

**INDICE  
INDEX  
СОДЕРЖАНИЕ**Pag.  
Page  
Seite

|          |  |           |          |
|----------|--|-----------|----------|
| <b>A</b> | <b>Introduzione</b><br><i>Introduction</i><br>Введение   | <b>A1</b> | <b>A</b> |
| <b>B</b> | <b>Designazione - Schede Tecniche Riduttori</b><br><i>Designation - Gearboxes technical sheet</i><br>Обозначение - Технические характеристики редукторов | <b>B1</b> | <b>B</b> |
| <b>C</b> | <b>Dimensioni</b><br><i>Dimensions</i><br>Размеры  | <b>C1</b> | <b>C</b> |
| <b>D</b> | <b>Predisposizione Attacco Motore</b><br><i>Motor adjustment</i><br>Адаптеры для подключения моторов   | <b>D1</b> | <b>D</b> |
| <b>E</b> | <b>Accessori e opzioni</b><br><i>Accessories and options</i><br>Аксессуары и опции   | <b>E1</b> | <b>E</b> |

| SIMBOLO<br>SYMBOL<br>ОБОЗНАЧЕНИЕ  | UNITA' DI MISURA<br>MEASUREME<br>ЕДИНИЦЫ<br>ИЗМЕРЕНИЯ | Formule Utilizzate<br>Using formula<br>Формула для расчета               | DEFINIZIONE  | DEFINITION                                     | ОПРЕДЕЛЕНИЕ  |
|---|---|--|--|--|--|
| <b>1 - PARAMETRI TECNICI CALCOLO DI BASE / CALCULATIONS TECHNICAL RATINGS/ ТЕХНИЧЕСКИЕ ПАРАМЕТРЫ (Cinematica-Coppia-Vita / Kinematic - Tourque - Life / Кинематика - Крутящий момент - Ресурс)</b>                          |   |  |  |  |  |
| $n_1$   | $\text{min}^{-1}$                                     |  | Velocità albero entrata                            | <i>Input speed</i>                             | Скорость на входе                                      |
| $n_2$   |   |  | Velocità albero in uscita                          | <i>Output speed</i>                            | Скорость на выходе                                     |
| $i_r$   |   |  | $n_1/n_2$  | Rapporto di trasmissione                       | <i>Ratio</i>   |
| $T_{2n}$  | <b>Nm</b>   |  | Coppia Uscita Nominale Applicazione                | <i>Application nominal output torque</i>       | Фактический крутящий момент                            |
| $T_{eq}$  |   |  | $f_n * T_N > T_{2q}$                               | Coppia in uscita richiesta equivalente         | The equivalent output torque required                  |
| $T_N$   | <b>Nm</b>   | $f_n * T_N > F_s * T_{2n}$   | Coppia Uscita Nominale Riduttore                   | <i>Gearbox nominal output torque</i>           | Номинальный крутящий момент                            |
| $T_{max}$   |   |  | Coppia Uscita Sovraccarico Riduttore               | <i>Gearbox overloaded output torque</i>        | Пиковый момент перегрузок                              |
| $M_{2s}$  | <b>Nm</b>   |  | Coppia di slittamento calettatore                  | <i>Shrink disc slipping torque</i>             | Момент проскальзывания стяжной муфты                   |
| $T_{1f}$  | <b>Nm</b>   |  | Coppia frenatura motore Autofrenante.              | <i>Brake torque motor</i>                      | Тормозной момент двигателя со встроенным тормозом      |
| $P_{Ka}$  | <b>Kg</b>   |  | Peso Motore Elettrico                              | <i>Motor weight</i>                            | Вес электродвигателя                                   |
| <b>RD%</b>  |   |  | Rendimento dinamico                                | <i>Dynamic efficiency</i>                      | Динамический КПД                                       |
| $P_1$   | <b>kW</b>   | $(T_{2n} * n_2) / \eta$  | Potenza motoriduttore                              | <i>Gear motor power</i>                        | Мощность мотор-редуктора                               |
| <b>h</b>  | <b>час</b>  |  | Durata richiesta                                   | <i>Life required</i>                           | Ресурс эксплуатации                                    |
| $f_{n2h}$   | <b>(час*min<sup>-1</sup>)</b>                         | $n_2 * h$  | Fattore di durata a cicli                          | Output cycle life factor                       | Коеф.количества циклов выхода                          |
| $f_{n1h}$   |   | $n_1 * h$  | Fattore di durata a cicli                          | Input cycle life factor                        | Коеф.количества циклов входа                           |
| <b>2 - PARAMETRI TECNICI VERIFICA / VERIFICATION TECHNICAL RATINGS / ОБЗОР ТЕХНИЧЕСКИХ ПАРАМЕТРОВ (Picchi di carico - Giri massimi) / (Load peak - Max rpm) / Пиковые нагрузки - максимальная скорость min<sup>-1</sup></b> |   |  |  |  |  |
| <b>Potenza termica / Thermal power / Термическая мощность</b>   |   |  |  |  |  |
| $P_{tN}$  | <b>kW</b>   |  | Potenza termica nominale                           | Thermal power rating                           | Термическая мощность                                   |
| $P_{ta}$  | <b>kW</b>   | $P_{ta} \leq P_1 - (P_{tN} \cdot f_m \cdot f_a \cdot f_d \cdot f_p)$     | Potenza termica addizionale                        | Additional thermal power                       | Доп. термическая мощность                              |
| <b>Carichi Esterni / External loads / Внешняя нагрузка</b>  |   |  |  |  |  |
| <b>C</b>  |   |  | Fattore di collegamento                            | <i>Connection factor</i>                       | Коеф.подключения                                       |
| <b>d</b>  | <b>mm</b>   |  | Diametro pulegge, ruote                            | <i>Pulleys and gears diameter</i>              | Диаметр шкива и шестерен                               |
| $Fr_{en1}; Fr_{en2}$  | <b>N</b>  |  | Carico Radiale Nominale Applicazione               | <i>Application nominal radial load</i>         | Фактическая радиальная нагрузка                        |
| <b>x</b>  | <b>mm</b>   |  | Distanza Carico Radiale Nominale Applicazione      | <i>Application nominal radial load distans</i> | Плечо приложения радиальной нагрузки                   |
| $Fr(x)_{n1}; Fr(x)_{n2}$  | <b>N</b>  | funzione di x  | Carico Radiale Nominale Riduttore alla distanza x. | <i>Radial load</i>                             | Радиальная нагрузка                                    |
| <b>k (f<sub>nh</sub>)</b>   |   | funzione di f <sub>nh</sub>  | Fattore Correzione carico                          | <i>Load correction factor</i>                  | Коеф.корректировки нагрузки                            |
| $Fr_{c1}; Fr_{c2}$  | <b>N</b>  | $Fr_{c1}(f_{nh}) = k * Fr(x)_{n1}$<br>$Fr_{c2}(f_{nh}) = k * Fr(x)_{n2}$ | Carico Radiale Nominale Riduttore Corretto         | <i>Radial load</i>                             | Скорректированная радиальная нагрузка                  |
| $Fa_{en1}; Fa_{en2}$  | <b>N</b>  |  | Carico Assiale Nominale Applicazione               | <i>Application nominal axial load</i>          | Фактическая осевая нагрузка                            |
| $Fa_{n1}; Fa_{n2}$  | <b>N</b>  |  | Carico Assiale Nominale Riduttore                  | <i>Axial load</i>                              | Осевая нагрузка  |
| $Fa_{c1}; Fa_{c2}$  | <b>N</b>  | $Fa_{c1}(f_{nh}) = k * Fa_{n1}$<br>$Fa_{c2}(f_{nh}) = k * Fa_{n2}$       | Carico Assiale Nominale Riduttore Corretto         | <i>Axial load</i>                              | Скорректированная осевая нагрузка                      |
| <b>Parametri Transitori - Carico e giri / Transitory parameters - Load and rpm / Параметры передачи - нагрузки и скорости min<sup>-1</sup></b>  |   |  |  |  |  |
| $n_{1max}$  | <b>min<sup>-1</sup></b>                               |  | Velocità massima albero entrata                    | <i>Input shaft max rpm</i>                     | Максимальная допустимая частота вращения входного вала |
| $T_{2max}$  | <b>Nm</b>   |  | Coppia Uscita Sovraccarico Applicazione            | <i>Application overloaded output torque</i>    | Фактический момент перегрузок                          |
| $t_a$   | <b>°C</b>   |  | Temperatura ambiente                               | <i>Ambient Temperature</i>                     | Температура окружающей среды                           |
| $t_{oil}$   | <b>°C</b>   |  | Temperatura olio                                   | <i>Oil temperature</i>                         | Температура масла                                      |

**3 - FATTORI CORRETTIVI PRESTAZIONI / Performances correction factors / Поправочные коэффициенты**

|                        |  |  |   |                                     |
|------------------------|--|--|---|-------------------------------------|
| <b>F<sub>s</sub></b>   |  | Fattore di servizio                                | <i>Service factor</i>                   | Коэф.эксплуатации                   |
| <b>f<sub>s</sub></b>   |  | Fattore di durata di funzionamento                 | <i>Working life factor</i>              | Коэф.времени использования          |
| <b>f<sub>Ga</sub></b>  | $F_s = f_s \cdot f_{Ga} \cdot f_v$             | Fattore di affidabilità                            | <i>Safety factor</i>                    | Коэф.запаса                         |
| <b>f<sub>n</sub></b>   |  | Fattore correttivo delle prestazioni               | <i>Input speed factor</i>               | Коэф.скорости на входе              |
| <b>f<sub>v</sub></b>   |  | Fattore del numero di avviamenti /ora              | <i>Duty cycle factor</i>                | Коэф.цикличности нагрузки           |
| <b>N<sub>i</sub></b>   | $n_{2i} \times t_i \%$                         | Numero clichi sul livello di carico N <sub>i</sub> | N <sub>i</sub> load level cycles number | N <sub>i</sub> Цикличность нагрузки |
| <b>n<sub>2eq</sub></b> | $n_{2eq} = \frac{\sum_i n_{2i} t_i \%}{100\%}$ | velocità in uscita richiesta equivalente.          | the equivalent output speed             | Эквивалентная скорость на выходе    |

**4 - FATTORI CORRETTIVI POTENZA TERMICA / Thermal power correction factors / Коэф. корректировки термической мощности**

|                      |   |   |                                   |                                       |
|----------------------|---|---|-----------------------------------|---------------------------------------|
| <b>f<sub>m</sub></b> |   | Fattore correttivo per la posizione di montaggio  | <i>Mounting position factor</i>   | Коэф.поправки монтажного положения    |
| <b>f<sub>a</sub></b> |   | Fattore correttivo dell'altitudine                | <i>Altitude factor</i>            | Коэф.поправки высоты над уровнем моря |
| <b>f<sub>d</sub></b> | $P_1 \leq P_{tN} \times f_m \times f_a \times f_d \times f_p \times f_f$                      | Fattore correttivo del tempo di lavoro            | <i>Operation time factor</i>      | Коэф.продолжительности включений      |
| <b>f<sub>p</sub></b> | $P_1 \leq (P_{tN} \cdot f_m \cdot f_a \cdot f_d \cdot f_p) + (P_{iamax} \cdot f_w \cdot f_c)$ | Fattore correttivo della temperatura              | <i>Ambient temperature factor</i> | Коэф.температуры охлаждающего воздуха |
| <b>f<sub>f</sub></b> |   | Fattore correttivo di aerazione con ventola       | <i>Fan cooling factor</i>         | Коэф.охлаждения вентилятором          |
| <b>f<sub>c</sub></b> |   | Coefficiente relativo alla temperatura dell'aria  | <i>Air temperature factor</i>     | Коэф.тепературы окружающего воздуха   |
| <b>f<sub>w</sub></b> |   | Coefficiente relativo alla temperatura dell'acqua | <i>Water temperature factor</i>   | Коэф.тепературы охлаждающей жидкости  |

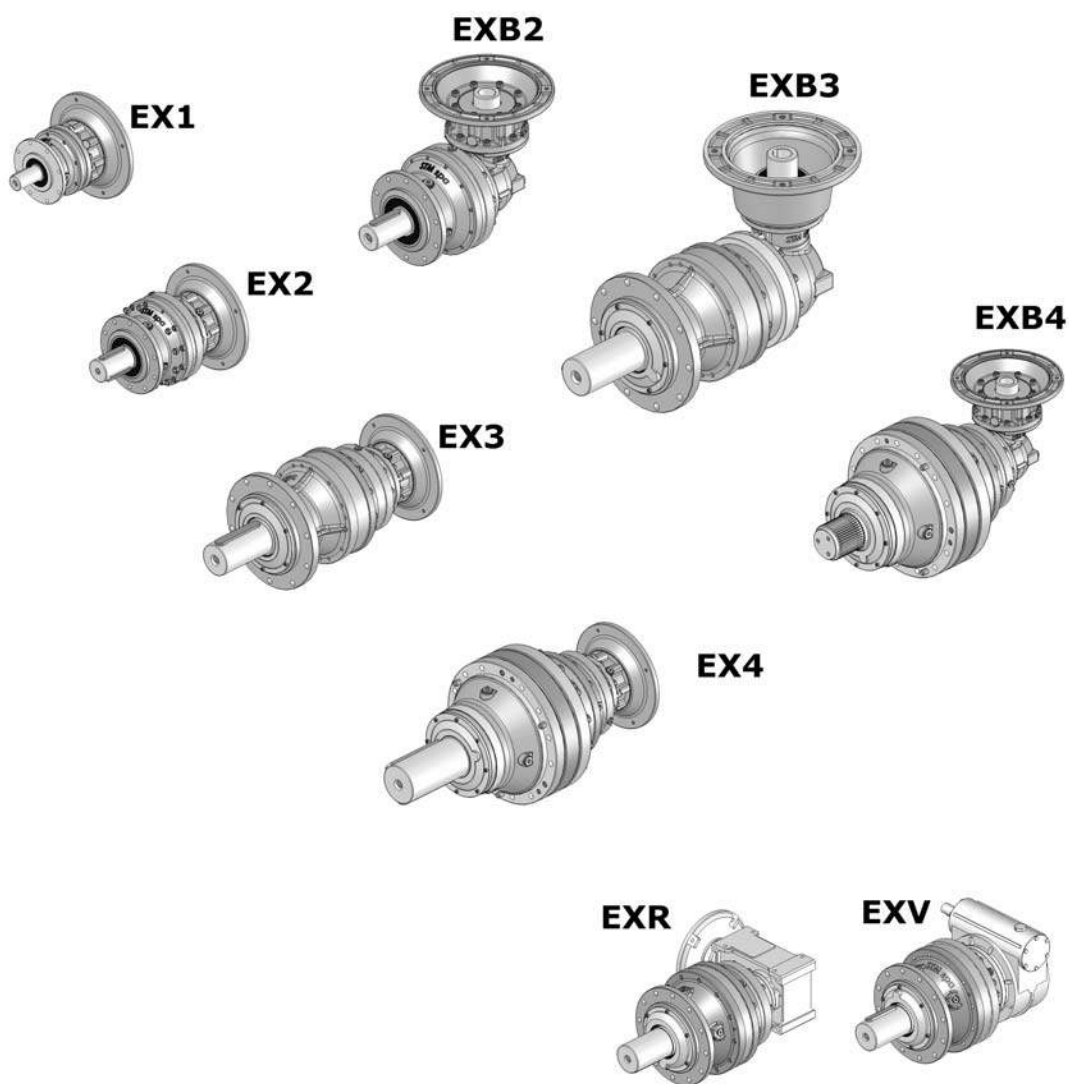


**Introduzione**  
**Introduction**  
**Введение**

**A**

|     |   |   |  |     |
|-----|---|---|--|-----|
| 1.1 | Caratteristiche costruttive             | <i>Construction features</i>                  | Конструктивные особенности             | A6  |
| 1.2 | Livelli di pressione sonora SPL [dB(A)] | <i>Mean sound pressure levels SPL [dB(A)]</i> | Уровень звукового давления SPL [дБ(А)] | A6  |
| 1.3 | Criteri di selezione                    | <i>Gear unit selection</i>                    | Параметры подбора                      | A7  |
| 1.4 | Verifiche                               | <i>Verification</i>                           | Проверка                               | A13 |
| 1.5 | Stato di fornitura                      | <i>Scope of the supply</i>                    | Состояние поставки                     | A19 |

**A**



## 1.1 Caratteristiche costruttive

### Generalità

I riduttori della serie EX sono estremamente compatti, eppure capaci di trasmettere le potenze più elevate. L'ingranaggio di tipo epicicloidale li rende la scelta più idonea per tutte le applicazioni dove urti e sovraccarichi sono la regola, più che l'eccezione.

Il prodotto è quanto di più versatile si trovi in commercio, offrendo una scelta vastissima di varianti nel tipo di fissaggio, nella composizione degli stadi di riduzione, nell'albero lento e nel tipo di motorizzazione.

Trovare quindi il prodotto idoneo ai requisiti dell'applicazione è una certezza sulla quale i nostri Clienti possono contare.

### Rendimento

Il rendimento dei riduttori RD% EX sono stati calcolati alle seguenti condizioni di impiego:

- servizio continuo;
- riduttore rodato;
- riduttore caricato con  $T_N$ ;
- viscosità olio ISO VG 320;
- posizione di montaggio M1;
- $n_1 = 1000 \text{ rpm}$ .

I valori così dedotti sono i seguenti:

| RD (%)                |      |      |      |                  |       |       |       |
|-----------------------|------|------|------|------------------|-------|-------|-------|
| Rendimento/Efficiency |      |      |      | Динамический КПД |       |       |       |
| EX 1                  | EX 2 | EX 3 | EX 4 |                  | EXB 2 | EXB 3 | EXB 4 |
| 98                    | 96   | 94   | 92   |                  | 93    | 91    | 90    |

## 1.2 Livelli di pressione sonora SPL [dB(A)]

Valori normali di produzione del livello medio di pressione sonora SPL (dB(A)) a velocità in entrata di 1450 giri/min (tolleranza +3 dB(A)). Valori misurati ad 1 m dalla superficie esterna del riduttore ed ottenuti su elaborazione di prove sperimentali. Per raffreddamento artificiale con ventola sommare ai valori di tabella: +2 dB(A) per ogni ventola. Per entrata ad un numero di giri diverso sommare i valori come in tabella. Per particolari esigenze è possibile fornire riduttori con livello medio di pressione sonora ridotto.

## 1.1 Construction features

### General description

EX gearboxes are very compact but they can also transmit high power.

The planetary gear types are the most suitable when the application has many shock load and is overloaded.

This product is versatile and offers a wide choice of fixing alternatives, ratios, output shaft types and motors input.

All our customers can surely find the best product for their applications.

### Efficiency

The EX efficiency RD% was calculated to the following conditions:

- continuous service;
- run gearbox;
- $T_N$  charged gearbox;
- Oil viscosity ISO VG 320;
- M1 mounting position;
- $n_1 = 1000 \text{ rpm}$ .

The value will be the followings:

| RD (%)                |      |      |      |                  |       |       |       |
|-----------------------|------|------|------|------------------|-------|-------|-------|
| Rendimento/Efficiency |      |      |      | Динамический КПД |       |       |       |
| EX 1                  | EX 2 | EX 3 | EX 4 |                  | EXB 2 | EXB 3 | EXB 4 |
| 98                    | 96   | 94   | 92   |                  | 93    | 91    | 90    |

## 1.2 Mean sound pressure levels SPL [dB(A)]

Noise levels are mean sound pressure levels SPL (dB(A)) and refer to normal operation at an input speed of 1450 rpm (tolerance +3 dB (A)). Measurements are taken at 1 m from the external surface of the gear unit and ratings are obtained by processing test data. For fan-cooled applications, add 2dB (A) to table values for each fan. For different input speeds, add the appropriate values indicated in the table below. Gear units with lower noise levels to suit particular needs are available on request.

## 1.1 Конструктивные особенности

### Общая информация

Планетарные редукторы EX серии способны передавать высокий крутящий момент, обладая очень компактными размерами

Планетарные передачи являются наилучшим выбором, когда эксплуатация связана с ударными нагрузками и перегрузками.

Данный продукт очень гибкий и предлагает широкий выбор вариантов монтажа, передаточных чисел и исполнений.

Все наши покупатели смогут найти лучший продукт для своих применений.

### Эффективность

Динамический КПД RD% рассчитан исходя из следующих условий:

- Непрерывная эксплуатация
- Редуктор загружен на величину  $T_N$
- Вязкость ISO VG320 сСт
- Монтажное положение M1
- Скорость входного вала  $n_1 = 1000 \text{ min}^{-1}$

В результате получены следующие значения:

| RD (%)                |      |      |      |                  |       |       |       |
|-----------------------|------|------|------|------------------|-------|-------|-------|
| Rendimento/Efficiency |      |      |      | Динамический КПД |       |       |       |
| EX 1                  | EX 2 | EX 3 | EX 4 |                  | EXB 2 | EXB 3 | EXB 4 |
| 98                    | 96   | 94   | 92   |                  | 93    | 91    | 90    |

## 1.2 Уровень звукового давления SPL [dB(A)]

Средние значения уровня звукового давления SPL (dB(A)) определялись скоростью входного вала 1450 об/мин (отклонения +3 dB(A)). Измерения проводились на расстоянии 1 м от поверхности редуктора. При наличии принудительного воздушного охлаждения с вентилятором, значение необходимо увеличить +2 dB(A). Для отличающейся скорости входного вала, значения должны быть скорректированы в соответствии с таблицей. По запросу редукторы могут поставляться с пониженным уровнем среднего звукового давления.

|                                 | EX 1 | EX 2 - EXB 2 | EX 3 - EXB 3 | EX 4 - EXB 4 |      |     |     |     |
|---------------------------------|------|--------------|--------------|--------------|------|-----|-----|-----|
| 10 - 20 - 25                    |      |              |              |              |      |     |     |     |
| 30 - 40 - 50 - 70               |      |              |              |              |      |     |     |     |
| 80 - 90 - 100                   |      |              |              |              |      |     |     |     |
| 150 - 180 - 200                 |      |              |              |              |      |     |     |     |
| 250 - 280 - 300                 |      |              |              |              |      |     |     |     |
| 350 - 420                       |      |              |              |              |      |     |     |     |
| 650                             |      |              |              |              |      |     |     |     |
| 850                             |      |              |              |              |      |     |     |     |
| 1200                            |      |              |              |              |      |     |     |     |
| $n_1$<br>[min <sup>-1</sup> ]   | 2750 | 2400         | 2000         | 1750         | 1000 | 750 | 500 | 350 |
| $\Delta \text{ SPL}$<br>[dB(A)] | 8    | 6            | 4            | 2            | -2   | -3  | -4  | -6  |

### 1.3 Criteri di selezione

#### 1.3.1 - Calcolo parametri nominali applicazione: $T_{2n}$ - $Fr_{en1-2}$ e $Fa_{en1-2}$

Come base del dimensionamento del riduttore si sceglie la coppia resistente nominale dell'applicazione  $T_{2n}$ .

Si tratta del momento d'esercizio per le condizioni di lavoro più gravose, regolari. Esempi:

-Coppia massima continua di laminazione (non da urto di passata iniziale);

-Coppia per carico massimo continuo di sollevamento in esercizio degli organi di sollevamento di una gru;

-Coppia massima di taglio con le cesoie;

-Coppia dovuta alla pressione di spinta massima continua con gli estrusori.

Con le stesse considerazioni è possibile determinare  $Fa_{en1-2}$  e  $Fa_{en1-2}$

Per calcolare il carico  $Fr_{en1-2}$  agente sull'albero lento diamo formule approssimate per alcune trasmissioni più comuni.

### 1.3 Gear unit selection

#### 1.3.1 - Calculations application nominal parameter : $T_{2n}$ - $Fr_{en1-2}$ e $Fa_{en1-2}$

*The gearbox dimensional start is the  $T_{2n}$  application nominal torqueproof.*

*We consider the hard work application conditions, as for example:*

- *Lamination continuously max torque (not for shock start operation)*

- *Lifting continuously max torque*

- *Shears cut max torque*

- *Extrusion continuously max torque.*

*Furthermore it's possible to find  $Fa_{en1-2}$  and*

*Here you can find the most common formulae in order to calculate the  $Fr_{en1-2}$  load on the output low shaft.*

### 1.3 Подбор редуктора

#### 1.3.1- Расчет номинальных параметров эксплуатации: $T_{2n}$ - $Fr_{en1-2}$ и $Fa_{en1-2}$

Основанием для выбора типоразмер редуктора используется значение номинального крутящего момента  $T_{2n}$  при установленном режиме эксплуатации, например:

- Максимальный крутящий момент привода насоса однородной жидкости;
- Максимальный крутящий момент привода механизма подъема крана;
- Максимальный крутящий момент привода гильотины ;
- Максимальный крутящий момент провода экструдера непрерывной однородной массы.

По данным критериям также определяют значения  $Fa_{en1-2}$  и  $Fa_{en1-2}$

Для расчета нагрузки  $Fr_{en1-2}$ , действующей на выходной вал, необходимо использовать приведенную ниже формулу.

| $Fr_{en1-2} = (C \times T_{2n}) / d$             |   |   |  |  |   |
|--|---|---|--|--|---|
| C  | 7000  | 5000  | 3000   | 2120   | 2000                                      |
| Trasmissioni<br>Drive member<br>Приводимый орган | Ruote di frizione (gomma su metallo)<br>Friction wheel drive (rubber on metal)<br>Сцепление колес (резина по металлу) | Cinghie trapezoidali<br>V belt drives<br>V-образная ременная передача | Cinghie dentate<br>Toothed belts<br>Зубчатая ременная передача | Ingranaggi cilindrici<br>Spur gears<br>Зубчатая передача | Catene<br>Chain drives<br>Цепная передача |

C - Fattore di collegamento  
d - Diametro pulegge, ruote

C - Connection factor  
d - Pulley diameter, wheels

C - Коэффициент подключения  
d - Диаметр шкива, колеса

#### Forze di accelerazione, di oscillazione

All'avviamento si verificano in date circostanze forze rilevanti di accelerazione. Altre forze secondarie possono prodursi a causa delle oscillazioni della linea di comando, in funzione delle masse (volano, ruote, giunti), della loro ripartizione, delle rigidità (alberi, giunti) e delle condizioni di esercizio.

Inoltre, spesso la coppia lato comando e la coppia comandata non sono uniformi, secondo il tipo di motore di comando e del processo lavorativo.

Si possono determinare le forze e le coppie effettivamente agenti sul riduttore mediante misure in tutti gli stati di esercizio eventualmente con un ampio calcolo dei cicli alterni.

Nel paragrafo seguente sarà fornita la procedura di selezione del riduttore per individuarne la taglia e il rapporto di riduzione.

#### Acceleration and scillation load.

*When we start some transmissions we can find some big acceleration loads.*

*Other secondary loads can be produced by oscillations in the control line, based on the masses (flywheel, wheels, joints), their distribution, rigidity (shafts, joints) and working conditions.*

*Frequently the driving torque and the driven torque aren't uniform, this depends on the driving motor and the working process.*

*We can know the gearbox torques and loads through many measurements in each working condition.*

*In the following paragraph we will supply you with the gearbox selection procedure in order to choose the ratio and size.*

#### Ускорение и изменение нагрузки

При старте трансмиссии часто испытывают большие нагрузки, вызванные ускорением.

Также дополнительные нагрузки могут возникнуть в результате возникновения вибраций в приводимом механизме (маховиках, шестернях, муфтах, валах).

Зачастую крутящий момент на выходе и крутящий момент на входе редуктора не являются однородными т.к. зависят от параметров мотора и условий эксплуатации.

Вы можете определить силы и моменты, действующие на передачу во всех рабочих режимах.

В следующем параграфе представлена процедура выбора редуктора в соответствии с требуемым передаточным числом и габаритом.

L'economicità di una costruzione dipende in misura determinante dal fatto che si riesca o meno a tener conto in "modo preciso" delle ripercussioni di queste forze sulla sollecitazione.

*The low costs of the product depends on being or not being possible to calculate the repercussions of loads on stress.*

Низкая стоимость оборудования в большей степени зависит от возможности учесть в расчетах все возможные возникающие нагрузки.



### 1.3 Criteri di selezione

#### 1.3.2 Procedura di selezione

Conosciuti i dati dell'applicazione calcolare:

$$ir = n_1/n_2 ;$$

$$f_{n2h} = n_2 * h ;$$

$$P1 = \frac{T_{2n} \times n_2 \times 100}{9550 \times RD\%} ;$$

$n_1$  - Velocità albero entrata;  
 $n_2$  - Velocità albero uscita;  
 $ir$  - Rapporto di trasmissione;  
 $h$  - Durata richiesta;  
 $f_{n2h}$  - Fattore di durata a cicli;  
 $RD\%$  - Rendimento dinamico;  
 $P1$  - Potenza macchina motrice;  
 $T_{2n}$  - Coppia Uscita Nominale Applicazione

Per selezionare il riduttore è necessario che sia soddisfatta la seguente relazione:

### 1.3 Gear unit selection

#### 1.3.2 Selection procedure

Locate application information and determine:

$$ir = n_1/n_2 ;$$

$$f_{n2h} = n_2 * h ;$$

$$P1 = \frac{T_{2n} \times n_2 \times 100}{9550 \times RD\%} ;$$

$n_1$  - Input shaft speed;  
 $n_2$  - Output shaft speed;  
 $ir$  - Ratio;  
 $h$  - Life required;  
 $f_{n2h}$  - Life factor at cycles;  
 $RD\%$  - Dinamic efficiency;  
 $P1$  - Input power;  
 $T_{2n}$  - Application nominal output torque

For gearbox selection the following is necessary:

### 1.3 Подбор редуктора

#### 1.3.3 Процедура подбора

Исходя из условий применения необходимо определить информацию:

$$ir = n_1/n_2 ;$$

$$f_{n2h} = n_2 * h ;$$

$$P1 = \frac{T_{2n} \times n_2 \times 100}{9550 \times RD\%} ;$$

$n_1$  - Скорость на входе;  
 $n_2$  - Скорость на выходе;  
 $ir$  - Передаточное число;  
 $h$  - Требуемый ресурс эксплуатации;  
 $f_{n2h}$  - Коэф. кол-ва циклов на выходе;  
 $RD\%$  - Динамический КПД;  
 $P1$  - Мощность привода;  
 $T_{2n}$  - Требуемый крутящий момент

Для выбора редуктора необходимо соблюдение следующего условия:

$$T_N \times fn \geq T_{2n} \times Fs$$

(1.3/b)

**1 -  $T_N$**  : Coppia Nominale in uscita del riduttore.

La coppia è calcolata tenendo conto della sollecitazione a flessione, sollecitazione a fatica superficiale ed infine della durata dei cuscinetti a rullini dei satelliti con **Fs** uguale ad 1.

I valori di  $T_N$  sono forniti in funzione:

**A - Del fattore  $f_{nh}$ :**

la  $T_N$  è fornita con  $f_{nh}$  che varia tra un valore di 10000 a 2000000.

**B - Dei fattori  $n_1$  e  $h$  :**

-  $n_1$  = 1400 [rpm];  
 -  $h$  = 10000 [ore].

Il valore di  $T_N$  è riportato nelle schede tecniche di prodotto.

**2 -  $Fs$**  : Fattore di Servizio:

Per determinare il valore **Fs** vedere paragrafo successivo.

E' possibile scegliere gli stadi, il rapporto, la grandezza del riduttore.

Utilizzando la designazione è possibile selezionare inoltre l'esecuzione uscita ed entrata, la posizione di montaggio e verificare le dimensioni del riduttore e di eventuali accessori o particolari estremità

**1 -  $T_N$**  : Gearbox output nominal torque.

The torque is calculated considering the bending stress, the pitting and the life of satellite roll bearings with **Fs** like 1.

The  $T_N$  values are supplied from:

**A - Factor  $f_{nh}$ :**

The  $T_N$  is supply with  $f_{nh}$  between 10000 to 2000000.

**B - Factors  $n_1$  and  $h$  :**

-  $n_1$  = 1400 [rpm];  
 -  $h$  = 10000 [hours].

The  $T_N$  value is write on the product technical sheets.

**2 -  $Fs$**  : Service factor.

For to calculate the **Fs** value you see the following paragraph.

It's possible to choose the ratio and the gearbox size and stadies.

If you use the designation it's possible to select the output and input configuration, the mounting position, to verify the gearbox dimensions and the options.

**1 -  $T_N$**  : Номинальный крутящий момент редуктора.

Крутящий момент рассчитывается с учетом напряжения изгиба зуба, поверхностного напряжения и усталости, а также ресурса подшипников сателлитов и **Fs** = 1. Значение  $T_N$  определяется по формуле:

**A - коэффициент  $f_{nh}$ :**

$f_{nh}$  принимает значения между 10000 и 2000000.

**B - коэффициенты  $n_1$  и  $h$  :**

-  $n_1$  = 1400 [об/мин];  
 -  $h$  = 10000 [часов].

Значения  $T_N$  указаны в разделе Технические характеристики.

**2 -  $Fs$**  : Сервис-фактор:

Для расчета **Fs** ознакомьтесь со следующим параграфом.

Необходимо выбрать передаточное число, типоразмер редуктора и количество ступеней.

Далее, имея маркировку, можно выбрать конфигурации входа и выхода редуктора, монтажное положение, габаритные размеры и доступные опции.



### 1.3 Criteri di selezione

### 1.3 Gear unit selection

### 1.3 Подбор редуктора

#### 1.3.3 Calcolo Fattore di servizio Fs

Per ricavare Fs sono disponibili due alternative:

**1 - Non è disponibile alcun collettivo di carico.**

#### Fattore di servizio - Fs

Il fattore di Servizio Fs dipende:

- a) dalle condizioni di applicazione
- b) dalla durata di funzionamento h/d
- c) avviamenti /ora
- d) dal grado di affidabilità o margine di sicurezza voluto .

Il fattore di servizio per casi specifici può essere assunto direttamente, altrimenti può essere calcolato in base ai singoli fattori: fattore di durata di funzionamento fs, dal numero di avviamenti /ora fv e dal fattore di sicurezza o grado di affidabilità fGa.

#### 1.3.3 Service factor calculation Fs

For to extract the Fs you have two alternatives:

**1- There isn't available any load collective.**

#### Service factor - Fs

Service factor Fs is determined on the basis of:

- a) operating conditions of application
- b) operation per day (h/d)
- c) starts and stops per hour
- d) desired reliability or safety factor.

Where service conditions allow it, the recommended service factor for a specific application may be used directly, otherwise the service factor must be calculated and the following factors must be considered: operation time factor fs, duty cycle factor fv and safety or reliability factor fGa.

#### 1.3.3 Расчет сервис-фактора Fs

Для определения Fs доступны два способа:

**1- Если нет циклограммы нагрузки**

#### Сервис-фактор - Fs

Эксплуатационный коэффициент Fs зависит от следующиx:

- a) Условия эксплуатации
- b) Время работы в сутки (час/день)
- c) Пуски/остановки в час
- d) Коэф.надежности или безопасности.

Коэффициент эксплуатации, за исключением случаев, когда он может быть принят равным fs, вычисляется произведением коэффициентов: fs продолжительность работы, fv количество пусков в час и коэф.безопасности или надежности fGa.

$$F_s = f_s \times f_v \times f_{Ga}$$

(1.3/c)

fs

| Macchina motrice / Prime mover / Первичный привод   | h/d | Macchina utilizzatrice<br>Driven Machine<br>Приводимое оборудование |      |      |
|---|-----|---|------|------|
|   |     | U   | M    | S    |
| Motori elettrici, Turbine, Motori oleodinamici<br><i>Electric motors, Turbines, Hydraulic motors</i><br>Электродвигатель, Турбина, Гидромотор | 2   | 0.8   | 1.0  | 1.4  |
|   | 4   | 0.9   | 1.12 | 1.6  |
|   | 8   | 1.0   | 1.25 | 1.75 |
|   | 16  | 1.25  | 1.5  | 2.0  |
|   | 24  | 1.5   | 1.75 | 2.25 |
| Motori alternativi 4-6 cilindri<br><i>Combustion engines with 4-6 cylinders</i><br>ДВС 4-6 цилиндровый  | 2   | 0.9   | 1.12 | 1.6  |
|   | 4   | 1.0   | 1.25 | 1.75 |
|   | 8   | 1.25  | 1.5  | 2.0  |
|   | 16  | 1.5   | 1.75 | 2.25 |
|   | 24  | 1.75  | 2.0  | 2.5  |
| Motori alternativi 1-3 cilindri<br><i>Combustion engines with 1-3 cylinders</i><br>ДВС 1-3 цилиндровый  | 2   | 1.0   | 1.25 | 1.75 |
|   | 4   | 1.25  | 1.5  | 2.0  |
|   | 8   | 1.5   | 1.75 | 2.25 |
|   | 16  | 1.75  | 2.0  | 2.5  |
|   | 24  | 2.25  | 2.5  | 3.0  |

**U** = macchina a carico uniforme  
**M** = macchina con urti moderati  
**S** = macchina con urti severi

**U** = Uniform load  
**M** = Moderate shock load  
**S** = Heavy shock load

**U** = Равномерная нагрузка  
**M** = Нагрузка со средними ударами  
**S** = Нагрузка с сильными ударами

**h/d** = ore di funzionamento giornaliero

**h/d** = hours of operation per day

**h/d** = время работы в день



1 - Per i moltiplicatori di velocità, moltiplicare i valori di fs per 1.1

2 - Qualora il motore elettrico sia autofrenante è necessario moltiplicare i valori di fs per 1.1.

1 - For speed multipliers, multiply fs by 1.1

2 - When you've the brake electric motor, it's needed multiply the fs values for 1.1.

1 - Для мультипликаторов fs принимается равным 1.1

2 - При использовании электродвигателя со встроенным тормозом необходимо принять fs равным 1.1

1.3 Criteri di selezione

1.3 Gear unit selection

1.3 Подбор редуктора

Classificazione dell'applicazione

Application classification

Классификация применений

|                  | SETTORE DI APPLICAZIONE  | APPLICATION SECTOR   | Область применения             |
|------------------|--|--|--------------------------------|
| U<br>M           | <b>AGITATORI</b>   | <b>AGITATORS</b>   | Мешалки                        |
|                  | Con densit uniforme<br>Con densit non uniforme   | Uniform product density<br>Variable product density  |                                |
| U<br>M           | <b>ALIMENTARE</b>  | <b>ALIMENTARY</b>  | Пищевая                        |
|                  | Maceratori, bollitori, coclee<br>Trituratrici, sbucciatrici, scatoiatrici                                    | Mashers, boilers, screw feeders,<br>blenders, peelers, cartoners   |                                |
| (1)U,M<br>M<br>S | <b>ARGANI</b>  | <b>WINCHES</b>   | Лебёдки                        |
|                  | Sollevamento<br>Trascinamento<br>Bobinatori  | Lifting<br>Dragging<br>Reel winders  |                                |
|                  | <b>CARTARIO</b>  | <b>PAPER MILLS</b>   | Бумажное производство          |
| U<br>M<br>S      | Avvolgitori, essiccatrici, pressatrici,<br>Mescolatrici, estrusori, addensatrici<br>Tagliatrici, lucidatrici | Winders, dryers, couch rolls<br>Mixers, extruders, thickeners<br>Cutters, glazing cylinders                                  | ! , !<br>" , , #<br>\$ % &     |
|                  | <b>CHIMICO</b>   | <b>CHEMICAL</b>  | Химическая                     |
| S<br>M           | Estrusori, stampatrici<br>Impoatrici   | Extruders, printing presses<br>Mixers  | " ,<br>! .                     |
|                  | <b>COMPRESSORI</b>   | <b>COMPRESSORS</b>   | Компрессоры                    |
| U<br>M<br>M      | Centrifughi<br>Rotativi<br>Assiali   | Centrifugal<br>Rotating<br>Axial piston  | ' %<br>\$<br>!                 |
|                  | <b>DRAGHE</b>  | <b>DREDGES</b>   | Экскаваторы                    |
|                  | Trasportatori<br>Estratrici, teste fresatrici  | Conveyors<br>Extractors, cutter head drives  | ( ! &<br>" , ) *# +            |
| M<br>M<br>S      | <b>EDILIZIA</b>  | <b>BUILDING</b>  | Строительство                  |
|                  | Betoniere, coclee<br>Frantoi, dosatrici<br>Frantumatrici   | Cement mixers, screw feeders<br>Crushers, batchers<br>Stone breakers   | !<br>(                         |
|                  | <b>ELEVATORI</b>   | <b>ELEVATORS</b>   | Элеваторы                      |
| U<br>M<br>M      | A nastro, scale mobili<br>A tazza, montacarichi, skip<br>Ascensori, ponteggi mobili                          | Belt type, escalators<br>Bucket conveyors, hoists, skip hoists<br>Public lifts, mobile scaffolding                           | / ,0<br>( ! &<br>1 , ,         |
|                  | <b>GRU</b>   | <b>CRANES</b>  | КРАНЫ                          |
|                  | Traslazione<br>Rotazione<br>Sollevamento   | Translation<br>Slew<br>Lifting   |                                |
| M<br>M<br>M      | <b>LEGNO</b>   | <b>WOOD</b>  | ДЕРЕВООБРАБАТЫВАЮЩАЯ           |
|                  | Accatastatori<br>Trasportatori<br>Seghe, piallatrici, fresatrici   | Stackers<br>Transporters<br>Saws, thicknessers, routers  | / , , ! )                      |
|                  | <b>MACCHINE UTENSILI</b>   | <b>MACHINE TOOLS</b>   | СТАНКИ                         |
| M<br>M<br>S      | Alesatrici, brocciatrici, cesoiatrici<br>Piegatrici, stampatrici<br>Magli, laminatoi                         | Boring machines, broaching machines,<br>shearing machines<br>Bending machines, press forgers<br>Power hammers, rolling mills | ! , %<br>% , , ! )<br>2# 3 ! , |
|                  | <b>MESCOLATORI-MISCELATORI</b>   | <b>MIXERS</b>  | МИКСЕРЫ                        |
|                  | Con densit uniforme<br>Con densit non uniforme   | Uniform density product<br>Variable density product  | &<br>&                         |
| S<br>M           | <b>MOVIMENTO TERRA</b>   | <b>EARTH MOVING MACHINERY</b>  | ЭКСКАВАТОРЫ                    |
|                  | Escavatrici rotative a pale<br>Trasportatori   | Rotating shovel excavators<br>Transporters   | /                              |
| U<br>M,S<br>M,S  | <b>POMPE</b>   | <b>PUMPS</b>   | НАСОСЫ                         |
|                  | Centrifughe<br>Volumetriche a doppio effetto<br>Volumetriche a semplice effetto                              | Centrifugal<br>Double acting volumetric<br>Single acting volumetric  | ' #<br>4<br>4                  |
|                  | <b>TRASPORTATORI</b>   | <b>CONVEYORS</b>   | Конвейеры                      |
| U<br>M           | Su rotaie<br>A nastro  | On rails<br>Belts  | 5 ) %<br>\$                    |
|                  | <b>TRATTAMENTO ACQUE</b>   | <b>WATER TREATMENT</b>   | ВОДНАЯ ОБРАБОТКА               |
| M<br>M<br>U      | Coclee, trituratori<br>Mescolatori, decantatori<br>Ossigenatori  | Screw feeders, disintegrators<br>Mixers, settlers<br>Oxygenators   | 0<br>%<br>%                    |
|                  | <b>VENTILATORI</b>   | <b>FAN UNITS</b>   | ВЕНТИЛЯТОРЫ                    |
|                  | Di piccole dimensioni<br>Di grandi dimensioni  | Small<br>Large   | !                              |

1) Per la scelta del fs secondo F.E.M. /1.001/1987 consultare il capitolo "sollevamento".

1) For fs selection in accordance with F.E.M. /1.001/1987, please read Chapter "Lifting".

1) Для выбора fs согласно F.E.M. /1.001/1987 обратитесь к главе "Подъемные устройства"

## 1.3 Criteri di selezione

## 1.3 Gear unit selection

## 1.3 Подбор редуктора

**Fattore correttivo -  $f_v$** 

Fattore correttivo del fattore di servizio  $F_s$ , per tenere conto degli avviamenti/ora. Il fattore di servizio  $F_s$  deve aumentare in caso di avviamenti frequenti con coppia di spunto notevolmente maggiore di quella di regime tenendo conto degli avviamenti per ora secondo la seguente tabella.

 $f_v$ 

| Avv/h - Starts/minute - Пуск./Час. | U    | M    | S    |
|------------------------------------|------|------|------|
| $Z \leq 5$                         | 1    | 1    | 1    |
| $5 < Z \leq 30$                    | 1.2  | 1.12 | 1.06 |
| $30 < Z \leq 63$                   | 1.33 | 1.2  | 1.12 |
| $63 < Z$                           | 1.5  | 1.33 | 1.2  |

 $f_{Ga}$ **Fattore affidabilità -  $f_{Ga}$** 

Un margine di sicurezza o di affidabilità è già inserito nella prestazione di catalogo del riduttore. Se per particolari esigenze è necessaria un' affidabilità maggiore si aumenti il fattore di servizio ed in particolare si può dare i seguenti fattori:

Grado di affidabilità normale:  $f_{Ga} = 1$ ;

Grado di affidabilità elevato (difficoltà di manutenzione, grande importanza del riduttore nel ciclo produttivo, sicurezza per le persone, ecc...):  $f_{Ga} = 1.25 - 1.4$ ;

Non occorre introdurre coefficienti correttivi nel caso che si alternino cicli di funzionamento con carichi applicati nei due sensi, poiché se ne è già tenuto conto nel progetto degli ingranaggi.

**Duty cycle factor -  $f_v$** 

*This correction factor is used to adjust service  $F_s$  to reflect the number of starts per hour. Where an application involves frequent starts at a starting torque significantly greater than running torque, service factor  $f_s$  must be adjusted to account for the number of starts per hour using the factors indicated in following table.*

**Safety factor -  $f_{Ga}$** 

*Catalogue ratings incorporate a safety or reliability factor as standard. If greater reliability is required to meet specific requirements, service factor must be increased using the following factors:*

*Standard safety factor:  $f_{Ga} = 1$ ;*

*High safety factor (recommended for difficult maintenance situations, where gear unit performs a critical task in the overall production process or a task such to affect the safety of people, etc...):  $f_{Ga} = 1.25 - 1.4$ ;*

*Applications with alternating duty cycles where load is applied in both directions have been considered in gear calculations and require no correction factors.*

**Коэф.цикличности нагрузки -  $f_v$** 

Этот поправочный коэффициент используется для корректировки  $F_s$  и учитывает кол-во запусков в час. В тех случаях, когда эксплуатация подразумевает частые запуски, а пусковой момент значительно больше, чем номинальный крутящий момент, коэффициент  $F_s$  должен быть скорректирован используя данные, указанные в табл.

**Коэффициент безопасности -  $f_{Ga}$** 

Каталог содержит стандартные коэф.безопасности и надёжности. Если необходима большая безопасность, для удовлетворения конкретных потребностей, то сервис-фактор  $F_s$  должен быть увеличен с помощью коэффициентов: Стандартный фактор безопасности  $f_{Ga}=1$ ; Высокий коэффициент безопасности (рекомендуется для работы в сложных ситуациях, для влияния на безопасность людей и т.д. ):  $f_{Ga} = 1.25 - 1.4$ ;

Применение с периодически чередующимися циклами, где нагрузка происходит в обоих направлениях поправочный коэффициент не требуется.

### 1.3 Criteri di selezione

2 - E' disponibile il collettivo di carico  
Si misurano le coppie resistenti sugli alberi del riduttore in condizioni di esercizio aderenti alla realtà e si classificano i valori di misura per grandezza ( $T_i, Fr_i$ ) e frequenza ( $N_i$ ).

Per calcolare  $F_s$  è necessario utilizzare la formula ponendo il coefficiente  $f_v$  uguale ad 1.

$$T_s = \frac{T_{eq}}{T_{2n}} \times f_{Ga}$$

1 -  $T_{2eq}$   
Coppia in uscita richiesta equivalente

$$T_{eq} = \left[ \frac{n_{21} t_1 \% \times T_1^{6.6} + n_{22} t_2 \% \times T_2^{6.6} + \dots + n_{2i} t_i \% \times T_i^{6.6}}{n_{21} t_1 \% + n_{22} t_2 \% + \dots + n_{2i} t_i \%} \right]^{\frac{1}{6.6}}$$

Dove  $t_1, t_2 \dots t_i$  le percentuali di tempo (sul 100% del ciclo) in cui agiscono le coppie  $T_1, T_2, \dots T_i$  alle velocità  $n_{21}, n_{22} \dots n_{2i}$ .

2 -  $n_{2eq}$   
velocità in uscita richiesta equivalente.

$$n_{2eq} = \frac{n_{21} t_1 \% + n_{22} t_2 \% + \dots + n_{2i} t_i \%}{100\%}$$

3 -  $Fr_{1eq}$   
Forza Radiale asse entrata richiesta equivalente

$$Fr_{1eq} = \left[ \frac{n_{21} t_1 \% \times Fr_{11}^{\frac{10}{3}} + n_{22} t_2 \% \times Fr_{12}^{\frac{10}{3}} + \dots + n_{2i} t_i \% \times Fr_{1i}^{\frac{10}{3}}}{n_{21} t_1 \% + n_{22} t_2 \% + \dots + n_{2i} t_i \%} \right]^{\frac{3}{10}}$$

4 -  $Fr_{2eq}$   
Forza Radiale asse uscita richiesta equivalente

$$Fr_{2eq} = \left[ \frac{n_{21} t_1 \% \times Fr_{21}^{\frac{10}{3}} + n_{22} t_2 \% \times Fr_{22}^{\frac{10}{3}} + \dots + n_{2i} t_i \% \times Fr_{2i}^{\frac{10}{3}}}{n_{21} t_1 \% + n_{22} t_2 \% + \dots + n_{2i} t_i \%} \right]^{\frac{3}{10}}$$

Le formule sono state ricavate utilizzando la formula di Palmgren/Miner. Per insicurezze, ipotesi di calcolo utilizzare indicazioni riportate sul Niemann/Winter - "Elementi di Macchine".

### 1.3 Gear unit selection

2 - It's available the load collective  
It's possible to measure the resistant torque on the gearbox output shaft in real work conditions and classify the values for size ( $T_i, Fr_i$ ) and frequency ( $N_i$ ).

In order to calculate  $F_s$  it's necessary to use the formula with  $f_v$  value like 1.

$$T_s = \frac{Fr_{1eq}}{Fr_{en1}} \times f_{Ga}$$

1 -  $T_{eq}$   
The equivalent output torque required

Where  $t_1, t_2 \dots t_i$  are the percentages of time (on 100% of the cycle) when the torques  $T_{21}, T_{22} \dots T_{2i}$  act at the speed of  $n_{21}, n_{22} \dots n_{2i}$ .

2 -  $n_{2eq}$   
the equivalent output speed

3 -  $Fr_{1eq}$   
Equivalent input axis radial force

4 -  $Fr_{2eq}$   
Equivalent output axis radial force

The formula are extract using the Palmgren/Miner formula. For any calculation hypothesis you use the Niemann/Winter book "Elementi di Macchine".

### 1.3 Подбор редуктора

2 - При наличии циклограммы нагрузки необходимо измерить требуемый крутящий момент на выходном валу при нормальных условиях, а также определить значения ( $T_i, Fr_i$ ) и периодичностью ( $N_i$ ).

Для определения  $F_s$  необходимо использовать формулу со значением  $f_v$  равным 1.

$$T_s = \frac{Fr_{2eq}}{Fr_{en2}} \times f_{Ga}$$

1 -  $T_{eq}$   
Требуемый эквивалентный крутящий момент

Где  $t_1, t_2 \dots t_i$  процент от времени цикла (цикл 100%), при крутящих моментах  $T_{21}, T_{22} \dots T_{2i}$  действующих со скоростью  $n_{21}, n_{22} \dots n_{2i}$ .

2 -  $n_{2eq}$   
Эквивалентная скорость выходного вала

3 -  $Fr_{1eq}$   
Эквивалентная радиальная нагрузка на входе

4 -  $Fr_{2eq}$   
Эквивалентная радиальная нагрузка на выходе

Приведенные формулы получены преобразованием формулы Пальмгрена-Майнера.

В случае сомнения в полученных данных руководствуйтесь расчетами Ньюмана-Винтера "Элементы машин"

### 1.4 Verifiche

#### 1) Geometria - Dimensioni

Compatibilità dimensionale con ingombri disponibili (es diametro del tamburo) e delle estremità d'albero con giunti, dischi o pulegge.

#### 2) Massimo sovraccarico

Nel caso di avviamenti  $T_{2max}$  può essere considerata come quella parte della coppia accelerante ( $T_{2acc}$ ) che passa attraverso l'asse lento del riduttore:

#### Avviamento

### 1.4 Verification

#### 1) Geometry - Dimensions

Ensure that dimensions are compatible with space constraints (for instance, drum diameter) and shaft ends are compatible with any couplings, discs or pulleys to be used.

#### 2) Maximum overload

For starting,  $T_{2max}$  may be considered as that portion of acceleration ( $T_{2acc}$ ) passing through the gear unit output (low speed) shaft:

#### Starting

### 1.4 Проверка

#### 1) Геометрия - Размеры

Убедитесь, что выбранные размеры совместимы со свободным пространством (например диаметр барабана) и валы полностью совместимы с муфтами, шкивами и т.д.

#### 2) Максимальные перегрузки

При пуске  $T_{2max}$  может приниматься равным величине моменту ускорения ( $T_{2acc}$ ), проходящему через тихоходный вал редуктора:

#### Пуск

$$T_{2max} = T_{2acc} = \left( (0.45 \cdot (T_{1s} + T_{1max}) \cdot ir \cdot \eta) - T_{2n} \right) \cdot \left( \frac{J}{J + J_0 \cdot \eta} \right) + T_{2n} \quad [Nm]$$

dove:

J: momento d'inerzia della macchina e del riduttore ridotto all'asse motore ( $kgm^2$ )

$J_0$ : momento d'inerzia delle masse rotanti sull'asse motore ( $kgm^2$ )

$T_{1s}$ : coppia motrice di spunto (Nm)

$T_{1max}$ : coppia motrice max (Nm)

Where:

J: machine and gear unit inertial load reflected to motor shaft ( $kgm^2$ )

$J_0$ : inertial load of rotating parts at motor shaft ( $kgm^2$ )

$T_{1s}$ : starting torque (Nm)

$T_{1max}$ : max drive torque (Nm)

Где:

J: Приведенный момент инерции вращающихся масс оборудования и редуктора, к валу двигателя ( $kgm^2$ )

$J_0$ : Момент инерции вала двигателя ( $kgm^2$ )

$T_{1s}$ : Пусковой крутящий момент (Nm)

$T_{1max}$ : Макс. крутящий момент (Nm)

E' necessario che sia soddisfatta la seguente relazione:

The following formula must be satisfied:

Необходимо соблюдать следующее неравенство:

$$T_{2max} < T_{max}$$

(2/a)

$T_{max}$

Il valore è indicato nelle schede tecniche di prodotto.

Tale valore deve essere considerato come una coppia massima dovuta a picchi o spunti di avviamento:

- inversioni di moto per effetti inerziali,
- commutazioni da bassa ad alta polarità,
- avviamenti e frenature a pieno carico con grandi momenti d'inerzia (soprattutto nel caso di bassi rapporti),
- sovraccarichi, urti od altri effetti dinamici, deve essere verificata la condizione:

#### ATTENZIONE

Non deve essere mai considerata come coppia di lavoro ed essere opportunamente valutato in quegli azionamenti che comportano un elevato numero di avviamenti o inversioni.

$T_{max}$

The value can be found on the product technical sheets.

Determine maximum overload in the event of:

- reversing due to inertia,
- switching from low to high polarity,
- starts and stops under full load with high moment of inertia (this is especially important for low ratios),
- overload, shock load or other dynamic load conditions, and determine whether this condition is verified:

#### ATTENTION

The max torque should never be considered as a work torque and it must be calculated in applications with high start or inversion runnings.

$T_{max}$

Значения могут быть взяты из раздела с техническими характеристиками.

- Значения максимальной перегрузки определяется при наличии:
- момент инерции возникающего при изменении направления движения;
  - переключение электродвигателя с низкой на высокую полярность;
  - пуск и остановка при полной загрузке (особенно важно на низких передаточных числах);
  - Перепады, удары или другие динамические нагрузки.

#### ВНИМАНИЕ

Максимальный крутящий момент никогда не должен выбираться в качестве номинального момента и должен быть рассчитан с учетом высокого пускового крутящего момента и изменения направления вращения.

### 1.4 Verifiche

#### 3) Numero massimo giri in entrata $n_{1 \max}$

Rappresenta il valore massimo accettabile per ogni grandezza di riduttore, in condizioni di funzionamento intermittente.

Per applicazioni in servizio continuo o per velocità superiori a quelle indicate, il Servizio Tecnico Commerciale è a disposizione per ulteriori chiarimenti.

### 1.4 Verification

#### 3) Input max rpm $n_{1 \max}$

*It's the max acceptable value for each gearbox size with intermittent work.*

*For any different work conditions, you can keep in touch with our technical sales department.*

### 1.4 Проверка

#### 3) Максимальная входная скорость $n_{1 \max}$

Это максимально допустимое значение частоты вращения входного вала для каждого типоразмера редуктора в условиях прерывистого режима работы.

| $n_{1 \max}$                 |                   | EX 1 | EX 2 | EX 3 | EX 4 | EXB 2<br>EXB 3<br>EXB 4 |
|------------------------------|-------------------|------|------|------|------|-------------------------|
| Grandezza<br>Size<br>Габарит | 10 - 20 - 25      | 2800 |      |      |      | 2800                    |
|                              | 30 - 40 - 50 - 70 | 2800 |      |      |      |                         |
|                              | 80 - 90 - 100     | 2000 | 2800 |      |      |                         |
|                              | 150 - 180         | 2000 | 2800 |      |      |                         |
|                              | 250 - 280 - 300   | 2000 |      | 2800 |      |                         |
|                              | 420               | 1500 | 2000 | 2800 |      |                         |
|                              | 650 - 850         | 1000 | 2000 | 2800 |      |                         |
|                              | 1200              | 500  | 1000 | 1400 |      |                         |



1.4 Verifiche

Questo paragrafo ha lo scopo di determinare il carico radiale e/o assiale ammissibile e/o la durata dei cuscinetti degli alberi in entrata ed uscita del riduttore sottoposto all'azione di carichi radiale ed assiali derivanti da macchine motrici ed operatrice.

4.1  $F_{r_{en1-2}}$  e  $F_{a_{en1-2}}$

Per il calcolo dei carichi radiale ed assiali delle macchine motrici ed operatrici applicati al riduttore si rimanda al paragrafo 1.3.

4.2 Caso 1

Carico assiale e radiale non agiscono contemporaneamente.

A - Verifica carico assiale

Metodo di Calcolo  $F_{a_{c1-2}}$

1.4 Verification

*This paragraph is aimed to help you in calculating the acceptable axyl and/or radial load and/or the bearings life of the gearbox, which is submitted to the axyl and radial machine loads.*

4.1  $F_{r_{en1-2}}$  and  $F_{a_{en1-2}}$

*In order to calculate the machine radial and axial loads, please see the paragraph 1.3.*

4.2 Example 1

*The Radial and axial load don't work at the same time.*

A - Axial load verify

Calculation method  $F_{a_{c1-2}}$

1.4 Проверка

Данный пункт описывает методику вычислений допустимых осевых и радиальных нагрузок, и/или ресурс работы подшипников редуктора в соответствии с требуемыми осевыми и радиальными нагрузками.

4.1  $F_{r_{en1-2}}$  и  $F_{a_{en1-2}}$

Для расчета осевых и/или радиальных нагрузок обратитесь к разделу 1.3

4.2 Пример 1

Осевые и радиальные нагрузки не приложены одновременно.

A - Проверка осевой нагрузки

Расчет по методу  $F_{a_{c1-2}}$

$$F_{a_{c1-2}} = K \times F_{a_{n1-2}}$$

(4/a)

Il carico assiale nominale riduttore  $F_{a_{n1}}$ ;  $F_{a_{n2}}$  è riportato nelle schede tecniche di prodotto, il cui valore è stato calcolato considerando  $F_s = 1$  e  $f_{nh} = 10^5$ .

*The gearbox nominal axial load  $F_{a_{n1}}$ ;  $F_{a_{n2}}$  is calculated on the product technical sheet tacking into consideration do  $F_s = 1$  e  $f_{nh} = 10^5$ .*

Редуктор с номинальным осевой нагрузкой  $F_{a_{n1}}$ ;  $F_{a_{n2}}$  рассчитывается техническим параметрам редуктора принимая в расчет  $F_s = 1$  и  $f_{nh} = 10^5$ .

Qualora il parametro calcolato  $f_{nh}$  dell'applicazione sia diverso da  $10^5$  è necessario calcolare il valore di  $F_{a_{c1-2}}$  utilizzando il fattore correttivo del carico K, il cui valore è riportato nelle schede tecniche di prodotto.

*If the calculated application  $f_{nh}$  parameter is different from  $10^5$  it will be necessary to calculate the  $F_{a_{c1-2}}$  value using the K load correction factor that you can find on the product data sheet.*

Если расчетное значение параметра  $f_{nh}$  отличается от  $10^5$ , необходимо проверить по  $F_{a_{c1-2}}$  используя поправочный коэффициент K, который находится в разделе с техническим описанием.

A questo punto è possibile verificare la condizione riportata nella formula:

*Now it's possible to verify the condition studying the following formula.*

После необходимо проверить выполнение неравенства:

$$F_{a_{c1-2}} \geq F_{a_{en1-2}} \times F_s$$

(4/b)

B1 - Verifica carico radiale

Metodo di Calcolo  $F_{r_{c1-2}}$

B1 - Radial load verify

Calculation method  $F_{r_{c1-2}}$

B1 - Проверка радиальной нагрузки

Расчет по методу  $F_{r_{c1-2}}$ .

$$F_{r_{c1-2}} = K \times Fr(x)_{n1-2}$$

(4/c)

Il carico radiale nominale riduttore alla distanza "x",  $Fr(x)_{n1}$ ;  $Fr(x)_{n2}$  è riportato nelle schede tecniche di prodotto, il cui valore è stato calcolato considerando  $F_s = 1$  e  $f_{nh} = 10^5$  e dove x è la distanza del carico radiale nominale applicazione dalla battuta dell'albero uscita.

*The gearbox nominal radial load at distance "x",  $Fr(x)_{n1}$ ;  $Fr(x)_{n2}$  can be found on the product technical sheet and is calculated tacking into consideration  $F_s = 1$  and  $f_{nh} = 10^5$  and where x is the distance of the application nominal radial load from the output shaft step ..*

Значения допустимой радиальной нагрузки, приложенной на расстоянии "x",  $Fr(x)_{n1}$ ;  $Fr(x)_{n2}$  указаны в разделе с техническим описанием редуктора исходя из  $F_s = 1$  и  $f_{nh} = 10$ .

Qualora il parametro calcolato  $f_{nh}$  dell'applicazione sia diverso da  $10^5$  è necessario calcolare il valore di  $F_{r_{c1-2}}$  utilizzando il fattore correttivo del carico K, il cui valore è riportato nelle schede tecniche di prodotto.

*If the calculated application  $f_{nh}$  parameter is different from  $10^5$  it's necessary to calculate the  $F_{r_{c1-2}}$  value using the K load correction factor, as specified on the product data sheet.*

Если расчетное значение параметра  $f_{nh}$  отличается от  $10^5$ , необходимо проверить по  $F_{r_{c1-2}}$  используя поправочный коэффициент K, который находится в разделе с техническим описанием.

A questo punto è possibile verificare la condizione riportata nella formula:

*Now it's possible to verify the condition from the following formula:*

После необходимо проверить выполнение неравенства:

$$F_{r_{c1-2}} \geq F_{r_{en1-2}} \times F_s$$

(4/d)

**1.4 Verifiche**

B2 - Calcolo durata in ore dei cuscinetti  
 Conoscendo:  $F_{ren1-2}$  ;  $F_s$  ;  $F_r(x)_{n1-2}$  alla distanza  $x$  dalla battuta.  
 Dalla formula indicata si ricava il fattore  $K$ .

**1.4 Verification**

B2 - Bearings life calculation If you know:  $F_{ren1-2}$  ;  $F_s$  ;  $F_r(x)_{n1-2}$  from step  $x$  distance.  
 From the following formula we extract  $K$  factor.

**1.4 Проверка**

B2 - Расчет срока службы подшипников исходя из значений  $F_{ren1-2}$  ;  $F_s$  ;  $F_r(x)_{n1-2}$  и плеча приложений „ $x$ “  
 Из следующей формулы можно получить значение коэффициента  $K$ :

$$K = (F_{ren1-2} \times F_s) / F_r(x)_{n1-2}$$

(4/e)

Dal grafico del fattore  $K$  si ricava il valore  $f_{n2h}$  da cui, conoscendo il numero di giri  $n_2$ , si ricava la durata  $h$ .

From  $K$  factor graphic we extract  $f_{n2h}$  and if you know the  $n_2$ , speed, we calculate the life  $h$ .

По значению коэффициента  $K$  из графика извлекаем значение  $f_{n2h}$  и используя  $n_2$  можно рассчитать ресурс  $h$ .

**4.3 Caso 2**

Carico assiale e radiale agiscono contemporaneamente.

In questo caso è necessario effettuare un calcolo di verifica completo che richiede la conoscenza dei seguenti dati base:

- carico radiale  $F_{ren2}$  (verso, intensità, direzione);
- carico assiale  $F_{aen2}$  (verso, intensità);
- senso di rotazione dell'albero

**4.3 Example 2**

The Radial and axial load work at the same time.

In this case it's necessary to do a complete checking calculation, but we must have the following information:

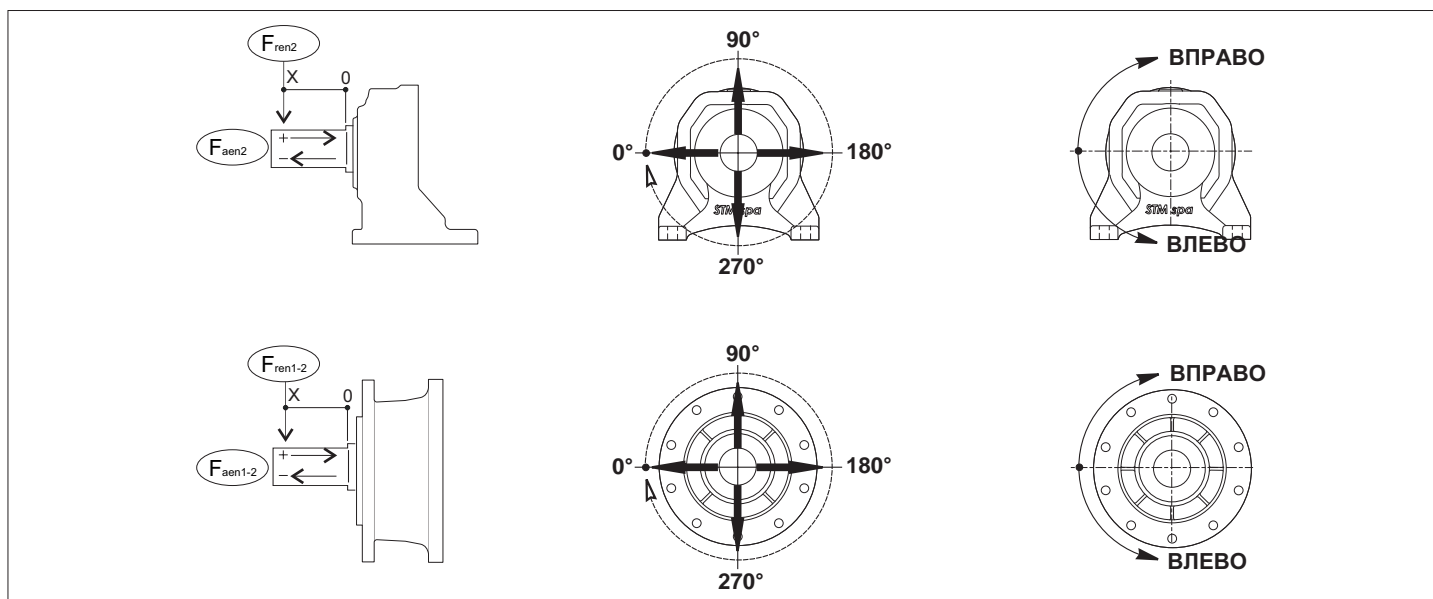
- radial load  $F_{ren2}$  (way, intensity and direction);
- axial load  $F_{aen2}$  (way and intensity);
- shaft rotation

**4.3 Пример 2**

Осевые и радиальные нагрузки приложены одновременно.

В этом случае необходимо провести полный расчет параметром и знать следующую информацию:

- радиальная нагрузка  $F_{ren2}$  (тип, размер, направление);
- осевая нагрузка  $F_{aen2}$  (тип и направление);
- направление вращения вала



5) Verifica Posizione di montaggio

5) Check mounting position

6) Проверьте монтажное положение

6) Lubrificazione

6) Lubrication

6) Смазка

6.1 - Verificare che tipo e viscosità olio siano idonee alle velocità applicate, ai carichi e al rapporto di riduzione del riduttore selezionato;

6.1 - Verify that the oil type and viscosity are suitable to the input speed and ratio required;

6.1) Необходимо убедиться в совместимости выбранного типа масла и его вязкости с передаточным числом редуктора и скоростью входного вала;

6.2 - Verificare che la quantità di olio sia conforme alla:

6.2 - Verify if the oil quantity is corresponding to:

6.2) Убедиться в том, что уровень масла соответствует:

- taglia ;
- versione;
- posizione di montaggio.

- size
- mounting position

- типоразмеру редуктора
- исполнению
- монтажному положению

6.3 - Verificare se occorre montare il vaso di espansione e tappo di sfiato.

6.3 - Verify if it's necessary to mount an oil tank and breather plug.

6.3) Проверить необходимость в установке расширительного бачка для масла.

Per maggiori chiarimenti vedere sezione V.

For any other information please see section V.

За прочей информацией обратитесь к разделу V.

1.4 Verifiche

1.4 Verification

1.4 Проверка

7) Potenza termica del riduttore:  
è necessario verificare la seguente formula:

7) Gearbox thermal power:  
it's necessary to check the following formula:

7) Термическая мощность редуктора  
Необходимо проверить выполнение следующего неравенства:

$$P_1 \leq P_{tN} \times f_m \times f_a \times f_d \times f_p \times f_r \quad [\text{kW}]$$

(7/a)

Considerazioni sui parametri con i quali è stata calcolata la  $P_{tN}$  sono riportati nella tabella con indicato, per ciascun parametro, il relativo parametro correttivo. I valori delle  $P_{tN}$  dei riduttori sono riportate nella tabella riportata nella pagina seguente.

The thermal power considerations with the corresponding correction parameters can be found in the following table.

Условия, для которых рассчитана термическая мощность редуктора, указаны в таблице ниже:

The gearboxes  $P_{tN}$  values are in the table on next page.

Значения  $P_{tN}$  для редукторов указаны на следующей странице.

Nei riduttori combinati del tipo EXV - EXA - EXO ecc. è necessario verificare la potenza al limite termico anche del riduttore accoppiato.

On the combined EXV - EXA - EXO gearboxes it's necessary to check the secondary gearbox thermal power too.

При использовании комбинированных редукторов типа EXV – EXA – EXO необходимо проверить оба редуктора на термическую мощность.

A

**$P_{tN}$  = potenza termica nominale/thermal power rating/номинальная термическая мощность**

| Descrizione condizione operativa<br>Operative condition description<br>Описание условий эксплуатации | Valore Riferimento per calcolo $P_{tN}$<br>Reference value for $P_{tN}$ calculation<br>Значения для расчета $P_{tN}$  | Fattore correttivo di riferimento<br>Reference correction factor<br>Корректирующие коэффициенты  |
|--|---|--|
| 1 - Ambiente Lavoro *<br>1 - Work ambient*<br>1 - Температура окр. среды*                            | ambiente industriale aperto con velocità dell'aria di 1,4 m/s<br>open space industrial environment with air speed 1,4 m/s<br>открытое пространство со скоростью ветра до 1,4м/сек | Da definire tipo ambiente/Ambient type to define/<br>Определение окружающей среды<br><br>A - Ambiente Chiuso / Closed space / Закрытое пространство<br>B - Carter  |
| 2 - Stato Superficiale *<br>2 - Surface condition*<br>2 - Состояние покрытия*                        | Non verniciato con nessun accumulo di polvere e/o sporco.<br>Not painted without deposit of dust and/or dirt.<br>Без покрытия, свободно от пыли и грязи                           | Da definire tipo finitura/Finishing type to define/<br>Определение покрытия<br>Esempio / For example / Например B.<br>A - Verniciato/Painting/Окрашено;<br>B - Sporco e/o Polvere/Dirty and/or dust/ Грязь и/или пыль  |
| 3 - Motorizzazione *<br>3 - Input adjustment*<br>3 - Конфигурация входа*                             | Versione ECE - Senza alcuna ventilazione<br>ECE version - without ventilation<br>Исполнение ECE, без вентилятора  | Da definire tipo unità motrice / Prime mover type to be defined /<br>Определение входного вала<br>Se l'unità motrice è installata direttamente sul riduttore ne perturba lo stato di equilibrio termico.<br>If the prime mover is mounted on the gearbox his thermal power will be different.<br>При монтаже мотора непосредственно на редукторе, термическая мощность будет отличаться. |
| 4 - Metodo di Lubrificazione<br>4 - System Lubrification<br>4 - Система смазки                       | Sbattimento<br>Splash Oil<br>Погружение в маслянную ванну   | fm.: fattore correttivo per la posizione di montaggio, velocità e rapporto.<br>fm.: correction factor accounting for mounting position, speed and ratio.<br>fm.: Поправочный коэффициент учитывающий передаточное число, монтаж, скорость вала.<br>При смазке под давлением необходимо принять fm = 1  |
| 5 - <b>Montaggio posizione</b>   | M1  |  |
| 6 - $n_1$  | 1000 [rpm]  |  |
| 7 - Tipo Lubrificante *<br>7 - Lubricant type*<br>7 - Тип смазки*                                    | PAG ISO VG 320 olio sintetico<br>PAG ISO VG 320 syntetic oil<br>PAG ISO VG 320 синтетическое масло  | Da definire<br>to define<br>Необходимо определить  |
| 8 - $t_a$  | 20 [° C]  | fp = fattore correttivo della temperatura ambiente<br>fp = ambient temperature factor<br>fp = коэф. температуры окружающей среды   |
| 9 - $t_{oil}$  | -   | -  |
| 10 - Tipo Servizio<br>10 - Working use<br>10 - Режим эксплуатации                                    | Continuo<br>Continuos<br>Непрерывный  | fd = fattore correttivo del tempo di lavoro fd =<br>operation time factor<br>fd = коэф. продолжительности включений  |
| 11 - altitudine<br>11 - Altitude<br>11- Высота над уровнем моря                                      | 0 [m]   | fa = fattore correttivo dell'altitudine<br>fa = altitude factor<br>fa = Коэф. высоты над уровнем моря  |

1.4 Verifiche

1.4 Verification

1.4 Проверка

| $P_{IN}$ |   |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |
|----------|---|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
|          | 10  | 20 | 25 | 30 | 40 | 50 | 70 | 80 | 90 | 100 | 150 | 180 | 250 | 300 | 420 | 650 | 850 |
| EX 1     | Vedere tabelle delle prestazioni<br>Please look at the performance tables<br>Смотри таблицы характеристик |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |
| EX 2     |   |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |
| EX 3     |   |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |
| EX 4     |   |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |

**ATTENZIONE:**  
Questo valore non deve essere confuso con la potenza della unità motrice installata che per esempio per esigenze di normalizzazione è scelto a volte più grande del necessario.

**ATTENTION:**  
This value must not be confused with the installed prime mower power, that sometimes is mounted bigger than necessary.

**ВНИМАНИЕ:**  
Данный параметр нельзя путать с мощностью установленного двигателя, который может быть значительно больше.

| $f_m$  |                         |                    |                  |
|--------|-------------------------|--------------------|------------------|
| size   |                         | M1-M2-M5-M6        | M3-M4            |
|        |                         | $n_1$              |                  |
|        |                         | >1000 - $n_{1max}$ | 1751- $n_{1max}$ |
| EX...1 | 10-20-25                | 0.95               | 0.9              |
|        | 30-50-70                | 0.95               | 0.9              |
|        | 80-100                  | 0.90               | 0.8              |
|        | 150-180-200-250-280-300 | 0.85               | 0.7              |
|        | 350-420                 | 0.8                | 0.68             |
|        | 650                     | 1.0                |                  |
|        | 850                     |                    |                  |
| 1200   |                         |                    |                  |

| size   |                         | EX: M1-M2-M5-M6<br>EXB: M...1 - M...2 | EX: M3-M4<br>EXB: M...3 - M...4 - M...5 - M...6 |
|--|-------------------------|---------------------------------------|---|
|  |                         | $n_1$                                 |   |
|  |                         | > 1000- $n_{1max}$                    | 1751- $n_{1max}$                                |
| EX...2<br>EXB...2<br>EX...3<br>EXB...3<br>EX...4<br>EX...4 | 10-20-25                | 1.0                                   | 1.0   |
|  | 30-40-50-70             | 1.0                                   | 0.95  |
|  | 80-90-100               | 0.95                                  | 0.85  |
|  | 150-180-200-250-280-300 | 0.90                                  | 0.75  |
|  | 350-420                 | 0.85                                  | 0.7   |
|  | 650                     | 0.8                                   |   |
|  | 850                     |                                       |   |
| 1200   |                         |                                       |   |

N.B. I valori di  $n_{1max}$  sono riportati al punto 3 (Verifiche).  
( $f_m = 1$  nel caso in cui  $n_1 = 0-1000 \text{ min}^{-1}$ )

**NOTE**  $n_{1max}$  values are listed at point 3 (Verification)  
( $f_m = 1$  if  $n_1 = 0-1000 \text{ rpm}$ )

**ПРИМЕЧАНИЕ:** Значения  $n_{1max}$ , приведенные в пункте 3 "Проверка"  
( $f_m = 1$  при  $n_1 = 0 - 1000 \text{ min}^{-1}$ )

| $f_a$ |   |      |      |      |      |
|-------|---|------|------|------|------|
| m     | 0 | 750  | 1500 | 2250 | 3000 |
| fa    | 1 | 0.95 | 0.90 | 0.85 | 0.81 |

| $f_d$ |      |
|-------|------|
| S3%   |      |
| 100   | 1    |
| 80    | 1.05 |
| 60    | 1.15 |
| 40    | 1.35 |
| 20    | 1.8  |

Durate di un ciclo / Cycle duration  
Один цикл

Carico / Load / Нагрузка

$S3 = \frac{N}{N + R} \cdot 100$

| $f_p$   |       |       |       |       |       |      |
|---|-------|-------|-------|-------|-------|------|
| Temperatura ambiente<br>Ambient temperature<br>Темп. окружающей среды | 50 °C | 40 °C | 30 °C | 20 °C | 10 °C | 0 °C |
|   | 0.63  | 0.75  | 0.87  | 1     | 1.12  | 1.25 |

1.4 Verifiche

1.4 Verification

1.4 Проверка

$f_f$

Il fattore correttivo  $f_f$  della potenza termica che tiene conto dell'effetto refrigerante della ventola assume in accordo con le norme AGMA 6010.E88 i valori riportati nella tabella 8. L'impiego è limitato alle velocità maggiori o uguali a 700  $\text{min}^{-1}$ .

Cooling fan factors  $f_f$  reported in table 8 are in accordance with AGMA 6010.E88 and can be used directly to adjust thermal power to reflect the use of a cooling fan. These factors must only be used for speeds equal to 700 rpm and higher.

В соответствии со стандартами AGMA 6010.E88 коэф.охлаждения вентилятором, указанный в таблице 8, применяется для корректировки термической мощности. Использование данного коэф.допустимо при скорости входного вала от 700 $\text{min}^{-1}$  и выше.



| Tipo / Type / Typ | Tipo ventola / Fan type / Lüfbertyp | Note / Notes / Примечание   | $f_f$ |
|-------------------|-------------------------------------|---|-------|
| EX<br>EXB         | VE                                  | Contattare per la selezione il servizio Tecnico Commerciale<br>Please contact our sales technical dept.<br>Обратитесь в наш технический отдел |       |

Qualora (7/a) non sia verificata occorre sostituire la ventola con un gruppo di raffreddamento con scambiatore di calore. Per selezionare il gruppo di raffreddamento adeguato occorre determinare la  $P_{ta}$  necessaria:

If (7/a) is not verified, opt for a heat exchanger instead of fan cooling. To select a suitable cooling unit, you need to determine required  $P_{ta}$ :

В случае не выполнения неравенства (7/a) необходимо использовать станцию охлаждения вместо вентилятора. Для выбора подходящей станции требуется определить значение  $P_{ta}$ :

|  |       |
|--|-------|
| $P_{ta} = P_1 - (P_{tN} \times f_m \times f_a \times f_d \times f_p)$ [kW] | (7/b) |
|--|-------|

dove:  
 $P_{ta}$  = potenza termica addizionale

Where:  
 $P_{ta}$  = additional thermal power required

Где:  
 $P_{ta}$  = избыточная термическая мощность

Dopo avere selezionato il gruppo di raffreddamento, ripetere la verifica aggiungendo alla precedente il valore massimo di  $P_{tamax}$  del range identificato espresso in tabella, adeguato con i coefficienti correttivi di temperatura acqua e aria:

After selecting the cooling unit, check that the following condition is satisfied; as you can see, it considers the upper limit value  $P_{tamax}$  of the resulting tabulated range adjusted using the water and air temperature correction factors:

После выбора станции охлаждения проверьте выполнение следующего условия. Обратите внимание, что  $P_{tamax}$  - верхнее значение из представленного в таблице диапазона отводимой мощности, в зависимости от типоразмера станции и способа отвода тепла:

|  |       |
|--|-------|
| $P_1 \leq (P_{tN} \times f_m \times f_a \times f_d \times f_p) + (P_{tamax} \times f_w \times f_c)$ [kW] | (7/b) |
|--|-------|

dove:  
 $P_{tamax}$  = potenza termica addizionale del range identificato espresso in tabella  
 $f_w$  = coefficiente relativo alla temperatura dell'acqua (esclude  $f_c$ )  
 $f_c$  = coefficiente relativo alla temperatura dell'aria (esclude  $f_w$ )

Where:  
 $P_{tamax}$  = additional thermal power required obtained from resulting tabulated range  
 $f_w$  = water temperature factor (excludes  $f_c$ )  
 $f_c$  = air temperature factor (excludes  $f_w$ )

Где:  
 $P_{tamax}$  = избыточная термическая мощность  
 $f_w$  = коэф.температуры охлаждающей жидкости  
 $f_c$  = коэф.температуры охлаждающего воздуха

**P<sub>ta</sub> [kW]**

**EX**

| Raffreddamento con scambiatore acqua-olio (Tacqua=15°C)<br>Cooling by water-oil exchanger (Twater=15°C)<br>Водно-масляный теплообменник (Тводы=15°C) |                  |             |           |           |           |
|--|------------------|-------------|-----------|-----------|-----------|
| RFW...   |                  | EX 1        | EX 2      | EX 3      | EX 4      |
| Size   | Q <sub>min</sub> |             |           |           |           |
| 1  | 6                | ≤ 135       | ≤ 66      | ≤ 46      | ≤ 37      |
| 2  | 6                | 136 ÷ 219   | 67 ÷ 108  | 47 ÷ 74   | 38 ÷ 59   |
| 3  | 16               | 220 ÷ 412   | 109 ÷ 202 | 75 ÷ 139  | 60 ÷ 111  |
| 4  | 30               | 413 ÷ 1104  | 203 ÷ 542 | 140 ÷ 373 | 112 ÷ 298 |
| 5  | 80               | 1105 ÷ 1972 | 543 ÷ 968 | 374 ÷ 666 | 299 ÷ 533 |

| Raffreddamento con scambiatore aria-olio (Taria=20°C)<br>Cooling by air-oil exchanger (Tair=20°C)<br>Воздушно-масляный теплообменник (Твоздуха=20°C) |                  |             |             |            |            |
|--|------------------|-------------|-------------|------------|------------|
| RFA...   |                  | EX 1        | EX 2        | EX 3       | EX 4       |
| Size   | Q <sub>min</sub> |             |             |            |            |
| 1  | 6                | ≤ 304       | ≤ 149       | ≤ 103      | ≤ 82       |
| 2  | 13               | 305 ÷ 407   | 150 ÷ 200   | 104 ÷ 138  | 83 ÷ 110   |
| 3  | 32               | 408 ÷ 798   | 201 ÷ 392   | 139 ÷ 269  | 111 ÷ 215  |
| 4  | 112              | 799 ÷ 1336  | 393 ÷ 656   | 270 ÷ 451  | 216 ÷ 361  |
| 5  | 112              | 1337 ÷ 2003 | 657 ÷ 984   | 452 ÷ 676  | 362 ÷ 541  |
| 6  | 160              | 2004 ÷ 2516 | 985 ÷ 1235  | 677 ÷ 849  | 452 ÷ 679  |
| 7  | 160              | 2517 ÷ 3952 | 1236 ÷ 1940 | 850 ÷ 1334 | 680 ÷ 1067 |



**EXB**

Raffreddamento con scambiatore acqua-olio (Tacqua=15°C)  
Cooling by water-oil exchanger (Twater=15°C)  
Водно-масляный теплообменник (Тводы=15°C)

| RFW... |                  | EXB 2     | EXB 3<br>EXB 4 |
|--------|------------------|-----------|----------------|
| Size   | Q <sub>min</sub> |           |                |
| 1      | 6                | ≤ 46      | ≤ 37           |
| 2      | 6                | 47 ÷ 74   | 38 ÷ 59        |
| 3      | 16               | 75 ÷ 139  | 60 ÷ 111       |
| 4      | 30               | 140 ÷ 373 | 112 ÷ 298      |
| 5      | 80               | 374 ÷ 666 | 299 ÷ 533      |

Raffreddamento con scambiatore aria-olio (Taria=20°C)  
Cooling by air-oil exchanger (Tair=20°C)  
Воздушно-масляный теплообменник (Твоздуха=20°C)

| RFA... |                  | EXB 2      | EXB 3<br>EXB 4 |
|--------|------------------|------------|----------------|
| Size   | Q <sub>min</sub> |            |                |
| 1      | 6                | ≤ 103      | ≤ 82           |
| 2      | 13               | 104 ÷ 138  | 83 ÷ 110       |
| 3A     | 32               | 139 ÷ 269  | 111 ÷ 215      |
| 4      | 112              | 270 ÷ 451  | 216 ÷ 361      |
| 5      | 112              | 452 ÷ 676  | 362 ÷ 541      |
| 6      | 160              | 677 ÷ 849  | 452 ÷ 679      |
| 7      | 160              | 850 ÷ 1334 | 680 ÷ 1067     |

**fw**

Coefficiente relativo alla temperatura dell'acqua  
Water temperature factor  
Коэффициент температуры воды

| Twater    | 15°C | 20°C | 25°C | 30°C |
|-----------|------|------|------|------|
| <b>fw</b> | 1    | 0.85 | 0.7  | 0.6  |

**fc**

Coefficiente relativo alla temperatura dell'aria  
Air temperature factor  
Коэффициент температуры воздуха

| Tair      | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C |
|-----------|------|------|------|------|------|------|
| <b>fc</b> | 1.12 | 1    | 0.88 | 0.75 | 0.65 | 0.5  |

Una volta selezionato lo scambiatore è necessario verificare se la quantità di olio del riduttore è sufficiente a garantire un corretto funzionamento del gruppo. Pertanto deve essere verificata la relazione:

After selecting the cooling system it's necessary to check if the oil quantity is enough for making it work.

Therefore check the following formula:

После выбора станции охлаждения необходимо убедиться в том, что заливаемого масла будет достаточно для нормальной работы: Для этого воспользуйтесь формулой:

$$Q_{rid} \geq Q_{min} \times 1.2$$

(7/c)

**Q<sub>rid</sub>** - Quantità olio di riempimento del riduttore (vedere Sezione V)

**Q<sub>rid</sub>** - Gearbox oil quantity (I) look at vedere Section V

**Q<sub>rid</sub>** - Количество масла необходимое редуктору (л)

**Q<sub>min</sub>** - Quantità olio minima che deve avere il serbatoio olio per garantire il funzionamento del gruppo.

**Q<sub>min</sub>** - Minimum tank oil quantity to assure the cooling running.

**Q<sub>min</sub>** - Минимальное количество масла, требуется для нормальной работы станции охлаждения.

Qualora la relazione non fosse soddisfatta è necessario prevedere un serbatoio aggiuntivo

If the formula is not satisfied, it will be necessary to add another oil tank.

В случае несоблюдения неравенства в систему требуется добавить расширительных бак для масла.

8) Condizioni di impiego:

8.1 - ta > 0 °C: vedere i punti 6 e 7;

8.2 - ta < -10 °C: contattare il nostro servizio tecnico-commerciale.

8) Using conditions:

8.1 - ta > 0 °C: look at points 6 and 7;

8.2 - ta < -10 °C: contact our technical sales dept.

8) Используемые условия:

8.1 - ta > 0°C: смотри пункты 6 и 7;

8.2 - ta < -10 °C: свяжитесь с нашим техническим отделом.



1.4 Verifiche

1.4 Verification

1.4 Проверка

9) Coppia di slittamento del calettatore

9) *Shrink disk slipping torque*.

9) Момент проскальзывания стяжной муфты

E' necessario che sia soddisfatta la seguente relazione:

The following formula must be satisfied:

Необходимо соблюдения следующего неравенства:

$$M_{2s} > T_{2max}$$

(7/d)

|   | 10<br>20<br>25 | 30<br>40<br>50<br>70 | 80    | 90<br>100 | 150<br>180<br>200 | 250<br>280 | 300   | 350   | 420   | 650    | 850    | 1200   |
|---|----------------|----------------------|-------|-----------|-------------------|------------|-------|-------|-------|--------|--------|--------|
| Coppia Slittamento<br><i>Slipping torques</i><br>Момент проскальзывания $M_{2s}$ [Nm] | 2200           | 7500                 | 13000 | 17600     | 35000             | 41000      | 52000 | 62000 | 86000 | 136000 | 176000 | 342000 |

**Nota**  
Sulle grandezze 420-650-850-1200 si utilizzano calettatori con larghezza maggiorata che consentano di avere una distribuzione del carico più uniforme riducendo così lo stato tensionale dell'albero uscita.

**Remark**  
*sizes 420-650-850-1200 are using shrink disk with increased width, in order to have uniform distribution of the load thereby reducing the stress load of the output shaft.*

**Примечание**  
на габаритах 420-650-850-1200 стяжная муфта используется для снижения напряжений, возникающих на выходном валу.



10) Verifica peso motore elettrico:  
EX - Lineare:

10) *Verify of the electric motor weight:*  
EX - In line:

10) Проверка веса присоединяемого электродвигателя

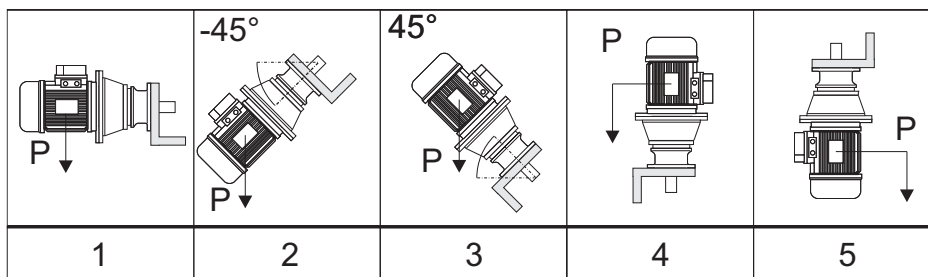
Qualora la grandezza del motore elettrico installato sia maggiore della IEC 180 (peso 165 Kg) e qualora la posizione di montaggio del riduttore sia tale da porre il motore nelle posizioni 1-2-3 è necessario contattare il nostro servizio tecnico per verificare se l'installazione è idonea, considerando il peso del motore installato e il fattore di servizio dell'applicazione.

*If the input electric motor is bigger than IEC 180 (weight 165 Kg) and the mounting position is 1-2-3, it will be necessary to contact our technical sales department to check the electric motor weight and the service factor of the installation.*

При использовании электродвигателей больше IEC180 (весом 165кг) и монтажном положении 1-2-3 необходимо связаться с нашим техническим отделом для проверки данного соединения.

$P_{KG}$  - Electric motor weight

$P_{KG}$  - Вес электродвигателя



1.4 Verifiche

1.4 Verification

1.4 Проверка

11) Coppia frenatura-Motore Autofrenante

11) Braking torque - Brake motor

11) Момент торможения - двигатель с тормозом

Nel caso di frenature  $T_{2max}$  può essere considerata come quella parte della coppia decelerante ( $T_{2dec}$ ) che passa attraverso l'asse lento del riduttore:

For braking  $T_{2max}$  may be considered as that portion of deceleration torque ( $T_{2dec}$ ) passing through the gear unit output (low speed) shaft:

При торможении  $T_{2max}$  принимается равным моменту торможения  $T_{2dec}$ , приложенным к тихоходному валу редуктора:

$$T_{2max} = T_{2dec} = \left( \left( \frac{T_{1f} \cdot ir}{\eta} \right) - T_{2n} \right) \cdot \left( \frac{J}{J + \frac{J_0}{\eta}} \right) + T_{2n} \quad [Nm]$$

dove:

J: momento d'inerzia della macchina e del riduttore ridotto all'asse motore ( $kgm^2$ )  
 $J_0$ : momento d'inerzia delle masse rotanti sull'asse motore ( $kgm^2$ )  
 $T_{1f}$ : coppia frenante dinamica (Nm)

Where:

J: machine and gear unit inertial load reflected to motor shaft ( $kgm^2$ )  
 $J_0$ : inertial load of rotating parts at motor shaft ( $kgm^2$ )  
 $T_{1f}$ : dynamic braking torque (Nm)

Где:

J: Приведенный момент инерции вращающихся масс оборудования и редуктора к валу двигателя ( $kgm^2$ )  
 $J_0$ : Момент инерции вала двигателя ( $kgm^2$ )  
 $T_{1f}$ : Момент торможения тормоза мотора (Nm)

Prima della messa in servizio del riduttore è necessario verificare la seguente relazione:

Before using the gearbox, it's necessary to verify the following formula:

Перед использованием редуктора необходимо проверить выполнение неравенства:

$$T_{2max} < T_{max}$$

(7/e)

Qualora la condizione non sia rispettata è necessario provvedere alla regolazione della coppia di frenatura.

If the condition is not respected, it will be necessary to adjust the braking torque.

Если условие не выполняется, необходимо увеличить момент тормоза.

## 1.5 Stato di fornitura

### 1.5.1 VERNICIATURA E PROTEZIONE

I riduttori sono verniciati esternamente con fondo antiossidante all'acqua di colore rosso, salvo disposizioni contrattuali diverse

La protezione è idonea a resistere a normali ambienti industriali anche esterni, e a consentire finiture ulteriori con vernici sintetiche.

Per maggiori informazioni relative allo stato di fornitura vedere la tabella seguente

#### Caratteristiche della Vernice

Nel caso si prevedano condizioni ambientali particolarmente aggressive occorre adottare verniciature speciali.

#### ATTENZIONE

In caso di verniciatura dei prodotti, si devono preservare da tale trattamento i piani lavorati e le tenute, al fine di evitare che la vernice ne alteri le caratteristiche chimico-fisiche e pregiudichi l'efficienza dei paraolio. Occorre analogamente preservare la targa di identificazione, e proteggere contro l'occlusione il tappo di livello dell'olio e il foro del tappo di sfato (ove esistenti).

## 1.5 Scope of the supply

### 1.5.1 PAINTING AND PROTECTION

The gear units are externally painted with a red water-base antioxidising undercoat, unless different contractual instructions are given.

The protection is suitable to stand normal industrial environments, also outdoors, and allows additional synthetic paint finishes.

For further details about the supply conditions, please refer to the following table

#### Paint features

In case particularly aggressive environment conditions are expected, special paints will be needed.

#### ATTENTION

If the product must be painted, protect the machined surfaces and oil seals/gaskets in order to prevent any damage. It is also necessary to protect the identification plate, the oil level plug (if fitted) and the hole in the breather plug (if fitted) against obstruction.

## 1.5 Состояние поставки

### 1.5.1 ЗАЩИТНОЕ ПОКРЫТИЕ И ПОКРАСКА

Если иное не оговорено контрактом, редукторы поставляются окрашенными красной антиоксидной краской на водной основе.

Данное покрытие подходит для использования в общепромышленных условиях, на открытом воздухе и может быть покрыто синтетическими лаковыми красками.

За дополнительной информацией о состоянии поставки можно найти в следующей таблице.

#### Свойства покрытия

Для эксплуатации в особенно агрессивных средах должно использоваться специальное покрытие.

#### ВНИМАНИЕ

В случае самостоятельного нанесения дополнительных покрытий защитите от попадания краски обработанные поверхности и уплотнения во избежание изменения их физико-химических свойств. Также необходимо защитить шильдик изделия и пробку уровня масла и пробку воздушного клапана.

Tabella riassuntiva / Summary Table / Сводная таблица

| Serie<br>Series<br>Серия | Verniciatura Interna<br>Inner painting<br>Внутренняя покраска                             | Verniciatura Esterna<br>Outer painting<br>Außenlackierung   |  | Piani lavorati<br>Machined surfaces<br>Обработанные поверхности   | Alberi<br>Shafts<br>Wellen  |
|--------------------------|---|---|--|---|---|
|                          |   | Tipo e Caratteristiche vernice<br>Paint type and features<br>Тип краски и свойства  | Verniciabile<br>Can be painted<br>Возможность покраски |   |   |
| <b>EX<br/>EXB</b>        | Uguale a verniciatura esterna<br>Same as outer painting<br>Совпадает с наружным покрытием | Fondo antiossidante all'acqua di colore rosso,<br>a red water-base antioxidising undercoat,<br>красная антиоксидная краска на водной основе | Да   | Quando il materiale è la ghisa sono protetti con pasta antiruggine.<br><br>When material is cast iron, they are protected by oxide protectant<br>Поверхности из чугуна покрыты консервационным материалом | Protetti con pasta antiruggine.<br>Protected by oxide protectant.<br>Покрываются консервационным материалом |

### 1.5.2 LUBRIFICAZIONE

Per i dati relativi allo stato di fornitura dei riduttori per quanto riguarda la lubrificazione si rimanda al paragrafo relativo alla lubrificazione.

#### ATTENZIONE:

Lo stato di fornitura è messo in evidenza con una targhetta adesiva posta sul riduttore.

Verificare la corrispondenza tra stato di fornitura e targhetta adesiva.

### 1.5.2 LUBRICATION

Please refer to the paragraph about lubrication for further details on state of supply of gearboxes as far as lubrication is concerned.

#### CAUTION:

Gearbox state of supply is indicated on a nameplate applied on gearbox.

Ensure that nameplate data and state of supply correspond.

### 1.5.2 СМАЗКА

За информацией, относящейся к поставке смазочных материалов редуктора, обратитесь к разделу Смазка.

#### ВНИМАНИЕ:

Редуктор на корпусе имеет наклейку, отражающую состояние поставки смазки. Убедитесь, что наименование масла совпадает требуемым типом.

| Riduttore Privo di Lubrificante<br>Gearbox with no lubricant<br>Редуктор поставляется без масла | Riduttore Completo di Lubrificante Standard STM<br>Gearbox with lubricant<br>STM standard<br>Редуктор заправлен стандартным маслом | Riduttore Completo di Lubrificante "ALIMENTARE"<br>Gearbox with lubricant "FOOD-TYPE"<br>Редуктор заправлен маслом пищевого типа |
|---|--|--|
|              |   |   |

## 1.5 Stato di fornitura

### 1.5.3 CONNESSIONE MOTORE/RIDUTTORE CON GIUNTO STM/ROTEX

Qualora la connessione tra riduttore e macchina motrice sia effettuata con un giunto è necessario verificare se è necessario montare un linguetta di dimensioni a disegno STM.

La linguetta e la targhetta nella quale sono riportate le istruzioni di montaggio sono allegate ad ogni fornitura.

Qualora non fornite segnalare il problema al Nostro Ufficio Commerciale ed attenersi alle istruzioni di installazione riportate nello specifico paragrafo.

## 1.6 Normative applicate

### 1.6.1 Specifiche prodotti non "ATEX"

I riduttori della STM SpA sono organi meccanici destinati all'uso industriale e all'incorporazione in apparecchiature meccaniche più complesse. Dunque non vanno considerati macchine indipendenti per una predeterminata applicazione ai sensi 2006/42/CE, né tantomeno dispositivi di sicurezza.

### 1.6.2 Specifiche prodotti "ATEX"

#### Campo applicabilità

La direttiva ATEX (94/9/CE) si applica a prodotti elettrici e non elettrici destinati a essere introdotti e svolgere la loro funzione in atmosfera potenzialmente esplosiva. Le atmosfere potenzialmente esplosive vengono suddivise in gruppi e zone a seconda della probabilità di formazione. I prodotti STM sono Conformi alla seguente classificazione:

- 1- Gruppo: II
- 2- Categoria: Gas 2G polveri 2D
- 3- Zona: Gas 1 – Polveri 21

## 1.5 Scope of the supply

### 1.5.3 CONNECTING THE MOTOR AND GEARBOX WITH STM/ROTEX JOINT

If gearbox and driving machine are connected by means of a joint, check whether it is necessary to install a key sized as specified on STM drawing.

Key and nameplate indicating assembly instructions come with any supply.

Should they be missing, report this problem to our Sales Dept. and follow the installation instructions given in the relevant paragraph.

## 1.6 Standards applied

### 1.6.1 Specifications of non - "ATEX" products

STM SpA gearboxes are mechanical devices for industrial use and incorporation in more complex machines. Consequently, they should not be considered neither self-standing machines for a pre-determined application according to 2006/42/EC nor safety devices.

### 1.6.2 Specifications of "ATEX" products

#### Application field

ATEX set of provisions (94/9/CE) is referred to electric and non-electric products which are used and run in a potentially explosive environment. The potentially explosive environments are divided into different groups and zones according to the probability of their formation. STM products are in conformity with following classification:

- 1- Group : II
- 2- Type : Gas 2G dust 2D
- 3- Zone : Gas 1 – Dust 21

## 1.5 Состояние поставки

### 1.5.3 СОЕДИНЕНИЕ МОТОРА С РЕДУКТОРОМ С ПОМОЩЬЮ МУФТЫ ТИПА STM/ROTEX

При соединении вала редуктора и вала двигателя через муфту необходимо проверить необходимость использования шпонки вала по чертежу STM. Шпонка и инструкция по установке включены в комплект поставки. В случае утери или возникновения проблем с монтажом обратитесь в наш отдел продаж. Ниже приведена инструкция по установке электродвигателя.

## 1.6 Используемые стандарты

### 1.6.1 Требования к продукции без применения норм ATEX

Редукторы STM являются механическим устройствами, предназначенные для промышленного использования. Не должны рассматриваться как самостоятельное оборудование для применения в соответствии с 2006/42/ЕС или в качестве защитных/предохранительных устройств.

### 1.6.2 Спецификация продукции по нормам "ATEX"

#### Сфера применения

Нормы ATEX (94/9/EC) применяются к электрическому и неэлектрическому оборудованию, которое предназначено для эксплуатации в потенциально взрывоопасной среде. Потенциально взрывоопасные среды делятся на различные группы и зоны, в зависимости от вероятности их образования. Продукция STM соответствует следующей классификации:

- 1 - Группа: II
- 2 - Тип: Газ 2G Пыль 2D
- 3 - Зона: Газ 1 - Пыль 21

| Massime temperature di superficiali / Max surface temperature allowed / Максимальная допустимая температура поверхности                              |     |     |     |     |        |
|--|-----|-----|-----|-----|--------|
| Classe di temperatura / Temperature class / Температурный класс  | T1  | T2  | T3  | T4  | T5(1)  |
| Massima temp.di superficie / Max surface temperature / ATEX температурный класс продукции STM  | 450 | 300 | 200 | 135 | 100(1) |
| Classi di temperatura ATEX dei prodotti STM / ATEX temperature class of STM products / ATEX температурный класс продукции STM                        |     |     |     |     |        |
| <sup>(1)</sup> Classe di temperatura ATEX ottenibile a richiesta / ATEX temperature class on request / ATEX температурный класс, доступен по запросу |     |     |     |     |        |

I prodotti STM sono marcati classe di temperatura T4 per IIG (atmosfera gassosa) e 135° C per IID (atmosfera polverosa).

Nel caso di classe di temperatura T5 occorre verificare la potenza limite termico declassata (rif. normativa interna NORM\_0198, visibile sul sito web: [www.stmspa.com](http://www.stmspa.com)).

I prodotti del gruppo IID (atmosfera polverosa) vengono definiti dalla massima temperatura di superficie effettiva.

La massima temperatura di superficie è determinata in normali condizioni di installazione e ambientali (-20°C e +40°C) e senza depositi di polvere sugli apparecchi.

Qualunque scostamento da queste condizioni di riferimento può influenzare notevolmente lo smaltimento del calore e quindi la temperatura.

STM products are branded temperature class T4 for IIG (gas environment) and 135°C for IID (dust environment).

In case of T5 temperature class it will be necessary to verify the declassified thermal limit power (refer to internal standard NORM\_0198, available on the web site: [www.stmspa.com](http://www.stmspa.com)).

The products of the family IID (dust environment) are defined by the max effective surface temperature.

Max surface temperature is determined in standard installation and environmental conditions (-20°C and +40°C) and in absence of dust on product surface.

Any other condition will modify the heat dissipation and consequently the temperature.

Продукция STM поставляется с температурным классом T4 для IIG (газообразная среда) и 135°C для IID (пылеобразная среда).

При выборе температурного класса T5 необходимо проверить предельную термическую мощность (согласно внутренним стандартам NORM\_0198, которые доступны на сайте: [www.stmspa.com](http://www.stmspa.com)).

Продукция предназначенная для эксплуатации в группе IID (пылеобразная среда) выбирается в соответствии с ее максимальной температурой поверхности. Представленные значения максимальной температуры поверхности определены для ее стандартного исполнения и температурой окружающей среды (от -20° C до +40°C), без учета возможного отложения пыли. Любые отклонения от этих значений могут значительно повлиять на рассеивание тепла и рабочей температуры.

## 1.6 Normative applicate

### 1.6.3 Prodotti disponibili

I prodotti disponibili in esecuzione "ATEX" sono:

- EX
- EXB

**N.B**

Sono escluse dalla certificazione tutte le versioni con limitatore di coppia e con motore compatto.

## 1.6 Standards applied

### 1.6.3 Products available

Products available in "ATEX" execution:

- EX
- EXB

**N.B.**

All versions with torque limiter and compact motor are excluded from certification.

## 1.6 Исползованные стандарты

### 1.6.3 Доступная продукция

В исполнении по нормам "ATEX" доступна следующая продукция:

- EX
- EXB

**ПРИМЕЧАНИЕ**

Оборудование со встроенным ограничителем крутящего момента и уменьшенным электродвигателем на подлежит сертификации.

**A**

### 1.11.4 Direttive CE- marcatura CE- ISO9001

#### Direttiva Bassa Tensione 2006/95/CE

I motoriduttori, motorivviiangolari, motovariatori e i motori elettrici STM sono conformi alle prescrizioni della direttiva Bassa Tensione .

#### 2004/108/CE Compatibilità elettromagnetica

I motoriduttori, motorivviiangolari, motovariatori e i motori elettrici STM sono conformi alle specifiche della direttiva di Compatibilità Elettromagnetica.

#### Direttiva Macchine 2006/42/CE

I motoriduttori, motorivviiangolari, motovariatori e i motori elettrici STM non sono macchine ma organa da installare o assemblare nelle macchine.

#### Marchio CE, dichiarazione del fabbricante e dichiarazione di conformità.

I motoriduttori, motovariatori e i motori elettrici hanno il marchio CE.

Questo marchio indica la loro conformità alla direttiva Bassa Tensione e alla direttiva Compatibilità Elettromagnetica.

Su richiesta, STM può fornire la dichiarazione di conformità dei prodotti e la dichiarazione del fabbricante secondo la direttiva macchine.

#### ISO 9001

I prodotti STM sono realizzati all'interno di un sistema di qualità conforme allo standard ISO 9001. A tal fine su richiesta è possibile rilasciare copia del certificato.

### 1.11.4 EC Directives-CE mark-ISO 9001

#### Directive 2006/95 EEC Low VoltageSTM

geared motors, right angle drives with motor, motovariators and electric motors meet the specification of the low voltage directive.

#### 2004/108/EEC Electromagnetic Compatibility

STM geared motors, right angle drives with motor, motovariators and electric motors correspond to the specifications of the EMC directive.

#### Machinery Directive 2006/42/EC

STM geared motors, right angle drives with motor, motovariators and electric motors are not standalone machines, they are exclusively for installation into a machine or for assembly on a machine.

#### CE Mark, Conformity Declarations and Manufacturer's Declaration.

STM geared motors, right angle drives with motor, motovariators and electric motors carry the CE Mark.

It indicates conformity to the low voltage directive and to electromagnetic compatibility directive.

On request STM supplies both the conformity declarations and the manufacturer's declaration according to the machine directive.

#### ISO 9001

STM products have been designed and manufactured according to ISO 9001 quality system standard.

On request a copy of the certification can be issued.

### 1.6.4 Европейские нормы CE-ISO9001

#### Нормы 2006/95/ЕЕС по низкому напряжению

мотор-редукторы, мотор-вариаторы и электродвигатели отвечают требованиям директивы по низкому напряжению.

#### 2004/108/EG Электромагнитная совместимость

Мотор-редукторы, мотор-вариаторы и электродвигатели соответствуют требованиям стандарта по электромагнитной совместимости.

#### Директива 2006/42/EG

Мотор-редукторы, мотор-вариаторы и электродвигатели не являются самостоятельным оборудованием и предназначены для использования в составе оборудования.

#### Маркировка CE, декларация соответствия

Мотор-редукторы STM, мотор-вариаторы и электродвигатели имеют клеймо CE. Оно отражает соответствие директиве по низкому напряжению и электромагнитной совместимости.

По запросу STM представляет копии декларации соответствия и декларации изготовителя в соответствии с директивой машиностроения.

#### ISO 9001

Продукция STM разработана и изготовлена в соответствии с ISO 9001 системы качества.

По запросу может быть представлена копия данного сертификата



## 1.6 Normative applicate

## 1.6 Standards applied

## 1.6 Исползованные стандарты

### 1.6.6 Normative riferimento Progettazione e Fabbricazione

### 1.6.6 Standards applied

### 1.6.5 Исползованные стандарты

Tutti i prodotti della STM sono progettati nel rispetto delle seguenti normative:

All STM products are designed following these standards:

Вся продукция STM спроектирована согласно следующим стандартам:

#### Calcolo degli ingranaggi e cuscinetti

#### Calculation of gearboxes and bearings

#### Расчет редукторов и подшипников

ISO 6336  
Calcolo della capacità di carico degli ingranaggi cilindrici.

ISO 6336:  
Calculation of load capacity of spur and helical gears

ISO 6336  
Расчет допустимых нагрузок прямозубых и косозубых колес

BS 721  
Calcolo della capacità di carico delle viti e delle corone elicoidali.

BS 721:  
Calculation of load capacity for worm gearing.

BS 721  
Расчет допустимых нагрузок червячной передачи.

ISO 281  
Calcolo della durata a fatica dei cuscinetti volventi.

ISO 281:  
Rolling bearings — Dynamic load ratings and rating life

ISO 281  
Роликовые подшипники - Динамическая грузоподъемность и расчетный ресурс

#### Materiali

#### Materials

#### Материалы

EN 10084  
Acciaio da cementazione per ingranaggi e viti senza fine.

EN 10084  
Case hardening steels for gears and worms

EN 10084  
Цементированная с последующей закалкой сталь для зубчатых колес и червячных валов

EN 10083  
Acciaio da bonifica per alberi.

EN 10083  
Quenched and Tempered Steels for shafts

EN 10083  
Закаленные и отпущенные стали для валов

UNI EN 1982  
Bronzo per corone elicoidali.

UNI EN 1982  
Copper for helical worm-gears

UNI EN 1982  
Бронза для червячных колес

UNI EN 1706  
Alluminio e leghe di Alluminio

UNI EN 1706  
Aluminium alloy

UNI EN 1706  
Алюминиевый сплав

UNI EN 1561  
Fusioni in ghisa grigia.

UNI EN 1561  
Grey iron casting

UNI EN 1561  
Серый чугун для корпусов

UNI EN 1563 2004  
Getti di ghisa a grafite sferoidale

UNI EN 1563 2004  
Spheroidal cast iron

UNI EN 1563 2004  
Чугун со сфероидальным графитом

UNI 3097  
Acciaio per cuscinetti per piste rotolamento.

UNI 3097  
Ball and roller bearing steel

UNI 3097  
Сталь шариков и роликов подшипников

| Serie<br>Series<br>Тип | Materiale costruttivi - Casse - Flange - Coperchi<br>Material - Housings - Flanges - Covers<br>Konstruktionsmaterial - Gehäuse - Flanschen - Deckel |  |   |
|------------------------|---|--|---|
|                        | Supporti Uscita<br>Output Support<br>Выходной суппорт   | Supporti Entrata<br>Input Support<br>Входной суппорт   |   |
|                        | Getti di ghisa a grafite sferoidale<br>Spheroidal cast iron<br>Чугун со сфероидальным графитом  | Getti di ghisa a grafite sferoidale<br>Spheroidal cast iron<br>Чугун со сфероидальным графитом | Fusioni in ghisa grigia<br>Grey iron casting<br>Серый чугун |
| <b>EX<br/>EXB</b>      | R-M-MX-T-H-X-S-SB<br>P-PH-PX-PS-PSB<br>F-FB-FP-FSB<br>FC-FCB<br>FU-HU-SU-TU   | EXB - ECR  | EU - ECE - IEC - I - EXB                                    |

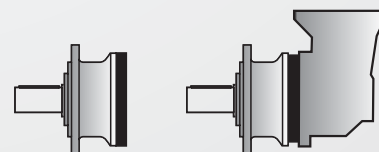


DESIGNAZIONE  
DESIGNATION  
МАРКИРОВКА

B2-B15

| Габарит     | Nm     |     |     |
|-------------|--------|-----|-----|
| <b>10</b>   | 1000   | B16 | B17 |
| <b>20</b>   | 2000   | B18 | B19 |
| <b>25</b>   | 2500   | B20 | B21 |
| <b>30</b>   | 3000   | B22 | B23 |
| <b>40</b>   | 4000   | B24 | B25 |
| <b>50</b>   | 5000   | B26 | B27 |
| <b>70</b>   | 7000   | B28 | B29 |
| <b>80</b>   | 8000   | B30 | B31 |
| <b>90</b>   | 9000   | B32 | B33 |
| <b>100</b>  | 10000  | B34 | B35 |
| <b>150</b>  | 15000  | B36 | B37 |
| <b>180</b>  | 18000  | B38 | B39 |
| <b>200</b>  | 20000  | B40 | B41 |
| <b>250</b>  | 25000  | B42 | B43 |
| <b>280</b>  | 28000  | B44 | B45 |
| <b>300</b>  | 30000  | B46 | B47 |
| <b>350</b>  | 35000  | B48 | B49 |
| <b>420</b>  | 48000  | B50 | B51 |
| <b>650</b>  | 65000  | B52 | B53 |
| <b>850</b>  | 85000  | B54 | B55 |
| <b>1200</b> | 120000 | B56 | B57 |

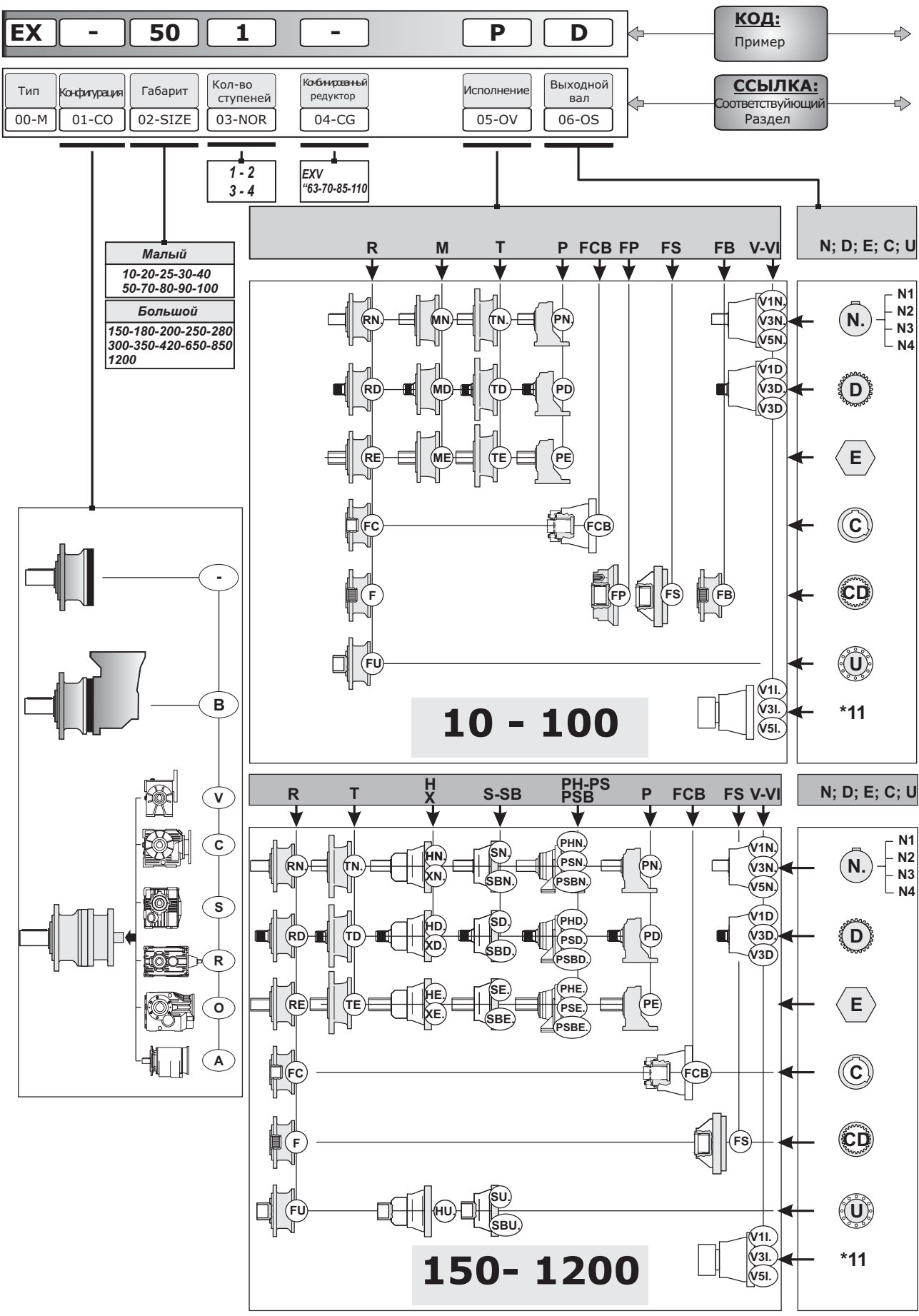
SCHEDE TECNICHE RIDUTTORI  
GEARBOXES TECHNICAL SHEETS  
ХАРАКТЕРИСТИКИ РЕДУКТОРОВ



1.1 Designazione

1.1 Designation

1.1 Маркировка



1.1 Designazione

1.1 Designation

1.1 Маркировка

**63.4 Z 1 A 1 - CA04 - - VT A M11 FD -**

|                        |             |                 |                              |                      |                  |             |                 |                   |        |                   |                     |            |                           |
|------------------------|-------------|-----------------|------------------------------|----------------------|------------------|-------------|-----------------|-------------------|--------|-------------------|---------------------|------------|---------------------------|
| Передаточное отношение | Тип Тормоза | Габарит Тормоза | Статический Тормозной Момент | Расположение Тормоза | Исполнение Входа | Входной Вал | Входной вал IEC | Выходная шестерня | Опции  | Исполнение мотора | Монтажное положение | Аксессуары | Положение Клемной Коробки |
| 07-IR                  | 8a-TBZ      | 8b-SIZEBZ       | 8c-STBZ                      | 8d-ABZ               | 09-IV            | 10-IS       | 11-IECT         | 12-OP             | 13-OPT | 14-MV             | 15-MP               | 16-ACC.    | 17 PMT                    |

3.60; 4.25; 5.33; ...

-; G; D

E12E9

VT

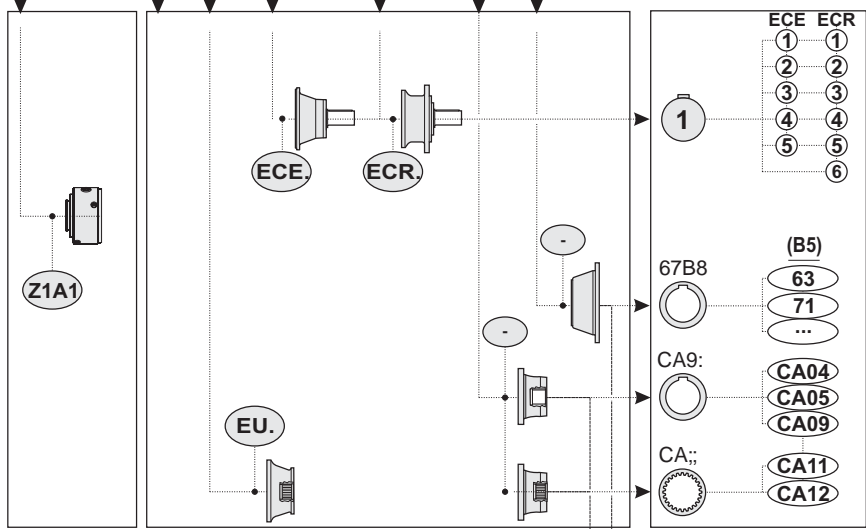
A-B-C-D  
L-M-N-O

1-Стандарт  
2-3-4

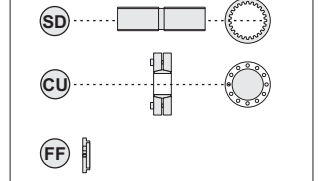
EX:  
P: M1-M2-M3-M4-M5-M6  
R-M-H-FB-FS-FP: M1-M3-M4

EXB  
EXV;EXC;EXS;EXR;EXO;EXA:  
P: M11-M12-M13-M14  
M21-M22-M23-M24  
M35-M46-M36-M45  
M51-M52-M53-M54  
M61-M62-M63-M64  
R-M-H-FB-FS-FP: M11-M12-M13-M14  
M35-M46-M36-M45

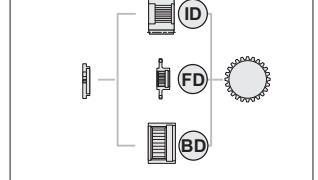
Z. PR EU ECE ECR I IEC 1; 2.; CA04.; 63; 71.



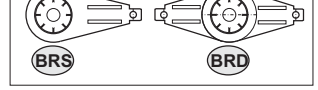
ACC1



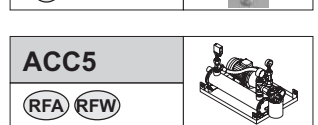
ACC2



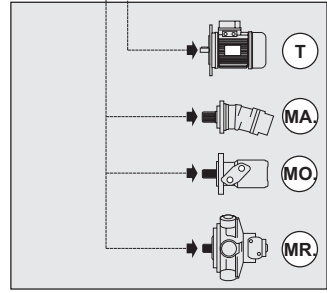
ACC3



ACC4



ACC5



1.1 Designazione

1.1 Designation

1.1 Маркировка

00 M - Macchina

M - Maschine

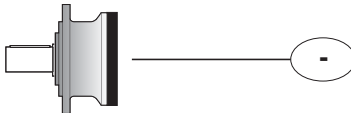
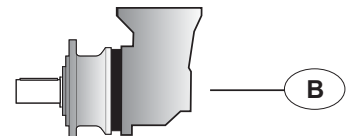
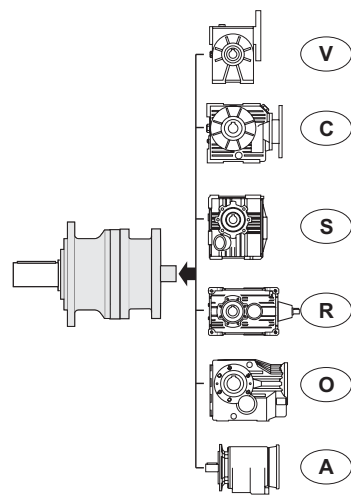
М - Трансмиссия

**EX**

01 CO - Posizione Assi

CO - Centerline Orientation

CO - Расположение ступеней редуктора

|  |  |  |
|--|--|--|
|   | <b>01-CO</b>                             |  |
|  | Lineare<br>In line<br>Линейное           |  |
|   | Ortagonale<br>Bevelgear<br>Ортогональное |  |
|  | V  | Ortagonale / Bevelgear / Ортогональное |
|  | C  | Ortagonale / Bevelgear / Ортогональное |
|  | S  | Ortagonale / Bevelgear / Ортогональное |
|  | R  | Ortagonale / Bevelgear / Ортогональное |
|  | O  | Ortagonale / Bevelgear / Ортогональное |
| A  | Lineare / In line / Линейное             |  |

02 SIZE - Grandezza

SIZE - Size

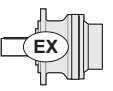

SIZE - Типоразмер

|    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |      |
|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 10 | 20 | 25 | 30 | 40 | 50 | 70 | 80 | 90 | 100 | 150 | 180 | 200 | 250 | 280 | 300 | 350 | 420 | 650 | 850 | 1200 |
|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|

03 NOR - N° Stadi

NOR - N° of reductions

NOR - Количество ступеней

|  |                    |         |    |    |          |    |         |    |    |          |     |         |     |          |     |         |     |     |     |     |     |      |
|--|--------------------|---------|----|----|----------|----|---------|----|----|----------|-----|---------|-----|----------|-----|---------|-----|-----|-----|-----|-----|------|
|  | <b>02<br/>SIZE</b> | 10      | 20 | 25 | 30       | 40 | 50      | 70 | 80 | 90       | 100 | 150     | 180 | 200      | 250 | 280     | 300 | 350 | 420 | 650 | 850 | 1200 |
|  | <b>03<br/>NOR</b>  | 1-2-3-4 |    |    | 2-3<br>4 |    | 1-2-3-4 |    |    | 2-3<br>4 |     | 1-2-3-4 |     | 2-3<br>4 |     | 1-2-3-4 |     |     |     |     |     |      |
|  | <b>02<br/>SIZE</b> | 10      | 20 | 25 | 30       | 40 | 50      | 70 | 80 | 90       | 100 | 150     | 180 | 200      | 250 | 280     | 300 | 350 | 420 | 650 | 850 | 1200 |
|  | <b>03<br/>NOR</b>  | 2-3-4   |    |    | 3-4      |    | 2-3-4   |    |    | 3-4      |     | 2-3-4   |     | 3-4      |     |         |     | 4   |     |     |     |      |

1.1 Designazione

1.1 Designation

1.1 Маркировка

04 CG- Riduttore Accoppiato

CG - Combined gearbox

CG - Комбинированные редукторы

|      | 1   |     |     |     |     |     |     |      | 2    |      |      |      |     |     |     |      | 3    |      |      |     |     |      |      |      | 4    |      |      |  |      |  |  |  |
|------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|-----|-----|-----|------|------|------|------|-----|-----|------|------|------|------|------|------|--|------|--|--|--|
| 10   | 101 |     |     |     |     |     |     |      |      | 102  |      |      |     |     |     |      |      |      |      | 103 |     |      |      |      |      |      |      |  | 104  |  |  |  |
| 20   |     | 201 |     |     |     |     |     |      |      |      | 202  |      |     |     |     |      |      |      |      |     | 203 |      |      |      |      |      |      |  | 204  |  |  |  |
| 25   |     |     | 251 |     |     |     |     |      |      |      |      | 252  |     |     |     |      |      |      |      |     |     | 253  |      |      |      |      |      |  | 254  |  |  |  |
| 30   |     |     |     | 301 |     |     |     |      |      |      |      | 302  |     |     |     |      |      |      |      |     |     | 303  |      |      |      |      |      |  | 304  |  |  |  |
| 40   |     |     |     |     |     |     |     |      |      |      |      | 402  |     |     |     |      |      |      |      |     |     | 403  |      |      |      |      |      |  | 404  |  |  |  |
| 50   |     |     |     |     | 501 |     |     |      |      |      |      |      | 502 |     |     |      |      |      |      |     |     | 503  |      |      |      |      |      |  | 504  |  |  |  |
| 70   |     |     |     |     |     | 701 |     |      |      |      |      |      |     | 702 |     |      |      |      |      |     |     | 703  |      |      |      |      |      |  | 704  |  |  |  |
| 80   |     |     |     |     |     |     | 801 |      |      |      |      |      |     |     | 802 |      |      |      |      |     |     | 803  |      |      |      |      |      |  | 804  |  |  |  |
| 90   |     |     |     |     |     |     |     |      |      |      |      |      |     |     | 902 |      |      |      |      |     |     | 903  |      |      |      |      |      |  | 904  |  |  |  |
| 100  |     |     |     |     |     |     |     | 1001 |      |      |      |      |     |     |     | 1002 |      |      |      |     |     | 1003 |      |      |      |      |      |  | 1004 |  |  |  |
| 150  |     |     |     |     |     |     |     |      | 1501 |      |      |      |     |     |     |      | 1502 |      |      |     |     |      | 1503 |      |      |      |      |  | 1504 |  |  |  |
| 180  |     |     |     |     |     |     |     |      |      |      |      |      |     |     |     |      | 1802 |      |      |     |     |      | 1803 |      |      |      |      |  | 1804 |  |  |  |
| 200  |     |     |     |     |     |     |     |      |      | 2001 |      |      |     |     |     |      |      | 2002 |      |     |     |      | 2003 |      |      |      |      |  | 2004 |  |  |  |
| 250  |     |     |     |     |     |     |     |      |      |      | 2501 |      |     |     |     |      |      |      | 2502 |     |     |      |      | 2503 |      |      |      |  | 2504 |  |  |  |
| 280  |     |     |     |     |     |     |     |      |      |      |      |      |     |     |     |      | 2802 |      |      |     |     |      |      | 2803 |      |      |      |  | 2804 |  |  |  |
| 300  |     |     |     |     |     |     |     |      |      |      |      | 3001 |     |     |     |      |      | 3002 |      |     |     |      |      | 3003 |      |      |      |  | 3004 |  |  |  |
| 350  |     |     |     |     |     |     |     |      |      |      |      |      |     |     |     |      |      | 3502 |      |     |     |      |      |      | 3503 |      |      |  | 3504 |  |  |  |
| 420  |     |     |     |     |     |     |     |      |      |      |      |      |     |     |     |      |      |      | 4202 |     |     |      |      |      | 4203 |      |      |  | 4204 |  |  |  |
| 650  |     |     |     |     |     |     |     |      |      |      |      |      |     |     |     |      |      |      |      |     |     | 6502 |      |      |      | 6503 |      |  | 6504 |  |  |  |
| 850  |     |     |     |     |     |     |     |      |      |      |      |      |     |     |     |      |      |      |      |     |     |      | 8502 |      |      |      | 8503 |  | 8504 |  |  |  |
| 1200 |     |     |     |     |     |     |     |      |      |      |      |      |     |     |     |      |      |      |      |     |     |      |      |      |      | 1200 |      |  | 1200 |  |  |  |
|      |     |     |     |     |     |     |     |      |      |      |      |      |     |     |     |      |      |      |      |     |     |      |      |      |      | 3    |      |  | 4    |  |  |  |

**B**

|         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| EXV 50  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXV 63  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXV 70  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXV 85  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXV 110 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXV 130 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXV 150 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXV 180 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXC 50  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXC 70  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXC 85  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXC 110 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXS 35  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXS 45  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXR 704 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXR 708 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXR 712 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXR 716 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXR 720 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXO 132 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXO 150 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXO 170 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXO 190 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXA 35  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXA 41  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXA 45  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXA 50  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

1.1 Designazione

1.1 Designation

1.1 Маркировка

05 OV - Versione Uscita

OV - Output Version

OV - Исполнение

06 OS - Albero Uscita

OS - Output Shaft

OS - Выходной вал



|             | 10<br>20<br>25 | 30<br>40<br>50<br>70 | 80       | 90<br>100 | 150<br>180<br>200 | 250<br>280 | 300        | 350<br>420 | 650        | 850        | 1200       |
|-------------|----------------|----------------------|----------|-----------|-------------------|------------|------------|------------|------------|------------|------------|
| <b>RN1</b>  | ø38xL58        | ø60xL105             | ø80xL130 | ø90xL170  | ø90xL170          |            |            |            |            |            |            |
| <b>RN2</b>  | ø42xL82        | ø65xL105             |          | ø100xL170 | ø100xL170         |            |            |            |            |            |            |
| <b>RN3</b>  | ø50xL82        | ø50xL100             |          |           |                   |            |            |            |            |            |            |
| <b>RN4</b>  | ø48xL82        |                      |          |           |                   |            |            |            |            |            |            |
| <b>RD</b>   | B 40x36        | B 58x53              | B 70x64  | B 80x74   | B 80x74           |            |            |            |            |            |            |
| <b>MN1</b>  | ø60xL105       | ø60xL105             | ø80xL130 |           |                   |            |            |            |            |            |            |
| <b>MN2</b>  | ø65xL105       | ø65xL105             |          |           |                   |            |            |            |            |            |            |
| <b>MN3</b>  | ø50xL100       |                      |          |           |                   |            |            |            |            |            |            |
| <b>MD</b>   | B 58x53        | B 58x53              | B 70x64  |           |                   |            |            |            |            |            |            |
| <b>MXN1</b> |                | ø60xL105             |          |           |                   |            |            |            |            |            |            |
| <b>MXN2</b> |                | ø65xL105             |          |           |                   |            |            |            |            |            |            |
| <b>MXD</b>  |                | B 58x53              |          |           |                   |            |            |            |            |            |            |
| <b>TN1</b>  | ø38xL58        | ø60xL105             | ø80xL130 | ø90xL170  | ø90xL170          | ø 110xL210 | ø 120xL210 |            |            |            |            |
| <b>TN2</b>  | ø42xL82        | ø65xL105             |          | ø100xL170 | ø100xL170         |            |            |            |            |            |            |
| <b>TN3</b>  | ø50xL82        | ø50xL100             |          |           |                   |            |            |            |            |            |            |
| <b>TN4</b>  | ø48xL82        |                      |          |           |                   |            |            |            |            |            |            |
| <b>TD</b>   | B 40x36        | B 58x53              | B 70x64  | B 80x74   | B 80x74           | B 100x94   | W 120x3    |            |            |            |            |
| <b>HN1</b>  |                |                      |          |           | ø90xL170          | ø 110xL210 | ø 120xL210 |            |            |            |            |
| <b>HN2</b>  |                |                      |          |           | ø100xL210         |            |            |            |            |            |            |
| <b>HD</b>   |                |                      |          |           | B 80x74           | B 100x94   | W 120x3    |            |            |            |            |
| <b>XN1</b>  |                |                      |          |           |                   |            |            |            |            |            |            |
| <b>XN2</b>  |                |                      |          |           | ø100xL210         |            |            |            |            |            |            |
| <b>XD</b>   |                |                      |          |           | B 100x94          |            |            |            |            |            |            |
| <b>SN1</b>  |                |                      |          |           |                   |            |            | ø 120xL210 | ø 160xL240 | ø 170xL240 | ø 180xL240 |
| <b>SN2</b>  |                |                      |          |           |                   |            |            | ø 140xL220 |            |            |            |
| <b>SD</b>   |                |                      |          |           |                   |            |            | W 120x3    | W150x5     | W170x5     | W 170x5    |
| <b>SBN1</b> |                |                      |          |           |                   |            |            | ø 120xL210 |            |            |            |
| <b>SBN2</b> |                |                      |          |           |                   |            |            | ø 140xL220 |            |            |            |
| <b>SBD</b>  |                |                      |          |           |                   |            |            | W 120x3    |            |            |            |



|              | 10<br>20<br>25 | 30<br>40<br>50<br>70 | 80       | 90<br>100 | 150<br>180<br>200 | 250<br>280 | 300        | 350<br>420 | 650        | 850        | 1200 |
|--------------|----------------|----------------------|----------|-----------|-------------------|------------|------------|------------|------------|------------|------|
| <b>PN1</b>   | ø38xL58        | ø60xL105             | ø80xL130 | ø90xL170  | ø 90xL170         |            |            |            |            |            |      |
| <b>PN2</b>   | ø42xL82        | ø65xL105             |          |           | ø100xL210         |            |            |            |            |            |      |
| <b>PN3</b>   | ø50xL82        |                      |          |           |                   |            |            |            |            |            |      |
| <b>PN4</b>   | ø48xL82        |                      |          |           |                   |            |            |            |            |            |      |
| <b>PD</b>    | B 40x36        | B 58x53              | B 70x64  | B 80x74   | B 80x74           |            |            |            |            |            |      |
| <b>PHN1</b>  |                |                      |          |           | ø90xL170          | ø 110xL210 | ø 120xL210 |            |            |            |      |
| <b>PHN2</b>  |                |                      |          |           | ø100xL210         |            |            |            |            |            |      |
| <b>PHD</b>   |                |                      |          |           | B 80x74           | B 100x94   | W 120x3    |            |            |            |      |
| <b>PXN1</b>  |                |                      |          |           |                   |            |            |            |            |            |      |
| <b>PXN2</b>  |                |                      |          |           | ø100xL210         |            |            |            |            |            |      |
| <b>PXD</b>   |                |                      |          |           | B 100x94          |            |            |            |            |            |      |
| <b>PSN1</b>  |                |                      |          |           |                   |            |            | ø 120xL210 | ø 160xL240 | ø 170xL240 |      |
| <b>PSN2</b>  |                |                      |          |           |                   |            |            | ø 140xL220 |            |            |      |
| <b>PSD</b>   |                |                      |          |           |                   |            |            | W 120x3    | W150x5     | W170x5     |      |
| <b>PSBN1</b> |                |                      |          |           |                   |            |            | ø 120xL210 |            |            |      |
| <b>PSBN2</b> |                |                      |          |           |                   |            |            | ø 140xL220 |            |            |      |
| <b>PSBD</b>  |                |                      |          |           |                   |            |            | W 120x3    |            |            |      |



1.1 Designazione

1.1 Designation

1.1 Маркировка

05 OV - Versione Uscita


OV - Output Version

OV - Исполнение

06 OS - Albero Uscita

OS - Output Shaft

OS - Выходной вал

|  |                |                      |          |           |                   |            |         |                   |         |         |         |
|--|----------------|----------------------|----------|-----------|-------------------|------------|---------|-------------------|---------|---------|---------|
|  | 10<br>20<br>25 | 30<br>40<br>50<br>70 | 80       | 90<br>100 | 150<br>180<br>200 | 250<br>280 | 300     | 350<br>420        | 650     | 850     | 1200    |
| F  | A 40x36        | A 58x53              | A 70x64  | A 80x74   |                   |            |         |                   |         |         |         |
| FB   |                |                      | A 70x64  | A 70x64   |                   |            |         |                   |         |         |         |
| FP   |                | A 58x53              |          |           |                   |            |         |                   |         |         |         |
| *FS  | A 40x36*       | A 58x53*             | A 70x64* | A 80x74*  | A 80x74           | A 100x94   | N 120x5 | EX 350<br>N 120x3 | N 150x5 | N 170x5 | N 200x5 |
| FSB  |                |                      |          |           |                   |            |         | EX 420<br>N 140x5 |         |         |         |

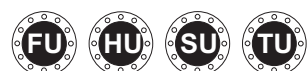


|      |                |                      |       |           |                   |            |     |            |     |     |      |
|------|----------------|----------------------|-------|-----------|-------------------|------------|-----|------------|-----|-----|------|
|      | 10<br>20<br>25 | 30<br>40<br>50<br>70 | 80    | 90<br>100 | 150<br>180<br>200 | 250<br>280 | 300 | 350<br>420 | 650 | 850 | 1200 |
| FC   | ø 35           | ø 50                 | ø 65  | ø 75      |                   |            |     |            |     |     |      |
| *FCB |                | ø 65*                | ø 80* | ø 90*     | ø 100             | ø 110      |     |            |     |     |      |

(\*) NOTA  
Solo per **EXB**  
- Non disponibili per le grandezze  
10-20-25-30-40-50-70-80-90-100:  
le versioni **FS-FCB**.

(\*) NOTA  
Only for **EXB**  
- Not available for size  
10-20-25-30-50-70-80-90-100:  
versions **FS-FCB**.

(\*) ПРИМЕЧАНИЕ  
Только для **EXB**  
- Не доступны для типоразмеров  
10-20-25-30-40-50-70-80-90-100: в  
исполнениях **FS-FCB**



|    |                |                      |      |           |                   |            |       |            |       |       |       |
|----|----------------|----------------------|------|-----------|-------------------|------------|-------|------------|-------|-------|-------|
|    | 10<br>20<br>25 | 30<br>40<br>50<br>70 | 80   | 90<br>100 | 150<br>180<br>200 | 250<br>280 | 300   | 350<br>420 | 650   | 850   | 1200  |
| FU | ø 50           | ø 75                 | ø 90 | ø 100     | ø 120             |            |       |            |       |       |       |
| HU |                |                      |      |           | ø 120             | ø 130      | ø 135 |            |       |       |       |
| SU |                |                      |      |           |                   |            |       | ø 145      | ø 165 | ø 180 | ø 220 |
| TU |                |                      |      |           | ø 120             | ø 130      | ø 135 |            |       |       |       |

07 IR- Rapporto di riduzione

IR - Reduction ratio

IR - Передаточное отношение

(Vedi prestazioni).

(See ratings)

(Смотри Технические характеристики)



1.1 Designazione

1.1 Designation

1.1 Маркировка

| Descrizione Predisposizione<br>Adjustment description<br>Описание | 08a                        | 08b                                    | 08c   |        |        |        |        |        | 08d  | 09-IV<br>10-IS              |
|---|----------------------------|--|---|--------|--------|--------|--------|--------|--|-----------------------------|
| <br>Freno Idraulico<br>Hydraulic Brake<br>Гидравлический тормоз   | TBZ<br>Tipo<br>Type<br>Тип | SIZEBZ<br>Grandezza<br>Size<br>Габарит | STBZ<br>Coppia Frenatura<br>Static Torque<br>Статический момент тормоза   |        |        |        |        |        | ABZ<br>Accoppiamento<br>Attachment<br>Расположение | CA04<br>CA05<br>CA06<br>... |
|   | Z                          | 1                                      | A   | B      | C      | D      | E      | F      | 1 (10-20-25)<br>2 (30--50-70)                      |                             |
|   |                            | 2                                      | Contattare il ns. servizio tecnico<br>Contact our technical dept<br>Пожалуйста, свяжитесь с нашим техническим отделом |        |        |        |        |        |  |                             |
|   |                            |  | 90 Nm   | 140 Nm | 240 Nm | 300 Nm | 430 Nm | 550 Nm |  |                             |

**Note - Remarks - Примечание**  
 Per Dimensioni e Predisposizioni disponibili vedere Sezione D - See section D for adjustments and dimensions available - Размеры и возможные регулировки описаны в разделе D

| 10- IS<br>Albero Entrata<br>Input Shaft<br>Входной вал |          |       |      |     |      |      |    |      |      |      |  |  |       |  |     |  |       |  |
|--|----------|-------|------|-----|------|------|----|------|------|------|--|--|-------|--|-----|--|-------|--|
| 10   |          |       |      | 101 |      |      |    | 102  |      |      |  |  | 103   |  |     |  | 104   |  |
| 20   |          |       |      | 201 |      |      |    | 202  |      | EXB  |  |  | 203   |  |     |  | 204   |  |
| 25   |          |       |      | 251 |      |      |    | 252  |      | EXB  |  |  | 253   |  |     |  | 254   |  |
| 30   |          |       |      |     | 301  |      |    | 302  |      | -    |  |  | 303   |  |     |  | 304   |  |
| 40   |          |       |      |     |      |      |    | 402  |      | -    |  |  | 403   |  |     |  | 404   |  |
| 50   |          |       |      |     | 501  |      |    | 502  |      | EXB  |  |  | 503   |  |     |  | 504   |  |
| 70   |          |       |      |     | 701  |      | EX | 702  |      | EXB  |  |  | 703   |  |     |  | 704   |  |
| 80   |          |       |      |     |      | 801  |    |      |      | -    |  |  | 803   |  | EXB |  | 804   |  |
| 90   |          |       |      |     |      |      |    | 902  |      | -    |  |  | 903   |  | EXB |  | 904   |  |
| 100  |          |       |      |     | 1001 |      |    | 1002 |      | EXB  |  |  | 1003  |  | EX  |  | 1004  |  |
| 150  |          |       |      |     |      | 1501 |    | 1502 |      |      |  |  | 1503  |  | EX  |  | 1504  |  |
| 180  |          |       |      |     |      |      |    | 1802 |      |      |  |  | 1803  |  | EX  |  | 1804  |  |
| 200  |          |       |      |     |      | 2001 |    | 2002 |      |      |  |  | 2003  |  | EX  |  | 2004  |  |
| 250  |          |       |      |     |      |      |    |      | 2502 |      |  |  | 2503  |  | EX  |  | 2504  |  |
| 280  |          |       |      |     |      |      |    |      | 2802 |      |  |  | 2803  |  | EX  |  | 2804  |  |
| 300  |          |       |      |     |      |      |    |      | 3002 |      |  |  | 3003  |  | EX  |  | 3004  |  |
| 350  |          |       |      |     |      |      |    |      | 3502 |      |  |  | 3503  |  | EX  |  | 3504  |  |
| 420  |          |       |      |     |      |      |    |      |      | 4202 |  |  | 4203  |  | EX  |  | 4204  |  |
| 650  |          |       |      |     |      |      |    |      |      |      |  |  | 6503  |  | EX  |  | 6504  |  |
| 850  |          |       |      |     |      |      |    |      |      |      |  |  | 8503  |  | EX  |  | 8504  |  |
| 1200   |          |       |      |     |      |      |    |      |      |      |  |  | 12003 |  | EX  |  | 12004 |  |
|  | D        | R     | G    |     |      |      |    |      |      |      |  |  |       |  |     |  |       |  |
| CA 04  | 25       | 106,4 | 82,6 |     |      |      |    |      |      |      |  |  |       |  |     |  |       |  |
| CA 09  | 1" 6B    | 106,4 | 82,6 |     |      |      |    |      |      |      |  |  |       |  |     |  |       |  |
| CB 07  | 32       | 106,4 | 82,6 |     |      |      |    |      |      |      |  |  |       |  |     |  |       |  |
| DA 11  | 12/24-12 | 125   | 100  |     |      |      |    |      |      |      |  |  |       |  |     |  |       |  |
| DB 22  | N30x2    | 125   | 100  |     |      |      |    |      |      |      |  |  |       |  |     |  |       |  |
| FA 13  | 12/24-16 | 160   | 125  |     |      |      |    |      |      |      |  |  |       |  |     |  |       |  |
| FA 22  | N30x2    | 160   | 125  |     |      |      |    |      |      |      |  |  |       |  |     |  |       |  |
| FA 23  | N35x2    | 160   | 125  |     |      |      |    |      |      |      |  |  |       |  |     |  |       |  |
| FA 24  | N40x2    | 160   | 125  |     |      |      |    |      |      |      |  |  |       |  |     |  |       |  |
| FA 28  | N32x2    | 160   | 125  |     |      |      |    |      |      |      |  |  |       |  |     |  |       |  |
| FB 08  | 40       | 160   | 125  |     |      |      |    |      |      |      |  |  |       |  |     |  |       |  |
| PA 29  | 28x34    | 210   | 175  |     |      |      |    |      |      |      |  |  |       |  |     |  |       |  |





1.1 Designazione

1.1 Designation

1.1 Маркировка

- 09 IV - Versione Entrata
- 10 IS - Albero Entrata

- IV - Input Version
- IS - Input Shaft

- IV - Исполнение входа
- IS - Входной вал

| Descrizione Predisposizione<br>Adjustment description<br>Описание   | 09<br>IV   | 10<br>IS           | Note<br>Remarks<br>Примечание   |
|---|------------|--------------------|---|
| Senza Flangia Motore<br>Редуктор без фланца   | <b>PR</b>  | -                  | EX. Combinati .<br>EX. Combined Gearbox.<br>EX Комбинированный.   |
| Universale<br>Universal<br>Универсальный  | <b>EU</b>  | -                  | Per Dimensioni e Predisposizioni disponibili<br>vedere Sezione D<br>See section D for adjustments and dimensions available<br>Размеры и возможные регулировки описаны в разделе D |
| Albero maschio cilindrico con linguetta<br>Support with keyed cylindrical shaft<br>Цилиндрические с валом | <b>ECE</b> | 1<br>2<br>3<br>... |   |

**B**

| 10-IS Albero<br>Entrata Input<br>Shaft<br>Входной вал |          |          |          |          |      |      |     |      |       |      |     |      |       |      |     |      |
|---|----------|----------|----------|----------|------|------|-----|------|-------|------|-----|------|-------|------|-----|------|
|   | EX1      | EX1      | EX1      | EX1      | EX2  | EXB2 | EX2 | EXB2 | EX3   | EXB3 | EX3 | EXB3 | EX4   | EXB4 | EX4 | EXB4 |
| 10  | 101      |          |          |          | 102  |      |     |      | 103   |      |     |      | 104   |      |     |      |
| 20  | 201      |          |          |          | 202  |      |     |      | 203   |      |     |      | 204   |      |     |      |
| 25  | 251      |          |          |          | 252  |      | EXB |      | 253   |      |     |      | 254   |      |     |      |
| 30  | 301      |          |          |          | 302  |      |     |      | 303   |      |     |      | 304   |      |     |      |
| 40  |          |          |          |          | 402  |      | -   |      | 403   |      |     |      | 404   |      |     |      |
| 50  | 501      |          |          | EX       | 502  |      |     |      | 503   |      |     |      | 504   |      |     |      |
| 70  | 701      |          |          |          | 702  |      | EXB |      | 703   |      |     |      | 704   |      |     |      |
| 80  | 801      |          |          |          | 802  |      |     |      | 803   |      |     |      | 804   |      |     |      |
| 90  |          |          |          |          | 902  |      | -   | EX   | 903   |      | EXB |      | 904   |      |     |      |
| 100   | 1001     |          |          |          | 1002 |      | EXB |      | 1003  |      |     |      | 1004  |      |     |      |
| 150   |          |          |          |          | 1502 |      |     |      | 1503  |      |     |      | 1504  |      | EX  |      |
| 180   |          |          |          |          | 1802 |      |     |      | 1803  |      |     |      | 1804  |      | EX  | EXB  |
| 200   |          |          |          |          | 2002 |      |     |      | 2003  |      |     |      | 2004  |      |     |      |
| 250   |          |          |          |          | 2502 |      |     |      | 2503  |      |     |      | 2504  |      |     |      |
| 280   |          |          |          |          | 2802 |      |     |      | 2803  |      |     |      | 2804  |      |     |      |
| 300   |          |          |          |          | 3002 |      |     |      | 3003  |      |     |      | 3004  |      |     |      |
| 350   |          |          |          |          | 3502 |      |     |      | 3503  |      |     |      | 3504  |      |     |      |
| 420   |          |          |          |          |      |      |     |      | 4203  |      |     |      | 4204  |      |     |      |
| 650   |          |          |          |          |      |      |     |      | 6503  |      |     |      | 6504  |      |     |      |
| 850   |          |          |          |          |      |      |     |      | 8503  |      |     |      | 8504  |      |     |      |
| 1200  |          |          |          |          |      |      |     |      | 12003 |      |     |      | 12004 |      |     |      |
|   | <b>D</b> | <b>L</b> | <b>R</b> | <b>G</b> |      |      |     |      |       |      |     |      |       |      |     |      |
| <b>EU</b>   | 50x45    |          | 150      | 95       |      |      |     |      |       |      |     |      |       |      |     |      |
| <b>ECE 1</b>  | 24       | 50       |          |          |      |      |     |      |       |      |     |      |       |      |     |      |
| <b>ECE 2</b>  | 38       | 58       |          |          |      |      |     |      |       |      |     |      |       |      |     |      |
| <b>ECE 3</b>  | 42       | 82       |          |          |      |      |     |      |       |      |     |      |       |      |     |      |
| <b>ECE 4</b>  | 48       | 82       |          |          |      |      |     |      |       |      |     |      |       |      |     |      |
| <b>ECE 5</b>  | 28       | 50       |          |          |      |      |     |      |       |      |     |      |       |      |     |      |



1.1 Designazione

1.1 Designation

1.1 Маркировка

09 IV - Versione Entrata

IV - Input Version

IV - Исполнение входа

10 IS - Albero Entrata

IS - Input Shaft

IS - Входной вал

| Descrizione Predisposizione<br>Adjustment description<br>Описание   | 09<br>IV | 10<br>IS           | Note<br>Remarks<br>Примечание   |
|---|----------|--------------------|---|
| Albero maschio cilindrico con linguetta -Rinforzata<br>Reinforced support with keyed cylindrical shaft<br>Усиленный суппорт со шпоночным цилиндрическим валом |          | 1<br>2<br>3<br>... | Per Dimensioni e Predisposizioni disponibili<br>vedere Sezione D<br>See section D for adjustments and dimensions available<br>Размеры и возможные регулировки описаны в разделе D |

| 10 - IV<br>Albero Entrata / Input Shaft/Antriebswelle | D    | L   | R   | G   |     |
|---|------|-----|-----|-----|-----|
|   | ECR0 | 42  | 82  | 165 | 110 |
|   | ECR1 | 50  | 82  | 165 | 110 |
|   | ECR2 | 60  | 105 | 195 | 150 |
|   | ECR3 | 65  | 105 | 195 | 150 |
|   | ECR4 | 65  | 105 | 245 | 175 |
|   | ECR5 | 80  | 130 | 250 | 200 |
|   | ECR6 | 90  | 170 | 295 | 230 |
|   | ECR7 | 100 | 170 | 295 | 230 |
|   | ECR8 | 110 | 210 | 370 | 245 |
|   | ECR9 | 120 | 210 | 370 | 245 |

| EX1  |      | EX2 EXB2 |  | EX3 EXB3 |     | EX4 EXB4 |     |
|------|------|----------|--|----------|-----|----------|-----|
| 10   | 101  | 102      |  | 103      |     | 104      |     |
| 20   | 201  | 202      |  | 203      | EXB | 204      |     |
| 25   | 251  | 252      |  | 253      |     | 254      |     |
| 30   | 301  | 302      |  | 303      |     | 304      |     |
| 40   |      | 402      |  | 403      | -   | 404      |     |
| 50   | 501  | 502      |  | 503      |     | 504      |     |
| 70   | 701  | 702      |  | 703      | EXB | 704      |     |
| 80   | 801  | 802      |  | 803      |     | 804      |     |
| 90   |      | 902      |  | 903      |     | 904      |     |
| 100  | 1001 | 1002     |  | 1003     | EXB | 1004     |     |
| 150  | 1501 | 1502     |  | 1503     |     | 1504     | EXB |
| 180  |      | 1802     |  | 1803     |     | 1804     |     |
| 200  | 2001 | 2002     |  | 2003     |     | 2004     |     |
| 250  | 2501 | 2502     |  | 2503     |     | 2504     |     |
| 280  |      | 2802     |  | 2803     |     | 2804     |     |
| 300  | 3001 | 3002     |  | 3003     |     | 3004     |     |
| 350  |      | 3502     |  | 3503     |     | 3504     |     |
| 420  |      | 4202     |  | 4203     |     | 4204     |     |
| 650  |      | 6502     |  | 6503     |     | 6504     |     |
| 850  |      | 8502     |  | 8503     |     | 8504     |     |
| 1200 |      |          |  | 12003    |     | 12004    |     |
| ECR0 |      |          |  |          |     |          |     |
| ECR1 |      |          |  |          |     |          |     |
| ECR2 |      |          |  |          |     |          |     |
| ECR3 |      |          |  |          |     |          |     |
| ECR4 |      |          |  |          |     |          |     |
| ECR5 |      |          |  |          |     |          |     |
| ECR6 |      |          |  |          |     |          |     |
| ECR7 |      |          |  |          |     |          |     |
| ECR8 |      |          |  |          |     |          |     |
| ECR9 |      |          |  |          |     |          |     |



1.1 Designazione

1.1 Designation

1.1 Маркировка

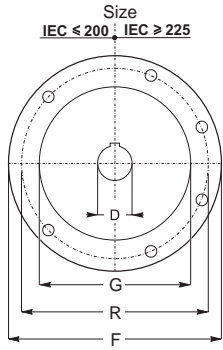
- 09 IV - Versione Entrata
- 10 IS - Albero Entrata

- IV - Input Version
- IS - Input Shaft

- IV - Исполнение входа
- IS - Входной вал

| Descrizione Predisposizione<br>Adjustment description<br>Описание | 09<br>IV   | 10<br>IS              | Note<br>Remarks<br>Примечание   |
|---|------------|-----------------------|---|
| Motore Elettrico<br>Elektromotor<br>Электродвигатель              | <b>IEC</b> | 63<br>71<br>80<br>... | Per Dimensioni e Predisposizioni disponibili<br>vedere Sezione D<br>See section D for adjustments and dimensions available<br>Размеры и возможные регулировки описаны в разделе D |

| 10- IV<br>Albero Entrata<br>Input Shaft<br>Входной вал |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|  | 101 | 201 | 251 | 301 | 102 | 202 | 252 | 302 | 103 | 203 | 253 | 303 | 104 | 204 | 254 | 304 |
| 10   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 20   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 25   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 30   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 40   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 50   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 70   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 80   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 90   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 100  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 150  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 180  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 200  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 250  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 280  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 300  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 350  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 420  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 650  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 850  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 1200   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |



|     | D  | F   | R   | G   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----|----|-----|-----|-----|--|--|--|--|--|--|--|--|--|--|--|--|
| 63  | 11 | 140 | 115 | 95  |  |  |  |  |  |  |  |  |  |  |  |  |
| 71  | 14 | 160 | 130 | 110 |  |  |  |  |  |  |  |  |  |  |  |  |
| 80  | 19 | 200 | 165 | 130 |  |  |  |  |  |  |  |  |  |  |  |  |
| 90  | 24 | 200 | 165 | 130 |  |  |  |  |  |  |  |  |  |  |  |  |
| 100 | 28 | 250 | 215 | 180 |  |  |  |  |  |  |  |  |  |  |  |  |
| 112 | 28 | 250 | 215 | 180 |  |  |  |  |  |  |  |  |  |  |  |  |
| 132 | 38 | 300 | 265 | 230 |  |  |  |  |  |  |  |  |  |  |  |  |
| 160 | 42 | 350 | 300 | 250 |  |  |  |  |  |  |  |  |  |  |  |  |
| 180 | 48 | 350 | 300 | 250 |  |  |  |  |  |  |  |  |  |  |  |  |
| 200 | 55 | 400 | 350 | 300 |  |  |  |  |  |  |  |  |  |  |  |  |
| 225 | 60 | 450 | 400 | 350 |  |  |  |  |  |  |  |  |  |  |  |  |
| 250 | 65 | 550 | 500 | 450 |  |  |  |  |  |  |  |  |  |  |  |  |
| 280 | 75 | 550 | 500 | 450 |  |  |  |  |  |  |  |  |  |  |  |  |

**B**



1.1 Designazione

1.1 Designation

1.1 Маркировка

09 IV - Versione Entrata

IV - Input Version

IV - Исполнение входа

10 IS - Albero Entrata

IS - Input Shaft

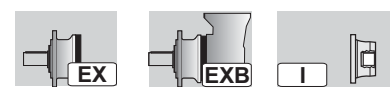
IS - Входной вал

| Descrizione Predisposizione<br>Adjustment description<br>Описание | 09<br>IV | 10<br>IS              | Note<br>Remarks<br>Merkmale   |
|---|----------|-----------------------|---|
| Motore Elettrico<br>Elektromotor<br>Электродвигатель              |          | 63<br>71<br>80<br>... | Per Dimensioni e Predisposizioni disponibili<br>vedere Sezione D<br>See section D for adjustments and dimensions available<br>Размеры и возможные регулировки описаны в разделе D |

| 10- IV<br>Albero Entrata<br>Input Shaft<br>Входной вал |  |      |       |      |
|--|--|------|-------|------|
| 10   |  | 102  | 103   | 104  |
| 20   |  |      | 203   | 204  |
| 25   |  |      | 253   | 254  |
| 30   |  |      | 303   | 304  |
| 40   |  |      | 403   | 404  |
| 50   |  | 502  | 503   | 504  |
| 70   |  | 702  | 703   | 704  |
| 80   |  | 802  | 803   | 804  |
| 90   |  | -    | 903   | 904  |
| 100  |  | 1002 | 1003  | 1004 |
| 150  |  |      | 1503  | 1504 |
| 180  |  |      | 1803  | 1804 |
| 200  |  |      | 2003  | 2004 |
| 250  |  |      | 2503  | 2504 |
| 280  |  |      | 2803  | 2804 |
| 300  |  | 3003 | 3004  |      |
| 350  |  | 3503 | 3504  |      |
| 420  |  |      | 4204  |      |
| 650  |  |      | 6504  |      |
| 850  |  |      | 8504  |      |
| 1200   |  |      | 12004 |      |

|     | D  | F   | R   | G   |
|-----|----|-----|-----|-----|
| 63  | 11 | 140 | 115 | 95  |
| 71  | 14 | 160 | 130 | 110 |
| 80  | 19 | 200 | 165 | 130 |
| 90  | 24 | 200 | 165 | 130 |
| 100 | 28 | 250 | 215 | 180 |
| 112 | 28 | 250 | 215 | 180 |
| 132 | 38 | 300 | 265 | 230 |
| 160 | 42 | 350 | 300 | 250 |
| 180 | 48 | 350 | 300 | 250 |
| 200 | 55 | 400 | 350 | 300 |
| 225 | 60 | 450 | 400 | 350 |
| 250 | 65 | 550 | 500 | 450 |
| 280 | 75 | 550 | 500 | 450 |





1.1 Designazione

- 09 IV - Versione Entrata
- 10 IS - Albero Entrata

1.1 Designation

- IV - Input Version
- IS - Input Shaft

1.1 Маркировка

- IV - Исполнение входа
- IS - Входной вал

| Descrizione Predisposizione<br>Adjustment description<br>Описание      |      | 09<br>IV | 10<br>IS             | Note<br>Remarks<br>Примечание  |      |       |      |    |
|--|------|----------|----------------------|--|------|-------|------|----|
| Idraulico - Motore<br>Hydromotor<br>Гидромотор                         |      | <b>I</b> | CA04<br>CA05<br>CA06 | Per Dimensioni e Predisposizioni disponibili vedere Sezione D<br>See section D for adjustments and dimensions available<br>Размеры и возможные регулировки описаны в разделе D |      |       |      |    |
| <p><b>10-IV</b><br/>Albero Entrata<br/>Input Shaft<br/>Входной вал</p> |      |          |                      |  |      |       |      |    |
|  | 101  |          | 102                  |  | 103  |       | 104  |    |
|  | 201  |          | 202                  |  | 203  |       | 204  |    |
|  | 251  |          | 252                  | EXB  | 253  |       | 254  |    |
|  | 301  |          | 302                  | -  | 303  |       | 304  |    |
|  | 401  |          | 402                  |  | 403  |       | 404  |    |
|  | 501  |          | 502                  |  | 503  |       | 504  |    |
|  | 701  | EX       | 702                  | EXB  | 703  |       | 704  |    |
|  | 801  |          | 802                  |  | 803  | EXB   | 804  |    |
|  | 901  |          | 902                  | -  | 903  |       | 904  |    |
|  | 1001 |          | 1002                 | EXB  | 1003 | EXB   | 1004 | EX |
|  | 1501 |          | 1502                 |  | 1503 |       | 1504 | EX |
|  | 2001 |          | 2002                 |  | 2003 |       | 2004 | EX |
|  |      |          | 2502                 |  | 2503 |       | 2504 |    |
|  |      |          | 2802                 |  | 2803 |       | 2804 |    |
|  |      | 3002     |                      | 3003   |      | 3004  |      |    |
|  |      | 3502     |                      | 3503   |      | 3504  |      |    |
|  |      | 4202     |                      | 4203   |      | 4204  |      |    |
|  |      |          |                      | 6503   |      | 6504  |      |    |
|  |      |          |                      | 8503   |      | 8504  |      |    |
|  |      |          |                      | 12003  |      | 12004 |      |    |

**B**

|        | D        | R          | G     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------|----------|------------|-------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| BA 21  | N25x1,25 | 100        | 80    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CA 04  | 25       | 106,4      | 82,6  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CA 05  | 25,4     | 106,4      | 82,6  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CA 06  | 31,75    | 106,4      | 82,6  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CA 09  | 1" 6B    | 106,4      | 82,6  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CA 11  | 12/24-12 | 106,4      | 82,6  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CA 12  | 12/24-14 | 106,4      | 82,6  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CA 15  | 16/32-13 | 106,4      | 82,6  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CB 07  | 32       | 106,4      | 82,6  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DB 04  | 25       | 125        | 100   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DA 11  | 12/24-12 | 125        | 100   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DB 21  | N25x1,25 | 125        | 100   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DB 22  | N30x2    | 125        | 100   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EA 15  | 16/32-13 | 146        | 101,6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FA 13  | 12/24-16 | 160        | 125   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FA 22  | N30x2    | 160        | 125   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FA 23  | N35x2    | 160        | 125   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FA 24  | N40x2    | 160        | 125   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FA 28  | N32x2    | 160        | 125   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FB 08  | 40       | 160        | 125   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FB 14  | 12/24-17 | 160        | 125   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| GAB 17 | 16/32-21 | 162<br>181 | 127   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| GC 08  | 40       | 162        | 127   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HA 10  | 10/20-16 | 180        | 140   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HB 23  | N35x2    | 180        | 140   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HB 24  | N40x2    | 180        | 140   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| JA 20  | 8/16-13  | 228,6      | 152,4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| KB 22  | N30x2    | 200        | 160   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| KB 24  | N40x2    | 200        | 160   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LA 25  | N45x2    | 224        | 180   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LB 33  | 45       | 224        | 180   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NA 29  | 28x34    | 160        | 125   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| OA 31  | 36x40    | 250        | 150   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PA 29  | 28x34    | 210        | 175   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**1.1 Designazione**

**1.1 Designation**

**1.1 Маркировка**

**11 IECT - Tipo IEC e Albero Entrata**

**IECT - IEC type and Input Shaft**

**IECT - Тип входного вала IEC**

| 11 IECT | Descrizione  | EX EXB | EX.  |                     |         |                                     |                                |     |
|---------|--|--------|--|---------------------|---------|-------------------------------------|--------------------------------|-----|
|         |  |        | Combinato / Combined / Комбинации            |                     |         |                                     |                                |     |
|         |  |        | EXV  | EXC                 | EXS     | EXR                                 | EXA                            | EXO |
| -       | Con campana senza giunto<br>Motor bell without coupling<br>С фланцем без муфты |        |  |                     |         | RXP - RXO<br>704 - 708<br>712 - 716 |                                | -   |
| G       | Con giunto<br>With coupling<br>С упругой муфтой                                |        | 50 - 63                                      |                     | 35 - 45 | RXP - RXO<br>704 - 708<br>712 - 716 | 2C - 41<br>2C - 45             | *   |
| D       | Accoppiamento diretto<br>Direct coupling<br>Прямое соединение вал-втулка       |        | 50 - 63<br>70 - 85<br>110 - 130<br>150 - 180 | 50 - 70<br>85 - 110 |         | RXO<br>704 - 708<br>712 - 716       | 35<br>3C - 41<br>3C - 45<br>50 | *   |

\* Contattare nostro ufficio tecnico commerciale

\* Please, contact our technical sales dept.

\* Обратитесь в наш технических отдел.

**12 OP - Pignoni dentati**

**OP - Output pinions**

**OP - Выходная шестерня**

| Modulo Normale<br>Normal module<br>Нормальный модуль |  |
|--|--|
| Modulo<br>Module<br>Modul                            | Designazione<br>Designation<br>Bezeichnung |
| 4.5  | A  |
| 5  | B  |
| 6  | C  |
| 8  | D  |
| 10   | E  |
| 12   | F  |
| 14   | G  |
| 16   | H  |
| 18   | I  |
| 20   | L  |

| Numero Denti<br>Number of Teeth<br>Количество зубьев |  |
|--|--|
| N° Denti<br>Teeth nr.<br>Кол-во зубьев               | Designazione<br>Designation<br>Обозначение |
| 10   | 10   |
| 11   | 11   |
| 12   | 12   |
| 13   | 13   |
| 14   | 14   |
| 15   | 15   |
| 16   | 16   |
| 17   | 17   |
| 18   | 18   |
| 19   | 19   |
| 20   | 20   |
| 21   | 21   |

| Larghezza Fascia<br>Teeth width<br>Ширина зубьев |  |
|--|--|
| Larghezza Fascia<br>Widht<br>Ширина              | Designazione<br>Designation<br>Обозначение |
| 40-49  | A  |
| 50-59  | B  |
| 60-69  | C  |
| 70-79  | D  |
| 80-89  | E  |
| 90-99  | F  |
| 100-109  | G  |
| 110-119  | H  |
| 120-129  | I  |
| 130-139  | L  |
| 140-149  | M  |
| 150-159  | N  |

Esempio:

Se si vuole un pignone dentato per rotazione con modulo normale 10, numero denti 12, larghezza fascia 89 in designazione si dovrà riportare:

**E12E9**

For example:

If you require a rotation pinion with normal module 10, teeth number 12 and widht 89 the description will be:

**E12E9**

Пример:

Для выходной шестерни модулем 10, числом зубьев 12 и шириной 89, маркировка следующая:

**E12E9**

**13 OPT - Opzioni - Materiale degli anelli di tenuta**

**OPT - Options - Materials of Seals**

**OPT - Опции - Материалы уплотнений**

| -   | Tenute STANDARD                          | Oil Seals Standard                      | Стандартные уплотнения                 |
|-----|--|---|--|
| VT1 | Paraoli in viton in entrata              | Viton oil seals at input end            | Витоновые уплотнения на входе          |
| VT2 | Paraoli in viton in uscita               | Viton oil seals at output end           | Витоновые уплотнения на выходе         |
| VT  | Paraoli in viton in entrata ed in uscita | Viton oil seals at input and output end | Витоновые уплотнения на входе и выходе |

Vedi Sezione E.

To see section E.

Смотри раздел E

**14 MV - Versione di Montaggio**

**MV - Mounting Version**

**MV - Исполнение мотора**

APPLICABILITA': solo per prodotti combinati esempio EXB-EXV - EXC - EXS - EXR - EXO - EXA.

La versione di montaggio definisce la posizione reciproca del riduttore EX con il riduttore combinato.

Lo schema grafico è riportato nella Sezione V.

Applicability: only for combined gearboxes type EXB - EXV - EXC - EXS - EXR - EXO and EXA.

The mounting position define the mountin position between the two gearboxes.

The graphic sketch is to the section V.

Применимо: только для комбинированных редукторов типа EXB - EXV - EXC - EXS - EXR - EXO - EXA.

Данный параметр описывает взаимное расположение двух комбинированных редукторов.

Схемы приведены в разделе V.

**1.1 Designazione**

**1.1 Designation**

**1.1 Маркировка**

**14 MV - Versione di Montaggio**

**MV - Mounting Version**

**MV - Исполнение мотора**

| Lato flangia uscita riduttore combinato<br>Combined gearbox output flange side<br>Переходной фланец | Descrizione                                     | <b>EX.</b><br>Combinato / Combined / Комбинация |     |               |     |     |     |     |
|---|---|---|-----|---------------|-----|-----|-----|-----|
|   |   | EXB   | EXV | EXC           | EXS | EXR | EXO | EXA |
|   |   | Designazione/Designation/Обозначение            |     |               |     |     |     |     |
| <b>DX</b>   | flangia destra<br>Right flange<br>Правый фланец | A - B - C - D                                   |     | A - B - C - D |     |     |     |     |
| <b>SX</b>   | flangia sinistra<br>Left flange<br>Левый фланец | -   |     | L - M - N - O |     |     |     |     |

**15 MP - Posizioni di montaggio**

**MP - Mounting positions**

**MP - Монтажные положения**

Dopo aver definito la versione di montaggio è necessario che sia indicata la posizione in cui il riduttore sarà montato.

After to have defined the mounting position it's necessary to show the position whose the gearbox will be mounted.

После выбора взаимного расположения редукторов необходимо указать в каком положении редуктор будет расположен в пространстве.

Il primo numero indica la posizione di montaggio in cui si viene a trovare il riduttore EX mentre il secondo numero la posizione in cui si trova il riduttore combinato.

The first number is the EX mounting position while the second number is the combined gearbox position.

Первая цифра указывает монтажное положение первой ступени, вторая соответственно положение второго присоединяемого редуктора.

Attenersi a questi indicazioni per il riempimento dei rispettivi riduttori.

Follow this instructions for to fill the gearboxes.

Схемы монтажных положений указаны разделе F.

Lo schema grafico è riportato nella Sezione

On the section F there is the graphic sketch.

| <b>EX</b> (Lineare / In line / Линейный)                  |                             |                                 |
|---|-----------------------------|---------------------------------|
| Tipo Supporto Uscita/Output support type/Выходной суппорт | <b>P.</b>                   | <b>R - M - H - FB - FS - FP</b> |
| Designazione / Designation / Обозначение                  | M1 - M2 - M3 - M4 - M5 - M6 | M1 - M3 - M4                    |

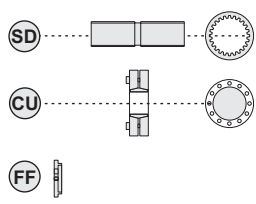
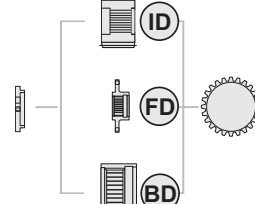
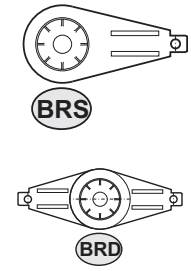

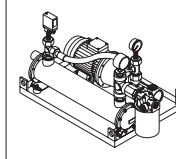
  

| <b>EX.</b> (Combinato / Combined / Комбинированный)       |  |  |
|---|--|--|
| Tipo Supporto Uscita/Output support type/Выходной суппорт | <b>P.</b>  | <b>R - M - H - FB - FS - FP</b>                |
| Designazione / Designation / Обозначение                  | M11 - M21 - M35 - M51 - M61<br>M12 - M22 - M46 - M52 - M62<br>M13 - M23 - M36 - M53 - M63<br>M14 - M24 - M45 - M54 - M64 | M11 - M12 - M13 - M14<br>M35 - M46 - M36 - M45 |

**16 ACC. - Accessori**

**ACC. - Accessories**

**ACC. - Аксессуары**

| 16a ACC1  | 16b ACC2  | 16c ACC3  | 16d ACC 4  | 16e ACC5  |
|---|---|---|--|---|
| Accessori - Estremità uscita<br>Accessories - Output Configuration<br>Аксессуары - для выходного вала | Accessori - Estremità Dentate D<br>Accessories - Output Configuration -<br>Accessories - Splined D<br>Аксессуары - для шлицевого вала D | Accessori - Versioni pendolari<br>Accessories - Shaft Mounted Version<br>Аксессуары - Монтируемый на валу | Accessori - Vaso Espansione<br>Accessories - Expansion tank<br>Аксессуары - Расширительный бак | Accessori - sistema con scambiatore<br>Accessories - Cooling Unit<br>Станция охлаждения |
| SD CU FF  | ID FD BD  | BRS BRD   | OT   | RFA RFW   |
|                     |    |                        |           |    |
| Vedi Sezione C / To see section C / Обратитесь к разделу C  |   |   | Vedi Sezione E/To see section E<br>Обратитесь к разделу E                                      |   |

**17 PMT - Posizioni della Morsettiera**

**PMT - Position Terminal Box**

**PMT - Положение клеммной коробки**

[2, 3, 4] Posizione della morsettiera del motore se diversa da quella standard (1). Vedi Sezione C e V.

[2, 3, 4] Position of the motor terminal box if different from the standard one (1). To see section C and V.

Положения клемной коробки [2, 3, 4], отличаются от стандартного положения [1]. Обратитесь к разделам C и V.

## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX                         |         | $n_2 \times h$ |       |       |        |        |         |         | 10000<br>ЧАСОВ |             |            |            | $T_{max}$<br>[Nm] |
|----------------------------|---------|----------------|-------|-------|--------|--------|---------|---------|----------------|-------------|------------|------------|-------------------|
|                            |         | $T_N$ [Nm]     |       |       |        |        |         |         | $n_1$ [rpm]    | $n_2$ [rpm] | $T_N$ [Nm] | $P_1$ [kW] |                   |
| Stadio<br>Stage<br>Ступени | ir      | 10000          | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                |             |            |            | $n_1$ [rpm]       |
| <b>1</b>                   | 3,48    | 1076           | 1025  | 957   | 906    | 750    | 609     | 495     | 1400           | 402         | 401        | 17,26      | 1700              |
|                            | 4,26    | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 328         | 419        | 14,70      | 1550              |
|                            | 5,77    | 939            | 889   | 802   | 723    | 551    | 521     | 472     |                | 243         | 445        | 11,55      | 1350              |
|                            | 7,20    | 665            | 595   | 514   | 460    | 369    | 342     | 317     |                | 194         | 318        | 6,60       | 1050              |
| <b>2</b>                   | 12,11   | 1076           | 1025  | 957   | 906    | 750    | 609     | 495     | 1400           | 116         | 584        | 7,36       | 1700              |
|                            | 14,84   | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 94          | 609        | 6,27       | 1550              |
|                            | 18,17   | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 77          | 647        | 5,44       | 1550              |
|                            | 20,08   | 1076           | 1025  | 957   | 906    | 750    | 609     | 495     |                | 70          | 679        | 5,17       | 1700              |
|                            | 24,60   | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 57          | 709        | 4,40       | 1550              |
|                            | 30,69   | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 46          | 757        | 3,77       | 1550              |
|                            | 33,28   | 939            | 889   | 802   | 723    | 551    | 521     | 472     |                | 42          | 558        | 2,56       | 1350              |
|                            | 41,54   | 939            | 889   | 802   | 723    | 551    | 521     | 472     |                | 34          | 568        | 2,09       | 1350              |
| 51,84                      | 665     | 595            | 514   | 460   | 369    | 342    | 317     | 27      | 395            | 1,16        | 1050       |            |                   |
| <b>3</b>                   | 51,63   | 1022           | 972   | 955   | 942    | 737    | 598     | 486     | 1400           | 27          | 861        | 2,60       | 1550              |
|                            | 63,25   | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 22          | 877        | 2,16       | 1550              |
|                            | 69,87   | 1076           | 1025  | 957   | 906    | 750    | 609     | 495     |                | 20          | 890        | 1,99       | 1700              |
|                            | 77,48   | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 18          | 893        | 1,80       | 1550              |
|                            | 85,59   | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 16          | 933        | 1,70       | 1550              |
|                            | 104,85  | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 13          | 937        | 1,39       | 1550              |
|                            | 106,82  | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 13          | 937        | 1,37       | 1550              |
|                            | 130,86  | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 11          | 941        | 1,12       | 1550              |
|                            | 141,90  | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 10          | 942        | 1,04       | 1550              |
|                            | 144,55  | 1076           | 1025  | 957   | 906    | 750    | 609     | 495     |                | 10          | 909        | 0,98       | 1700              |
|                            | 177,09  | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 7,9         | 946        | 0,83       | 1550              |
|                            | 180,40  | 1076           | 1025  | 957   | 906    | 750    | 609     | 495     |                | 7,8         | 925        | 0,80       | 1700              |
|                            | 221,00  | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 6,3         | 950        | 0,67       | 1550              |
|                            | 239,64  | 939            | 889   | 802   | 723    | 551    | 521     | 472     |                | 5,8         | 784        | 0,51       | 1350              |
| 299,08                     | 939     | 889            | 802   | 723   | 551    | 521    | 472     | 4,7     | 810            | 0,42        | 1350       |            |                   |
| <b>4</b>                   | 220,10  | 1022           | 972   | 955   | 942    | 737    | 598     | 486     | 1400           | 6,4         | 950        | 0,69       | 1550              |
|                            | 243,14  | 1076           | 1025  | 957   | 906    | 750    | 609     | 495     |                | 5,8         | 947        | 0,62       | 1700              |
|                            | 269,63  | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 5,2         | 954        | 0,56       | 1550              |
|                            | 303,44  | 1076           | 1025  | 957   | 906    | 750    | 609     | 495     |                | 4,6         | 963        | 0,51       | 1700              |
|                            | 364,89  | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 3,8         | 960        | 0,42       | 1550              |
|                            | 403,08  | 1076           | 1025  | 957   | 906    | 750    | 609     | 495     |                | 3,5         | 984        | 0,39       | 1700              |
|                            | 447,00  | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 3,1         | 963        | 0,34       | 1550              |
|                            | 493,79  | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 2,8         | 965        | 0,31       | 1550              |
|                            | 557,86  | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 2,5         | 967        | 0,28       | 1550              |
|                            | 627,80  | 1076           | 1025  | 957   | 906    | 750    | 609     | 495     |                | 2,2         | 1017       | 0,26       | 1700              |
|                            | 818,63  | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 1,7         | 975        | 0,19       | 1550              |
|                            | 942,17  | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 1,5         | 939        | 0,16       | 1550              |
|                            | 1021,64 | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 1,4         | 956        | 0,15       | 1550              |
|                            | 1275,01 | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 1,1         | 1002       | 0,13       | 1550              |
|                            | 1591,22 | 1022           | 972   | 955   | 942    | 737    | 598     | 486     |                | 0,9         | 1049       | 0,10       | 1550              |
|                            | 1725,44 | 939            | 889   | 802   | 723    | 551    | 521     | 472     |                | 0,8         | 969        | 0,09       | 1350              |
|                            | 2153,35 | 939            | 889   | 802   | 723    | 551    | 521     | 472     |                | 0,7         | 1000       | 0,07       | 1350              |
|                            | 2687,39 | 665            | 595   | 514   | 460    | 369    | 342     | 317     |                | 0,5         | 738        | 0,04       | 1050              |

| $P_{TN}$   | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP |
|------------|------|-----------------------|---------|----------|
| <b>101</b> | 18.6 | 12.6                  | 14.1    | 11.7     |
| <b>102</b> | 12.2 | 8.7                   | 9.6     | 8.2      |
| <b>103</b> | 8.0  | 6.0                   | 6.5     | 5.7      |
| <b>104</b> | 6.7  | 5.2                   | 5.5     | 4.9      |

**1.2 Prestazioni**

**1.2 Performances**

**1.2.1.2 Характеристики**

| EXB<br>  | n <sub>2</sub> X h         |      |                     |       |        |        |         |         | 10000<br>ЧАСОВ       |                      |                     |                     | T <sub>max</sub><br>[Nm] |
|----------|----------------------------|------|---------------------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|--------------------------|
|          | Stadio<br>Stage<br>Ступени | ir   | T <sub>N</sub> [Nm] |       |        |        |         |         | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |
| 10000    |                            |      | 20000               | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      |                      |                     |                     |                          |
| <b>2</b> | 10,01                      | 1076 | 1025                | 957   | 906    | 750    | 609     | 495     | 1400                 | 140                  | 551                 | 8,68                | 1700                     |
|          | 12,26                      | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 114                  | 575                 | 7,02                | 1550                     |
|          | 16,59                      | 939  | 889                 | 802   | 723    | 551    | 521     | 472     |                      | 84                   | 528                 | 5,02                | 1350                     |
|          | 17,76                      | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 79                   | 643                 | 5,70                | 1550                     |
|          | 20,70                      | 665  | 595                 | 514   | 460    | 369    | 342     | 317     |                      | 68                   | 357                 | 2,72                | 1050                     |
|          | 24,04                      | 939  | 889                 | 802   | 723    | 551    | 521     | 472     |                      | 58                   | 544                 | 3,57                | 1350                     |
|          | 29,23                      | 941  | 880                 | 807   | 807    | 737    | 598     | 486     |                      | 48                   | 746                 | 4,02                | 1550                     |
|          | 39,56                      | 939  | 889                 | 802   | 723    | 551    | 521     | 472     |                      | 35                   | 566                 | 2,26                | 1350                     |
|          | 49,37                      | 665  | 595                 | 514   | 460    | 369    | 342     | 317     |                      | 28                   | 392                 | 1,25                | 1050                     |
| <b>3</b> | 34,82                      | 1076 | 1025                | 957   | 906    | 750    | 609     | 495     | 1400                 | 40                   | 801                 | 3,71                | 1700                     |
|          | 42,65                      | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 33                   | 836                 | 3,16                | 1550                     |
|          | 52,25                      | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 27                   | 862                 | 2,66                | 1550                     |
|          | 61,82                      | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 23                   | 875                 | 2,28                | 1550                     |
|          | 70,71                      | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 20                   | 886                 | 2,02                | 1550                     |
|          | 75,73                      | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 18                   | 891                 | 1,90                | 1550                     |
|          | 88,25                      | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 16                   | 934                 | 1,71                | 1550                     |
|          | 102,48                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 14                   | 936                 | 1,47                | 1550                     |
|          | 119,42                     | 939  | 889                 | 802   | 723    | 551    | 521     | 472     |                      | 12                   | 706                 | 0,95                | 1350                     |
|          | 127,89                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 11                   | 940                 | 1,18                | 1550                     |
|          | 168,65                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 8,3                  | 945                 | 0,90                | 1550                     |
|          | 210,48                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 6,7                  | 950                 | 0,73                | 1550                     |
|          | 284,84                     | 939  | 889                 | 802   | 723    | 551    | 521     | 472     |                      | 4,9                  | 804                 | 0,45                | 1350                     |
| <b>4</b> | 148,43                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     | 1400                 | 9,4                  | 943                 | 1,0                 | 1550                     |
|          | 181,84                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 7,7                  | 947                 | 0,85                | 1550                     |
|          | 215,12                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 6,5                  | 950                 | 0,72                | 1550                     |
|          | 222,76                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 6,3                  | 951                 | 0,70                | 1550                     |
|          | 246,07                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 5,7                  | 952                 | 0,63                | 1550                     |
|          | 263,53                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 5,3                  | 954                 | 0,59                | 1550                     |
|          | 301,45                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 4,6                  | 956                 | 0,52                | 1550                     |
|          | 322,84                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 4,3                  | 957                 | 0,48                | 1550                     |
|          | 376,21                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 3,7                  | 960                 | 0,42                | 1550                     |
|          | 407,95                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 3,4                  | 962                 | 0,38                | 1550                     |
|          | 445,07                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 3,1                  | 963                 | 0,35                | 1550                     |
|          | 509,12                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 2,7                  | 966                 | 0,31                | 1550                     |
|          | 545,24                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 2,6                  | 967                 | 0,29                | 1550                     |
|          | 591,23                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 2,4                  | 969                 | 0,27                | 1550                     |
|          | 635,38                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 2,2                  | 970                 | 0,25                | 1550                     |
|          | 737,85                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 1,9                  | 973                 | 0,21                | 1550                     |
|          | 897,30                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 1,6                  | 929                 | 0,17                | 1550                     |
|          | 972,99                     | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 1,4                  | 972                 | 0,16                | 1550                     |
|          | 1214,30                    | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 1,2                  | 992                 | 0,13                | 1550                     |
|          | 1515,44                    | 1022 | 972                 | 955   | 942    | 737    | 598     | 486     |                      | 0,9                  | 1038                | 0,11                | 1550                     |
| 2050,81  | 939                        | 889  | 802                 | 723   | 551    | 521    | 472     | 0,7     | 993                  | 0,08                 | 1350                |                     |                          |

| P <sub>TN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP |
|-----------------|------|-----------------------|---------|----------|
| <b>102</b>      | 11,6 | 9,4                   | 9,9     | 9,0      |
| <b>103</b>      | 8,6  | 7,1                   | 7,5     | 6,9      |
| <b>104</b>      | 6,8  | 5,7                   | 5,9     | 5,5      |

## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX                         |         | $n_2 \times h$ |       |       |        |        |         |         | 10000<br>ЧАСОВ |             |            |            | $T_{max}$<br>[Nm] |      |       |      |
|----------------------------|---------|----------------|-------|-------|--------|--------|---------|---------|----------------|-------------|------------|------------|-------------------|------|-------|------|
|                            |         | $T_N$ [Nm]     |       |       |        |        |         |         | $n_1$ [rpm]    | $n_2$ [rpm] | $T_N$ [Nm] | $P_1$ [kW] |                   |      |       |      |
| Stadio<br>Stage<br>Ступени | ir      | 10000          | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                |             |            |            | 1400              | 1400 | 1400  | 1400 |
| <b>1</b>                   | 3,48    | 2100           | 1994  | 1854  | 1807   | 1374   | 1116    | 906     | 1400           | 1400        | 1400       | 1400       |                   |      |       |      |
|                            | 4,26    | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                |             |            |            | 328               | 767  | 26,91 | 3000 |
|                            | 5,77    | 1804           | 1673  | 1602  | 1444   | 1102   | 1042    | 864     |                |             |            |            | 243               | 816  | 21,15 | 2560 |
|                            | 7,20    | 1329           | 1198  | 1044  | 941    | 739    | 693     | 669     |                |             |            |            | 194               | 670  | 13,92 | 2000 |
| <b>2</b>                   | 12,11   | 2100           | 1994  | 1854  | 1807   | 1374   | 1116    | 906     | 1400           | 1400        | 1400       | 1400       | 116               | 1068 | 13,47 | 3400 |
|                            | 14,84   | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                |             |            |            | 94                | 1115 | 11,48 | 3000 |
|                            | 18,17   | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                |             |            |            | 77                | 1185 | 9,96  | 3000 |
|                            | 20,08   | 2100           | 1994  | 1854  | 1807   | 1374   | 1116    | 906     |                |             |            |            | 70                | 1243 | 9,46  | 3400 |
|                            | 24,60   | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                |             |            |            | 57                | 1297 | 8,06  | 3000 |
|                            | 30,69   | 1951           | 1855  | 1685  | 1561   | 1308   | 1096    | 890     |                |             |            |            | 46                | 1321 | 6,57  | 3000 |
|                            | 33,28   | 1804           | 1673  | 1602  | 1444   | 1102   | 1042    | 864     |                |             |            |            | 42                | 1117 | 5,12  | 2560 |
|                            | 41,54   | 1804           | 1673  | 1602  | 1444   | 1102   | 1042    | 864     |                |             |            |            | 34                | 1137 | 4,18  | 2560 |
| 51,84                      | 1329    | 1198           | 1044  | 941   | 739    | 693    | 669     | 27      | 811            | 2,39        | 2000       |            |                   |      |       |      |
| <b>3</b>                   | 51,63   | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 890     | 1400           | 1400        | 1400       | 1400       | 27                | 1621 | 4,90  | 3000 |
|                            | 63,25   | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                |             |            |            | 22                | 1722 | 4,25  | 3000 |
|                            | 69,87   | 2100           | 1994  | 1854  | 1807   | 1374   | 1116    | 906     |                |             |            |            | 20                | 1741 | 3,89  | 3400 |
|                            | 77,48   | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                |             |            |            | 18                | 1775 | 3,57  | 3000 |
|                            | 85,59   | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                |             |            |            | 16                | 1779 | 3,24  | 3000 |
|                            | 104,85  | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                |             |            |            | 13                | 1786 | 2,66  | 3000 |
|                            | 106,82  | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                |             |            |            | 13                | 1787 | 2,61  | 3000 |
|                            | 130,86  | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                |             |            |            | 11                | 1794 | 2,14  | 3000 |
|                            | 141,90  | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                |             |            |            | 10                | 1797 | 1,98  | 3000 |
|                            | 144,55  | 2100           | 1994  | 1854  | 1807   | 1374   | 1116    | 906     |                |             |            |            | 10                | 1753 | 1,89  | 3400 |
|                            | 177,09  | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                |             |            |            | 7,9               | 1805 | 1,59  | 3000 |
|                            | 180,40  | 2100           | 1994  | 1854  | 1807   | 1374   | 1116    | 906     |                |             |            |            | 7,8               | 1787 | 1,54  | 3400 |
|                            | 221,00  | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                |             |            |            | 6,3               | 1813 | 1,28  | 3000 |
|                            | 239,64  | 1804           | 1673  | 1602  | 1444   | 1102   | 1042    | 864     |                |             |            |            | 5,8               | 1565 | 1,02  | 2560 |
| 299,08                     | 1804    | 1673           | 1602  | 1444  | 1102   | 1042   | 864     | 4,7     | 1618           | 0,84        | 2560       |            |                   |      |       |      |
| <b>4</b>                   | 220,10  | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 1096    | 1400           | 1400        | 1400       | 1400       | 6,4               | 1813 | 1,31  | 3000 |
|                            | 243,14  | 2100           | 1994  | 1854  | 1807   | 1374   | 1116    | 1116    |                |             |            |            | 5,8               | 1832 | 1,20  | 3400 |
|                            | 269,63  | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 1096    |                |             |            |            | 5,2               | 1821 | 1,08  | 3000 |
|                            | 303,44  | 2100           | 1994  | 1854  | 1807   | 1374   | 1116    | 1116    |                |             |            |            | 4,6               | 1866 | 0,98  | 3400 |
|                            | 364,89  | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 1096    |                |             |            |            | 3,8               | 1832 | 0,80  | 3000 |
|                            | 403,08  | 2100           | 1994  | 1854  | 1807   | 1374   | 1116    | 1116    |                |             |            |            | 3,5               | 1910 | 0,75  | 3000 |
|                            | 447,00  | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 1096    |                |             |            |            | 3,1               | 1839 | 0,66  | 3000 |
|                            | 493,79  | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 1096    |                |             |            |            | 2,8               | 1843 | 0,59  | 3000 |
|                            | 557,86  | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 1096    |                |             |            |            | 2,5               | 1847 | 0,53  | 3400 |
|                            | 627,80  | 2100           | 1994  | 1854  | 1807   | 1374   | 1116    | 1116    |                |             |            |            | 2,2               | 1977 | 0,50  | 3000 |
|                            | 818,63  | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 1096    |                |             |            |            | 1,7               | 1861 | 0,36  | 3000 |
|                            | 942,17  | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 1096    |                |             |            |            | 1,5               | 1801 | 0,30  | 3000 |
|                            | 1021,64 | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 1096    |                |             |            |            | 1,4               | 1831 | 0,29  | 3000 |
|                            | 1275,01 | 1951           | 1855  | 1822  | 1797   | 1349   | 1096    | 1096    |                |             |            |            | 1,1               | 1915 | 0,24  | 3000 |
|                            | 1591,22 | 1951           | 1855  | 1685  | 1561   | 1308   | 1096    | 1096    |                |             |            |            | 0,9               | 1999 | 0,20  | 3000 |
|                            | 1725,44 | 1804           | 1673  | 1602  | 1444   | 1102   | 1042    | 1042    |                |             |            |            | 0,8               | 1862 | 0,17  | 2560 |
|                            | 2153,35 | 1804           | 1673  | 1602  | 1444   | 1102   | 1042    | 1042    |                |             |            |            | 0,7               | 1924 | 0,14  | 2560 |
|                            | 2687,39 | 1329           | 1198  | 1044  | 941    | 739    | 693     | 693     |                |             |            |            | 0,5               | 1466 | 0,09  | 2000 |

| $P_{TN}$ | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP |
|----------|------|-----------------------|---------|----------|
| 201      | 19.3 | 13.3                  | 14.8    | 12.4     |
| 202      | 12.6 | 9.2                   | 10.0    | 8.6      |
| 203      | 8.2  | 6.2                   | 6.7     | 5.9      |
| 204      | 6.8  | 5.3                   | 5.7     | 5.1      |



**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

|                      |         | n <sub>2</sub> X h  |       |       |        |        |         |         | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|----------------------|---------|---------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|-----------------------|
|                      |         | T <sub>N</sub> [Nm] |       |       |        |        |         |         | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| Stadio Stage Ступени | ir      | 10000               | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      |                      |                     |                     |                       |
| <b>2</b>             | 10,01   | 1307                | 1280  | 1244  | 1217   | 1153   | 1116    | 906     | 1400                 | 139,9                | 1009                | 15,90               | 3400                  |
|                      | 12,26   | 1592                | 1558  | 1514  | 1481   | 1349   | 1096    | 890     |                      | 114,2                | 1053                | 12,85               | 3000                  |
|                      | 16,59   | 1804                | 1673  | 1602  | 1444   | 1102   | 1042    | 864     |                      | 84,4                 | 1056                | 10,04               | 2560                  |
|                      | 17,76   | 1248                | 1248  | 1248  | 1248   | 1248   | 1096    | 890     |                      | 78,8                 | 1177                | 10,44               | 3000                  |
|                      | 20,70   | 1329                | 1198  | 1044  | 941    | 739    | 693     | 669     |                      | 67,6                 | 706                 | 5,38                | 2000                  |
|                      | 24,04   | 1689                | 1673  | 1602  | 1444   | 1102   | 1042    | 864     |                      | 58,2                 | 1088                | 7,14                | 2560                  |
|                      | 29,23   | 941                 | 880   | 807   | 807    | 807    | 807     | 807     |                      | 47,9                 | 807                 | 4,35                | 3000                  |
|                      | 39,56   | 1237                | 1156  | 1092  | 1092   | 1092   | 1042    | 864     |                      | 35,4                 | 1092                | 4,35                | 2560                  |
| 49,37                | 1329    | 1198                | 1044  | 941   | 739    | 693    | 669     | 28,4    | 805                  | 2,57                 | 2000                |                     |                       |
| <b>3</b>             | 34,82   | 2100                | 1994  | 1854  | 1807   | 1374   | 1116    | 906     | 1400                 | 40                   | 1467                | 6,79                | 3400                  |
|                      | 42,65   | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 33                   | 1530                | 5,78                | 3000                  |
|                      | 52,25   | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 27                   | 1626                | 5,01                | 3000                  |
|                      | 61,82   | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 23                   | 1711                | 4,46                | 3000                  |
|                      | 70,71   | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 20                   | 1772                | 4,04                | 3000                  |
|                      | 75,73   | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 18                   | 1774                | 3,77                | 3000                  |
|                      | 88,25   | 1951                | 1855  | 1685  | 1561   | 1308   | 1096    | 890     |                      | 16                   | 1484                | 2,71                | 3000                  |
|                      | 102,48  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 14                   | 1785                | 2,81                | 3000                  |
|                      | 119,42  | 1804                | 1673  | 1602  | 1444   | 1102   | 1042    | 864     |                      | 12                   | 1410                | 1,90                | 2560                  |
|                      | 127,89  | 1951                | 1855  | 1685  | 1561   | 1308   | 1096    | 890     |                      | 11                   | 1546                | 1,95                | 3000                  |
|                      | 168,65  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 8,3                  | 1803                | 1,72                | 3000                  |
|                      | 210,48  | 1951                | 1855  | 1685  | 1561   | 1308   | 1096    | 890     |                      | 6,7                  | 1633                | 1,25                | 3000                  |
| 284,84               | 1804    | 1673                | 1602  | 1444  | 1102   | 1042   | 864     | 4,9     | 1606                 | 0,91                 | 2560                |                     |                       |
| <b>4</b>             | 148,43  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     | 1400                 | 9,4                  | 1799                | 2,0                 | 3000                  |
|                      | 181,84  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 7,7                  | 1806                | 1,62                | 3000                  |
|                      | 215,12  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 6,5                  | 1812                | 1,37                | 3000                  |
|                      | 222,76  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 6,3                  | 1814                | 1,33                | 3000                  |
|                      | 246,07  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 5,7                  | 1817                | 1,20                | 3000                  |
|                      | 263,53  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 5,3                  | 1820                | 1,12                | 3000                  |
|                      | 301,45  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 4,6                  | 1825                | 0,99                | 3000                  |
|                      | 322,84  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 4,3                  | 1827                | 0,92                | 3000                  |
|                      | 376,21  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 3,7                  | 1833                | 0,79                | 3000                  |
|                      | 407,95  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 3,4                  | 1836                | 0,73                | 3000                  |
|                      | 445,07  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 3,1                  | 1839                | 0,67                | 3000                  |
|                      | 509,12  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 2,7                  | 1844                | 0,59                | 3000                  |
|                      | 545,24  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 2,6                  | 1846                | 0,55                | 3000                  |
|                      | 591,23  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 2,4                  | 1849                | 0,51                | 3000                  |
|                      | 635,38  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 2,2                  | 1852                | 0,47                | 3000                  |
|                      | 737,85  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 1,9                  | 1857                | 0,41                | 3000                  |
|                      | 897,30  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 1,6                  | 1782                | 0,32                | 3000                  |
|                      | 972,99  | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 1,4                  | 1813                | 0,30                | 3000                  |
|                      | 1214,30 | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 1,2                  | 1897                | 0,25                | 3000                  |
|                      | 1515,44 | 1951                | 1855  | 1822  | 1797   | 1349   | 1096    | 890     |                      | 0,9                  | 1981                | 0,21                | 3000                  |
| 2050,81              | 1804    | 1673                | 1602  | 1444  | 1102   | 1042   | 864     | 0,7     | 1910                 | 0,15                 | 2560                |                     |                       |

| P <sub>TN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP |
|-----------------|------|-----------------------|---------|----------|
| <b>202</b>      | 11,8 | 9,6                   | 10,2    | 9,3      |
| <b>203</b>      | 8,8  | 7,3                   | 7,7     | 7,1      |
| <b>204</b>      | 6,9  | 5,8                   | 6,1     | 5,6      |

## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX                         |         | $n_2 \times h$ |       |       |        |        |         |         | 10000<br>ЧАСОВ |             |            |            | $T_{max}$<br>[Nm] |
|----------------------------|---------|----------------|-------|-------|--------|--------|---------|---------|----------------|-------------|------------|------------|-------------------|
| Stadio<br>Stage<br>Ступени | ir      | 10000          | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 | $n_1$ [rpm]    | $n_2$ [rpm] | $T_N$ [Nm] | $P_1$ [kW] |                   |
| <b>1</b>                   | 4,26    | 2407           | 2292  | 2250  | 2219   | 1795   | 1458    | 1184    | 1400           | 328         | 1020       | 35,79      | 4000              |
| <b>2</b>                   | 14,84   | 2407           | 2292  | 2250  | 2219   | 1795   | 1458    | 1184    | 1400           | 94          | 1483       | 15,27      | 4000              |
|                            | 18,17   | 2407           | 2292  | 2250  | 2219   | 1795   | 1458    | 1184    |                | 77          | 1576       | 13,25      | 4000              |
|                            | 24,60   | 2407           | 2292  | 2250  | 2219   | 1795   | 1458    | 1184    |                | 57          | 1726       | 10,72      | 4000              |
|                            | 30,69   | 2195           | 1964  | 1685  | 1561   | 1308   | 1212    | 1123    |                | 46          | 1321       | 6,57       | 4000              |
| <b>3</b>                   | 51,63   | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    | 1400           | 27          | 2031       | 6.13       | 4000              |
|                            | 63,25   | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                | 22          | 2065       | 5.09       | 4000              |
|                            | 77,48   | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                | 18          | 2101       | 4.23       | 4000              |
|                            | 85,59   | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                | 16          | 2196       | 4.00       | 4000              |
|                            | 104,85  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                | 13          | 2206       | 3.28       | 4000              |
|                            | 106,82  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                | 13          | 2206       | 3.22       | 4000              |
|                            | 130,86  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                | 11          | 2216       | 2.64       | 4000              |
|                            | 141,90  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                | 10          | 2219       | 2.44       | 4000              |
|                            | 177,09  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                | 7.9         | 2229       | 1.96       | 4000              |
|                            | 221,00  | 2195           | 1964  | 1685  | 1561   | 1308   | 1212    | 1123    |                | 6.3         | 1642       | 1.16       | 4000              |
| <b>4</b>                   | 220,10  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1461    | 1400           | 6,4         | 2239       | 1,62       | 4000              |
|                            | 269,63  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1461    |                | 5,2         | 2248       | 1,33       | 4000              |
|                            | 297,86  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1461    |                | 4,7         | 2253       | 1,21       | 4000              |
|                            | 330,31  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1461    |                | 4,2         | 2258       | 1,09       | 4000              |
|                            | 371,73  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1461    |                | 3,8         | 2263       | 0,97       | 4000              |
|                            | 447,00  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1461    |                | 3,1         | 2271       | 0,81       | 4000              |
|                            | 493,79  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1461    |                | 2,8         | 2276       | 0,73       | 4000              |
|                            | 557,86  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1461    |                | 2,5         | 2281       | 0,65       | 4000              |
|                            | 616,26  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1461    |                | 2,3         | 2286       | 0,59       | 4000              |
|                            | 754,94  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1461    |                | 1,9         | 2295       | 0,48       | 4000              |
|                            | 818,63  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1461    |                | 1,7         | 2299       | 0,45       | 4000              |
|                            | 942,17  | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1461    |                | 1,5         | 2223       | 0,38       | 4000              |
|                            | 1021,64 | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1461    |                | 1,4         | 2261       | 0,35       | 4000              |
|                            | 1275,01 | 2407           | 2292  | 2250  | 2219   | 1798   | 1461    | 1461    |                | 1,1         | 2364       | 0,30       | 4000              |
|                            | 1591,22 | 2195           | 1964  | 1685  | 1561   | 1308   | 1212    | 1212    |                | 0,9         | 2240       | 0,22       | 4000              |

| $P_{TN}$   | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP |
|------------|------|-----------------------|---------|----------|
| <b>251</b> | 19.3 | 13.3                  | 14.8    | 12.4     |
| <b>252</b> | 12.6 | 9.2                   | 10.0    | 8.6      |
| <b>253</b> | 8.2  | 6.2                   | 6.7     | 5.9      |
| <b>254</b> | 6.8  | 5.3                   | 5.7     | 5.1      |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

|                      |        | n <sub>2</sub> X h  |       |       |        |        |         |         | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|----------------------|--------|---------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|-----------------------|
|                      |        | T <sub>N</sub> [Nm] |       |       |        |        |         |         | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| Stadio Stage СТУПЕНИ | ir     | 10000               | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      |                      |                     |                     |                       |
| <b>2</b>             | 12,26  | 1592                | 1558  | 1514  | 1481   | 1403   | 1370    | 1184    | 1400                 | 114                  | 1363                | 16,64               | 4000                  |
|                      | 17,76  | 1248                | 1248  | 1248  | 1248   | 1248   | 1248    | 1184    |                      | 79                   | 1248                | 11,08               | 4000                  |
|                      | 29,23  | 941                 | 880   | 807   | 807    | 807    | 807     | 807     |                      | 48                   | 807                 | 4,35                | 4000                  |
| <b>3</b>             | 42,65  | 2407                | 2292  | 2250  | 2219   | 1795   | 1458    | 1184    | 1400                 | 33                   | 1999                | 7,55                | 4000                  |
|                      | 52,25  | 2407                | 2292  | 2250  | 2219   | 1795   | 1458    | 1184    |                      | 27                   | 2033                | 6,27                | 4000                  |
|                      | 61,82  | 2407                | 2292  | 2250  | 2219   | 1795   | 1458    | 1184    |                      | 23                   | 2062                | 5,37                | 4000                  |
|                      | 70,71  | 2407                | 2292  | 2250  | 2219   | 1795   | 1458    | 1184    |                      | 20                   | 2085                | 4,75                | 4000                  |
|                      | 75,73  | 2407                | 2292  | 2250  | 2219   | 1795   | 1458    | 1184    |                      | 18                   | 2097                | 4,46                | 4000                  |
|                      | 88,25  | 2195                | 1964  | 1685  | 1561   | 1308   | 1212    | 1123    |                      | 16                   | 1484                | 2,71                | 4000                  |
|                      | 102,48 | 2407                | 2292  | 2250  | 2219   | 1795   | 1458    | 1184    |                      | 14                   | 2205                | 3,47                | 4000                  |
|                      | 127,89 | 2195                | 1964  | 1685  | 1561   | 1308   | 1212    | 1123    |                      | 11                   | 1546                | 1,95                | 4000                  |
|                      | 168,65 | 2407                | 2292  | 2250  | 2219   | 1795   | 1458    | 1184    |                      | 8,3                  | 2227                | 2,13                | 4000                  |
| 210,48               | 2195   | 1964                | 1685  | 1561  | 1308   | 1212   | 1123    | 6,7     | 1663                 | 1,27                 | 4000                |                     |                       |
| <b>4</b>             | 148,43 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    | 1400                 | 9,4                  | 2221                | 2,44                | 4000                  |
|                      | 181,84 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 7,7                  | 2231                | 2,00                | 4000                  |
|                      | 215,12 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 6,5                  | 2238                | 1,69                | 4000                  |
|                      | 222,76 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 6,3                  | 2240                | 1,64                | 4000                  |
|                      | 246,07 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 5,7                  | 2244                | 1,49                | 4000                  |
|                      | 263,53 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 5,3                  | 2247                | 1,39                | 4000                  |
|                      | 301,45 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 4,6                  | 2253                | 1,22                | 4000                  |
|                      | 322,84 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 4,3                  | 2257                | 1,14                | 4000                  |
|                      | 376,21 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 3,7                  | 2264                | 0,98                | 4000                  |
|                      | 407,95 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 3,4                  | 2267                | 0,91                | 4000                  |
|                      | 445,07 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 3,1                  | 2271                | 0,83                | 4000                  |
|                      | 509,12 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 2,7                  | 2277                | 0,73                | 4000                  |
|                      | 545,24 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 2,6                  | 2280                | 0,68                | 4000                  |
|                      | 591,23 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 2,4                  | 2284                | 0,63                | 4000                  |
|                      | 635,38 | 2195                | 1964  | 1685  | 1561   | 1308   | 1212    | 1123    |                      | 2,2                  | 1934                | 0,50                | 4000                  |
|                      | 737,85 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 1,9                  | 2294                | 0,51                | 4000                  |
|                      | 897,30 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 1,6                  | 2201                | 0,40                | 4000                  |
|                      | 972,99 | 2407                | 2292  | 2250  | 2219   | 1798   | 1461    | 1187    |                      | 1,4                  | 2238                | 0,37                | 4000                  |
| 1214,30              | 2407   | 2292                | 2250  | 2219  | 1798   | 1461   | 1187    | 1,2     | 2341                 | 0,31                 | 4000                |                     |                       |
| 1515,44              | 2195   | 1964                | 1685  | 1561  | 1308   | 1212   | 1123    | 0,9     | 2223                 | 0,24                 | 4000                |                     |                       |

**B**

| P <sub>TN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP |
|-----------------|------|-----------------------|---------|----------|
| <b>252</b>      | 11,8 | 9,6                   | 10,2    | 9,3      |
| <b>253</b>      | 8,8  | 7,3                   | 7,7     | 7,1      |
| <b>254</b>      | 6,9  | 5,8                   | 6,1     | 5,6      |

## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX<br>   | n <sub>2</sub> X h         |      |                     |      |      |      |      |      | n <sub>1</sub> [rpm] | 10000<br>ЧАСОВ       |                     |                     | T <sub>max</sub><br>[Nm] |
|----------|----------------------------|------|---------------------|------|------|------|------|------|----------------------|----------------------|---------------------|---------------------|--------------------------|
|          | Stadio<br>Stage<br>Ступени | ir   | T <sub>N</sub> [Nm] |      |      |      |      |      |                      | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |
| <b>1</b> |                            |      | 3,60                | 3103 | 2796 | 2748 | 2711 | 2317 | 1882                 |                      |                     |                     | 1528                     |
|          | 4,25                       | 2794 | 2601                | 2557 | 2523 | 2283 | 1855 | 1506 | 329                  | 1297                 | 45,65               | 3500                |                          |
|          | 5,33                       | 2657 | 2383                | 2339 | 2306 | 2215 | 1799 | 1461 | 263                  | 1347                 | 37,78               | 3600                |                          |
|          | 6,20                       | 2205 | 2037                | 2001 | 1973 | 1596 | 1522 | 1446 | 226                  | 1394                 | 33,64               | 3100                |                          |
|          | 7,50                       | 2029 | 1880                | 1741 | 1539 | 1200 | 1145 | 1091 | 187                  | 1096                 | 21,86               | 2550                |                          |
| <b>2</b> | 12,53                      | 3103 | 2796                | 2748 | 2711 | 1795 | 1458 | 1184 | 1400                 | 112                  | 1410                | 17,19               | 3900                     |
|          | 14,79                      | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 95                   | 1665                | 17,19               | 3500                     |
|          | 15,35                      | 3103 | 2796                | 2748 | 2711 | 1763 | 1432 | 1163 |                      | 91                   | 1472                | 14,64               | 3900                     |
|          | 18,12                      | 2794 | 2601                | 2557 | 2523 | 1980 | 1608 | 1306 |                      | 77                   | 1737                | 14,64               | 3500                     |
|          | 18,56                      | 2657 | 2383                | 2339 | 2306 | 2215 | 1799 | 1461 |                      | 75                   | 1958                | 16,11               | 3600                     |
|          | 20,77                      | 2961 | 2669                | 2100 | 1986 | 1712 | 1391 | 1129 |                      | 67                   | 1565                | 11,51               | 3900                     |
|          | 21,58                      | 2205 | 2037                | 2001 | 1973 | 1596 | 1522 | 1446 |                      | 65                   | 1568                | 11,10               | 3100                     |
|          | 22,74                      | 2657 | 2383                | 2339 | 2306 | 2215 | 1799 | 1461 |                      | 62                   | 2081                | 13,98               | 3600                     |
|          | 24,52                      | 2794 | 2601                | 2446 | 2314 | 1923 | 1562 | 1269 |                      | 57                   | 1848                | 11,51               | 3500                     |
|          | 26,43                      | 2205 | 2037                | 2001 | 1973 | 1596 | 1522 | 1446 |                      | 53                   | 1590                | 9,19                | 3100                     |
|          | 30,77                      | 2657 | 2383                | 2339 | 2306 | 2215 | 1799 | 1461 |                      | 46                   | 2233                | 11,08               | 3600                     |
|          | 35,77                      | 2205 | 2037                | 2001 | 1973 | 1596 | 1522 | 1446 |                      | 39                   | 1622                | 6,93                | 3100                     |
|          | 38,40                      | 2649 | 2371                | 2057 | 1906 | 1596 | 1479 | 1371 |                      | 36                   | 1653                | 6,57                | 3600                     |
| 44,64    | 2205                       | 2037 | 2001                | 1973 | 1596 | 1522 | 1446 | 31   | 1646                 | 5,63                 | 3100                |                     |                          |
| 54,00    | 2029                       | 1880 | 1741                | 1539 | 1200 | 1145 | 1091 | 26   | 1252                 | 3,54                 | 2550                |                     |                          |
| <b>3</b> | 43,60                      | 3103 | 2796                | 2748 | 2711 | 1795 | 1458 | 1184 | 1400                 | 32                   | 2050                | 7,33                | 3900                     |
|          | 51,47                      | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 27                   | 2421                | 7,33                | 3500                     |
|          | 53,41                      | 3103 | 2796                | 2748 | 2711 | 1795 | 1458 | 1184 |                      | 26                   | 2179                | 6,36                | 3900                     |
|          | 63,05                      | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 22                   | 2485                | 6,15                | 3500                     |
|          | 64,59                      | 2657 | 2383                | 2339 | 2306 | 2215 | 1799 | 1461 |                      | 22                   | 2269                | 5,48                | 3600                     |
|          | 72,28                      | 3103 | 2796                | 2748 | 2711 | 1795 | 1458 | 1184 |                      | 19                   | 2386                | 5,15                | 3900                     |
|          | 77,24                      | 2794 | 2601                | 2557 | 2523 | 1980 | 1608 | 1306 |                      | 18                   | 2495                | 5,04                | 3500                     |
|          | 79,12                      | 2657 | 2383                | 2339 | 2306 | 2215 | 1799 | 1461 |                      | 18                   | 2279                | 4,49                | 3600                     |
|          | 85,33                      | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 16                   | 2500                | 4,57                | 3500                     |
|          | 104,53                     | 2794 | 2601                | 2557 | 2523 | 1980 | 1608 | 1306 |                      | 13                   | 2509                | 3,74                | 3500                     |
|          | 106,49                     | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 13                   | 2510                | 3,68                | 3500                     |
|          | 107,08                     | 2657 | 2383                | 2339 | 2306 | 2215 | 1799 | 1461 |                      | 13                   | 2293                | 3,34                | 3600                     |
|          | 130,45                     | 2794 | 2601                | 2557 | 2523 | 1980 | 1608 | 1306 |                      | 11                   | 2520                | 3,01                | 3500                     |
|          | 133,63                     | 2657 | 2383                | 2339 | 2306 | 2215 | 1799 | 1461 |                      | 10                   | 2304                | 2,69                | 3600                     |
|          | 141,46                     | 2794 | 2601                | 2446 | 2314 | 1923 | 1562 | 1269 |                      | 10                   | 2316                | 2,55                | 3500                     |
|          | 163,71                     | 2657 | 2383                | 2339 | 2306 | 2215 | 1799 | 1461 |                      | 8,6                  | 2314                | 2,20                | 3600                     |
|          | 176,54                     | 2794 | 2601                | 2446 | 2314 | 1923 | 1562 | 1269 |                      | 7,9                  | 2357                | 2,08                | 3500                     |
|          | 190,31                     | 2205 | 2037                | 2001 | 1973 | 1596 | 1522 | 1446 |                      | 7,4                  | 1985                | 1,63                | 3100                     |
|          | 221,54                     | 2657 | 2383                | 2339 | 2306 | 2215 | 1799 | 1461 |                      | 6,3                  | 2328                | 1,64                | 3600                     |
|          | 257,54                     | 2205 | 2037                | 2001 | 1973 | 1596 | 1522 | 1446 |                      | 5,4                  | 1997                | 1,21                | 3100                     |
| 276,48   | 2649                       | 2371 | 2057                | 1906 | 1596 | 1479 | 1371 | 5,1  | 2054                 | 1,16                 | 3600                |                     |                          |
| 321,41   | 2205                       | 2037 | 2001                | 1973 | 1596 | 1522 | 1446 | 4,4  | 2006                 | 0,97                 | 3100                |                     |                          |
| <b>4</b> | 219,42                     | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 | 1400                 | 6,4                  | 2600                | 1,89                | 3500                     |
|          | 224,77                     | 2657 | 2383                | 2339 | 2306 | 2215 | 1799 | 1461 |                      | 6,2                  | 2400                | 1,70                | 3600                     |
|          | 268,80                     | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 5,2                  | 2600                | 1,54                | 3500                     |
|          | 275,35                     | 2657 | 2383                | 2339 | 2306 | 2215 | 1799 | 1461 |                      | 5,1                  | 2400                | 1,39                | 3600                     |
|          | 296,94                     | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 4,7                  | 2600                | 1,40                | 3500                     |
|          | 329,29                     | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 4,3                  | 2600                | 1,26                | 3500                     |
|          | 363,76                     | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 3,8                  | 2600                | 1,14                | 3500                     |
|          | 416,98                     | 3103 | 2796                | 2748 | 2711 | 1795 | 1458 | 1184 |                      | 3,4                  | 2800                | 1,07                | 3900                     |
|          | 453,98                     | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 3,1                  | 2600                | 0,91                | 3500                     |
|          | 492,27                     | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 2,8                  | 2600                | 0,84                | 3500                     |
|          | 556,14                     | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 2,5                  | 2600                | 0,74                | 3500                     |
|          | 614,35                     | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 2,3                  | 2600                | 0,67                | 3500                     |
|          | 766,71                     | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 1,8                  | 2600                | 0,54                | 3500                     |
|          | 795,61                     | 3103 | 2796                | 2748 | 2711 | 1795 | 1458 | 1184 |                      | 1,8                  | 2800                | 0,56                | 3900                     |
|          | 939,26                     | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 1,5                  | 2700                | 0,46                | 3500                     |
|          | 1018,49                    | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 1,4                  | 2700                | 0,42                | 3500                     |
|          | 1178,68                    | 2649 | 2371                | 2057 | 1906 | 1596 | 1479 | 1371 |                      | 1,2                  | 2600                | 0,35                | 3600                     |
|          | 1271,08                    | 2794 | 2601                | 2557 | 2523 | 2017 | 1638 | 1330 |                      | 1,1                  | 2700                | 0,34                | 3500                     |
|          | 1595,08                    | 2649 | 2371                | 2057 | 1906 | 1596 | 1479 | 1371 |                      | 0,9                  | 2700                | 0,27                | 3600                     |
|          | 1990,66                    | 2649 | 2371                | 2057 | 1906 | 1596 | 1479 | 1371 |                      | 0,7                  | 2700                | 0,22                | 3600                     |
|          | 2314,14                    | 2205 | 2037                | 2001 | 1973 | 1596 | 1522 | 1446 |                      | 0,6                  | 2300                | 0,16                | 3100                     |
|          | 2799,36                    | 2029 | 1880                | 1741 | 1539 | 1200 | 1145 | 1091 |                      | 0,5                  | 2100                | 0,12                | 2550                     |

| P <sub>TN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP | T    |
|-----------------|------|-----------------------|---------|----------|------|
| <b>301</b>      | 30.0 | 19.6                  | 23.2    | 14.4     | 28.6 |
| <b>302</b>      | 20.4 | 14.5                  | 16.5    | 11.5     | 19.6 |
| <b>303</b>      | 12.8 | 9.3                   | 10.5    | 7.6      | 12.3 |
| <b>304</b>      | 10.3 | 7.7                   | 8.6     | 6.4      | 9.9  |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

|                      |         | n <sub>2</sub> X h  |       |       |        |        |         |         | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|----------------------|---------|---------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|-----------------------|
|                      |         | T <sub>N</sub> [Nm] |       |       |        |        |         |         | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| Stadio Stage Ступени | ir      | 10000               | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      |                      |                     |                     |                       |
| <b>2</b>             | 10,35   | 1351                | 1323  | 1286  | 1257   | 1192   | 1164    | 1135    | 1400                 | 135,3                | 1151                | 17,54               | 3900                  |
|                      | 12,22   | 1587                | 1554  | 1510  | 1476   | 1399   | 1366    | 1333    |                      | 114,6                | 1359                | 17,54               | 3500                  |
|                      | 15,33   | 1978                | 1936  | 1881  | 1839   | 1742   | 1700    | 1461    |                      | 91,3                 | 1706                | 17,54               | 3600                  |
|                      | 17,83   | 2205                | 2037  | 2001  | 1973   | 1596   | 1522    | 1446    |                      | 78,5                 | 1548                | 13,69               | 3100                  |
|                      | 22,22   | 1562                | 1562  | 1562  | 1562   | 1562   | 1562    | 1461    |                      | 63,0                 | 1562                | 11,08               | 3600                  |
|                      | 25,83   | 1815                | 1815  | 1815  | 1815   | 1596   | 1522    | 1446    |                      | 54,2                 | 1587                | 9,69                | 3100                  |
|                      | 31,25   | 2029                | 1880  | 1741  | 1539   | 1200   | 1145    | 1091    |                      | 44,8                 | 1209                | 6,10                | 2550                  |
|                      | 36,57   | 1152                | 1077  | 1010  | 1010   | 1010   | 1010    | 1010    |                      | 38,3                 | 1010                | 4,35                | 3600                  |
|                      | 42,51   | 1320                | 1234  | 1174  | 1174   | 1174   | 1174    | 1174    |                      | 32,9                 | 1174                | 4,35                | 3100                  |
| 51,43                | 1567    | 1465                | 1420  | 1420  | 1200   | 1145   | 1091    | 27,2    | 1248                 | 3,82                 | 2550                |                     |                       |
| <b>3</b>             | 36,02   | 3103                | 2796  | 2748  | 2711   | 1795   | 1458    | 1184    | 1400                 | 39                   | 1953                | 8,74                | 3900                  |
|                      | 42,52   | 2794                | 2601  | 2557  | 2523   | 2017   | 1638    | 1330    |                      | 33                   | 2286                | 8,66                | 3500                  |
|                      | 52,09   | 2794                | 2601  | 2557  | 2523   | 1980   | 1608    | 1306    |                      | 27                   | 2385                | 7,38                | 3500                  |
|                      | 61,63   | 2794                | 2601  | 2557  | 2523   | 2017   | 1638    | 1330    |                      | 23                   | 2484                | 6,49                | 3500                  |
|                      | 75,49   | 2794                | 2601  | 2557  | 2523   | 1980   | 1608    | 1306    |                      | 19                   | 2494                | 5,32                | 3500                  |
|                      | 86,54   | 2961                | 2669  | 2100  | 1986   | 1712   | 1391    | 1129    |                      | 16                   | 1911                | 3,56                | 3900                  |
|                      | 94,74   | 2657                | 2383  | 2339  | 2306   | 2215   | 1799    | 1461    |                      | 15                   | 2287                | 3,89                | 3600                  |
|                      | 102,16  | 2794                | 2601  | 2446  | 2314   | 1923   | 1562    | 1269    |                      | 14                   | 2257                | 3,56                | 3500                  |
|                      | 124,24  | 2794                | 2601  | 2557  | 2523   | 1980   | 1608    | 1306    |                      | 11                   | 2518                | 3,26                | 3500                  |
|                      | 155,91  | 2657                | 2383  | 2339  | 2306   | 2215   | 1799    | 1461    |                      | 9,0                  | 2311                | 2,39                | 3600                  |
|                      | 168,13  | 2794                | 2601  | 2446  | 2314   | 1923   | 1562    | 1269    |                      | 8,3                  | 2348                | 2,25                | 3500                  |
|                      | 186,00  | 2205                | 2037  | 2001  | 1973   | 1596   | 1522    | 1446    |                      | 7,5                  | 1964                | 1,70                | 3100                  |
|                      | 210,99  | 2657                | 2383  | 2339  | 2306   | 2215   | 1799    | 1461    |                      | 6,6                  | 2326                | 1,78                | 3600                  |
| 263,31               | 2649    | 2371                | 2057  | 1906  | 1596   | 1479   | 1371    | 5,3     | 2043                 | 1,25                 | 3600                |                     |                       |
| 306,10               | 2205    | 2037                | 2001  | 1973  | 1596   | 1522   | 1446    | 4,6     | 2004                 | 1,05                 | 3100                |                     |                       |
| <b>4</b>             | 125,34  | 3103                | 2796  | 2748  | 2711   | 1795   | 1458    | 1184    | 1400                 | 11,2                 | 2705                | 3,52                | 3900                  |
|                      | 147,97  | 2794                | 2601  | 2557  | 2523   | 2017   | 1638    | 1330    |                      | 9,5                  | 2526                | 2,78                | 3500                  |
|                      | 181,27  | 2794                | 2601  | 2557  | 2523   | 2017   | 1638    | 1330    |                      | 7,7                  | 2536                | 2,28                | 3500                  |
|                      | 222,07  | 2794                | 2601  | 2557  | 2523   | 1980   | 1608    | 1306    |                      | 6,3                  | 2546                | 1,87                | 3500                  |
|                      | 245,31  | 2794                | 2601  | 2557  | 2523   | 2017   | 1638    | 1330    |                      | 5,7                  | 2551                | 1,69                | 3500                  |
|                      | 306,15  | 2794                | 2601  | 2557  | 2523   | 2017   | 1638    | 1330    |                      | 4,6                  | 2561                | 1,36                | 3500                  |
|                      | 321,84  | 2794                | 2601  | 2557  | 2523   | 1980   | 1608    | 1306    |                      | 4,3                  | 2564                | 1,30                | 3500                  |
|                      | 355,53  | 2794                | 2601  | 2557  | 2523   | 2017   | 1638    | 1330    |                      | 3,9                  | 2493                | 1,14                | 3500                  |
|                      | 406,69  | 2794                | 2601  | 2446  | 2314   | 1923   | 1562    | 1269    |                      | 3,4                  | 2575                | 1,03                | 3500                  |
|                      | 432,36  | 2794                | 2601  | 2557  | 2523   | 2017   | 1638    | 1330    |                      | 3,2                  | 2578                | 0,97                | 3500                  |
|                      | 507,55  | 2794                | 2601  | 2446  | 2314   | 1923   | 1562    | 1269    |                      | 2,8                  | 2586                | 0,83                | 3500                  |
|                      | 543,55  | 2794                | 2601  | 2557  | 2523   | 1980   | 1608    | 1306    |                      | 2,6                  | 2589                | 0,78                | 3500                  |
|                      | 585,10  | 2794                | 2601  | 2557  | 2523   | 2017   | 1638    | 1330    |                      | 2,4                  | 2593                | 0,72                | 3500                  |
|                      | 716,77  | 2794                | 2601  | 2557  | 2523   | 1980   | 1608    | 1306    |                      | 2,0                  | 2602                | 0,59                | 3500                  |
|                      | 734,24  | 2657                | 2383  | 2339  | 2306   | 2215   | 1799    | 1461    |                      | 1,9                  | 2386                | 0,53                | 3600                  |
|                      | 894,53  | 2794                | 2601  | 2557  | 2523   | 1980   | 1608    | 1306    |                      | 1,6                  | 2614                | 0,48                | 3500                  |
|                      | 969,99  | 2794                | 2601  | 2446  | 2314   | 1923   | 1562    | 1269    |                      | 1,4                  | 2647                | 0,44                | 3500                  |
|                      | 1152,00 | 2649                | 2371  | 2057  | 1906   | 1596   | 1479    | 1371    |                      | 1,2                  | 2568                | 0,36                | 3600                  |
|                      | 1339,20 | 2205                | 2037  | 2001  | 1973   | 1596   | 1522    | 1446    |                      | 1,0                  | 2191                | 0,27                | 3100                  |
|                      | 1519,12 | 2657                | 2383  | 2339  | 2306   | 2215   | 1799    | 1461    |                      | 0,9                  | 2680                | 0,29                | 3600                  |
| 2203,94              | 2205    | 2037                | 2001  | 1973  | 1596   | 1522   | 1446    | 0,6     | 2352                 | 0,17                 | 3100                |                     |                       |

| P <sub>TN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP | T    |
|-----------------|------|-----------------------|---------|----------|------|
| <b>302</b>      | 16,8 | 13,0                  | 14,3    | 11,1     | 16,3 |
| <b>303</b>      | 12,2 | 9,6                   | 10,5    | 8,3      | 11,9 |
| <b>304</b>      | 9,4  | 7,5                   | 8,1     | 6,5      | 9,1  |

## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX<br>  | n <sub>2</sub> X h |       |       |       |        |        |         |         | n <sub>1</sub> [rpm] | 10000<br>ЧАСОВ       |                     |                     | T <sub>max</sub><br>[Nm] |
|---------|--------------------|-------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|--------------------------|
|         | ir                 | 10000 | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |
| 2       | 12.53              | 5471  | 4715  | 3582  | 2910   | 1795   | 1458    | 1184    | 1400                 | 112                  | 1410                | 17.19               | 7000                     |
|         | 14.79              | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 95                   | 1665                | 17.19               | 6700                     |
|         | 15.35              | 5471  | 4629  | 3517  | 2856   | 1763   | 1432    | 1163    |                      | 91                   | 1472                | 14.64               | 7000                     |
|         | 18.12              | 5378  | 4978  | 3950  | 3208   | 1980   | 1608    | 1306    |                      | 77                   | 1737                | 14.64               | 6700                     |
|         | 18.56              | 5234  | 4556  | 4468  | 3831   | 2364   | 1920    | 1560    |                      | 75                   | 2090                | 17.19               | 7000                     |
|         | 20.77              | 5471  | 4497  | 3416  | 2775   | 1712   | 1391    | 1129    |                      | 67                   | 1565                | 11.51               | 7000                     |
|         | 21.58              | 4210  | 3877  | 3805  | 3750   | 2627   | 2133    | 1733    |                      | 65                   | 2429                | 17.19               | 6000                     |
|         | 22.74              | 5234  | 4556  | 4468  | 3761   | 2321   | 1885    | 1531    |                      | 62                   | 2180                | 14.64               | 7000                     |
|         | 24.52              | 5378  | 4978  | 3837  | 3116   | 1923   | 1562    | 1269    |                      | 57                   | 1848                | 11.51               | 6700                     |
|         | 26.43              | 4210  | 3877  | 3805  | 3750   | 2579   | 2095    | 1701    |                      | 53                   | 2534                | 14.64               | 6000                     |
|         | 30.77              | 5234  | 4556  | 4468  | 3653   | 2254   | 1831    | 1487    |                      | 46                   | 2319                | 11.51               | 7000                     |
|         | 35.77              | 4210  | 3877  | 3805  | 3750   | 2505   | 2034    | 1653    |                      | 39                   | 2696                | 11.51               | 6000                     |
|         | 38.40              | 5234  | 4556  | 4228  | 3604   | 2224   | 1806    | 1467    |                      | 36                   | 2445                | 9.72                | 7000                     |
|         | 44.64              | 4210  | 3877  | 3805  | 3750   | 2471   | 2007    | 1630    |                      | 31                   | 2842                | 9.72                | 6000                     |
| 54.00   | 3874               | 3585  | 3362  | 2974  | 2339   | 2233   | 1862    | 26      | 2439                 | 6.90                 | 5000                |                     |                          |
| 3       | 43.60              | 5471  | 4715  | 3582  | 2910   | 1795   | 1458    | 1184    | 1400                 | 32                   | 2050                | 7.33                | 7000                     |
|         | 51.47              | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 27                   | 2421                | 7.33                | 6700                     |
|         | 53.41              | 5471  | 4629  | 3517  | 2856   | 1763   | 1432    | 1163    |                      | 26                   | 2139                | 6.25                | 7000                     |
|         | 63.05              | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 22                   | 2573                | 6.36                | 6700                     |
|         | 64.59              | 5234  | 4556  | 4468  | 3831   | 2364   | 1920    | 1560    |                      | 22                   | 3038                | 7.33                | 7000                     |
|         | 72.28              | 5471  | 4715  | 3582  | 2910   | 1795   | 1458    | 1184    |                      | 19                   | 2386                | 5.15                | 7000                     |
|         | 77.24              | 5378  | 4978  | 3950  | 3208   | 1980   | 1608    | 1306    |                      | 18                   | 2684                | 5.42                | 6700                     |
|         | 79.12              | 5234  | 4556  | 4468  | 3831   | 2364   | 1920    | 1560    |                      | 18                   | 3228                | 6.36                | 7000                     |
|         | 85.33              | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 16                   | 2817                | 5.15                | 6700                     |
|         | 104.53             | 5378  | 4978  | 3950  | 3208   | 1980   | 1608    | 1306    |                      | 13                   | 2939                | 4.39                | 6700                     |
|         | 106.49             | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 13                   | 3011                | 4.41                | 6700                     |
|         | 107.08             | 5234  | 4556  | 4468  | 3831   | 2364   | 1920    | 1560    |                      | 13                   | 3535                | 5.15                | 7000                     |
|         | 130.45             | 5378  | 4978  | 3950  | 3208   | 1980   | 1608    | 1306    |                      | 11                   | 3141                | 3.76                | 6700                     |
|         | 133.63             | 5234  | 4556  | 4468  | 3831   | 2364   | 1920    | 1560    |                      | 10                   | 3778                | 4.41                | 7000                     |
|         | 141.46             | 5378  | 4978  | 3837  | 3116   | 1923   | 1562    | 1269    |                      | 10                   | 3126                | 3.45                | 6700                     |
|         | 163.71             | 5234  | 4556  | 4468  | 3761   | 2321   | 1885    | 1531    |                      | 8.6                  | 3942                | 3.76                | 7000                     |
|         | 176.54             | 5378  | 4978  | 3837  | 3116   | 1923   | 1562    | 1269    |                      | 7.9                  | 3341                | 2.95                | 6700                     |
|         | 190.31             | 4210  | 3877  | 3805  | 3750   | 2579   | 2095    | 1701    |                      | 7.4                  | 3774                | 3.09                | 6000                     |
|         | 221.54             | 5234  | 4556  | 4468  | 3653   | 2254   | 1831    | 1487    |                      | 6.3                  | 4193                | 2.95                | 7000                     |
|         | 257.54             | 4210  | 3877  | 3805  | 3750   | 2505   | 2034    | 1653    |                      | 5.4                  | 3798                | 2.30                | 6000                     |
| 276.48  | 5234               | 4556  | 4228  | 3604  | 2224   | 1806   | 1467    | 5.1     | 4220                 | 2.38                 | 7000                |                     |                          |
| 321.41  | 4210               | 3877  | 3805  | 3750  | 2471   | 2007   | 1630    | 4.4     | 3815                 | 1.85                 | 6000                |                     |                          |
| 4       | 219.42             | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    | 1400                 | 6.4                  | 4000                | 2.90                | 6700                     |
|         | 224.77             | 5234  | 4556  | 4468  | 3831   | 2364   | 1920    | 1560    |                      | 6.2                  | 4400                | 3.12                | 7000                     |
|         | 268.80             | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 5.2                  | 4000                | 2.37                | 6700                     |
|         | 275.35             | 5234  | 4556  | 4468  | 3831   | 2364   | 1920    | 1560    |                      | 5.1                  | 4400                | 2.55                | 7000                     |
|         | 296.94             | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 4.7                  | 4000                | 2.15                | 6700                     |
|         | 329.29             | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 4.3                  | 4000                | 1.94                | 6700                     |
|         | 363.76             | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 3.8                  | 4000                | 1.75                | 6700                     |
|         | 416.98             | 5471  | 4715  | 3582  | 2910   | 1795   | 1458    | 1184    |                      | 3.4                  | 4500                | 1.72                | 7000                     |
|         | 453.98             | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 3.1                  | 4900                | 1.72                | 6700                     |
|         | 492.27             | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 2.8                  | 4900                | 1.59                | 6700                     |
|         | 556.14             | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 2.5                  | 4900                | 1.40                | 6700                     |
|         | 614.35             | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 2.3                  | 4900                | 1.27                | 6700                     |
|         | 766.71             | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 1.8                  | 4900                | 1.02                | 6700                     |
|         | 795.61             | 5471  | 4715  | 3582  | 2910   | 1795   | 1458    | 1184    |                      | 1.8                  | 4700                | 0.94                | 7000                     |
|         | 939.26             | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 1.5                  | 5000                | 0.85                | 6700                     |
|         | 1018.49            | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 1.4                  | 5000                | 0.78                | 6700                     |
|         | 1178.68            | 5234  | 4556  | 4228  | 3604   | 2224   | 1806    | 1467    |                      | 1.2                  | 5200                | 0.70                | 7000                     |
|         | 1271.08            | 5378  | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |                      | 1.1                  | 5300                | 0.66                | 6700                     |
|         | 1595.08            | 5234  | 4556  | 4228  | 3604   | 2224   | 1806    | 1467    |                      | 0.9                  | 5300                | 0.53                | 7000                     |
|         | 1990.66            | 5234  | 4556  | 4228  | 3604   | 2224   | 1806    | 1467    |                      | 0.7                  | 5300                | 0.42                | 7000                     |
| 2314.14 | 4210               | 3877  | 3805  | 3750  | 2471   | 2007   | 1630    | 0.6     | 4300                 | 0.30                 | 6000                |                     |                          |
| 2799.36 | 3874               | 3585  | 3362  | 2974  | 2339   | 2233   | 1862    | 0.5     | 3900                 | 0.22                 | 5000                |                     |                          |

| P <sub>EN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP | T    |
|-----------------|------|-----------------------|---------|----------|------|
| 402             | 21.2 | 15.2                  | 17.3    | 12.2     | 20.3 |
| 403             | 13.3 | 9.8                   | 11.0    | 8.0      | 12.8 |
| 404             | 10.6 | 8.0                   | 8.9     | 6.7      | 10.2 |



**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

|                         |         | n <sub>2</sub> X h  |       |       |        |        |         |         |      | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|-------------------------|---------|---------------------|-------|-------|--------|--------|---------|---------|------|----------------------|----------------------|---------------------|---------------------|-----------------------|
|                         |         | T <sub>N</sub> [Nm] |       |       |        |        |         |         |      | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| Stadio Stage<br>Ступени | ir      | 10000               | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |      |                      |                      |                     |                     |                       |
| <b>3</b>                | 36,02   | 5471                | 4715  | 3582  | 2910   | 1795   | 1458    | 1184    | 1400 | 39                   | 1936                 | 8,66                | 7000                |                       |
|                         | 42,52   | 5378                | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |      | 33                   | 2286                 | 8,66                | 6700                |                       |
|                         | 52,09   | 5378                | 4978  | 3950  | 3208   | 1980   | 1608    | 1306    |      | 27                   | 2385                 | 7,38                | 6700                |                       |
|                         | 61,63   | 5378                | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |      | 23                   | 2555                 | 6,68                | 6700                |                       |
|                         | 75,49   | 5378                | 4978  | 3950  | 3208   | 1980   | 1608    | 1306    |      | 19                   | 2666                 | 5,69                | 6700                |                       |
|                         | 86,54   | 5471                | 4497  | 3416  | 2775   | 1712   | 1391    | 1129    |      | 16                   | 2402                 | 4,47                | 7000                |                       |
|                         | 94,74   | 5234                | 4556  | 4468  | 3761   | 2321   | 1885    | 1531    |      | 15                   | 3345                 | 5,69                | 7000                |                       |
|                         | 102,16  | 5378                | 4978  | 3837  | 3116   | 1923   | 1562    | 1269    |      | 14                   | 2835                 | 4,47                | 6700                |                       |
|                         | 124,24  | 5378                | 4978  | 3950  | 3208   | 1980   | 1608    | 1306    |      | 11                   | 3095                 | 4,01                | 6700                |                       |
|                         | 155,91  | 5234                | 4556  | 4468  | 3761   | 2321   | 1885    | 1531    |      | 9,0                  | 3885                 | 4,01                | 7000                |                       |
|                         | 168,13  | 5378                | 4978  | 3837  | 3116   | 1923   | 1562    | 1269    |      | 8,3                  | 3292                 | 3,15                | 6700                |                       |
|                         | 186,00  | 4210                | 3877  | 3805  | 3750   | 2471   | 2007    | 1630    |      | 7,5                  | 3772                 | 3,27                | 6000                |                       |
|                         | 210,99  | 5234                | 4556  | 4468  | 3653   | 2254   | 1831    | 1487    |      | 6,6                  | 4132                 | 3,15                | 7000                |                       |
|                         | 263,31  | 5234                | 4556  | 4228  | 3604   | 2224   | 1806    | 1467    |      | 5,3                  | 4189                 | 2,56                | 7000                |                       |
| 306,10                  | 4210    | 3877                | 3805  | 3750  | 2471   | 2007   | 1630    | 4,6     | 3812 | 2,01                 | 6000                 |                     |                     |                       |
| <b>4</b>                | 125,34  | 5471                | 4715  | 3582  | 2910   | 1795   | 1458    | 1184    | 1400 | 11,2                 | 2815                 | 3,66                | 7000                |                       |
|                         | 147,97  | 5378                | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |      | 9,5                  | 3323                 | 3,66                | 6700                |                       |
|                         | 181,27  | 5378                | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |      | 7,7                  | 3531                 | 3,17                | 6700                |                       |
|                         | 222,07  | 5378                | 4978  | 3950  | 3208   | 1980   | 1608    | 1306    |      | 6,3                  | 3685                 | 2,70                | 6700                |                       |
|                         | 245,31  | 5378                | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |      | 5,7                  | 3867                 | 2,57                | 6700                |                       |
|                         | 306,15  | 5378                | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |      | 4,6                  | 4133                 | 2,20                | 6700                |                       |
|                         | 321,84  | 5378                | 4978  | 3950  | 3208   | 1980   | 1608    | 1306    |      | 4,3                  | 4119                 | 2,08                | 6700                |                       |
|                         | 355,53  | 5378                | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |      | 3,9                  | 4322                 | 1,98                | 6700                |                       |
|                         | 406,69  | 5378                | 4978  | 3837  | 3116   | 1923   | 1562    | 1269    |      | 3,4                  | 4291                 | 1,72                | 6700                |                       |
|                         | 432,36  | 5378                | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |      | 3,2                  | 4584                 | 1,73                | 6700                |                       |
|                         | 507,55  | 5378                | 4978  | 3837  | 3116   | 1923   | 1562    | 1269    |      | 2,8                  | 4586                 | 1,47                | 6700                |                       |
|                         | 543,55  | 5378                | 4978  | 3950  | 3208   | 1980   | 1608    | 1306    |      | 2,6                  | 4820                 | 1,44                | 6700                |                       |
|                         | 585,10  | 5378                | 4978  | 4023  | 3268   | 2017   | 1638    | 1330    |      | 2,4                  | 4961                 | 1,38                | 6700                |                       |
|                         | 716,77  | 5378                | 4978  | 3950  | 3208   | 1980   | 1608    | 1306    |      | 2,0                  | 4981                 | 1,13                | 6700                |                       |
|                         | 734,24  | 5234                | 4556  | 4468  | 3831   | 2364   | 1920    | 1560    |      | 1,9                  | 4558                 | 1,01                | 7000                |                       |
|                         | 894,53  | 5378                | 4978  | 3950  | 3208   | 1980   | 1608    | 1306    |      | 1,6                  | 5025                 | 0,92                | 6700                |                       |
|                         | 969,99  | 5378                | 4978  | 3837  | 3116   | 1923   | 1562    | 1269    |      | 1,4                  | 5089                 | 0,85                | 6700                |                       |
|                         | 1152,00 | 5234                | 4556  | 4228  | 3604   | 2224   | 1806    | 1467    |      | 1,2                  | 5178                 | 0,73                | 7000                |                       |
|                         | 1339,20 | 4210                | 3877  | 3805  | 3750   | 2471   | 2007    | 1630    |      | 1,0                  | 4182                 | 0,51                | 6000                |                       |
|                         | 1519,12 | 5234                | 4556  | 4468  | 3653   | 2254   | 1831    | 1487    |      | 0,9                  | 5257                 | 0,56                | 7000                |                       |
| 2203,94                 | 4210    | 3877                | 3805  | 3750  | 2471   | 2007   | 1630    | 0,6     | 4502 | 0,33                 | 6000                 |                     |                     |                       |

**B**

| P <sub>EN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP | T    |
|-----------------|------|-----------------------|---------|----------|------|
| <b>403</b>      | 12,6 | 10,0                  | 10,9    | 8,7      | 12,2 |
| <b>404</b>      | 9,6  | 7,7                   | 8,4     | 6,8      | 9,4  |

## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX<br>   | n <sub>2</sub> X h |       |       |       |        |        |         |         | n <sub>1</sub> [rpm] | 10000<br>ЧАСОВ       |                     |                     | T <sub>max</sub><br>[Nm] |
|----------|--------------------|-------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|--------------------------|
|          | ir                 | 10000 | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |
| <b>1</b> | 3.60               | 5471  | 5086  | 4995  | 4926   | 4067   | 3303    | 2683    | 1400                 | 389                  | 2198                | 91.33               | 7000                     |
|          | 4.25               | 5378  | 4978  | 4890  | 4823   | 4008   | 3256    | 2644    |                      | 329                  | 2277                | 80.13               | 6700                     |
|          | 5.33               | 5234  | 4556  | 4468  | 4402   | 3889   | 3159    | 2566    |                      | 263                  | 2365                | 66.32               | 7000                     |
|          | 6.20               | 4210  | 3877  | 3805  | 3750   | 3123   | 2974    | 2538    |                      | 226                  | 2448                | 59.05               | 6000                     |
|          | 7.50               | 3874  | 3585  | 3362  | 2974   | 2339   | 2233    | 2127    |                      | 187                  | 2137                | 42.62               | 5000                     |
| <b>2</b> | 12.53              | 5471  | 5086  | 4995  | 4926   | 3287   | 2670    | 2169    | 1400                 | 112                  | 2583                | 31.48               | 7000                     |
|          | 14.79              | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 95                   | 3049                | 31.48               | 6700                     |
|          | 15.35              | 5471  | 5086  | 4995  | 4926   | 3227   | 2621    | 2129    |                      | 91                   | 2695                | 26.81               | 7000                     |
|          | 18.12              | 5378  | 4978  | 4890  | 4823   | 3625   | 2944    | 2392    |                      | 77                   | 3181                | 26.81               | 6700                     |
|          | 18.56              | 5234  | 4556  | 4468  | 4402   | 3889   | 3159    | 2566    |                      | 75                   | 3437                | 28.28               | 7000                     |
|          | 20.77              | 5471  | 5086  | 4200  | 3973   | 3135   | 2546    | 2068    |                      | 67                   | 2866                | 21.07               | 7000                     |
|          | 21.58              | 4210  | 3877  | 3805  | 3750   | 3123   | 2974    | 2538    |                      | 65                   | 3067                | 21.70               | 6000                     |
|          | 22.74              | 5234  | 4556  | 4468  | 4402   | 3889   | 3159    | 2566    |                      | 62                   | 3653                | 24.54               | 7000                     |
|          | 24.52              | 5378  | 4978  | 4890  | 4629   | 3521   | 2860    | 2323    |                      | 57                   | 3383                | 21.07               | 6700                     |
|          | 26.43              | 4210  | 3877  | 3805  | 3750   | 3123   | 2974    | 2538    |                      | 53                   | 3110                | 17.97               | 6000                     |
|          | 30.77              | 5234  | 4556  | 4468  | 4402   | 3889   | 3159    | 2566    |                      | 46                   | 4000                | 19.85               | 7000                     |
|          | 35.77              | 4210  | 3877  | 3805  | 3750   | 3123   | 2974    | 2538    |                      | 39                   | 3175                | 13.56               | 6000                     |
|          | 38.40              | 5234  | 4556  | 4228  | 3721   | 3433   | 3159    | 2566    |                      | 36                   | 3488                | 13.87               | 7000                     |
|          | 44.64              | 4210  | 3877  | 3805  | 3750   | 3123   | 2974    | 2538    |                      | 31                   | 3223                | 11.03               | 6000                     |
| 54.00    | 3874               | 3585  | 3362  | 2974  | 2339   | 2233   | 2127    | 26      | 2439                 | 6.90                 | 5000                |                     |                          |
| <b>3</b> | 43.60              | 5471  | 5086  | 4995  | 4926   | 3287   | 2670    | 2169    | 1400                 | 32                   | 3754                | 13.43               | 7000                     |
|          | 51.47              | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 27                   | 4432                | 13.43               | 6700                     |
|          | 53.41              | 5471  | 5086  | 4995  | 4926   | 3227   | 2621    | 2129    |                      | 26                   | 3917                | 11.44               | 7000                     |
|          | 63.05              | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 22                   | 4710                | 11.65               | 6700                     |
|          | 64.59              | 5234  | 4556  | 4468  | 4402   | 3889   | 3159    | 2566    |                      | 22                   | 4327                | 10.45               | 7000                     |
|          | 72.28              | 5471  | 5086  | 4995  | 4926   | 3287   | 2670    | 2169    |                      | 19                   | 4369                | 9.43                | 7000                     |
|          | 77.24              | 5378  | 4978  | 4890  | 4823   | 3625   | 2944    | 2392    |                      | 18                   | 4765                | 9.62                | 6700                     |
|          | 79.12              | 5234  | 4556  | 4468  | 4402   | 3889   | 3159    | 2566    |                      | 18                   | 4347                | 8.57                | 7000                     |
|          | 85.33              | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 16                   | 4775                | 8.73                | 6700                     |
|          | 104.53             | 5378  | 4978  | 4890  | 4823   | 3625   | 2944    | 2392    |                      | 13                   | 4794                | 7.15                | 6700                     |
|          | 106.49             | 5378  | 4978  | 4890  | 4610   | 3692   | 2999    | 2436    |                      | 13                   | 4474                | 6.55                | 6700                     |
|          | 107.08             | 5234  | 4556  | 4468  | 4402   | 3889   | 3159    | 2566    |                      | 13                   | 4376                | 6.37                | 7000                     |
|          | 130.45             | 5378  | 4978  | 4890  | 4823   | 3625   | 2944    | 2392    |                      | 11                   | 4816                | 5.76                | 6700                     |
|          | 133.63             | 5234  | 4556  | 4468  | 4402   | 3889   | 3159    | 2566    |                      | 10                   | 4397                | 5.13                | 7000                     |
|          | 141.46             | 5378  | 4978  | 4890  | 4629   | 3521   | 2860    | 2323    |                      | 10                   | 4633                | 5.11                | 6700                     |
|          | 163.71             | 5234  | 4556  | 4468  | 4402   | 3889   | 3159    | 2566    |                      | 8.6                  | 4416                | 4.21                | 7000                     |
|          | 176.54             | 5378  | 4978  | 4890  | 4629   | 3521   | 2860    | 2323    |                      | 7.9                  | 4716                | 4.17                | 6700                     |
|          | 190.31             | 4210  | 3877  | 3805  | 3750   | 3123   | 2974    | 2538    |                      | 7.4                  | 3774                | 3.09                | 6000                     |
|          | 221.54             | 5234  | 4556  | 4468  | 4402   | 3889   | 3159    | 2566    |                      | 6.3                  | 4445                | 3.13                | 7000                     |
|          | 257.54             | 4210  | 3877  | 3805  | 3750   | 3123   | 2974    | 2538    |                      | 5.4                  | 3798                | 2.30                | 6000                     |
| 276.48   | 5234               | 4556  | 4228  | 3721  | 3433   | 3159   | 2566    | 5.1     | 4220                 | 2.38                 | 7000                |                     |                          |
| 321.41   | 4210               | 3877  | 3805  | 3750  | 3123   | 2974   | 2538    | 4.4     | 3815                 | 1.85                 | 6000                |                     |                          |
| <b>4</b> | 219.42             | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    | 1400                 | 6.4                  | 4900                | 3.56                | 6700                     |
|          | 224.77             | 5234  | 4556  | 4468  | 4402   | 3889   | 3159    | 2566    |                      | 6.2                  | 4400                | 3.12                | 7000                     |
|          | 268.80             | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 5.2                  | 4900                | 2.90                | 6700                     |
|          | 275.35             | 5234  | 4556  | 4468  | 4402   | 3889   | 3159    | 2566    |                      | 5.1                  | 4400                | 2.55                | 7000                     |
|          | 296.94             | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 4.7                  | 4900                | 2.63                | 6700                     |
|          | 329.29             | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 4.3                  | 4900                | 2.37                | 6700                     |
|          | 363.76             | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 3.8                  | 4900                | 2.15                | 6700                     |
|          | 416.98             | 5471  | 5086  | 4995  | 4926   | 3287   | 2670    | 2169    |                      | 3.4                  | 5000                | 1.91                | 7000                     |
|          | 453.98             | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 3.1                  | 5000                | 1.75                | 6700                     |
|          | 492.27             | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 2.8                  | 5000                | 1.62                | 6700                     |
|          | 556.14             | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 2.5                  | 5000                | 1.43                | 6700                     |
|          | 614.35             | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 2.3                  | 5000                | 1.30                | 6700                     |
|          | 766.71             | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 1.8                  | 5000                | 1.04                | 6700                     |
|          | 795.61             | 5471  | 5086  | 4995  | 4926   | 3287   | 2670    | 2169    |                      | 1.8                  | 5100                | 1.02                | 7000                     |
|          | 939.26             | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 1.5                  | 5000                | 0.85                | 6700                     |
|          | 1018.49            | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 1.4                  | 5000                | 0.78                | 6700                     |
|          | 1178.68            | 5234  | 4556  | 4228  | 3721   | 3433   | 3159    | 2566    |                      | 1.2                  | 5200                | 0.70                | 7000                     |
|          | 1271.08            | 5378  | 4978  | 4890  | 4823   | 3692   | 2999    | 2436    |                      | 1.1                  | 5300                | 0.66                | 6700                     |
|          | 1595.08            | 5234  | 4556  | 4228  | 3721   | 3433   | 3159    | 2566    |                      | 0.9                  | 5300                | 0.53                | 7000                     |
|          | 1990.66            | 5234  | 4556  | 4228  | 3721   | 3433   | 3159    | 2566    |                      | 0.7                  | 5300                | 0.42                | 7000                     |
|          | 2314.14            | 4210  | 3877  | 3805  | 3750   | 3123   | 2999    | 2436    |                      | 0.6                  | 4300                | 0.30                | 6000                     |
|          | 2799.36            | 3874  | 3585  | 3362  | 2974   | 2339   | 2233    | 2127    |                      | 0.5                  | 3900                | 0.22                | 5000                     |

| P <sub>EN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP | T    |
|-----------------|------|-----------------------|---------|----------|------|
| 501             | 31.4 | 21.0                  | 24.6    | 15.8     | 29.9 |
| 502             | 21.6 | 15.7                  | 17.7    | 12.7     | 20.8 |
| 503             | 13.5 | 10.0                  | 11.2    | 8.3      | 13.0 |
| 504             | 10.8 | 8.2                   | 9.1     | 6.9      | 10.4 |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

| <br>Stadio Stage<br>Ступени |         | n <sub>2</sub> X h  |       |        |        |         |         |      | 10000<br>ЧАСОВ       |                      |                     |                     | T <sub>max</sub><br>[Nm] |
|-----------------------------|---------|---------------------|-------|--------|--------|---------|---------|------|----------------------|----------------------|---------------------|---------------------|--------------------------|
|                             |         | T <sub>N</sub> [Nm] |       |        |        |         |         |      | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |
| ir                          | 10000   | 20000               | 50000 | 100000 | 500000 | 1000000 | 2000000 |      |                      |                      |                     |                     |                          |
| <b>2</b>                    | 9,11    | 3362                | 3311  | 3244   | 3193   | 3074    | 3023    | 2683 | 1400                 | 153,7                | 2903                | 50                  | 7000                     |
|                             | 10,75   | 3955                | 3895  | 3815   | 3755   | 3615    | 3256    | 2644 |                      | 130,2                | 3008                | 44                  | 6700                     |
|                             | 13,49   | 4938                | 4556  | 4468   | 4402   | 3889    | 3159    | 2566 |                      | 103,8                | 3124                | 36                  | 7000                     |
|                             | 15,68   | 4210                | 3877  | 3805   | 3750   | 3123    | 2974    | 2538 |                      | 89,3                 | 2998                | 30                  | 6000                     |
|                             | 22,22   | 4498                | 4304  | 4047   | 3852   | 3401    | 3159    | 2566 |                      | 63,0                 | 3336                | 24                  | 7000                     |
|                             | 25,83   | 4210                | 3877  | 3805   | 3750   | 3123    | 2974    | 2538 |                      | 54,2                 | 3105                | 19                  | 6000                     |
|                             | 31,25   | 3874                | 3585  | 3362   | 2974   | 2339    | 2233    | 2127 |                      | 44,8                 | 2355                | 12                  | 5000                     |
|                             | 36,74   | 3920                | 3655  | 3285   | 2912   | 2201    | 1951    | 1729 |                      | 38,1                 | 2307                | 9,9                 | 7000                     |
|                             | 42,71   | 4210                | 3877  | 3720   | 3298   | 2492    | 2209    | 1958 |                      | 32,8                 | 2682                | 9,9                 | 6000                     |
| 51,67                       | 3874    | 3585                | 3362  | 2974   | 2339   | 2233    | 2127    | 27,1 | 2432                 | 7,4                  | 5000                |                     |                          |
| <b>3</b>                    | 36,02   | 5471                | 5086  | 4995   | 4926   | 3287    | 2670    | 2169 | 1400                 | 39                   | 3545                | 15,86               | 7000                     |
|                             | 42,52   | 5378                | 4978  | 4890   | 4823   | 3692    | 2999    | 2436 |                      | 33                   | 4185                | 15,86               | 6700                     |
|                             | 52,09   | 5378                | 4978  | 4890   | 4823   | 3625    | 2944    | 2392 |                      | 27                   | 4367                | 13,51               | 6700                     |
|                             | 61,63   | 5378                | 4978  | 4890   | 4823   | 3692    | 2999    | 2436 |                      | 23                   | 4678                | 12,23               | 6700                     |
|                             | 75,49   | 5378                | 4978  | 4890   | 4823   | 3625    | 2944    | 2392 |                      | 19                   | 4763                | 10,16               | 6700                     |
|                             | 86,54   | 5471                | 5086  | 4200   | 3973   | 3135    | 2546    | 2068 |                      | 16                   | 3823                | 7,12                | 7000                     |
|                             | 94,74   | 5234                | 4556  | 4468   | 4402   | 3889    | 3159    | 2566 |                      | 15                   | 4364                | 7,42                | 7000                     |
|                             | 102,16  | 5378                | 4978  | 4890   | 4629   | 3521    | 2860    | 2323 |                      | 14                   | 4514                | 7,12                | 6700                     |
|                             | 124,24  | 5378                | 4978  | 4890   | 4823   | 3625    | 2944    | 2392 |                      | 11                   | 4811                | 6,24                | 6700                     |
|                             | 155,91  | 5234                | 4556  | 4468   | 4402   | 3889    | 3159    | 2566 |                      | 9,0                  | 4412                | 4,56                | 7000                     |
|                             | 168,13  | 5378                | 4978  | 4890   | 4629   | 3521    | 2860    | 2323 |                      | 8,3                  | 4697                | 4,50                | 6700                     |
|                             | 186,00  | 4210                | 3877  | 3805   | 3750   | 3123    | 2974    | 2538 |                      | 7,5                  | 3772                | 3,27                | 6000                     |
|                             | 210,99  | 5234                | 4556  | 4468   | 4402   | 3889    | 3159    | 2566 |                      | 6,6                  | 4441                | 3,39                | 7000                     |
| 263,31                      | 5234    | 4556                | 4228  | 3721   | 3433   | 3159    | 2566    | 5,3  | 4189                 | 2,56                 | 7000                |                     |                          |
| 306,10                      | 4210    | 3877                | 3805  | 3750   | 3123   | 2974    | 2538    | 4,6  | 3812                 | 2,01                 | 6000                |                     |                          |
| <b>4</b>                    | 125,34  | 5471                | 5086  | 4995   | 4926   | 3287    | 2670    | 2169 | 1400                 | 11,2                 | 4915                | 6,39                | 7000                     |
|                             | 147,97  | 5378                | 4978  | 4890   | 4823   | 3692    | 2999    | 2436 |                      | 9,5                  | 4828                | 5,31                | 6700                     |
|                             | 181,27  | 5378                | 4978  | 4890   | 4823   | 3692    | 2999    | 2436 |                      | 7,7                  | 4848                | 4,36                | 6700                     |
|                             | 222,07  | 5378                | 4978  | 4890   | 4823   | 3625    | 2944    | 2392 |                      | 6,3                  | 4867                | 3,57                | 6700                     |
|                             | 245,31  | 5378                | 4978  | 4890   | 4823   | 3692    | 2999    | 2436 |                      | 5,7                  | 4877                | 3,24                | 6700                     |
|                             | 306,15  | 5378                | 4978  | 4890   | 4610   | 3692    | 2999    | 2436 |                      | 4,6                  | 4898                | 2,61                | 6700                     |
|                             | 321,84  | 5378                | 4978  | 4890   | 4823   | 3625    | 2944    | 2392 |                      | 4,3                  | 4903                | 2,48                | 6700                     |
|                             | 355,53  | 5378                | 4978  | 4890   | 4823   | 3692    | 2999    | 2436 |                      | 3,9                  | 4913                | 2,25                | 6700                     |
|                             | 406,69  | 5378                | 4978  | 4890   | 4629   | 3521    | 2860    | 2323 |                      | 3,4                  | 4926                | 1,97                | 6700                     |
|                             | 432,36  | 5378                | 4978  | 4890   | 4823   | 3692    | 2999    | 2436 |                      | 3,2                  | 4932                | 1,86                | 6700                     |
|                             | 507,55  | 5378                | 4978  | 4890   | 4629   | 3521    | 2860    | 2323 |                      | 2,8                  | 4947                | 1,59                | 6700                     |
|                             | 543,55  | 5378                | 4978  | 4890   | 4823   | 3625    | 2944    | 2392 |                      | 2,6                  | 4954                | 1,48                | 6700                     |
|                             | 585,10  | 5378                | 4978  | 4890   | 4823   | 3692    | 2999    | 2436 |                      | 2,4                  | 4961                | 1,38                | 6700                     |
|                             | 716,77  | 5378                | 4978  | 4890   | 4823   | 3625    | 2944    | 2392 |                      | 2,0                  | 4981                | 1,13                | 6700                     |
|                             | 734,24  | 5234                | 4556  | 4468   | 4402   | 3889    | 3159    | 2566 |                      | 1,9                  | 4560                | 1,01                | 7000                     |
|                             | 894,53  | 5378                | 4978  | 4890   | 4823   | 3625    | 2944    | 2392 |                      | 1,6                  | 5025                | 0,92                | 6700                     |
|                             | 969,99  | 5378                | 4978  | 4890   | 4629   | 3521    | 2860    | 2323 |                      | 1,4                  | 5089                | 0,85                | 6700                     |
|                             | 1152,00 | 5234                | 4556  | 4228   | 3721   | 3433    | 3159    | 2566 |                      | 1,2                  | 5178                | 0,73                | 7000                     |
|                             | 1339,20 | 4210                | 3877  | 3805   | 3750   | 3123    | 2974    | 2538 |                      | 1,0                  | 4182                | 0,51                | 6000                     |
|                             | 1519,12 | 5234                | 4556  | 4468   | 4402   | 3889    | 3159    | 2566 |                      | 0,9                  | 5257                | 0,56                | 7000                     |
| 2203,94                     | 4210    | 3877                | 3805  | 3750   | 3123   | 2974    | 2538    | 0,6  | 4502                 | 0,33                 | 6000                |                     |                          |

| P <sub>TN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP | T    |
|-----------------|------|-----------------------|---------|----------|------|
| <b>502</b>      | 17,6 | 13,8                  | 15,1    | 11,9     | 17,0 |
| <b>503</b>      | 12,7 | 10,1                  | 11,0    | 8,8      | 12,4 |
| <b>504</b>      | 9,8  | 7,9                   | 8,5     | 6,9      | 9,5  |

## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX                         |         | n <sub>2</sub> X h  |       |       |        |        |         |         |      | 10000<br>ЧАСОВ       |                      |                     |                     | T <sub>max</sub><br>[Nm] |
|----------------------------|---------|---------------------|-------|-------|--------|--------|---------|---------|------|----------------------|----------------------|---------------------|---------------------|--------------------------|
| Stadio<br>Stage<br>Ступени | ir      | T <sub>N</sub> [Nm] |       |       |        |        |         |         |      | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |
|                            |         | 10000               | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |      |                      |                      |                     |                     |                          |
| <b>1</b>                   | 3,60    | 6729                | 6261  | 6148  | 6062   | 5423   | 4405    | 3578    | 1400 | 1400                 | 389                  | 2931                | 121,77              | 9100                     |
|                            | 5,33    | 6221                | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |      |                      | 263                  | 3153                | 88,43               | 9100                     |
| <b>2</b>                   | 15,35   | 6729                | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    | 1400 | 1400                 | 91                   | 3593                | 35,75               | 9100                     |
|                            | 22,74   | 6221                | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |      |                      | 62                   | 4871                | 32,71               | 9100                     |
| <b>3</b>                   | 53,41   | 6729                | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    | 1400 | 1400                 | 26                   | 5223                | 15,25               | 9100                     |
|                            | 65,43   | 6729                | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |      |                      | 21                   | 5551                | 13,23               | 9100                     |
|                            | 79,12   | 6221                | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |      |                      | 18                   | 5360                | 10,56               | 9100                     |
|                            | 88,54   | 6729                | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |      |                      | 16                   | 6005                | 10,58               | 9100                     |
|                            | 96,93   | 6221                | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |      |                      | 14                   | 5384                | 8,66                | 9100                     |
|                            | 110,50  | 6691                | 6261  | 6148  | 5920   | 4303   | 3495    | 2839    |      |                      | 13                   | 5841                | 8,24                | 9100                     |
|                            | 131,17  | 6221                | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |      |                      | 11                   | 5420                | 6,44                | 9100                     |
|                            | 163,71  | 6221                | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |      |                      | 8,6                  | 5447                | 5,19                | 9100                     |
| <b>4</b>                   | 185,86  | 6729                | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    | 1400 | 1400                 | 7,5                  | 6000                | 5,14                | 9100                     |
|                            | 227,69  | 6729                | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |      |                      | 6,1                  | 6000                | 4,20                | 9100                     |
|                            | 278,93  | 6729                | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |      |                      | 5,0                  | 6000                | 3,43                | 9100                     |
|                            | 308,13  | 6729                | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |      |                      | 4,5                  | 6200                | 3,21                | 9100                     |
|                            | 337,32  | 6221                | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |      |                      | 4,2                  | 5550                | 2,62                | 9100                     |
|                            | 384,54  | 6729                | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |      |                      | 3,6                  | 6200                | 2,57                | 9100                     |
|                            | 413,23  | 6221                | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |      |                      | 3,4                  | 5550                | 2,14                | 9100                     |
|                            | 471,08  | 6729                | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |      |                      | 3,0                  | 6200                | 2,10                | 9100                     |
|                            | 510,82  | 6729                | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |      |                      | 2,7                  | 6200                | 1,93                | 9100                     |
|                            | 559,22  | 6221                | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |      |                      | 2,5                  | 5550                | 1,58                | 9100                     |
|                            | 569,69  | 6221                | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |      |                      | 2,5                  | 5550                | 1,55                | 9100                     |
|                            | 637,51  | 6729                | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |      |                      | 2,2                  | 6200                | 1,55                | 9100                     |
|                            | 697,90  | 6221                | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |      |                      | 2,0                  | 5600                | 1,28                | 9100                     |
|                            | 795,61  | 6691                | 6261  | 6148  | 5920   | 4303   | 3495    | 2839    |      |                      | 1,8                  | 6300                | 1,26                | 9100                     |
|                            | 944,45  | 6221                | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |      |                      | 1,5                  | 6000                | 1,01                | 9100                     |
|                            | 1178,68 | 6221                | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |      |                      | 1,2                  | 6000                | 0,81                | 9100                     |

| P <sub>EN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP | T    |
|-----------------|------|-----------------------|---------|----------|------|
| <b>701</b>      | 31.4 | 21.0                  | 24.6    | 15.8     | 29.9 |
| <b>702</b>      | 21.6 | 15.7                  | 17.7    | 12.7     | 20.8 |
| <b>703</b>      | 13.5 | 10.0                  | 11.2    | 8.3      | 13.0 |
| <b>704</b>      | 10.8 | 8.2                   | 9.1     | 6.9      | 10.4 |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

| EXB                  |         | n <sub>2</sub> X h |       |       |        |        |         |         | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|----------------------|---------|--------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|-----------------------|
| Stadio Stage СТУПЕНИ | ir      | 10000              | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| <b>2</b>             | 9,11    | 3362               | 3311  | 3244  | 3193   | 3074   | 3023    | 2972    | 1400                 | 153,7                | 2992                | 51,79               | 9100                  |
|                      | 13,49   | 4938               | 4863  | 4763  | 4687   | 4512   | 4211    | 3421    |                      | 103,8                | 4165                | 48,67               | 9000                  |
|                      | 22,22   | 4498               | 4304  | 4047  | 3852   | 3401   | 3207    | 3013    |                      | 63,0                 | 3336                | 23,67               | 9000                  |
|                      | 36,74   | 3920               | 3655  | 3285  | 2912   | 2201   | 1951    | 1729    |                      | 38,1                 | 2307                | 9,90                | 9000                  |
| <b>3</b>             | 44,12   | 6729               | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    | 1400                 | 31,7                 | 4932                | 18,01               | 9100                  |
|                      | 65,37   | 6729               | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |                      | 21,4                 | 5549                | 13,68               | 9100                  |
|                      | 94,74   | 6221               | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |                      | 14,8                 | 5382                | 9,15                | 9100                  |
|                      | 105,24  | 6729               | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |                      | 13,3                 | 6027                | 9,23                | 9100                  |
|                      | 155,91  | 6221               | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |                      | 9,0                  | 5441                | 5,62                | 9100                  |
| <b>4</b>             | 153,55  | 6729               | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    | 1400                 | 9,1                  | 6074                | 6,44                | 9100                  |
|                      | 188,11  | 6729               | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |                      | 7,4                  | 6099                | 5,28                | 9100                  |
|                      | 222,54  | 6729               | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |                      | 6,3                  | 6120                | 4,48                | 9100                  |
|                      | 272,62  | 6729               | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |                      | 5,1                  | 6145                | 3,67                | 9100                  |
|                      | 317,69  | 6691               | 6261  | 6148  | 5920   | 4303   | 3495    | 2839    |                      | 4,4                  | 6164                | 3,16                | 9100                  |
|                      | 366,23  | 6729               | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |                      | 3,8                  | 6181                | 2,75                | 9100                  |
|                      | 403,88  | 6221               | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |                      | 3,5                  | 5554                | 2,24                | 9100                  |
|                      | 448,65  | 6729               | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |                      | 3,1                  | 6206                | 2,25                | 9100                  |
|                      | 542,57  | 6221               | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |                      | 2,6                  | 5589                | 1,68                | 9100                  |
|                      | 607,15  | 6729               | 6261  | 6148  | 6062   | 4303   | 3495    | 2839    |                      | 2,3                  | 6244                | 1,68                | 9100                  |
|                      | 682,11  | 6221               | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |                      | 2,1                  | 5589                | 1,33                | 9100                  |
|                      | 757,72  | 6691               | 6261  | 6148  | 5920   | 4303   | 3495    | 2839    |                      | 1,8                  | 6271                | 1,35                | 9100                  |
|                      | 899,48  | 6221               | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |                      | 1,6                  | 5889                | 1,07                | 9100                  |
|                      | 1122,55 | 6221               | 5620  | 5510  | 5428   | 5185   | 4211    | 3421    |                      | 1,2                  | 6055                | 0,88                | 9100                  |

**B**

| P <sub>TN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP | T    |
|-----------------|------|-----------------------|---------|----------|------|
| <b>702</b>      | 17,6 | 13,8                  | 15,1    | 11,9     | 17,0 |
| <b>703</b>      | 12,7 | 10,1                  | 11,0    | 8,8      | 12,4 |
| <b>704</b>      | 9,8  | 7,9                   | 8,5     | 6,9      | 9,5  |

## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX      |         | n <sub>2</sub> X h  |       |       |        |        |         |         | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|---------|---------|---------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|-----------------------|
|         |         | T <sub>N</sub> [Nm] |       |       |        |        |         |         | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| Ступени | ir      | 10000               | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      |                      |                     |                     |                       |
| 1       | 3,50    | 7836                | 7384  | 7234  | 7120   | 4949   | 4020    | 3265    | 1400                 | 400                  | 2652                | 113,35              | 10800                 |
|         | 4,13    | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 339                  | 2763                | 100,21              | 9650                  |
|         | 5,17    | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    |                      | 271                  | 2874                | 83,21               | 9650                  |
|         | 6,00    | 6659                | 6010  | 5900  | 5813   | 4602   | 3790    | 3079    |                      | 233                  | 2940                | 73,29               | 10200                 |
|         | 7,25    | 6059                | 5560  | 4967  | 4392   | 3443   | 3284    | 3050    |                      | 193                  | 3082                | 63,59               | 8300                  |
| 2       | 12,60   | 7836                | 7384  | 7234  | 7120   | 4949   | 4020    | 3265    | 1400                 | 111                  | 3895                | 47,20               | 10800                 |
|         | 14,88   | 7836                | 7384  | 7234  | 7120   | 4949   | 4020    | 3265    |                      | 94                   | 4093                | 42,02               | 10800                 |
|         | 17,53   | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 80                   | 4265                | 37,15               | 9650                  |
|         | 18,60   | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    |                      | 75                   | 4220                | 34,65               | 9650                  |
|         | 22,00   | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 64                   | 4566                | 31,69               | 9650                  |
|         | 25,58   | 7719                | 7193  | 6807  | 6509   | 4909   | 3987    | 3239    |                      | 55                   | 4777                | 28,52               | 9650                  |
|         | 27,56   | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    |                      | 51                   | 4749                | 26,32               | 9650                  |
|         | 32,03   | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    |                      | 44                   | 4968                | 23,68               | 9650                  |
|         | 37,20   | 6659                | 6010  | 5900  | 5813   | 4602   | 3790    | 3079    |                      | 38                   | 4691                | 19,25               | 10200                 |
|         | 38,75   | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    |                      | 36                   | 5260                | 20,73               | 9650                  |
|         | 45,00   | 6659                | 6010  | 5900  | 5813   | 4602   | 3790    | 3079    |                      | 31                   | 4750                | 16,12               | 10200                 |
|         | 54,38   | 6059                | 5560  | 4967  | 4392   | 3443   | 3284    | 3050    |                      | 26                   | 3595                | 10,10               | 8300                  |
|         | 3       | 51,77               | 7836  | 7384  | 7234   | 7120   | 4730    | 3842    |                      | 3121                 | 1400                | 27                  | 5688                  |
| 53,72   |         | 7836                | 7384  | 7234  | 6701   | 4135   | 3358    | 2728    | 26                   | 5027                 |                     | 14,60               | 10800                 |
| 63,31   |         | 7719                | 7193  | 7075  | 6987   | 4639   | 3768    | 3060    | 22                   | 5925                 |                     | 14,60               | 9650                  |
| 74,74   |         | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    | 19                   | 6590                 |                     | 13,75               | 9650                  |
| 76,56   |         | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    | 18                   | 6638                 |                     | 13,52               | 9650                  |
| 85,82   |         | 7836                | 7384  | 7234  | 7120   | 4511   | 3664    | 2976    | 16                   | 6312                 |                     | 11,47               | 10800                 |
| 101,14  |         | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    | 14                   | 6945                 |                     | 10,71               | 9650                  |
| 107,69  |         | 7836                | 7384  | 7234  | 7120   | 4949   | 4020    | 3265    | 13                   | 7077                 |                     | 10,25               | 10800                 |
| 126,92  |         | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    | 11                   | 6974                 |                     | 8,57                | 9650                  |
| 136,56  |         | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    | 10                   | 5963                 |                     | 6,81                | 9650                  |
| 147,55  |         | 7719                | 7193  | 6807  | 6509   | 4909   | 3987    | 3239    | 9,5                  | 6531                 |                     | 6,90                | 9650                  |
| 158,40  |         | 7719                | 7193  | 7075  | 6565   | 4909   | 3987    | 3239    | 8,8                  | 6655                 |                     | 6,55                | 9650                  |
| 184,14  |         | 7719                | 7193  | 6807  | 6509   | 4909   | 3987    | 3239    | 7,6                  | 6627                 |                     | 5,61                | 9650                  |
| 198,40  |         | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    | 7,1                  | 6009                 |                     | 4,72                | 9650                  |
| 222,75  |         | 7236                | 6421  | 5112  | 4892   | 4382   | 3987    | 3239    | 6,3                  | 5040                 |                     | 3,53                | 9650                  |
| 230,64  |         | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    | 6,1                  | 6027                 |                     | 4,08                | 9650                  |
| 259,62  |         | 6659                | 6010  | 5900  | 5813   | 4602   | 3790    | 3079    | 5,4                  | 5891                 |                     | 3,54                | 10200                 |
| 279,00  |         | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    | 5,0                  | 6051                 |                     | 3,38                | 9650                  |
| 324,00  |         | 6659                | 6010  | 5900  | 5813   | 4602   | 3790    | 3079    | 4,3                  | 5918                 |                     | 2,85                | 10200                 |
| 4       |         | 180,14              | 7836  | 7384  | 7234   | 7120   | 4730    | 3842    | 3121                 | 1400                 |                     | 7,8                 | 7200                  |
|         | 220,68  | 7836                | 7384  | 7234  | 7120   | 4644   | 3772    | 3064    | 6,3                  |                      | 7200                | 5,20                | 10800                 |
|         | 260,09  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    | 5,4                  |                      | 7000                | 4,29                | 9650                  |
|         | 270,35  | 7836                | 7384  | 7234  | 7120   | 4730   | 3842    | 3121    | 5,2                  |                      | 7200                | 4,24                | 10800                 |
|         | 318,62  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    | 4,4                  |                      | 7000                | 3,50                | 9650                  |
|         | 351,97  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    | 4,0                  |                      | 7000                | 3,17                | 9650                  |
|         | 386,75  | 7836                | 7384  | 7234  | 6701   | 4135   | 3358    | 2728    | 3,6                  |                      | 7200                | 2,97                | 10800                 |
|         | 455,82  | 7719                | 7193  | 7075  | 6987   | 4639   | 3768    | 3060    | 3,1                  |                      | 7100                | 2,48                | 9650                  |
|         | 495,10  | 7836                | 7384  | 7234  | 7120   | 4730   | 3842    | 3121    | 2,8                  |                      | 7300                | 2,35                | 10800                 |
|         | 538,12  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    | 2,6                  |                      | 7150                | 2,12                | 9650                  |
|         | 551,23  | 7719                | 7193  | 7075  | 6565   | 4909   | 3987    | 3239    | 2,5                  |                      | 7150                | 2,07                | 9650                  |
|         | 640,81  | 7719                | 7193  | 6807  | 6509   | 4909   | 3987    | 3239    | 2,2                  |                      | 7150                | 1,78                | 9650                  |
|         | 728,22  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    | 1,9                  |                      | 7200                | 1,58                | 9650                  |
|         | 785,02  | 7719                | 7193  | 6807  | 6509   | 4909   | 3987    | 3239    | 1,8                  |                      | 7200                | 1,46                | 9650                  |
|         | 802,63  | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    | 1,7                  |                      | 6300                | 1,25                | 9650                  |
|         | 917,16  | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    | 1,5                  |                      | 6300                | 1,09                | 9650                  |
|         | 949,62  | 7236                | 6421  | 5112  | 4892   | 4382   | 3987    | 3239    | 1,5                  |                      | 6600                | 1,11                | 9650                  |
|         | 1062,35 | 7719                | 7193  | 6807  | 6509   | 4909   | 3987    | 3239    | 1,3                  |                      | 7400                | 1,11                | 9650                  |
|         | 1140,48 | 7719                | 7193  | 7075  | 6565   | 4909   | 3987    | 3239    | 1,2                  |                      | 7600                | 1,06                | 9650                  |
|         | 1325,81 | 7719                | 7193  | 6807  | 6509   | 4909   | 3987    | 3239    | 1,1                  |                      | 7700                | 0,93                | 9650                  |
|         | 1428,48 | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    | 1,0                  |                      | 6800                | 0,76                | 9650                  |
|         | 1603,80 | 7236                | 6421  | 5112  | 4892   | 4382   | 3987    | 3239    | 0,9                  |                      | 7300                | 0,73                | 9650                  |
|         | 1660,61 | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    | 0,8                  |                      | 6900                | 0,66                | 9650                  |
|         | 1869,23 | 6659                | 6010  | 5900  | 5813   | 4602   | 3790    | 3079    | 0,7                  |                      | 6800                | 0,58                | 10200                 |
|         | 2008,80 | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    | 0,7                  |                      | 6900                | 0,55                | 9650                  |
|         | 2332,80 | 6659                | 6010  | 5900  | 5813   | 4602   | 3790    | 3079    | 0,6                  |                      | 6800                | 0,46                | 10200                 |
|         | 2818,80 | 6059                | 5560  | 4967  | 4392   | 3443   | 3284    | 3050    | 0,5                  |                      | 6200                | 0,35                | 8300                  |

| P <sub>TN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP | T    |
|-----------------|------|-----------------------|---------|----------|------|
| 801             | 42.2 | 27.7                  | 29.4    | 20.1     | 40.5 |
| 802             | 28.7 | 20.4                  | 21.4    | 16.0     | 27.7 |
| 803             | 17.6 | 12.8                  | 13.4    | 10.2     | 17.1 |
| 804             | 13.9 | 10.3                  | 10.7    | 8.4      | 13.5 |



**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

|                      |         | n <sub>2</sub> X h  |       |       |        |        |         |         | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|----------------------|---------|---------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|-----------------------|
|                      |         | T <sub>N</sub> [Nm] |       |       |        |        |         |         | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| Stadio Stage Ступени | ir      | 10000               | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      |                      |                     |                     |                       |
| <b>2</b>             | 8,85    | 4549                | 4481  | 4391  | 4323   | 4165   | 4020    | 3265    | 1400                 | 158                  | 3503                | 62,38               | 10800                 |
|                      | 10,43   | 5342                | 5262  | 5156  | 5076   | 4889   | 3987    | 3239    |                      | 134                  | 3650                | 55,15               | 9650                  |
|                      | 13,07   | 6658                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    |                      | 107                  | 3796                | 45,79               | 9650                  |
|                      | 15,18   | 6659                | 6010  | 5900  | 5813   | 4602   | 3790    | 3079    |                      | 92                   | 3883                | 40,33               | 10200                 |
|                      | 18,34   | 6059                | 5560  | 4967  | 4392   | 3443   | 3284    | 3050    |                      | 76                   | 3346                | 28,76               | 8300                  |
|                      | 21,53   | 5910                | 5700  | 5422  | 5213   | 4726   | 3876    | 3148    |                      | 65                   | 4410                | 32,29               | 9650                  |
|                      | 25,00   | 6659                | 6010  | 5900  | 5813   | 4602   | 3790    | 3079    |                      | 56                   | 4510                | 28,44               | 10200                 |
|                      | 30,21   | 6059                | 5560  | 4967  | 4392   | 3443   | 3284    | 3050    |                      | 46                   | 3461                | 18,06               | 8300                  |
|                      | 35,59   | 4929                | 4633  | 4242  | 3946   | 3259   | 2963    | 2668    |                      | 39                   | 3362                | 14,89               | 9650                  |
|                      | 41,33   | 5650                | 5306  | 4852  | 4508   | 3711   | 3367    | 3024    |                      | 34                   | 3904                | 14,89               | 10200                 |
| 49,94                | 6059    | 5560                | 4967  | 4392  | 3443   | 3284   | 3050    | 28      | 3576                 | 11,29                | 8300                |                     |                       |
| <b>3</b>             | 36,23   | 7836                | 7384  | 7234  | 7120   | 4949   | 4020    | 3265    | 1400                 | 39                   | 5346                | 23,77               | 10800                 |
|                      | 42,77   | 7836                | 7384  | 7234  | 7120   | 4949   | 4020    | 3265    |                      | 33                   | 5619                | 21,17               | 10800                 |
|                      | 50,40   | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 28                   | 5855                | 18,71               | 9650                  |
|                      | 63,25   | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 22                   | 6268                | 15,96               | 9650                  |
|                      | 73,53   | 7719                | 7193  | 6807  | 6509   | 4909   | 3987    | 3239    |                      | 19                   | 6231                | 13,65               | 9650                  |
|                      | 91,67   | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 15                   | 6932                | 12,18               | 9650                  |
|                      | 106,56  | 7719                | 7193  | 6807  | 6509   | 4909   | 3987    | 3239    |                      | 13                   | 6391                | 9,66                | 9650                  |
|                      | 120,21  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 12                   | 6967                | 9,34                | 9650                  |
|                      | 133,47  | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    |                      | 10                   | 5961                | 7,19                | 9650                  |
|                      | 150,86  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 9                    | 6996                | 7,47                | 9650                  |
|                      | 175,37  | 7719                | 7193  | 6807  | 6509   | 4909   | 3987    | 3239    |                      | 8,0                  | 6606                | 6,07                | 9650                  |
|                      | 188,95  | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    |                      | 7,4                  | 6003                | 5,12                | 9650                  |
|                      | 219,66  | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    |                      | 6,4                  | 6021                | 4,42                | 9650                  |
|                      | 265,71  | 6818                | 6163  | 6051  | 5966   | 4771   | 3876    | 3148    |                      | 5,3                  | 6045                | 3,66                | 9650                  |
| 308,57               | 6659    | 6010                | 5900  | 5813  | 4602   | 3790   | 3079    | 4,5     | 5912                 | 3,09                 | 10200               |                     |                       |
| <b>4</b>             | 148,82  | 7836                | 7384  | 7234  | 7120   | 4730   | 3842    | 3121    | 1400                 | 9,4                  | 7130                | 7,80                | 10800                 |
|                      | 182,01  | 7719                | 7193  | 7075  | 6987   | 4639   | 3768    | 3060    |                      | 7,7                  | 7020                | 6,28                | 9650                  |
|                      | 214,87  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 6,5                  | 7041                | 5,34                | 9650                  |
|                      | 220,11  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 6,4                  | 7045                | 5,21                | 9650                  |
|                      | 263,78  | 7719                | 7193  | 7075  | 6987   | 4639   | 3768    | 3060    |                      | 5,3                  | 7068                | 4,36                | 9650                  |
|                      | 290,78  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 4,8                  | 7080                | 3,97                | 9650                  |
|                      | 319,00  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 4,4                  | 7092                | 3,62                | 9650                  |
|                      | 364,90  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 3,8                  | 7109                | 3,17                | 9650                  |
|                      | 421,42  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 3,3                  | 7128                | 2,76                | 9650                  |
|                      | 455,40  | 7719                | 7193  | 7075  | 6565   | 4909   | 3987    | 3239    |                      | 3,1                  | 7138                | 2,55                | 9650                  |
|                      | 512,49  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 2,7                  | 7153                | 2,27                | 9650                  |
|                      | 588,46  | 7836                | 7384  | 7234  | 7120   | 4511   | 3664    | 2976    |                      | 2,4                  | 7356                | 2,04                | 10800                 |
|                      | 660,00  | 7719                | 7193  | 7075  | 6565   | 4909   | 3987    | 3239    |                      | 2,1                  | 7185                | 1,77                | 9650                  |
|                      | 738,46  | 7836                | 7384  | 7234  | 7120   | 4949   | 4020    | 3265    |                      | 1,9                  | 7393                | 1,63                | 10800                 |
|                      | 767,25  | 7719                | 7193  | 6807  | 6509   | 4909   | 3987    | 3239    |                      | 1,8                  | 7204                | 1,53                | 9650                  |
|                      | 870,33  | 7719                | 7193  | 7075  | 6987   | 4909   | 3987    | 3239    |                      | 1,6                  | 7219                | 1,35                | 9650                  |
|                      | 1011,76 | 7719                | 7193  | 6807  | 6509   | 4909   | 3987    | 3239    |                      | 1,4                  | 7378                | 1,19                | 9650                  |
|                      | 1262,67 | 7719                | 7193  | 6807  | 6509   | 4909   | 3987    | 3239    |                      | 1,1                  | 7610                | 0,98                | 9650                  |
|                      | 1527,43 | 7236                | 6421  | 5112  | 4892   | 4382   | 3987    | 3239    |                      | 0,9                  | 7339                | 0,78                | 9650                  |
|                      | 1780,22 | 6659                | 6010  | 5900  | 5813   | 4602   | 3790    | 3079    |                      | 0,8                  | 6881                | 0,63                | 10200                 |
| 1913,14              | 6818    | 6163                | 6051  | 5966  | 4771   | 3876   | 3148    | 0,7     | 7060                 | 0,60                 | 9650                |                     |                       |
| 2221,71              | 6659    | 6010                | 5900  | 5813  | 4602   | 3790   | 3079    | 0,6     | 7086                 | 0,52                 | 10200               |                     |                       |

| P <sub>TN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | M<br>MX | FS<br>FP | T    |
|-----------------|------|-----------------------|---------|----------|------|
| <b>802</b>      | 23,6 | 18,3                  | 18,9    | 15,5     | 23,0 |
| <b>803</b>      | 16,9 | 13,3                  | 13,7    | 11,4     | 16,5 |
| <b>804</b>      | 12,8 | 10,1                  | 10,4    | 8,7      | 12,5 |



## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Leistungen

| EX      |         | n <sub>2</sub> X h |       |       |        |        |         |         | n <sub>1</sub> [rpm] | 10000<br>ЧАСОВ       |                     |                     | T <sub>max</sub><br>[Nm] |
|---------|---------|--------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|--------------------------|
| Ступени | ir      | 10000              | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |
| 2       | 12.60   | 9451               | 9326  | 9160  | 8808   | 5435   | 4414    | 3585    | 1400                 | 111                  | 4277                | 51.83               | 15000                    |
|         | 14.88   | 8793               | 8679  | 8528  | 8413   | 5356   | 4350    | 3534    |                      | 94                   | 4430                | 45.48               | 15000                    |
|         | 17.53   | 10332              | 9884  | 9716  | 9589   | 6009   | 4881    | 3964    |                      | 80                   | 5221                | 45.48               | 13500                    |
|         | 18.60   | 9202               | 8446  | 8287  | 8166   | 6540   | 5312    | 4315    |                      | 75                   | 5785                | 47.50               | 12500                    |
|         | 22.00   | 9455               | 9321  | 9144  | 9010   | 5830   | 4735    | 3846    |                      | 64                   | 5423                | 37.64               | 13500                    |
|         | 25.58   | 8085               | 7975  | 6807  | 6509   | 5768   | 4685    | 3805    |                      | 55                   | 5613                | 33.52               | 13500                    |
|         | 27.56   | 9202               | 8446  | 8287  | 8166   | 6540   | 5312    | 4315    |                      | 51                   | 6509                | 36.07               | 12500                    |
|         | 32.03   | 9202               | 8446  | 8287  | 8031   | 6540   | 5312    | 4315    |                      | 44                   | 6810                | 32.46               | 12500                    |
|         | 37.20   | 9207               | 8266  | 8105  | 7983   | 6290   | 5196    | 4220    |                      | 38                   | 6420                | 26.36               | 13900                    |
|         | 38.75   | 9202               | 8446  | 8287  | 8166   | 6540   | 5312    | 4315    |                      | 36                   | 7210                | 28.41               | 12500                    |
| 45.00   | 9207    | 8266               | 8105  | 7983  | 6290   | 5196   | 4220    | 31      | 6508                 | 22.08                | 13900               |                     |                          |
| 54.38   | 8369    | 7648               | 6826  | 5993  | 4622   | 4392   | 4162    | 26      | 4842                 | 13.60                | 11400               |                     |                          |
| 3       | 51.77   | 8793               | 8679  | 8528  | 7666   | 4730   | 3842    | 3121    | 1400                 | 27                   | 5688                | 17.14               | 15000                    |
|         | 53.72   | 9451               | 9326  | 8250  | 6701   | 4135   | 3358    | 2728    |                      | 26                   | 5027                | 14.60               | 15000                    |
|         | 63.31   | 10637              | 9884  | 9255  | 7517   | 4639   | 3768    | 3060    |                      | 22                   | 5925                | 14.60               | 13500                    |
|         | 74.74   | 10332              | 9884  | 9716  | 8444   | 5210   | 4232    | 3437    |                      | 19                   | 6995                | 14.60               | 13500                    |
|         | 76.56   | 9455               | 9321  | 9144  | 9010   | 5830   | 4735    | 3846    |                      | 18                   | 7883                | 16.06               | 13500                    |
|         | 85.82   | 8793               | 8134  | 7559  | 7151   | 4511   | 3664    | 2976    |                      | 16                   | 6312                | 11.47               | 15000                    |
|         | 101.14  | 10001              | 9461  | 8793  | 8202   | 5061   | 4111    | 3339    |                      | 14                   | 7439                | 11.47               | 13500                    |
|         | 107.69  | 8049               | 7936  | 7786  | 7672   | 5196   | 4221    | 3428    |                      | 13                   | 7629                | 11.05               | 15000                    |
|         | 126.92  | 9455               | 9321  | 9144  | 9010   | 5830   | 4735    | 3846    |                      | 11                   | 8991                | 11.05               | 13500                    |
|         | 136.56  | 9202               | 8446  | 8287  | 8031   | 6540   | 5312    | 4315    |                      | 10                   | 8017                | 9.16                | 12500                    |
|         | 147.55  | 8085               | 7975  | 6807  | 6509   | 5768   | 4685    | 3805    |                      | 9.5                  | 6531                | 6.90                | 13500                    |
|         | 158.40  | 8457               | 7836  | 7085  | 6565   | 5500   | 4735    | 3846    |                      | 8.8                  | 6655                | 6.55                | 13500                    |
|         | 184.14  | 8085               | 7975  | 6807  | 6509   | 5768   | 4685    | 3805    |                      | 7.6                  | 6627                | 5.61                | 13500                    |
|         | 198.40  | 9202               | 8446  | 8287  | 8021   | 6540   | 5312    | 4315    |                      | 7.1                  | 8227                | 6.47                | 12500                    |
|         | 222.75  | 7236               | 6421  | 5112  | 4892   | 4382   | 4162    | 3760    |                      | 6.3                  | 5040                | 3.53                | 13500                    |
|         | 230.64  | 9202               | 8446  | 8287  | 8031   | 6540   | 5312    | 4315    |                      | 6.1                  | 8253                | 5.58                | 12500                    |
|         | 259.62  | 9207               | 8266  | 7263  | 6943   | 6200   | 5196    | 4220    |                      | 5.4                  | 7228                | 4.34                | 13900                    |
|         | 279.00  | 8732               | 7711  | 6314  | 6038   | 5399   | 5123    | 4315    |                      | 5.0                  | 6312                | 3.53                | 12500                    |
| 324.00  | 9207    | 8266               | 7263  | 6943  | 6200   | 5196   | 4220    | 4.3     | 7330                 | 3.53                 | 13900               |                     |                          |
| 4       | 180.14  | 8793               | 8679  | 8528  | 7666   | 4730   | 3842    | 3121    | 1400                 | 7.8                  | 8200                | 7.25                | 15000                    |
|         | 220.68  | 8793               | 8679  | 8528  | 7666   | 4730   | 3842    | 3121    |                      | 6.3                  | 8200                | 5.92                | 15000                    |
|         | 260.09  | 10332              | 9884  | 9716  | 8444   | 5210   | 4232    | 3437    |                      | 5.4                  | 9700                | 5.94                | 13500                    |
|         | 270.35  | 8793               | 8679  | 8528  | 7666   | 4730   | 3842    | 3121    |                      | 5.2                  | 8500                | 5.01                | 15000                    |
|         | 318.62  | 10332              | 9884  | 9716  | 8444   | 5210   | 4232    | 3437    |                      | 4.4                  | 9800                | 4.90                | 13500                    |
|         | 351.97  | 10332              | 9884  | 9716  | 8444   | 5210   | 4232    | 3437    |                      | 4.0                  | 9800                | 4.44                | 13500                    |
|         | 386.75  | 9451               | 9326  | 8250  | 6701   | 4135   | 3358    | 2728    |                      | 3.6                  | 8400                | 3.46                | 15000                    |
|         | 455.82  | 10637              | 9884  | 9255  | 7517   | 4639   | 3768    | 3060    |                      | 3.1                  | 9400                | 3.29                | 13500                    |
|         | 495.10  | 8793               | 8679  | 8528  | 7666   | 4730   | 3842    | 3121    |                      | 2.8                  | 8600                | 2.77                | 15000                    |
|         | 538.12  | 10332              | 9884  | 9716  | 8444   | 5210   | 4232    | 3437    |                      | 2.6                  | 9800                | 2.90                | 13500                    |
|         | 551.23  | 8457               | 7836  | 7085  | 6565   | 5500   | 4735    | 3846    |                      | 2.5                  | 7800                | 2.25                | 13500                    |
|         | 640.81  | 8085               | 7975  | 6807  | 6509   | 5768   | 4685    | 3805    |                      | 2.2                  | 7800                | 1.94                | 13500                    |
|         | 728.22  | 10332              | 9884  | 9716  | 8444   | 5210   | 4232    | 3437    |                      | 1.9                  | 9800                | 2.14                | 13500                    |
|         | 785.02  | 8085               | 7975  | 6807  | 6509   | 5768   | 4685    | 3805    |                      | 1.8                  | 8100                | 1.64                | 13500                    |
|         | 802.63  | 9202               | 8446  | 8287  | 8031   | 6540   | 5312    | 4315    |                      | 1.7                  | 8600                | 1.71                | 12500                    |
|         | 917.16  | 9202               | 8446  | 8287  | 8166   | 6540   | 5312    | 4315    |                      | 1.5                  | 8600                | 1.49                | 12500                    |
|         | 949.62  | 7236               | 6421  | 5112  | 4892   | 4382   | 4162    | 3760    |                      | 1.5                  | 6800                | 1.14                | 13500                    |
|         | 1062.35 | 8085               | 7975  | 6807  | 6509   | 5768   | 4685    | 3805    |                      | 1.3                  | 8000                | 1.20                | 13500                    |
|         | 1140.48 | 8457               | 7836  | 7085  | 6565   | 5500   | 4735    | 3846    |                      | 1.2                  | 8000                | 1.12                | 13500                    |
|         | 1325.81 | 8085               | 7975  | 6807  | 6509   | 5768   | 4685    | 3805    |                      | 1.1                  | 8100                | 0.97                | 13500                    |
|         | 1428.48 | 9202               | 9202  | 9202  | 9202   | 9202   | 9202    | 9202    |                      | 1.0                  | 9200                | 1.03                | 12500                    |
|         | 1603.80 | 7236               | 6421  | 5112  | 4892   | 4382   | 4162    | 3760    |                      | 0.9                  | 7400                | 0.74                | 13500                    |
|         | 1660.61 | 9202               | 8446  | 8287  | 8031   | 6540   | 5312    | 4315    |                      | 0.8                  | 9600                | 0.92                | 12500                    |
|         | 1869.23 | 9207               | 8266  | 7263  | 6943   | 6200   | 5196    | 4220    |                      | 0.7                  | 9600                | 0.82                | 13900                    |
|         | 2008.80 | 8732               | 7711  | 6314  | 6038   | 5399   | 5123    | 4315    |                      | 0.7                  | 9200                | 0.73                | 12500                    |
|         | 2332.80 | 9207               | 8266  | 7263  | 6943   | 6200   | 5196    | 4220    |                      | 0.6                  | 9600                | 0.66                | 13900                    |
| 2818.80 | 8369    | 7648               | 6826  | 5993  | 4622   | 4392   | 4162    | 0.5     | 8600                 | 0.49                 | 11400               |                     |                          |

| P <sub>EN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | FS<br>FP | T    |
|-----------------|------|-----------------------|----------|------|
| 902             | 30.4 | 25.6                  | 16.9     | 28.6 |
| 903             | 18.6 | 15.8                  | 10.8     | 17.6 |
| 904             | 14.6 | 12.6                  | 8.7      | 13.9 |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

|                         |         | n <sub>2</sub> X h  |       |       |        |        |         |         |      | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|-------------------------|---------|---------------------|-------|-------|--------|--------|---------|---------|------|----------------------|----------------------|---------------------|---------------------|-----------------------|
|                         |         | T <sub>N</sub> [Nm] |       |       |        |        |         |         |      | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| Stadio Stage<br>Ступени | ir      | 10000               | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |      |                      |                      |                     |                     |                       |
| <b>3</b>                | 36,23   | 9451                | 9326  | 9160  | 8808   | 5435   | 4414    | 3585    | 1400 | 39                   | 5871                 | 26,11               | 15000               |                       |
|                         | 42,77   | 8793                | 8679  | 8528  | 8413   | 5356   | 4350    | 3534    |      |                      |                      |                     |                     |                       |
|                         | 50,40   | 10332               | 9884  | 9716  | 9589   | 6009   | 4881    | 3964    |      |                      |                      |                     |                     |                       |
|                         | 63,25   | 9455                | 9321  | 9144  | 9010   | 5830   | 4735    | 3846    |      |                      |                      |                     |                     |                       |
|                         | 73,05   | 10332               | 9884  | 9716  | 9589   | 6009   | 4881    | 3964    |      |                      |                      |                     |                     |                       |
|                         | 92,10   | 9202                | 8446  | 8287  | 8031   | 6540   | 5312    | 4315    |      |                      |                      |                     |                     |                       |
|                         | 106,95  | 9207                | 8266  | 8105  | 7983   | 6290   | 5196    | 4220    |      |                      |                      |                     |                     |                       |
|                         | 127,54  | 9202                | 8446  | 8287  | 8166   | 6540   | 5312    | 4315    |      |                      |                      |                     |                     |                       |
|                         | 133,47  | 9202                | 8446  | 8287  | 8031   | 6540   | 5312    | 4315    |      |                      |                      |                     |                     |                       |
|                         | 155,00  | 9207                | 8266  | 8105  | 7983   | 6290   | 5196    | 4220    |      |                      |                      |                     |                     |                       |
|                         | 161,46  | 9202                | 8446  | 8287  | 8166   | 6540   | 5312    | 4315    |      |                      |                      |                     |                     |                       |
|                         | 188,95  | 9202                | 8446  | 8287  | 8166   | 6540   | 5312    | 4315    |      |                      |                      |                     |                     |                       |
|                         | 219,66  | 9202                | 8446  | 8287  | 8031   | 6540   | 5312    | 4315    |      |                      |                      |                     |                     |                       |
|                         | 265,71  | 9202                | 8446  | 8287  | 8166   | 6540   | 5312    | 4315    |      |                      |                      |                     |                     |                       |
| 308,57                  | 9207    | 8266                | 8105  | 7983  | 6290   | 5196   | 4220    |         |      |                      |                      |                     |                     |                       |
| <b>4</b>                | 148,82  | 8793                | 8679  | 8528  | 7666   | 4730   | 3842    | 3121    | 1400 | 9,4                  | 7808                 | 8,55                | 15000               |                       |
|                         | 182,01  | 10637               | 9884  | 9255  | 7517   | 4639   | 3768    | 3060    |      |                      |                      |                     |                     |                       |
|                         | 214,87  | 10332               | 9884  | 9716  | 8444   | 5210   | 4232    | 3437    |      |                      |                      |                     |                     |                       |
|                         | 220,11  | 9455                | 9321  | 9144  | 9010   | 5830   | 4735    | 3846    |      |                      |                      |                     |                     |                       |
|                         | 263,78  | 10637               | 9884  | 9255  | 7517   | 4639   | 3768    | 3060    |      |                      |                      |                     |                     |                       |
|                         | 290,78  | 10001               | 9461  | 8793  | 8202   | 5061   | 4111    | 3339    |      |                      |                      |                     |                     |                       |
|                         | 319,00  | 9455                | 9321  | 9144  | 9010   | 5830   | 4735    | 3846    |      |                      |                      |                     |                     |                       |
|                         | 364,90  | 9455                | 9321  | 9144  | 9010   | 5830   | 4735    | 3846    |      |                      |                      |                     |                     |                       |
|                         | 421,42  | 10001               | 9461  | 8793  | 8202   | 5061   | 4111    | 3339    |      |                      |                      |                     |                     |                       |
|                         | 455,40  | 8457                | 7836  | 7085  | 6565   | 5500   | 4735    | 3846    |      |                      |                      |                     |                     |                       |
|                         | 512,49  | 10332               | 9884  | 9716  | 8444   | 5210   | 4232    | 3437    |      |                      |                      |                     |                     |                       |
|                         | 588,46  | 8793                | 8134  | 7559  | 7151   | 4511   | 3664    | 2976    |      |                      |                      |                     |                     |                       |
|                         | 663,09  | 9202                | 8446  | 8287  | 8031   | 6540   | 5312    | 4315    |      |                      |                      |                     |                     |                       |
|                         | 746,39  | 9207                | 8266  | 7263  | 6943   | 6200   | 5196    | 4220    |      |                      |                      |                     |                     |                       |
|                         | 870,33  | 9455                | 9321  | 9144  | 9010   | 5830   | 4735    | 3846    |      |                      |                      |                     |                     |                       |
|                         | 961,00  | 9202                | 8446  | 8287  | 8031   | 6540   | 5312    | 4315    |      |                      |                      |                     |                     |                       |
|                         | 1162,50 | 8732                | 7711  | 6314  | 6038   | 5399   | 5123    | 4315    |      |                      |                      |                     |                     |                       |
|                         | 1581,53 | 9202                | 8446  | 8287  | 8031   | 6540   | 5312    | 4315    |      |                      |                      |                     |                     |                       |
|                         | 1780,22 | 9207                | 8266  | 7263  | 6943   | 6200   | 5196    | 4220    |      |                      |                      |                     |                     |                       |
|                         | 1913,14 | 8732                | 7711  | 6314  | 6038   | 5399   | 5123    | 4315    |      |                      |                      |                     |                     |                       |
| 2221,71                 | 9207    | 8266                | 7263  | 6943  | 6200   | 5196   | 4220    |         |      |                      |                      |                     |                     |                       |

**B**

| P <sub>TN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | FS<br>FP | T    |
|-----------------|------|-----------------------|----------|------|
| <b>903</b>      | 17,6 | 15,6                  | 11,7     | 16,9 |
| <b>904</b>      | 13,3 | 11,8                  | 9,0      | 12,8 |



1.2 Prestazioni

1.2 Performances

1.2 Характеристики

| EX      |         | n <sub>2</sub> X h  |       |       |        |        |         |         |      | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|---------|---------|---------------------|-------|-------|--------|--------|---------|---------|------|----------------------|----------------------|---------------------|---------------------|-----------------------|
| Ступени | ir      | T <sub>N</sub> [Nm] |       |       |        |        |         |         |      | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
|         |         | 10000               | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |      |                      |                      |                     |                     |                       |
| 1       | 3.50    | 11827               | 11118 | 10882 | 10704  | 6784   | 5510    | 4476    | 1400 | 400                  | 3635                 | 155,37              | 15000               |                       |
|         | 4.13    | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |      | 339                  | 3788                 | 137,37              | 13500               |                       |
|         | 5.17    | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    |      | 271                  | 3939                 | 114,05              | 12500               |                       |
|         | 6.00    | 9207                | 8266  | 8105  | 7983   | 6290   | 5196    | 4220    |      | 233                  | 4029                 | 100,46              | 13900               |                       |
|         | 7.25    | 8369                | 7648  | 6826  | 5993   | 4622   | 4392    | 4162    |      | 193                  | 4173                 | 86,11               | 11400               |                       |
| 2       | 12.60   | 11827               | 11118 | 10882 | 10704  | 6784   | 5510    | 4476    | 1400 | 111                  | 5339                 | 64,70               | 15000               |                       |
|         | 14.88   | 11827               | 11118 | 10882 | 10704  | 6784   | 5510    | 4476    |      | 94                   | 5611                 | 57,60               | 15000               |                       |
|         | 17.53   | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |      | 80                   | 5847                 | 50,93               | 13500               |                       |
|         | 18.60   | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    |      | 75                   | 5785                 | 47,50               | 12500               |                       |
|         | 22.00   | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |      | 64                   | 6259                 | 43,44               | 13500               |                       |
|         | 25.58   | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |      | 55                   | 6548                 | 39,10               | 13500               |                       |
|         | 27.56   | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    |      | 51                   | 6509                 | 36,07               | 12500               |                       |
|         | 32.03   | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    |      | 44                   | 6810                 | 32,46               | 12500               |                       |
|         | 37.20   | 9207                | 8266  | 8105  | 7983   | 6290   | 5196    | 4220    |      | 38                   | 6420                 | 26,36               | 13900               |                       |
|         | 38.75   | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    |      | 36                   | 7210                 | 28,41               | 12500               |                       |
|         | 45.00   | 9207                | 8266  | 8105  | 7983   | 6290   | 5196    | 4220    |      | 31                   | 6508                 | 22,08               | 13900               |                       |
|         | 54.38   | 8369                | 7648  | 6826  | 5993   | 4622   | 4392    | 4162    |      | 26                   | 4842                 | 13,60               | 11400               |                       |
|         | 3       | 51.77               | 11827 | 11118 | 10882  | 10704  | 6784    | 5510    |      | 4476                 | 1400                 | 27                  | 8157                | 24,57                 |
| 53.72   |         | 11827               | 11118 | 10882 | 10704  | 6784   | 5510    | 4476    | 26   | 8248                 |                      | 23,95               | 15000               |                       |
| 63.31   |         | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 22   | 8594                 |                      | 21,17               | 13500               |                       |
| 74.74   |         | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 19   | 9033                 |                      | 18,85               | 13500               |                       |
| 76.56   |         | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 18   | 9099                 |                      | 18,53               | 13500               |                       |
| 85.82   |         | 11827               | 11118 | 10882 | 10704  | 6784   | 5510    | 4476    | 16   | 9493                 |                      | 17,25               | 15000               |                       |
| 101.14  |         | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 14   | 9530                 |                      | 14,69               | 13500               |                       |
| 107.69  |         | 11827               | 11118 | 10882 | 10704  | 6784   | 5510    | 4476    | 13   | 9669                 |                      | 14,00               | 15000               |                       |
| 126.92  |         | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 11   | 9571                 |                      | 11,76               | 13500               |                       |
| 136.56  |         | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    | 10   | 8162                 |                      | 9,32                | 12500               |                       |
| 147.55  |         | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 9    | 9599                 |                      | 10,15               | 13500               |                       |
| 158.40  |         | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 9    | 9612                 |                      | 9,46                | 13500               |                       |
| 184.14  |         | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 7,6  | 9639                 |                      | 8,16                | 13500               |                       |
| 198.40  |         | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    | 7,1  | 8227                 |                      | 6,47                | 12500               |                       |
| 222.75  |         | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 6,3  | 9674                 |                      | 6,77                | 13500               |                       |
| 230.64  |         | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    | 6,1  | 8253                 |                      | 5,58                | 12500               |                       |
| 259.62  |         | 9207                | 8266  | 8105  | 7983   | 6290   | 5196    | 4220    | 5,4  | 8091                 |                      | 4,86                | 13900               |                       |
| 279.00  |         | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    | 5,0  | 8286                 |                      | 4,63                | 12500               |                       |
| 324.00  |         | 9207                | 8266  | 8105  | 7983   | 6290   | 5196    | 4220    | 4,3  | 8130                 |                      | 3,91                | 13900               |                       |
| 4       |         | 180.14              | 11827 | 11118 | 10882  | 10704  | 6784    | 5510    | 4476 | 1400                 |                      | 7,8                 | 9700                | 8,58                  |
|         | 220.68  | 11827               | 11118 | 10882 | 10704  | 6784   | 5510    | 4476    | 6,3  |                      | 9700                 | 7,00                | 15000               |                       |
|         | 260.09  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 5,4  |                      | 9700                 | 5,94                | 13500               |                       |
|         | 270.35  | 11827               | 11118 | 10882 | 10704  | 6784   | 5510    | 4476    | 5,2  |                      | 9800                 | 5,78                | 15000               |                       |
|         | 318.62  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 4,4  |                      | 9800                 | 4,90                | 13500               |                       |
|         | 351.97  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 4,0  |                      | 9800                 | 4,44                | 13500               |                       |
|         | 386.75  | 11827               | 11118 | 10882 | 10704  | 6784   | 5510    | 4476    | 3,6  |                      | 9950                 | 4,10                | 15000               |                       |
|         | 455.82  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 3,1  |                      | 9850                 | 3,44                | 13500               |                       |
|         | 495.10  | 11827               | 11118 | 10882 | 10704  | 6784   | 5510    | 4476    | 2,8  |                      | 9900                 | 3,19                | 15000               |                       |
|         | 538.12  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 2,6  |                      | 9800                 | 2,90                | 13500               |                       |
|         | 551.23  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 2,5  |                      | 9800                 | 2,83                | 13500               |                       |
|         | 640.81  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 2,2  |                      | 9800                 | 2,44                | 13500               |                       |
|         | 728.22  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 1,9  |                      | 9900                 | 2,17                | 13500               |                       |
|         | 785.02  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 1,8  |                      | 9900                 | 2,01                | 13500               |                       |
|         | 802.63  | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    | 1,7  |                      | 8700                 | 1,73                | 12500               |                       |
|         | 917.16  | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    | 1,5  |                      | 8700                 | 1,51                | 12500               |                       |
|         | 949.62  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 1,5  |                      | 10000                | 1,68                | 13500               |                       |
|         | 1062.35 | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 1,3  |                      | 10000                | 1,50                | 13500               |                       |
|         | 1140.48 | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 1,2  |                      | 10500                | 1,47                | 13500               |                       |
|         | 1325.81 | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 1,1  |                      | 10500                | 1,26                | 13500               |                       |
|         | 1428.48 | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    | 1,0  |                      | 9200                 | 1,03                | 12500               |                       |
|         | 1603.80 | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    | 0,9  |                      | 10700                | 1,06                | 13500               |                       |
|         | 1660.61 | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    | 0,8  |                      | 9600                 | 0,92                | 12500               |                       |
|         | 1869.23 | 9207                | 8266  | 8105  | 7983   | 6290   | 5196    | 4220    | 0,7  |                      | 9600                 | 0,82                | 13900               |                       |
|         | 2008.80 | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    | 0,7  |                      | 9600                 | 0,76                | 12500               |                       |
|         | 2332.80 | 9207                | 8266  | 8105  | 7983   | 6290   | 5196    | 4220    | 0,6  |                      | 9600                 | 0,66                | 13900               |                       |
|         | 2818.80 | 8369                | 7648  | 6826  | 5993   | 4622   | 4392    | 4162    | 0,5  |                      | 8600                 | 0,49                | 11400               |                       |

| P <sub>TN</sub> | P    | R-L-F-FC-FU<br>FB-FCB | FS<br>FP | T    |
|-----------------|------|-----------------------|----------|------|
| 1001            | 45.2 | 36.9                  | 21.6     | 42.1 |
| 1002            | 31.1 | 26.4                  | 17.7     | 29.4 |
| 1003            | 20.3 | 17.5                  | 12.5     | 19.3 |
| 1004            | 15.9 | 13.8                  | 10.0     | 15.1 |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

|                      |         | n <sub>2</sub> X h  |       |       |        |        |         |         | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|----------------------|---------|---------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|-----------------------|
|                      |         | T <sub>N</sub> [Nm] |       |       |        |        |         |         | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| Stadio Stage Ступени | ir      | 10000               | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      |                      |                     |                     |                       |
| <b>2</b>             | 8,85    | 4549                | 4481  | 4391  | 4323   | 4165   | 4097    | 4029    | 1400                 | 158                  | 4052                | 72,14               | 15000                 |
|                      | 10,43   | 5342                | 5262  | 5156  | 5076   | 4889   | 4809    | 4439    |                      | 134                  | 4775                | 72,14               | 13500                 |
|                      | 13,07   | 6658                | 6558  | 6425  | 6325   | 6092   | 5312    | 4315    |                      | 107                  | 5204                | 62,77               | 12500                 |
|                      | 15,18   | 7707                | 7590  | 7436  | 7320   | 6290   | 5196    | 4220    |                      | 92                   | 5323                | 55,29               | 13900                 |
|                      | 18,34   | 8369                | 7648  | 6826  | 5993   | 4622   | 4392    | 4162    |                      | 76                   | 4481                | 38,52               | 11400                 |
|                      | 21,53   | 5910                | 5700  | 5422  | 5213   | 4726   | 4516    | 4306    |                      | 65                   | 4646                | 34,02               | 12500                 |
|                      | 25,00   | 6810                | 6567  | 6245  | 6001   | 5435   | 5192    | 4220    |                      | 56                   | 5396                | 34,02               | 13900                 |
|                      | 30,21   | 8149                | 7648  | 6826  | 5993   | 4622   | 4392    | 4162    |                      | 46                   | 4647                | 24,25               | 11400                 |
|                      | 35,59   | 4929                | 4633  | 4242  | 3946   | 3259   | 2963    | 2668    |                      | 39                   | 3362                | 14,89               | 12500                 |
|                      | 41,33   | 5650                | 5306  | 4852  | 4508   | 3711   | 3367    | 3024    |                      | 34                   | 3904                | 14,89               | 13900                 |
| 49,94                | 6713    | 6298                | 5750  | 5334  | 4370   | 3955   | 3540    | 28      | 4717                 | 14,89                | 11400               |                     |                       |
| <b>3</b>             | 31,87   | 11827               | 11118 | 10882 | 10704  | 6784   | 5510    | 4476    | 1400                 | 44                   | 7062                | 35,70               | 15000                 |
|                      | 44,34   | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 32                   | 7724                | 28,06               | 13500                 |
|                      | 55,65   | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 25                   | 8268                | 23,94               | 13500                 |
|                      | 64,69   | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 22                   | 8650                | 21,54               | 13500                 |
|                      | 73,05   | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 19                   | 8971                | 19,78               | 13500                 |
|                      | 91,67   | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 15                   | 9512                | 16,72               | 13500                 |
|                      | 106,56  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 13                   | 9539                | 14,42               | 13500                 |
|                      | 120,77  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 12                   | 9562                | 12,75               | 13500                 |
|                      | 133,47  | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    |                      | 10                   | 8158                | 9,85                | 12500                 |
|                      | 151,56  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 9                    | 9604                | 10,21               | 13500                 |
|                      | 176,18  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 7,9                  | 9631                | 8,81                | 13500                 |
|                      | 189,83  | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    |                      | 7,4                  | 8219                | 6,97                | 12500                 |
|                      | 220,67  | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    |                      | 6,3                  | 8245                | 6,02                | 12500                 |
|                      | 266,94  | 10122               | 9291  | 9116  | 8983   | 6540   | 5312    | 4315    |                      | 5,2                  | 8279                | 5,00                | 12500                 |
| 310,00               | 9207    | 8266                | 8105  | 7983  | 6290   | 5196   | 4220    | 4,5     | 8123                 | 4,22                 | 13900               |                     |                       |
| <b>4</b>             | 148,82  | 11827               | 11118 | 10882 | 10704  | 6784   | 5510    | 4476    | 1400                 | 9,4                  | 9745                | 10,67               | 15000                 |
|                      | 182,01  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 7,7                  | 9637                | 8,62                | 13500                 |
|                      | 214,87  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 6,5                  | 9668                | 7,33                | 13500                 |
|                      | 220,11  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 6,4                  | 9672                | 7,16                | 13500                 |
|                      | 263,78  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 5,3                  | 9705                | 5,99                | 13500                 |
|                      | 290,78  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 4,8                  | 9723                | 5,45                | 13500                 |
|                      | 319,00  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 4,4                  | 9740                | 4,97                | 13500                 |
|                      | 364,90  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 3,8                  | 9764                | 4,36                | 13500                 |
|                      | 421,42  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 3,3                  | 9791                | 3,78                | 13500                 |
|                      | 455,40  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 3,1                  | 9805                | 3,51                | 13500                 |
|                      | 512,49  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 2,7                  | 9827                | 3,12                | 13500                 |
|                      | 588,46  | 11827               | 11118 | 10882 | 10704  | 6784   | 5510    | 4476    |                      | 2,4                  | 10067               | 2,79                | 15000                 |
|                      | 660,00  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 2,1                  | 9873                | 2,44                | 13500                 |
|                      | 738,46  | 11827               | 11118 | 10882 | 10704  | 6784   | 5510    | 4476    |                      | 1,9                  | 10120               | 2,23                | 15000                 |
|                      | 767,25  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 1,8                  | 9900                | 2,10                | 13500                 |
|                      | 870,33  | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 1,6                  | 9926                | 1,86                | 13500                 |
|                      | 1011,76 | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 1,4                  | 10151               | 1,63                | 13500                 |
|                      | 1262,67 | 11700               | 10872 | 10688 | 10548  | 6729   | 5465    | 4439    |                      | 1,1                  | 10482               | 1,35                | 13500                 |
|                      | 1527,43 | 11700               | 10872 | 9961  | 9534   | 6729   | 5465    | 4439    |                      | 0,9                  | 10767               | 1,15                | 13500                 |
|                      | 1780,22 | 9207                | 8266  | 8105  | 7983   | 6290   | 5196    | 4220    |                      | 0,8                  | 9554                | 0,87                | 13900                 |
| 1913,14              | 10122   | 9291                | 9116  | 8983  | 6540   | 5312   | 4315    | 0,7     | 9642                 | 0,82                 | 12500               |                     |                       |
| 2221,71              | 9207    | 8266                | 8105  | 7983  | 6290   | 5196   | 4220    | 0,6     | 9873                 | 0,72                 | 13900               |                     |                       |

| P <sub>tn</sub> | P    | R-L-F-FC-FU<br>FB-FCB | FS<br>FP | T    |
|-----------------|------|-----------------------|----------|------|
| <b>1002</b>     | 25,2 | 22,1                  | 16,6     | 24,1 |
| <b>1003</b>     | 18,9 | 16,8                  | 13,0     | 18,1 |
| <b>1004</b>     | 14,2 | 12,7                  | 10,0     | 13,7 |





1.2 Prestazioni

1.2 Performances

1.2 Характеристики

| EX<br>   | n <sub>2</sub> X h |        |       |       |        |        |         |         | n <sub>1</sub> [rpm] | 10000<br>ЧАСОВ       |                     |                     | T <sub>max</sub><br>[Nm] |       |       |
|----------|--------------------|--------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|--------------------------|-------|-------|
|          | ir                 | 10000  | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |       |       |
| <b>1</b> | 3.72               | 16904  | 15971 | 15664 | 15431  | 11227  | 9119    | 7407    | 1400                 | 376                  | 6128                | 246.40              | 24000                    |       |       |
|          | 4.09               | 18257  | 17249 | 16917 | 16665  | 11182  | 9083    | 7377    |                      | 342                  | 6279                | 229.61              | 26000                    |       |       |
|          | 5.25               | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 267                  | 6605                | 188.19              | 23000                    |       |       |
|          | 6.23               | 17333  | 15583 | 13699 | 11959  | 9630   | 8651    | 7027    |                      | 225                  | 6786                | 162.92              | 24000                    |       |       |
| <b>2</b> | 13.39              | 16904  | 15971 | 15664 | 15431  | 9956   | 8087    | 6569    | 1400                 | 105                  | 7980                | 90.99               | 24000                    |       |       |
|          | 14.73              | 18257  | 17249 | 16917 | 16665  | 10641  | 8643    | 7021    |                      | 95                   | 8776                | 90.99               | 26000                    |       |       |
|          | 17.39              | 18257  | 17249 | 16917 | 16665  | 10487  | 8518    | 6919    |                      | 81                   | 9090                | 79.84               | 26000                    |       |       |
|          | 18.90              | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 74                   | 9699                | 78.37               | 23000                    |       |       |
|          | 22.31              | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 63                   | 10195               | 69.77               | 23000                    |       |       |
|          | 25.36              | 15254  | 15036 | 13236 | 12641  | 10067  | 8177    | 6642    |                      | 55                   | 9773                | 58.84               | 26000                    |       |       |
|          | 28.00              | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 50                   | 10913               | 59.52               | 23000                    |       |       |
|          | 32.55              | 18420  | 17081 | 16711 | 15947  | 10913  | 8864    | 7200    |                      | 43                   | 11417               | 53.56               | 23000                    |       |       |
|          | 33.23              | 17333  | 15583 | 13699 | 11959  | 9630   | 8651    | 7027    |                      | 42                   | 9743                | 44.77               | 24000                    |       |       |
|          | 39.38              | 17087  | 15101 | 12488 | 11945  | 10683  | 8864    | 7200    |                      | 36                   | 10950               | 42.47               | 23000                    |       |       |
|          | 46.73              | 17333  | 15583 | 13699 | 11959  | 9630   | 8651    | 7027    |                      | 30                   | 9967                | 32.57               | 24000                    |       |       |
|          | <b>3</b>           | 51.25  | 18257 | 17249 | 16917  | 13940  | 8601    | 6986    |                      | 5675                 | 1400                | 27                  | 10312                    | 31.38 | 26000 |
| 60.50    |                    | 18257  | 17249 | 16917 | 15657  | 9661   | 7847    | 6374    | 23                   | 12173                |                     | 31.38               | 26000                    |       |       |
| 62.78    |                    | 18257  | 17249 | 16848 | 13685  | 8444   | 6859    | 5571    | 22                   | 10759                |                     | 26.72               | 26000                    |       |       |
| 74.12    |                    | 18257  | 17249 | 16917 | 15371  | 9485   | 7704    | 6257    | 19                   | 12701                |                     | 26.72               | 26000                    |       |       |
| 77.65    |                    | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 18                   | 14820                |                     | 29.77               | 23000                    |       |       |
| 80.57    |                    | 18420  | 17081 | 16797 | 16296  | 10055  | 8167    | 6634    | 17                   | 13807                |                     | 26.72               | 23000                    |       |       |
| 95.12    |                    | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 15                   | 15750                |                     | 25.82               | 23000                    |       |       |
| 100.31   |                    | 18257  | 17249 | 16917 | 14931  | 9213   | 7483    | 6078    | 14                   | 13509                |                     | 21.00               | 26000                    |       |       |
| 109.04   |                    | 18420  | 17081 | 16797 | 15829  | 9767   | 7933    | 6444    | 13                   | 14685                |                     | 21.00               | 23000                    |       |       |
| 119.37   |                    | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 12                   | 16533                |                     | 21.60               | 23000                    |       |       |
| 128.73   |                    | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 11                   | 16557                |                     | 20.06               | 23000                    |       |       |
| 138.77   |                    | 18420  | 17081 | 16711 | 15947  | 10913  | 8864    | 7200    | 10                   | 15937                |                     | 17.91               | 23000                    |       |       |
| 146.33   |                    | 15254  | 15036 | 13236 | 12641  | 10067  | 8177    | 6642    | 10                   | 12678                |                     | 13.51               | 26000                    |       |       |
| 157.09   |                    | 17395  | 15677 | 14333 | 13845  | 10175  | 8264    | 6713    | 8.9                  | 13925                |                     | 13.82               | 26000                    |       |       |
| 161.54   |                    | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 8.7                  | 16627                |                     | 16.05               | 23000                    |       |       |
| 187.79   |                    | 18420  | 17081 | 16711 | 15947  | 10913  | 8864    | 7200    | 7.5                  | 16271                |                     | 13.51               | 23000                    |       |       |
| 201.60   |                    | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 6.9                  | 16695                |                     | 12.92               | 23000                    |       |       |
| 234.36   |                    | 18420  | 17081 | 16711 | 15947  | 10913  | 8864    | 7200    | 6.0                  | 16515                |                     | 10.99               | 23000                    |       |       |
| 239.26   |                    | 17333  | 15583 | 13699 | 11959  | 9630   | 8651    | 7027    | 5.9                  | 13305                |                     | 8.67                | 24000                    |       |       |
| 278.14   |                    | 17333  | 15583 | 13699 | 11959  | 9630   | 8651    | 7027    | 5.0                  | 13683                |                     | 7.67                | 24000                    |       |       |
| 283.50   |                    | 17087  | 15101 | 12488 | 11945  | 10683  | 8864    | 7200    | 4.9                  | 12498                |                     | 6.88                | 23000                    |       |       |
| 336.46   |                    | 17333  | 15583 | 13699 | 11959  | 9630   | 8651    | 7027    | 4.2                  | 14161                |                     | 6.56                | 24000                    |       |       |
| <b>4</b> |                    | 210.56 | 18257 | 17249 | 16917  | 15657  | 9661    | 7847    | 6374                 | 1400                 |                     | 6.6                 | 16813                    | 12.72 | 26000 |
|          |                    | 218.49 | 18257 | 17249 | 16848  | 13685  | 8444    | 6859    | 5571                 |                      |                     | 6.4                 | 15640                    | 11.41 | 26000 |
|          | 257.94             | 18257  | 17249 | 16917 | 15657  | 9661   | 7847    | 6374    | 5.4                  |                      | 16887               | 10.43               | 26000                    |       |       |
|          | 270.21             | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 5.2                  |                      | 16786               | 9.90                | 23000                    |       |       |
|          | 280.40             | 18420  | 17081 | 16797 | 16296  | 10055  | 8167    | 6634    | 5.0                  |                      | 16798               | 9.55                | 23000                    |       |       |
|          | 315.99             | 18257  | 17249 | 16917 | 15371  | 9485   | 7704    | 6257    | 4.4                  |                      | 16961               | 8.55                | 26000                    |       |       |
|          | 331.02             | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 4.2                  |                      | 16849               | 8.11                | 23000                    |       |       |
|          | 343.50             | 18420  | 17081 | 16797 | 16296  | 10055  | 8167    | 6634    | 4.1                  |                      | 16860               | 7.82                | 23000                    |       |       |
|          | 405.52             | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 3.5                  |                      | 16912               | 6.65                | 23000                    |       |       |
|          | 415.40             | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 3.4                  |                      | 16919               | 6.49                | 23000                    |       |       |
|          | 447.97             | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 3.1                  |                      | 16942               | 6.03                | 23000                    |       |       |
|          | 464.85             | 18420  | 17081 | 16797 | 16296  | 10055  | 8167    | 6634    | 3.0                  |                      | 16954               | 5.81                | 23000                    |       |       |
|          | 508.89             | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 2.8                  |                      | 16982               | 5.32                | 23000                    |       |       |
|          | 562.15             | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 2.5                  |                      | 17013               | 4.82                | 23000                    |       |       |
|          | 580.13             | 18420  | 17081 | 16797 | 16296  | 10055  | 8167    | 6634    | 2.4                  |                      | 17022               | 4.68                | 23000                    |       |       |
|          | 629.07             | 18420  | 17081 | 16797 | 15829  | 9767   | 7933    | 6444    | 2.2                  |                      | 17048               | 4.32                | 23000                    |       |       |
|          | 688.66             | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 2.0                  |                      | 17076               | 3.95                | 23000                    |       |       |
|          | 742.65             | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 1.9                  |                      | 17100               | 3.67                | 23000                    |       |       |
|          | 800.57             | 18420  | 17081 | 16711 | 15947  | 10913  | 8864    | 7200    | 1.7                  |                      | 17122               | 3.41                | 23000                    |       |       |
|          | 859.45             | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 1.6                  |                      | 17251               | 3.20                | 23000                    |       |       |
|          | 926.83             | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 1.5                  |                      | 17432               | 3.00                | 23000                    |       |       |
|          | 999.11             | 18420  | 17081 | 16711 | 15947  | 10913  | 8864    | 7200    | 1.4                  |                      | 17612               | 2.81                | 23000                    |       |       |
|          | 1163.08            | 18420  | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    | 1.2                  |                      | 18000               | 2.47                | 23000                    |       |       |
|          | 1285.79            | 17333  | 15583 | 13699 | 11959  | 9630   | 8651    | 7027    | 1.1                  |                      | 17200               | 2.13                | 24000                    |       |       |
| 1352.08  | 18420              | 17081  | 16711 | 15947 | 10913  | 8864   | 7200    | 1.0     | 18336                | 2.16                 | 23000               |                     |                          |       |       |
| 1451.52  | 18420              | 17081  | 16797 | 16583 | 10913  | 8864   | 7200    | 1.0     | 18500                | 2.03                 | 23000               |                     |                          |       |       |
| 1687.39  | 18420              | 17081  | 16711 | 15947 | 10913  | 8864   | 7200    | 0.8     | 18867                | 1.78                 | 23000               |                     |                          |       |       |
| 2041.20  | 17087              | 15101  | 12488 | 11945 | 10683  | 8864   | 7200    | 0.7     | 18200                | 1.42                 | 23000               |                     |                          |       |       |
| 2422.52  | 17333              | 15583  | 13699 | 11959 | 9630   | 8651   | 7027    | 0.6     | 18200                | 1.20                 | 24000               |                     |                          |       |       |

| P <sub>TN</sub> | P    | PH   | PX   | R-L-F-FC-FU<br>FB-FCB | FS<br>FP | H<br>HU | X    | T    |
|-----------------|------|------|------|-----------------------|----------|---------|------|------|
| <b>1501</b>     | 64.9 | 54.7 | 63.5 | 39.6                  | 26.7     | 32.7    | 41.5 | 58.1 |
| <b>1502</b>     | 44.4 | 38.6 | 43.6 | 29.9                  | 22.6     | 26.0    | 31.0 | 40.5 |
| <b>1503</b>     | 28.0 | 22.5 | 27.6 | 19.6                  | 15.3     | 17.3    | 20.2 | 25.8 |
| <b>1504</b>     | 21.7 | 19.2 | 21.4 | 15.4                  | 12.1     | 13.6    | 15.8 | 20.0 |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

|                         |        | n <sub>2</sub> X h  |       |       |        |        |         |         | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|-------------------------|--------|---------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|-----------------------|
|                         |        | T <sub>N</sub> [Nm] |       |       |        |        |         |         | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| Stadio Stage<br>Ступени | ir     | 10000               | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      |                      |                     |                     |                       |
| <b>3</b>                | 33,87  | 16904               | 15971 | 15664 | 15431  | 9956   | 8087    | 6569    | 1400                 | 41                   | 10542               | 50,14               | 24000                 |
|                         | 37,25  | 18257               | 17249 | 16917 | 16665  | 10641  | 8643    | 7021    |                      | 38                   | 11593               | 50,13               | 26000                 |
|                         | 47,81  | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 29                   | 12813               | 43,18               | 23000                 |
|                         | 56,44  | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 25                   | 13467               | 38,44               | 23000                 |
|                         | 61,36  | 18257               | 17249 | 16917 | 16665  | 10641  | 8643    | 7021    |                      | 23                   | 13465               | 35,35               | 26000                 |
|                         | 64,16  | 15254               | 15036 | 13236 | 12641  | 10067  | 8177    | 6642    |                      | 22                   | 11971               | 30,06               | 26000                 |
|                         | 70,82  | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 20                   | 14416               | 32,79               | 23000                 |
|                         | 78,75  | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 18                   | 14883               | 30,45               | 23000                 |
|                         | 82,33  | 18420               | 17081 | 16711 | 15947  | 10913  | 8864    | 7200    |                      | 17                   | 15083               | 29,51               | 23000                 |
|                         | 92,97  | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 15                   | 15643               | 27,11               | 23000                 |
|                         | 99,60  | 17087               | 15101 | 12488 | 11945  | 10683  | 8864    | 7200    |                      | 14                   | 11678               | 18,89               | 23000                 |
|                         | 116,67 | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 12                   | 16526               | 22,82               | 23000                 |
|                         | 135,63 | 18420               | 17081 | 16711 | 15947  | 10913  | 8864    | 7200    |                      | 10                   | 15912               | 18,90               | 23000                 |
|                         | 153,71 | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 9,1                  | 16612               | 17,41               | 23000                 |
|                         | 174,73 | 15254               | 15036 | 13236 | 12641  | 10067  | 8177    | 6642    |                      | 8,0                  | 12831               | 11,83               | 26000                 |
|                         | 192,89 | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 7,3                  | 16682               | 13,93               | 23000                 |
|                         | 224,23 | 18420               | 17081 | 16711 | 15947  | 10913  | 8864    | 7200    |                      | 6,2                  | 16466               | 11,83               | 23000                 |
| 271,25                  | 17087  | 15101               | 12488 | 11945 | 10683  | 8864   | 7200    | 5,2     | 12463                | 7,40                 | 23000               |                     |                       |
| 321,92                  | 17333  | 15583               | 13699 | 11959 | 9630   | 8651   | 7027    | 4,3     | 14050                | 7,03                 | 24000               |                     |                       |
| <b>4</b>                | 147,35 | 18257               | 17249 | 16917 | 13940  | 8601   | 6986    | 5675    | 1400                 | 9,5                  | 14155               | 15,65               | 26000                 |
|                         | 173,95 | 18257               | 17249 | 16917 | 15657  | 9661   | 7847    | 6374    |                      | 8,0                  | 16711               | 15,65               | 26000                 |
|                         | 223,24 | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 6,3                  | 16727               | 12,20               | 23000                 |
|                         | 273,47 | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 5,1                  | 16790               | 10,00               | 23000                 |
|                         | 313,49 | 18420               | 17081 | 16797 | 15829  | 9767   | 7933    | 6444    |                      | 4,5                  | 16832               | 8,75                | 23000                 |
|                         | 343,18 | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 4,1                  | 16860               | 8,00                | 23000                 |
|                         | 370,09 | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 3,8                  | 16883               | 7,43                | 23000                 |
|                         | 398,95 | 18420               | 17081 | 16711 | 15947  | 10913  | 8864    | 7200    |                      | 3,5                  | 16907               | 6,90                | 23000                 |
|                         | 454,33 | 18420               | 17081 | 16797 | 15829  | 9767   | 7933    | 6444    |                      | 3,1                  | 16947               | 6,08                | 23000                 |
|                         | 464,42 | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 3,0                  | 16954               | 5,95                | 23000                 |
|                         | 497,37 | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 2,8                  | 16975               | 5,56                | 23000                 |
|                         | 536,36 | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 2,6                  | 16998               | 5,16                | 23000                 |
|                         | 579,60 | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 2,4                  | 17022               | 4,78                | 23000                 |
|                         | 673,08 | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 2,1                  | 17068               | 4,13                | 23000                 |
|                         | 782,45 | 18420               | 17081 | 16711 | 15947  | 10913  | 8864    | 7200    |                      | 1,8                  | 17115               | 3,56                | 23000                 |
|                         | 840,00 | 18420               | 17081 | 16797 | 16583  | 10913  | 8864    | 7200    |                      | 1,7                  | 17137               | 3,32                | 23000                 |
|                         | 976,50 | 18420               | 17081 | 16711 | 15947  | 10913  | 8864    | 7200    |                      | 1,4                  | 17557               | 2,93                | 23000                 |
| 1107,69                 | 18420  | 17081               | 16797 | 16583 | 10913  | 8864   | 7200    | 1,3     | 17859                | 2,63                 | 23000               |                     |                       |
| 1382,40                 | 18420  | 17081               | 16797 | 16583 | 10913  | 8864   | 7200    | 1,0     | 18390                | 2,17                 | 23000               |                     |                       |
| 1607,04                 | 18420  | 17081               | 16711 | 15947 | 10913  | 8864   | 7200    | 0,9     | 18750                | 1,90                 | 23000               |                     |                       |
| 1907,26                 | 17333  | 15583               | 13699 | 11959 | 9630   | 8651   | 7027    | 0,7     | 17818                | 1,52                 | 24000               |                     |                       |
| 2307,16                 | 17333  | 15583               | 13699 | 11959 | 9630   | 8651   | 7027    | 0,6     | 18116                | 1,28                 | 24000               |                     |                       |

| P <sub>TN</sub> | P    | PH   | PX   | R-L-F-FC-FU<br>FB-FCB | FS<br>FP | H<br>HU | X    | T    |
|-----------------|------|------|------|-----------------------|----------|---------|------|------|
| <b>1503</b>     | 26,8 | 22,7 | 26,5 | 20,5                  | 17,2     | 18,7    | 20,9 | 25,1 |
| <b>1504</b>     | 20,0 | 18,1 | 19,7 | 15,4                  | 13,0     | 14,1    | 15,7 | 18,7 |





## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX                         |         | $n_2 \times h$ |       |       |        |        |         |         | 10000<br>ЧАСОВ |             |            |            | $T_{max}$<br>[Nm] |
|----------------------------|---------|----------------|-------|-------|--------|--------|---------|---------|----------------|-------------|------------|------------|-------------------|
| Stadio<br>Stage<br>Ступени | ir      | 10000          | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 | $n_1$ [rpm]    | $n_2$ [rpm] | $T_N$ [Nm] | $P_1$ [kW] |                   |
| 2                          | 15,84   | 21504          | 21208 | 20816 | 18148  | 11198  | 9095    | 7388    | 1400           | 88          | 9439       | 90,99      | 32800             |
|                            | 18,90   | 22948          | 21636 | 21220 | 20536  | 12672  | 10292   | 8360    |                | 74          | 11262      | 90,99      | 30000             |
|                            | 22,31   | 22948          | 21636 | 21220 | 20239  | 12488  | 10144   | 8239    |                | 63          | 11666      | 79,84      | 30000             |
|                            | 28,00   | 22869          | 21636 | 21220 | 19636  | 12116  | 9841    | 7994    |                | 50          | 12116      | 66,08      | 30000             |
|                            | 32,55   | 19475          | 19195 | 16711 | 15947  | 11988  | 9737    | 7909    |                | 43          | 12541      | 58,84      | 30000             |
|                            | 39,38   | 17087          | 15101 | 12488 | 11945  | 10683  | 9621    | 7814    |                | 36          | 10950      | 42,47      | 30000             |
| 3                          | 55,12   | 21504          | 21208 | 18059 | 14669  | 9051   | 7352    | 5972    | 1400           | 25          | 11091      | 31,38      | 32800             |
|                            | 65,08   | 21051          | 20763 | 20284 | 16476  | 10166  | 8258    | 6707    |                | 22          | 13093      | 31,38      | 32800             |
|                            | 77,65   | 22948          | 21636 | 21220 | 18644  | 11504  | 9344    | 7590    |                | 18          | 15622      | 31,38      | 30000             |
|                            | 80,57   | 22948          | 21636 | 20063 | 16296  | 10055  | 8167    | 6634    |                | 17          | 13807      | 26,72      | 30000             |
|                            | 95,12   | 22948          | 21636 | 21220 | 18304  | 11294  | 9174    | 7451    |                | 15          | 16300      | 26,72      | 30000             |
|                            | 109,04  | 21437          | 20280 | 18847 | 15829  | 9767   | 7933    | 6444    |                | 13          | 14685      | 21,00      | 30000             |
|                            | 119,37  | 22869          | 21636 | 21220 | 19636  | 12116  | 9841    | 7994    |                | 12          | 18719      | 24,46      | 30000             |
|                            | 128,73  | 22948          | 21636 | 21220 | 17779  | 10970  | 8911    | 7238    |                | 11          | 17337      | 21,00      | 30000             |
|                            | 138,77  | 19475          | 19195 | 16711 | 15947  | 11988  | 9737    | 7909    |                | 10          | 15937      | 17,91      | 30000             |
|                            | 157,38  | 16381          | 16147 | 14168 | 13528  | 10593  | 8605    | 6989    |                | 8,9         | 13636      | 13,51      | 32800             |
|                            | 161,54  | 22869          | 21636 | 21220 | 19636  | 12116  | 9841    | 7994    |                | 8,7         | 20497      | 19,79      | 30000             |
|                            | 187,79  | 19475          | 19195 | 16711 | 15947  | 11988  | 9737    | 7909    |                | 7,5         | 16271      | 13,51      | 30000             |
|                            | 201,60  | 21504          | 19018 | 18166 | 17547  | 12116  | 9841    | 7994    |                | 6,9         | 17870      | 13,82      | 30000             |
|                            | 234,36  | 19475          | 19195 | 16711 | 15947  | 11988  | 9737    | 7909    |                | 6,0         | 16515      | 10,99      | 30000             |
| 283,50                     | 17087   | 15101          | 12488 | 11945 | 10683  | 9621   | 7814    | 4,9     | 12498          | 6,88        | 30000      |            |                   |
| 4                          | 226,46  | 21051          | 20763 | 20284 | 16476  | 10166  | 8258    | 6707    | 1400           | 6,2         | 18300      | 12,88      | 32800             |
|                            | 235,00  | 21504          | 21208 | 18059 | 14669  | 9051   | 7352    | 5972    |                | 6,0         | 17200      | 11,66      | 32800             |
|                            | 270,21  | 22948          | 21636 | 21220 | 18644  | 11504  | 9344    | 7590    |                | 5,2         | 21000      | 12,38      | 30000             |
|                            | 280,40  | 22948          | 21636 | 20063 | 16296  | 10055  | 8167    | 6634    |                | 5,0         | 20500      | 11,65      | 30000             |
|                            | 318,02  | 20333          | 17239 | 16020 | 13988  | 8631   | 7011    | 5694    |                | 4,4         | 16500      | 8,27       | 32800             |
|                            | 331,02  | 22948          | 21636 | 21220 | 18304  | 11294  | 9174    | 7451    |                | 4,2         | 21300      | 10,25      | 30000             |
|                            | 343,50  | 22948          | 21636 | 20063 | 16296  | 10055  | 8167    | 6634    |                | 4,1         | 20500      | 9,51       | 30000             |
|                            | 415,40  | 22869          | 21636 | 21220 | 19636  | 12116  | 9841    | 7994    |                | 3,4         | 21400      | 8,21       | 30000             |
|                            | 447,97  | 22948          | 21636 | 21220 | 17779  | 10970  | 8911    | 7238    |                | 3,1         | 21400      | 7,61       | 30000             |
|                            | 464,85  | 22948          | 21636 | 20063 | 16296  | 10055  | 8167    | 6634    |                | 3,0         | 20500      | 7,03       | 30000             |
|                            | 508,89  | 22869          | 21636 | 21220 | 19636  | 12116  | 9841    | 7994    |                | 2,8         | 21400      | 6,70       | 30000             |
|                            | 562,15  | 22869          | 21636 | 21220 | 19636  | 12116  | 9841    | 7994    |                | 2,5         | 21400      | 6,07       | 30000             |
|                            | 580,13  | 22948          | 21636 | 20063 | 16296  | 10055  | 8167    | 6634    |                | 2,4         | 21400      | 5,88       | 30000             |
|                            | 629,07  | 21437          | 20280 | 18847 | 15829  | 9767   | 7933    | 6444    |                | 2,2         | 20000      | 5,07       | 30000             |
|                            | 688,66  | 22869          | 21636 | 21220 | 19636  | 12116  | 9841    | 7994    |                | 2,0         | 21600      | 5,00       | 30000             |
|                            | 742,65  | 22948          | 21636 | 21220 | 17779  | 10970  | 8911    | 7238    |                | 1,9         | 21600      | 4,63       | 30000             |
|                            | 800,57  | 19475          | 19195 | 16711 | 15947  | 11988  | 9737    | 7909    |                | 1,7         | 19400      | 3,86       | 30000             |
|                            | 859,45  | 22869          | 21636 | 21220 | 19636  | 12116  | 9841    | 7994    |                | 1,6         | 21700      | 4,02       | 30000             |
|                            | 926,83  | 22948          | 21636 | 21220 | 17779  | 10970  | 8911    | 7238    |                | 1,5         | 21700      | 3,73       | 30000             |
|                            | 999,11  | 19475          | 19195 | 16711 | 15947  | 11988  | 9737    | 7909    |                | 1,4         | 19400      | 3,09       | 30000             |
|                            | 1163,08 | 22869          | 21636 | 21220 | 19636  | 12116  | 9841    | 7994    |                | 1,2         | 22000      | 3,01       | 30000             |
| 1352,08                    | 19475   | 19195          | 16711 | 15947 | 11988  | 9737   | 7909    | 1,0     | 19400          | 2,29        | 30000      |            |                   |
| 1451,52                    | 21504   | 19018          | 18166 | 17547 | 12116  | 9841   | 7994    | 1,0     | 21500          | 2,36        | 30000      |            |                   |
| 1687,39                    | 19475   | 19195          | 16711 | 15947 | 11988  | 9737   | 7909    | 0,8     | 19500          | 1,84        | 30000      |            |                   |
| 2041,20                    | 17087   | 15101          | 12488 | 11945 | 10683  | 9621   | 7814    | 0,7     | 17100          | 1,33        | 30000      |            |                   |

| $P_{TN}$ | P    | PH   | PX   | R-L-F-FC-FU<br>FB-FCB | FS<br>FP | H<br>HU | X    | T    |
|----------|------|------|------|-----------------------|----------|---------|------|------|
| 1802     | 44.4 | 38.6 | 43.6 | 29.9                  | 22.6     | 26.0    | 31.0 | 40.5 |
| 1803     | 28.0 | 22.5 | 27.6 | 19.6                  | 15.3     | 17.3    | 20.2 | 25.8 |
| 1804     | 21.7 | 19.2 | 21.4 | 15.4                  | 12.1     | 13.6    | 15.8 | 20.0 |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

| EXB                  |          | n <sub>2</sub> X h |       |       |                     |       |       |      | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|----------------------|----------|--------------------|-------|-------|---------------------|-------|-------|------|----------------------|----------------------|---------------------|---------------------|-----------------------|
| Stadio Stage Ступени | ir       | 10000              | 20000 | 50000 | T <sub>N</sub> [Nm] |       |       |      | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| <b>3</b>             | 40,07    | 21504              | 21208 | 20816 | 18148               | 11198 | 9095  | 7388 | 1400                 | 35                   | 12469               | 50,13               | 32800                 |
|                      | 47,81    | 22948              | 21636 | 21220 | 20536               | 12672 | 10292 | 8360 |                      | 29                   | 14877               | 50,13               | 30000                 |
|                      | 56,44    | 22948              | 21636 | 21220 | 20239               | 12488 | 10144 | 8239 |                      | 25                   | 15411               | 43,99               | 30000                 |
|                      | 70,82    | 22869              | 21636 | 21220 | 19636               | 12116 | 9841  | 7994 |                      | 20                   | 16005               | 36,41               | 30000                 |
|                      | 78,75    | 22948              | 21636 | 21220 | 20536               | 12672 | 10292 | 8360 |                      | 18                   | 17280               | 35,35               | 30000                 |
|                      | 82,33    | 19475              | 19195 | 16711 | 15947               | 11988 | 9737  | 7909 |                      | 17                   | 15362               | 30,06               | 30000                 |
|                      | 92,97    | 22948              | 21636 | 21220 | 20239               | 12488 | 10144 | 8239 |                      | 15                   | 17900               | 31,02               | 30000                 |
|                      | 99,60    | 17087              | 15101 | 12488 | 11945               | 10683 | 9621  | 7814 |                      | 14                   | 11678               | 18,89               | 30000                 |
|                      | 116,67   | 22869              | 21636 | 21220 | 19636               | 12116 | 9841  | 7994 |                      | 12                   | 15746               | 21,74               | 30000                 |
|                      | 135,63   | 19475              | 19195 | 16711 | 15947               | 11988 | 9737  | 7909 |                      | 10                   | 15912               | 18,90               | 30000                 |
|                      | 153,71   | 22948              | 21636 | 21220 | 20239               | 12488 | 10144 | 8239 |                      | 9                    | 20814               | 21,81               | 30000                 |
|                      | 164,06   | 17087              | 15101 | 12488 | 11945               | 10683 | 9621  | 7814 |                      | 9                    | 12069               | 11,85               | 30000                 |
|                      | 192,89   | 22869              | 21636 | 21220 | 19636               | 12116 | 9841  | 7994 |                      | 7,3                  | 21051               | 17,58               | 30000                 |
|                      | 224,23   | 19475              | 19195 | 16711 | 15947               | 11988 | 9737  | 7909 |                      | 6,2                  | 16466               | 11,83               | 30000                 |
|                      | 271,25   | 17087              | 15101 | 12488 | 11945               | 10683 | 9621  | 7814 |                      | 5,2                  | 12463               | 7,40                | 30000                 |
|                      | <b>4</b> | 158,48             | 21504 | 21208 | 18059               | 14669 | 9051  | 7352 |                      | 5972                 | 1400                | 8,8                 | 15225                 |
| 223,24               |          | 22948              | 21636 | 21220 | 18644               | 11504 | 9344  | 7590 | 6,3                  | 21118                |                     | 15,41               | 30000                 |
| 273,47               |          | 22948              | 21636 | 21220 | 18304               | 11294 | 9174  | 7451 | 5,1                  | 21210                |                     | 12,63               | 30000                 |
| 343,18               |          | 22869              | 21636 | 21220 | 19636               | 12116 | 9841  | 7994 | 4,1                  | 21313                |                     | 10,12               | 30000                 |
| 370,09               |          | 22948              | 21636 | 21220 | 17779               | 10970 | 8911  | 7238 | 3,8                  | 21347                |                     | 9,40                | 30000                 |
| 398,95               |          | 19475              | 19195 | 16711 | 15947               | 11988 | 9737  | 7909 | 3,5                  | 17101                |                     | 6,98                | 30000                 |
| 454,33               |          | 21437              | 20280 | 18847 | 15829               | 9767  | 7933  | 6444 | 3,1                  | 19591                |                     | 7,02                | 30000                 |
| 464,42               |          | 22869              | 21636 | 21220 | 19636               | 12116 | 9841  | 7994 | 3,0                  | 21450                |                     | 7,52                | 30000                 |
| 497,37               |          | 22869              | 21636 | 21220 | 19636               | 12116 | 9841  | 7994 | 2,8                  | 21481                |                     | 7,03                | 30000                 |
| 536,36               |          | 22948              | 21636 | 21220 | 17779               | 10970 | 8911  | 7238 | 2,6                  | 21515                |                     | 6,53                | 30000                 |
| 579,60               |          | 21504              | 19018 | 18166 | 17547               | 12116 | 9841  | 7994 | 2,4                  | 18839                |                     | 5,29                | 30000                 |
| 673,08               |          | 22869              | 21636 | 21220 | 19636               | 12116 | 9841  | 7994 | 2,1                  | 21618                |                     | 5,23                | 30000                 |
| 782,45               |          | 19475              | 19195 | 16711 | 15947               | 11988 | 9737  | 7909 | 1,8                  | 19240                |                     | 4,01                | 30000                 |
| 840,00               |          | 21504              | 19018 | 18166 | 17547               | 12116 | 9841  | 7994 | 1,7                  | 19918                |                     | 3,86                | 30000                 |
| 976,50               |          | 19475              | 19195 | 16711 | 15947               | 11988 | 9737  | 7909 | 1,4                  | 19330                |                     | 3,22                | 30000                 |
| 1107,69              |          | 22869              | 21636 | 21220 | 19636               | 12116 | 9841  | 7994 | 1,3                  | 22237                |                     | 3,27                | 30000                 |
| 1382,40              |          | 21504              | 19018 | 18166 | 17547               | 12116 | 9841  | 7994 | 1,0                  | 21463                |                     | 2,53                | 30000                 |
| 1607,04              |          | 19475              | 19195 | 16711 | 15947               | 11988 | 9737  | 7909 | 0,9                  | 19530                |                     | 1,98                | 30000                 |
| 1944,00              | 17087    | 15101              | 12488 | 11945 | 10683               | 9621  | 7814  | 0,7  | 18027                | 1,51                 | 30000               |                     |                       |

| P <sub>TN</sub> | P    | PH   | PX   | R-L-F-FC-FU<br>FB-FCB | FS<br>FP | H<br>HU | X    | T    |
|-----------------|------|------|------|-----------------------|----------|---------|------|------|
| <b>1803</b>     | 26,8 | 22,7 | 26,5 | 20,5                  | 17,2     | 18,7    | 20,9 | 25,1 |
| <b>1804</b>     | 20,0 | 18,1 | 19,7 | 15,4                  | 13,0     | 14,1    | 15,7 | 18,7 |



## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX                         |        | n <sub>2</sub> X h |       |       |        |        |         |         | 10000<br>ЧАСОВ       |                      |                     |                     | T <sub>max</sub><br>[Nm] |
|----------------------------|--------|--------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|--------------------------|
| Stadio<br>Stage<br>Ступени | ir     | 10000              | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |
| <b>1</b>                   | 4,40   | 23010              | 23010 | 21238 | 20922  | 14786  | 12010   | 9755    | 1400                 | 318                  | 8487                | 281,49              | 35000                    |
|                            | 5,25   | 22948              | 22948 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 267                  | 8806                | 250,92              | 31000                    |
| <b>2</b>                   | 15,84  | 23010              | 21655 | 21238 | 20922  | 14786  | 12010   | 9755    | 1400                 | 88                   | 12463               | 120,15              | 35000                    |
|                            | 18,90  | 22948              | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 74                   | 12933               | 104,49              | 31000                    |
|                            | 23,47  | 23010              | 21655 | 21238 | 20094  | 14786  | 12010   | 9755    |                      | 60                   | 14023               | 91,25               | 35000                    |
|                            | 28,00  | 22948              | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 50                   | 14551               | 79,36               | 31000                    |
| <b>3</b>                   | 67,53  | 23010              | 21655 | 21238 | 19201  | 11848  | 9623    | 7817    | 1400                 | 21                   | 15429               | 35,63               | 35000                    |
|                            | 80,57  | 22948              | 21636 | 21220 | 20906  | 13407  | 10890   | 8845    |                      | 17                   | 18410               | 35,63               | 31000                    |
|                            | 100,04 | 22948              | 21636 | 21220 | 20906  | 14786  | 12010   | 9755    |                      | 14                   | 19954               | 31,11               | 35000                    |
|                            | 119,37 | 22948              | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 12                   | 20834               | 27,22               | 31000                    |
| <b>4</b>                   | 235,00 | 23010              | 21655 | 21238 | 19201  | 11848  | 9623    | 7817    | 1400                 | 5,96                 | 20000               | 13,56               | 35000                    |
|                            | 280,40 | 22948              | 21636 | 21220 | 20906  | 13407  | 10890   | 8845    |                      | 4,99                 | 21200               | 12,05               | 31000                    |
|                            | 287,88 | 23010              | 21655 | 21238 | 19201  | 11848  | 9623    | 7817    |                      | 4,86                 | 21200               | 11,73               | 35000                    |
|                            | 343,50 | 22948              | 21636 | 21220 | 20906  | 13407  | 10890   | 8845    |                      | 4,08                 | 21500               | 9,97                | 31000                    |
|                            | 348,15 | 22948              | 21636 | 21220 | 20906  | 14786  | 12010   | 9755    |                      | 4,02                 | 21500               | 9,84                | 35000                    |
|                            | 389,59 | 23010              | 21655 | 21238 | 19201  | 11848  | 9623    | 7817    |                      | 3,59                 | 21500               | 8,79                | 35000                    |
|                            | 415,40 | 22948              | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 3,37                 | 21500               | 8,25                | 31000                    |
|                            | 426,50 | 22948              | 21636 | 21220 | 20906  | 14786  | 12010   | 9755    |                      | 3,28                 | 21500               | 8,03                | 35000                    |
|                            | 464,85 | 22948              | 21636 | 21220 | 20906  | 13407  | 10890   | 8845    |                      | 3,01                 | 21500               | 7,37                | 31000                    |
|                            | 486,20 | 23010              | 21655 | 21238 | 19201  | 11848  | 9623    | 7817    |                      | 2,88                 | 21500               | 7,05                | 35000                    |
|                            | 508,89 | 22948              | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 2,75                 | 21500               | 6,73                | 31000                    |
|                            | 577,17 | 22948              | 21636 | 21220 | 20906  | 14786  | 12010   | 9755    |                      | 2,43                 | 21500               | 5,94                | 35000                    |
|                            | 580,13 | 22948              | 21636 | 21220 | 20906  | 13407  | 10890   | 8845    |                      | 2,41                 | 21500               | 5,91                | 31000                    |
|                            | 688,66 | 22948              | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 2,03                 | 21600               | 5,00                | 31000                    |
|                            | 720,30 | 22948              | 21636 | 21220 | 20906  | 14786  | 12010   | 9755    |                      | 1,94                 | 21500               | 4,76                | 35000                    |
|                            | 859,45 | 22948              | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 1,63                 | 21800               | 4,04                | 31000                    |

| P <sub>TN</sub> | P    | PH   | PX   | R-L-F-FC-<br>FU<br>FB-FCB | FS<br>FP | H<br>HU | X    | T    |
|-----------------|------|------|------|---------------------------|----------|---------|------|------|
| <b>2001</b>     | 64.9 | 54.7 | 63.5 | 39.6                      | 26.7     | 32.7    | 41.5 | 58.1 |
| <b>2002</b>     | 44.4 | 38.6 | 43.6 | 29.9                      | 22.6     | 26.0    | 31.0 | 40.5 |
| <b>2003</b>     | 28.0 | 22.5 | 27.6 | 19.6                      | 15.3     | 17.3    | 20.2 | 25.8 |
| <b>2004</b>     | 21.7 | 19.2 | 21.4 | 15.4                      | 12.1     | 13.6    | 15.8 | 20.0 |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

|                         |        | n <sub>2</sub> X h  |       |       |        |        |         |         | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|-------------------------|--------|---------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|-----------------------|
|                         |        | T <sub>N</sub> [Nm] |       |       |        |        |         |         | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| Stadio Stage<br>Ступени | ir     | 10000               | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      |                      |                     |                     |                       |
| <b>3</b>                | 40,07  | 23010               | 21655 | 21238 | 20922  | 14786  | 12010   | 9755    | 1400                 | 35                   | 16464               | 66,20               | 35000                 |
|                         | 47,81  | 22948               | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 29                   | 17084               | 57,57               | 31000                 |
|                         | 59,36  | 23010               | 21655 | 21238 | 20094  | 14786  | 12010   | 9755    |                      | 24                   | 18524               | 50,27               | 35000                 |
|                         | 70,82  | 22948               | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 20                   | 18686               | 42,50               | 31000                 |
|                         | 78,75  | 22948               | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 18                   | 18801               | 38,46               | 31000                 |
|                         | 97,78  | 23010               | 21655 | 21238 | 20094  | 14786  | 12010   | 9755    |                      | 14                   | 20759               | 34,20               | 35000                 |
|                         | 116,67 | 22948               | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 12                   | 20823               | 28,75               | 31000                 |
|                         | 130,20 | 22948               | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 11                   | 20873               | 25,83               | 31000                 |
|                         | 161,66 | 23010               | 21655 | 21238 | 20094  | 14786  | 12010   | 9755    |                      | 8,7                  | 20988               | 20,91               | 35000                 |
|                         | 192,89 | 22948               | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 7,3                  | 21051               | 17,58               | 31000                 |
| <b>4</b>                | 194,14 | 23010               | 21655 | 21238 | 19201  | 11848  | 9623    | 7817    | 1400                 | 7,2                  | 21071               | 17,68               | 35000                 |
|                         | 231,65 | 22948               | 21636 | 21220 | 20906  | 13407  | 10890   | 8845    |                      | 6,0                  | 21134               | 14,86               | 31000                 |
|                         | 281,37 | 23010               | 21655 | 21238 | 19201  | 11848  | 9623    | 7817    |                      | 5,0                  | 21240               | 12,30               | 35000                 |
|                         | 287,62 | 22948               | 21636 | 21220 | 20906  | 14786  | 12010   | 9755    |                      | 4,9                  | 21233               | 12,02               | 35000                 |
|                         | 335,72 | 22948               | 21636 | 21220 | 20906  | 13407  | 10890   | 8845    |                      | 4,2                  | 21303               | 10,34               | 31000                 |
|                         | 343,18 | 22948               | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 4,1                  | 21313               | 10,12               | 31000                 |
|                         | 416,84 | 22948               | 21636 | 21220 | 20906  | 14786  | 12010   | 9755    |                      | 3,4                  | 21401               | 8,36                | 35000                 |
|                         | 463,05 | 23010               | 21655 | 21238 | 19201  | 11848  | 9623    | 7817    |                      | 3,0                  | 21467               | 7,55                | 35000                 |
|                         | 497,37 | 22948               | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 2,8                  | 21481               | 7,03                | 31000                 |
|                         | 552,51 | 22948               | 21636 | 21220 | 20906  | 13407  | 10890   | 8845    |                      | 2,5                  | 21529               | 6,35                | 31000                 |
|                         | 686,00 | 22948               | 21636 | 21220 | 20906  | 14786  | 12010   | 9755    |                      | 2,0                  | 21627               | 5,14                | 35000                 |
|                         | 818,53 | 22948               | 21636 | 21220 | 20906  | 14551  | 11819   | 9600    |                      | 1,7                  | 21707               | 4,32                | 31000                 |

**B**

| P <sub>TN</sub> | P    | PH   | PX   | R-L-F-FC-FU<br>FB-FCB | FS<br>FP | H<br>HU | X    | T    |
|-----------------|------|------|------|-----------------------|----------|---------|------|------|
| <b>2003</b>     | 26,8 | 22,7 | 26,5 | 20,5                  | 17,2     | 18,7    | 20,9 | 25,1 |
| <b>2004</b>     | 20,0 | 18,1 | 19,7 | 15,4                  | 13,0     | 14,1    | 15,7 | 18,7 |



## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX                         |         | n <sub>2</sub> X h |       |       |        |        |         |         | 10000<br>ЧАСОВ       |                      |                     |                     | T <sub>max</sub><br>[Nm] |
|----------------------------|---------|--------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|--------------------------|
| Stadio<br>Stage<br>Ступени | ir      | 10000              | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |
| <b>1</b>                   | 3.63    | 26102              | 24645 | 24086 | 23542  | 16856  | 13691   | 11121   | 1400                 | 386                  | 9128                | 376.69              | 49000                    |
|                            | 4.00    | 32628              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   |                      | 350                  | 9263                | 346.40              | 51500                    |
|                            | 5.20    | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 269                  | 9874                | 284.03              | 36700                    |
|                            | 6.25    | 25999              | 24178 | 23770 | 21693  | 16050  | 13036   | 10589   |                      | 224                  | 10235               | 244.96              | 35200                    |
| <b>2</b>                   | 12.69   | 25780              | 24645 | 23739 | 19282  | 11898  | 9664    | 7850    | 1400                 | 110                  | 9383                | 112.93              | 49000                    |
|                            | 14.00   | 28384              | 27940 | 25433 | 20658  | 12747  | 10353   | 8410    |                      | 100                  | 10353               | 112.93              | 51500                    |
|                            | 16.50   | 27734              | 27387 | 25226 | 20490  | 12643  | 10269   | 8341    |                      | 85                   | 10788               | 99.84               | 51500                    |
|                            | 18.20   | 31767              | 29519 | 29041 | 24823  | 15316  | 12441   | 10105   |                      | 77                   | 13460               | 112.93              | 36700                    |
|                            | 21.45   | 31767              | 29519 | 29041 | 24621  | 15192  | 12340   | 10023   |                      | 65                   | 14025               | 99.84               | 36700                    |
|                            | 26.87   | 30686              | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 52                   | 14585               | 82.90               | 36700                    |
|                            | 31.20   | 29921              | 29288 | 24389 | 23295  | 14442  | 11731   | 9528    |                      | 45                   | 14919               | 73.02               | 36700                    |
|                            | 37.70   | 25044              | 22124 | 18235 | 17429  | 14307  | 11621   | 9439    |                      | 37                   | 15642               | 63.36               | 36700                    |
| 45.31                      | 25999   | 24178              | 21660 | 20691 | 16050  | 13036  | 10589   | 31      | 17824                | 60.07                | 35200               |                     |                          |
| <b>3</b>                   | 50.40   | 28384              | 27940 | 25433 | 20658  | 12747  | 10353   | 8410    | 1400                 | 28                   | 15205               | 47.05               | 51500                    |
|                            | 59.40   | 27734              | 27387 | 25226 | 20490  | 12643  | 10269   | 8341    |                      | 24                   | 15843               | 41.60               | 51500                    |
|                            | 70.13   | 27734              | 27387 | 25226 | 20490  | 12643  | 10269   | 8341    |                      | 20                   | 16652               | 37.03               | 51500                    |
|                            | 77.35   | 31767              | 29519 | 29041 | 24823  | 15316  | 12441   | 10105   |                      | 18                   | 20775               | 41.89               | 36700                    |
|                            | 87.83   | 23729              | 23399 | 22963 | 19917  | 12290  | 9982    | 8108    |                      | 16                   | 17318               | 30.75               | 51500                    |
|                            | 102.30  | 27734              | 25785 | 24244 | 20490  | 12643  | 10269   | 8341    |                      | 14                   | 18650               | 28.43               | 51500                    |
|                            | 114.18  | 30686              | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 12                   | 22513               | 30.75               | 36700                    |
|                            | 132.60  | 29921              | 29288 | 24389 | 23295  | 14442  | 11731   | 9528    |                      | 11                   | 23027               | 27.08               | 36700                    |
|                            | 143.29  | 30686              | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 10                   | 24100               | 26.23               | 36700                    |
|                            | 166.57  | 30686              | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 8,4                  | 25213               | 23.61               | 36700                    |
|                            | 193.44  | 29921              | 29288 | 24389 | 23295  | 14442  | 11731   | 9528    |                      | 7,2                  | 23806               | 19.19               | 36700                    |
|                            | 201.50  | 30686              | 29519 | 28718 | 23933  | 14767  | 11995   | 9743    |                      | 6,9                  | 26695               | 20.66               | 36700                    |
|                            | 233.74  | 25044              | 22124 | 18235 | 17429  | 14307  | 11621   | 9439    |                      | 6,0                  | 18025               | 12.03               | 36700                    |
|                            | 242.19  | 25999              | 24178 | 23770 | 21693  | 16050  | 13036   | 10589   |                      | 5,8                  | 23705               | 15.26               | 35200                    |
| 282.75                     | 25044   | 22124              | 18235 | 17429 | 14307  | 11621  | 9439    | 5,0     | 18246                | 10.06                | 36700               |                     |                          |
| 339.84                     | 25999   | 24178              | 21660 | 20691 | 16050  | 13036  | 10589   | 4,1     | 21930                | 10.06                | 35200               |                     |                          |
| <b>4</b>                   | 207.06  | 27734              | 27387 | 25226 | 20490  | 12643  | 10269   | 8341    | 1400                 | 6,8                  | 23043               | 17.73               | 51500                    |
|                            | 214.86  | 28384              | 27940 | 25433 | 20658  | 12747  | 10353   | 8410    |                      | 6,5                  | 23491               | 17.42               | 51500                    |
|                            | 244.04  | 27734              | 27387 | 25226 | 20490  | 12643  | 10269   | 8341    |                      | 5,7                  | 24027               | 15.69               | 51500                    |
|                            | 298.95  | 27734              | 27387 | 25226 | 20490  | 12643  | 10269   | 8341    |                      | 4,7                  | 25727               | 13.71               | 51500                    |
|                            | 306.24  | 27734              | 27387 | 25226 | 20490  | 12643  | 10269   | 8341    |                      | 4,6                  | 25913               | 13.48               | 51500                    |
|                            | 342.69  | 27734              | 27387 | 25226 | 20490  | 12643  | 10269   | 8341    |                      | 4,1                  | 26803               | 12.46               | 51500                    |
|                            | 404.57  | 27734              | 27387 | 25226 | 20490  | 12643  | 10269   | 8341    |                      | 3,5                  | 27113               | 10.68               | 51500                    |
|                            | 445.50  | 31767              | 29519 | 29041 | 24621  | 15192  | 12340   | 10023   |                      | 3,1                  | 29283               | 10.47               | 36700                    |
|                            | 558.00  | 30686              | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 2,5                  | 29401               | 8.40                | 36700                    |
|                            | 633.60  | 27734              | 27387 | 25226 | 20490  | 12643  | 10269   | 8341    |                      | 2,2                  | 27338               | 6.88                | 51500                    |
|                            | 698.88  | 31767              | 29519 | 29041 | 24823  | 15316  | 12441   | 10105   |                      | 2,0                  | 29518               | 6.73                | 36700                    |
|                            | 824.67  | 29921              | 29288 | 24389 | 23295  | 14442  | 11731   | 9528    |                      | 1,7                  | 29598               | 5.72                | 36700                    |
|                            | 961.00  | 30686              | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 1,5                  | 30259               | 5.02                | 36700                    |
|                            | 1031.68 | 30686              | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 1,4                  | 30497               | 4.71                | 36700                    |
|                            | 1162.50 | 30686              | 29519 | 28718 | 23933  | 14767  | 11995   | 9743    |                      | 1,2                  | 30570               | 4.19                | 36700                    |
|                            | 1350.00 | 29921              | 29288 | 24389 | 23295  | 14442  | 11731   | 9528    |                      | 1,0                  | 29898               | 3.53                | 36700                    |
|                            | 1450.80 | 30686              | 29519 | 28718 | 23933  | 14767  | 11995   | 9743    |                      | 1,0                  | 30708               | 3.37                | 36700                    |
|                            | 1684.80 | 29921              | 29288 | 24389 | 23295  | 14442  | 11731   | 9528    |                      | 0,8                  | 30000               | 2.84                | 36700                    |
|                            | 2035.80 | 25044              | 22124 | 18235 | 17429  | 14307  | 11621   | 9439    |                      | 0,7                  | 26621               | 2.08                | 36700                    |
|                            | 2446.88 | 25999              | 24178 | 21660 | 20691  | 16050  | 13036   | 10589   |                      | 0,6                  | 27948               | 1.82                | 26500                    |

| P <sub>TN</sub> | PH   | FCB  | FS<br>FP | H<br>HU | T    |
|-----------------|------|------|----------|---------|------|
| <b>2501</b>     | 61.8 | 41.8 | 33.4     | 36.6    | 57.1 |
| <b>2502</b>     | 45.4 | 34.0 | 29.2     | 31.0    | 42.7 |
| <b>2503</b>     | 26.5 | 22.5 | 19.7     | 20.8    | 27.6 |
| <b>2504</b>     | 22.5 | 17.5 | 15.4     | 16.2    | 21.4 |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

|                         |                | n <sub>2</sub> X h  |       |       |        |        |         |         | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|-------------------------|----------------|---------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|-----------------------|
|                         |                | T <sub>N</sub> [Nm] |       |       |        |        |         |         | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| Stadio Stage<br>Ступени | ir             | 10000               | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      |                      |                     |                     |                       |
| <b>3</b>                | <b>32,09</b>   | 25780               | 24645 | 23739 | 19282  | 11898  | 9664    | 7850    | 1400                 | 44                   | 12395               | 62,22               | 49000                 |
|                         | <b>35,41</b>   | 28384               | 27940 | 25433 | 20658  | 12747  | 10353   | 8410    |                      | 40                   | 13677               | 62,22               | 51500                 |
|                         | <b>46,04</b>   | 31767               | 29519 | 29041 | 24823  | 15316  | 12441   | 10105   |                      | 30                   | 17780               | 62,22               | 36700                 |
|                         | <b>54,26</b>   | 31767               | 29519 | 29041 | 24621  | 15192  | 12340   | 10023   |                      | 26                   | 18527               | 55,01               | 36700                 |
|                         | <b>67,96</b>   | 30686               | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 21                   | 19267               | 45,67               | 36700                 |
|                         | <b>78,92</b>   | 29921               | 29288 | 24389 | 23295  | 14442  | 11731   | 9528    |                      | 18                   | 19708               | 40,23               | 36700                 |
|                         | <b>96,44</b>   | 28384               | 27940 | 25433 | 20658  | 12747  | 10353   | 8410    |                      | 15                   | 18473               | 30,86               | 51500                 |
|                         | <b>111,9</b>   | 30686               | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 13                   | 22380               | 32,21               | 36700                 |
|                         | <b>130,00</b>  | 29921               | 29288 | 24389 | 23295  | 14442  | 11731   | 9528    |                      | 11                   | 22891               | 28,37               | 36700                 |
|                         | <b>147,77</b>  | 31767               | 29519 | 29041 | 24621  | 15192  | 12340   | 10023   |                      | 9,5                  | 25023               | 27,28               | 36700                 |
|                         | <b>185,08</b>  | 30686               | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 7,6                  | 26023               | 22,65               | 36700                 |
|                         | <b>214,93</b>  | 29921               | 29288 | 24389 | 23295  | 14442  | 11731   | 9528    |                      | 6,5                  | 23972               | 17,97               | 36700                 |
|                         | <b>259,71</b>  | 25044               | 22124 | 18235 | 17429  | 14307  | 11621   | 9439    |                      | 5,4                  | 18147               | 11,26               | 36700                 |
|                         | <b>312,15</b>  | 25999               | 24178 | 21660 | 20691  | 16050  | 13036   | 10589   |                      | 4,5                  | 21811               | 11,26               | 35200                 |
| <b>4</b>                | <b>144,90</b>  | 28384               | 27940 | 25433 | 20658  | 12747  | 10353   | 8410    | 1400                 | 9,7                  | 20872               | 23,46               | 51500                 |
|                         | <b>170,78</b>  | 27734               | 27387 | 25226 | 20490  | 12643  | 10269   | 8341    |                      | 8,2                  | 21749               | 20,74               | 51500                 |
|                         | <b>222,38</b>  | 31767               | 29519 | 29041 | 24823  | 15316  | 12441   | 10105   |                      | 6,3                  | 28519               | 20,89               | 36700                 |
|                         | <b>252,52</b>  | 23729               | 23399 | 22963 | 19917  | 12290  | 9982    | 8108    |                      | 5,5                  | 22914               | 14,78               | 51500                 |
|                         | <b>328,28</b>  | 30686               | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 4,3                  | 29124               | 14,45               | 36700                 |
|                         | <b>381,23</b>  | 29921               | 29288 | 24389 | 23295  | 14442  | 11731   | 9528    |                      | 3,7                  | 24876               | 10,63               | 36700                 |
|                         | <b>411,96</b>  | 30686               | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 3,4                  | 29242               | 11,56               | 36700                 |
|                         | <b>478,90</b>  | 30686               | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 2,9                  | 29321               | 9,97                | 36700                 |
|                         | <b>552,50</b>  | 29921               | 29288 | 24389 | 23295  | 14442  | 11731   | 9528    |                      | 2,5                  | 27989               | 8,25                | 36700                 |
|                         | <b>579,31</b>  | 30686               | 29519 | 28718 | 23933  | 14767  | 11995   | 9743    |                      | 2,4                  | 29420               | 8,27                | 36700                 |
|                         | <b>694,06</b>  | 30686               | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 2,0                  | 29514               | 6,93                | 36700                 |
|                         | <b>782,97</b>  | 30686               | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 1,8                  | 29577               | 6,15                | 36700                 |
|                         | <b>839,58</b>  | 30686               | 29519 | 28718 | 23933  | 14767  | 11995   | 9743    |                      | 1,7                  | 29614               | 5,75                | 36700                 |
|                         | <b>982,55</b>  | 25999               | 24178 | 21660 | 20691  | 16050  | 13036   | 10589   |                      | 1,4                  | 30347               | 5,03                | 35200                 |
|                         | <b>1142,22</b> | 30686               | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 1,2                  | 30560               | 4,36                | 36700                 |
|                         | <b>1381,71</b> | 30686               | 29519 | 28718 | 23933  | 14767  | 11995   | 9743    |                      | 1,0                  | 30677               | 3,62                | 36700                 |
|                         | <b>1660,71</b> | 25999               | 24178 | 23770 | 21693  | 16050  | 13036   | 10589   |                      | 0,8                  | 26595               | 2,61                | 35200                 |
|                         | <b>1938,86</b> | 25044               | 22124 | 18235 | 17429  | 14307  | 11621   | 9439    |                      | 0,7                  | 26416               | 2,22                | 36700                 |
| <b>2330,36</b>          | 25999          | 24178               | 21660 | 20691 | 16050  | 13036  | 10589   | 0,6     | 27778                | 1,94                 | 35200               |                     |                       |

**B**

| P <sub>TN</sub> | PH   | FCB  | FS<br>FP | H<br>HU | T    |
|-----------------|------|------|----------|---------|------|
| <b>2503</b>     | 25,6 | 22,6 | 20,5     | 21,3    | 26,5 |
| <b>2504</b>     | 20,6 | 16,9 | 15,4     | 16,0    | 19,7 |





## 1.2 Prestazioni

## 1.2 Performances

## 1.2.1.2 Характеристики

| EX                         |         | n <sub>2</sub> X h |       |       |        |        |         |         | 10000<br>ЧАСОВ       |                      |                     |                     | T <sub>max</sub><br>[Nm] |
|----------------------------|---------|--------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|--------------------------|
| Stadio<br>Stage<br>Ступени | ir      | 10000              | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |
| 2                          | 12,69   | 26102              | 24645 | 24086 | 23542  | 16309  | 13247   | 10760   | 1400                 | 110                  | 12862               | 154,80              | 49000                    |
|                            | 14,00   | 32628              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   |                      | 100                  | 13488               | 147,12              | 51500                    |
|                            | 16,50   | 32628              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   |                      | 85                   | 14170               | 131,14              | 51500                    |
|                            | 18,20   | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 77                   | 14378               | 120,64              | 36700                    |
|                            | 21,45   | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 65                   | 15104               | 107,53              | 36700                    |
|                            | 26,87   | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 52                   | 16160               | 91,85               | 36700                    |
|                            | 31,20   | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 45                   | 16901               | 82,72               | 36700                    |
|                            | 37,70   | 31767              | 29519 | 24558 | 23390  | 16361  | 13290   | 10795   |                      | 37                   | 17889               | 72,46               | 36700                    |
|                            | 45,31   | 25999              | 24178 | 23770 | 21693  | 16050  | 13036   | 10589   |                      | 31                   | 17824               | 60,07               | 35200                    |
| 3                          | 50,40   | 32628              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   | 1400                 | 28                   | 19808               | 61,29               | 51500                    |
|                            | 59,40   | 32628              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   |                      | 24                   | 20809               | 54,63               | 51500                    |
|                            | 70,13   | 32628              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   |                      | 20                   | 21871               | 48,64               | 51500                    |
|                            | 77,35   | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 18                   | 22193               | 44,75               | 36700                    |
|                            | 87,83   | 32503              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   |                      | 16                   | 23400               | 41,55               | 51500                    |
|                            | 102,30  | 28781              | 25785 | 24244 | 23078  | 16606  | 13488   | 10956   |                      | 14                   | 22551               | 34,38               | 51500                    |
|                            | 114,18  | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 12                   | 24943               | 34,07               | 36700                    |
|                            | 132,60  | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 11                   | 26088               | 30,68               | 36700                    |
|                            | 143,29  | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 10                   | 26702               | 29,06               | 36700                    |
|                            | 166,57  | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 8,4                  | 27935               | 26,15               | 36700                    |
|                            | 193,44  | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 7,2                  | 28848               | 23,26               | 36700                    |
|                            | 201,50  | 31767              | 29519 | 28718 | 26516  | 16361  | 13290   | 10795   |                      | 6,9                  | 28054               | 21,71               | 36700                    |
|                            | 233,74  | 31767              | 29519 | 24558 | 23390  | 16361  | 13290   | 10795   |                      | 6,0                  | 24254               | 16,18               | 36700                    |
|                            | 242,19  | 25999              | 24178 | 23770 | 21693  | 16050  | 13036   | 10589   |                      | 5,8                  | 23705               | 15,26               | 35200                    |
|                            | 282,75  | 31767              | 29519 | 24558 | 23390  | 16361  | 13290   | 10795   |                      | 5,0                  | 24575               | 13,55               | 36700                    |
| 339,84                     | 25999   | 24178              | 23770 | 21693 | 16050  | 13036  | 10589   | 4,1     | 23856                | 10,95                | 35200               |                     |                          |
| 4                          | 207,06  | 32628              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   | 1400                 | 6,8                  | 29442               | 22,66               | 51500                    |
|                            | 214,86  | 32628              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   |                      | 6,5                  | 29524               | 21,90               | 51500                    |
|                            | 244,04  | 32628              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   |                      | 5,7                  | 29804               | 19,46               | 51500                    |
|                            | 298,95  | 32628              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   |                      | 4,7                  | 30232               | 16,11               | 51500                    |
|                            | 306,24  | 32628              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   |                      | 4,6                  | 30248               | 15,74               | 51500                    |
|                            | 342,69  | 32628              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   |                      | 4,1                  | 30324               | 14,10               | 51500                    |
|                            | 404,57  | 32628              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   |                      | 3,5                  | 30436               | 11,99               | 51500                    |
|                            | 445,50  | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 3,1                  | 29283               | 10,47               | 36700                    |
|                            | 558,00  | 30686              | 29519 | 29041 | 23933  | 14767  | 11995   | 9743    |                      | 2,5                  | 29401               | 8,40                | 36700                    |
|                            | 633,60  | 32628              | 30807 | 30108 | 26912  | 16606  | 13488   | 10956   |                      | 2,2                  | 30379               | 7,64                | 51500                    |
|                            | 698,88  | 31767              | 29519 | 29041 | 24823  | 15316  | 12441   | 10105   |                      | 2,0                  | 29518               | 6,73                | 36700                    |
|                            | 824,67  | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 1,7                  | 29604               | 5,72                | 36700                    |
|                            | 961,00  | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 1,5                  | 30259               | 5,02                | 36700                    |
|                            | 1031,68 | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 1,4                  | 30543               | 4,72                | 36700                    |
|                            | 1162,50 | 31767              | 29519 | 28718 | 26516  | 16361  | 13290   | 10795   |                      | 1,2                  | 31022               | 4,25                | 36700                    |
|                            | 1350,00 | 29921              | 29288 | 24389 | 23295  | 14442  | 11731   | 9528    |                      | 1,0                  | 31621               | 3,73                | 36700                    |
|                            | 1450,80 | 31767              | 29519 | 28718 | 26516  | 16361  | 13290   | 10795   |                      | 1,0                  | 31910               | 3,50                | 36700                    |
|                            | 1684,80 | 31767              | 29519 | 29041 | 26516  | 16361  | 13290   | 10795   |                      | 0,8                  | 32509               | 3,07                | 36700                    |
|                            | 2035,80 | 31767              | 29519 | 24558 | 23390  | 16361  | 13290   | 10795   |                      | 0,7                  | 33268               | 2,60                | 36700                    |
|                            | 2446,88 | 25999              | 24178 | 23770 | 21693  | 16050  | 13036   | 10589   |                      | 0,6                  | 27948               | 1,82                | 26500                    |

| P <sub>EN</sub> | PH   | FCB  | FS<br>FP | H<br>HU | T    |
|-----------------|------|------|----------|---------|------|
| 2802            | 46.3 | 34.9 | 30.1     | 31.9    | 43.6 |
| 2803            | 27.0 | 23.5 | 20.7     | 21.7    | 28.6 |
| 2804            | 23.3 | 18.3 | 16.2     | 17.0    | 22.1 |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

| <br>Stadio Stage<br>Ступени |         | n <sub>2</sub> X h  |       |        |        |         |         |       | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|-----------------------------|---------|---------------------|-------|--------|--------|---------|---------|-------|----------------------|----------------------|---------------------|---------------------|-----------------------|
|                             |         | T <sub>N</sub> [Nm] |       |        |        |         |         |       | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| ir                          | 10000   | 20000               | 50000 | 100000 | 500000 | 1000000 | 2000000 |       |                      |                      |                     |                     |                       |
| <b>3</b>                    | 32,09   | 26102               | 24645 | 24086  | 23542  | 16309   | 13247   | 10760 | 1400                 | 44                   | 16990               | 85,29               | 49000                 |
|                             | 35,41   | 32628               | 30807 | 30108  | 26912  | 16606   | 13488   | 10956 |                      | 40                   | 17818               | 81,06               | 51500                 |
|                             | 46,04   | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 30                   | 18993               | 66,46               | 36700                 |
|                             | 54,26   | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 26                   | 19953               | 59,24               | 36700                 |
|                             | 67,96   | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 21                   | 21347               | 50,60               | 36700                 |
|                             | 78,92   | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 18                   | 22327               | 45,58               | 36700                 |
|                             | 96,44   | 32628               | 30807 | 30108  | 26912  | 16606   | 13488   | 10956 |                      | 15                   | 24066               | 40,20               | 51500                 |
|                             | 111,94  | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 13                   | 24796               | 35,68               | 36700                 |
|                             | 130,00  | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 11                   | 25933               | 32,14               | 36700                 |
|                             | 147,77  | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 9,5                  | 26949               | 29,38               | 36700                 |
|                             | 185,08  | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 7,6                  | 28825               | 25,09               | 36700                 |
|                             | 214,93  | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 6,5                  | 28903               | 21,66               | 36700                 |
|                             | 259,71  | 31767               | 29519 | 24558  | 23390  | 16361   | 13290   | 10795 |                      | 5,4                  | 24432               | 15,15               | 36700                 |
|                             | 312,15  | 25999               | 24178 | 23770  | 21693  | 16050   | 13036   | 10589 |                      | 4,5                  | 23818               | 12,29               | 35200                 |
| <b>4</b>                    | 127,48  | 32628               | 30807 | 30108  | 26912  | 16606   | 13488   | 10956 | 1400                 | 11,0                 | 26167               | 33,43               | 51500                 |
|                             | 150,25  | 32628               | 30807 | 30108  | 26912  | 16606   | 13488   | 10956 |                      | 9,3                  | 27489               | 29,80               | 51500                 |
|                             | 177,38  | 32628               | 30807 | 30108  | 26912  | 16606   | 13488   | 10956 |                      | 7,9                  | 28892               | 26,53               | 51500                 |
|                             | 222,17  | 32503               | 30807 | 30108  | 26912  | 16606   | 13488   | 10956 |                      | 6,3                  | 29597               | 21,70               | 51500                 |
|                             | 258,76  | 28781               | 25785 | 24244  | 23078  | 16606   | 13488   | 10956 |                      | 5,4                  | 24111               | 15,18               | 51500                 |
|                             | 335,40  | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 4,2                  | 29135               | 14,15               | 36700                 |
|                             | 362,44  | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 3,9                  | 29175               | 13,11               | 36700                 |
|                             | 421,33  | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 3,3                  | 29254               | 11,31               | 36700                 |
|                             | 489,29  | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 2,9                  | 29332               | 9,76                | 36700                 |
|                             | 552,50  | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 2,5                  | 29395               | 8,67                | 36700                 |
|                             | 597,04  | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 2,3                  | 29436               | 8,03                | 36700                 |
|                             | 694,06  | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 2,0                  | 29514               | 6,93                | 36700                 |
|                             | 786,60  | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 1,8                  | 29580               | 6,13                | 36700                 |
|                             | 839,58  | 31767               | 29519 | 28718  | 26516  | 16361   | 13290   | 10795 |                      | 1,7                  | 29614               | 5,75                | 36700                 |
|                             | 987,10  | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 1,4                  | 30366               | 5,01                | 36700                 |
|                             | 1147,51 | 31767               | 29519 | 29041  | 26516  | 16361   | 13290   | 10795 |                      | 1,2                  | 30970               | 4,40                | 36700                 |
|                             | 1388,11 | 31767               | 29519 | 28718  | 26516  | 16361   | 13290   | 10795 |                      | 1,0                  | 31733               | 3,72                | 36700                 |
|                             | 1610,21 | 31767               | 29519 | 24558  | 23390  | 16361   | 13290   | 10795 |                      | 0,9                  | 32328               | 3,27                | 36700                 |
|                             | 1668,40 | 25999               | 24178 | 23770  | 21693  | 16050   | 13036   | 10589 |                      | 0,8                  | 26612               | 2,60                | 35200                 |
|                             | 1947,83 | 31767               | 29519 | 24558  | 23390  | 16361   | 13290   | 10795 |                      | 0,7                  | 33091               | 2,77                | 36700                 |
| 2341,15                     | 25999   | 24178               | 23770 | 21693  | 16050  | 13036   | 10589   | 0,6   | 27794                | 1,93                 | 35200               |                     |                       |

**B**

| P <sub>TN</sub> | PH   | FCB  | FS<br>FP | H<br>HU | T    |
|-----------------|------|------|----------|---------|------|
| <b>2803</b>     | 26,0 | 23,4 | 21,3     | 22,1    | 27,2 |
| <b>2804</b>     | 21,1 | 17,5 | 16,0     | 16,5    | 20,3 |

## 1.2 Prestazioni

## 1.2 Performances

## 1.2.1.2 Характеристики

| EX                         |         | $n_2 \times h$ |       |       |        |        |         |         | 10000<br>ЧАСОВ |             |            |            | $T_{max}$<br>[Nm] |
|----------------------------|---------|----------------|-------|-------|--------|--------|---------|---------|----------------|-------------|------------|------------|-------------------|
| Stadio<br>Stage<br>Ступени | ir      | 10000          | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 | $n_1$ [rpm]    | $n_2$ [rpm] | $T_N$ [Nm] | $P_1$ [kW] |                   |
| <b>1</b>                   | 3,52    | 32282          | 30462 | 29353 | 28644  | 22474  | 18255   | 14827   | 1400           | 398         | 12064      | 512,69     | 64000             |
|                            | 4,00    | 40352          | 38077 | 36691 | 35805  | 22141  | 17984   | 14608   |                | 350         | 12350      | 461,86     | 65000             |
|                            | 4,71    | 38455          | 37838 | 37021 | 35841  | 22115  | 17963   | 14591   |                | 298         | 12952      | 411,71     | 64000             |
| <b>2</b>                   | 12,32   | 32282          | 30462 | 29353 | 25893  | 15977  | 12977   | 10541   | 1400           | 114         | 12489      | 154,80     | 64000             |
|                            | 14,00   | 38826          | 38077 | 34862 | 28317  | 17473  | 14192   | 11528   |                | 100         | 14192      | 154,80     | 65000             |
|                            | 16,47   | 38455          | 37838 | 37021 | 31729  | 19578  | 15902   | 12916   |                | 85          | 16697      | 154,80     | 64000             |
|                            | 19,41   | 38455          | 37838 | 37021 | 31471  | 19419  | 15773   | 12812   |                | 72          | 17398      | 136,86     | 64000             |
|                            | 24,31   | 38109          | 37555 | 36823 | 30591  | 18876  | 15332   | 12453   |                | 58          | 18093      | 113,64     | 64000             |
|                            | 28,24   | 37273          | 36713 | 30476 | 29018  | 18460  | 14994   | 12179   |                | 50          | 18507      | 100,09     | 64000             |
|                            | 34,12   | 31688          | 27858 | 22377 | 21320  | 18287  | 14854   | 12065   |                | 41          | 19167      | 85,79      | 64000             |
| <b>3</b>                   | 44,35   | 31689          | 30462 | 29353 | 25893  | 15977  | 12977   | 10541   | 1400           | 32          | 18341      | 64,49      | 64000             |
|                            | 50,40   | 35920          | 35431 | 34784 | 28317  | 17473  | 14192   | 11528   |                | 28          | 20842      | 64,49      | 65000             |
|                            | 59,29   | 38455          | 37838 | 37021 | 31729  | 19578  | 15902   | 12916   |                | 24          | 24520      | 64,49      | 64000             |
|                            | 70,00   | 38455          | 37838 | 37021 | 31729  | 19578  | 15902   | 12916   |                | 20          | 25772      | 57,42      | 64000             |
|                            | 82,50   | 38455          | 37838 | 37021 | 31471  | 19419  | 15773   | 12812   |                | 17          | 26854      | 50,76      | 64000             |
|                            | 87,53   | 38109          | 37555 | 36823 | 30591  | 18876  | 15332   | 12453   |                | 16          | 26571      | 47,34      | 64000             |
|                            | 101,65  | 37273          | 36713 | 30476 | 29018  | 18460  | 14994   | 12179   |                | 14          | 27178      | 41,70      | 64000             |
|                            | 110,22  | 32503          | 32033 | 31410 | 27302  | 16846  | 13683   | 11114   |                | 13          | 25412      | 35,95      | 65000             |
|                            | 120,00  | 37273          | 36713 | 30476 | 29018  | 18460  | 14994   | 12179   |                | 12          | 28566      | 37,12      | 64000             |
|                            | 129,67  | 38109          | 37555 | 36823 | 30591  | 18876  | 15332   | 12453   |                | 11          | 29896      | 35,95      | 64000             |
|                            | 150,75  | 38109          | 37035 | 34764 | 30591  | 18876  | 15332   | 12453   |                | 9,3         | 31277      | 32,36      | 64000             |
|                            | 175,06  | 37273          | 36713 | 30476 | 29018  | 18460  | 14994   | 12179   |                | 8,0         | 29488      | 26,27      | 64000             |
|                            | 211,76  | 33486          | 32017 | 30075 | 28606  | 18460  | 14994   | 12179   |                | 6,6         | 29483      | 21,71      | 64000             |
| 255,88                     | 31688   | 27858          | 22377 | 21320 | 18287  | 14854  | 12065   | 5,5     | 22240          | 13,55       | 64000      |            |                   |
| <b>4</b>                   | 206,34  | 38455          | 37838 | 37021 | 31729  | 19578  | 15902   | 12916   | 1400           | 6,8         | 35644      | 27,53      | 64000             |
|                            | 214,86  | 35920          | 35431 | 34784 | 28317  | 17473  | 14192   | 11528   |                | 6,5         | 32200      | 23,88      | 65000             |
|                            | 243,60  | 38455          | 37838 | 37021 | 31729  | 19578  | 15902   | 12916   |                | 5,7         | 37000      | 24,20      | 64000             |
|                            | 298,42  | 38455          | 37838 | 37021 | 31729  | 19578  | 15902   | 12916   |                | 4,7         | 37100      | 19,81      | 64000             |
|                            | 304,60  | 38109          | 37555 | 36823 | 30591  | 18876  | 15332   | 12453   |                | 4,6         | 37000      | 19,36      | 64000             |
|                            | 342,08  | 38455          | 37838 | 37021 | 31729  | 19578  | 15902   | 12916   |                | 4,1         | 37200      | 17,33      | 64000             |
|                            | 403,85  | 38455          | 37838 | 37021 | 31729  | 19578  | 15902   | 12916   |                | 3,5         | 37500      | 14,80      | 64000             |
|                            | 451,26  | 38109          | 37555 | 36823 | 30591  | 18876  | 15332   | 12453   |                | 3,1         | 37200      | 13,14      | 64000             |
|                            | 504,98  | 38109          | 37555 | 36823 | 30591  | 18876  | 15332   | 12453   |                | 2,8         | 37300      | 11,77      | 64000             |
|                            | 552,82  | 38109          | 37555 | 36823 | 30591  | 18876  | 15332   | 12453   |                | 2,5         | 37400      | 10,78      | 64000             |
|                            | 630,21  | 38109          | 37555 | 36823 | 30591  | 18876  | 15332   | 12453   |                | 2,2         | 37500      | 9,48       | 64000             |
|                            | 736,94  | 33486          | 32017 | 36823 | 28606  | 18460  | 14994   | 12179   |                | 1,9         | 32200      | 6,96       | 64000             |
|                            | 775,73  | 31688          | 27858 | 22377 | 21320  | 18287  | 14854   | 12065   |                | 1,8         | 28400      | 5,83       | 64000             |
|                            | 869,68  | 38109          | 37035 | 34764 | 30591  | 18876  | 15332   | 12453   |                | 1,6         | 37500      | 6,87       | 64000             |
|                            | 933,65  | 38109          | 37555 | 36823 | 30591  | 18876  | 15332   | 12453   |                | 1,5         | 37800      | 6,45       | 64000             |
|                            | 1085,36 | 35920          | 35431 | 34784 | 28317  | 17473  | 14192   | 11528   |                | 1,3         | 37900      | 5,56       | 64000             |
|                            | 1260,42 | 37273          | 36713 | 30476 | 29018  | 17473  | 14994   | 12179   |                | 1,1         | 37200      | 4,70       | 64000             |
|                            | 1310,12 | 31688          | 27858 | 22377 | 21320  | 18287  | 14854   | 12065   |                | 1,1         | 31300      | 3,81       | 64000             |
|                            | 1524,71 | 33486          | 32017 | 30075 | 28606  | 18460  | 14994   | 12179   |                | 0,9         | 33700      | 3,52       | 64000             |
|                            | 1842,35 | 31688          | 27858 | 22377 | 21320  | 18287  | 14854   | 12065   |                | 0,8         | 33200      | 2,87       | 64000             |

| $P_{TN}$    | PH   | FS<br>FP | H<br>HU | T    |
|-------------|------|----------|---------|------|
| <b>3001</b> | 64.3 | 32.7     | 36.6    | 73.7 |
| <b>3002</b> | 47.7 | 29.6     | 31.9    | 53.1 |
| <b>3003</b> | 27.8 | 20.4     | 21.7    | 34.1 |
| <b>3004</b> | 23.9 | 16.0     | 17.0    | 26.2 |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

| <br>Stadio Stage<br>Ступени |         | n <sub>2</sub> X h  |       |        |        |         |         |       | 10000<br>ЧАСОВ       |                      |                     |                     | T <sub>max</sub><br>[Nm] |
|-----------------------------|---------|---------------------|-------|--------|--------|---------|---------|-------|----------------------|----------------------|---------------------|---------------------|--------------------------|
|                             |         | T <sub>N</sub> [Nm] |       |        |        |         |         |       | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |
| ir                          | 10000   | 20000               | 50000 | 100000 | 500000 | 1000000 | 2000000 |       |                      |                      |                     |                     |                          |
| <b>3</b>                    | 31,16   | 32282               | 30462 | 29353  | 25893  | 15977   | 12977   | 10541 | 1400                 | 45                   | 16498               | 85,29               | 64000                    |
|                             | 35,41   | 38826               | 38077 | 34862  | 28317  | 17473   | 14192   | 11528 |                      | 40                   | 18748               | 85,29               | 65000                    |
|                             | 41,66   | 38455               | 37838 | 37021  | 31729  | 19578   | 15902   | 12916 |                      | 34                   | 22056               | 85,29               | 64000                    |
|                             | 49,10   | 38455               | 37838 | 37021  | 31471  | 19419   | 15773   | 12812 |                      | 29                   | 22983               | 75,41               | 64000                    |
|                             | 61,50   | 38109               | 37555 | 36823  | 30591  | 18876   | 15332   | 12453 |                      | 23                   | 23901               | 62,61               | 64000                    |
|                             | 71,42   | 37273               | 36713 | 30476  | 29018  | 18460   | 14994   | 12179 |                      | 20                   | 24447               | 55,14               | 64000                    |
|                             | 80,88   | 38455               | 27858 | 22377  | 21320  | 18287   | 14854   | 12065 |                      | 17                   | 26695               | 53,17               | 64000                    |
|                             | 101,31  | 38109               | 37555 | 36823  | 30591  | 18876   | 15332   | 12453 |                      | 14                   | 27762               | 44,15               | 64000                    |
|                             | 117,65  | 37273               | 36713 | 30476  | 29018  | 18460   | 14994   | 12179 |                      | 12                   | 28396               | 38,88               | 64000                    |
|                             | 133,73  | 38455               | 37838 | 37021  | 31471  | 19419   | 15773   | 12812 |                      | 10,5                 | 31041               | 37,39               | 64000                    |
|                             | 142,16  | 31688               | 27858 | 22377  | 21320  | 18287   | 14854   | 12065 |                      | 9,8                  | 21343               | 24,19               | 64000                    |
|                             | 167,49  | 38109               | 37555 | 36823  | 30591  | 18876   | 15332   | 12453 |                      | 8,4                  | 32282               | 31,05               | 64000                    |
|                             | 194,51  | 37273               | 36713 | 30476  | 29018  | 18460   | 14994   | 12179 |                      | 7,2                  | 29710               | 24,61               | 64000                    |
|                             | 235,03  | 31688               | 27858 | 22377  | 21320  | 18287   | 14854   | 12065 |                      | 6,0                  | 22110               | 15,15               | 64000                    |
| <b>4</b>                    | 127,48  | 35920               | 35431 | 34784  | 28317  | 17473   | 14192   | 11528 | 1400                 | 11,0                 | 27532               | 35,18               | 65000                    |
|                             | 149,98  | 38455               | 37838 | 37021  | 31729  | 19578   | 15902   | 12916 |                      | 9,3                  | 32391               | 35,18               | 64000                    |
|                             | 177,06  | 38455               | 37838 | 37021  | 31729  | 19578   | 15902   | 12916 |                      | 7,9                  | 34045               | 31,32               | 64000                    |
|                             | 221,40  | 38109               | 37555 | 36823  | 30591  | 18876   | 15332   | 12453 |                      | 6,3                  | 35100               | 25,82               | 64000                    |
|                             | 257,11  | 37273               | 36713 | 30476  | 29018  | 18460   | 14994   | 12179 |                      | 5,4                  | 30297               | 19,19               | 64000                    |
|                             | 328,00  | 38109               | 37555 | 36823  | 30591  | 18876   | 15332   | 12453 |                      | 4,3                  | 36950               | 18,35               | 64000                    |
|                             | 364,71  | 38109               | 37555 | 36823  | 30591  | 18876   | 15332   | 12453 |                      | 3,8                  | 37034               | 16,54               | 64000                    |
|                             | 381,30  | 38109               | 37035 | 34764  | 30591  | 18876   | 15332   | 12453 |                      | 3,7                  | 35530               | 15,18               | 64000                    |
|                             | 423,53  | 37273               | 36713 | 30476  | 29018  | 18460   | 14994   | 12179 |                      | 3,3                  | 33870               | 13,03               | 64000                    |
|                             | 442,80  | 37273               | 36713 | 30476  | 29018  | 18460   | 14994   | 12179 |                      | 3,2                  | 34196               | 12,58               | 64000                    |
|                             | 500,00  | 37273               | 36713 | 30476  | 29018  | 18460   | 14994   | 12179 |                      | 2,8                  | 35086               | 11,43               | 64000                    |
|                             | 540,31  | 38109               | 37555 | 36823  | 30591  | 18876   | 15332   | 12453 |                      | 2,6                  | 37349               | 11,26               | 64000                    |
|                             | 628,10  | 38109               | 37035 | 34764  | 30591  | 18876   | 15332   | 12453 |                      | 2,2                  | 36767               | 9,53                | 64000                    |
|                             | 729,41  | 37273               | 36713 | 30476  | 29018  | 18460   | 14994   | 12179 |                      | 1,9                  | 36746               | 8,21                | 64000                    |
|                             | 826,67  | 37273               | 36713 | 30476  | 29018  | 18460   | 14994   | 12179 |                      | 1,7                  | 36874               | 7,27                | 64000                    |
|                             | 893,30  | 38109               | 37555 | 36823  | 30591  | 18876   | 15332   | 12453 |                      | 1,6                  | 37750               | 6,88                | 64000                    |
|                             | 1038,47 | 38109               | 37035 | 34764  | 30591  | 18876   | 15332   | 12453 |                      | 1,3                  | 37871               | 5,94                | 64000                    |
|                             | 1205,96 | 37273               | 36713 | 30476  | 29018  | 18460   | 14994   | 12179 |                      | 1,2                  | 37153               | 5,02                | 64000                    |
|                             | 1458,82 | 33486               | 32017 | 30075  | 28606  | 18460   | 14994   | 12179 |                      | 1,0                  | 33574               | 3,75                | 64000                    |
|                             | 1762,75 | 31688               | 27858 | 22377  | 21320  | 18287   | 14854   | 12065 |                      | 0,8                  | 32961               | 3,05                | 64000                    |

**B**

| P <sub>EN</sub> | PH   | FS<br>FP | H<br>HU | T    |
|-----------------|------|----------|---------|------|
| <b>3003</b>     | 26,6 | 21,1     | 22,1    | 31,3 |
| <b>3004</b>     | 21,6 | 15,8     | 16,5    | 23,3 |



## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX<br>   | n <sub>2</sub> X h         |       |       |       |       |        |        |         | n <sub>1</sub> [rpm] | 10000<br>ЧАСОВ |                      |                     | T <sub>max</sub><br>[Nm] |
|----------|----------------------------|-------|-------|-------|-------|--------|--------|---------|----------------------|----------------|----------------------|---------------------|--------------------------|
|          | Stadio<br>Stage<br>Ступени | ir    | 10000 | 20000 | 50000 | 100000 | 500000 | 1000000 |                      | 2000000        | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] |                          |
| <b>1</b> | 4,04                       | 42343 | 38760 | 38114 | 37626 | 25123  | 20406  | 16575   | 1400                 | 346            | 14059                | 520,10              | 75000                    |
|          | 5,12                       | 39959 | 39259 | 38332 | 37632 | 24631  | 20007  | 16250   |                      | 274            | 14793                | 432,40              | 72000                    |
|          | 6,00                       | 37308 | 36685 | 35861 | 35238 | 24141  | 19609  | 15927   |                      | 233            | 15208                | 379,15              | 70000                    |
|          | 7,36                       | 36233 | 33413 | 31612 | 28709 | 22987  | 19414  | 15769   |                      | 190            | 16010                | 325,24              | 55000                    |
| <b>2</b> | 14,15                      | 39238 | 38598 | 37752 | 31385 | 19366  | 15730  | 12777   | 1400                 | 99             | 15781                | 170,28              | 75000                    |
|          | 17,91                      | 39959 | 39259 | 38332 | 37012 | 22838  | 18550  | 15067   |                      | 78             | 19973                | 170,28              | 72000                    |
|          | 21,11                      | 39959 | 39259 | 38332 | 36712 | 22652  | 18399  | 14945   |                      | 66             | 20812                | 150,55              | 72000                    |
|          | 26,44                      | 39959 | 39259 | 38332 | 35685 | 22019  | 17885  | 14527   |                      | 53             | 21644                | 125,00              | 72000                    |
|          | 30,71                      | 39959 | 39259 | 32951 | 31365 | 21534  | 17491  | 14207   |                      | 46             | 22139                | 110,10              | 72000                    |
|          | 36,00                      | 37308 | 37308 | 37308 | 36347 | 24071  | 19551  | 15881   |                      | 39             | 25956                | 110,10              | 70000                    |
|          | 43,50                      | 37308 | 33808 | 28058 | 26711 | 23582  | 19368  | 15732   |                      | 32             | 24438                | 85,79               | 70000                    |
| 53,39    | 36233                      | 33413 | 31612 | 28709 | 22987 | 19414  | 15769  | 26      | 23971                | 68,57          | 55000                |                     |                          |
| <b>3</b> | 50,95                      | 39238 | 38598 | 37752 | 31385 | 19366  | 15730  | 12777   | 1400                 | 27             | 23175                | 70,94               | 75000                    |
|          | 64,48                      | 39959 | 39259 | 38332 | 37012 | 22838  | 18550  | 15067   |                      | 22             | 29332                | 70,94               | 72000                    |
|          | 76,13                      | 39959 | 39259 | 38332 | 37012 | 22838  | 18550  | 15067   |                      | 18             | 30829                | 63,16               | 72000                    |
|          | 89,72                      | 39959 | 39259 | 38332 | 36712 | 22652  | 18399  | 14945   |                      | 16             | 32124                | 55,84               | 72000                    |
|          | 95,53                      | 39959 | 39259 | 38332 | 37012 | 22838  | 18550  | 15067   |                      | 15             | 33003                | 53,88               | 72000                    |
|          | 112,59                     | 39959 | 39259 | 38332 | 36712 | 22652  | 18399  | 14945   |                      | 12             | 34389                | 47,63               | 72000                    |
|          | 130,88                     | 39959 | 39259 | 38332 | 36712 | 22652  | 18399  | 14945   |                      | 11             | 35978                | 42,87               | 72000                    |
|          | 158,33                     | 39959 | 39259 | 38332 | 36712 | 22652  | 18399  | 14945   |                      | 8,8            | 37756                | 37,19               | 72000                    |
|          | 163,94                     | 39959 | 39259 | 38332 | 35685 | 22019  | 17885  | 14527   |                      | 8,5            | 37416                | 35,59               | 72000                    |
|          | 190,38                     | 39959 | 39259 | 32951 | 31365 | 21534  | 17491  | 14207   |                      | 7,4            | 32069                | 26,27               | 72000                    |
|          | 198,31                     | 39959 | 39259 | 38332 | 35685 | 22019  | 17885  | 14527   |                      | 7,1            | 37984                | 29,87               | 72000                    |
|          | 230,29                     | 39959 | 39259 | 32951 | 31365 | 21534  | 17491  | 14207   |                      | 6,1            | 32504                | 22,01               | 72000                    |
|          | 270,00                     | 32406 | 32406 | 32406 | 32406 | 24071  | 19551  | 15881   |                      | 5,2            | 32406                | 18,72               | 70000                    |
| 284,73   | 36233                      | 33413 | 31612 | 28709 | 22987 | 19414  | 15769  | 4,9     | 31686                | 17,36          | 55000                |                     |                          |
| 331,00   | 36233                      | 33413 | 31612 | 28709 | 22987 | 19414  | 15769  | 4,2     | 32356                | 15,25          | 55000                |                     |                          |
| <b>4</b> | 209,31                     | 39238 | 38598 | 37752 | 31385 | 19366  | 15730  | 12777   | 1400                 | 6,7            | 32191                | 24,51               | 75000                    |
|          | 224,40                     | 39959 | 39259 | 38332 | 37012 | 22838  | 18550  | 15067   |                      | 6,2            | 38109                | 27,06               | 72000                    |
|          | 264,92                     | 39959 | 39259 | 38332 | 37012 | 22838  | 18550  | 15067   |                      | 5,3            | 38276                | 23,02               | 72000                    |
|          | 312,22                     | 39959 | 39259 | 38332 | 36712 | 22652  | 18399  | 14945   |                      | 4,5            | 38442                | 19,62               | 72000                    |
|          | 324,53                     | 39959 | 39259 | 38332 | 37012 | 22838  | 18550  | 15067   |                      | 4,3            | 38482                | 18,89               | 72000                    |
|          | 372,01                     | 39959 | 39259 | 38332 | 37012 | 22838  | 18550  | 15067   |                      | 3,8            | 38620                | 16,54               | 72000                    |
|          | 382,49                     | 39959 | 39259 | 38332 | 36712 | 22652  | 18399  | 14945   |                      | 3,7            | 38648                | 16,10               | 72000                    |
|          | 391,81                     | 39959 | 39259 | 38332 | 36712 | 22652  | 18399  | 14945   |                      | 3,6            | 38672                | 15,73               | 72000                    |
|          | 439,18                     | 39959 | 39259 | 38332 | 37012 | 22838  | 18550  | 15067   |                      | 3,2            | 38787                | 14,07               | 72000                    |
|          | 455,48                     | 39959 | 39259 | 38332 | 36712 | 22652  | 18399  | 14945   |                      | 3,1            | 38824                | 13,58               | 72000                    |
|          | 517,61                     | 39959 | 39259 | 38332 | 36712 | 22652  | 18399  | 14945   |                      | 2,7            | 38953                | 11,99               | 72000                    |
|          | 548,10                     | 39959 | 39259 | 38332 | 37012 | 22838  | 18550  | 15067   |                      | 2,6            | 39011                | 11,34               | 72000                    |
|          | 649,55                     | 39959 | 39259 | 38332 | 36712 | 22652  | 18399  | 14945   |                      | 2,2            | 39183                | 9,61                | 72000                    |
|          | 698,88                     | 39959 | 39259 | 38332 | 35685 | 22019  | 17885  | 14527   |                      | 2,0            | 39257                | 8,95                | 72000                    |
|          | 755,10                     | 39959 | 39259 | 38332 | 36712 | 22652  | 18399  | 14945   |                      | 1,9            | 39335                | 8,30                | 72000                    |
|          | 810,64                     | 39959 | 39259 | 38332 | 36712 | 22652  | 18399  | 14945   |                      | 1,7            | 39407                | 7,75                | 72000                    |
|          | 913,43                     | 39959 | 39259 | 38332 | 36712 | 22652  | 18399  | 14945   |                      | 1,5            | 39528                | 6,90                | 72000                    |
|          | 1098,33                    | 39959 | 39259 | 32951 | 31365 | 21534  | 17491  | 14207   |                      | 1,3            | 39714                | 5,76                | 72000                    |
|          | 1328,62                    | 39959 | 39259 | 32951 | 31365 | 21534  | 17491  | 14207   |                      | 1,1            | 39907                | 4,79                | 72000                    |
|          | 1427,82                    | 39959 | 39259 | 38332 | 35685 | 22019  | 17885  | 14527   |                      | 1,0            | 39979                | 4,46                | 72000                    |
| 1658,12  | 39959                      | 39259 | 32951 | 31365 | 21534 | 17491  | 14207  | 0,8     | 40610                | 3,90           | 72000                |                     |                          |
| 1944,00  | 32406                      | 32406 | 32406 | 32406 | 24071 | 19551  | 15881  | 0,7     | 37308                | 3,06           | 70000                |                     |                          |
| 2383,17  | 36233                      | 33413 | 31612 | 28709 | 22987 | 19414  | 15769  | 0,6     | 38672                | 2,59           | 55000                |                     |                          |
| 2882,86  | 36233                      | 33413 | 31612 | 28709 | 22987 | 19414  | 15769  | 0,5     | 39545                | 2,19           | 55000                |                     |                          |

| P <sub>TN</sub> | PS<br>PSB | S-SB-SU<br>FS-FSB |
|-----------------|-----------|-------------------|
| <b>3501</b>     | 91,3      | 47,9              |
| <b>3502</b>     | 47,4      | 31,1              |
| <b>3503</b>     | 34,7      | 23,8              |
| <b>3504</b>     | 27,6      | 19,5              |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

|                      |         | n <sub>2</sub> X h  |       |       |        |        |         |         | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|----------------------|---------|---------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|-----------------------|
|                      |         | T <sub>N</sub> [Nm] |       |       |        |        |         |         | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| Stadio Stage Ступени | ir      | 10000               | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 |                      |                      |                     |                     |                       |
| <b>3</b>             | 35,80   | 39238               | 38598 | 37752 | 31385  | 19366  | 15730   | 12777   | 1400                 | 39                   | 20847               | 93,82               | 75000                 |
|                      | 53,40   | 39959               | 39259 | 38332 | 36712  | 22652  | 18399   | 14945   |                      | 26                   | 27493               | 82,95               | 72000                 |
|                      | 66,88   | 39959               | 39259 | 38332 | 35685  | 22019  | 17885   | 14527   |                      | 21                   | 28592               | 68,87               | 72000                 |
|                      | 77,67   | 39959               | 39259 | 32951 | 31365  | 21534  | 17491   | 14207   |                      | 18                   | 29245               | 60,66               | 72000                 |
|                      | 87,96   | 39959               | 39259 | 38332 | 36712  | 22652  | 18399   | 14945   |                      | 16                   | 31394               | 57,50               | 72000                 |
|                      | 110,17  | 39959               | 39259 | 38332 | 35685  | 22019  | 17885   | 14527   |                      | 13                   | 33210               | 48,56               | 72000                 |
|                      | 127,94  | 39959               | 39259 | 32951 | 31365  | 21534  | 17491   | 14207   |                      | 11                   | 31159               | 39,23               | 72000                 |
|                      | 145,43  | 39959               | 39259 | 38332 | 36712  | 22652  | 18399   | 14945   |                      | 10                   | 37133               | 41,13               | 72000                 |
|                      | 182,15  | 39959               | 39259 | 38332 | 35685  | 22019  | 17885   | 14527   |                      | 8                    | 37898               | 33,52               | 72000                 |
|                      | 211,53  | 39959               | 39259 | 32951 | 31365  | 21534  | 17491   | 14207   |                      | 7                    | 32310               | 24,61               | 72000                 |
|                      | 248,00  | 37308               | 37308 | 37308 | 36347  | 24071  | 19551   | 15881   |                      | 5,6                  | 32406               | 21,05               | 70000                 |
|                      | 299,67  | 37308               | 33808 | 28058 | 26711  | 23582  | 19368   | 15732   |                      | 4,7                  | 28190               | 15,15               | 70000                 |
|                      | 367,77  | 36233               | 33413 | 31612 | 28709  | 22987  | 19414   | 15769   |                      | 3,8                  | 32834               | 14,38               | 55000                 |
| <b>4</b>             | 128,87  | 39238               | 38598 | 37752 | 31385  | 19366  | 15730   | 12777   | 1400                 | 10,9                 | 30615               | 38,70               | 75000                 |
|                      | 163,10  | 39959               | 39259 | 38332 | 37012  | 22838  | 18550   | 15067   |                      | 8,6                  | 37786               | 37,74               | 72000                 |
|                      | 192,55  | 39959               | 39259 | 38332 | 37012  | 22838  | 18550   | 15067   |                      | 7,3                  | 37954               | 32,11               | 72000                 |
|                      | 226,94  | 39959               | 39259 | 38332 | 36712  | 22652  | 18399   | 14945   |                      | 6,2                  | 38120               | 27,36               | 72000                 |
|                      | 241,63  | 39959               | 39259 | 38332 | 37012  | 22838  | 18550   | 15067   |                      | 5,8                  | 38183               | 25,74               | 72000                 |
|                      | 331,06  | 39959               | 39259 | 38332 | 36712  | 22652  | 18399   | 14945   |                      | 4,2                  | 38502               | 18,94               | 72000                 |
|                      | 373,83  | 39959               | 39259 | 38332 | 36712  | 22652  | 18399   | 14945   |                      | 3,7                  | 38624               | 16,83               | 72000                 |
|                      | 414,66  | 39959               | 39259 | 38332 | 35685  | 22019  | 17885   | 14527   |                      | 3,4                  | 38729               | 15,21               | 72000                 |
|                      | 469,12  | 39959               | 39259 | 38332 | 36712  | 22652  | 18399   | 14945   |                      | 3,0                  | 38854               | 13,49               | 72000                 |
|                      | 501,60  | 39959               | 39259 | 38332 | 35685  | 22019  | 17885   | 14527   |                      | 2,8                  | 38922               | 12,64               | 72000                 |
|                      | 545,35  | 39959               | 39259 | 38332 | 36712  | 22652  | 18399   | 14945   |                      | 2,6                  | 39000               | 11,65               | 72000                 |
|                      | 659,70  | 39959               | 39259 | 38332 | 36712  | 22652  | 18399   | 14945   |                      | 2,1                  | 39200               | 9,68                | 72000                 |
|                      | 775,61  | 39959               | 39259 | 38332 | 36712  | 22652  | 18399   | 14945   |                      | 1,8                  | 39362               | 8,27                | 72000                 |
|                      | 826,29  | 39959               | 39259 | 38332 | 35685  | 22019  | 17885   | 14527   |                      | 1,7                  | 39426               | 7,77                | 72000                 |
|                      | 901,64  | 39959               | 39259 | 38332 | 36712  | 22652  | 18399   | 14945   |                      | 1,6                  | 39515               | 7,14                | 72000                 |
|                      | 1090,70 | 39959               | 39259 | 38332 | 36712  | 22652  | 18399   | 14945   |                      | 1,3                  | 39707               | 5,93                | 72000                 |
|                      | 1366,13 | 39959               | 39259 | 38332 | 35685  | 22019  | 17885   | 14527   |                      | 1,0                  | 39935               | 4,76                | 72000                 |
|                      | 1586,47 | 39959               | 39259 | 32951 | 31365  | 21534  | 17491   | 14207   |                      | 0,9                  | 40571               | 4,17                | 72000                 |
|                      | 1860,00 | 32406               | 32406 | 32406 | 32406  | 24071  | 19551   | 15881   |                      | 0,8                  | 32406               | 2,84                | 70000                 |
|                      | 1961,45 | 36233               | 33413 | 31612 | 28709  | 22987  | 19414   | 15769   |                      | 0,7                  | 37779               | 3,14                | 55000                 |
| 2280,19              | 36233   | 33413               | 31612 | 28709 | 22987  | 19414  | 15769   | 0,6     | 38470                | 2,75                 | 55000               |                     |                       |

**B**

| P <sub>EN</sub> | PS<br>PSB | S-SB-SU<br>FS-FSB |
|-----------------|-----------|-------------------|
| <b>3503</b>     | 28,3      | 21,0              |
| <b>3504</b>     | 24,3      | 18,4              |





## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX                         |         | n <sub>2</sub> X h |       |       |        |        |         |         | 10000<br>ЧАСОВ       |                      |                     |                     | T <sub>max</sub><br>[Nm] |
|----------------------------|---------|--------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|--------------------------|
| Stadio<br>Stage<br>Ступени | ir      | 10000              | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |
| <b>1</b>                   | 4,18    | 49268              | 46410 | 45531 | 44866  | 30452  | 24735   | 20091   | 1400                 | 335                  | 17214               | 615,76              | 85000                    |
|                            | 4,89    | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 286                  | 17686               | 541,16              | 82000                    |
|                            | 6,00    | 46515              | 42430 | 41734 | 41207  | 29427  | 23902   | 19415   |                      | 233                  | 18537               | 462,16              | 80000                    |
| <b>2</b>                   | 15,56   | 49268              | 46410 | 45531 | 44866  | 29832  | 24231   | 19682   | 1400                 | 90                   | 25009               | 245,50              | 85000                    |
|                            | 17,11   | 49268              | 46410 | 45531 | 44866  | 29711  | 24133   | 19602   |                      | 82                   | 25629               | 228,77              | 85000                    |
|                            | 20,00   | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 70                   | 26989               | 206,06              | 82000                    |
|                            | 21,95   | 49268              | 46410 | 45531 | 44866  | 28997  | 23553   | 19131   |                      | 64                   | 26957               | 187,50              | 85000                    |
|                            | 25,67   | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 55                   | 29086               | 173,05              | 82000                    |
|                            | 30,46   | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 46                   | 30619               | 153,50              | 82000                    |
|                            | 37,38   | 46515              | 42430 | 41734 | 41207  | 29427  | 23902   | 19415   |                      | 37                   | 32093               | 131,09              | 80000                    |
| <b>3</b>                   | 56,00   | 49268              | 46410 | 45531 | 42874  | 26455  | 21488   | 17454   | 1400                 | 25                   | 32570               | 90,70               | 85000                    |
|                            | 61,59   | 49268              | 46410 | 45531 | 44866  | 28275  | 22966   | 18654   |                      | 23                   | 35817               | 90,70               | 85000                    |
|                            | 72,00   | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 19                   | 39634               | 85,85               | 82000                    |
|                            | 79,04   | 49268              | 46410 | 45531 | 44866  | 28997  | 23553   | 19131   |                      | 18                   | 39588               | 78,11               | 85000                    |
|                            | 85,00   | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 16                   | 41658               | 76,43               | 82000                    |
|                            | 92,40   | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 15                   | 42714               | 72,09               | 82000                    |
|                            | 106,67  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 13                   | 44594               | 65,20               | 82000                    |
|                            | 109,66  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 13                   | 44843               | 63,77               | 82000                    |
|                            | 124,00  | 50202              | 46457 | 45659 | 45056  | 29839  | 24237   | 19687   |                      | 11                   | 44950               | 56,53               | 82000                    |
|                            | 136,89  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 10                   | 45036               | 51,31               | 82000                    |
|                            | 150,00  | 47225              | 45205 | 42534 | 40513  | 29483  | 23948   | 19452   |                      | 9,3                  | 40714               | 42,33               | 82000                    |
|                            | 159,13  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 8,8                  | 45167               | 44,26               | 82000                    |
|                            | 184,09  | 46515              | 42430 | 41734 | 41207  | 29427  | 23902   | 19415   |                      | 7,6                  | 41415               | 35,08               | 80000                    |
|                            | 192,50  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 7,3                  | 45333               | 36,73               | 82000                    |
|                            | 199,38  | 46515              | 42430 | 41734 | 41207  | 29427  | 23902   | 19415   |                      | 7,0                  | 41476               | 32,44               | 80000                    |
|                            | 228,46  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 6,1                  | 45482               | 31,05               | 82000                    |
|                            | 236,25  | 46515              | 42430 | 41734 | 41207  | 29427  | 23902   | 19415   |                      | 5,9                  | 41605               | 27,46               | 80000                    |
| 280,38                     | 46515   | 42430              | 41734 | 41207 | 29427  | 23902  | 19415   | 5,0     | 41735                | 23,21                | 80000               |                     |                          |
| <b>4</b>                   | 214,32  | 49268              | 46410 | 45531 | 44866  | 28275  | 22966   | 18654   | 1400                 | 6,5                  | 43000               | 31,97               | 85000                    |
|                            | 250,56  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 5,6                  | 43500               | 27,66               | 82000                    |
|                            | 295,80  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 4,7                  | 43500               | 23,43               | 82000                    |
|                            | 306,95  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 4,6                  | 43500               | 22,58               | 82000                    |
|                            | 321,55  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 4,4                  | 43500               | 21,56               | 82000                    |
|                            | 362,37  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 3,9                  | 44000               | 19,35               | 82000                    |
|                            | 415,38  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 3,4                  | 44000               | 16,88               | 82000                    |
|                            | 454,74  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 3,1                  | 44000               | 15,42               | 82000                    |
|                            | 518,40  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 2,7                  | 44100               | 13,56               | 82000                    |
|                            | 553,78  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 2,5                  | 44100               | 12,69               | 82000                    |
|                            | 611,92  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 2,3                  | 44200               | 11,51               | 82000                    |
|                            | 715,38  | 50202              | 46457 | 45659 | 45056  | 29839  | 24237   | 19687   |                      | 2,0                  | 44200               | 9,85                | 82000                    |
|                            | 820,66  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 1,7                  | 45000               | 8,74                | 82000                    |
|                            | 918,08  | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 1,5                  | 45000               | 7,81                | 82000                    |
|                            | 1007,17 | 46515              | 42430 | 41734 | 41207  | 29427  | 23902   | 19415   |                      | 1,4                  | 46000               | 7,28                | 80000                    |
|                            | 1110,58 | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 1,3                  | 46500               | 6,67                | 82000                    |
|                            | 1318,05 | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 1,1                  | 47500               | 5,74                | 82000                    |
|                            | 1386,00 | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 1,0                  | 48800               | 5,61                | 82000                    |
|                            | 1644,92 | 50202              | 46457 | 45659 | 45056  | 29855  | 24250   | 19697   |                      | 0,9                  | 48000               | 4,65                | 82000                    |
| 1701,00                    | 46515   | 42430              | 41734 | 41207 | 29427  | 23902  | 19415   | 0,8     | 45000                | 4,22                 | 80000               |                     |                          |
| 2018,77                    | 46515   | 42430              | 41734 | 41207 | 29427  | 23902  | 19415   | 0,7     | 46000                | 3,63                 | 80000               |                     |                          |

| P <sub>TN</sub> | PS<br>PSB | S-SB-SU<br>FS-FSB |
|-----------------|-----------|-------------------|
| <b>4201</b>     | 91,3      | 47,9              |
| <b>4202</b>     | 49,1      | 32,8              |
| <b>4203</b>     | 37,0      | 26,1              |
| <b>4204</b>     | 29,3      | 21,2              |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

| EXB                  |                | n <sub>2</sub> X h |       |       |                     |       |       |       | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|----------------------|----------------|--------------------|-------|-------|---------------------|-------|-------|-------|----------------------|----------------------|---------------------|---------------------|-----------------------|
| Stadio Stage Ступени | ir             | 10000              | 20000 | 50000 | T <sub>N</sub> [Nm] |       |       |       | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| <b>4</b>             | <b>141,65</b>  | 49268              | 46410 | 45531 | 42874               | 26455 | 21488 | 17454 | 1400                 | 9,9                  | 44878               | 51,60               | 85000                 |
|                      | <b>155,78</b>  | 49268              | 46410 | 45531 | 44866               | 28275 | 22966 | 18654 |                      | 9,0                  | 44968               | 47,02               | 85000                 |
|                      | <b>182,12</b>  | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 7,7                  | 45284               | 40,50               | 82000                 |
|                      | <b>199,92</b>  | 49268              | 46410 | 45531 | 44866               | 28997 | 23553 | 19131 |                      | 7,0                  | 45208               | 36,83               | 85000                 |
|                      | <b>233,72</b>  | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 6,0                  | 45502               | 31,71               | 82000                 |
|                      | <b>277,38</b>  | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 5,0                  | 45651               | 26,81               | 82000                 |
|                      | <b>313,65</b>  | 50202              | 46457 | 45659 | 45056               | 29839 | 24237 | 19687 |                      | 4,5                  | 45758               | 23,76               | 82000                 |
|                      | <b>346,25</b>  | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 4,0                  | 45844               | 21,57               | 82000                 |
|                      | <b>402,51</b>  | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 3,5                  | 45975               | 18,60               | 82000                 |
|                      | <b>456,92</b>  | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 3,1                  | 46086               | 16,43               | 82000                 |
|                      | <b>486,91</b>  | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 2,9                  | 46141               | 15,44               | 82000                 |
|                      | <b>577,87</b>  | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 2,4                  | 46290               | 13,05               | 82000                 |
|                      | <b>663,06</b>  | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 2,1                  | 46410               | 11,40               | 82000                 |
|                      | <b>755,45</b>  | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 1,9                  | 46523               | 10,03               | 82000                 |
|                      | <b>802,08</b>  | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 1,7                  | 46576               | 9,46                | 82000                 |
|                      | <b>943,01</b>  | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 1,5                  | 48623               | 8,40                | 82000                 |
|                      | <b>1096,25</b> | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 1,3                  | 48582               | 7,22                | 82000                 |
|                      | <b>1326,11</b> | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 1,1                  | 49776               | 6,11                | 82000                 |
|                      | <b>1573,85</b> | 50202              | 46457 | 45659 | 45056               | 29855 | 24250 | 19697 |                      | 0,9                  | 51122               | 5,29                | 82000                 |
|                      | <b>1931,54</b> | 46515              | 42430 | 41734 | 41207               | 29427 | 23902 | 19415 |                      | 0,7                  | 47973               | 4,05                | 80000                 |

**B**

|                       |               |                       |
|-----------------------|---------------|-----------------------|
| <b>P<sub>TN</sub></b> | <b>PS PSB</b> | <b>S-SB-SU FS-FSB</b> |
| <b>4204</b>           | 25.5          | 19.6                  |

## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX                         |         | n <sub>2</sub> X h |       |       |        |        |         |         | 10000<br>ЧАСОВ       |                      |                     |                     | T <sub>max</sub><br>[Nm] |
|----------------------------|---------|--------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|--------------------------|
| Stadio<br>Stage<br>Ступени | ir      | 10000              | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |
| <b>1</b>                   | 4,18    | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   | 1000                 | 335                  | 24318               | 869,89              | 120000                   |
|                            | 4,89    | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 286                  | 25165               | 769,99              | 117000                   |
|                            | 6,00    | 60279              | 57012 | 55884 | 55030  | 37694  | 30617   | 24869   |                      | 233                  | 26267               | 654,87              | 117000                   |
| <b>2</b>                   | 15,16   | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   | 1400                 | 92                   | 32351               | 325,88              | 120000                   |
|                            | 16,73   | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   |                      | 84                   | 33320               | 304,18              | 120000                   |
|                            | 19,56   | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 72                   | 34481               | 269,25              | 117000                   |
|                            | 21,75   | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   |                      | 64                   | 36049               | 253,15              | 120000                   |
|                            | 26,14   | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   |                      | 54                   | 38094               | 222,57              | 120000                   |
|                            | 30,56   | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 46                   | 39420               | 197,01              | 117000                   |
|                            | 37,50   | 60279              | 57012 | 55884 | 55030  | 37694  | 30617   | 24869   | 37                   | 41146                | 167,55              | 117000              |                          |
| <b>3</b>                   | 53,06   | 66723              | 62817 | 61580 | 51235  | 31614  | 25678   | 20857   | 1400                 | 26                   | 38296               | 112,57              | 120000                   |
|                            | 58,55   | 66723              | 62817 | 61580 | 54890  | 33869  | 27510   | 22345   |                      | 24                   | 42257               | 112,57              | 120000                   |
|                            | 68,44   | 67095              | 61932 | 60499 | 59747  | 37783  | 30689   | 24927   |                      | 20                   | 49402               | 112,57              | 117000                   |
|                            | 76,11   | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   |                      | 18                   | 52494               | 107,57              | 120000                   |
|                            | 80,67   | 67095              | 61932 | 60499 | 59747  | 37476  | 30440   | 24725   |                      | 17                   | 51477               | 99,52               | 117000                   |
|                            | 89,70   | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   |                      | 16                   | 55147               | 95,88               | 120000                   |
|                            | 99,00   | 60279              | 57012 | 55884 | 55030  | 37694  | 30617   | 24869   |                      | 14                   | 53083               | 83,62               | 117000                   |
|                            | 107,81  | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   |                      | 13                   | 58275               | 84,30               | 120000                   |
|                            | 126,04  | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 11                   | 59633               | 73,79               | 117000                   |
|                            | 135,04  | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   |                      | 10                   | 60595               | 69,98               | 120000                   |
|                            | 152,53  | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 9,2                  | 59840               | 61,18               | 117000                   |
|                            | 157,87  | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 8,9                  | 59877               | 59,15               | 117000                   |
|                            | 174,00  | 60279              | 57012 | 55884 | 55030  | 37694  | 30617   | 24869   |                      | 8,0                  | 55297               | 49,56               | 117000                   |
|                            | 184,31  | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 7,6                  | 60045               | 50,81               | 117000                   |
|                            | 189,49  | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   |                      | 7,4                  | 61053               | 50,25               | 120000                   |
|                            | 221,53  | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 6,3                  | 60245               | 42,41               | 117000                   |
| 271,88                     | 60279   | 57012              | 55884 | 55030 | 37694  | 30617  | 24869   | 5,1     | 55847                | 32,04                | 117000              |                     |                          |
| <b>4</b>                   | 246,40  | 67095              | 61932 | 60499 | 59747  | 37783  | 30689   | 24927   | 1400                 | 5,7                  | 60000               | 38,80               | 117000                   |
|                            | 273,99  | 67095              | 61932 | 60499 | 59747  | 37476  | 30440   | 24725   |                      | 5,1                  | 60500               | 35,18               | 117000                   |
|                            | 323,46  | 67095              | 61932 | 60499 | 59747  | 37476  | 30440   | 24725   |                      | 4,3                  | 61000               | 30,05               | 117000                   |
|                            | 365,04  | 67095              | 61932 | 60499 | 59747  | 37783  | 30689   | 24927   |                      | 3,8                  | 61000               | 26,63               | 117000                   |
|                            | 405,92  | 67095              | 61932 | 60499 | 59747  | 37476  | 30440   | 24725   |                      | 3,4                  | 61500               | 24,14               | 117000                   |
|                            | 453,75  | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 3,1                  | 61700               | 21,67               | 117000                   |
|                            | 535,68  | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 2,6                  | 61900               | 18,41               | 117000                   |
|                            | 573,91  | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   |                      | 2,4                  | 62500               | 17,35               | 118000                   |
|                            | 648,27  | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 2,2                  | 62000               | 15,24               | 117000                   |
|                            | 720,20  | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   |                      | 1,9                  | 63000               | 13,94               | 118000                   |
|                            | 805,33  | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   |                      | 1,7                  | 63500               | 12,56               | 118000                   |
|                            | 945,71  | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 1,5                  | 63500               | 10,70               | 117000                   |
|                            | 1010,61 | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   |                      | 1,4                  | 63500               | 10,01               | 118000                   |
|                            | 1144,00 | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 1,2                  | 64000               | 8,91                | 117000                   |
|                            | 1305,00 | 60279              | 57012 | 55884 | 55030  | 37694  | 30617   | 24869   |                      | 1,1                  | 60000               | 7,33                | 117000                   |
|                            | 1375,00 | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 1,0                  | 67000               | 7,76                | 117000                   |
|                            | 1421,16 | 66723              | 62817 | 61580 | 60644  | 38889  | 31588   | 25657   |                      | 1,0                  | 66800               | 7,49                | 118000                   |
|                            | 1661,46 | 67095              | 61932 | 60499 | 59747  | 38401  | 31191   | 25335   |                      | 0,8                  | 68000               | 6,52                | 117000                   |
|                            | 2039,06 | 60279              | 57012 | 55884 | 55030  | 37694  | 30617   | 24869   |                      | 0,7                  | 62000               | 4,85                | 117000                   |

| P <sub>IN</sub> | PS<br>PSB | S-SB-SU<br>FS-FSB |
|-----------------|-----------|-------------------|
| <b>6501</b>     | 117.0     | 65.2              |
| <b>6502</b>     | 64.3      | 44.9              |
| <b>6503</b>     | 48.8      | 35.8              |
| <b>6504</b>     | 38.6      | 28.8              |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

| EXB                  |                | n <sub>2</sub> X h |       |       |                     |       |       |       | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|----------------------|----------------|--------------------|-------|-------|---------------------|-------|-------|-------|----------------------|----------------------|---------------------|---------------------|-----------------------|
| Stadio Stage Ступени | ir             | 10000              | 20000 | 50000 | T <sub>N</sub> [Nm] |       |       |       | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| <b>4</b>             | <b>134,20</b>  | 66723              | 62817 | 61580 | 51235               | 31614 | 25678 | 20857 | 1400                 | 10,4                 | 50589               | 61,40               | 120000                |
|                      | <b>148,09</b>  | 66723              | 62817 | 61580 | 54890               | 33869 | 27510 | 22345 |                      | 9,5                  | 55822               | 61,40               | 120000                |
|                      | <b>173,12</b>  | 67095              | 61932 | 60499 | 59747               | 37783 | 30689 | 24927 |                      | 8,1                  | 59977               | 56,43               | 117000                |
|                      | <b>192,51</b>  | 66723              | 62817 | 61580 | 60644               | 38889 | 31588 | 25657 |                      | 7,3                  | 61074               | 51,68               | 120000                |
|                      | <b>226,89</b>  | 66723              | 62817 | 61580 | 60644               | 38889 | 31588 | 25657 |                      | 6,2                  | 61296               | 44,01               | 120000                |
|                      | <b>272,70</b>  | 66723              | 62817 | 61580 | 60644               | 38889 | 31588 | 25657 |                      | 5,1                  | 61544               | 36,76               | 120000                |
|                      | <b>318,81</b>  | 67095              | 61932 | 60499 | 59747               | 38401 | 31191 | 25335 |                      | 4,4                  | 60640               | 30,98               | 117000                |
|                      | <b>341,57</b>  | 66723              | 62817 | 61580 | 60644               | 38889 | 31588 | 25657 |                      | 4,1                  | 61848               | 29,49               | 120000                |
|                      | <b>399,32</b>  | 67095              | 61932 | 60499 | 59747               | 38401 | 31191 | 25335 |                      | 3,5                  | 60884               | 24,84               | 117000                |
|                      | <b>466,20</b>  | 67095              | 61932 | 60499 | 59747               | 38401 | 31191 | 25335 |                      | 3,0                  | 61052               | 21,33               | 117000                |
|                      | <b>525,17</b>  | 67095              | 61932 | 60499 | 59747               | 38401 | 31191 | 25335 |                      | 2,7                  | 61181               | 18,98               | 117000                |
|                      | <b>560,33</b>  | 67095              | 61932 | 60499 | 59747               | 38401 | 31191 | 25335 |                      | 2,5                  | 61273               | 17,81               | 117000                |
|                      | <b>657,79</b>  | 67095              | 61932 | 60499 | 59747               | 38401 | 31191 | 25335 |                      | 2,1                  | 61640               | 15,26               | 117000                |
|                      | <b>767,96</b>  | 67095              | 61932 | 60499 | 59747               | 38401 | 31191 | 25335 |                      | 1,8                  | 62472               | 13,25               | 117000                |
|                      | <b>923,03</b>  | 67095              | 61932 | 60499 | 59747               | 38401 | 31191 | 25335 |                      | 1,5                  | 63787               | 11,26               | 117000                |
|                      | <b>1087,55</b> | 67095              | 61932 | 60499 | 59747               | 38401 | 31191 | 25335 |                      | 1,3                  | 65087               | 9,75                | 117000                |
|                      | <b>1269,70</b> | 67095              | 61932 | 60499 | 59747               | 38401 | 31191 | 25335 |                      | 1,1                  | 66329               | 8,51                | 117000                |
|                      | <b>1526,08</b> | 67095              | 61932 | 60499 | 59747               | 38401 | 31191 | 25335 |                      | 0,9                  | 67751               | 7,23                | 117000                |
|                      | <b>1872,92</b> | 60279              | 57012 | 55884 | 55030               | 37694 | 30617 | 24869 |                      | 0,7                  | 61963               | 5,39                | 117000                |

**B**

|                       |                   |                           |
|-----------------------|-------------------|---------------------------|
| <b>P<sub>tN</sub></b> | <b>PS<br/>PSB</b> | <b>S-SB-SU<br/>FS-FSB</b> |
| <b>6504</b>           | 32.2              | 25.2                      |



## 1.2 Prestazioni

## 1.2 Performances

## 1.2 Характеристики

| EX                         |         | n <sub>2</sub> X h |       |       |        |        |         |         | 10000<br>ЧАСОВ       |                      |                     |                     | T <sub>max</sub><br>[Nm] |
|----------------------------|---------|--------------------|-------|-------|--------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|--------------------------|
| Stadio<br>Stage<br>Ступени | ir      | 10000              | 20000 | 50000 | 100000 | 500000 | 1000000 | 2000000 | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                          |
| <b>1</b>                   | 4,18    | 88361              | 82056 | 80656 | 79597  | 53235  | 43240   | 35122   | 1000                 | 335                  | 33289               | 1190,77             | 170000                   |
|                            | 4,89    | 89324              | 82360 | 79855 | 78791  | 52013  | 42248   | 34316   |                      | 286                  | 34085               | 1042,93             | 160000                   |
|                            | 6,00    | 82807              | 75822 | 72518 | 65903  | 50855  | 41307   | 33552   |                      | 233                  | 35686               | 889,71              | 150000                   |
| <b>2</b>                   | 14,72   | 88361              | 82056 | 80656 | 79597  | 53235  | 43240   | 35122   | 1400                 | 95                   | 43895               | 455,37              | 170000                   |
|                            | 16,73   | 88361              | 82056 | 80656 | 79597  | 53235  | 43240   | 35122   |                      | 84                   | 45611               | 416,39              | 170000                   |
|                            | 19,70   | 88361              | 82056 | 80656 | 79597  | 53235  | 43240   | 35122   |                      | 71                   | 47903               | 371,39              | 170000                   |
|                            | 23,03   | 89324              | 82360 | 79855 | 78791  | 52013  | 42248   | 34316   |                      | 61                   | 49050               | 325,28              | 160000                   |
|                            | 28,26   | 82807              | 75822 | 72518 | 65903  | 50855  | 41307   | 33552   |                      | 50                   | 50997               | 275,56              | 150000                   |
| <b>3</b>                   | 51,52   | 88361              | 82056 | 80656 | 68800  | 42452  | 34482   | 28008   | 1400                 | 27                   | 50973               | 154,30              | 170000                   |
|                            | 58,55   | 88361              | 82056 | 80656 | 75240  | 46426  | 37710   | 30630   |                      | 24                   | 57924               | 154,30              | 170000                   |
|                            | 68,94   | 88361              | 82056 | 80656 | 79597  | 52052  | 42279   | 34341   |                      | 20                   | 68206               | 154,30              | 170000                   |
|                            | 81,25   | 88361              | 82056 | 80656 | 79597  | 51629  | 41936   | 34062   |                      | 17                   | 71070               | 136,42              | 170000                   |
|                            | 86,42   | 88361              | 82056 | 80656 | 72543  | 44761  | 36358   | 29532   |                      | 16                   | 62769               | 113,27              | 170000                   |
|                            | 94,99   | 89324              | 82360 | 79855 | 78791  | 52013  | 42248   | 34316   |                      | 15                   | 75035               | 123,20              | 160000                   |
|                            | 101,76  | 88361              | 82056 | 80656 | 79597  | 50185  | 40763   | 33110   |                      | 14                   | 73911               | 113,27              | 170000                   |
|                            | 118,97  | 89324              | 82360 | 79855 | 78791  | 52013  | 42248   | 34316   |                      | 12                   | 78541               | 102,96              | 160000                   |
|                            | 142,80  | 88361              | 82056 | 80656 | 78176  | 48621  | 39492   | 32078   |                      | 10                   | 78299               | 85,51               | 170000                   |
|                            | 166,94  | 89324              | 82360 | 79855 | 78791  | 52013  | 42248   | 34316   |                      | 8,4                  | 79061               | 73,86               | 160000                   |
|                            | 174,00  | 82807              | 75822 | 72518 | 65903  | 50855  | 41307   | 33552   |                      | 8,0                  | 67910               | 60,87               | 150000                   |
|                            | 204,89  | 82807              | 75822 | 72518 | 65903  | 50855  | 41307   | 33552   |                      | 6,8                  | 69459               | 52,87               | 150000                   |
| <b>4</b>                   | 248,17  | 88361              | 82056 | 80656 | 79597  | 52052  | 42279   | 34341   | 1400                 | 5,6                  | 81500               | 52,33               | 170000                   |
|                            | 292,49  | 88361              | 82056 | 80656 | 79597  | 51629  | 41936   | 34062   |                      | 4,8                  | 81000               | 44,13               | 170000                   |
|                            | 341,95  | 89324              | 82360 | 79855 | 78791  | 52013  | 42248   | 34316   |                      | 4,1                  | 81000               | 37,75               | 160000                   |
|                            | 367,67  | 88361              | 82056 | 80656 | 79597  | 52052  | 42279   | 34341   |                      | 3,8                  | 81000               | 35,11               | 170000                   |
|                            | 403,69  | 89324              | 82360 | 79855 | 78791  | 52013  | 42248   | 34316   |                      | 3,5                  | 81000               | 31,97               | 160000                   |
|                            | 433,32  | 88361              | 82056 | 80656 | 79597  | 51629  | 41936   | 34062   |                      | 3,2                  | 81000               | 29,79               | 170000                   |
|                            | 505,63  | 89324              | 82360 | 79855 | 78791  | 52013  | 42248   | 34316   |                      | 2,8                  | 81000               | 25,53               | 160000                   |
|                            | 542,74  | 88361              | 82056 | 80656 | 79597  | 50185  | 40763   | 33110   |                      | 2,6                  | 82000               | 24,07               | 170000                   |
|                            | 609,36  | 88361              | 82056 | 80656 | 79597  | 51629  | 41936   | 34062   |                      | 2,3                  | 82000               | 21,44               | 170000                   |
|                            | 634,51  | 89324              | 82360 | 79855 | 78791  | 52013  | 42248   | 34316   |                      | 2,2                  | 82000               | 20,59               | 160000                   |
|                            | 737,62  | 89324              | 82360 | 79855 | 78791  | 52013  | 42248   | 34316   |                      | 1,9                  | 83000               | 17,93               | 160000                   |
|                            | 763,23  | 88361              | 82056 | 80656 | 79597  | 50185  | 40763   | 33110   |                      | 1,8                  | 84000               | 17,54               | 170000                   |
|                            | 892,28  | 89324              | 82360 | 79855 | 78791  | 52013  | 42248   | 34316   |                      | 1,6                  | 85000               | 15,18               | 160000                   |
|                            | 928,00  | 82807              | 75822 | 72518 | 65903  | 50855  | 41307   | 33552   |                      | 1,5                  | 82000               | 14,08               | 150000                   |
|                            | 1070,99 | 88361              | 82056 | 80656 | 78176  | 48621  | 39492   | 32078   |                      | 1,3                  | 86000               | 12,80               | 170000                   |
|                            | 1252,08 | 89324              | 82360 | 79855 | 78791  | 52013  | 42248   | 34316   |                      | 1,1                  | 88000               | 11,20               | 160000                   |
|                            | 1305,00 | 82807              | 82056 | 72518 | 65903  | 50855  | 41307   | 33552   |                      | 1,1                  | 82500               | 10,07               | 150000                   |
|                            | 1536,64 | 82807              | 75822 | 72518 | 65903  | 50855  | 41307   | 33552   |                      | 0,9                  | 83000               | 8,61                | 150000                   |

| P <sub>EN</sub> | PS<br>PSB | S-SB-SU<br>FS-FSB |
|-----------------|-----------|-------------------|
| <b>8501</b>     | 159.9     | 80.1              |
| <b>8502</b>     | 80.1      | 50.2              |
| <b>8503</b>     | 59.8      | 39.9              |
| <b>8504</b>     | 47.2      | 32.2              |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

| EXB                  |                | n <sub>2</sub> X h |       |       |                     |       |       |       | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|----------------------|----------------|--------------------|-------|-------|---------------------|-------|-------|-------|----------------------|----------------------|---------------------|---------------------|-----------------------|
| Stadio Stage Ступени | ir             | 10000              | 20000 | 50000 | T <sub>N</sub> [Nm] |       |       |       | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
| <b>4</b>             | <b>130,32</b>  | 88361              | 82056 | 80656 | 68800               | 42452 | 34482 | 28008 | 1400                 | 10,7                 | 67336               | 84,17               | 170000                |
|                      | <b>148,09</b>  | 88361              | 82056 | 80656 | 75240               | 46426 | 37710 | 30630 |                      | 9,5                  | 76519               | 84,17               | 170000                |
|                      | <b>174,37</b>  | 88361              | 82056 | 80656 | 79597               | 52052 | 42279 | 34341 |                      | 8,0                  | 79933               | 74,67               | 170000                |
|                      | <b>205,51</b>  | 88361              | 82056 | 80656 | 79597               | 51629 | 41936 | 34062 |                      | 6,8                  | 80184               | 63,55               | 170000                |
|                      | <b>240,26</b>  | 89324              | 82360 | 79855 | 78791               | 52013 | 42248 | 34316 |                      | 5,8                  | 79620               | 53,98               | 160000                |
|                      | <b>300,93</b>  | 89324              | 82360 | 79855 | 78791               | 52013 | 42248 | 34316 |                      | 4,7                  | 79965               | 43,28               | 160000                |
|                      | <b>361,20</b>  | 88361              | 82056 | 80656 | 78176               | 48621 | 39492 | 32078 |                      | 3,9                  | 81045               | 36,55               | 170000                |
|                      | <b>422,27</b>  | 89324              | 82360 | 79855 | 78791               | 52013 | 42248 | 34316 |                      | 3,3                  | 80465               | 31,04               | 160000                |
|                      | <b>495,71</b>  | 89324              | 82360 | 79855 | 78791               | 52013 | 42248 | 34316 |                      | 2,8                  | 80731               | 26,53               | 160000                |
|                      | <b>594,99</b>  | 88361              | 82056 | 80656 | 78176               | 48621 | 39492 | 32078 |                      | 2,4                  | 81808               | 22,40               | 170000                |
|                      | <b>654,34</b>  | 89324              | 82360 | 79855 | 78791               | 52013 | 42248 | 34316 |                      | 2,1                  | 81796               | 20,36               | 160000                |
|                      | <b>695,60</b>  | 89324              | 82360 | 79855 | 78791               | 52013 | 42248 | 34316 |                      | 2,0                  | 82305               | 19,27               | 160000                |
|                      | <b>819,58</b>  | 89324              | 82360 | 79855 | 78791               | 52013 | 42248 | 34316 |                      | 1,7                  | 83863               | 16,67               | 160000                |
|                      | <b>853,69</b>  | 82807              | 75822 | 72518 | 65903               | 50855 | 41307 | 33552 |                      | 1,6                  | 76132               | 14,53               | 150000                |
|                      | <b>983,72</b>  | 88361              | 82056 | 80656 | 78176               | 48621 | 39492 | 32078 |                      | 1,4                  | 82576               | 13,67               | 170000                |
|                      | <b>1150,05</b> | 89324              | 82360 | 79855 | 78791               | 52013 | 42248 | 34316 |                      | 1,2                  | 87375               | 12,38               | 160000                |
|                      | <b>1411,43</b> | 82807              | 75822 | 72518 | 65903               | 50855 | 41307 | 33552 |                      | 1,0                  | 83035               | 9,58                | 150000                |

**B**


| P <sub>TN</sub> | PS<br>PSB | S-SB-SU<br>FS-FSB |
|-----------------|-----------|-------------------|
| <b>8504</b>     | 38.5      | 27.6              |



**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**


| EX  |         | n <sub>2</sub> X h |        |        |                     |       |       |       | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|--|---------|--------------------|--------|--------|---------------------|-------|-------|-------|----------------------|----------------------|---------------------|---------------------|-----------------------|-----|--------|---------|--------|-----|--------|---------|--------|-----|--------|--------|--------|-----|--------|--------|--------|-----|--------|--------|--------|-----|--------|--------|--------|-----|--------|--------|--------|-----|--------|--------|--------|-----|--------|-------|--------|-----|--------|-------|--------|-----|--------|-------|--------|-----|--------|-------|--------|-----|--------|-------|--------|-----|--------|-------|--------|------|--------|-------|--------|------|--------|-------|--------|
| Stadio Stage<br>Ступени  | ir      | 10000              | 20000  | 50000  | T <sub>N</sub> [Nm] |       |       |       | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
| <b>1</b>   | 4,18    | 121725             | 112859 | 110881 | 109386              | 84857 | 68926 | 55985 | 500                  | 335                  | 65328               | 2336,86             | 270000                |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 4,89    | 127834             | 118564 | 114734 | 113239              | 83351 | 67702 | 54991 |                      |                      |                     |                     |                       | 286 | 67247  | 2057,60 | 250000 |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 6,00    | 93419              | 85995  | 84359  | 83122               | 73747 | 66640 | 54129 |                      |                      |                     |                     |                       |     |        |         |        | 233 | 70387  | 1754,85 | 200000 |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
| <b>2</b>   | 16,91   | 121725             | 112859 | 110881 | 109386              | 69788 | 56685 | 46043 | 1000                 | 83                   | 66360               | 599,29              | 270000                |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 19,77   | 127834             | 118564 | 114734 | 113239              | 77852 | 63235 | 51363 |                      |                      |                     |                     |                       | 71  | 77580  | 599,29  | 250000 |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 25,02   | 127834             | 118564 | 114734 | 113239              | 76328 | 61997 | 50358 |                      |                      |                     |                     |                       |     |        |         |        | 56  | 81631  | 498,23  | 250000 |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 29,33   | 127834             | 118564 | 114734 | 113239              | 74811 | 60765 | 49357 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        | 48  | 83920  | 436,87 | 250000 |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 36,00   | 127834             | 118564 | 114734 | 109842              | 74066 | 60160 | 48865 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        | 39  | 88349  | 374,76 | 250000 |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 44,18   | 93419              | 85995  | 84359  | 83122               | 73747 | 69433 | 56397 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        | 32  | 77089  | 266,44 | 200000 |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
| <b>3</b>   | 59,18   | 121725             | 112859 | 107336 | 87184               | 53795 | 43695 | 35492 | 1400                 | 24                   | 67337               | 177,44              | 270000                |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 69,19   | 127834             | 118564 | 114734 | 97259               | 60012 | 48745 | 39593 |                      |                      |                     |                     |                       | 20  | 78723  | 177,44  | 250000 |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 74,90   | 121725             | 112859 | 110881 | 102815              | 63440 | 51530 | 41855 |                      |                      |                     |                     |                       |     |        |         |        | 19  | 85225  | 177,44  | 270000 |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 87,57   | 127834             | 118564 | 114734 | 113239              | 70771 | 57484 | 46692 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        | 16  | 99636  | 177,44 | 250000 |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 102,67  | 127834             | 118564 | 114734 | 113239              | 74811 | 60765 | 49357 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        | 14  | 110470 | 167,81 | 250000 |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 121,00  | 127834             | 118564 | 114734 | 113239              | 74811 | 60765 | 49357 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        | 12  | 112925 | 145,55 | 250000 |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 129,27  | 127834             | 118564 | 114734 | 110584              | 68234 | 55423 | 45018 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        | 11  | 107969 | 130,26 | 250000 |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 151,56  | 127834             | 118564 | 114734 | 113239              | 74811 | 60765 | 49357 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        | 9,2 | 113410 | 116,70 | 250000 |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 176,00  | 127834             | 118564 | 114734 | 113239              | 74591 | 60587 | 49212 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        | 8,0 | 113733 | 100,78 | 250000 |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 212,67  | 127834             | 118564 | 114734 | 112730              | 73893 | 60020 | 48751 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        | 6,6 | 114141 | 83,70 | 250000 |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 261,00  | 127834             | 118564 | 114734 | 109842              | 74066 | 60160 | 48865 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        | 5,4 | 114381 | 68,35 | 250000 |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 320,32  | 93419              | 85995  | 84359  | 83122               | 73747 | 69433 | 56397 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        | 4,4 | 84599  | 41,19 | 200000 |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
| <b>4</b>   | 249,08  | 127834             | 118564 | 114734 | 97259               | 60012 | 48745 | 39593 | 1400                 | 5,6                  | 114482              | 73,24               | 250000                |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 293,56  | 127834             | 118564 | 114734 | 96469               | 59525 | 48349 | 39272 |                      |                      |                     |                     |                       | 4,8 | 114836 | 62,33   | 250000 |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 315,25  | 127834             | 118564 | 114734 | 113239              | 70771 | 57484 | 46692 |                      |                      |                     |                     |                       |     |        |         |        | 4,4 | 114990 | 58,12   | 250000 |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 369,60  | 127834             | 118564 | 114734 | 113239              | 74811 | 60765 | 49357 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        | 3,8 | 115333 | 49,72  | 250000 |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 398,06  | 121725             | 112859 | 110881 | 99129               | 61166 | 49682 | 40354 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        | 3,5 | 106324 | 42,56  | 270000 |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 435,60  | 127834             | 118564 | 114734 | 113239              | 74811 | 60765 | 49357 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        | 3,2 | 115688 | 42,32  | 250000 |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 514,25  | 127834             | 118564 | 114734 | 113239              | 74811 | 60765 | 49357 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        | 2,7 | 116046 | 35,96  | 250000 |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 547,56  | 127834             | 118564 | 114734 | 113239              | 74811 | 60765 | 49357 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        | 2,6 | 116181 | 33,81  | 250000 |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 636,53  | 127834             | 118564 | 114734 | 113239              | 74811 | 60765 | 49357 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        | 2,2 | 117384 | 29,38  | 250000 |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 656,76  | 127834             | 118564 | 114734 | 113239              | 70771 | 57484 | 46692 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        | 2,1 | 117760 | 28,57 | 250000 |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 750,20  | 127834             | 118564 | 114734 | 113239              | 74811 | 60765 | 49357 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        | 1,9 | 119480 | 25,38 | 250000 |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 808,30  | 127834             | 118564 | 114734 | 113239              | 74811 | 60765 | 49357 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        | 1,7 | 120499 | 23,75 | 250000 |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 938,67  | 127834             | 118564 | 114734 | 113239              | 74591 | 60587 | 49212 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        | 1,5 | 122579 | 20,81 | 250000 |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 1091,20 | 127834             | 118564 | 114734 | 113239              | 74591 | 60587 | 49212 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        | 1,3 | 124643 | 18,20 | 250000 |     |        |       |        |      |        |       |        |      |        |       |        |
|  | 1318,53 | 127834             | 118564 | 114734 | 112730              | 73893 | 60020 | 48751 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        | 1,1 | 127069 | 15,36 | 250000 |      |        |       |        |      |        |       |        |
|  | 1595,00 | 127834             | 118564 | 114734 | 112730              | 73893 | 60020 | 48751 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        | 0,88 | 129351 | 12,92 | 250000 |      |        |       |        |
|  | 1957,50 | 127834             | 118564 | 114734 | 109842              | 74066 | 60160 | 48865 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        | 0,72 | 131497 | 10,70 | 250000 |
|  | 2402,39 | 93419              | 85995  | 84359  | 83122               | 73747 | 69433 | 56397 |                      |                      |                     |                     |                       |     |        |         |        |     |        |         |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |        |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |     |        |       |        |      |        |       |        |      |        |       |        |

| P <sub>TN</sub> | S-SB-SU<br>FS-FSB |
|-----------------|-------------------|
| <b>12001</b>    | 99,7              |
| <b>12002</b>    | 64,0              |
| <b>12003</b>    | 51,4              |
| <b>12004</b>    | 40,9              |

**1.2 Prestazioni**

**1.2 Performances**

**1.2 Характеристики**

























| EXB  |                | n <sub>2</sub> X h |        |        |                     |        |         |         | 10000 ЧАСОВ          |                      |                     |                     | T <sub>max</sub> [Nm] |
|---|----------------|--------------------|--------|--------|---------------------|--------|---------|---------|----------------------|----------------------|---------------------|---------------------|-----------------------|
| Stadio Stage СТУПЕНИ  | ir             | 10000              | 20000  | 50000  | T <sub>N</sub> [Nm] |        |         |         | n <sub>1</sub> [rpm] | n <sub>2</sub> [rpm] | T <sub>N</sub> [Nm] | P <sub>1</sub> [kW] |                       |
|   |                |                    |        |        | 100000              | 500000 | 1000000 | 2000000 |                      |                      |                     |                     |                       |
| <b>4</b>  | <b>149,70</b>  | 121725             | 112859 | 107336 | 87184               | 53795  | 43695   | 35492   | 1400                 | 9,4                  | 88953               | 96,79               | 270000                |
|   | <b>175,01</b>  | 127834             | 118564 | 114734 | 97259               | 60012  | 48745   | 39593   |                      | 8,0                  | 103993              | 96,79               | 250000                |
|   | <b>189,46</b>  | 121725             | 112859 | 110881 | 102815              | 63440  | 51530   | 41855   |                      | 7,4                  | 104799              | 90,10               | 270000                |
|   | <b>221,50</b>  | 127834             | 118564 | 114734 | 113239              | 70771  | 57484   | 46692   |                      | 6,3                  | 114229              | 84,00               | 250000                |
|   | <b>259,69</b>  | 127834             | 118564 | 114734 | 113239              | 74811  | 60765   | 49357   |                      | 5,4                  | 114572              | 71,86               | 250000                |
|   | <b>306,06</b>  | 127834             | 118564 | 114734 | 113239              | 74811  | 60765   | 49357   |                      | 4,6                  | 114926              | 61,16               | 250000                |
|   | <b>383,35</b>  | 127834             | 118564 | 114734 | 113239              | 74811  | 60765   | 49357   |                      | 3,7                  | 115412              | 49,04               | 250000                |
|   | <b>445,18</b>  | 127834             | 118564 | 114734 | 113239              | 74591  | 60587   | 49212   |                      | 3,1                  | 115734              | 42,35               | 250000                |
|   | <b>504,17</b>  | 127834             | 118564 | 114734 | 113239              | 74811  | 60765   | 49357   |                      | 2,8                  | 116000              | 37,48               | 250000                |
|   | <b>537,92</b>  | 127834             | 118564 | 114734 | 112730              | 73893  | 60020   | 48751   |                      | 2,6                  | 116143              | 35,17               | 250000                |
|   | <b>631,48</b>  | 127834             | 118564 | 114734 | 113239              | 74811  | 60765   | 49357   |                      | 2,2                  | 117291              | 30,25               | 250000                |
|   | <b>733,33</b>  | 127834             | 118564 | 114734 | 113239              | 74591  | 60587   | 49212   |                      | 1,9                  | 119175              | 26,47               | 250000                |
|   | <b>833,56</b>  | 127834             | 118564 | 114734 | 113239              | 74811  | 60765   | 49357   |                      | 1,7                  | 120925              | 23,63               | 250000                |
|   | <b>1044,05</b> | 127834             | 118564 | 114734 | 113239              | 74811  | 60765   | 49357   |                      | 1,3                  | 124045              | 19,35               | 250000                |
|   | <b>1212,44</b> | 127834             | 118564 | 114734 | 112730              | 73893  | 60020   | 48751   |                      | 1,2                  | 126034              | 16,93               | 250000                |
|   | <b>1465,04</b> | 127834             | 118564 | 114734 | 112730              | 73893  | 60020   | 48751   |                      | 1,0                  | 128375              | 14,27               | 250000                |
|   | <b>1798,00</b> | 127834             | 118564 | 114734 | 109842              | 74066  | 60160   | 48865   |                      | 0,8                  | 130642              | 11,84               | 250000                |
|   | <b>2206,64</b> | 93419              | 85995  | 84359  | 83122               | 73747  | 69433   | 56397   |                      | 0,6                  | 98360               | 7,26                | 200000                |

**B**

|                       |                           |
|-----------------------|---------------------------|
| <b>P<sub>TN</sub></b> | <b>S-SB-SU<br/>FS-FSB</b> |
| <b>12004</b>          | 33,9                      |



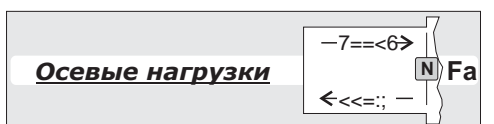
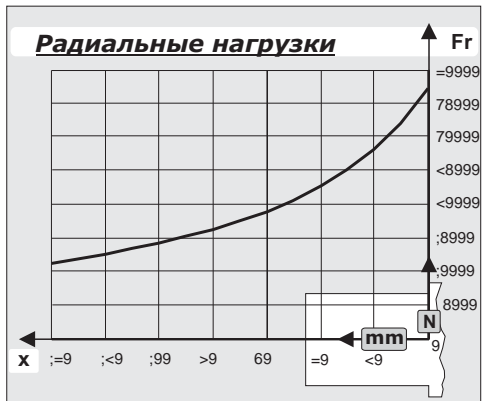
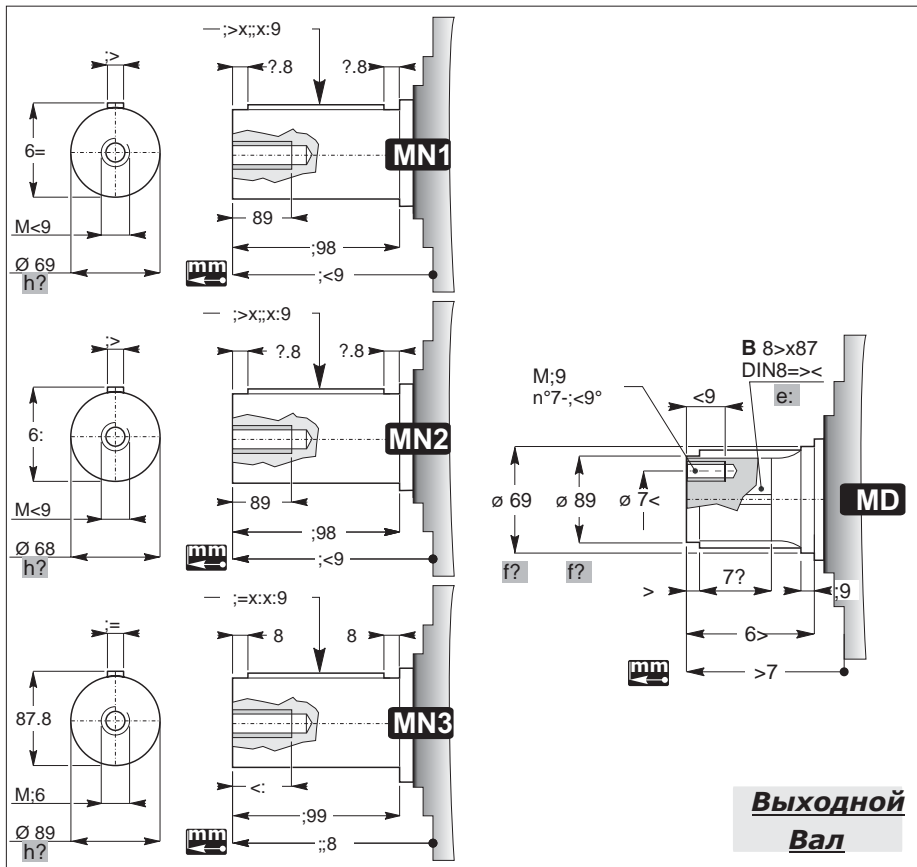
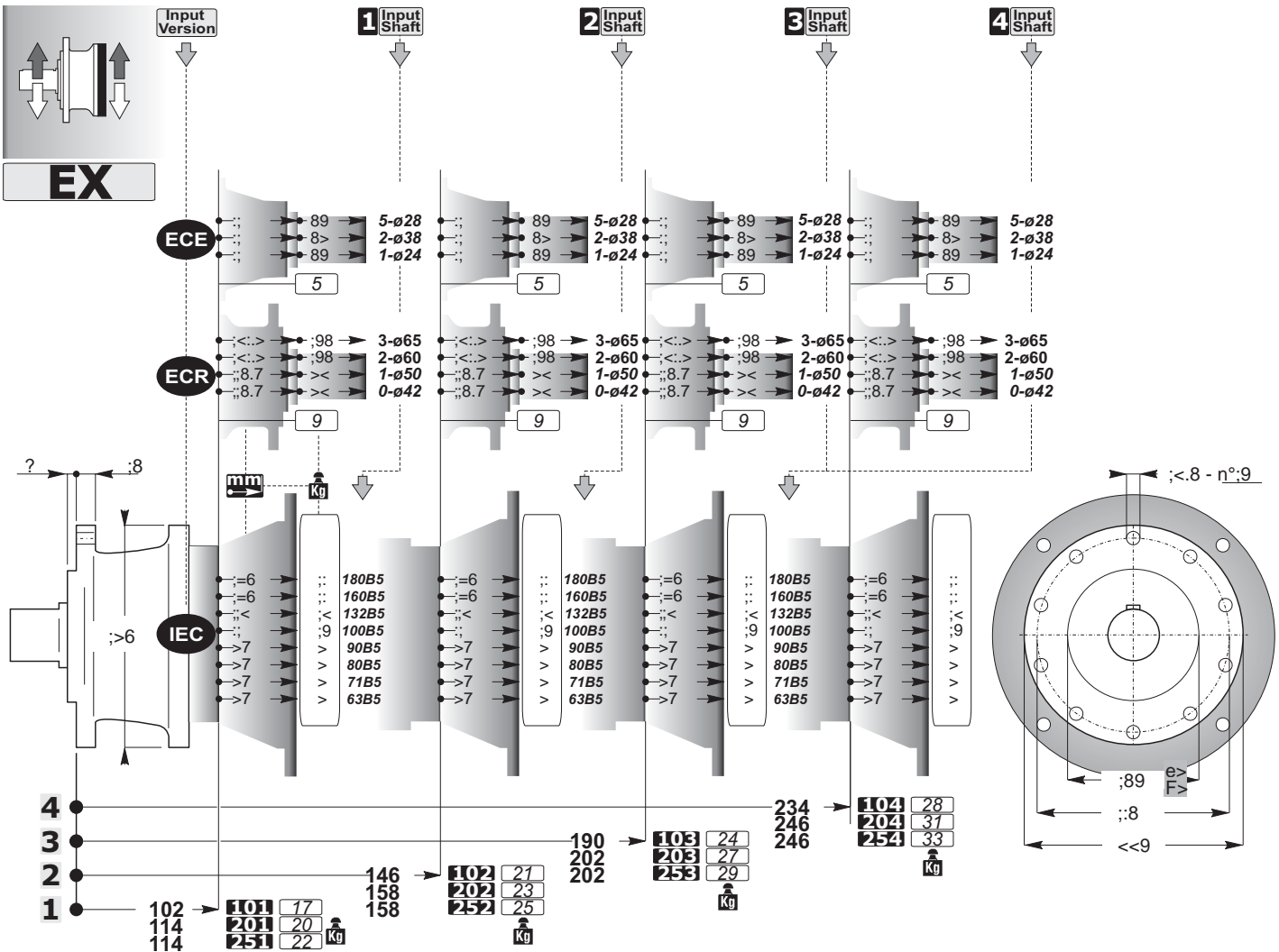
## ТИПОРАЗМЕР

| ИСПОЛНЕНИЕ СУПОРТА |  | 10  | 20  | 25  | 30  | 40  | 50   | 70   | 80   | 90 | 100 | 150  | 180  | 200  | 250  | 280 | 300 | 350 | 420 | 650 | 850  | 1200 |      |      |      |
|--------------------|--|-----|-----|-----|-----|-----|------|------|------|----|-----|------|------|------|------|-----|-----|-----|-----|-----|------|------|------|------|------|
| N                  |  <b>RN RD</b>       | C2  | C16 | C38 | C58 | C76 |      |      |      |    |     |      |      |      |      |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>MN MD</b>       | C4  | C18 | C40 |     |     |      |      |      |    |     |      |      |      |      |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>MXN MXD</b>     |     | C20 |     |     |     |      |      |      |    |     |      |      |      |      |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>TN TD</b>       |     | C22 | C42 | C60 | C78 | C100 | C114 |      |    |     |      |      |      |      |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>HN HD</b>       |     |     |     |     |     |      |      |      |    | C80 | C102 | C116 |      |      |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>XN XD</b>       |     |     |     |     |     |      |      |      |    | C82 |      |      |      |      |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>SN SD</b>       |     |     |     |     |     |      |      |      |    |     |      |      |      |      |     |     |     |     |     | C126 | C138 | C150 | C158 | C166 |
|                    |  <b>SBN SBD</b>     |     |     |     |     |     |      |      |      |    |     |      |      |      |      |     |     |     |     |     | C128 | C140 |      |      |      |
|                    |  <b>PN PD</b>     | C6  | C24 | C44 | C62 | C84 |      |      |      |    |     |      |      |      |      |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>PHN PHD</b>   |     |     |     |     |     |      |      |      |    |     |      | C86  | C104 | C118 |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>PXN PXD</b>   |     |     |     |     |     |      |      |      |    |     |      | C88  |      |      |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>PSN PSD</b>   |     |     |     |     |     |      |      |      |    |     |      |      |      |      |     |     |     |     |     | C130 | C142 | C152 | C160 |      |
|                    |  <b>PSBN PSBD</b> |     |     |     |     |     |      |      |      |    |     |      |      |      |      |     |     |     |     |     | C132 | C144 |      |      |      |
| D                  |  <b>F</b>         | C8  | C26 | C46 | C64 |     |      |      |      |    |     |      |      |      |      |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>FB</b>        |     |     |     | C48 | C66 |      |      |      |    |     |      |      |      |      |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>FP</b>        |     | C28 |     |     |     |      |      |      |    |     |      |      |      |      |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>FS</b>        | C10 | C30 | C50 | C68 | C90 | C106 | C120 | C134 |    |     |      |      |      |      |     |     |     |     |     | C154 | C162 | C168 |      |      |
|                    |  <b>FSB</b>       |     |     |     |     |     |      |      |      |    |     |      |      |      |      |     |     |     |     |     |      | C146 |      |      |      |
| C                  |  <b>FC</b>        | C12 | C32 | C52 | C70 |     |      |      |      |    |     |      |      |      |      |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>FCB</b>       |     | C34 | C54 | C72 | C92 | C108 |      |      |    |     |      |      |      |      |     |     |     |     |     |      |      |      |      |      |
| S                  |  <b>FU</b>        | C14 | C36 | C56 | C74 | C94 |      |      |      |    |     |      |      |      |      |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>HU</b>        |     |     |     |     |     |      |      |      |    |     | C96  | C110 | C122 |      |     |     |     |     |     |      |      |      |      |      |
|                    |  <b>SU</b>        |     |     |     |     |     |      |      |      |    |     |      |      |      |      |     |     |     |     |     | C136 | C148 | C156 | C164 | C170 |
|                    |  <b>TU</b>        |     |     |     |     |     |      |      |      |    |     |      | C98  | C112 | C124 |     |     |     |     |     |      |      |      |      |      |





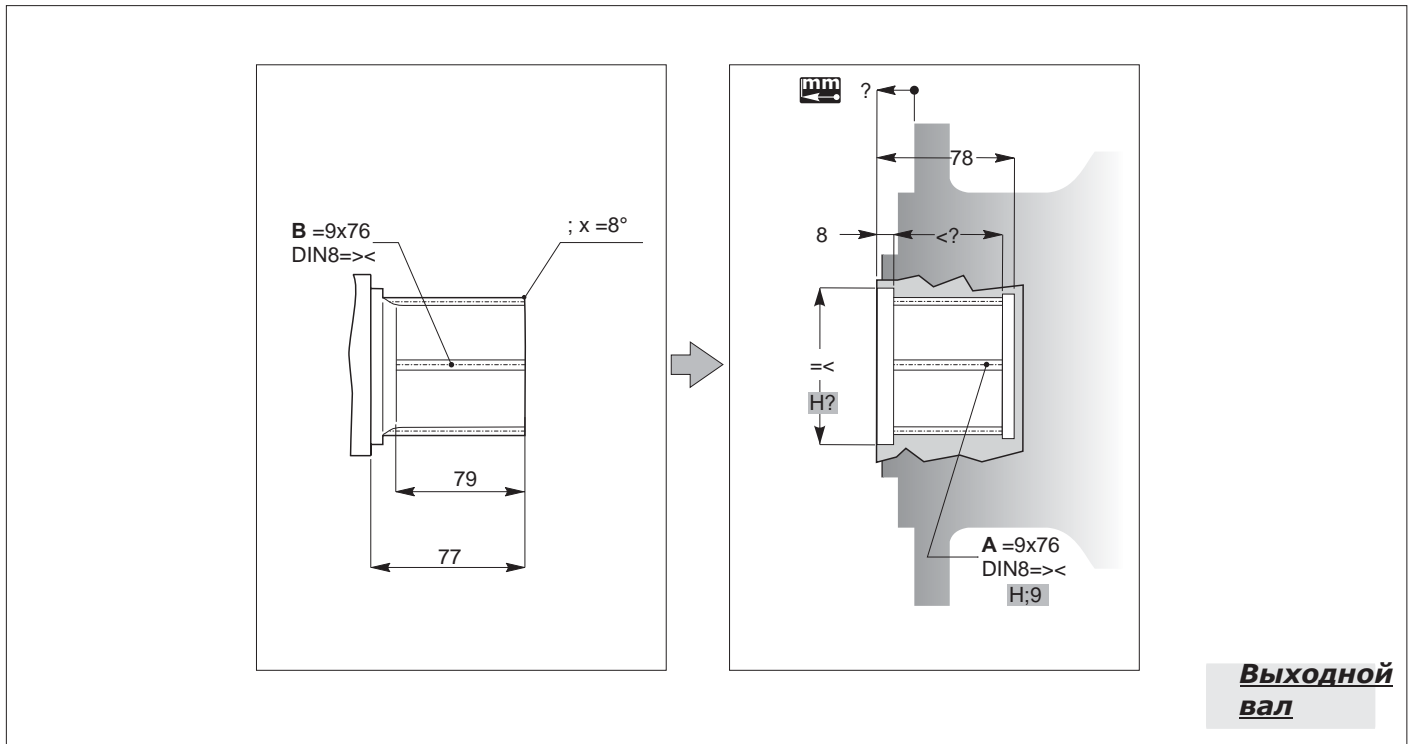
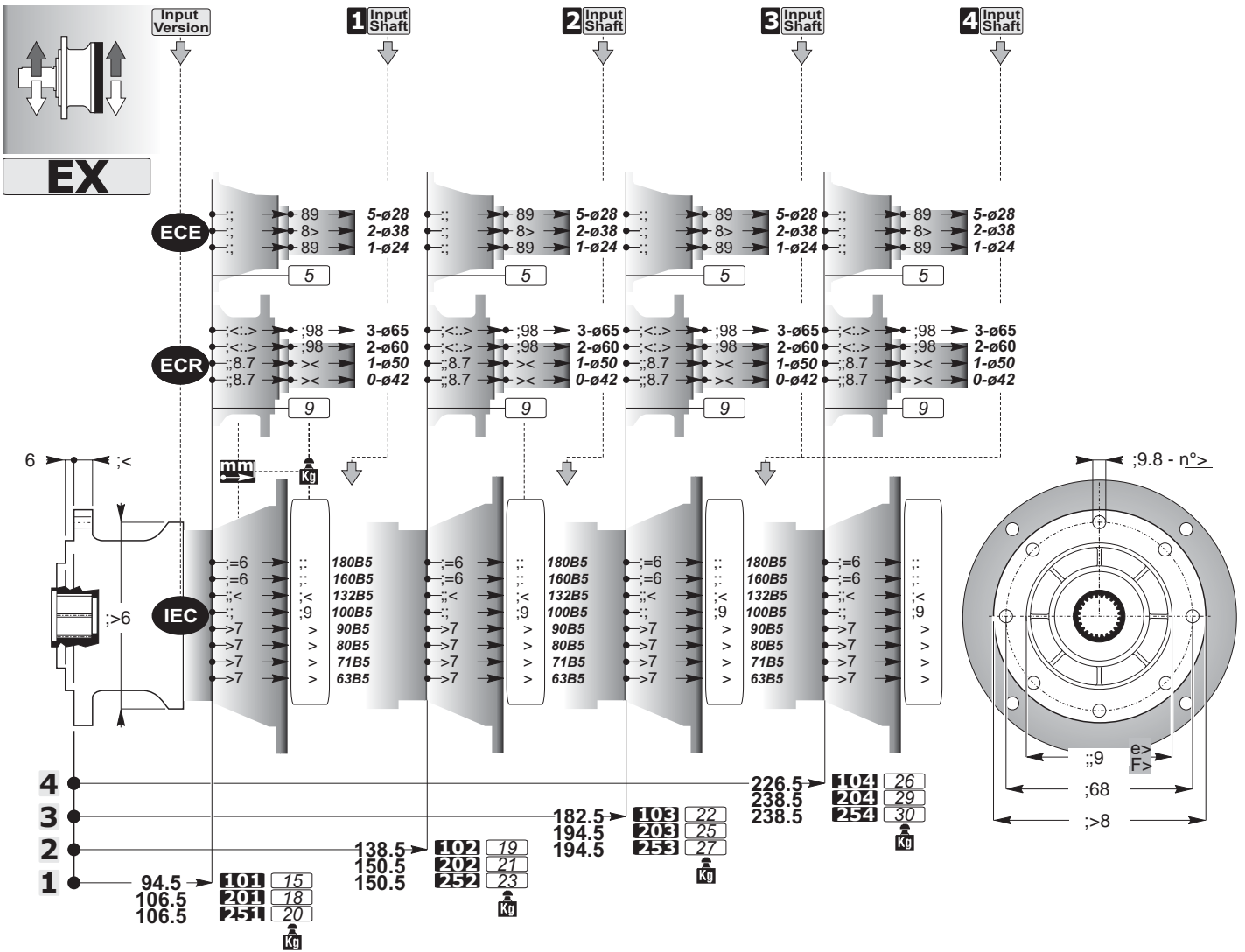


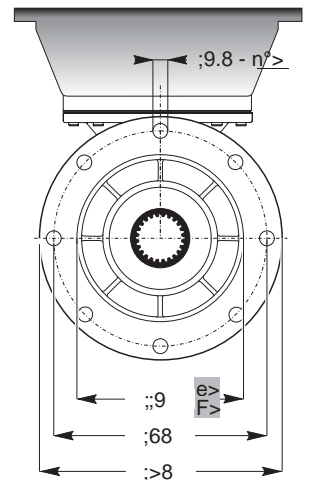
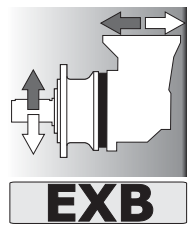
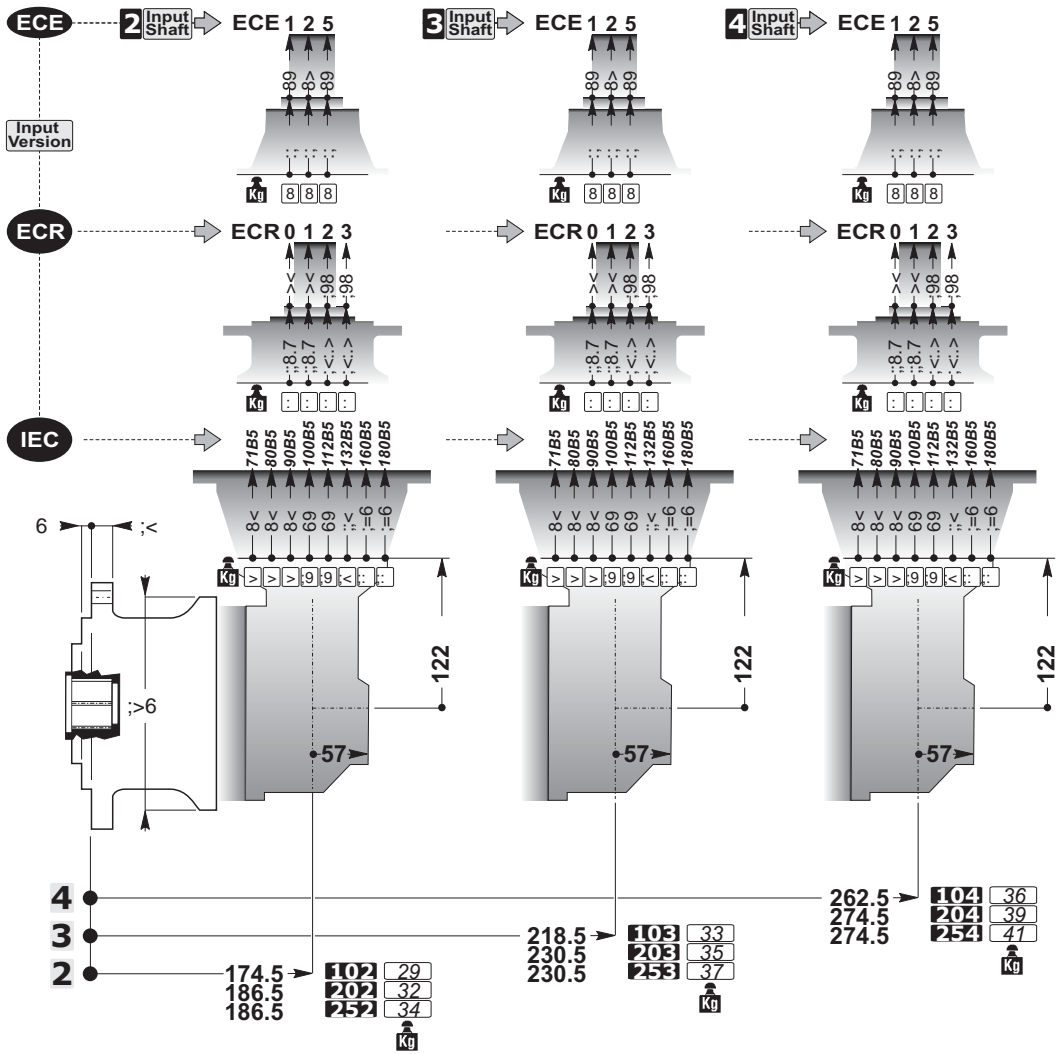




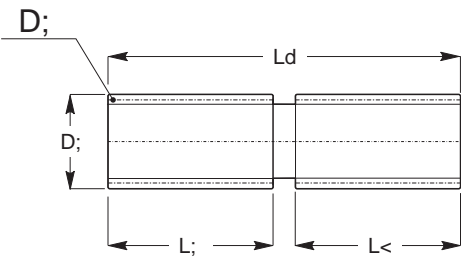






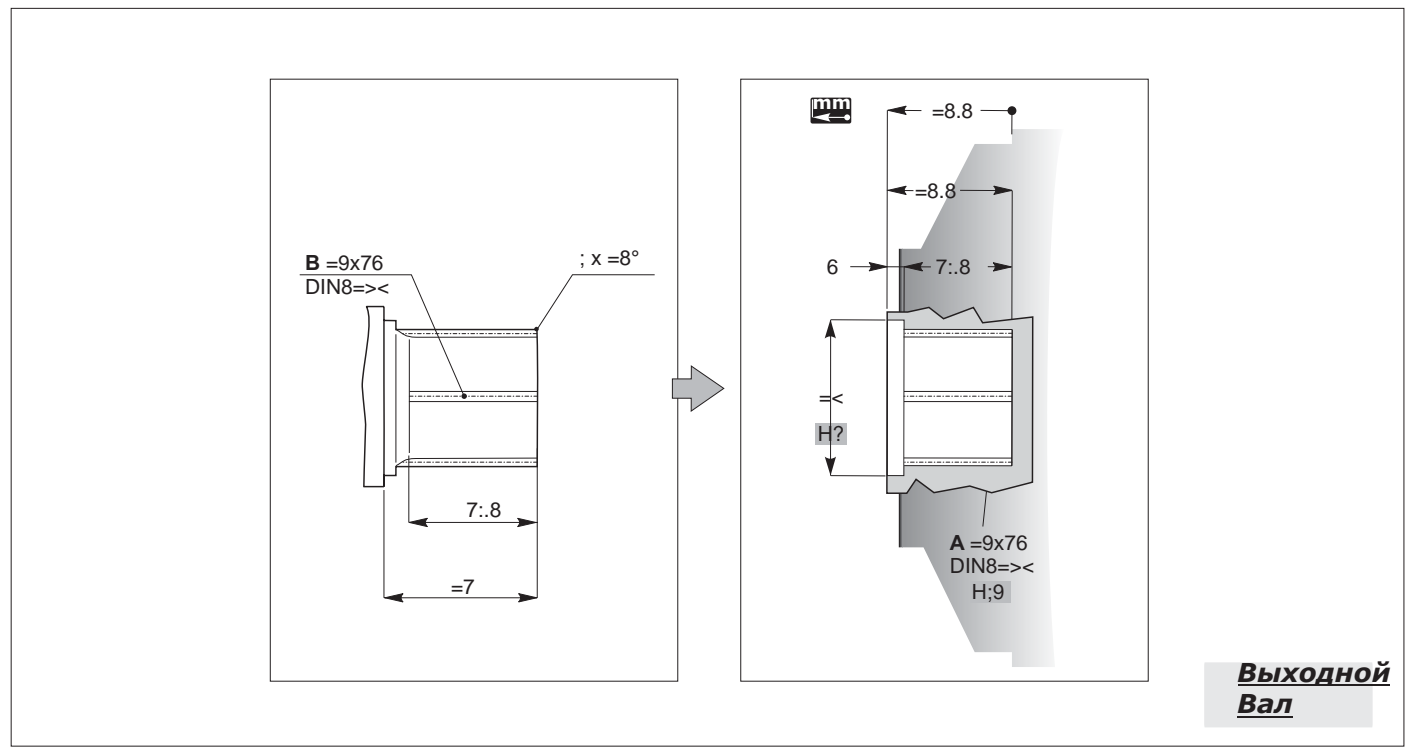
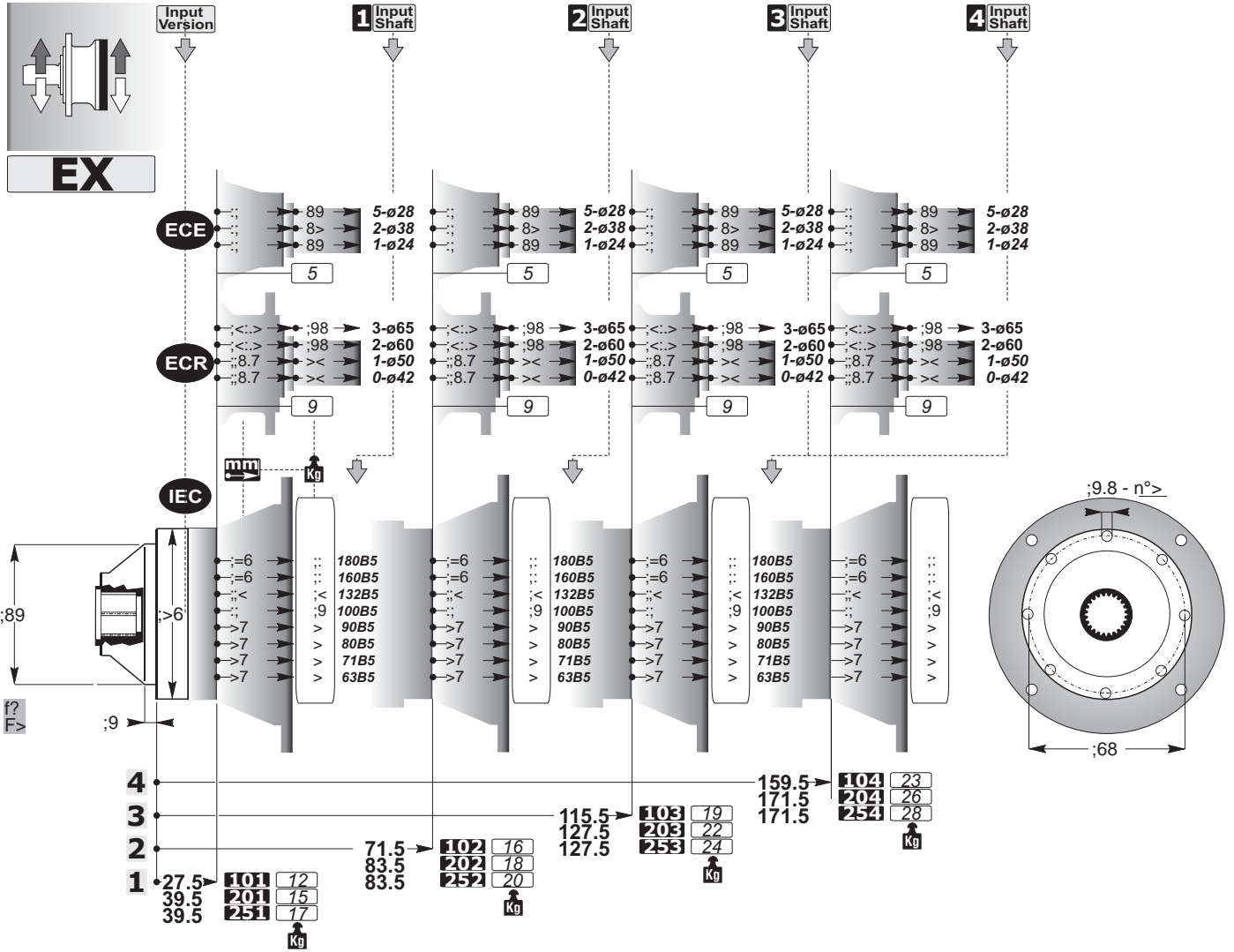


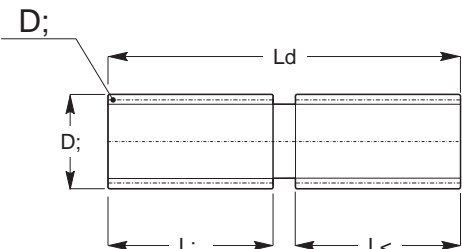

**SD**



**Аксессуары**





|   |  |   |
|---|--|---|
| <p><b>SD</b></p>  <p>Technical drawing showing dimensions: <math>D</math>, <math>L_d</math>, <math>L</math>, and <math>L&lt;</math>.</p> |  | <p><b>SD</b></p>  <p><b>Аксессуары</b></p> |
|   |  |   |

























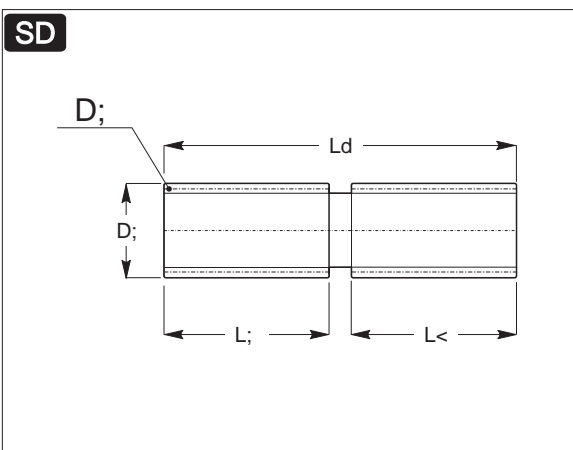
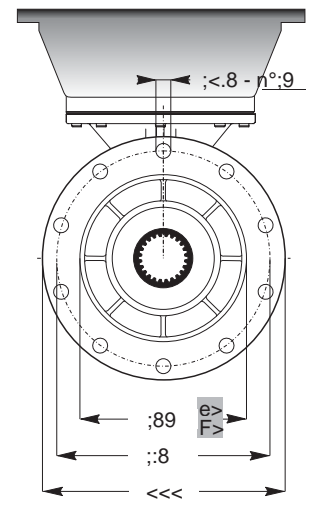
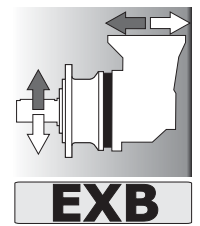
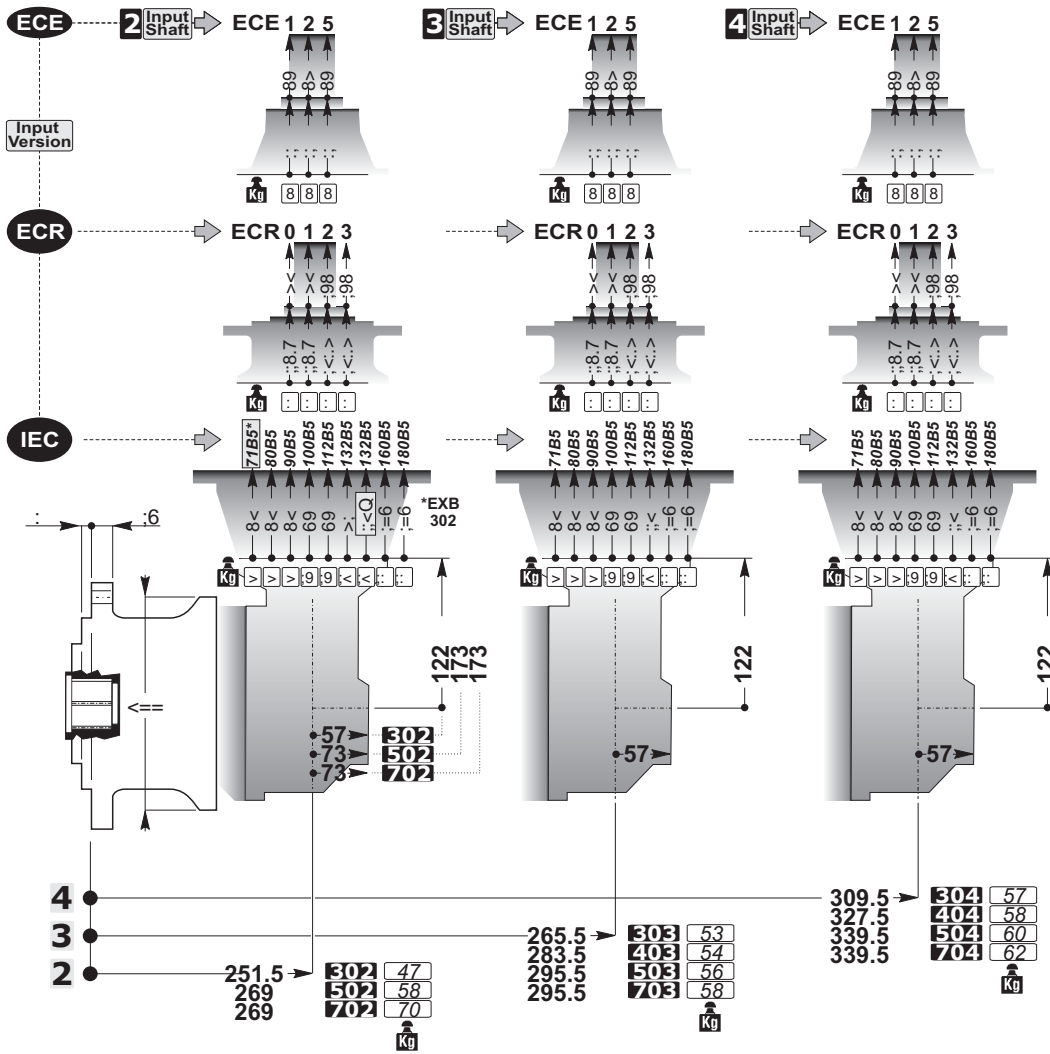








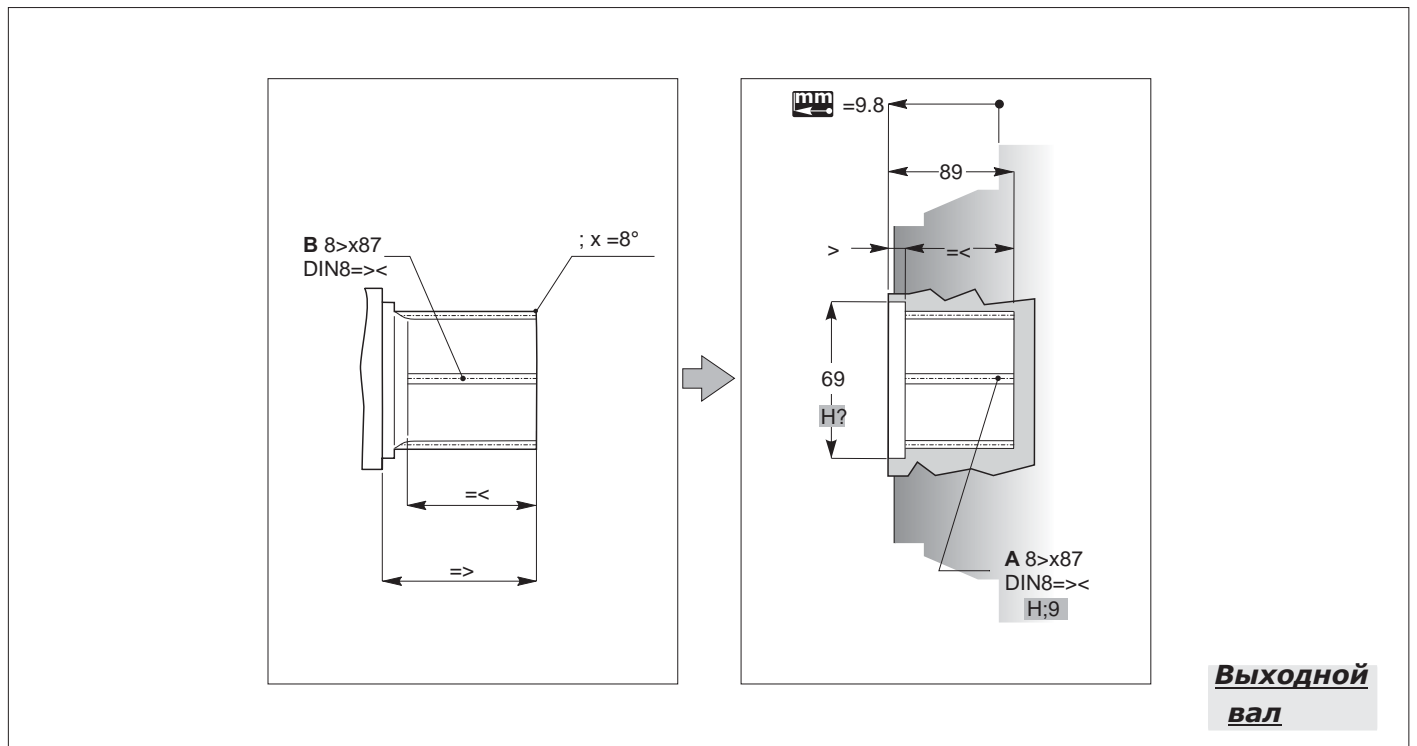
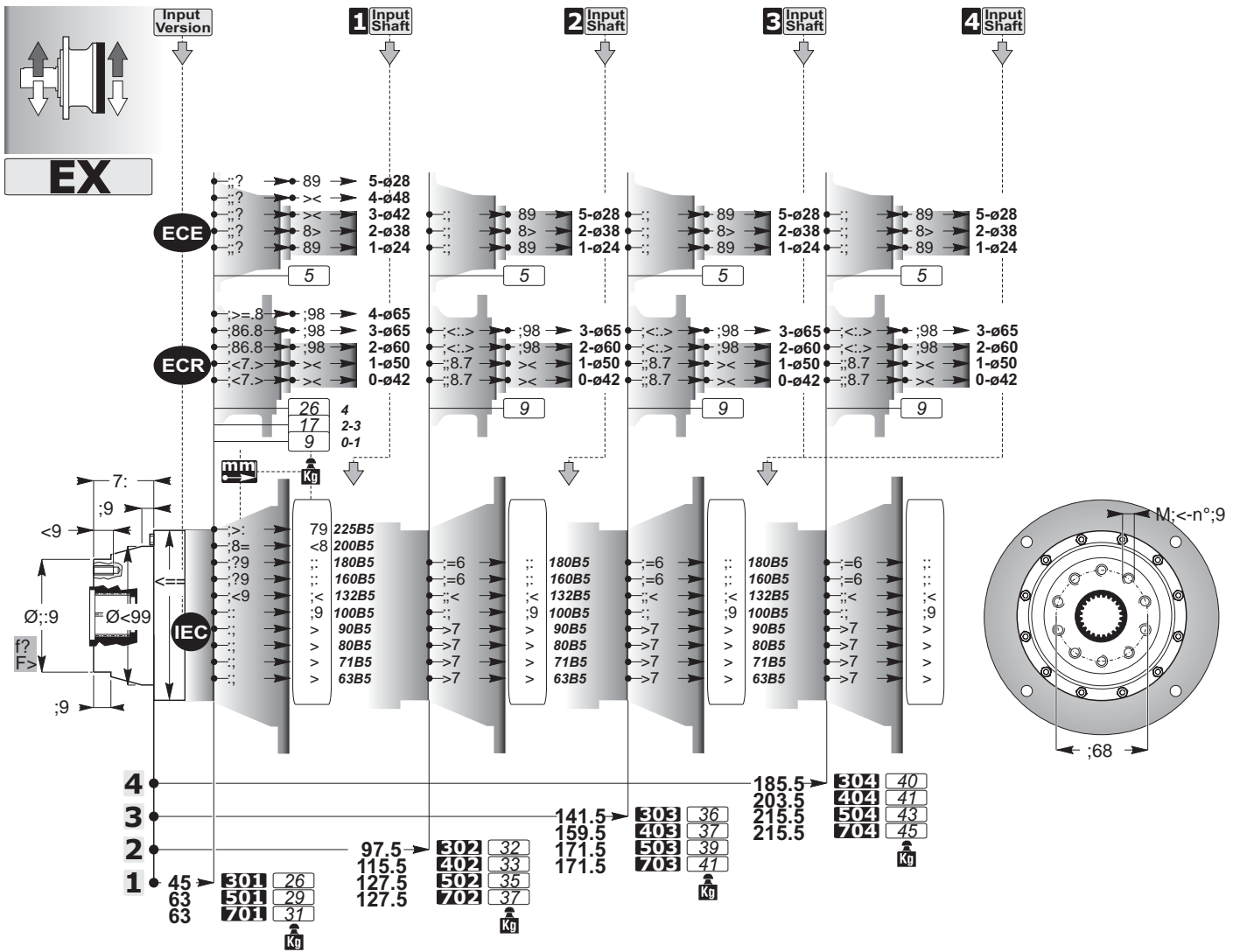




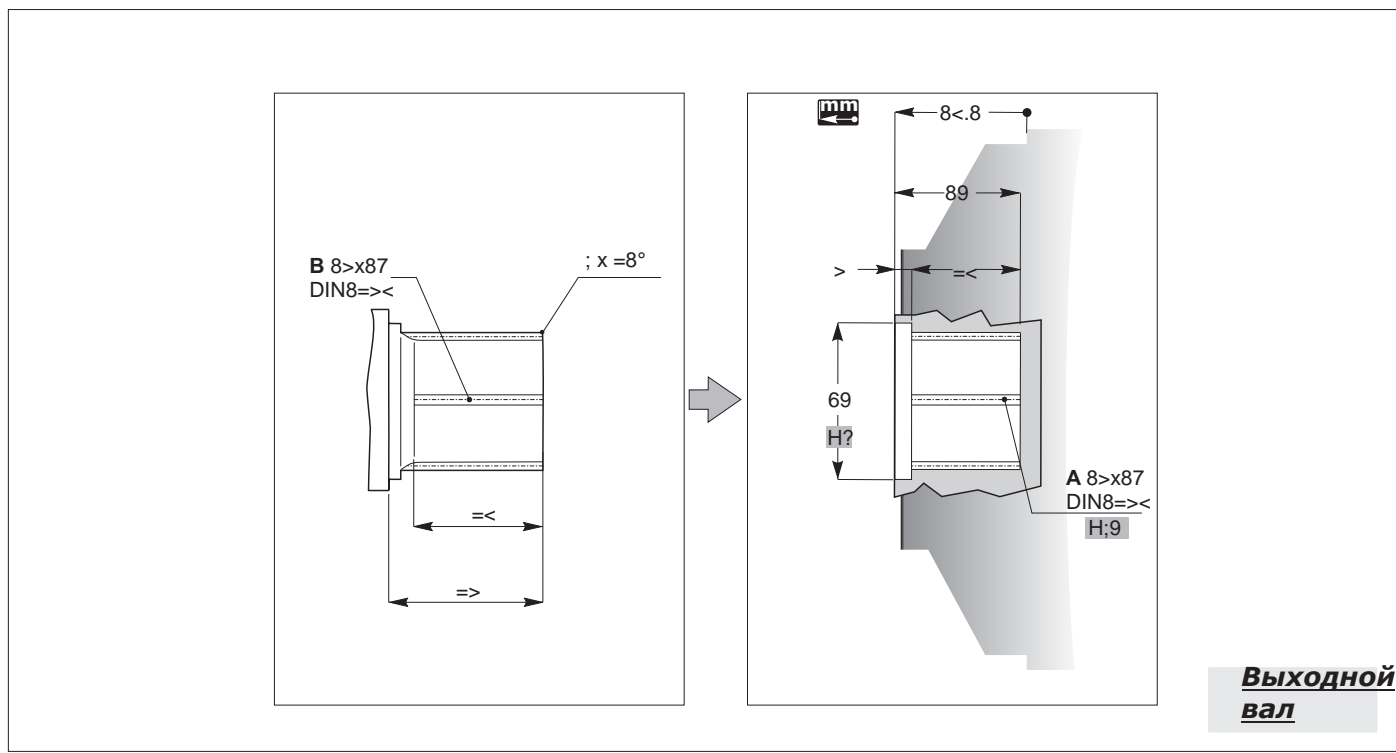
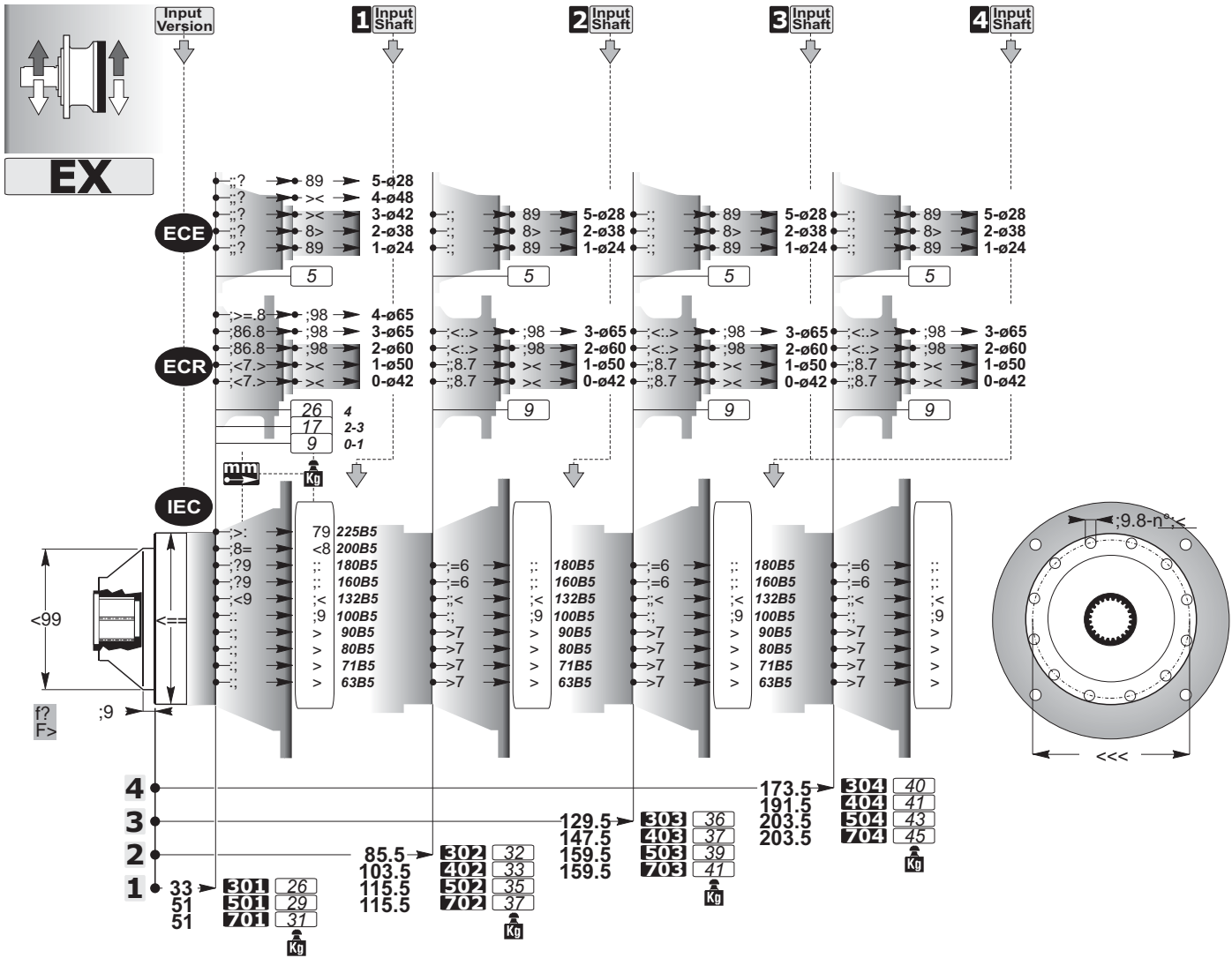
**SD**

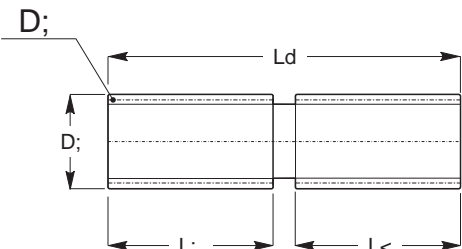

**Аксессуары**

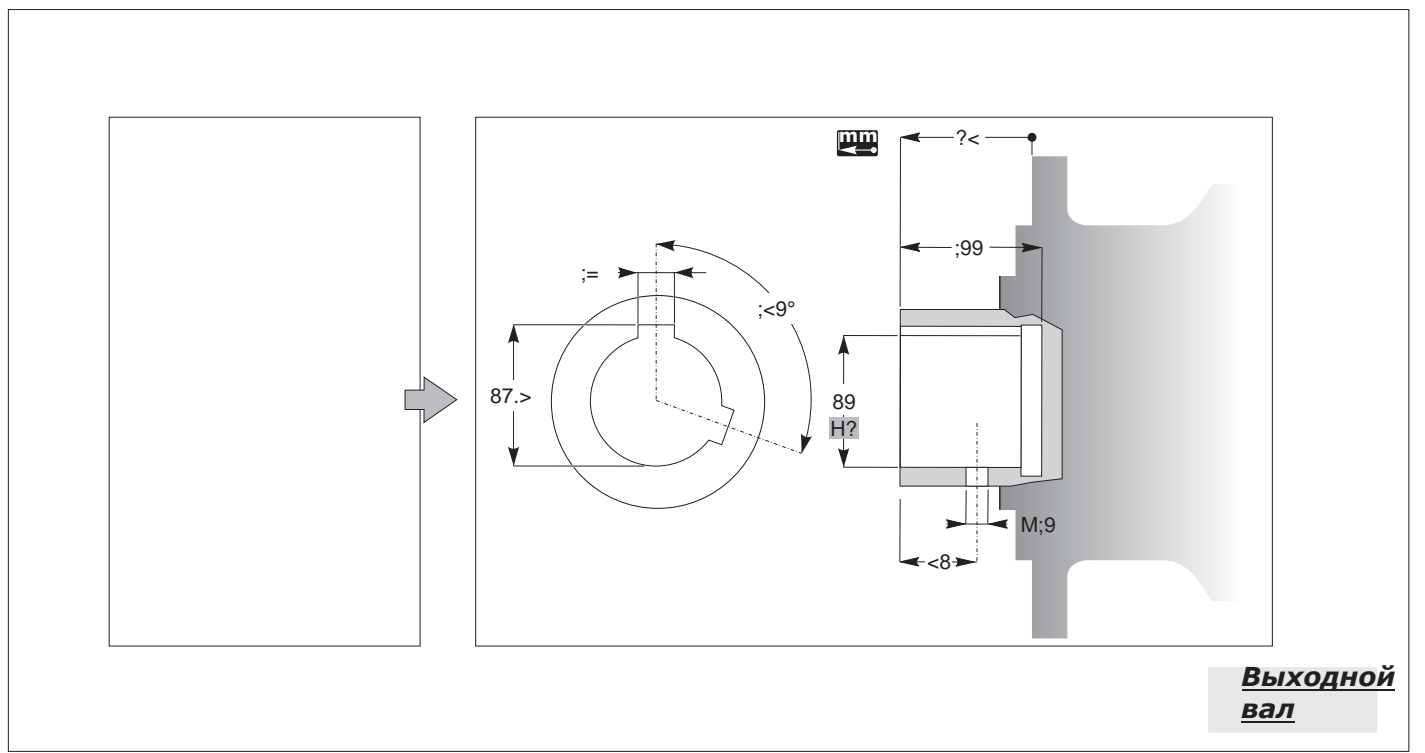
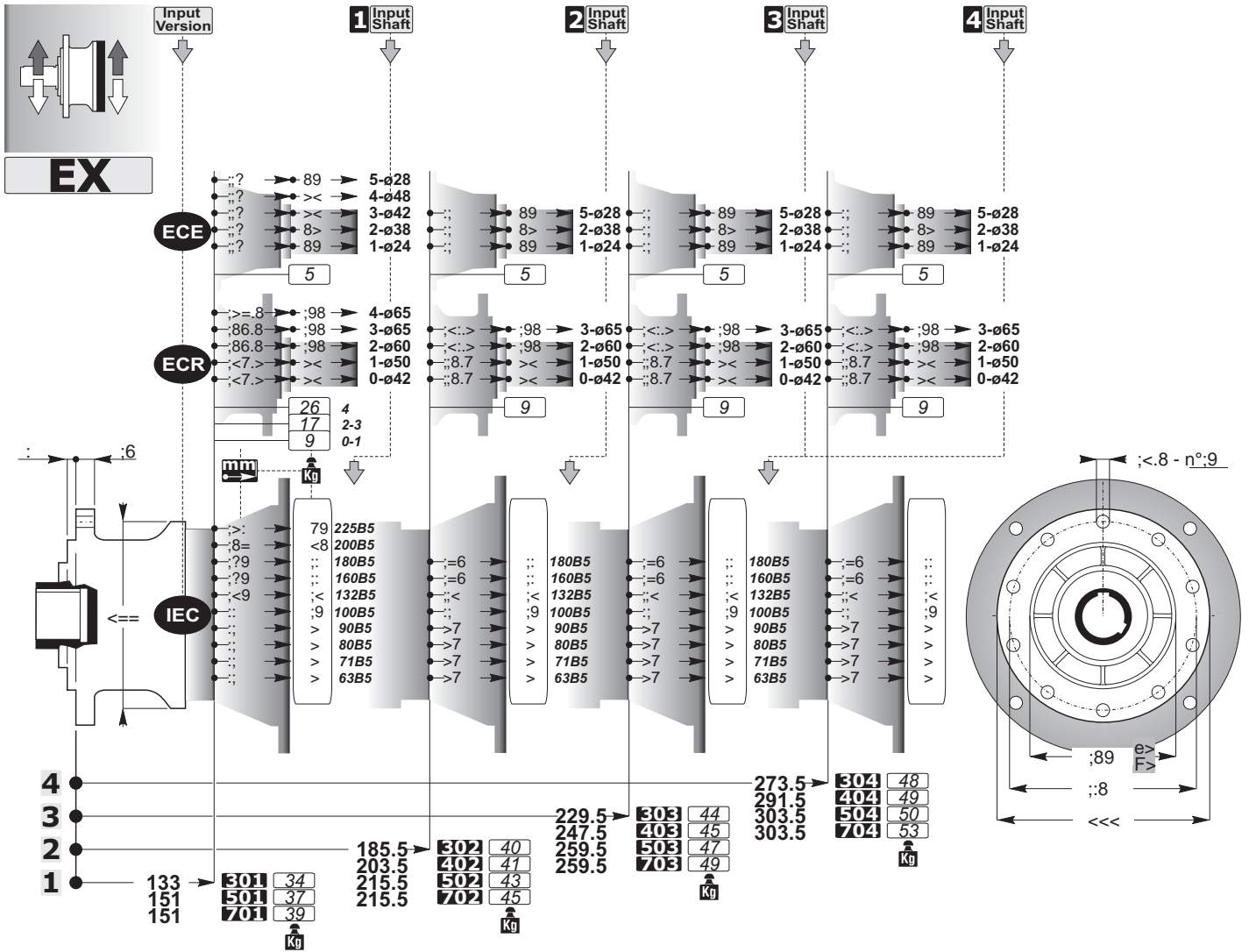








|  |  |   |
|--|--|---|
| <p><b>SD</b></p>  |  | <p><b>SD</b></p>  <p><b>Аксессуары</b></p> |
|  |  |   |























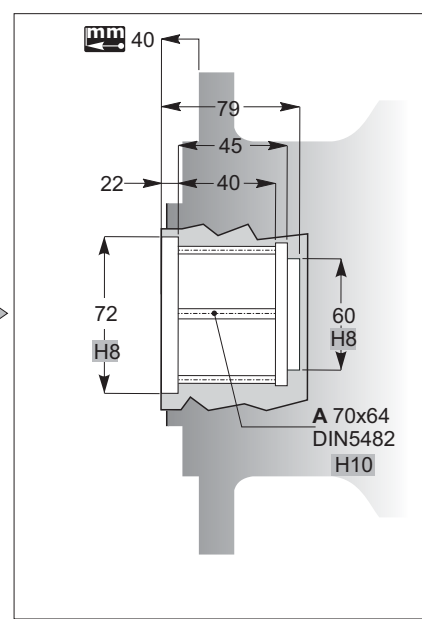
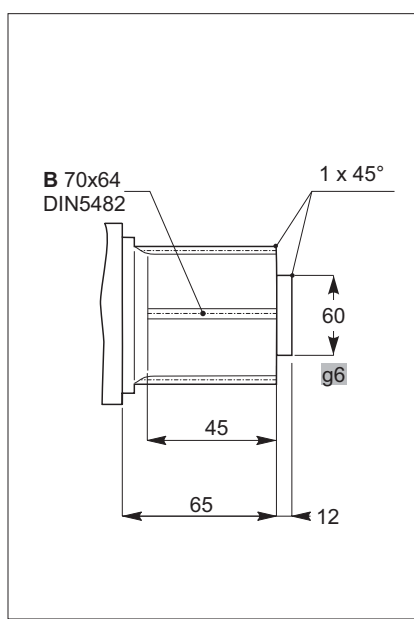
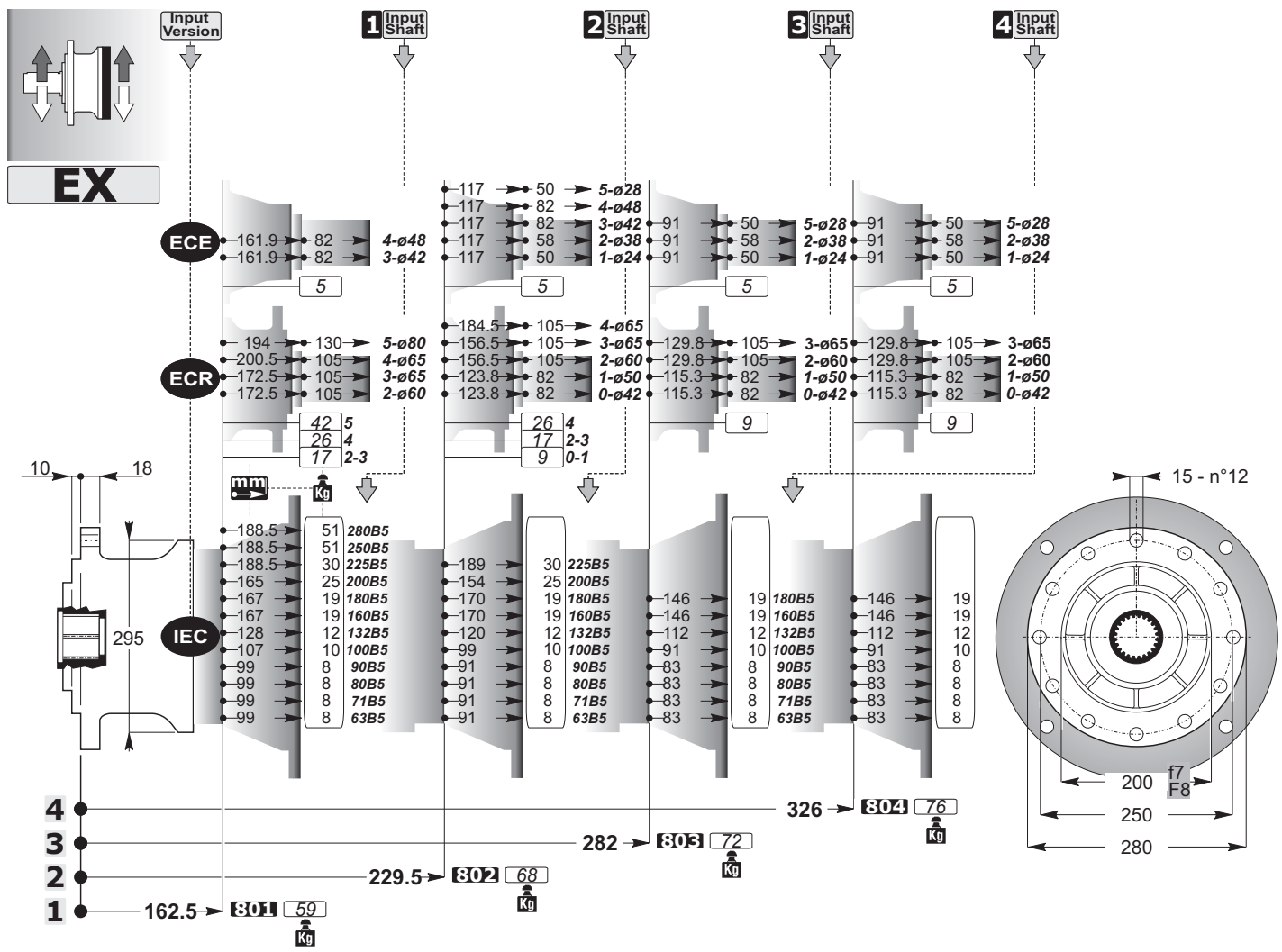




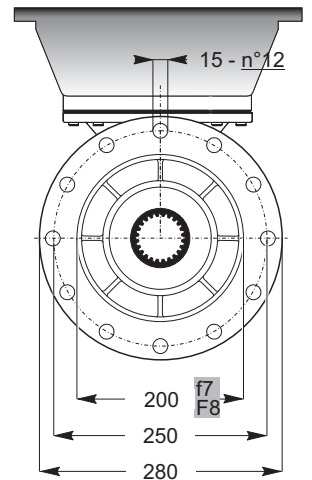
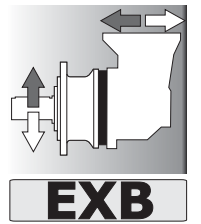
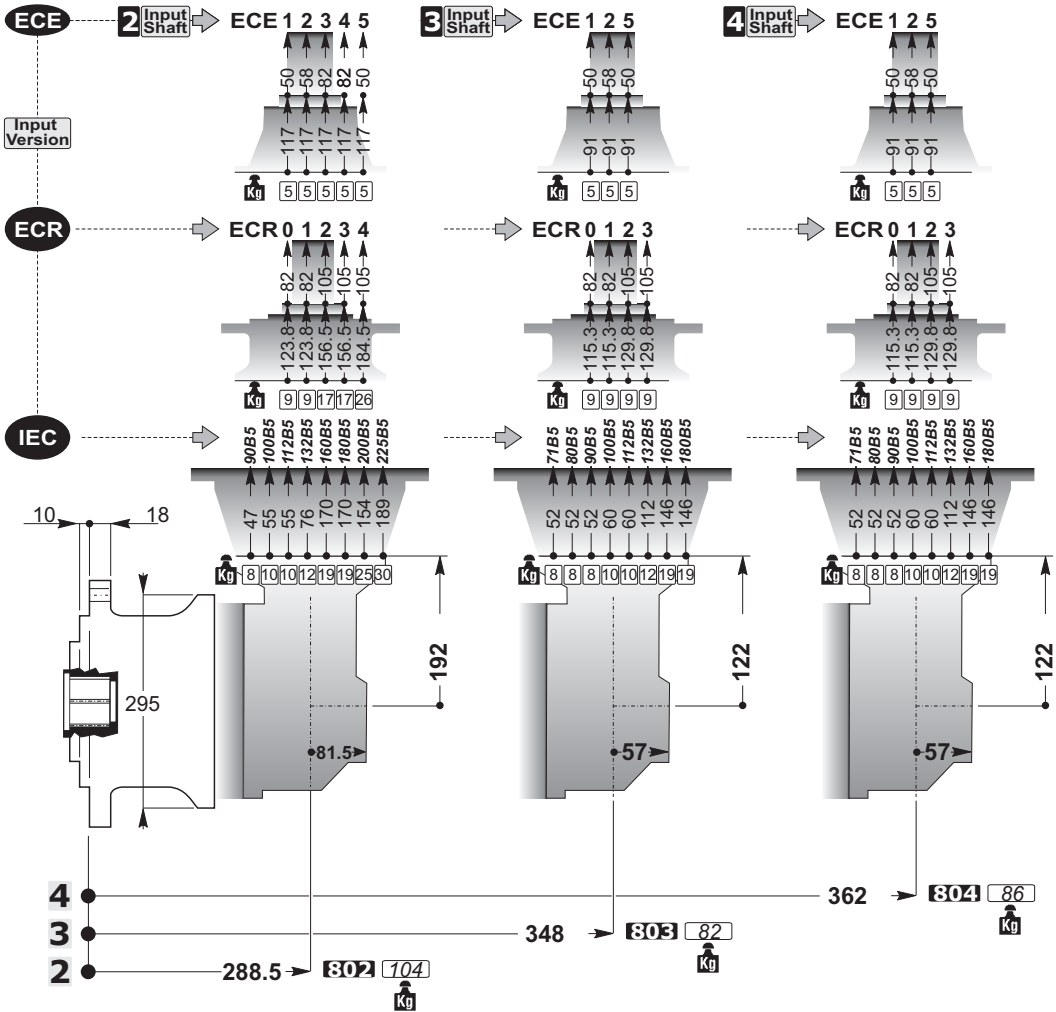






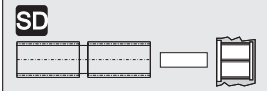
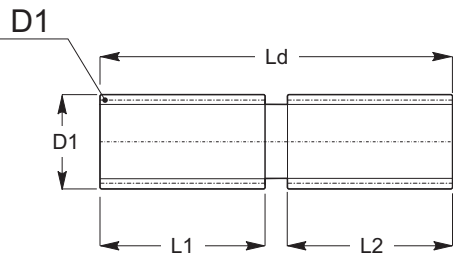


**Выходной Вал**



**C**

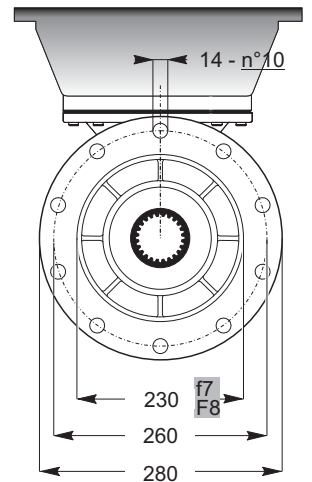
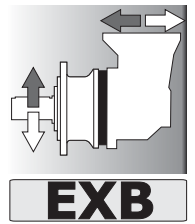
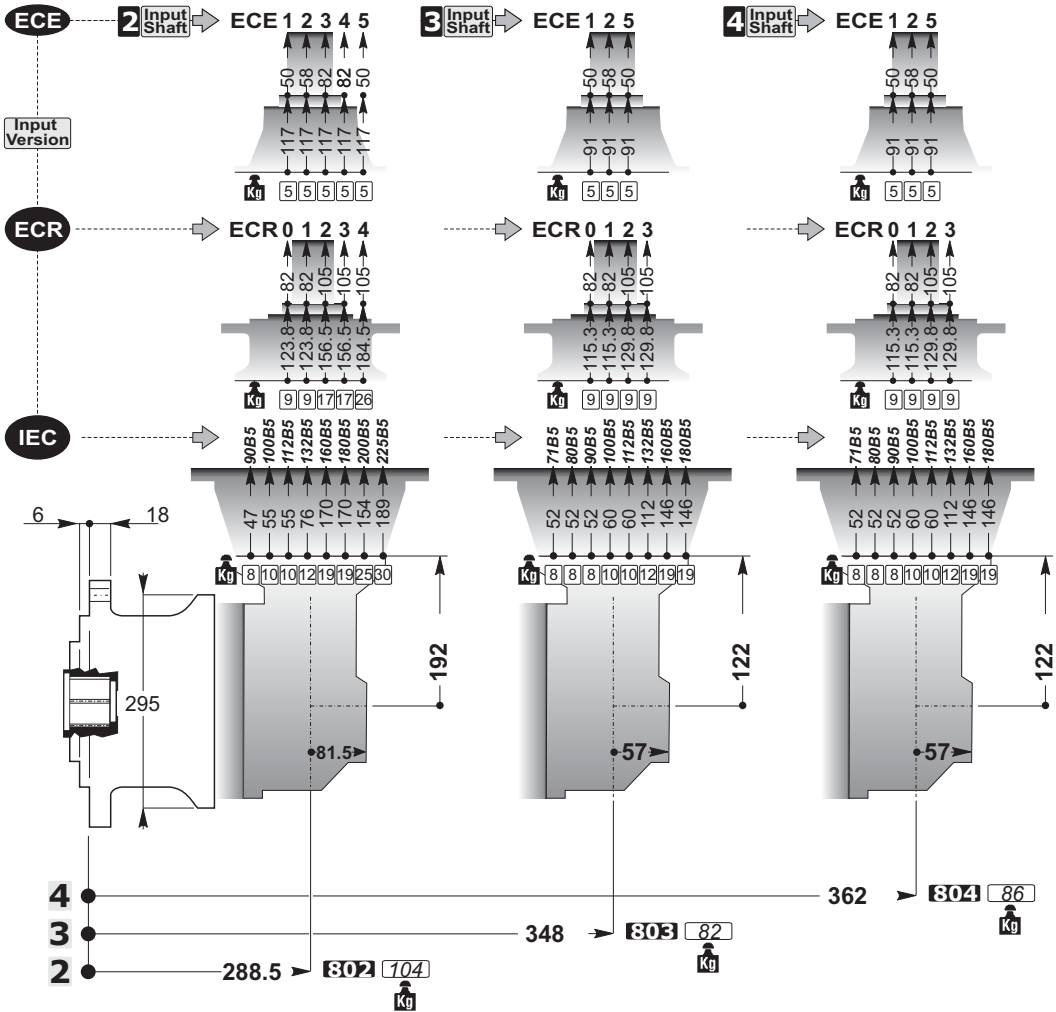
**SD**



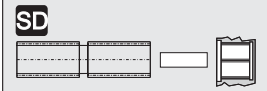
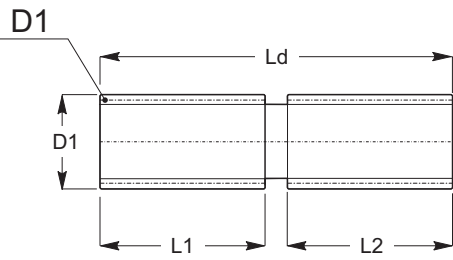
**Аксессуары**





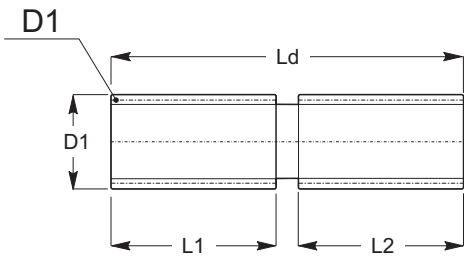
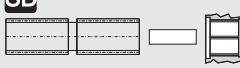


**SD**



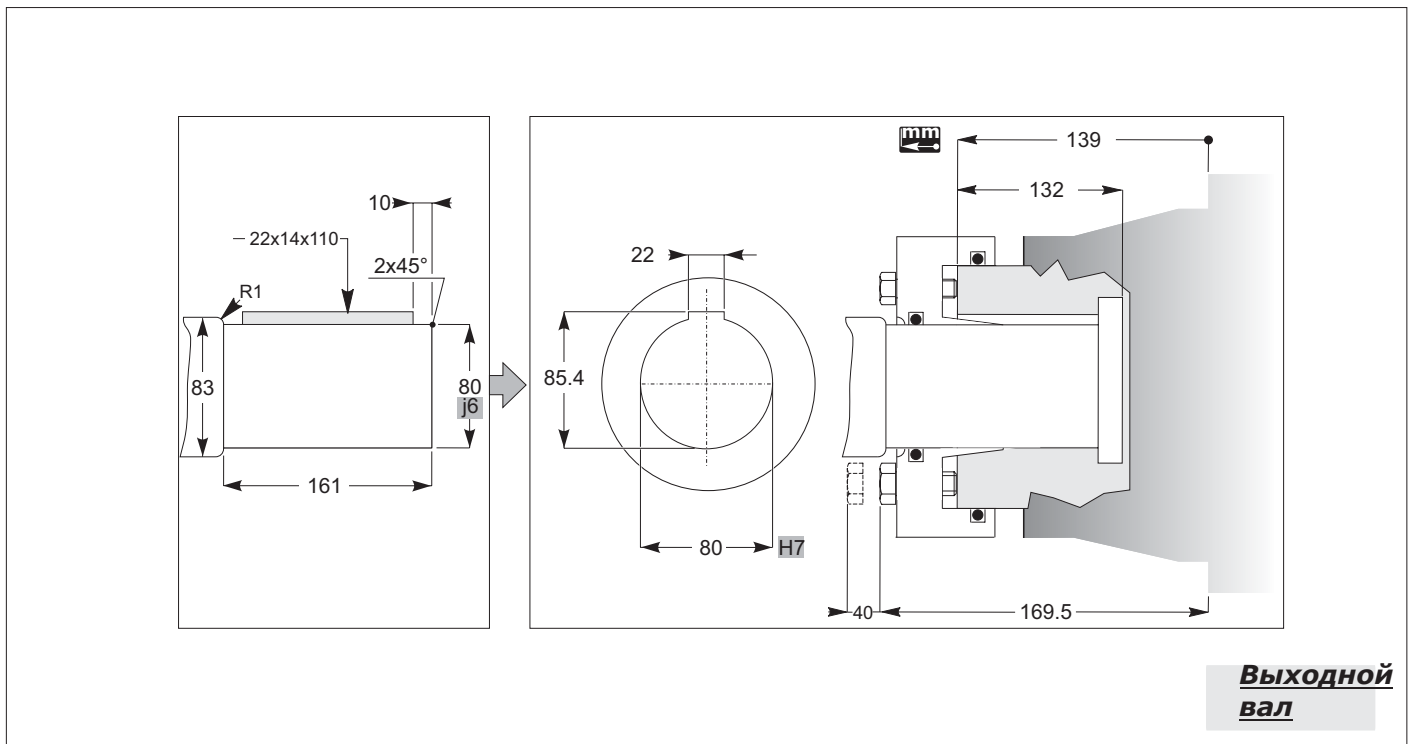
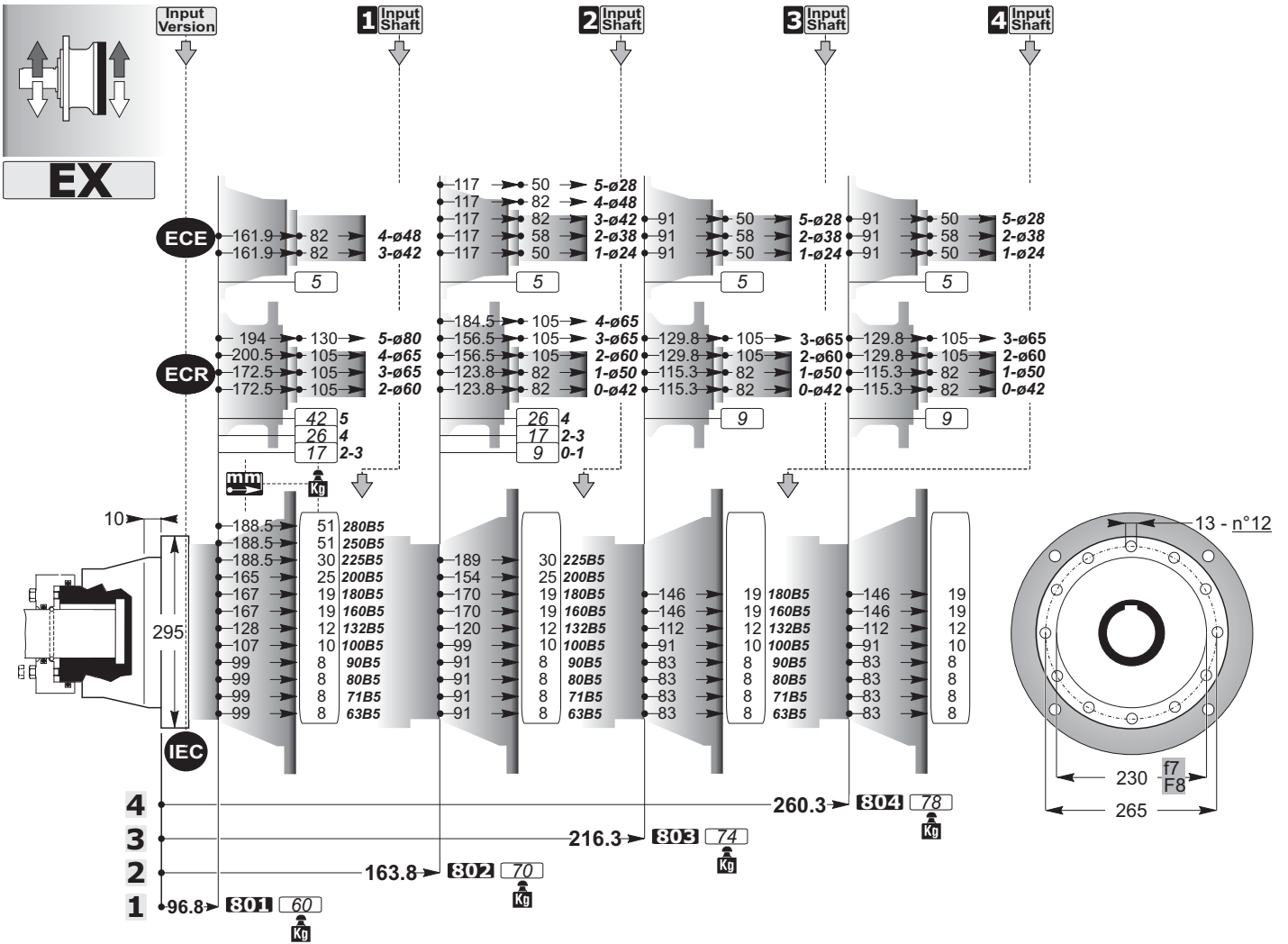
**Аксессуары**



|  |  |   |
|--|--|---|
| <p><b>SD</b></p>  <p>D1</p> <p>Ld</p> <p>D1</p> <p>L1</p> <p>L2</p> |  | <p><b>SD</b></p>  <p><b>Аксессуары</b></p> |
|  |  |   |

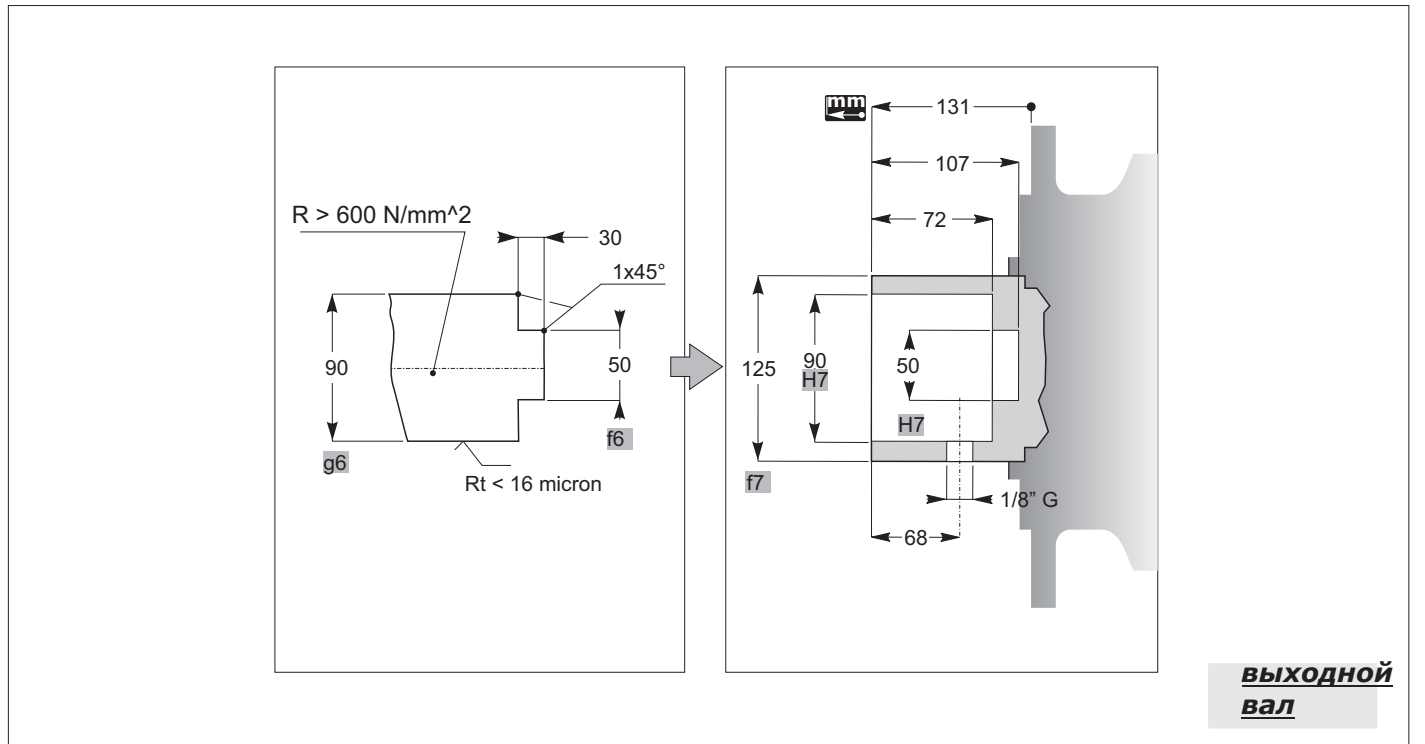
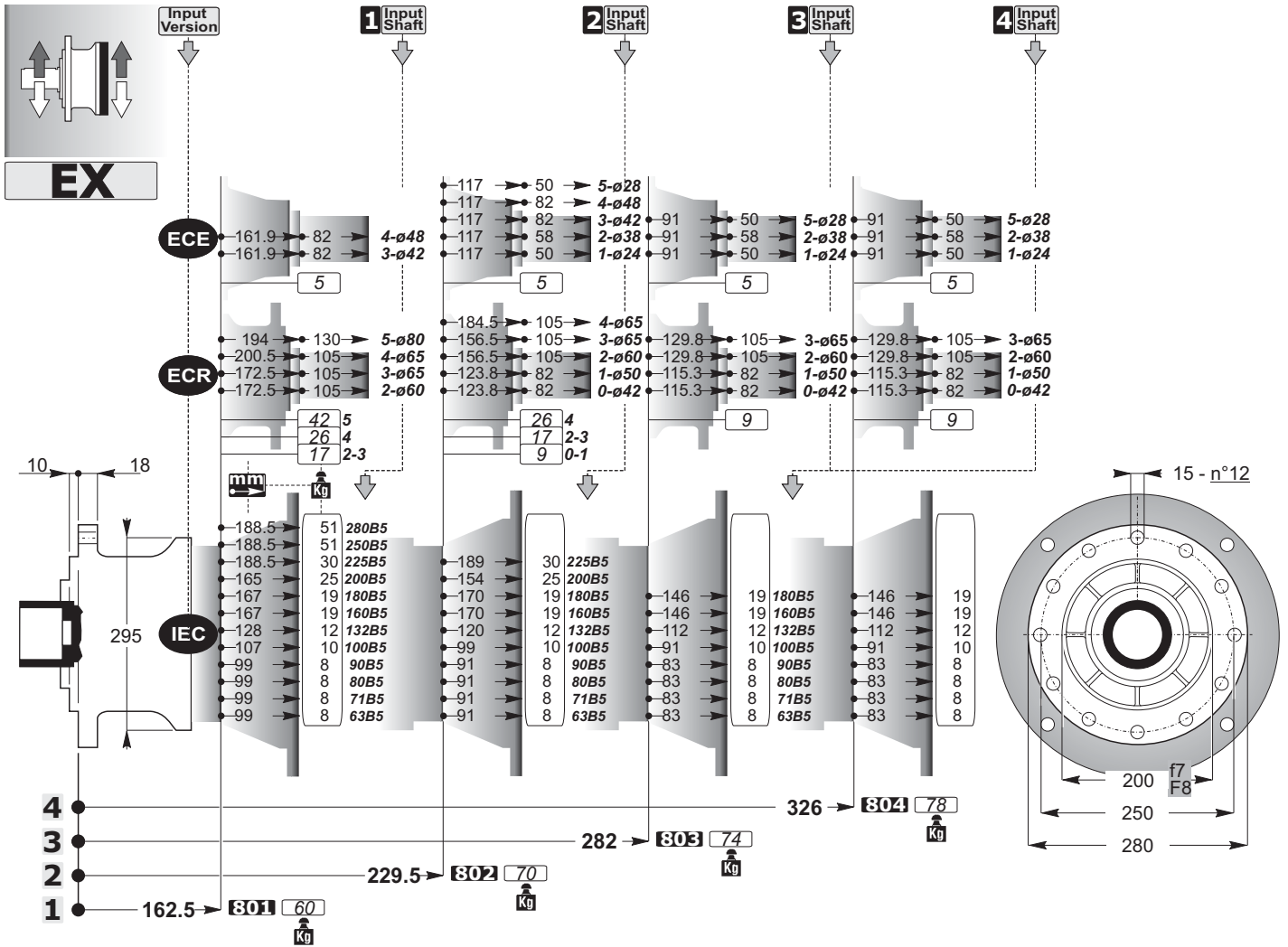
























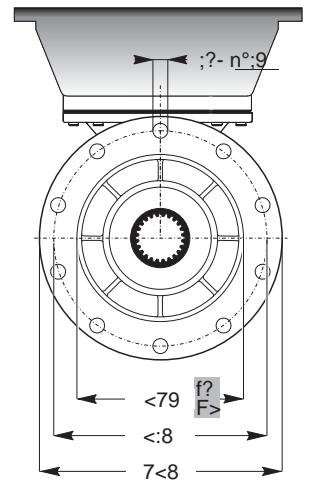
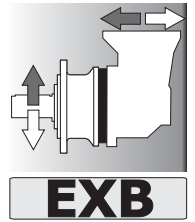
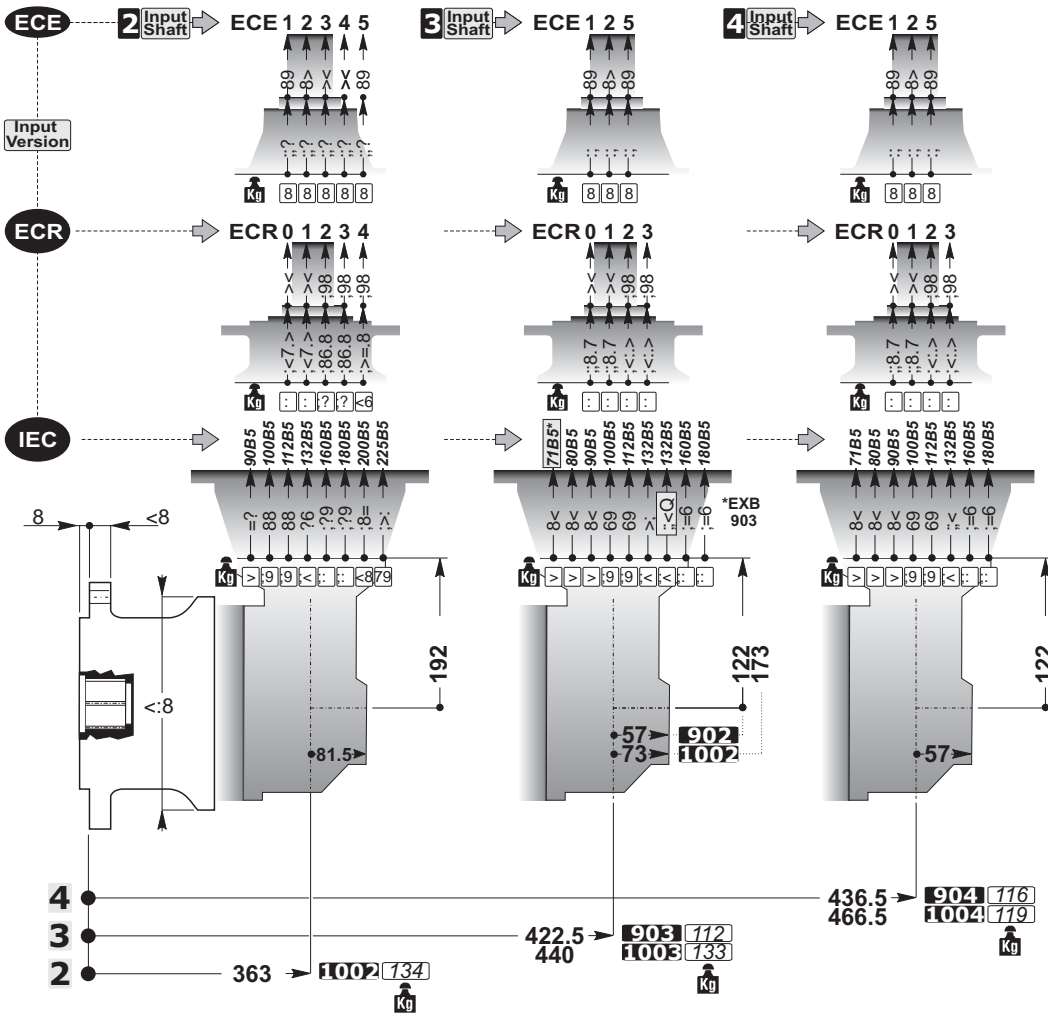






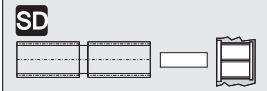
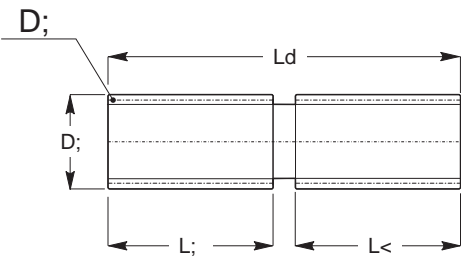






**C**

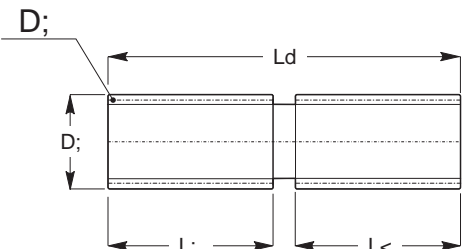

**SD**



**SD**

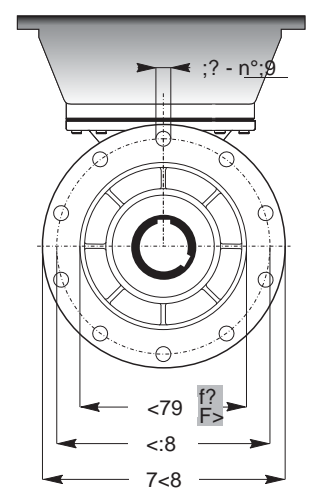
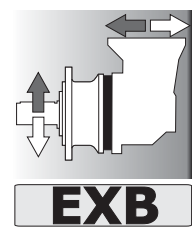
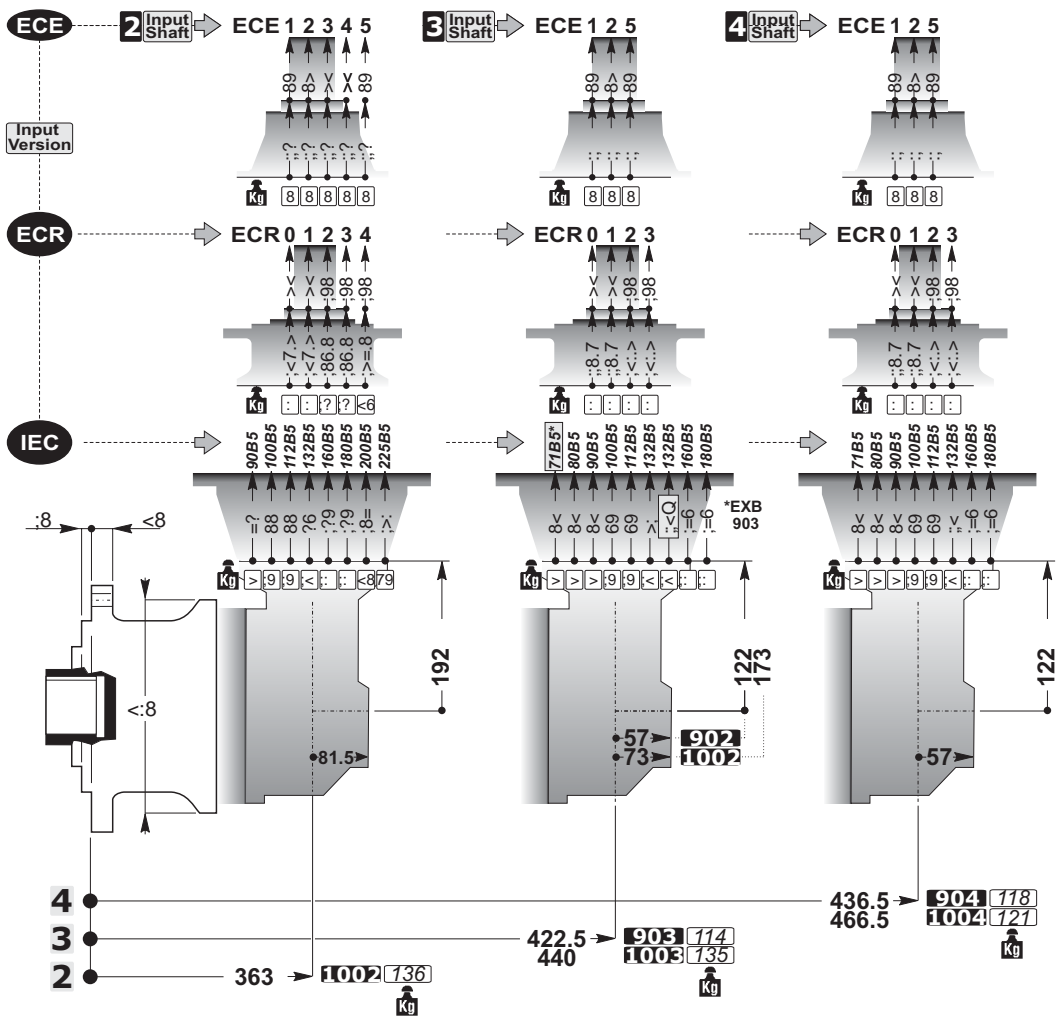
**Аксессуары**

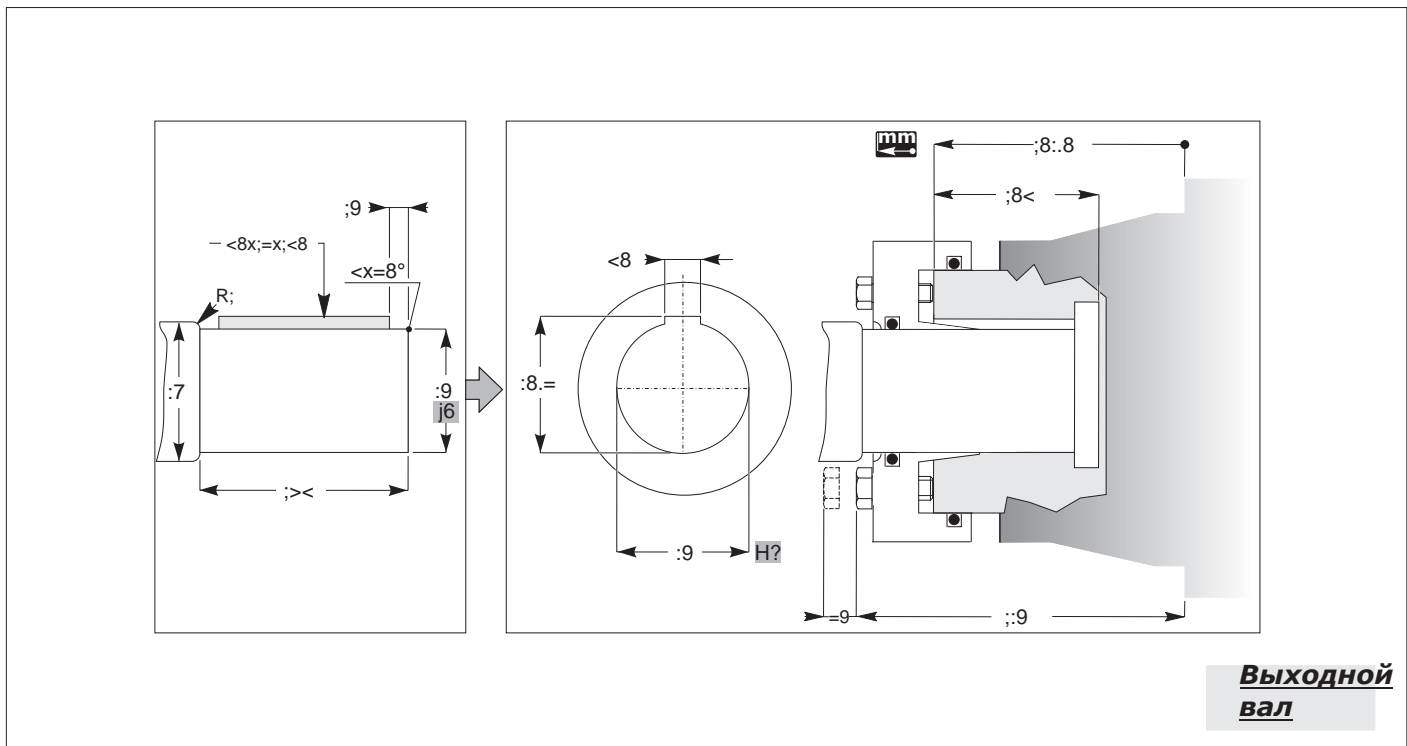
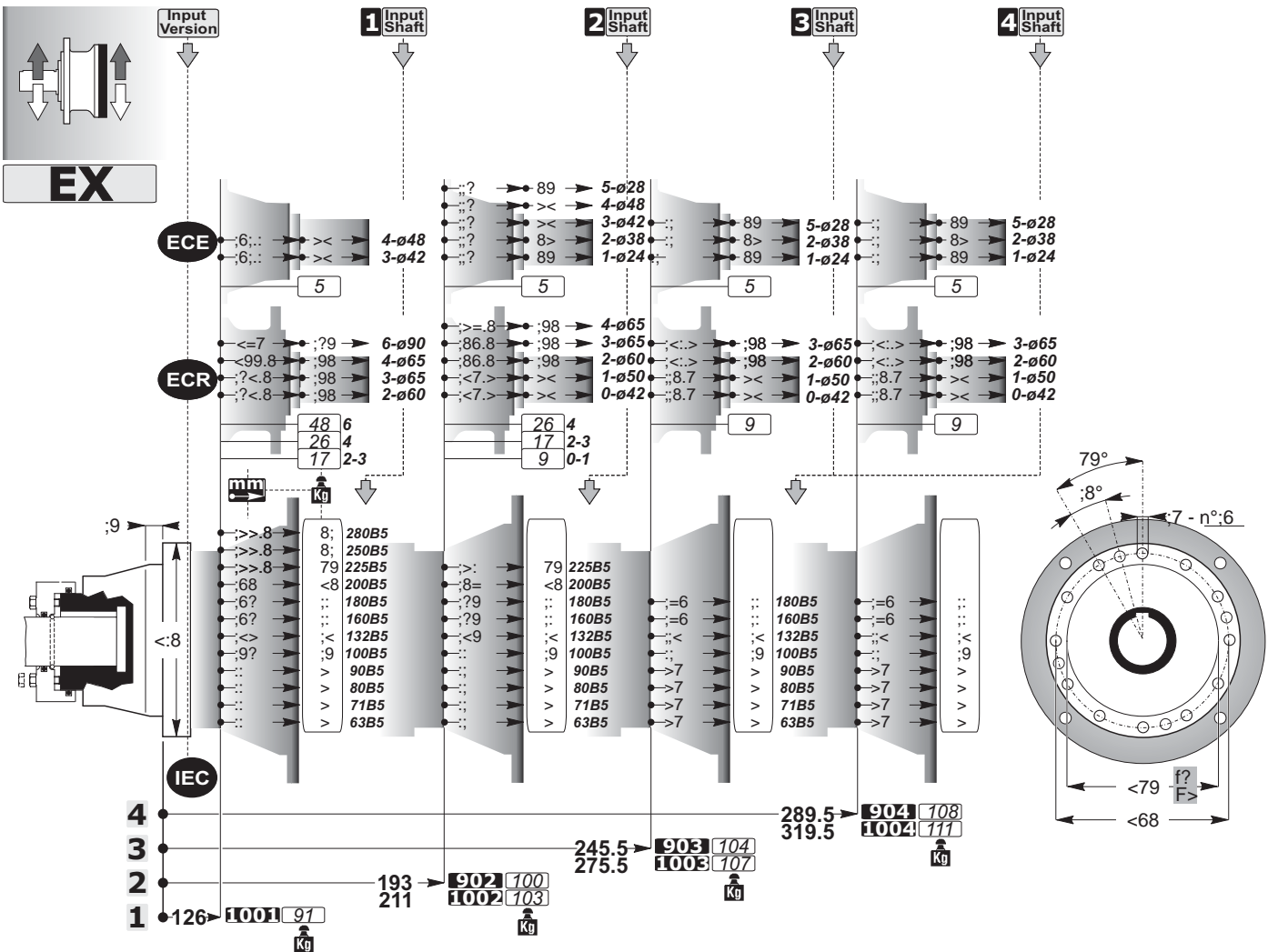


|  |  |   |
|--|--|---|
| <p><b>SD</b></p>  |  | <p><b>SD</b></p>  <p><b>Аксессуары</b></p> |
|  |  |   |

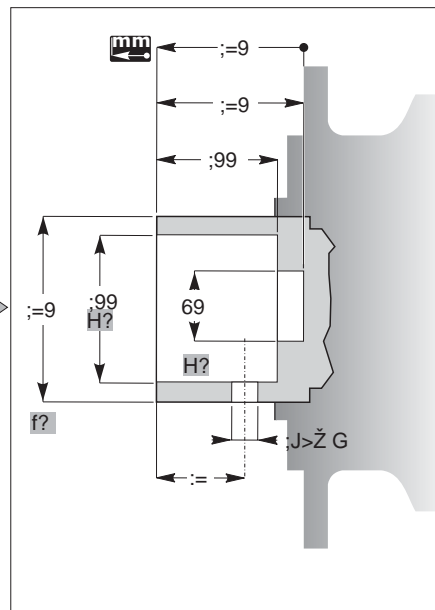
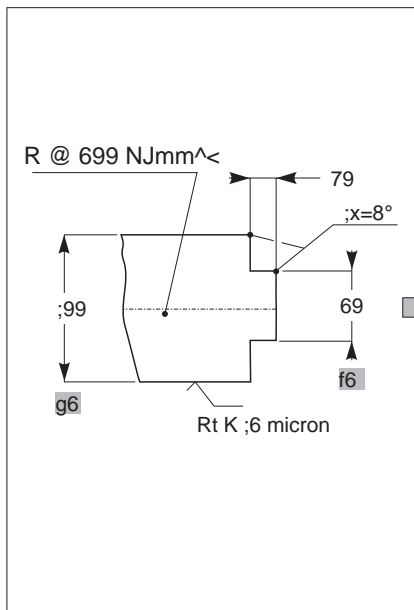
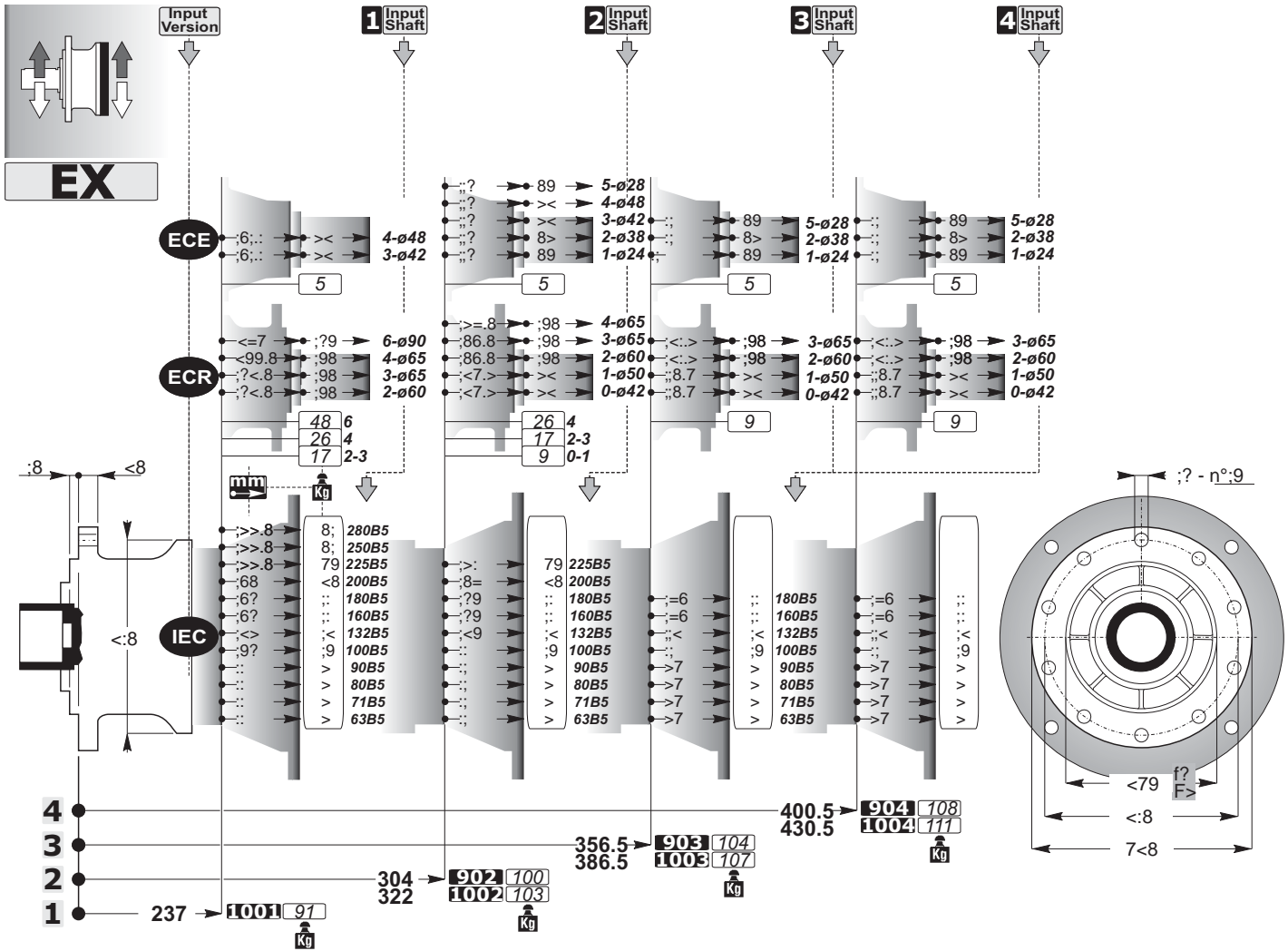




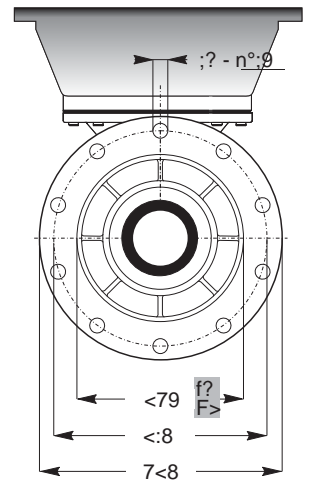
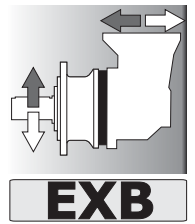
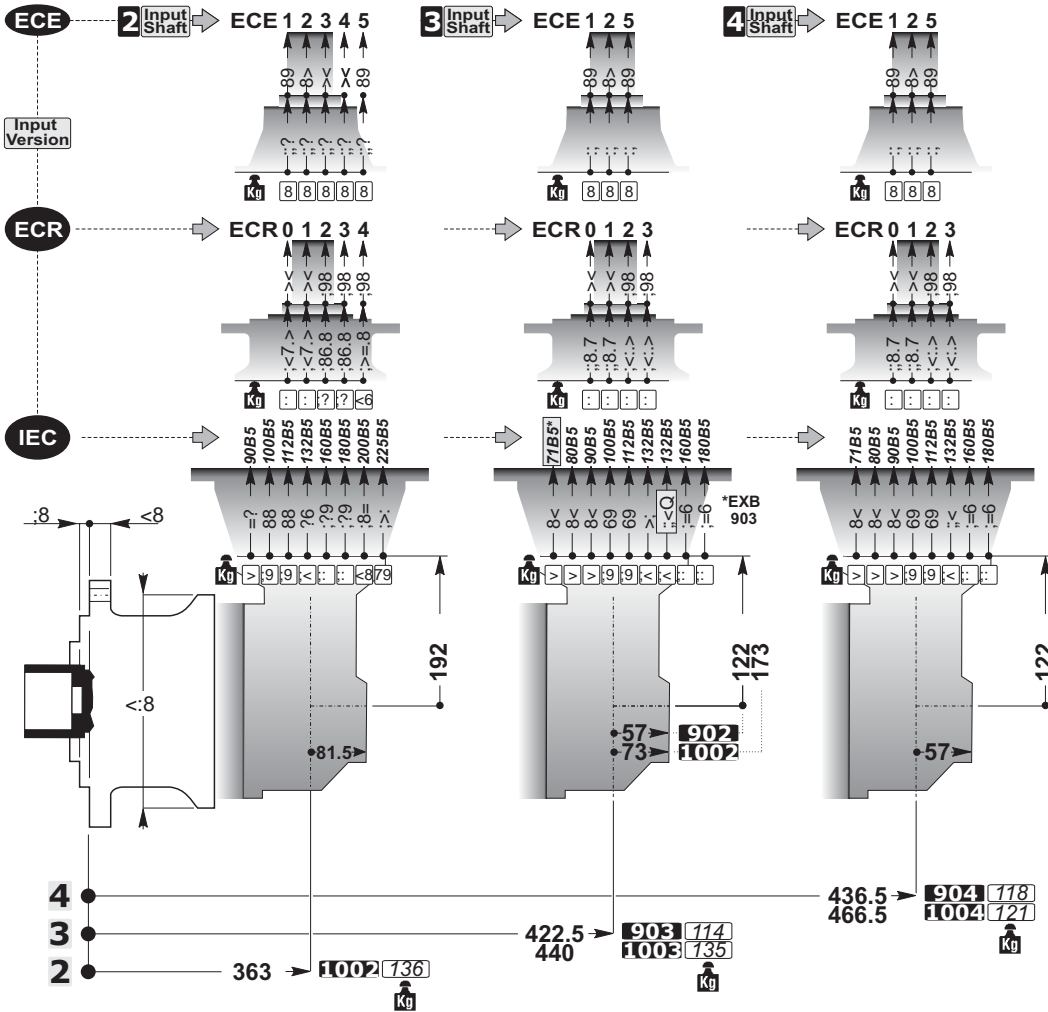




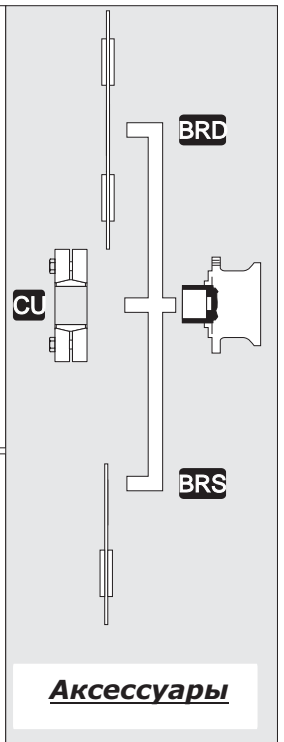
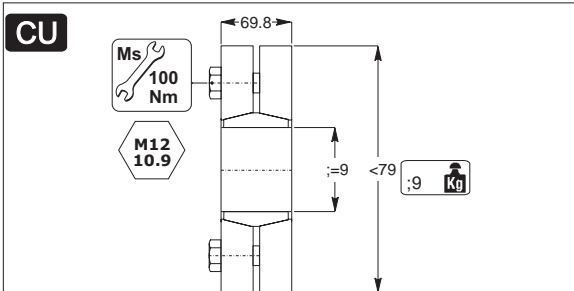
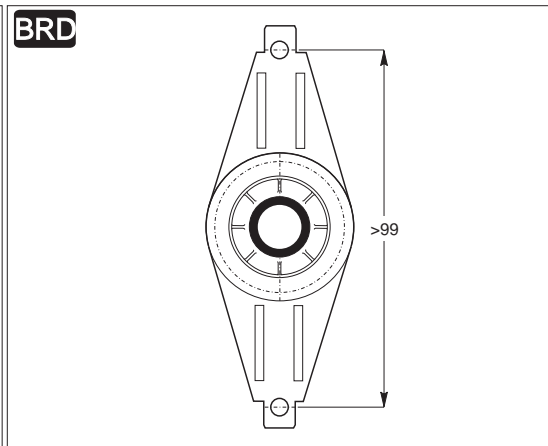
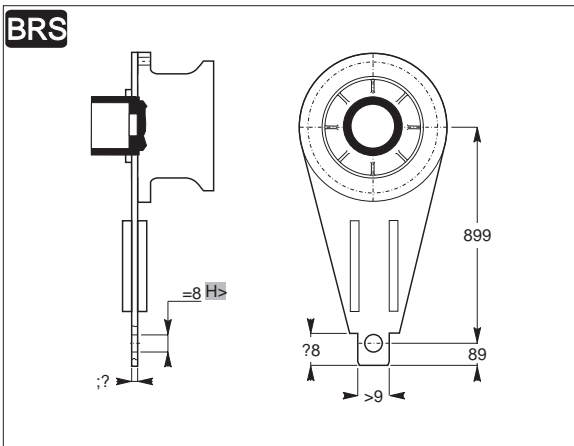




**Выходной Вал**



**C**





















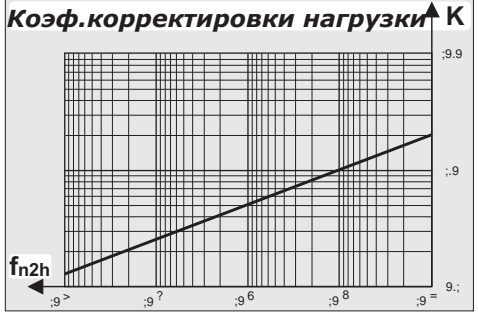
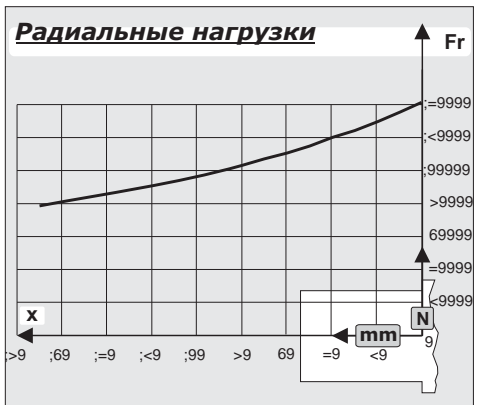
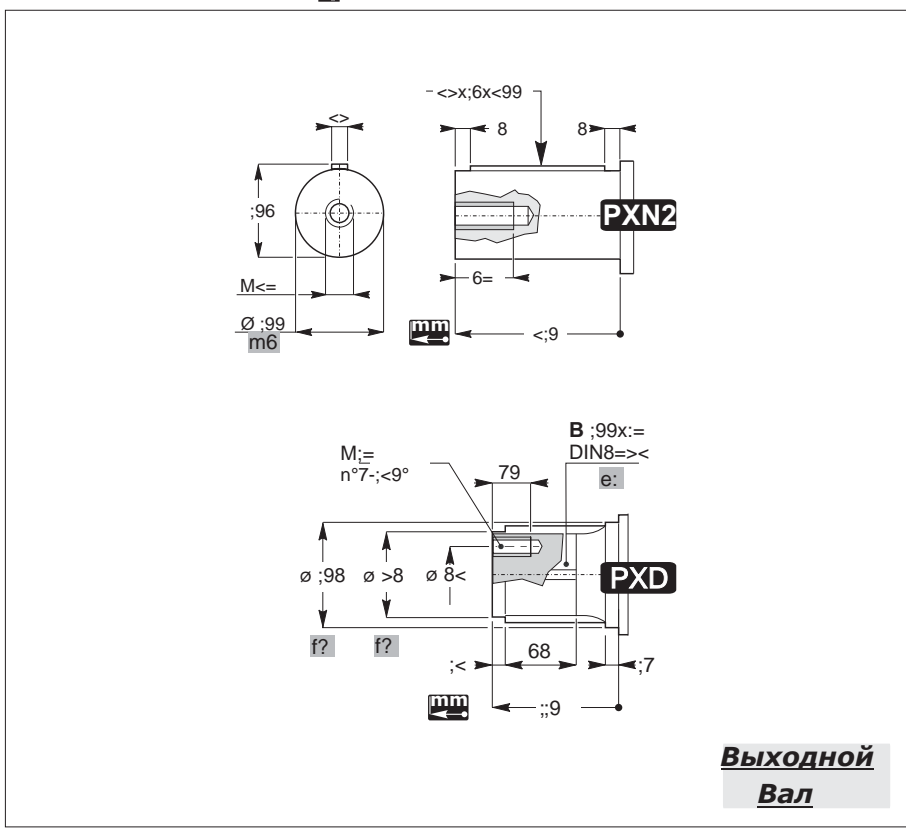
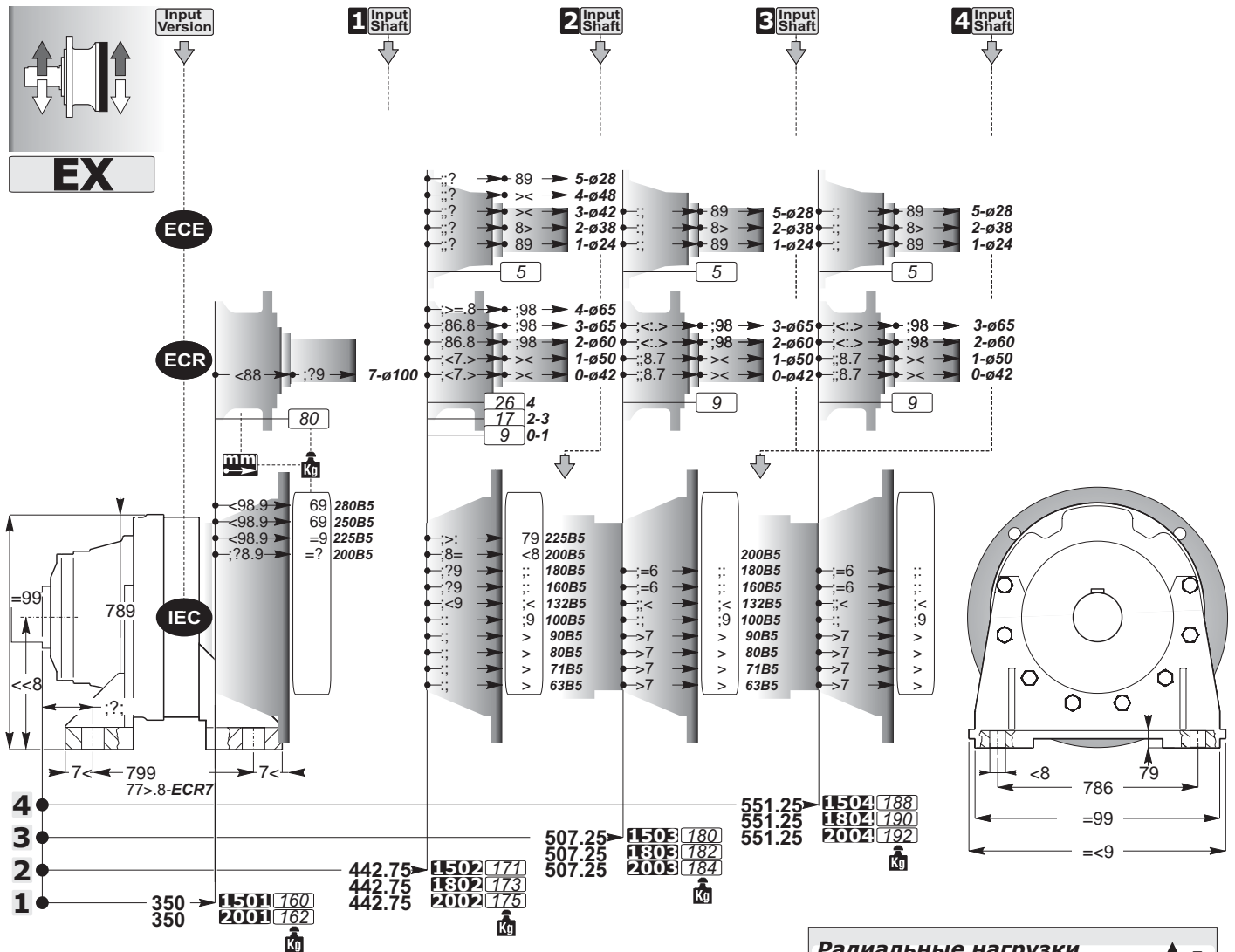




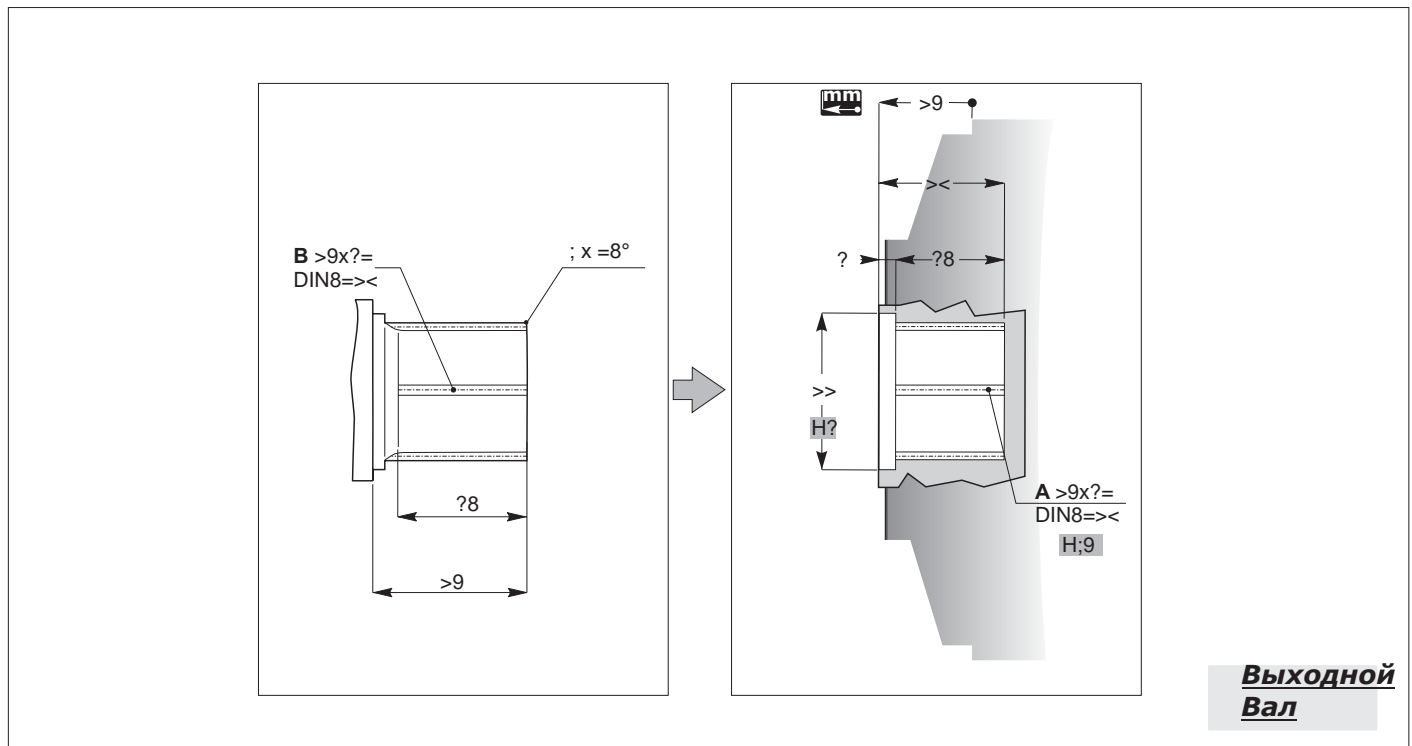
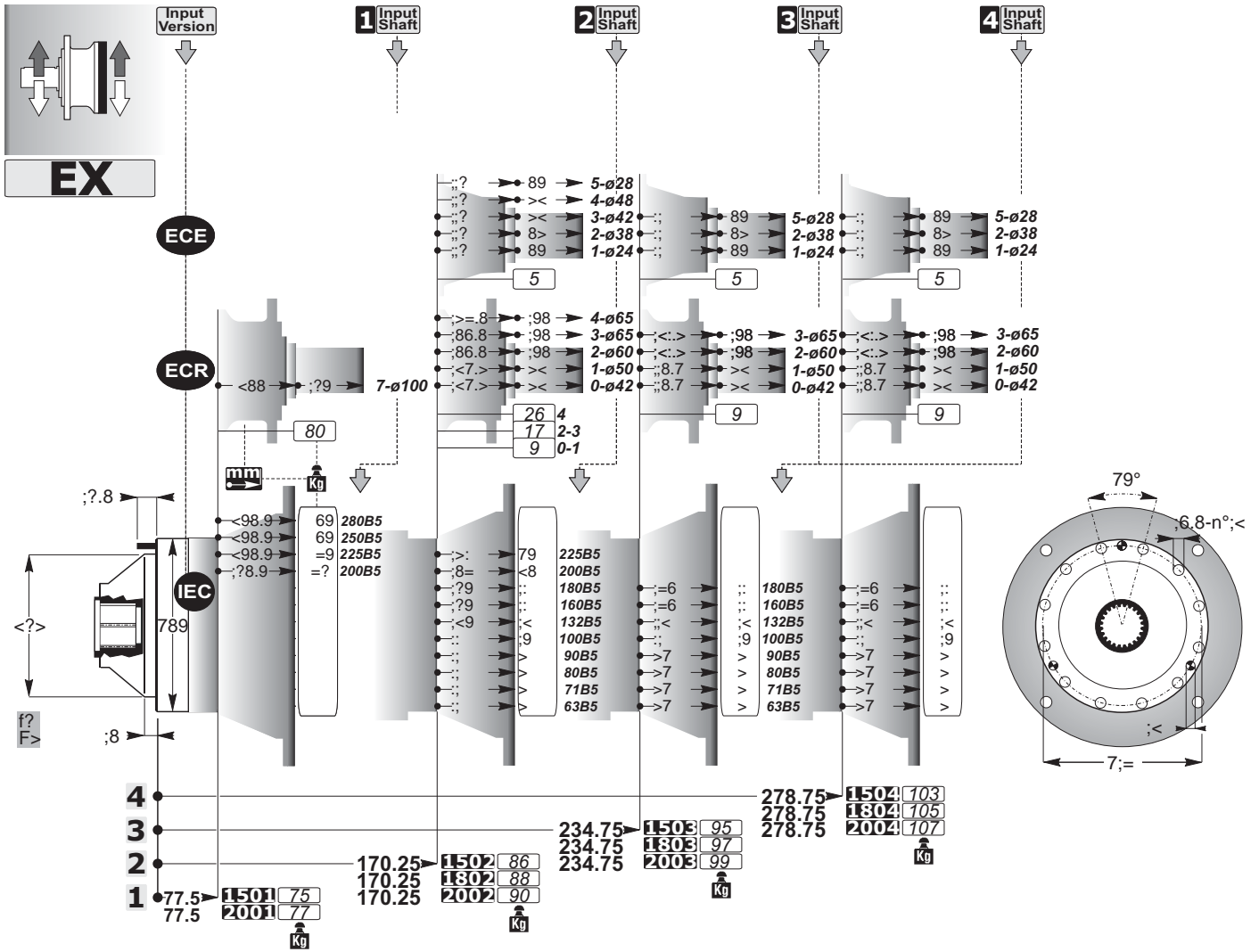




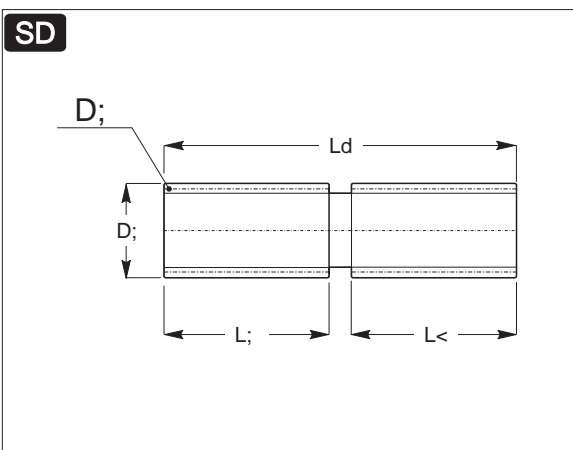
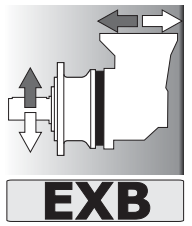
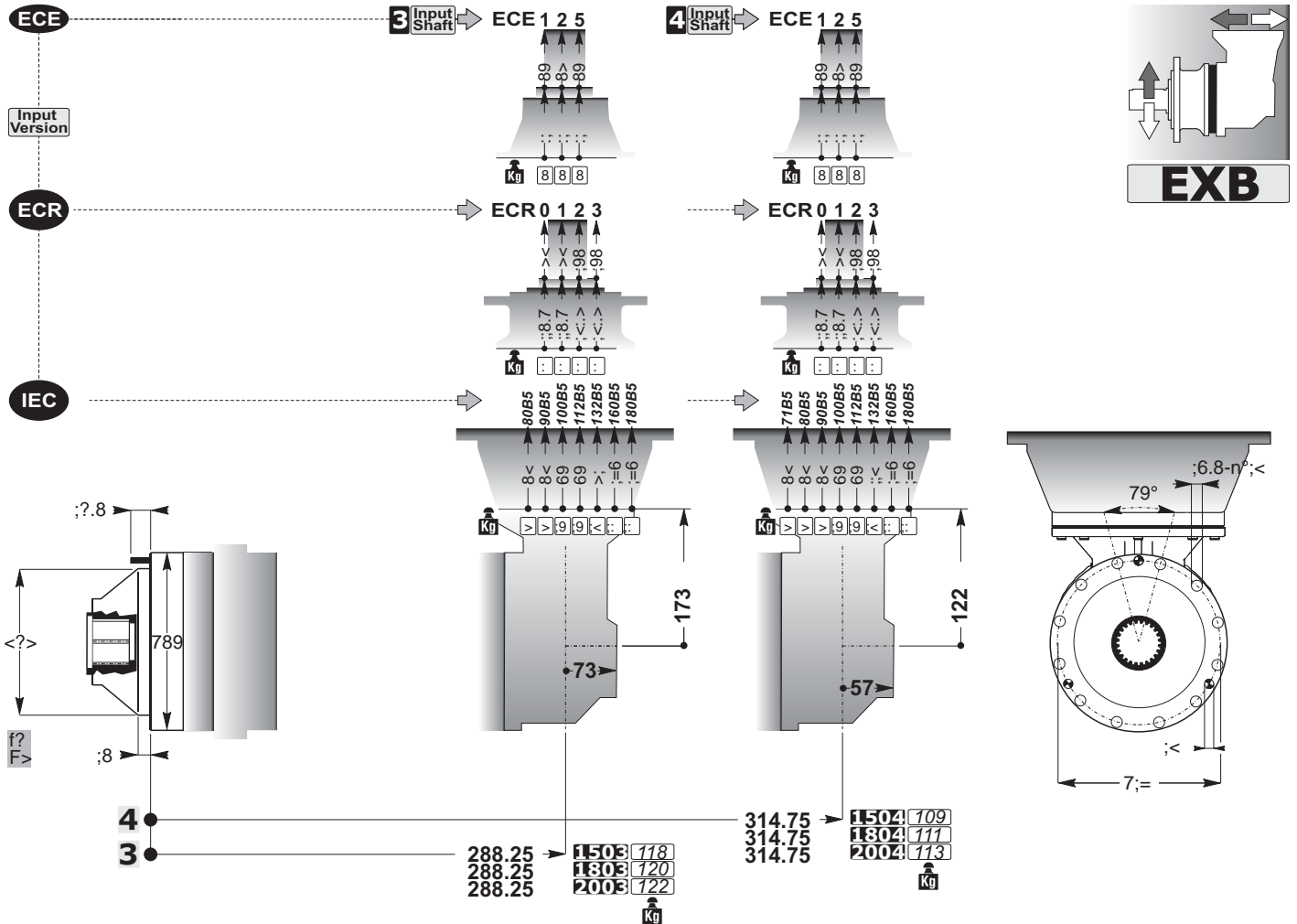






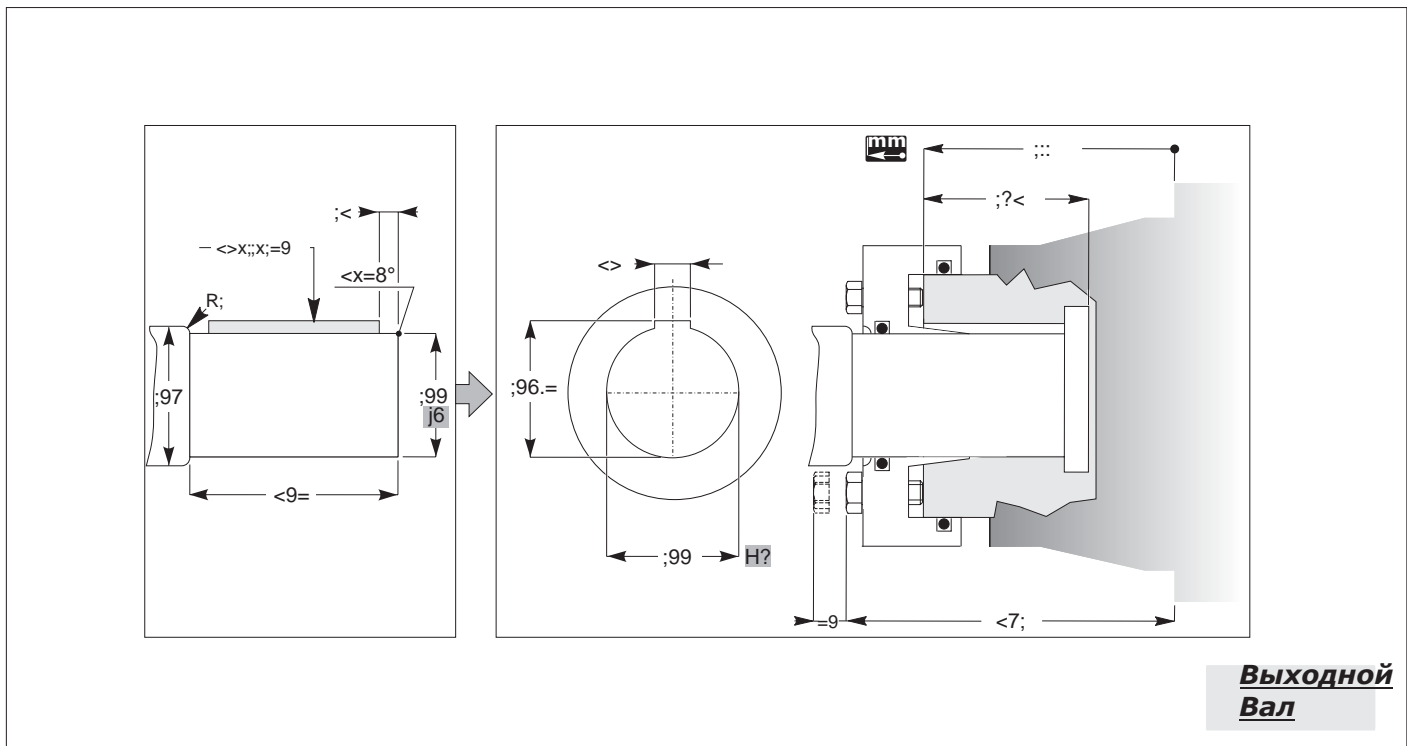
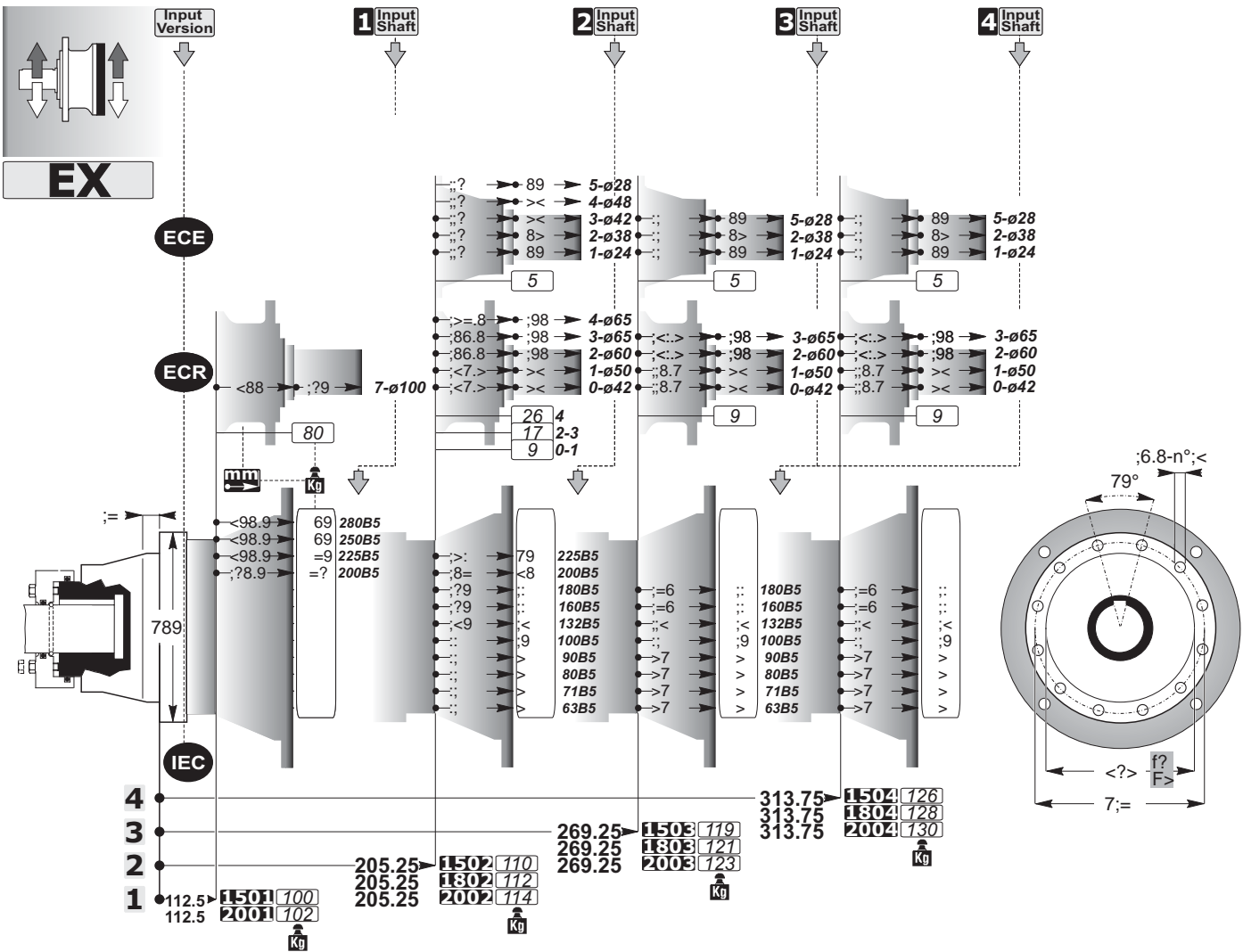






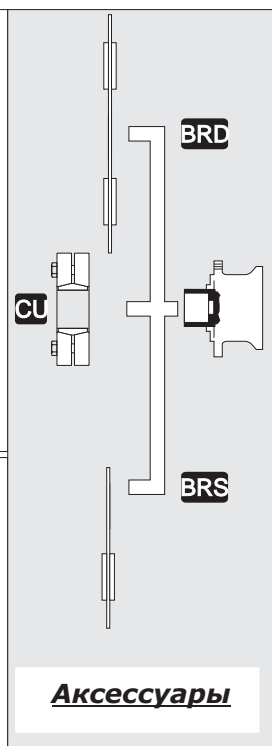
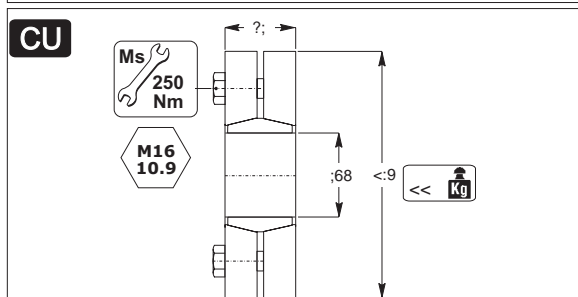
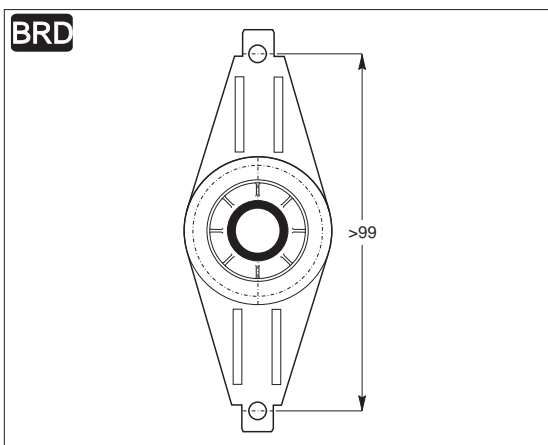
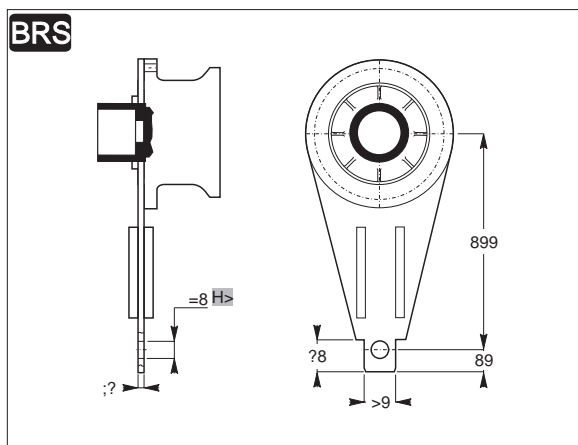
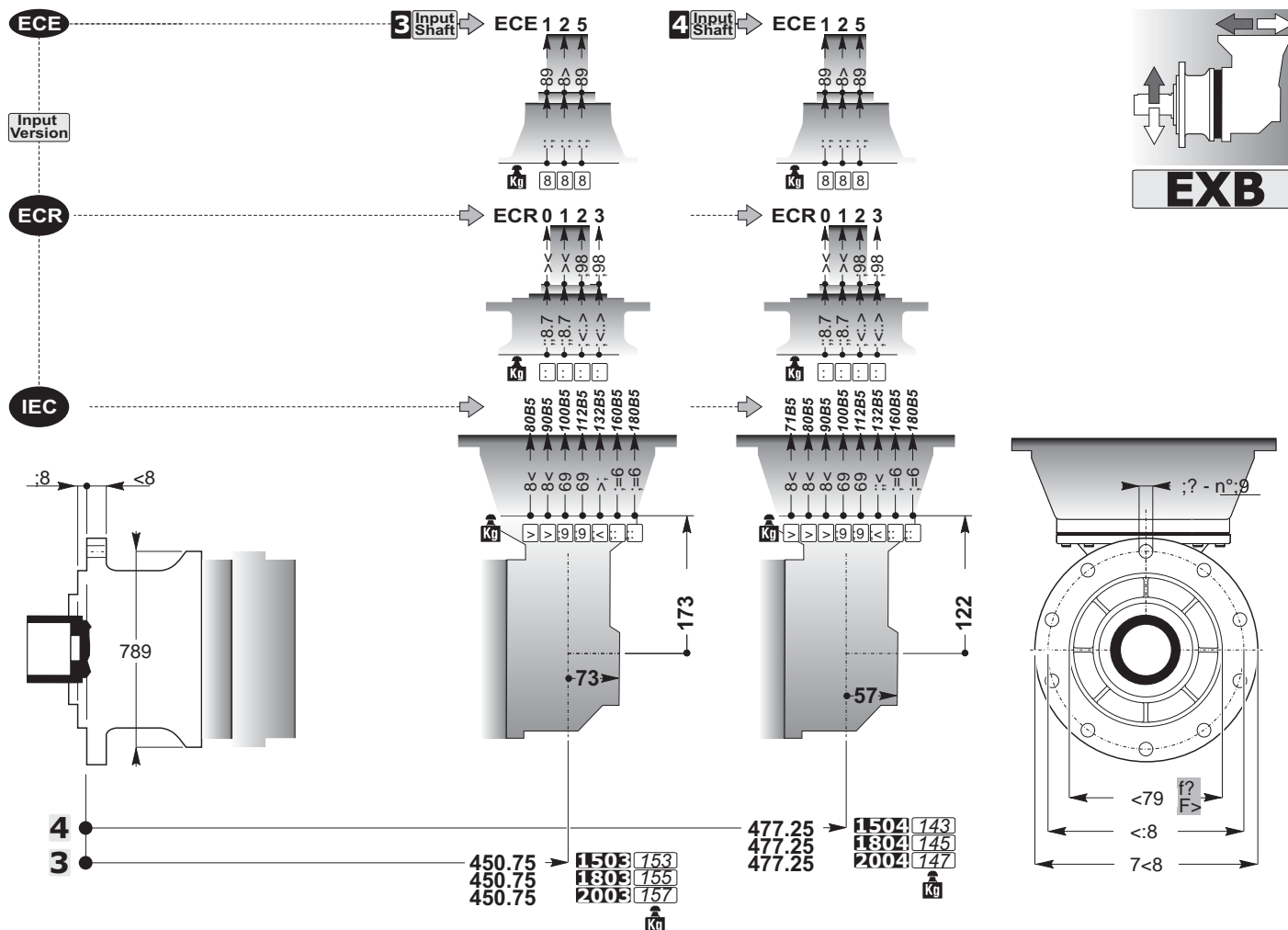
**SD**

**Аксессуары**







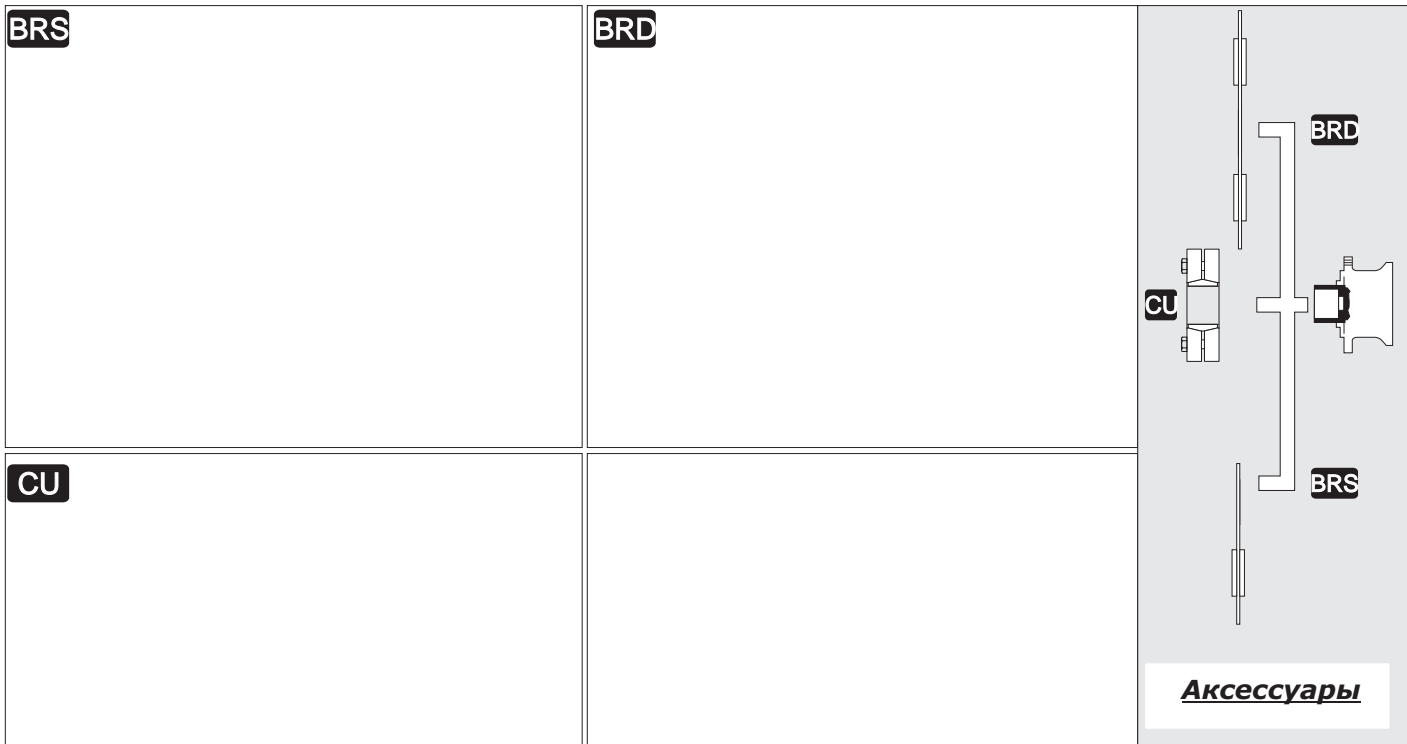
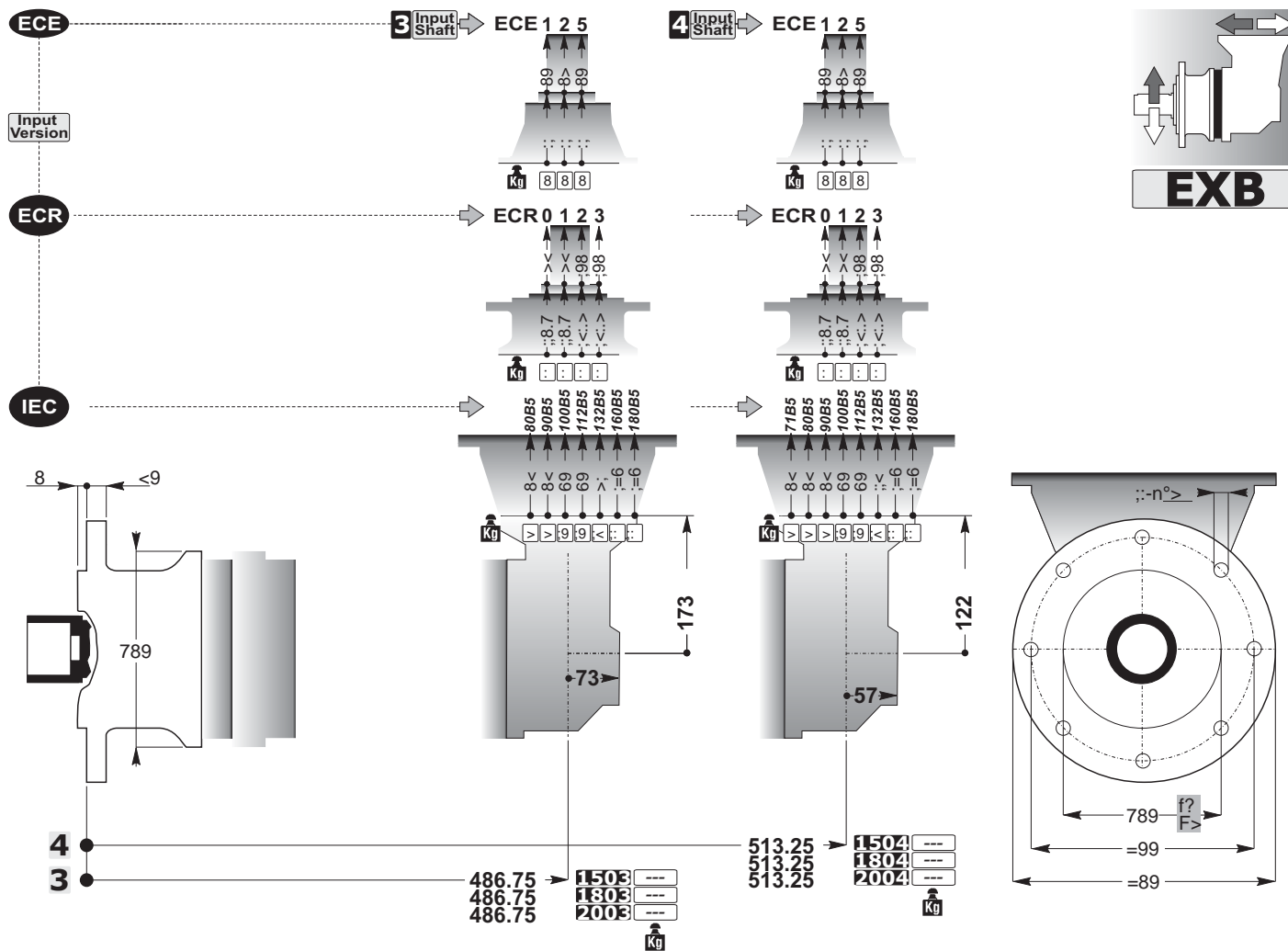










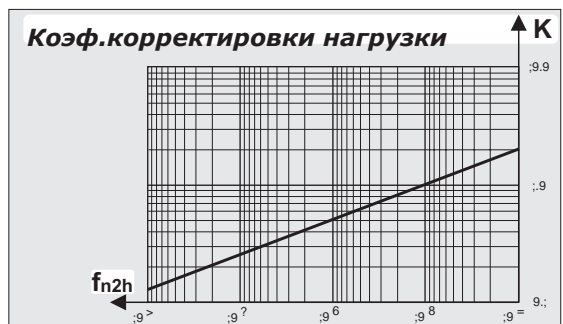
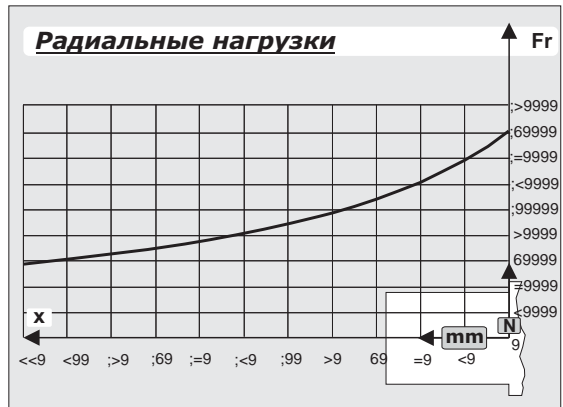
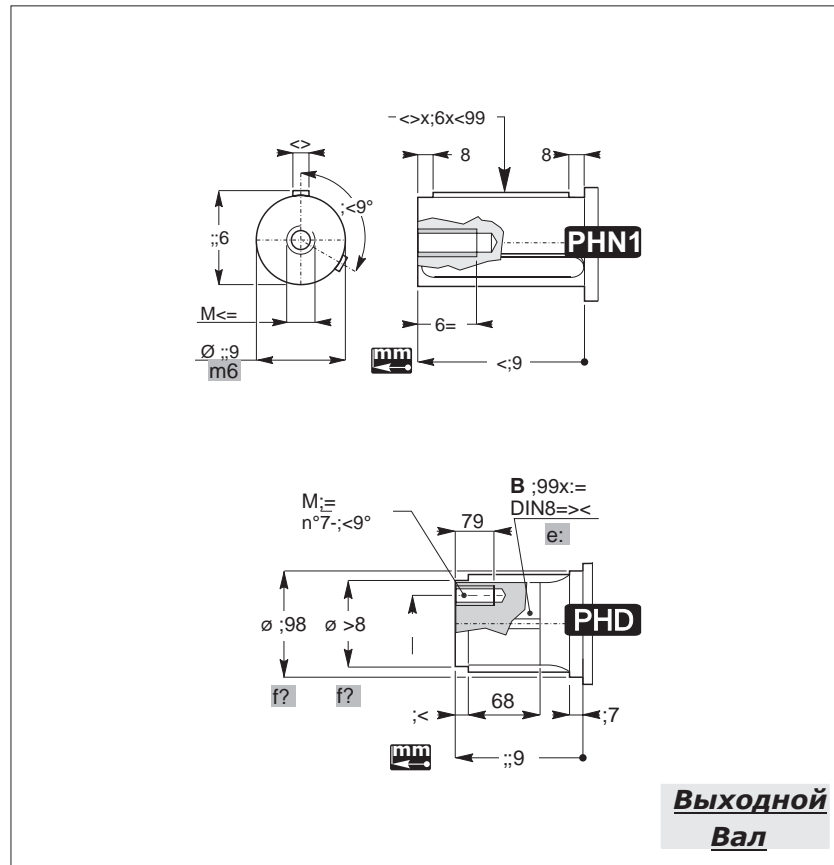
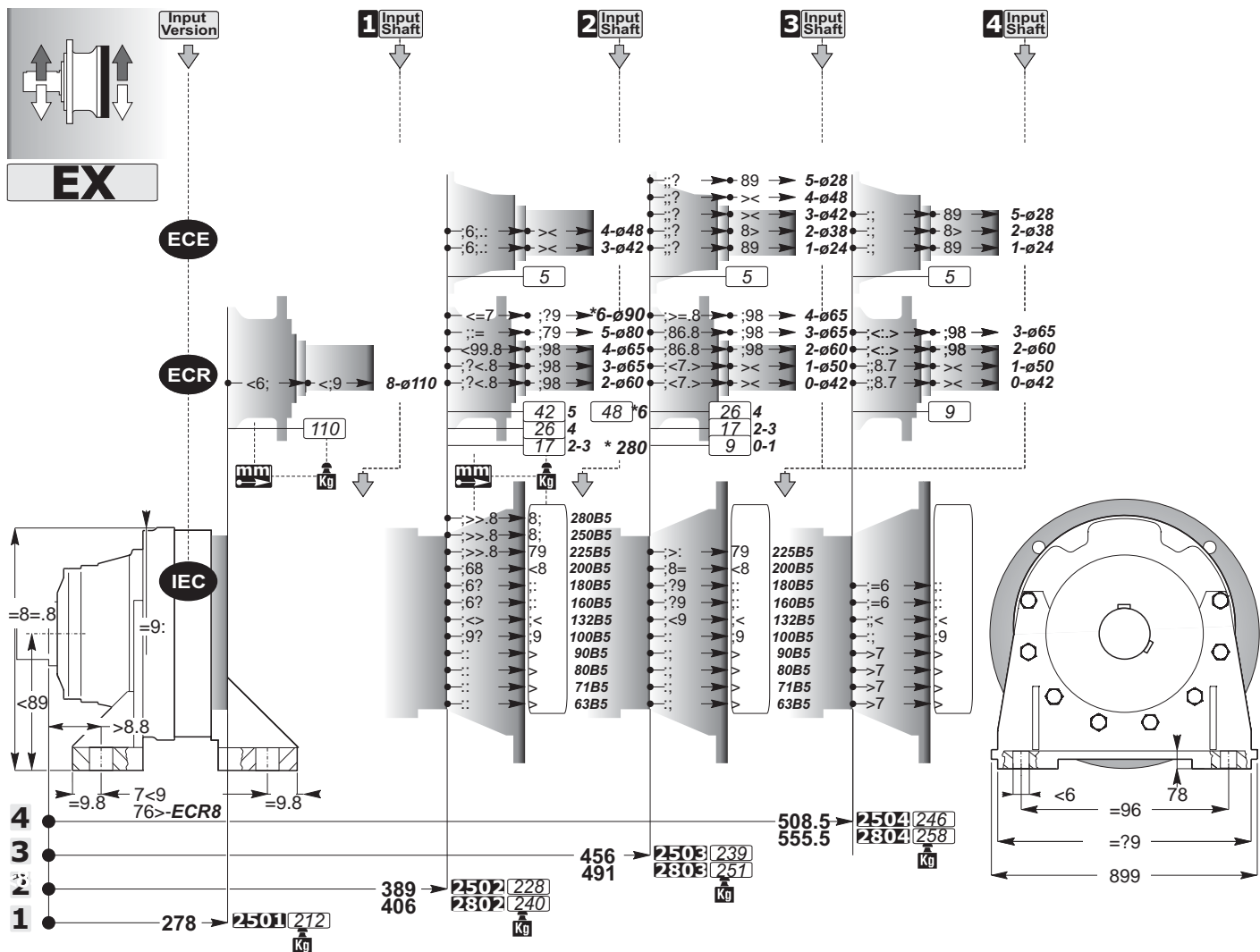








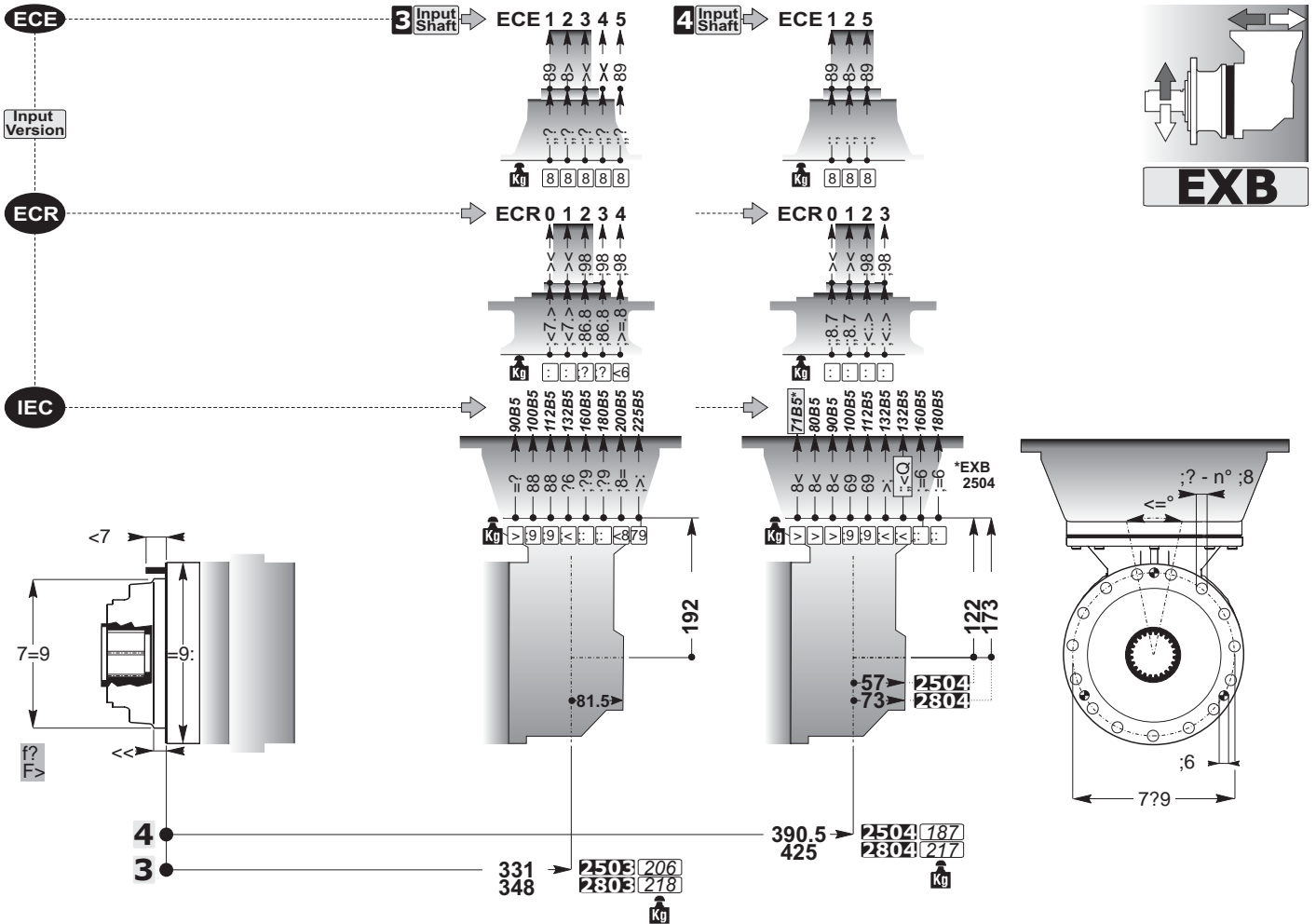




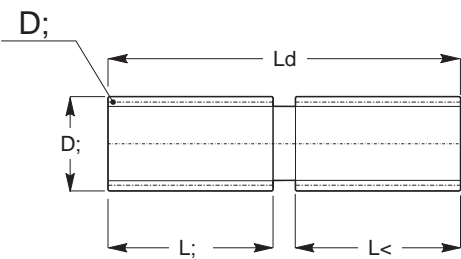








**SD**



**SD**



**Аксессуары**



**ECE**

**3** Input Shaft

ECE 1 2 3 4 5

**4** Input Shaft

ECE 1 2 5

Input Version

**ECR**

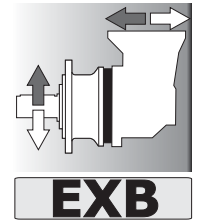
ECR 0 1 2 3 4

ECR 0 1 2 3

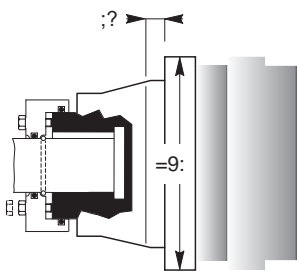
**IEC**

90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5

71B5 80B5 90B5 100B5 112B5 132B5 160B5 180B5



**EXB**



4  
3

335 → 

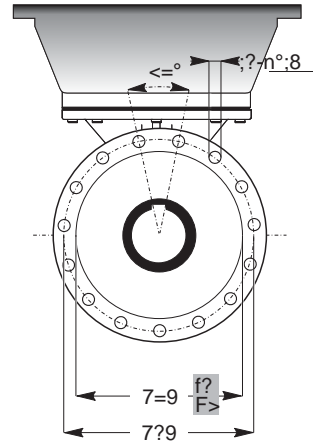
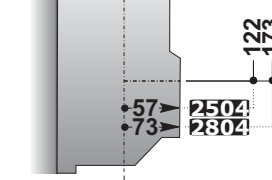
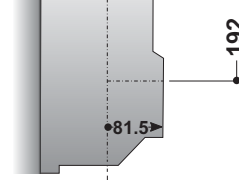
|      |     |
|------|-----|
| 2503 | 221 |
| 2803 | 233 |

  
Kg

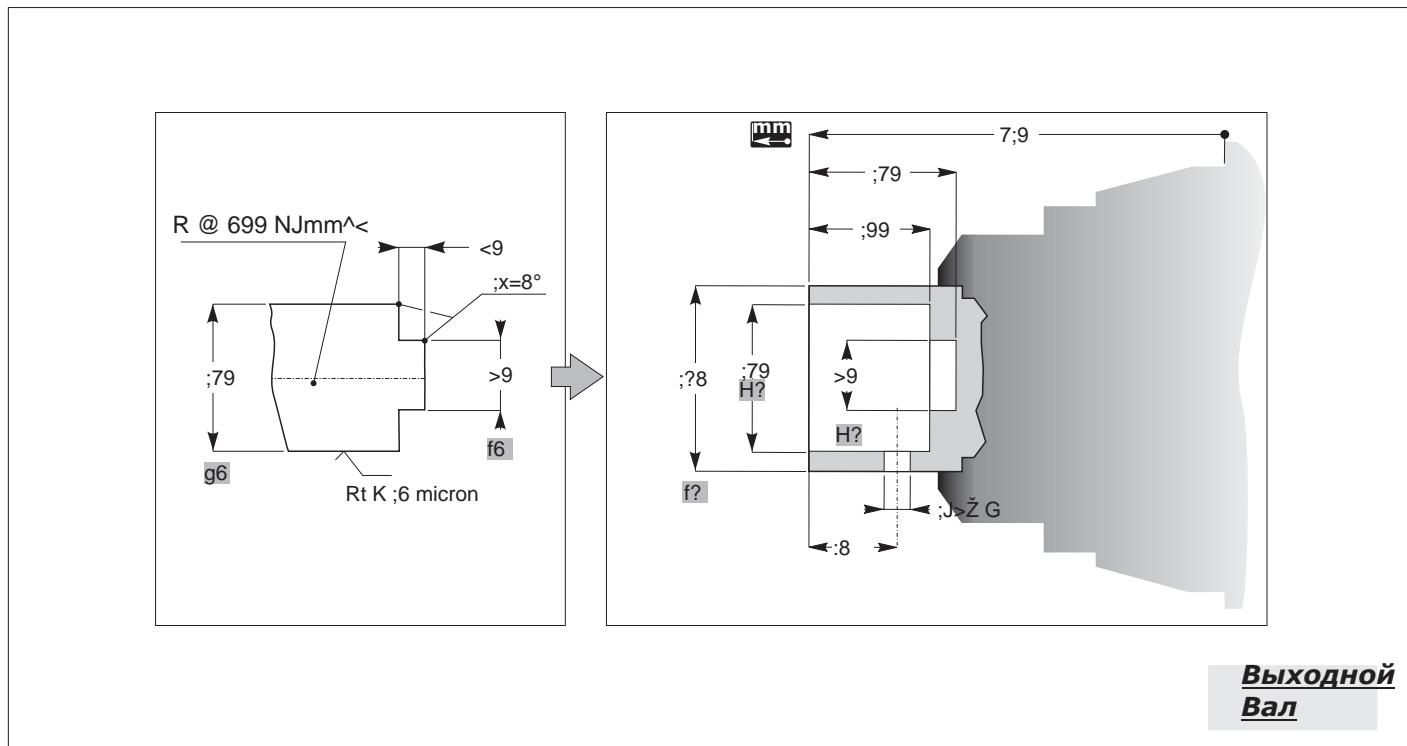
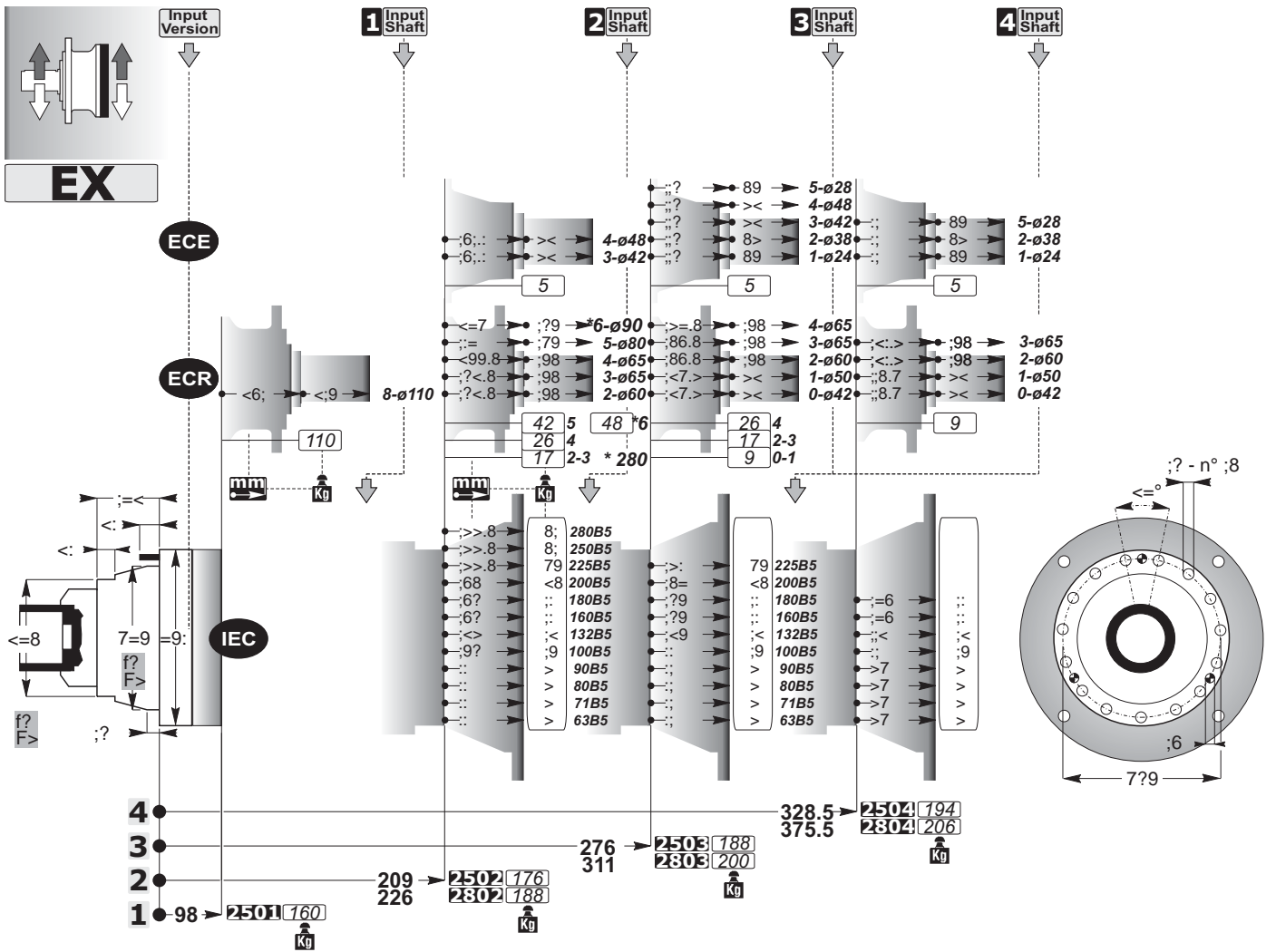
394.5 → 

|      |     |
|------|-----|
| 2504 | 202 |
| 2804 | 232 |

  
Kg



**C**

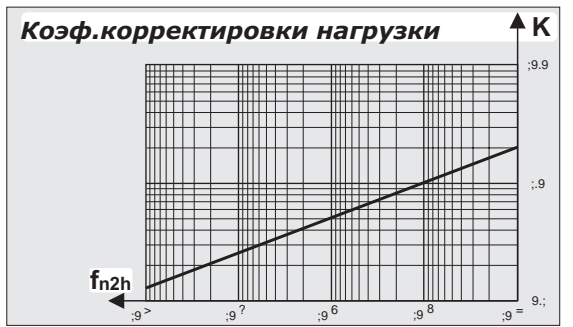
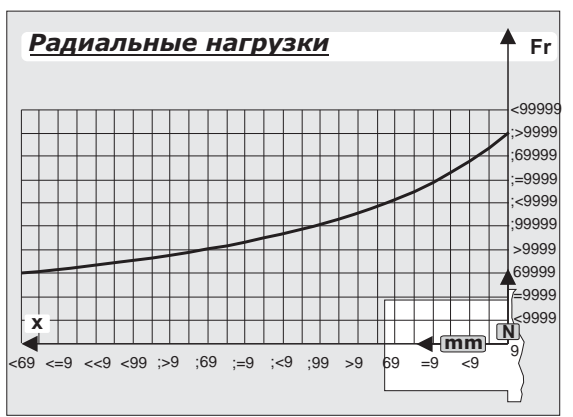
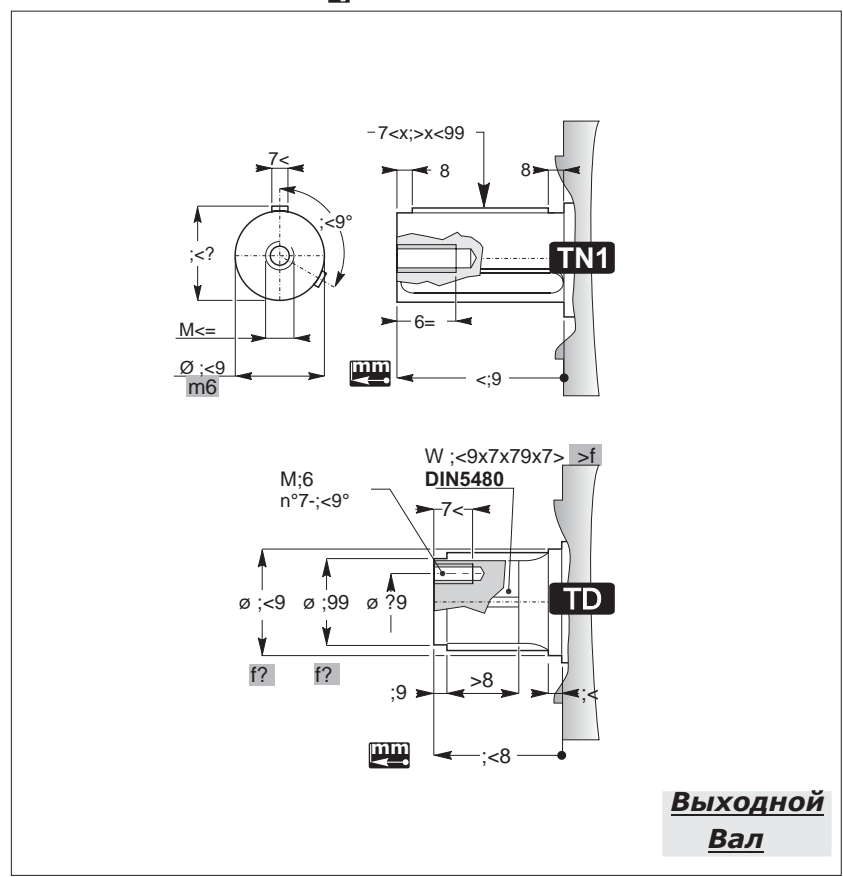
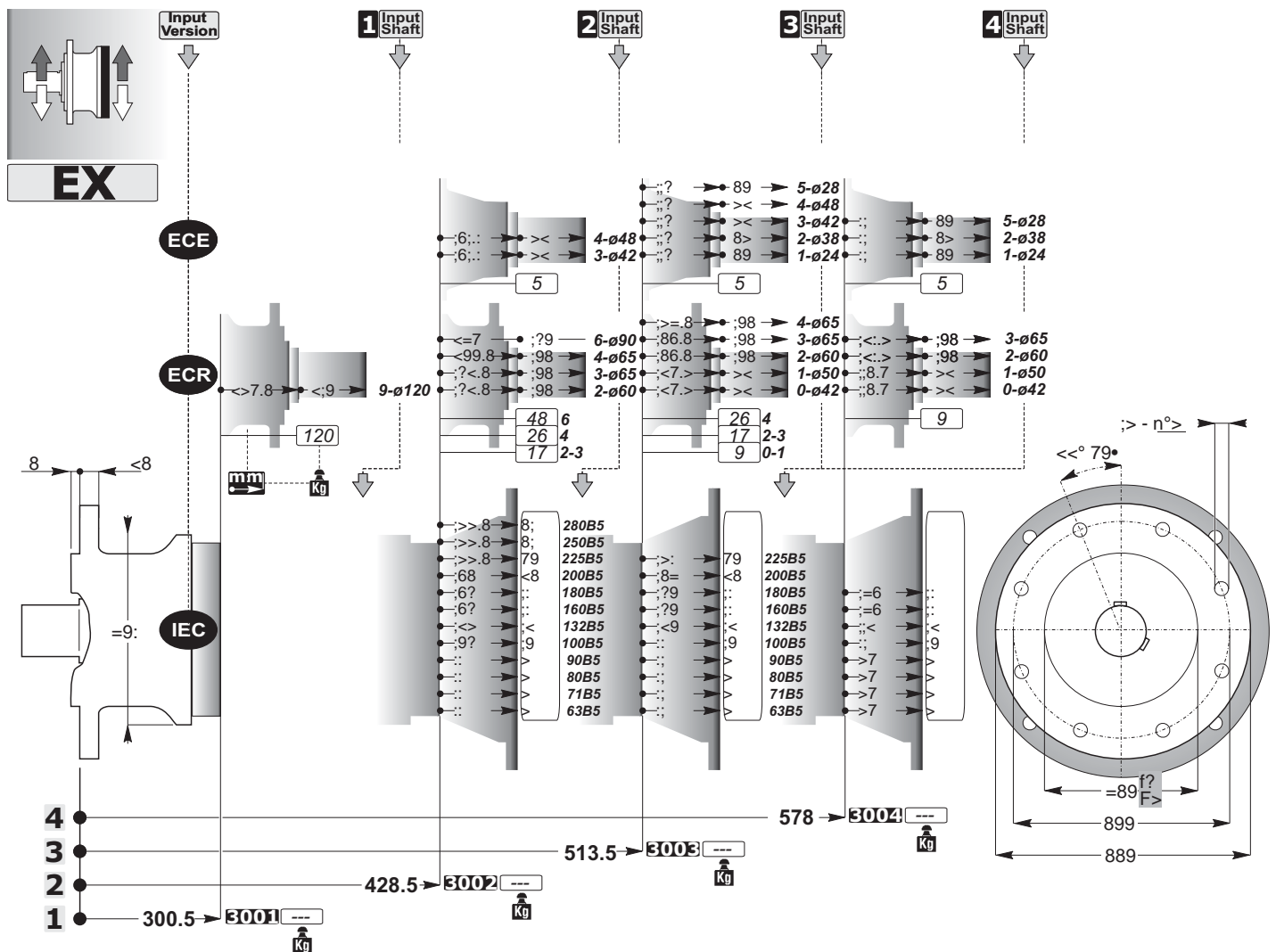
























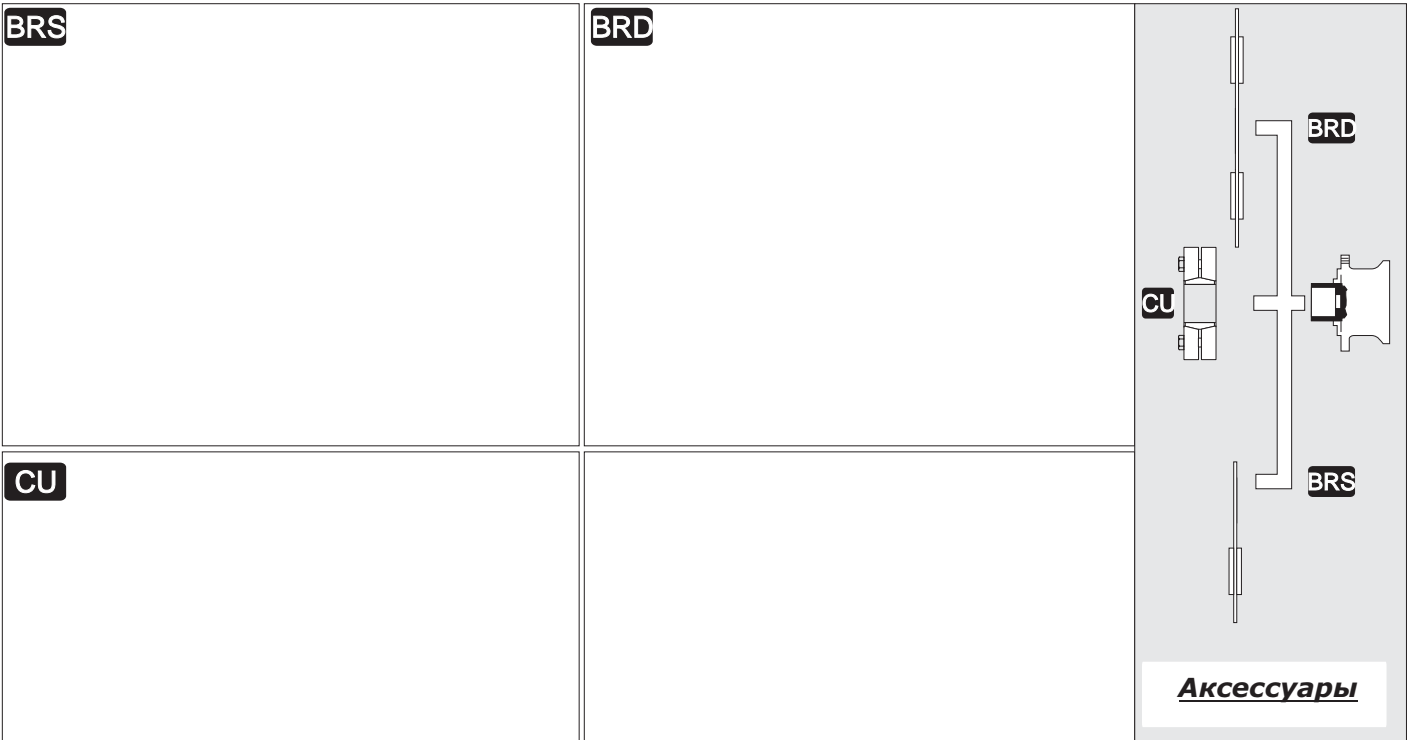
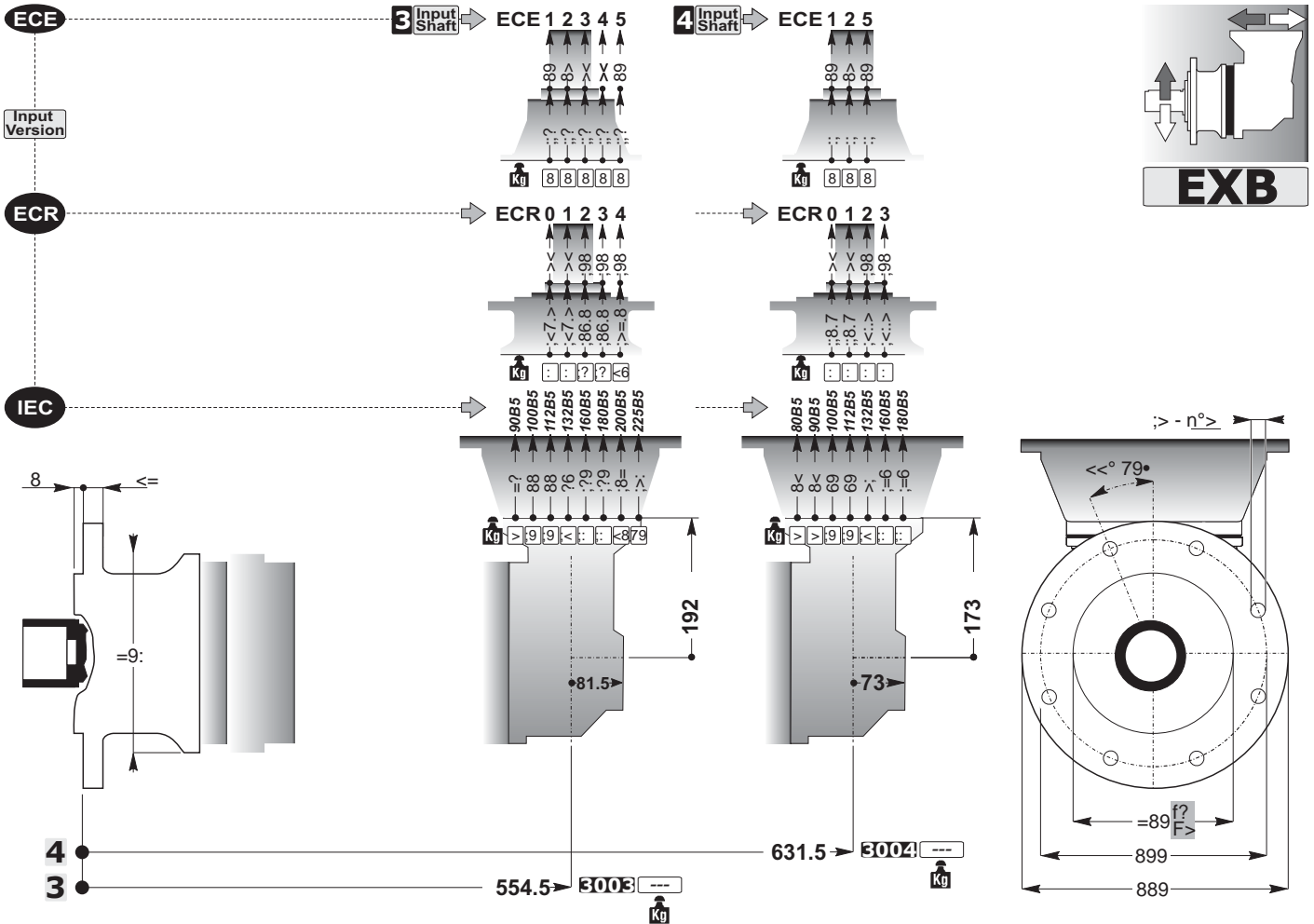


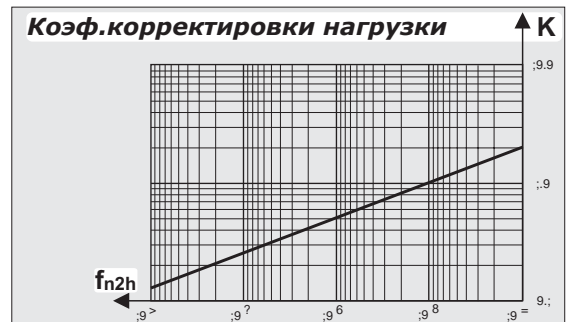
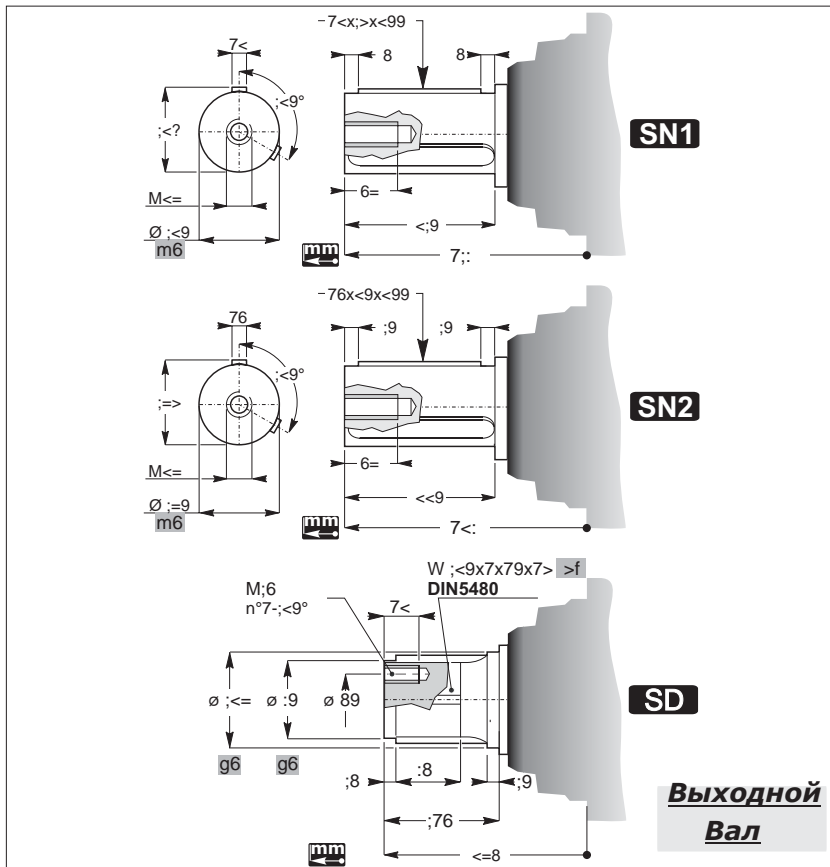
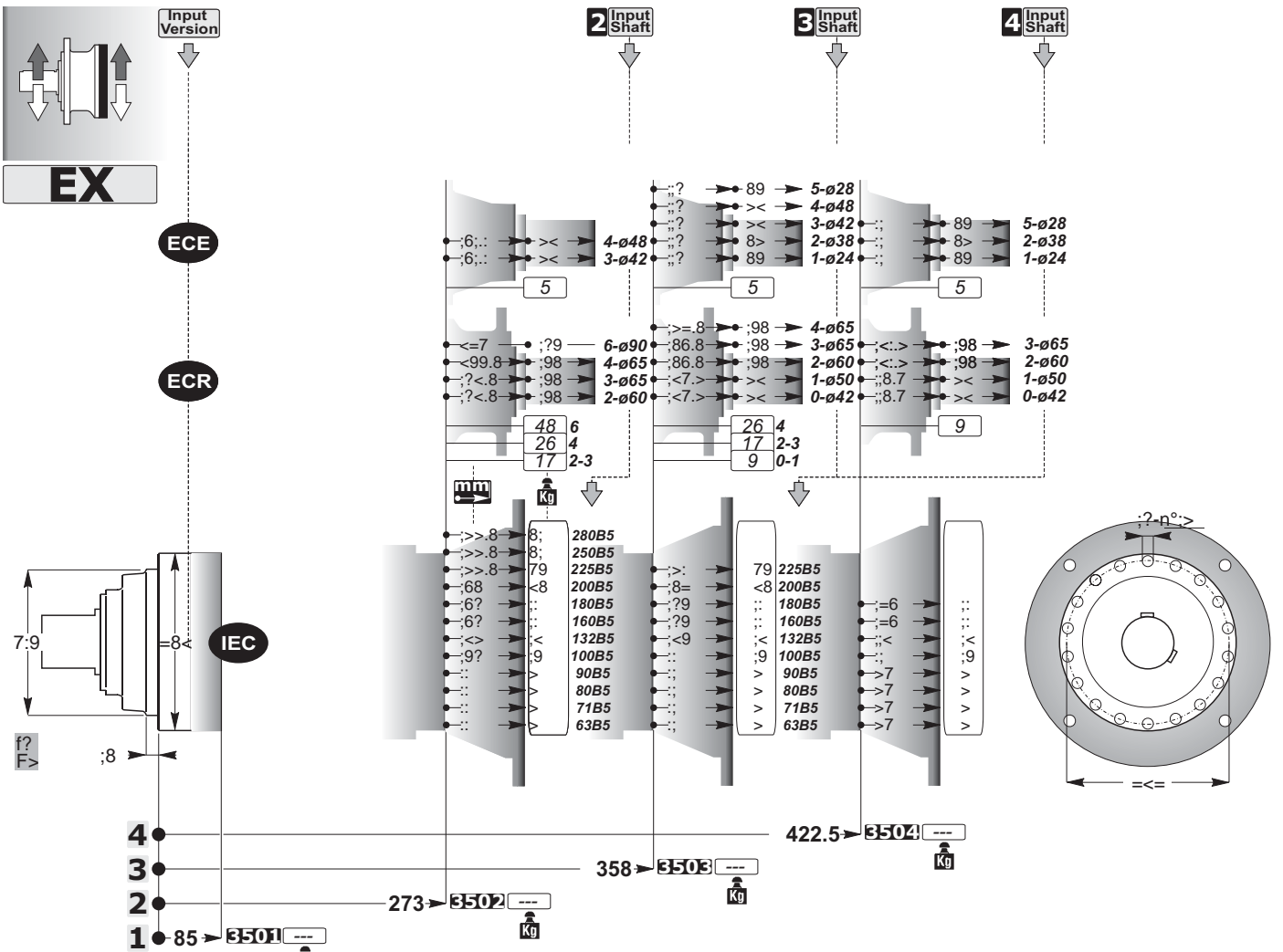




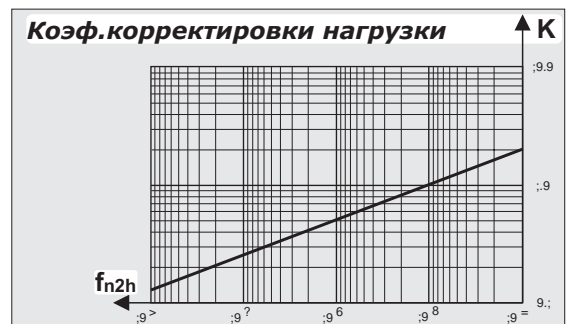
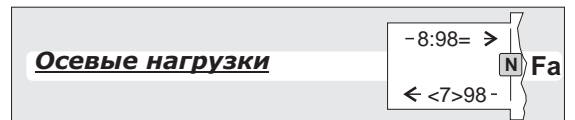
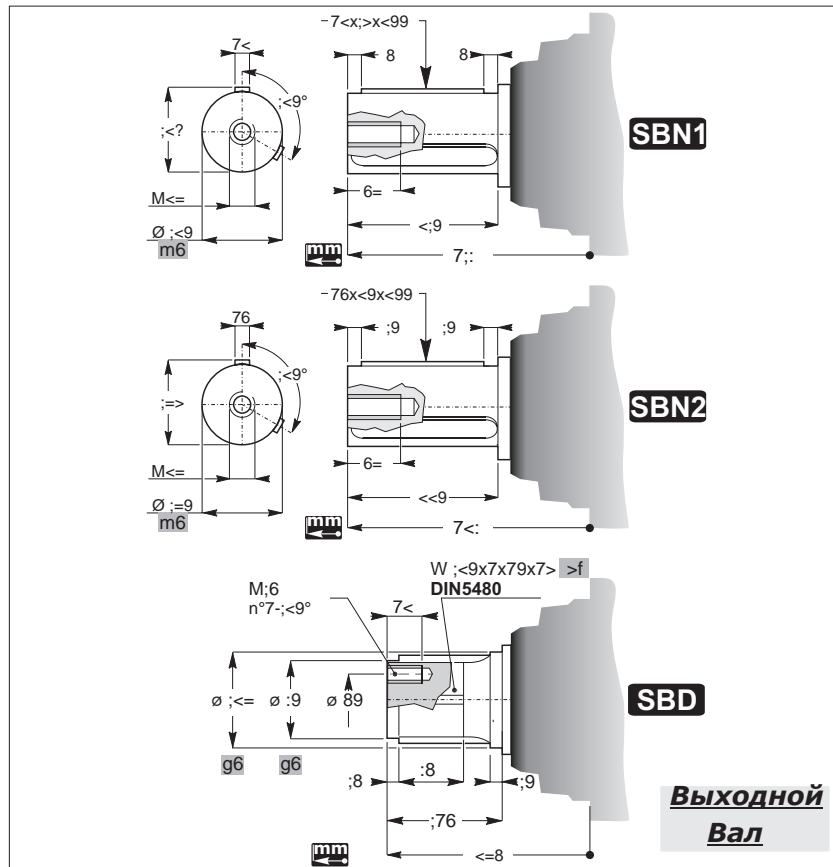
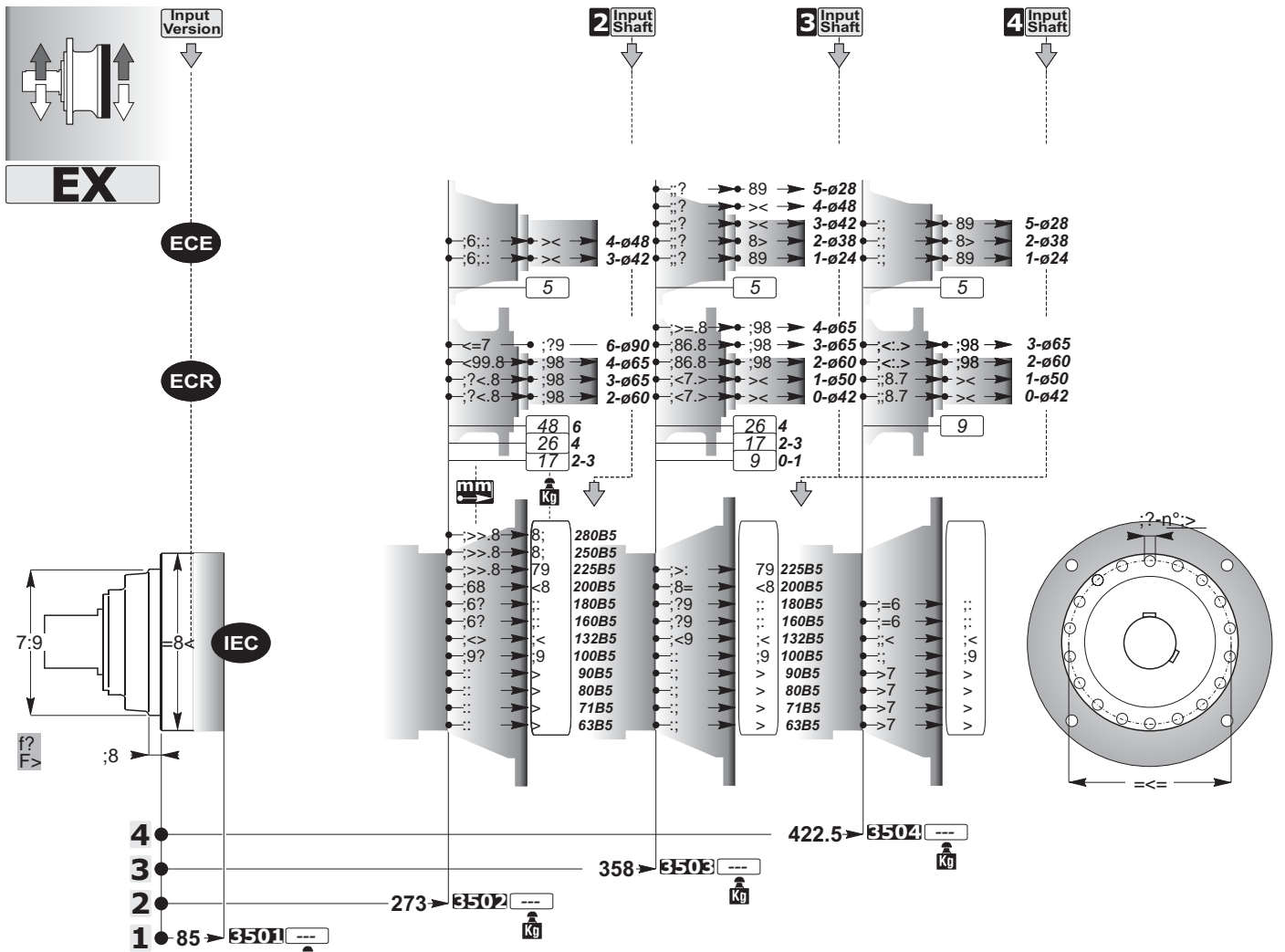


























**ECE**

**3** Input Shaft

ECE 1 2 3 4 5

**4** Input Shaft

ECE 1 2 5

Input Version

**ECR**

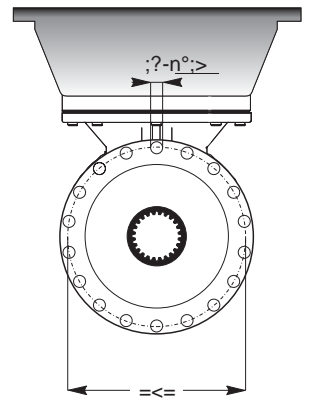
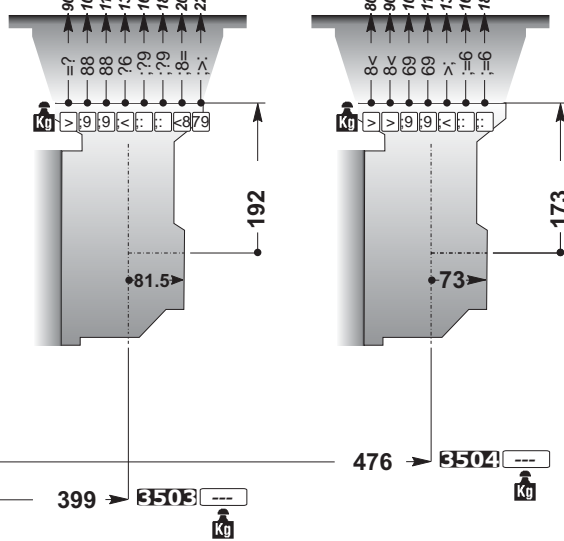
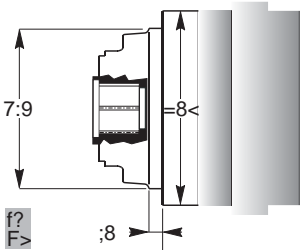
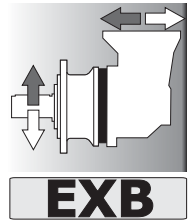
ECR 0 1 2 3 4

ECR 0 1 2 3

**IEC**

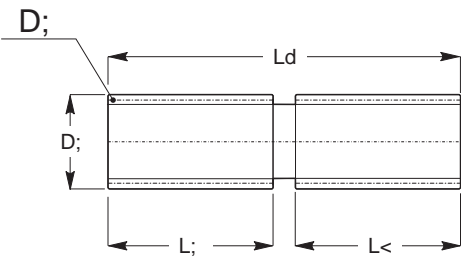
90B5 100B5 112B5 132B5 160B5 180B5 200B5 225B5

80B5 90B5 100B5 112B5 132B5 160B5 180B5



**C**

**SD**



**Аксессуары**





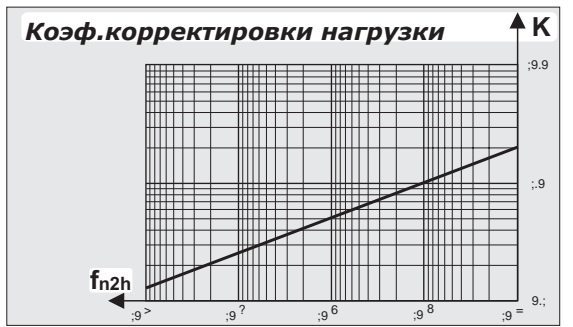
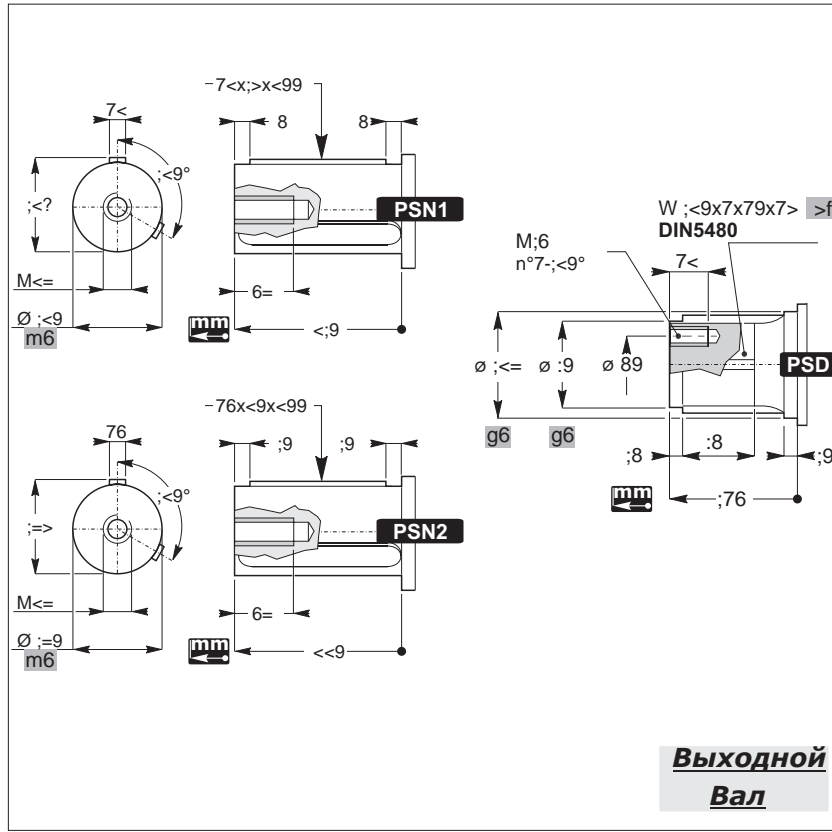
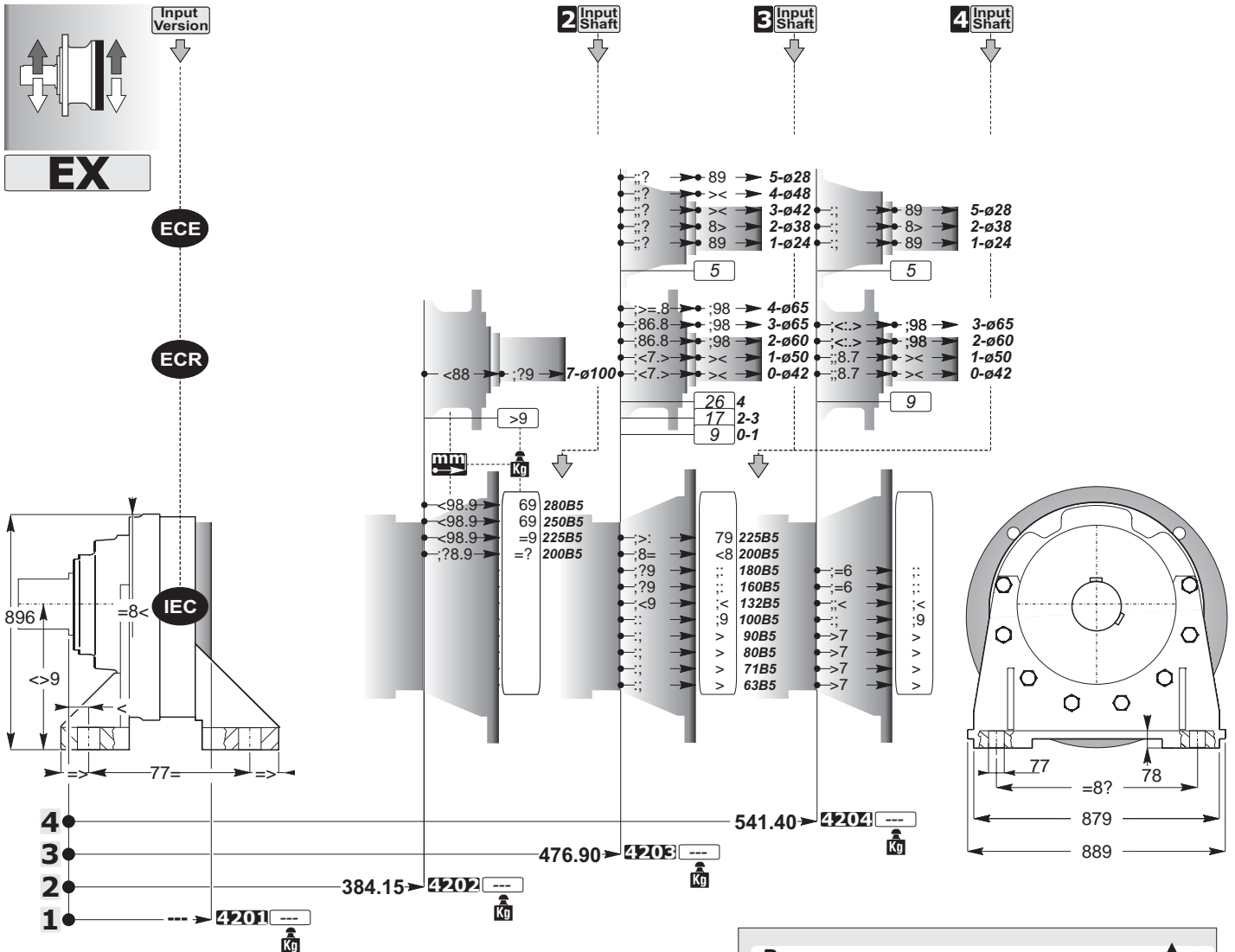






















**ECE**

4 Input Shaft

ECE 1 2 5

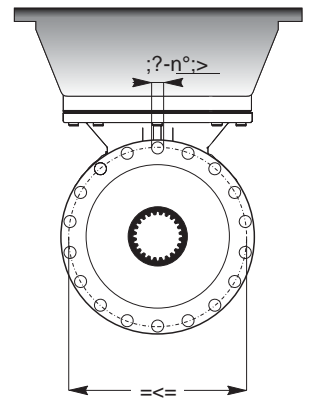
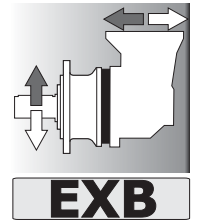
Input Version

**ECR**

ECR 0 1 2 3

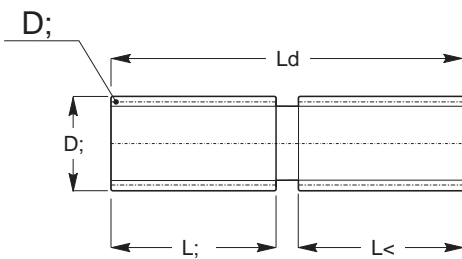
**IEC**

80B5 90B5 100B5 112B5 132B5 160B5 180B5



**C**

**SD**



**SD**



**Аксессуары**



**ECE**

4 Input Shaft

ECE 1 2 5

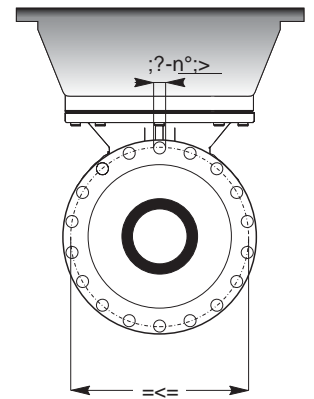
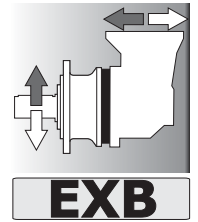
Input Version

**ECR**

ECR 0 1 2 3

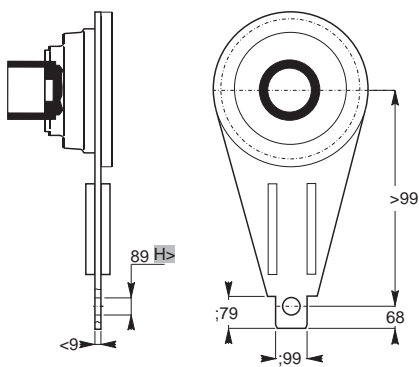
**IEC**

80B5 90B5 100B5 112B5 132B5 160B5 180B5

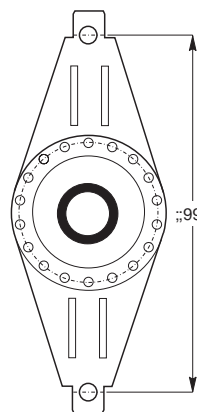


**C**

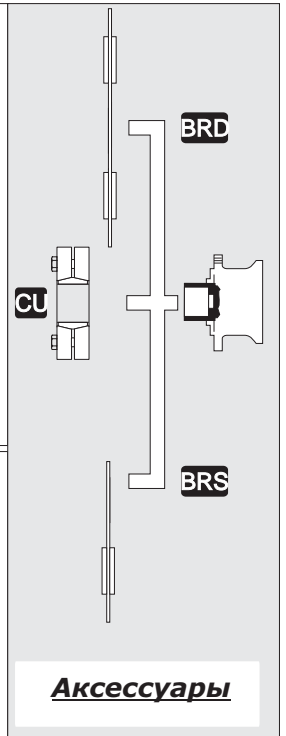
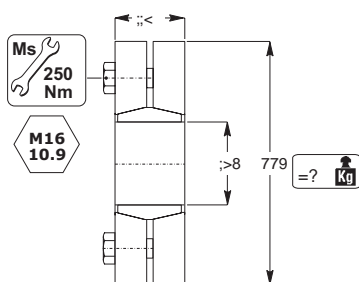
**BRS**



**BRD**



**CU**









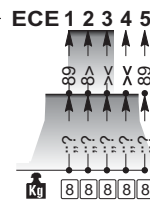






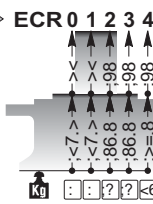
**ECE**

4 Input Shaft

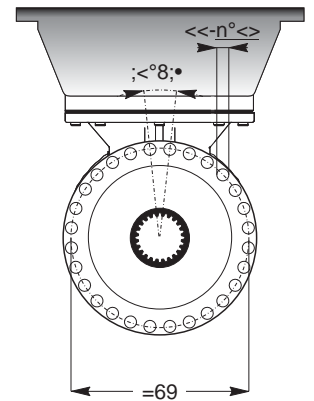
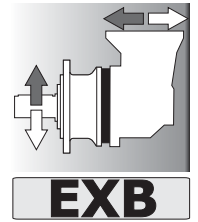
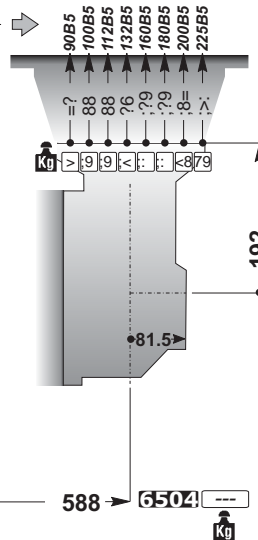


Input Version

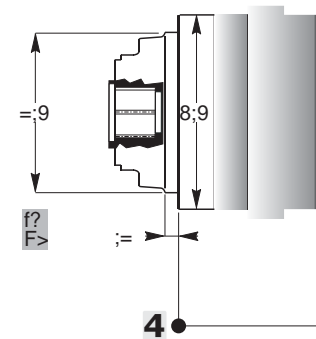
**ECR**



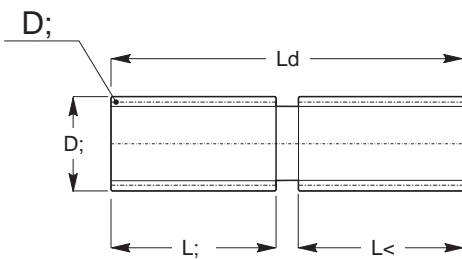
**IEC**



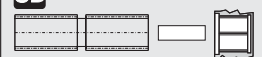
**C**



**SD**



**SD**



**Аксессуары**



**ECE**

4 Input Shaft

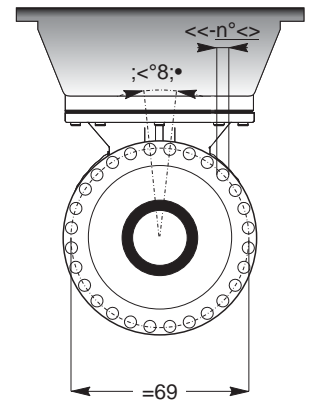
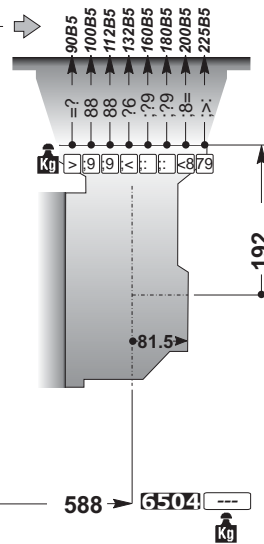
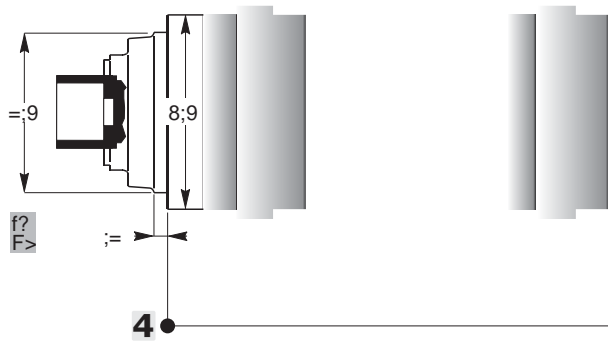
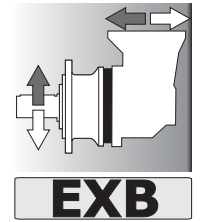
ECE 1 2 3 4 5

Input Version

**ECR**

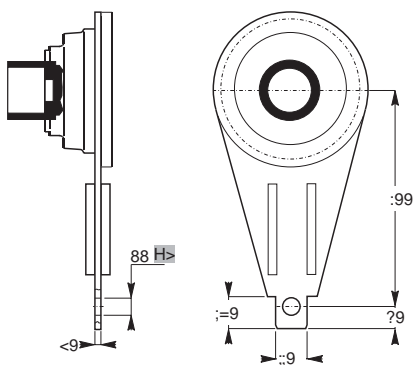
ECR 0 1 2 3 4

**IEC**

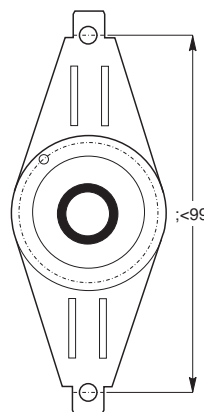


**C**

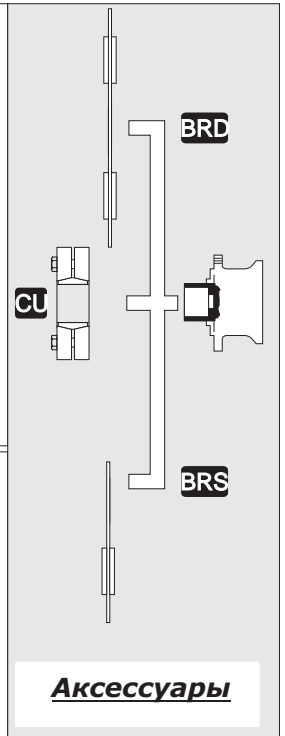
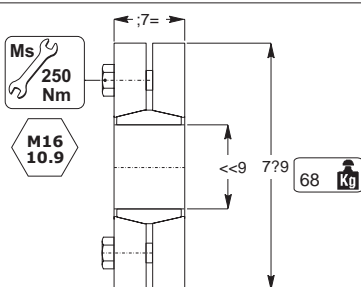
**BRS**



**BRD**



**CU**









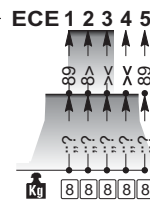






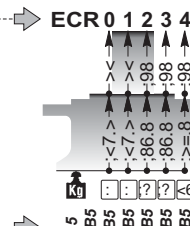
**ECE**

4 Input Shaft

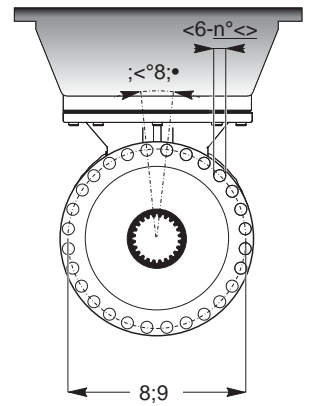
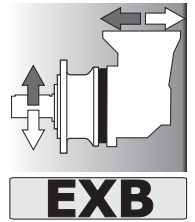
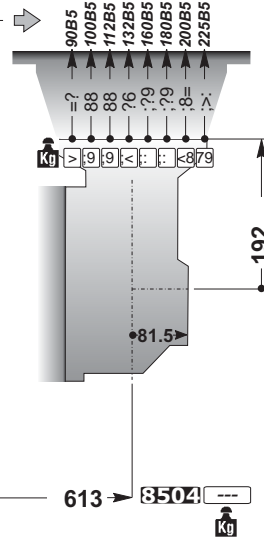


Input Version

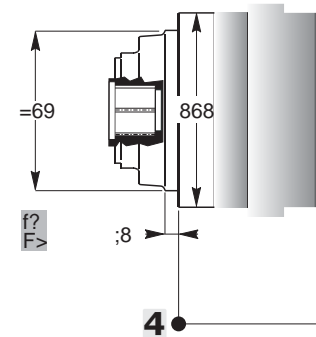
**ECR**



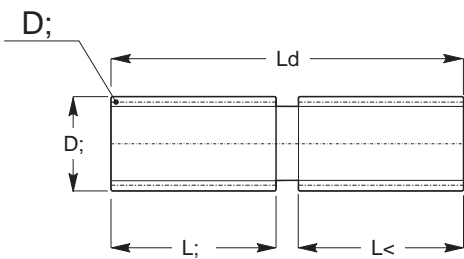
**IEC**



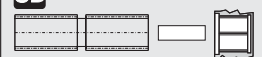
**C**



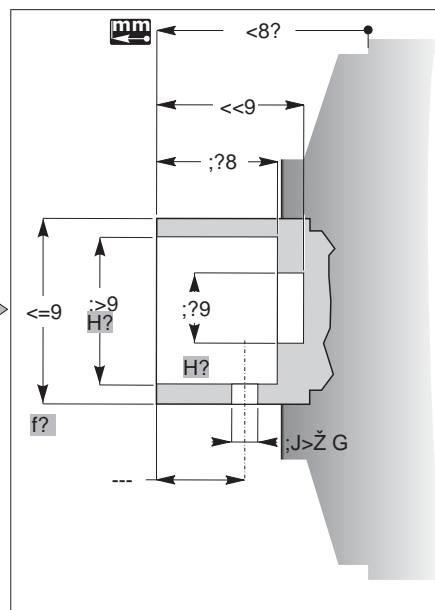
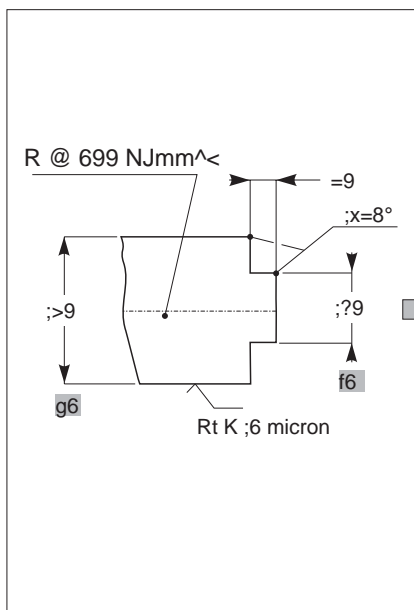
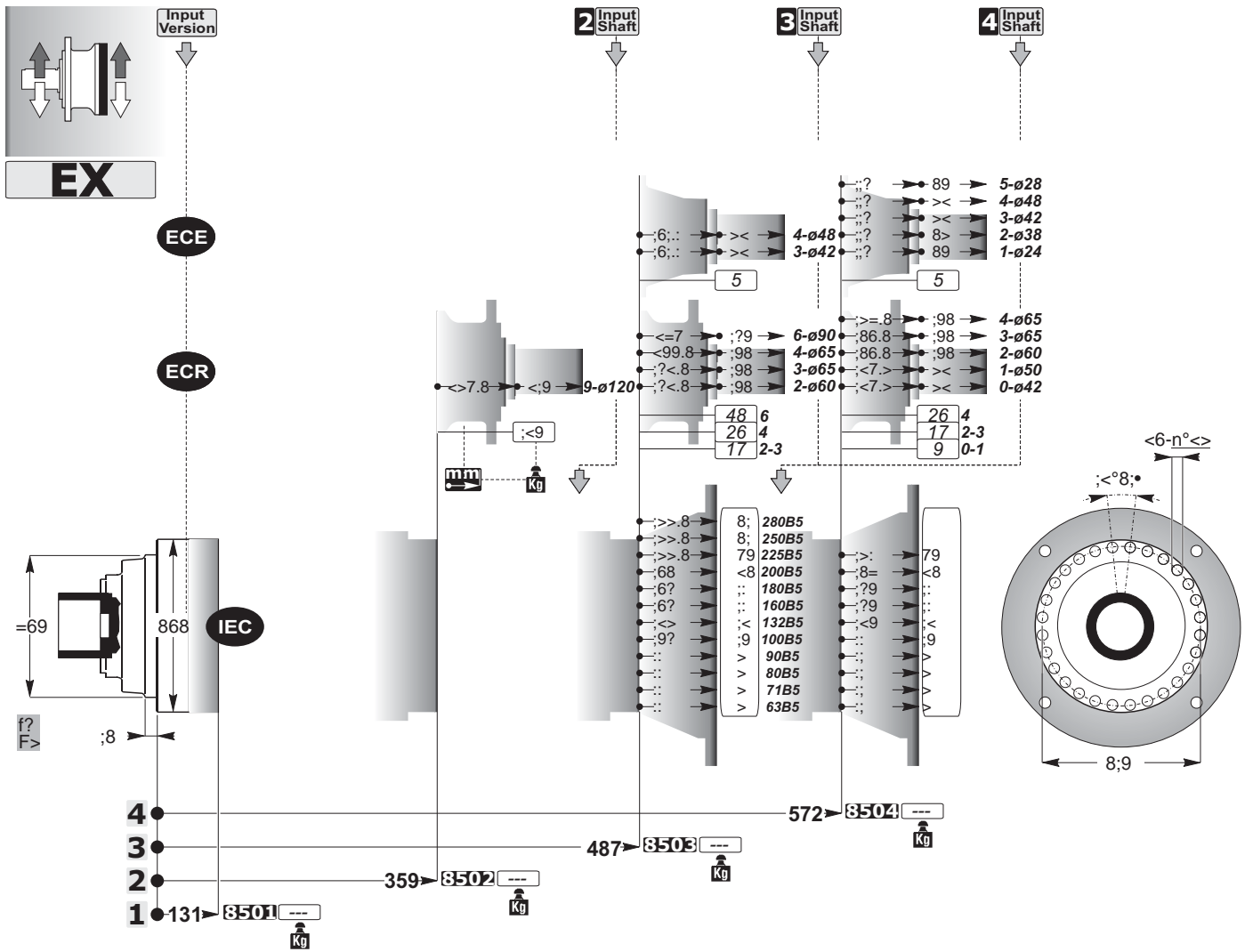
**SD**



**SD**



**Аксессуары**



**Выходной Вал**

**ECE**

4 Input Shaft

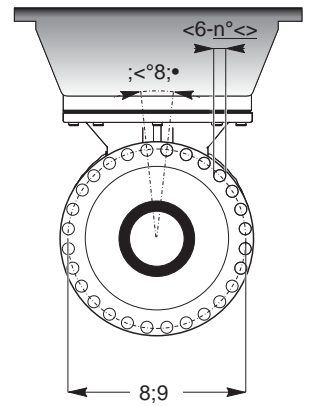
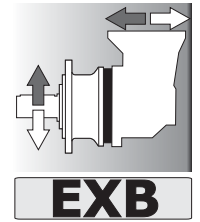
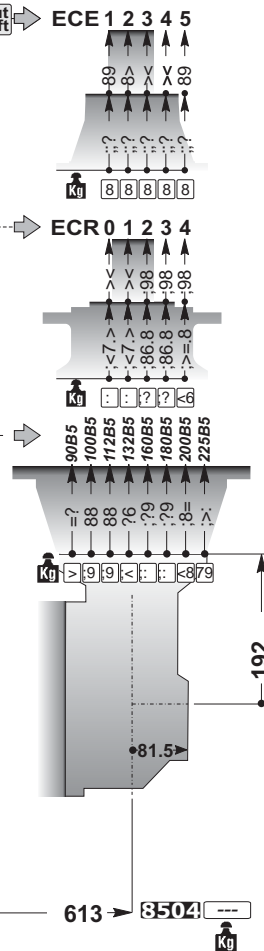
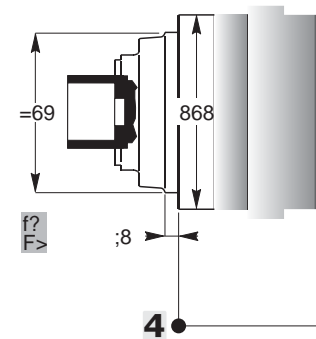
ECE 1 2 3 4 5

Input Version

**ECR**

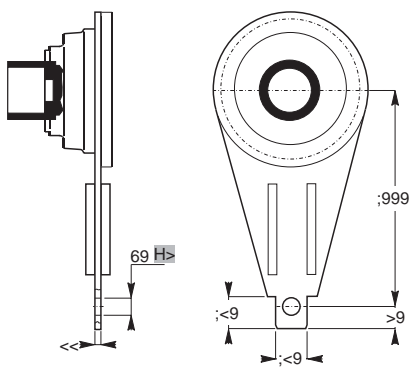
ECR 0 1 2 3 4

**IEC**

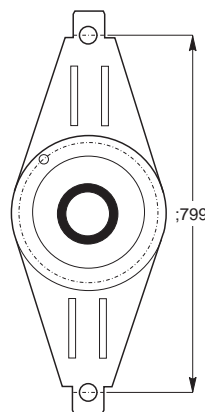


**C**

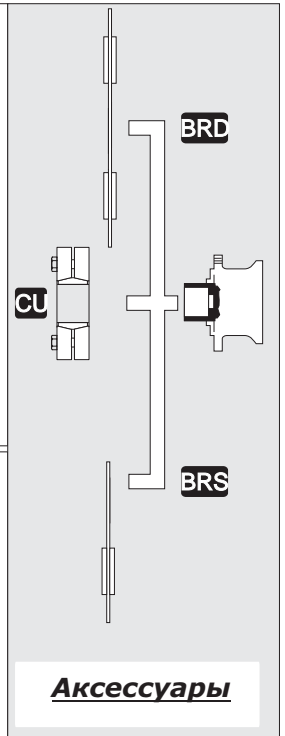
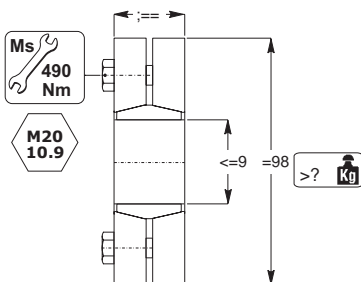
**BRS**



**BRD**



**CU**



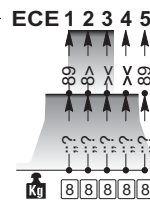






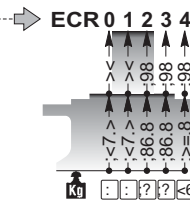
**ECE**

4 Input Shaft

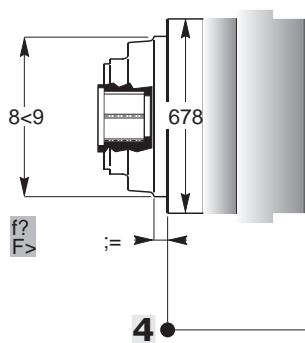
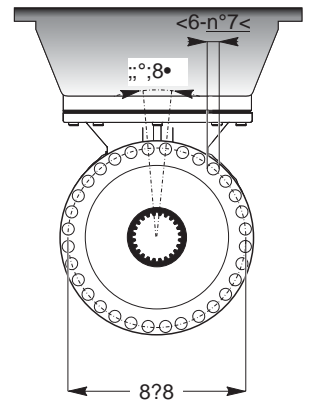
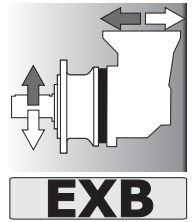
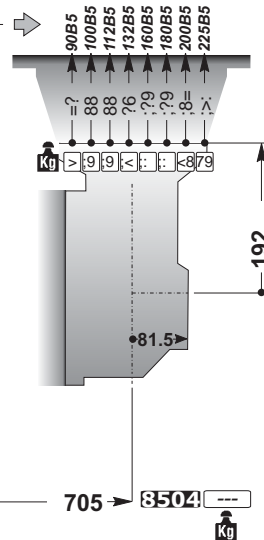


Input Version

**ECR**

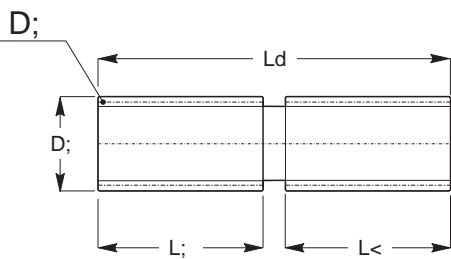


**IEC**



**C**

**SD**



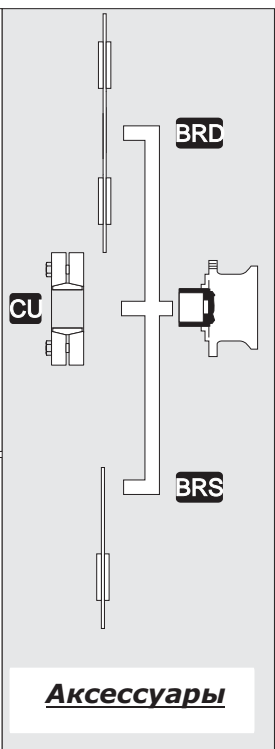
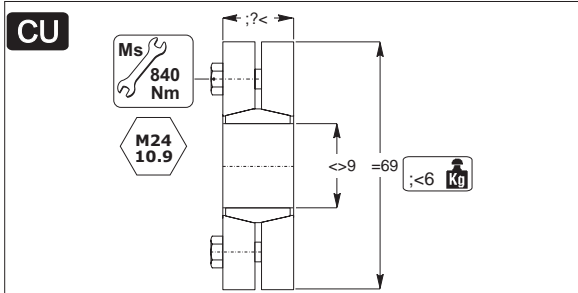
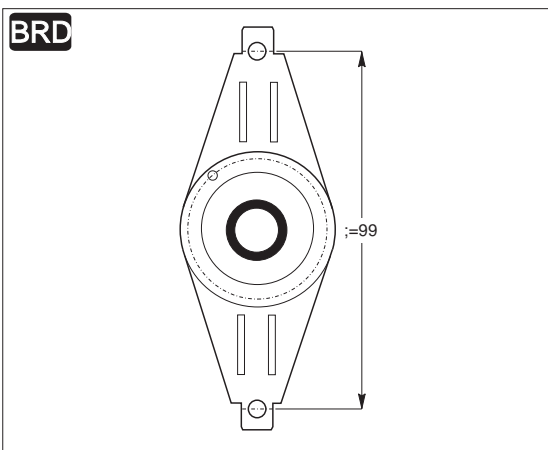
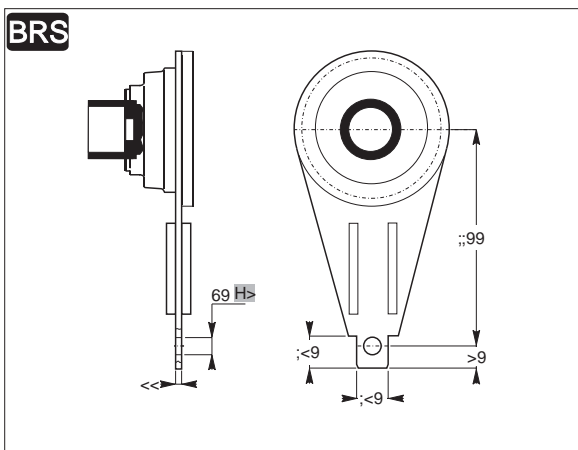
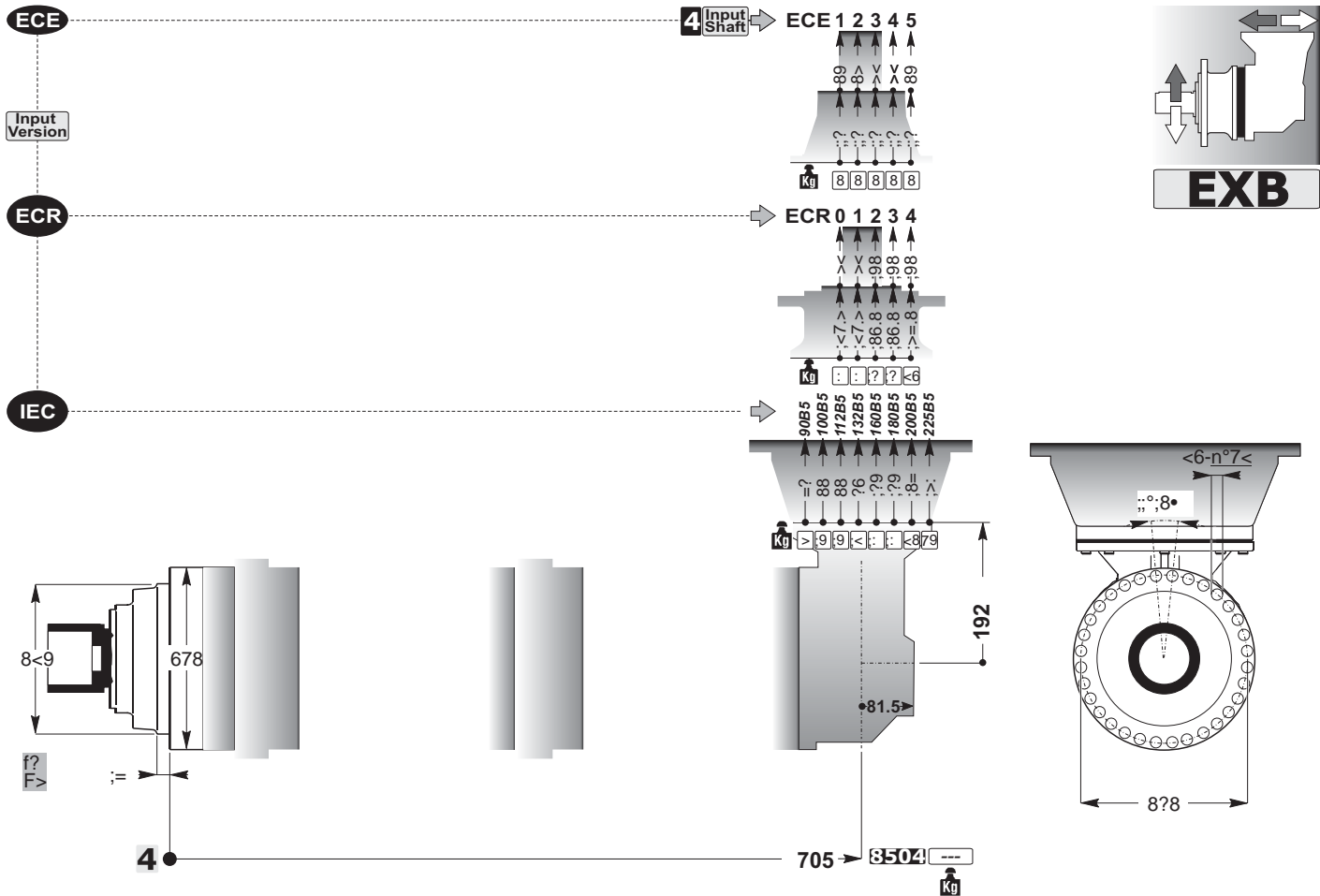
**SD**



**Аксессуары**









PREDISPOSIZIONI ATTACCO MOTORE  
 INPUT MOTOR ADJUSTMENTS  
 АДАПТЕРЫ ПОД МОТОР



|  |  |            |
|--|--|------------|
|  | <b>EU</b>  | <b>D2</b>  |
|  | <b>IEC</b>   | <b>D4</b>  |
|  | <b>Z.</b> <b>Z1.</b> <b>Z2.</b>  | <b>D6</b>  |
|  | <b>I</b> <b>CB</b> <b>DB</b><br><b>BA</b> <b>CA</b> <b>DA</b> <b>EA</b>  | <b>D8</b>  |
|  | <b>I</b> <b>FB</b> <b>HB</b><br><b>FA</b> <b>GAB</b> <b>GC</b> <b>HA</b> | <b>D10</b> |
|  | <b>I</b> <b>JA</b> <b>KB</b> <b>LA</b> <b>LB</b>                         | <b>D12</b> |
|  | <b>I</b> <b>NA</b> <b>OA</b> <b>PA</b>                                   | <b>D14</b> |
|  | <b>ECE</b>   | <b>D18</b> |
|  | <b>ECR</b>   | <b>D20</b> |
|  | <b>EX.</b>   | <b>D29</b> |

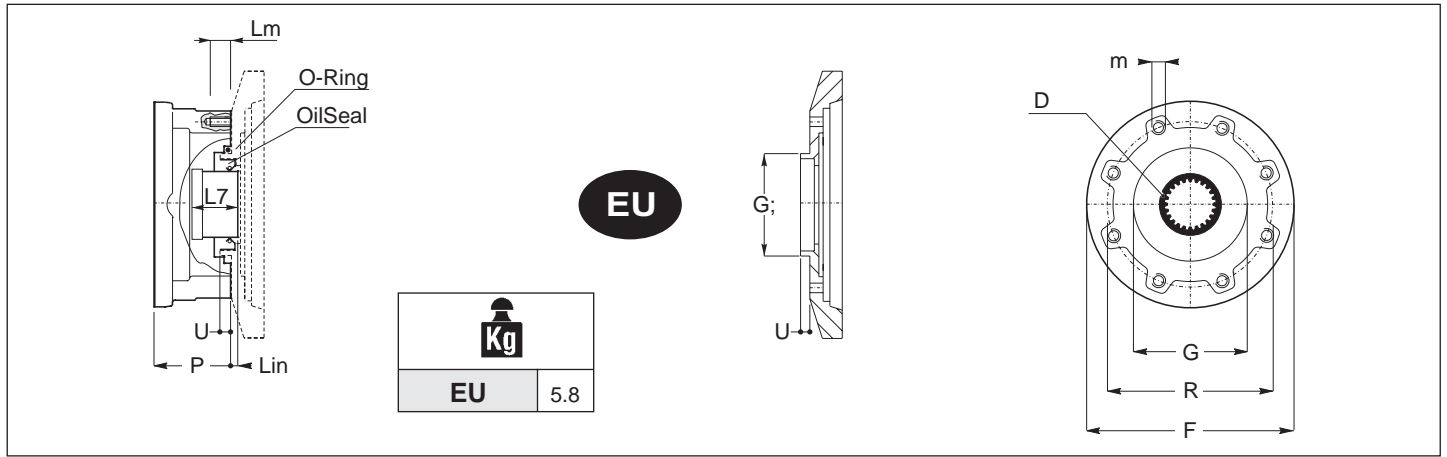
**D**



1.0 EU

1.0 EU

1.0 EU



| EU   | EX1 |     |    | EX2 EXB2 |     |     | EX3 EXB3 |      |    | EX4 EXB4 |     |       |        |
|------|-----|-----|----|----------|-----|-----|----------|------|----|----------|-----|-------|--------|
|      | 10  | 101 |    |          | 102 |     |          | 103  |    |          | 104 |       |        |
| 20   | 201 |     |    | 202      |     | EXB | 203      |      |    | 204      |     |       |        |
| 25   | 251 |     |    | 252      |     | EXB | 253      |      |    | 254      |     |       |        |
| 30   |     | 301 |    | 302      |     |     | 303      |      |    | 304      |     |       |        |
| 40   |     |     |    | 402      |     | -   | 403      |      |    | 404      |     |       |        |
| 50   |     |     | EX | 501      |     |     | 502      |      |    | 504      |     |       |        |
| 70   |     |     |    | 701      |     | EXB | 702      |      |    | 704      |     |       |        |
| 80   |     |     |    |          | 801 |     | 802      |      |    | 804      |     |       |        |
| 90   |     |     |    |          |     |     | 902      | -    | EX | 903      | EXB | 904   |        |
| 100  |     |     |    |          |     |     | 1002     | EXB  |    | 1003     |     | 1004  |        |
| 150  |     |     |    |          |     |     | 1502     |      |    | 1503     | EX  | 1504  | EX EXB |
| 180  |     |     |    |          |     |     | 1802     |      |    | 1803     |     | 1804  |        |
| 200  |     |     |    |          |     |     | 2002     |      |    | 2003     |     | 2004  |        |
| 250  |     |     |    |          |     |     |          | 2502 |    | 2503     |     | 2504  |        |
| 280  |     |     |    |          |     |     |          | 2802 |    | 2803     |     | 2804  |        |
| 300  |     |     |    |          |     |     |          | 3002 |    | 3003     |     | 3004  |        |
| 350  |     |     |    |          |     |     |          | 3502 |    | 3503     |     | 3504  |        |
| 420  |     |     |    |          |     |     |          |      |    | 4203     |     | 4204  |        |
| 650  |     |     |    |          |     |     |          |      |    | 6503     |     | 6504  |        |
| 850  |     |     |    |          |     |     |          |      |    | 8503     |     | 8504  |        |
| 1200 |     |     |    |          |     |     |          |      |    | 12003    |     | 12004 |        |

|    | D        | F                 | R       | G     | U <sub>max</sub> | L <sub>IN</sub> | L <sub>3</sub> | m   | L <sub>m</sub> | O <sub>Ring</sub>  | OilSeal      | P  |    |    |    |    |    |    |    |    |    |    |  |  |
|----|----------|-------------------|---------|-------|------------------|-----------------|----------------|-----|----------------|--------------------|--------------|----|----|----|----|----|----|----|----|----|----|----|--|--|
|    | DIN 5482 |                   | +/- 0,1 | H7 g6 |                  |                 |                |     |                |                    |              |    |    |    |    |    |    |    |    |    |    |    |  |  |
| EU | 50 x 45  | 186<br>244<br>295 |         | 95    | 6                | 4               | 38             | M10 | 20             | 94.92<br>x<br>2.62 | 60x80<br>7.5 | 67 | 75 | 83 | 67 | 75 | 83 | 67 | 75 | 83 | 67 | 75 |  |  |

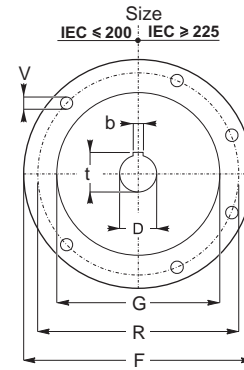
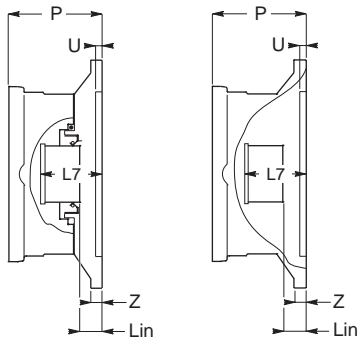




2.0 IEC

2.0 IEC

2.0 IEC



| Kg       |    |
|----------|----|
| 71-80-90 | 8  |
| 100-112  | 10 |
| 132      | 12 |
| 160-180  | 19 |
| 200      | 25 |
| 225      | 30 |
| 250-280  | 51 |

| IEC  | EX1 |      |      | EX2  |      |  | EX3  |      |       | EX4  |       |  |
|------|-----|------|------|------|------|--|------|------|-------|------|-------|--|
|      | 10  | 101  |      |      | 102  |  |      | 103  |       |      | 104   |  |
| 20   | 201 |      |      | 202  |      |  | 203  |      |       | 204  |       |  |
| 25   | 251 |      |      | 252  |      |  | 253  |      |       | 254  |       |  |
| 30   | 301 |      |      | 302  |      |  | 303  |      |       | 304  |       |  |
| 40   |     |      |      | 402  |      |  | 403  |      |       | 404  |       |  |
| 50   | 501 |      |      | 502  |      |  | 503  |      |       | 504  |       |  |
| 70   | 701 |      |      | 702  |      |  | 703  |      |       | 704  |       |  |
| 80   |     | 801  |      | 802  |      |  | 803  |      |       | 804  |       |  |
| 90   |     |      |      | 902  |      |  | 903  |      |       | 904  |       |  |
| 100  |     | 1001 |      | 1002 |      |  | 1003 |      |       | 1004 |       |  |
| 150  |     |      | 1501 | 1502 |      |  | 1503 |      |       | 1504 |       |  |
| 180  |     |      |      | 1802 |      |  | 1803 |      |       | 1804 |       |  |
| 200  |     |      | 2001 | 2002 |      |  | 2003 |      |       | 2004 |       |  |
| 250  |     |      |      | 2502 |      |  | 2503 |      |       | 2504 |       |  |
| 280  |     |      |      | 2802 |      |  | 2803 |      |       | 2804 |       |  |
| 300  |     |      |      | 3002 |      |  | 3003 |      |       | 3004 |       |  |
| 350  |     |      |      | 3502 |      |  | 3503 |      |       | 3504 |       |  |
| 420  |     |      |      |      | 4202 |  | 4203 |      |       | 4204 |       |  |
| 650  |     |      |      |      |      |  |      | 6503 |       | 6504 |       |  |
| 850  |     |      |      |      |      |  |      | 8503 |       | 8504 |       |  |
| 1200 |     |      |      |      |      |  |      |      | 12003 |      | 12004 |  |

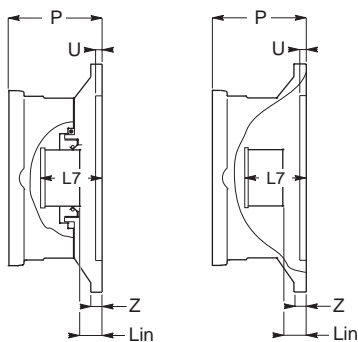
|     | D  | F   | R      | G        | U  | V   | Z  | L <sub>TN</sub> | L3  | b  | t            | P   |       |     |     |       |     |     |       |     |       |     |  |
|-----|----|-----|--------|----------|----|-----|----|-----------------|-----|----|--------------|-----|-------|-----|-----|-------|-----|-----|-------|-----|-------|-----|--|
|     | F7 |     | +/-0,1 | F8<br>G6 |    |     |    |                 |     | H7 | +0,1<br>+0,2 | EX1 |       |     | EX2 |       |     | EX3 |       |     | EX4   |     |  |
| 63  | 11 | 140 | 115    | 95       | 10 | M8  | 16 | 5,5             | 25  | 4  | 12,8         | 83  | 91    | 99  | 83  | 91    | 99  | 83  | 91    | 99  | 83    | 91  |  |
| 71  | 14 | 160 | 130    | 110      | 10 | M8  | 16 | 5,5             | 32  | 5  | 16,3         | 83  | 91    | 99  | 83  | 91    | 99  | 83  | 91    | 99  | 83    | 91  |  |
| 80  | 19 | 200 | 165    | 130      | 5  | M10 | 14 | 5,5             | 52  | 6  | 21,8         | 83  | 91    | 99  | 83  | 91    | 99  | 83  | 91    | 99  | 83    | 91  |  |
| 90  | 24 | 200 | 165    | 130      | 5  | M10 | 14 | 5,5             | 52  | 8  | 27,3         | 83  | 91    | 99  | 83  | 91    | 99  | 83  | 91    | 99  | 83    | 91  |  |
| 100 | 28 | 250 | 215    | 180      | 5  | M12 | 14 | 10,5            | 61  | 8  | 31,3         | 91  | 99    | 107 | 91  | 99    | 107 | 91  | 99    | 107 | 91    | 99  |  |
| 112 | 28 | 250 | 215    | 180      | 5  | M12 | 14 | 10,5            | 61  | 8  | 31,3         | 91  | 99    | 107 | 91  | 99    | 107 | 91  | 99    | 107 | 91    | 99  |  |
| 132 | 38 | 300 | 265    | 230      | 5  | M12 | 14 | 10,5            | 82  | 10 | 41,3         | 112 | 120   | 128 | 112 | 120   | 128 | 112 | 120   | 128 | 112   | 120 |  |
| 160 | 42 | 350 | 300    | 250      | 6  | M16 | 18 | 8,5             | 111 | 12 | 45,3         | 146 |       | 167 | 146 |       | 167 | 146 |       | 167 | 146   |     |  |
| 180 | 48 | 350 | 300    | 250      | 6  | M16 | 18 | 8,5             | 111 | 14 | 51,8         | 146 |       | 167 | 146 |       | 167 | 146 |       | 167 | 146   |     |  |
| 160 | 42 | 350 | 300    | 250      | 6  | M16 | 18 | 24,5            | 111 | 12 | 45,3         |     | 170   |     |     | 170   |     |     | 170   |     |       | 170 |  |
| 180 | 48 | 350 | 300    | 250      | 6  | M16 | 18 | 24,5            | 111 | 14 | 51,8         |     | 170   |     |     | 170   |     |     | 170   |     |       | 170 |  |
| 200 | 55 | 400 | 350    | 300      | 6  | M16 | 22 | 8,5             | 111 | 16 | 59,3         | 154 | 165   | 175 | 154 | 165   | 175 | 154 | 165   |     | 154   |     |  |
| 225 | 60 | 450 | 400    | 350      | 6  | M16 | 20 | 8,5             | 143 | 18 | 64,4         | 189 | 188,5 | 205 | 189 | 188,5 | 205 | 189 | 188,5 |     | 189   |     |  |
| 250 | 65 | 550 | 500    | 450      | 6  | M16 | 21 | 8,5             | 145 | 18 | 69,4         |     | 188,5 | 205 |     | 188,5 | 205 |     | 188,5 |     | 188,5 |     |  |
| 280 | 75 | 550 | 500    | 450      | 6  | M16 | 21 | 8,5             | 145 | 20 | 79,9         |     | 188,5 | 205 |     | 188,5 | 205 |     | 188,5 |     | 188,5 |     |  |



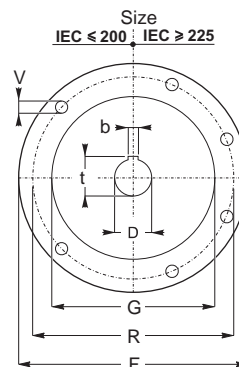
2.0 IEC

2.0 IEC

2.0 IEC



**IEC**



| Kg       |    |
|----------|----|
| 71-80-90 | 8  |
| 100-112  | 10 |
| 132      | 12 |
| 160-180  | 19 |
| 200      | 25 |
| 225      | 30 |
| 250-280  | 51 |

| IEC  | EXB2 | EXB3 | EXB4  |
|------|------|------|-------|
|      | 10   | 102  | 103   |
| 20   | 202  | 203  | 204   |
| 25   | 252  | 253  | 254   |
| 30   | 302  | 303  | 304   |
| 40   | -    | 403  | 404   |
| 50   | 502  | 503  | 504   |
| 70   | 702  | 703  | 704   |
| 80   | 802  | 803  | 804   |
| 90   | -    | 903  | 904   |
| 100  | 1002 | 1003 | 1004  |
| 150  | -    | 1503 | 1504  |
| 180  | -    | 1803 | 1804  |
| 200  | -    | 2003 | 2004  |
| 250  | -    | 2503 | 2504  |
| 280  | -    | 2803 | 2804  |
| 300  | -    | 3003 | 3004  |
| 350  | -    | 3503 | 3504  |
| 420  | -    | -    | 4204  |
| 650  | -    | -    | 6504  |
| 850  | -    | -    | 8504  |
| 1200 | -    | -    | 12004 |

|     | D  | F   | R      | G        | U  | V   | Z  | L <sub>TN</sub> | L3  | b  | t            | P         |
|-----|----|-----|--------|----------|----|-----|----|-----------------|-----|----|--------------|-----------|
|     | F7 |     | +/-0,1 | F8<br>G6 |    |     |    |                 |     | H7 | +0,1<br>+0,2 |           |
| 63  | 11 | 140 | 115    | 95       | 10 | M8  | 16 | 5,5             | 25  | 4  | 12,8         | 52        |
| 71  | 14 | 160 | 130    | 110      | 10 | M8  | 16 | 5,5             | 32  | 5  | 16,3         | 52 52     |
| 80  | 19 | 200 | 165    | 130      | 5  | M10 | 14 | 5,5             | 52  | 6  | 21,8         | 52 52 47  |
| 90  | 24 | 200 | 165    | 130      | 5  | M10 | 14 | 5,5             | 52  | 8  | 27,3         | 52 52 47  |
| 100 | 28 | 250 | 215    | 180      | 5  | M12 | 14 | 10,5            | 61  | 8  | 31,3         | 60 60 55  |
| 112 | 28 | 250 | 215    | 180      | 5  | M12 | 14 | 10,5            | 61  | 8  | 31,3         | 60 60 55  |
| 132 | 38 | 300 | 265    | 230      | 5  | M12 | 14 | 10,5            | 82  | 10 | 41,3         | 112 81 76 |
| 160 | 42 | 350 | 300    | 250      | 6  | M16 | 18 | 8,5             | 111 | 12 | 45,3         | 146 146   |
| 180 | 48 | 350 | 300    | 250      | 6  | M16 | 18 | 8,5             | 111 | 14 | 51,8         | 146 146   |
| 160 | 42 | 350 | 300    | 250      | 6  | M16 | 18 | 24,5            | 111 | 12 | 45,3         | 170       |
| 180 | 48 | 350 | 300    | 250      | 6  | M16 | 18 | 24,5            | 111 | 14 | 51,8         | 170       |
| 200 | 55 | 400 | 350    | 300      | 6  | M16 | 22 | 8,5             | 111 | 16 | 59,3         | 154       |
| 225 | 60 | 450 | 400    | 350      | 6  | M16 | 20 | 8,5             | 143 | 18 | 64,4         | 189       |
| 250 | 65 | 550 | 500    | 450      | 6  | M16 | 21 | 8,5             | 145 | 18 | 69,4         |           |
| 280 | 75 | 550 | 500    | 450      | 6  | M16 | 21 | 8,5             | 145 | 20 | 79,9         |           |

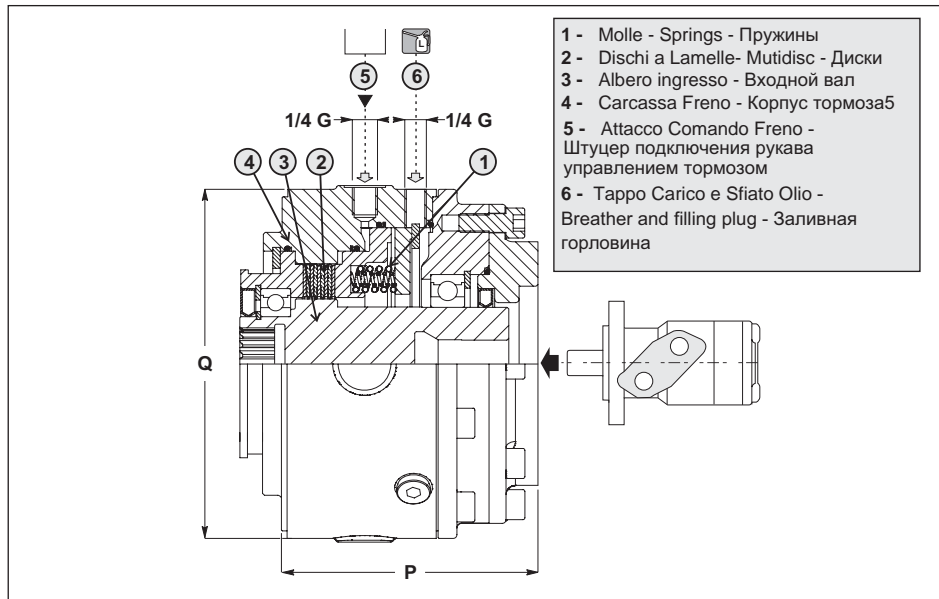




3.0 Z.

3.0 Z.

3.0 Z.



- 1 - Molle - Springs - Пружины
- 2 - Dischi a Lamelle- Mutidisc - Диски
- 3 - Albero ingresso - Входной вал
- 4 - Carcassa Freno - Корпус тормоза
- 5 - Attacco Comando Freno - Штуцер подключения рукава управления тормозом
- 6 - Tappo Carico e Sfiato Olio - Breather and filling plug - Заливная горловина

**1 - Campo applicazione**

Il freno è da impiegare solo come freno di stazionamento e non per effettuare frenature dinamiche.

**2 - Principio funzionamento freno**

Il funzionamento del freno è di tipo negativo con le seguenti modalità operative:

**2.1 - Condizione 1 - Pressione  $P_{INF} = 0$**

Le molle (particolare 1) esercitano una spinta sulle coppie di dischi a lamelle (componente 2). Alcuni dischi sono solidali con elemento mobile (componente 3) e dischi solidali con elemento fisso (componente 4).

In questa condizione operativa si genera sul manico riduttore (componente 3) una coppia  $T_{RF}$  con livello di accuratezza del valore di  $\pm 10\%$ .

**2.2 - Condizione 2 - Pressione  $P_{INF} = P_{Af}$**

Qualora attraverso l'attacco comando freno (componente 5), si immetta una pressione  $P_{INF}$  uguale alla pressione di apertura  $P_{Af}$  il valore della coppia resistente  $T_{RF}$  è uguale a zero consentendo la libera rotazione del manico del riduttore.

**2.3 - Condizione 3 - Contropressione presente nell'impianto idraulico  $P_c \neq 0$ .**

Tali prestazioni ( $T_{RF}$ ) sono sempre calcolate con contropressione uguale a zero. In caso contrario la coppia frenante è percentualmente ridotta nel rapporto contropressione/Pressione apertura freno.

**3 - Lubrificazione**

Il freno ha la lubrificazione separata da quella del riduttore epicicloidale. Pertanto si dovrà provvedere al riempimento del freno con olio idraulico di viscosità ISO VG32, utilizzando lo specifico tappo di riempimento.

**Ricordiamo che alte velocità di rotazione, oppure prolungati funzionamenti con asse verticale, possono generare elevati aumenti di temperatura: in questi casi consultare il Servizio Tecnico Commerciale STM.**

**1 - Application field**

The brake can be used only as stationary brake. It is not possible to utilize the brake for dynamic use.

**2 - How it works**

The brake works as a negative brake, with the following modalities:

**2.1 - option -  $P_{INF} = 0$**

The coil springs (see item 1) are pressing together on rotating discs. Some disks are running together with mobile elements (see item 3) and some other disks are fixed (see item 4).

In this working condition there is a resistant torque in the sleeve coupling of the gearbox (see item 3); the value of torque is  $T_{RF} \pm 10\%$ .

**2.2 - option - Pressure  $P_{INF} = P_{Af}$**

When from the motor brake connection (item 5) you introduce a pressure  $P_{INF}$  equal or same opening pressure  $P_{Af}$ , the resistant torque value  $T_{RF}$  is equal to zero, in letting free the input pressure, from the Hydraulic plan.

**2.3 - option - Backpressure in hydraulic plant  $P_c \neq 0$**

These performances ( $T_{RF}$ ) are always calculated without back pressure. Otherwise the braking torque is reduced as a percentage of the ratio back pressure/Brake release pressure.

**3 - Lubrication**

The brake has separated lubrication from the planetary gearbox. For this reason we have to fill the brake with Hydraulic oil viscosity ISO VG32. For such operation it must be used the specific filling plug.

**We remind you that high rotation speed, or extendent running with vertical axis, can generate considerable temperature increases: in such cases please apply STM technical staff for advice.**

$P_{INF}$  = Pressione ingresso-impianto idraulico/Input pressure – hydraulic plant / Давление жидкости на входе

$P_{Af}$  = Pressione apertura freno/Brake release pressure / Давление отключения тормоза

$P_c$  = Contropressione nell'impianto idraulico/Backpressure in hydraulic plant / Противодавление в гидросистеме

$P_{max}$  = Pressione max./max. pressure / Макс. давление

$T_{RF}$  = Coppia media Statica/ Medium static torque / Средний статический тормозной момент.

**1 - Область применения**

Тормоз может быть использован только как стояночный тормоз и не используется для динамического торможения.

**2 - Описание работы**

Тормоз работает как "негативный" при следующих условиях:

**2.1 - давление  $P_{INF} = 0$**

Под давлением пружин (поз. 1) диски тормоза (поз. 2) поочередно прижимаются к корпусу тормоза (поз. 4) и фиксируют от перемещения входной вал (поз. 2). В данном случае на входном валу (поз. 3) возникает момент сопротивления вращению равный  $T_{RF} \pm 10\%$ .

**3 - Смазка**

Тормоз имеет отдельную систему смазки, независимую от планетарной передачи. По этой причине следует заправлять тормоз гидравлическим маслом вязкостью ISO VG32. Для заправки должна использоваться соответствующая пробка.

Высокие скорости или длительное время работы в вертикальном положении может привести к значительному увеличению температуры тормоза.

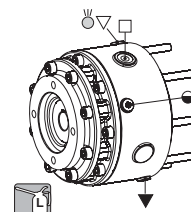


3.0 Z.

3.0 Z.

3.0 Z.

| Z1  | Q   | T <sub>RF</sub> [Nm] | P <sub>af</sub> [bar] | P <sub>max</sub> [bar] | M1   | M3   | M4 | Kg |
|-----|-----|----------------------|-----------------------|------------------------|------|------|----|----|
| Z1A | 186 | 90                   | 8.5                   | 310                    | 0.15 | 0.30 |    | 26 |
| Z1B | 186 | 140                  | 13.0                  |                        |      |      |    |    |
| Z1C | 186 | 240                  | 11.0                  |                        |      |      |    |    |
| Z1D | 186 | 300                  | 15.0                  |                        |      |      |    |    |
| Z1E | 186 | 430                  | 20.0                  |                        |      |      |    |    |
| Z1F | 186 | 550                  | 25.0                  |                        |      |      |    |    |



- ▽ Carico / Breather plug / Воздушный клапан
- Livello / Level plug / Уровневая пробка
- ▼ Scarico / Drain plug / Сливная пробка
- ☹ Sfiato / Vent plug / Сапун

|      | EX1  | EX2 EXB2 | EX3 EXB3 | EX4 EXB4 |
|------|------|----------|----------|----------|
| 10   | 101  | 102      | 103      | 104      |
| 20   | 201  | 202      | 203      | 204      |
| 25   | 251  | 252      | 253      | 254      |
| 30   | 301  | 302      | 303      | 304      |
| 40   |      | 402      | 403      | 404      |
| 50   | 501  | 502      | 503      | 504      |
| 70   | 701  | 702      | 703      | 704      |
| 80   | 801  | 802      | 803      | 804      |
| 90   |      | 902      | 903      | 904      |
| 100  | 1001 | 1002     | 1003     | 1004     |
| 150  |      | 1502     | 1503     | 1504     |
| 180  |      | 1802     | 1803     | 1804     |
| 200  |      | 2002     | 2003     | 2004     |
| 250  |      | 2502     | 2503     | 2504     |
| 280  |      | 2802     | 2803     | 2804     |
| 300  |      | 3002     | 3003     | 3004     |
| 350  |      | 3502     | 3503     | 3504     |
| 420  |      |          | 4203     | 4204     |
| 650  |      |          |          | 6504     |
| 850  |      |          |          | 8504     |
| 1200 |      |          |          | 12004    |

**D**

|       | F                | R | G | U | V | Z | L <sub>IN</sub> | L3 | b | t | P   |     |  |     |     |  |     |     |  |     |     |
|-------|------------------|---|---|---|---|---|-----------------|----|---|---|-----|-----|--|-----|-----|--|-----|-----|--|-----|-----|
| CA 04 | CMOTPI D6-D8-D10 |   |   |   |   |   |                 |    |   |   | 166 | 174 |  | 166 | 174 |  | 166 | 174 |  | 166 | 174 |
| CA 09 |                  |   |   |   |   |   |                 |    |   |   | 166 | 174 |  | 166 | 174 |  | 166 | 174 |  | 166 | 174 |
| CB 07 |                  |   |   |   |   |   |                 |    |   |   | 178 | 186 |  | 178 | 186 |  | 178 | 186 |  | 178 | 186 |
| DA 11 |                  |   |   |   |   |   |                 |    |   |   | 160 | 168 |  | 160 | 168 |  | 160 | 168 |  | 160 | 168 |
| DB 22 |                  |   |   |   |   |   |                 |    |   |   | 180 | 188 |  | 180 | 188 |  | 180 | 188 |  | 180 | 188 |
| FA 13 |                  |   |   |   |   |   |                 |    |   |   | 186 | 194 |  | 186 | 194 |  | 186 | 194 |  | 186 | 194 |
| FA 22 |                  |   |   |   |   |   |                 |    |   |   | 186 | 194 |  | 186 | 194 |  | 186 | 194 |  | 186 | 194 |
| FA 23 |                  |   |   |   |   |   |                 |    |   |   | 186 | 194 |  | 186 | 194 |  | 186 | 194 |  | 186 | 194 |
| FA 24 |                  |   |   |   |   |   |                 |    |   |   | 186 | 194 |  | 186 | 194 |  | 186 | 194 |  | 186 | 194 |
| FA 28 |                  |   |   |   |   |   |                 |    |   |   | 186 | 194 |  | 186 | 194 |  | 186 | 194 |  | 186 | 194 |
| FB 08 |                  |   |   |   |   |   |                 |    |   |   | 226 | 234 |  | 226 | 234 |  | 226 | 234 |  | 226 | 234 |
| PA 29 |                  |   |   |   |   |   |                 |    |   |   | 168 | 176 |  | 168 | 176 |  | 168 | 176 |  | 168 | 176 |

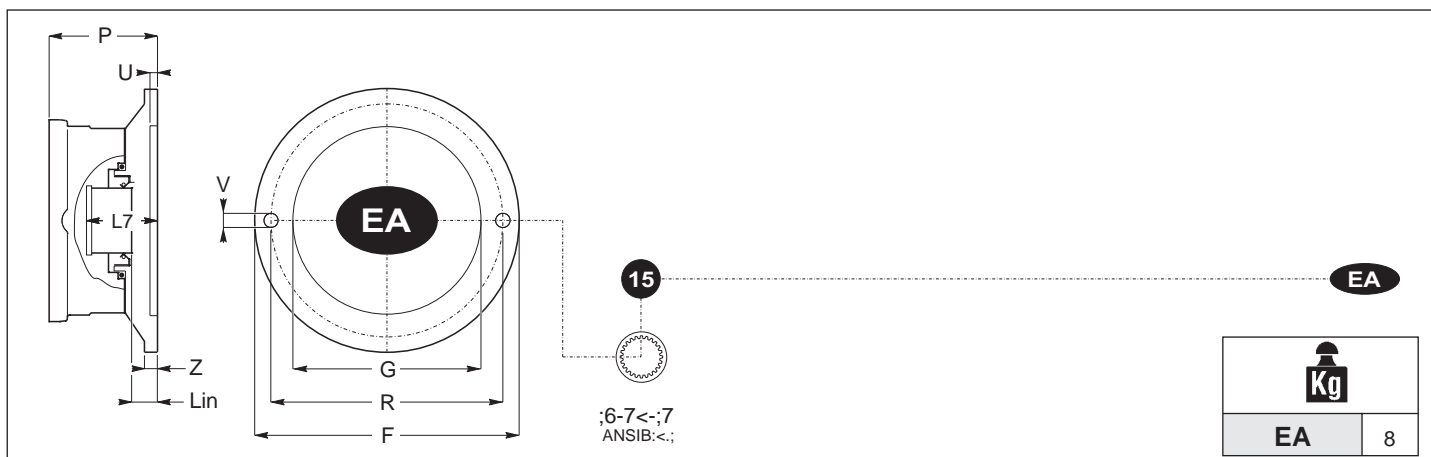
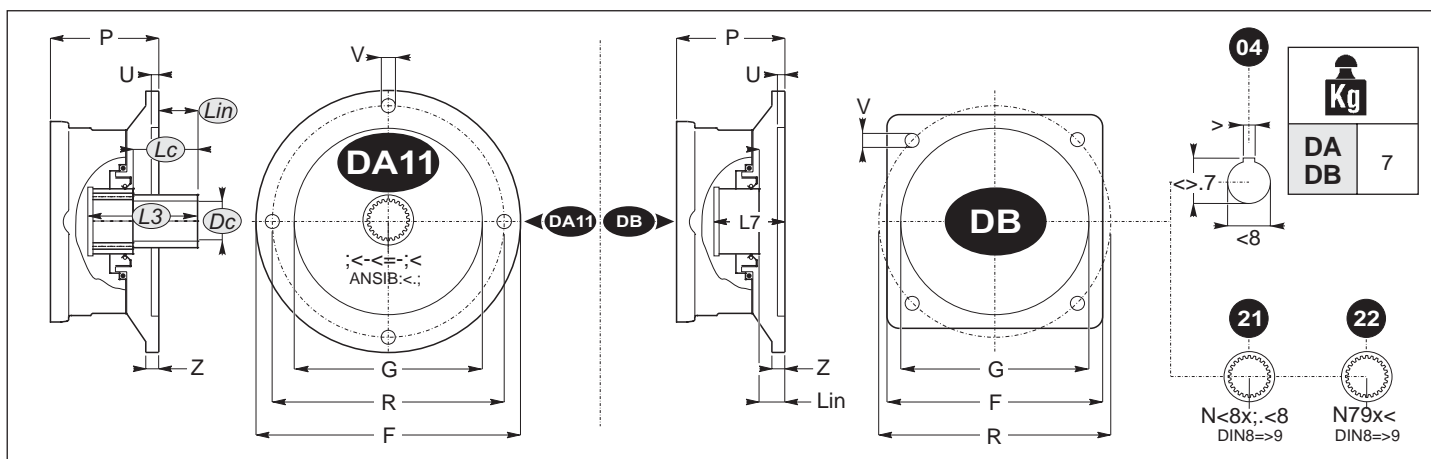
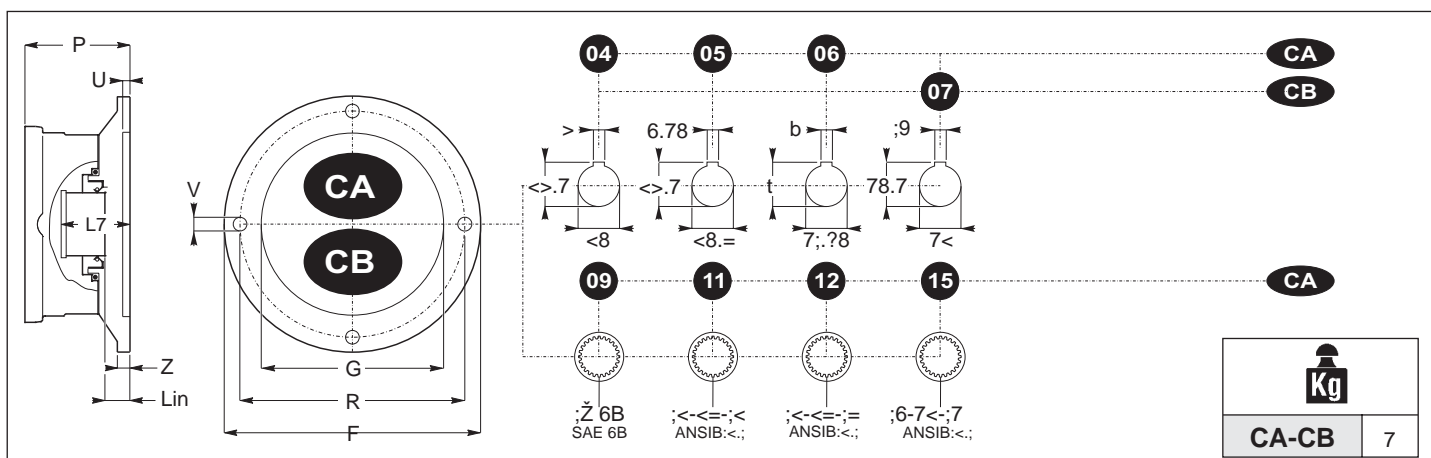
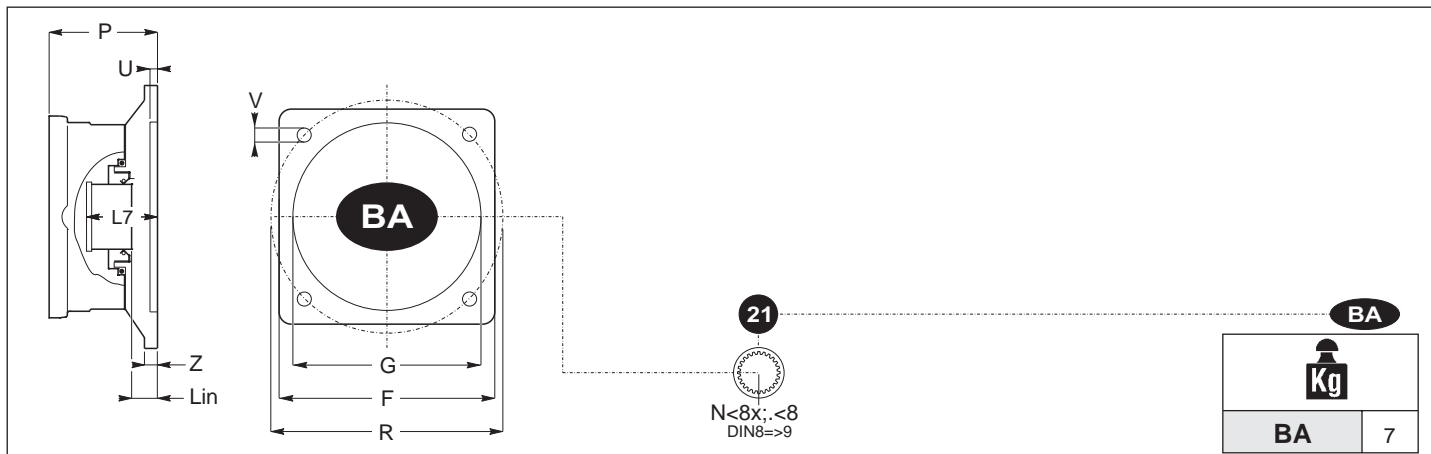




4.0 BA - CA - CB - DA - DB - EA

4.0 BA - CA - CB - DA - DB - EA

4.0 BA - CA - CB - DA - DB - EA





4.0 CA - CB - DA - DB - EA

4.0 CA - CB - DA - DB - EA

4.0 CA - CB - DA - DB - EA

| BA   | CA | CB | DA | DB | EA | EX1 | EX2 | EXB2 | EX3  | EXB3 | EX4   | EXB4 |       |    |     |
|------|----|----|----|----|----|-----|-----|------|------|------|-------|------|-------|----|-----|
| 10   |    |    |    |    |    | 101 |     |      | 102  |      | 103   |      | 104   |    |     |
| 20   |    |    |    |    |    | 201 |     |      | 202  | EXB  | 203   |      | 204   |    |     |
| 25   |    |    |    |    |    | 251 |     |      | 252  |      | 253   |      | 254   |    |     |
| 30   |    |    |    |    |    | 301 |     |      | 302  |      | 303   |      | 304   |    |     |
| 40   |    |    |    |    |    |     |     |      | 402  | -    | 403   |      | 404   |    |     |
| 50   |    |    |    |    |    | 501 |     |      | 502  |      | 503   |      | 504   |    |     |
| 70   |    |    |    |    |    | 701 |     |      | 702  | EXB  | 703   |      | 704   |    |     |
| 80   |    |    |    |    |    |     |     |      | 802  |      | 803   |      | 804   |    |     |
| 90   |    |    |    |    |    |     |     |      | 902  | -    | 903   | EXB  | 904   |    |     |
| 100  |    |    |    |    |    |     |     |      | 1002 |      | 1003  |      | 1004  |    |     |
| 150  |    |    |    |    |    |     |     |      | 1502 |      | 1503  | EX   | 1504  | EX | EXB |
| 180  |    |    |    |    |    |     |     |      | 1802 |      | 1803  |      | 1804  |    |     |
| 200  |    |    |    |    |    |     |     |      | 2002 |      | 2003  |      | 2004  |    |     |
| 250  |    |    |    |    |    |     |     |      |      | 2502 | 2503  |      | 2504  |    |     |
| 280  |    |    |    |    |    |     |     |      |      | 2802 | 2803  |      | 2804  |    |     |
| 300  |    |    |    |    |    |     |     |      |      | 3002 | 3003  |      | 3004  |    |     |
| 350  |    |    |    |    |    |     |     |      |      | 3502 | 3503  |      | 3504  |    |     |
| 420  |    |    |    |    |    |     |     |      |      |      | 4203  |      | 4204  |    |     |
| 650  |    |    |    |    |    |     |     |      |      |      | 6503  |      | 6504  |    |     |
| 850  |    |    |    |    |    |     |     |      |      |      | 8503  |      | 8504  |    |     |
| 1200 |    |    |    |    |    |     |     |      |      |      | 12003 |      | 12004 |    |     |



|       | F   | R          | G     | U  | V   | Z  | D <sub>C</sub> | L <sub>C</sub> | L <sub>IN</sub> | L <sub>3</sub> | b    | t    | P    |     |     |  |     |     |     |  |     |     |     |  |     |     |  |  |
|-------|-----|------------|-------|----|-----|----|----------------|----------------|-----------------|----------------|------|------|------|-----|-----|--|-----|-----|-----|--|-----|-----|-----|--|-----|-----|--|--|
|       |     | +/-<br>0,1 | F8    |    |     |    | +/-<br>0,5     |                |                 |                | H7   | +0,2 |      |     |     |  |     |     |     |  |     |     |     |  |     |     |  |  |
| BA 21 | 95  | 100        | 80    | 8  | M8  | 16 |                |                | 22,5            | 58             |      |      | 93   | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 |  |  |
| CA 04 | 130 | 106,4      | 82,6  | 10 | M12 | 17 |                |                | 15,5            | 58             | 8    | 28,3 | 93   | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 |  |  |
| CA 05 | 130 | 106,4      | 82,6  | 10 | M12 | 17 |                |                | 15,5            | 58             | 6,35 | 28,3 | 93   | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 |  |  |
| CA 06 | 130 | 106,4      | 82,6  | 10 | M12 | 17 |                |                | 13              | 58             |      |      | 93   | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 |  |  |
| CA 09 | 130 | 106,4      | 82,6  | 10 | M12 | 17 | -              |                | 20,5            | 58             |      |      | 93   | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 |  |  |
| CA 11 | 130 | 106,4      | 82,6  | 10 | M12 | 17 |                |                | 13              | 56             |      |      | 93   | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 |  |  |
| CA 12 | 130 | 106,4      | 82,6  | 10 | M12 | 17 |                |                | 13              | 56             |      |      | 93   | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 |  |  |
| CA 15 | 130 | 106,4      | 82,6  | 10 | M12 | 17 |                |                | 13              | 58             |      |      | 93   | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 | 109 |  | 93  | 101 |  |  |
| CB 07 | 130 | 106,4      | 82,6  | 22 | M12 | 29 |                |                | 17,5            | 74             | 10   | 35,3 | 105  | 113 | 121 |  | 105 | 113 | 121 |  | 105 | 113 | 121 |  | 105 | 113 |  |  |
| DB 04 | 118 | 125        | 100   | 10 | M10 | 30 | -              |                | 29              | 73             | 8    | 28,3 | 107  | 115 | 123 |  | 107 | 115 | 123 |  | 117 | 115 | 123 |  | 107 | 115 |  |  |
| DA 11 | 145 | 125        | 100   | 8  | M10 | 11 | 29             | 32             | 25              | 52             |      |      | 87   | 95  | 103 |  | 87  | 95  | 103 |  | 87  | 95  | 103 |  | 87  | 95  |  |  |
| DB 21 | 118 | 125        | 100   | 10 | M10 | 30 |                |                | 36              | 73             |      |      | 107  | 115 | 123 |  | 107 | 115 | 123 |  | 117 | 115 | 123 |  | 107 | 115 |  |  |
| DB 22 | 118 | 125        | 100   | 10 | M10 | 30 |                |                | 27              | 68             |      |      | 107  | 115 | 123 |  | 107 | 115 | 123 |  | 117 | 115 | 123 |  | 107 | 115 |  |  |
| EA 15 | 170 | 146        | 101,6 | 10 | M14 | 23 | -              |                | 10              | 56             |      |      | 90,0 | 98  | 106 |  | 90  | 98  | 106 |  | 90  | 98  | 106 |  | 90  | 98  |  |  |







4.0 JA-KB-LA-LB

4.0 JA-KB-LA-LB

4.0 JA-KB-LA-LB

**JA**

|           |    |
|-----------|----|
| <b>Kg</b> |    |
| <b>JA</b> | 10 |

**KB**

|           |   |
|-----------|---|
| <b>Kg</b> |   |
| <b>KB</b> | 9 |

**LA**

|           |    |
|-----------|----|
| <b>Kg</b> |    |
| <b>LA</b> | 10 |

**LB**

|           |    |
|-----------|----|
| <b>Kg</b> |    |
| <b>LB</b> | 10 |



4.0 JA-KB-LA-LB

4.0 JA-KB-LA-LB

4.0 JA-KB-LA-LB

|      | JA | KB | LA | LB | EX1 | EX2  | EXB2 | EX3  | EXB3 | EX4   | EXB4 |       |        |
|------|----|----|----|----|-----|------|------|------|------|-------|------|-------|--------|
| 10   |    |    |    |    | 101 |      |      | 102  |      | 103   |      | 104   |        |
| 20   |    |    |    |    | 201 |      |      | 202  | EXB  | 203   |      | 204   |        |
| 25   |    |    |    |    | 251 |      |      | 252  |      | 253   |      | 254   |        |
| 30   |    |    |    |    | 301 |      |      | 302  |      | 303   |      | 304   |        |
| 40   |    |    |    |    |     |      |      | 402  | -    | 403   |      | 404   |        |
| 50   |    |    |    |    | 501 |      |      | 502  |      | 503   |      | 504   |        |
| 70   |    |    |    |    | 701 |      |      | 702  | EXB  | 703   |      | 704   |        |
| 80   |    |    |    |    |     | 801  |      | 802  |      | 803   |      | 804   |        |
| 90   |    |    |    |    |     |      |      | 902  | - EX | 903   | EXB  | 904   |        |
| 100  |    |    |    |    |     | 1001 |      | 1002 | EXB  | 1003  |      | 1004  |        |
| 150  |    |    |    |    |     |      |      | 1502 |      | 1503  | EX   | 1504  | EX EXB |
| 180  |    |    |    |    |     |      |      | 1802 |      | 1803  |      | 1804  |        |
| 200  |    |    |    |    |     |      |      | 2002 |      | 2003  |      | 2004  |        |
| 250  |    |    |    |    |     |      |      |      | 2502 | 2503  |      | 2504  |        |
| 280  |    |    |    |    |     |      |      |      | 2802 | 2803  |      | 2804  |        |
| 300  |    |    |    |    |     |      |      |      | 3002 | 3003  |      | 3004  |        |
| 350  |    |    |    |    |     |      |      |      | 3502 | 3503  |      | 3504  |        |
| 420  |    |    |    |    |     |      |      |      |      | 4203  |      | 4204  |        |
| 650  |    |    |    |    |     |      |      |      |      | 6503  |      | 6504  |        |
| 850  |    |    |    |    |     |      |      |      |      | 8503  |      | 8504  |        |
| 1200 |    |    |    |    |     |      |      |      |      | 12003 |      | 12004 |        |

D

|              | F   | R      | G     | U  | V    | Z  | L <sub>IN</sub> | L3    | b  | t    | P     |       |       |       |       |       |       |       |       |       |       |  |  |  |
|--------------|-----|--------|-------|----|------|----|-----------------|-------|----|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|--|
|              |     | +/-0,1 | F8    |    |      |    |                 |       | H7 | +0,2 |       |       |       |       |       |       |       |       |       |       |       |  |  |  |
| <b>JA 20</b> | 197 | 228.6  | 152.4 | 15 | ∅ 21 | 30 | 30.5            | 80    |    |      | 117   | 125   | 133   | 117   | 125   | 133   | 117   | 125   | 133   | 117   | 125   |  |  |  |
| <b>KB 22</b> | 180 | 200    | 160   | 10 | M16  | 30 | 50              | 93    |    |      | 130   | 138   | 146   | 130   | 138   | 146   | 130   | 138   | 146   | 130   | 138   |  |  |  |
| <b>KB 24</b> | 180 | 200    | 160   | 10 | M16  | 30 | 50              | 93    |    |      | 130   | 138   | 146   | 130   | 138   | 146   | 130   | 138   | 146   | 130   | 138   |  |  |  |
| <b>LA 25</b> | 210 | 224    | 180   | 12 | M16  | 18 | 45              | 97    |    |      | 129   | 137   | 145   | 129   | 137   | 145   | 129   | 137   | 145   | 129   | 137   |  |  |  |
| <b>LB 33</b> | 265 | 224    | 180   | 20 | M16  | 10 | 43.5            | 135.5 | 14 | 48.8 | 172.5 | 180.5 | 188.5 | 172.5 | 180.5 | 188.5 | 172.5 | 180.5 | 188.5 | 172.5 | 180.5 |  |  |  |





4.0 NA-OA-PA

4.0 NA-OA-PA

4.0 NA-OA-PA

|           |    |
|-----------|----|
| <b>Kg</b> |    |
| NA        | 10 |

|           |    |
|-----------|----|
| <b>Kg</b> |    |
| OA        | 10 |

|           |    |
|-----------|----|
| <b>Kg</b> |    |
| PA        | 10 |



4.0 NA-OA-PA

4.0 NA-OA-PA

4.0 NA-OA-PA

| NA   | OA | PA | EX1 |     | EX2 EXB2 |      | EX3 EXB3 |       | EX4 EXB4 |       |
|------|----|----|-----|-----|----------|------|----------|-------|----------|-------|
|      |    |    |     |     |          |      |          |       |          |       |
| 10   |    |    | 101 |     |          | 102  |          | 103   |          | 104   |
| 20   |    |    | 201 |     |          | 202  | EXB      | 203   |          | 204   |
| 25   |    |    | 251 |     |          | 252  |          | 253   |          | 254   |
| 30   |    |    |     | 301 |          | 302  |          | 303   |          | 304   |
| 40   |    |    |     |     |          | 402  | -        | 403   |          | 404   |
| 50   |    |    |     | 501 | EX       | 502  |          | 503   |          | 504   |
| 70   |    |    |     | 701 |          | 702  | EXB      | 703   |          | 704   |
| 80   |    |    |     |     | 801      | 802  |          | 803   |          | 804   |
| 90   |    |    |     |     |          | 902  | - EX     | 903   | EXB      | 904   |
| 100  |    |    |     |     | 1001     | 1002 | EXB      | 1003  |          | 1004  |
| 150  |    |    |     |     |          | 1502 |          | 1503  | EX       | 1504  |
| 180  |    |    |     |     |          | 1802 |          | 1803  |          | 1804  |
| 200  |    |    |     |     |          | 2002 |          | 2003  |          | 2004  |
| 250  |    |    |     |     |          |      | 2502     | 2503  |          | 2504  |
| 280  |    |    |     |     |          |      | 2802     | 2803  |          | 2804  |
| 300  |    |    |     |     |          |      | 3002     | 3003  |          | 3004  |
| 350  |    |    |     |     |          |      | 3502     | 3503  |          | 3504  |
| 420  |    |    |     |     |          |      |          | 4203  |          | 4204  |
| 650  |    |    |     |     |          |      |          | 6503  |          | 6504  |
| 850  |    |    |     |     |          |      |          | 8503  |          | 8504  |
| 1200 |    |    |     |     |          |      |          | 12003 |          | 12004 |

D

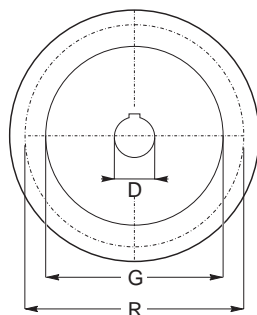
|       | F   | R      | G   | U  | V    | Z  | L <sub>IN</sub> | L3 | b  | t    | P   |     |     |     |     |     |     |     |     |     |     |
|-------|-----|--------|-----|----|------|----|-----------------|----|----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|       |     |        |     |    |      |    |                 |    |    |      |     |     |     |     |     |     |     |     |     |     |     |
|       |     | +/-0,1 | F8  |    |      |    |                 |    | H7 | +0,2 |     |     |     |     |     |     |     |     |     |     |     |
| NA 29 | 195 | 160    | 125 | 12 | M10  | 43 | 37              | 76 |    |      | 110 | 118 | 126 | 110 | 118 | 126 | 110 | 118 | 126 | 110 | 118 |
| OA 31 | 288 | 250    | 150 | 7  | ∅ 14 | 15 | 27              | 77 |    |      | 109 | 117 | 125 | 109 | 117 | 125 | 109 | 117 | 125 | 109 | 117 |
| PA 29 | 233 | 210    | 175 | 6  | ∅ 14 | 16 | 22              | 62 |    |      | 95  | 103 | 111 | 95  | 103 | 111 | 95  | 103 | 111 | 95  | 103 |

4.0 Motor Type / Code STM

4.0 Motor Type / Code STM

4.0 Типы моторов / Коды STM

Гидромотор



Вход редуктора

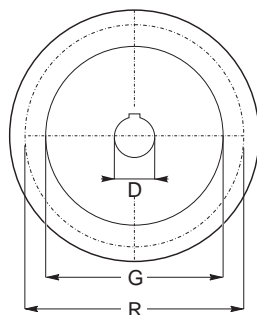
| Производитель    | Тип мотора   | D        | G     | R     | Код STM |
|------------------|--------------|----------|-------|-------|---------|
| AXIAL PUMP       | M2 24-50     | 16/32-13 | 101.6 | 146   | EA15    |
| AXIAL PUMP       | M3 40-65     | 16/32-13 | 101.6 | 146   | EA15    |
| DANFOSS          | OMP 25-400   | 25       | 82.55 | 106.4 | CA4     |
| DANFOSS          | OMR 50-375   | 25       | 82.55 | 106.4 | CA4     |
| DANFOSS          | OMP 25-400   | 25.4     | 82.55 | 106.4 | CA5     |
| DANFOSS          | OMR 50-375   | 25.4     | 82.55 | 106.4 | CA5     |
| DANFOSS          | OMP 25-400   | 32       | 82.55 | 106.4 | CB7     |
| DANFOSS          | OMR 50-375   | 32       | 82.55 | 106.4 | CB7     |
| DANFOSS          | OMH 200-500  | 32       | 82.55 | 106.4 | CB7     |
| DANFOSS          | OMS 80-400   | 32       | 82.55 | 106.4 | CB7     |
| DANFOSS          | OMT 160-500  | 40       | 125   | 160   | FB8     |
| DANFOSS          | OMP 25-400   | 1"6B     | 82.55 | 106.4 | CA9     |
| DANFOSS          | OMR 50-375   | 1"6B     | 82.55 | 106.4 | CA9     |
| DANFOSS          | OMSS 80-400  | 12/24-12 | 100   | 125   | DA11    |
| DANFOSS          | OMTS 160-500 | 12/24-16 | 125   | 160   | FA13    |
| DANFOSS          | OMT 160-500  | 12/24-17 | 125   | 160   | FB14    |
| DANFOSS          | OMVS 315-800 | 10/20-16 | 140   | 180   | HA10    |
| DINAMIC OIL      | MGL 50-400   | 25       | 82.55 | 106.4 | CA4     |
| DINAMIC OIL      | MGLR 50-375  | 25       | 82.55 | 106.4 | CA4     |
| DINAMIC OIL      | MGT 50-400   | 25       | 82.55 | 106.4 | CA4     |
| DINAMIC OIL      | MGL 50-401   | 25.4     | 82.55 | 106.4 | CA5     |
| DINAMIC OIL      | MGLR 50-375  | 25.4     | 82.55 | 106.4 | CA5     |
| DINAMIC OIL      | MGT 50-400   | 25.4     | 82.55 | 106.4 | CA5     |
| DINAMIC OIL      | MGL 50-402   | 1"6B     | 82.55 | 106.4 | CA9     |
| DINAMIC OIL      | MGLR 50-375  | 1"6B     | 82.55 | 106.4 | CA9     |
| DINAMIC OIL      | MGT 50-400   | 1"6B     | 82.55 | 106.4 | CA9     |
| EATON(CHAR-LYNN) | SERIE 2000   | 25       | 82.55 | 106.4 | CA4     |
| EATON(CHAR-LYNN) | SERIE 2000   | 25.4     | 82.55 | 106.4 | CA5     |
| EATON(CHAR-LYNN) | SERIE 2000   | 31.75    | 82.55 | 106.4 | CA6     |
| EATON(CHAR-LYNN) | SERIE 2000   | 32       | 82.55 | 106.4 | CB7     |
| EATON(CHAR-LYNN) | SERIE 2000   | 1"6B     | 82.55 | 106.4 | CA9     |
| GEOLINK          | GHL 50-400   | 25       | 82.55 | 106.4 | CA4     |
| GEOLINK          | GFS 50-400   | 25       | 82.55 | 106.4 | CA4     |
| GEOLINK          | GKS 50-400   | 25       | 82.55 | 106.4 | CA4     |
| GEOLINK          | GLS 80-315   | 32       | 82.55 | 106.4 | CB7     |
| GEOLINK          | GHL 50-400   | 1"6B     | 82.55 | 106.4 | CA9     |
| GEOLINK          | GFS 50-400   | 1"6B     | 82.55 | 106.4 | CA9     |
| GEOLINK          | GKS 50-400   | 1"6B     | 82.55 | 106.4 | CA9     |
| HP HYDRAULIC     | M4MF 21-28   | 25.4     | 82.55 | 106.4 | CA5     |
| HP HYDRAULIC     | M4MF 21-28   | 16/32-13 | 82.55 | 106.4 | CA15    |
| HP HYDRAULIC     | M4PV 21-28   | 16/32-13 | 101.6 | 146   | EA15    |
| HP HYDRAULIC     | M4PV 34-65   | 16/32-13 | 101.6 | 146   | EA15    |
| HP HYDRAULIC     | M4MF 34-65   | 16/32-13 | 101.6 | 146   | EA15    |
| HP HYDRAULIC     | M4MV 34-65   | 16/32-13 | 101.6 | 146   | EA15    |
| LINDE            | HMF 50-75    | 16/32-21 | 127   | 181   | GB17    |
| M + S            | EPM 40-630   | 25       | 82.55 | 106.4 | CA4     |
| M + S            | EPRM 50-400  | 25       | 82.55 | 106.4 | CA4     |
| M + S            | EPM 40-630   | 25.4     | 82.55 | 106.4 | CA5     |
| M + S            | EPRM 50-400  | 25.4     | 82.55 | 106.4 | CA5     |
| M + S            | EPM 40-630   | 32       | 82.55 | 106.4 | CB7     |
| M + S            | EPRM 50-400  | 32       | 82.55 | 106.4 | CB7     |
| M + S            | EPRM 80-400  | 32       | 82.55 | 106.4 | CB7     |
| M + S            | EPM 40-630   | 1"6B     | 82.55 | 106.4 | CA9     |
| M + S            | EPRM 50-400  | 1"6B     | 82.55 | 106.4 | CA9     |
| M + S            | EPMT 160-500 | 12/24-17 | 125   | 160   | FB14    |
| REXROTH          | A2FM 23-32   | 25       | 100   | 125   | DB4     |
| REXROTH          | A4FM 22-28   | 16/32-13 | 101.6 | 146   | EA15    |
| REXROTH          | A10FM 23-28  | 16/32-13 | 101.6 | 146   | EA15    |
| REXROTH          | A2FM 10-16   | W25x1,25 | 80    | 100   | BA21    |
| REXROTH          | A2FM 23-32   | W25x1,25 | 100   | 125   | DB21    |
| REXROTH          | A6VM 28      | W25x1,25 | 100   | 125   | DB21    |
| REXROTH          | A2FM 23-32   | W30x2    | 100   | 125   | DB22    |
| REXROTH          | A6VM 28      | W30x2    | 100   | 125   | DB22    |
| REXROTH          | A2FM 45-63   | W30x2    | 125   | 160   | FA22    |
| REXROTH          | A6VM 55      | W30x2    | 125   | 160   | FA22    |
| REXROTH          | A2FM 45-63   | W35x2    | 125   | 160   | FA23    |
| REXROTH          | A6VM 55      | W35x2    | 125   | 160   | FA23    |

4.0 Motor Type / Code STM

4.0 Motor Type / Code STM

4.0 Типы моторов / Коды STM

Гидромотор



Вход редуктора

| Производитель | Тип мотора  | D        | G     | R     | Код STM |
|---------------|-------------|----------|-------|-------|---------|
| REXROTH       | A2FM 80-90  | W35x2    | 140   | 180   | HB23    |
| REXROTH       | A6VM 80     | W35x2    | 140   | 180   | HB23    |
| REXROTH       | A2FM 80-90  | W40x2    | 140   | 180   | HB24    |
| REXROTH       | A6VM 80     | W40x2    | 140   | 180   | HB24    |
| REXROTH       | A6VM 160    | W45x2    | 180   | 224   | LA25    |
| SAE STANDARD  | SAE A       | 25       | 82.55 | 106.4 | CA4     |
| SAE STANDARD  | SAE A       | 25.4     | 82.55 | 106.4 | CA5     |
| SAE STANDARD  | SAE A       | 31.75    | 82.55 | 106.4 | CA6     |
| SAE STANDARD  | SAE A       | 1"6B     | 82.55 | 106.4 | CA9     |
| SAI           | GM05-40-200 | 28x34    | 125   | 160   | NA29    |
| SAI           | GM2-200-630 | 36x40    | 150   | 250   | OA31    |
| SAI           | GM1-100-320 | 28x34    | 175   | 210   | PA29    |
| SAMHYDRAULIK  | BG 40-400   | 25       | 82.55 | 106.4 | CA4     |
| SAMHYDRAULIK  | AGC 50-400  | 25       | 82.55 | 106.4 | CA4     |
| SAMHYDRAULIK  | AGF 50-400  | 25       | 82.55 | 106.4 | CA4     |
| SAMHYDRAULIK  | AR 50-400   | 25       | 82.55 | 106.4 | CA4     |
| SAMHYDRAULIK  | ARC 50-400  | 25       | 82.55 | 106.4 | CA4     |
| SAMHYDRAULIK  | ARF 50-400  | 25       | 82.55 | 106.4 | CA4     |
| SAMHYDRAULIK  | BR 50-400   | 25       | 82.55 | 106.4 | CA4     |
| SAMHYDRAULIK  | BG 40-401   | 25.4     | 82.55 | 106.4 | CA5     |
| SAMHYDRAULIK  | AGC 50-401  | 25.4     | 82.55 | 106.4 | CA5     |
| SAMHYDRAULIK  | AR 50-401   | 25.4     | 82.55 | 106.4 | CA5     |
| SAMHYDRAULIK  | ARC 50-401  | 25.4     | 82.55 | 106.4 | CA5     |
| SAMHYDRAULIK  | BR 50-401   | 25.4     | 82.55 | 106.4 | CA5     |
| SAMHYDRAULIK  | BR 50-402   | 31.75    | 82.55 | 106.4 | CA6     |
| SAMHYDRAULIK  | AGC 50-402  | 32       | 82.55 | 106.4 | CB7     |
| SAMHYDRAULIK  | AGS 50-402  | 32       | 82.55 | 106.4 | CB7     |
| SAMHYDRAULIK  | ARC 50-402  | 32       | 82.55 | 106.4 | CB7     |
| SAMHYDRAULIK  | BR 50-403   | 32       | 82.55 | 106.4 | CB7     |
| SAMHYDRAULIK  | HPR 80-401  | 32       | 82.55 | 106.4 | CB7     |
| SAMHYDRAULIK  | BG 40-402   | 1"6B     | 82.55 | 106.4 | CA9     |
| SAMHYDRAULIK  | AR 50-402   | 1"6B     | 82.55 | 106.4 | CA9     |
| SAMHYDRAULIK  | BR 50-404   | 1"6B     | 82.55 | 106.4 | CA9     |
| SAMHYDRAULIK  | H1C 75      | W35x2    | 140   | 180   | HB23    |
| SAMHYDRAULIK  | H1C 90      | W40x2    | 160   | 200   | KB24    |
| SAMHYDRAULIK  | H1C 160 M   | W45x2    | 180   | 224   | LA25    |
| SAMHYDRAULIK  | H2V 160 M   | W45x2    | 180   | 224   | LA25    |
| SAMHYDRAULIK  | H1C 160 M   | 45       | 180   | 224   | LB33    |
| SAUER         | M25MF       | 16/32-13 | 101.6 | 146   | EA15    |
| SAUER         | M35MF       | 16/32-13 | 101.6 | 146   | EA15    |
| SAUER         | M44MF       | 16/32-13 | 101.6 | 146   | EA15    |
| SAUER         | M46MF       | 16/32-13 | 101.6 | 146   | EA15    |
| SAUER         | 90M 030     | 16/32-13 | 101.6 | 146   | EA15    |
| SAUER         | 90M 042     | 16/32-13 | 101.6 | 146   | EA15    |
| SAUER         | 51V 160/A   | 8/16-13  | 152.4 | 228.5 | JA20    |
| SAUER         | OMT 160-500 | 40       | 127   | 162   | GC8     |
| VOAC          | 0           | 16/32-13 | 101.6 | 146   | EA15    |
| VOAC          | F12-30 ISO  | W30x2    | 100   | 125   | DB22    |
| VOAC          | F12-60 ISO  | W35x2    | 125   | 160   | FA23    |
| VOAC          | F12-80 ISO  | W40x2    | 140   | 180   | HB24    |
| VOAC          | V14-160     | W45x2    | 180   | 224   | LA25    |
| VOAC          | F 12/40 ISO | W32x2    | 125   | 160   | FA28    |
| WHITE         | RS-03-24    | 25       | 82.55 | 106.4 | CA4     |
| WHITE         | HB-03-24    | 25       | 82.55 | 106.4 | CA4     |
| WHITE         | RS-03-24    | 25.4     | 82.55 | 106.4 | CA5     |
| WHITE         | HB-03-24    | 25.4     | 82.55 | 106.4 | CA5     |
| WHITE         | HB-03-24    | 31.75    | 82.55 | 106.4 | CA6     |
| WHITE         | HB-03-24    | 32       | 82.55 | 106.4 | CB7     |
| WHITE         | RS-03-24    | 1"6B     | 82.55 | 106.4 | CA9     |
| WHITE         | HB-03-24    | 1"6B     | 82.55 | 106.4 | CA9     |
| WHITE         | HB-03-24    | 16/32-13 | 82.55 | 106.4 | CA15    |

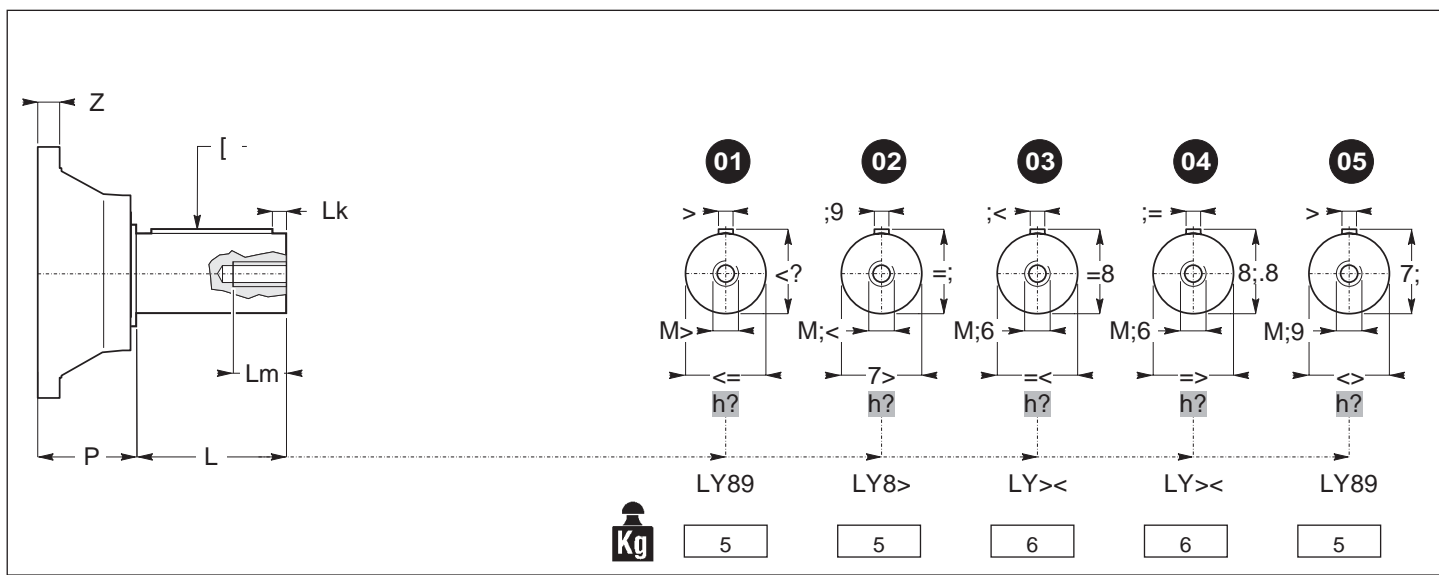




5.0 ECE

5.0 ECE

5.0 ECE



| ECE  | EX1  |     | EX2 EXB2 |      | EX3 EXB3 |       | EX4 EXB4 |        |
|------|------|-----|----------|------|----------|-------|----------|--------|
|      | 10   | 101 |          | 102  |          | 103   |          | 104    |
| 20   | 201  |     | 202      | EXB  | 203      |       | 204      |        |
| 25   | 251  |     | 252      | EXB  | 253      |       | 254      |        |
| 30   | 301  |     | 302      |      | 303      |       | 304      |        |
| 40   |      | EX  | 402      | -    | 403      |       | 404      |        |
| 50   | 501  |     | 502      |      | 503      |       | 504      |        |
| 70   | 701  |     | 702      | EXB  | 703      |       | 704      |        |
| 80   |      | 801 | 802      |      | 803      |       | 804      |        |
| 90   |      |     | 902      | - EX | 903      | EXB   | 904      |        |
| 100  | 1001 |     | 1002     | EXB  | 1003     |       | 1004     |        |
| 150  |      |     | 1502     |      | 1503     |       | 1504     | EX EXB |
| 180  |      |     | 1802     |      | 1803     |       | 1804     |        |
| 200  |      |     | 2002     |      | 2003     |       | 2004     |        |
| 250  |      |     | 2502     |      | 2503     |       | 2504     |        |
| 280  |      |     | 2802     |      | 2803     |       | 2804     |        |
| 300  |      |     | 3002     |      | 3003     |       | 3004     |        |
| 350  |      |     | 3502     |      | 3503     |       | 3504     |        |
| 420  |      |     |          |      | 4203     |       | 4204     |        |
| 650  |      |     |          |      |          | 6503  |          | 6504   |
| 850  |      |     |          |      |          | 8503  |          | 8504   |
| 1200 |      |     |          |      |          | 12003 |          | 12004  |

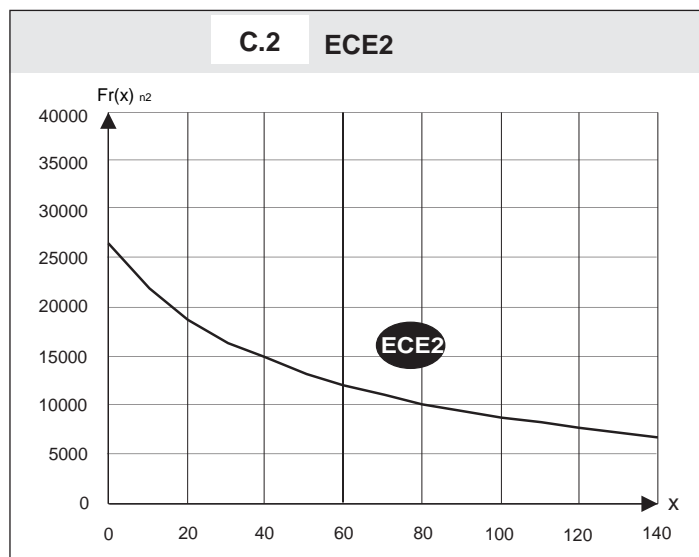
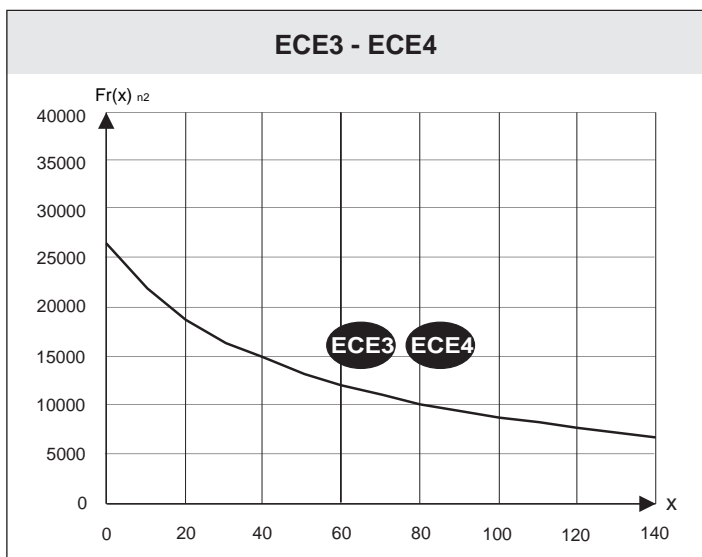
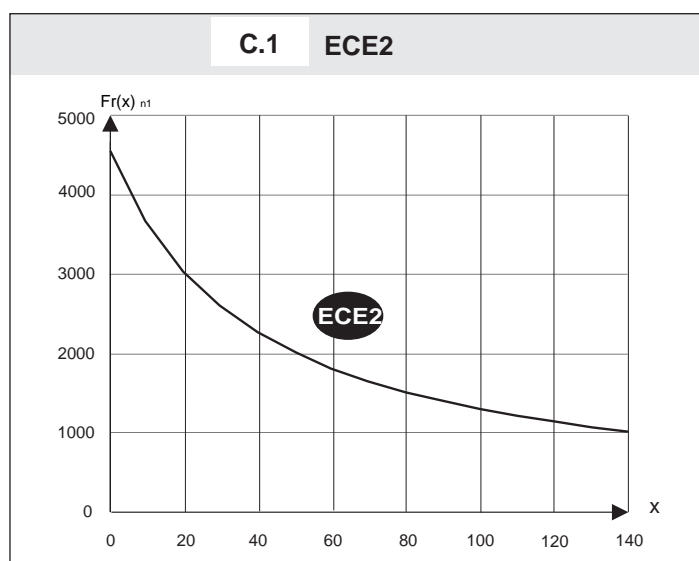
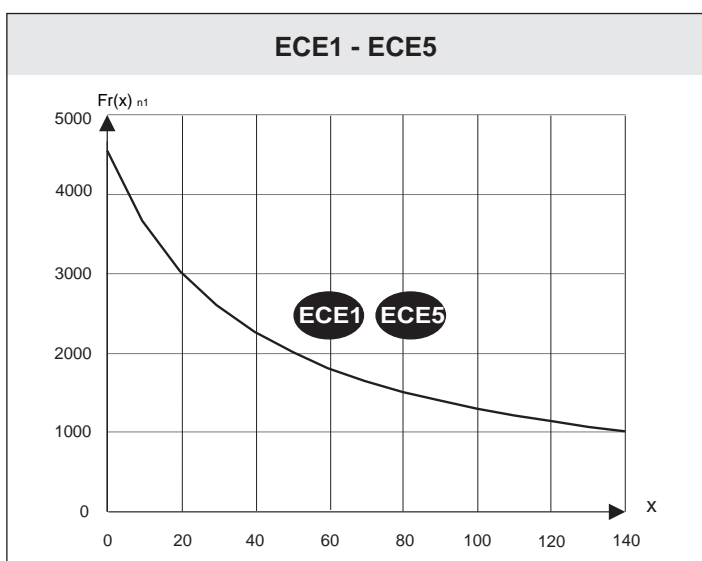
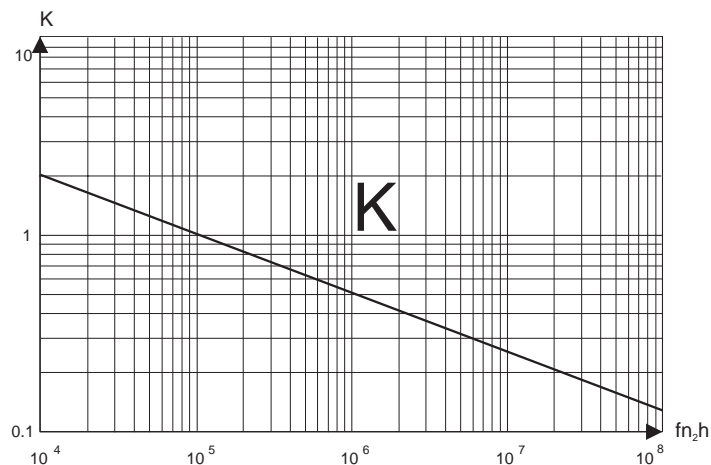
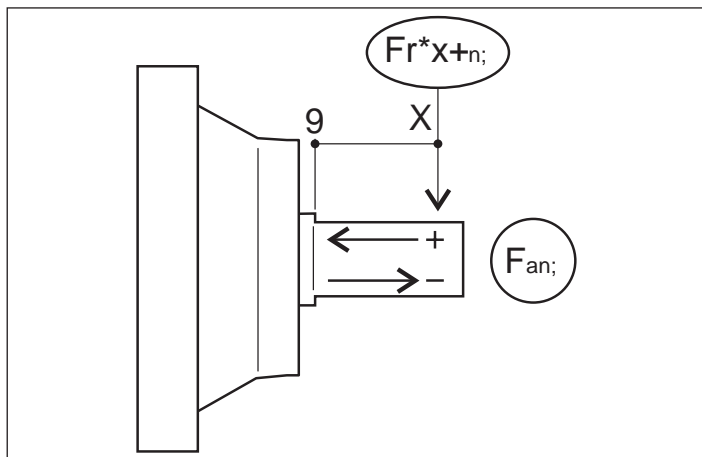
|                                       | L  | Z  | Lm | LK | K       | P       |     |       |  |     |     |       |  |     |     |       |  |     |     |
|---------------------------------------|----|----|----|----|---------|---------|-----|-------|--|-----|-----|-------|--|-----|-----|-------|--|-----|-----|
|                                       |    |    |    |    |         | UNI6604 | 91  | 117   |  |     | 91  | 117   |  |     | 91  | 117   |  |     | 91  |
| <b>ECE 1</b>                          | 50 | 23 | 20 | 5  | 8x7x40  | 91      | 117 |       |  | 91  | 117 |       |  | 91  | 117 |       |  | 91  | 117 |
| <b>ECE 2</b>                          | 58 | 23 | 24 | 4  | 10x8x50 | 91      | 117 |       |  | 91  | 117 |       |  | 91  | 117 |       |  | 91  | 117 |
| Radial Load - Look Chart C.- Page D19 |    |    |    |    |         | C.1     | C.2 |       |  | C.1 | C.2 |       |  | C.1 | C.2 |       |  | C.1 | C.2 |
| <b>ECE 3</b>                          | 82 | 23 | 32 | 6  | 12x8x70 |         | 117 | 161,9 |  |     | 117 | 161,9 |  |     | 117 | 161,9 |  |     | 117 |
| <b>ECE 4</b>                          | 82 | 23 | 32 | 6  | 14x9x70 |         | 117 | 161,9 |  |     | 117 | 161,9 |  |     | 117 | 161,9 |  |     | 117 |
| <b>ECE 5</b>                          | 50 | 23 | 22 | 5  | 8x7x40  | 91      | 117 |       |  | 91  | 117 |       |  | 91  | 117 |       |  | 91  | 117 |



5.0 ECE

5.0 ECE

5.0 ECE



| Fa n1 | Direzione/Direction/Drehrichtung | ECE 1 | ECE 2 | ECE 3 | ECE 4 | ECE 5 |
|-------|----------------------------------|-------|-------|-------|-------|-------|
|       | (+)                              |       | *     | *     | *     | *     |
| (-)   |                                  | *     | *     | *     | *     | *     |

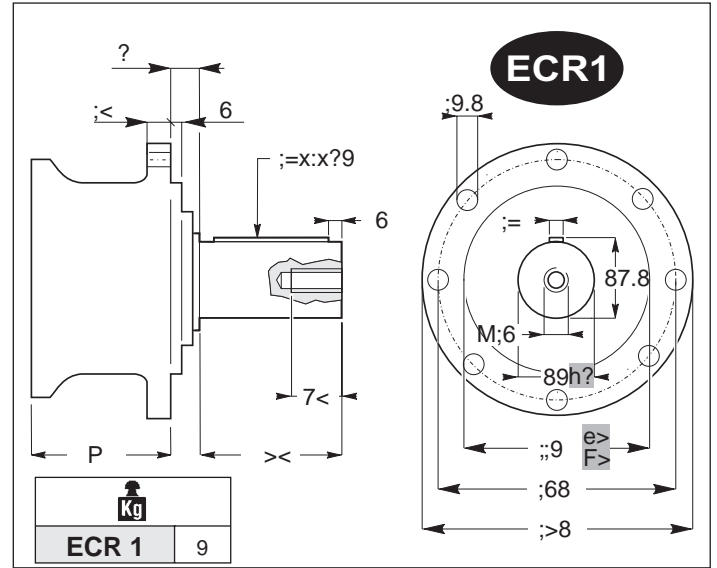
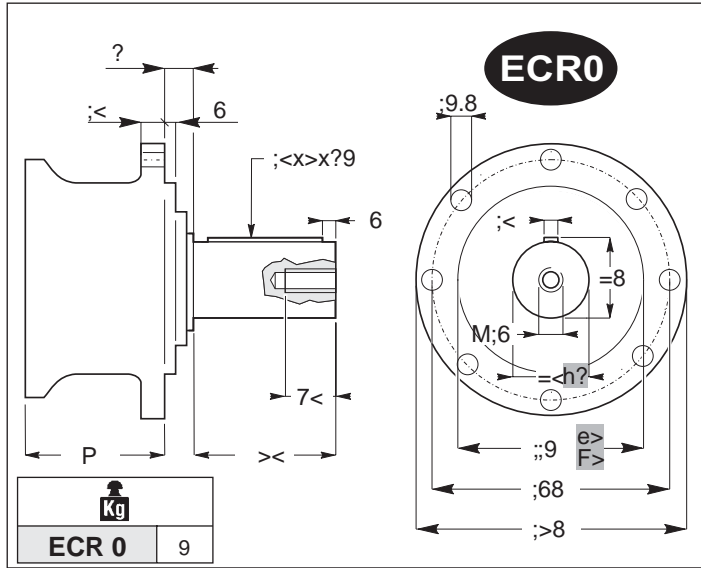
\* Contattare nostro ufficio tecnico commerciale / \* Please, contact our technical sales dept. / \* Свяжитесь с нашим техническим отделом.



6.0 ECR 0-1

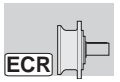
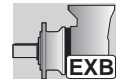
6.0 ECR 0-1

6.0 ECR 0-1



| ECR  | EX1 |    | EX2 EXB2 |        | EX3 EXB3 |     | EX4 EXB4 |        |
|------|-----|----|----------|--------|----------|-----|----------|--------|
|      | 101 |    | 102      |        | 103      |     | 104      |        |
| 10   | 101 |    | 102      |        | 103      |     | 104      |        |
| 20   | 201 |    | 202      | EXB    | 203      |     | 204      |        |
| 25   | 251 |    | 252      |        | 253      |     | 254      |        |
| 30   | 301 | EX | 302      |        | 303      |     | 304      |        |
| 40   |     |    | 402      | -      | 403      |     | 404      |        |
| 50   | 501 |    | 502      |        | 503      |     | 504      |        |
| 70   | 701 |    | 702      | EXB EX | 703      |     | 704      |        |
| 80   |     |    | 802      |        | 803      |     | 804      |        |
| 90   |     |    | 902      | -      | 903      | EXB | 904      |        |
| 100  |     |    | 1002     | EXB    | 1003     |     | 1004     |        |
| 150  |     |    | 1502     |        | 1503     |     | 1504     | EX EXB |
| 180  |     |    | 1802     |        | 1803     |     | 1804     |        |
| 200  |     |    | 2002     |        | 2003     |     | 2004     |        |
| 250  |     |    |          |        | 2503     |     | 2504     |        |
| 280  |     |    |          |        | 2803     |     | 2804     |        |
| 300  |     |    |          |        | 3003     |     | 3004     |        |
| 350  |     |    |          |        | 3503     |     | 3504     |        |
| 420  |     |    |          |        | 4203     |     | 4204     |        |
| 650  |     |    |          |        |          |     | 6504     |        |
| 850  |     |    |          |        |          |     | 8504     |        |
| 1200 |     |    |          |        |          |     | 12004    |        |

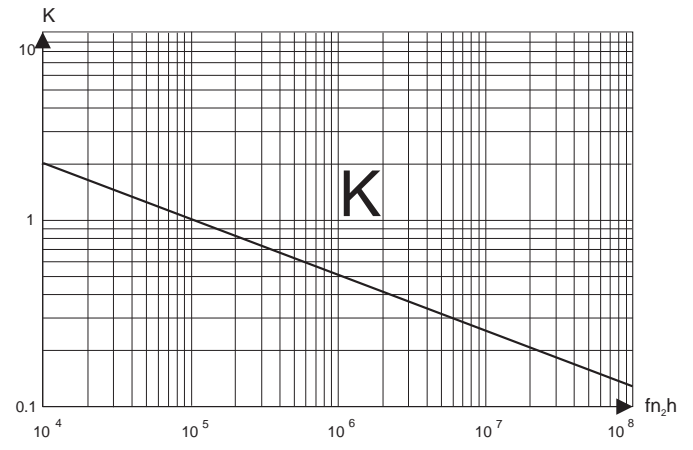
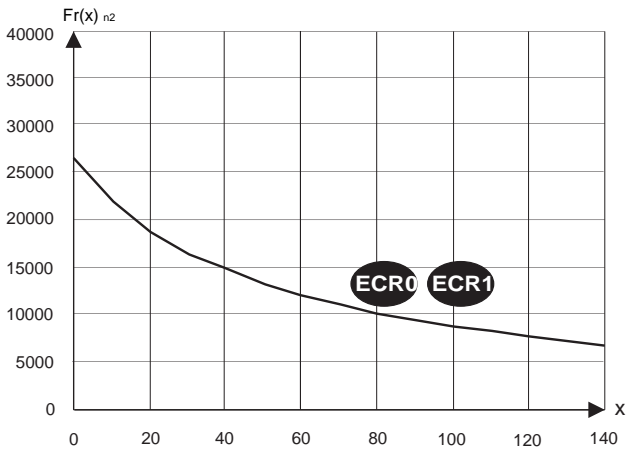
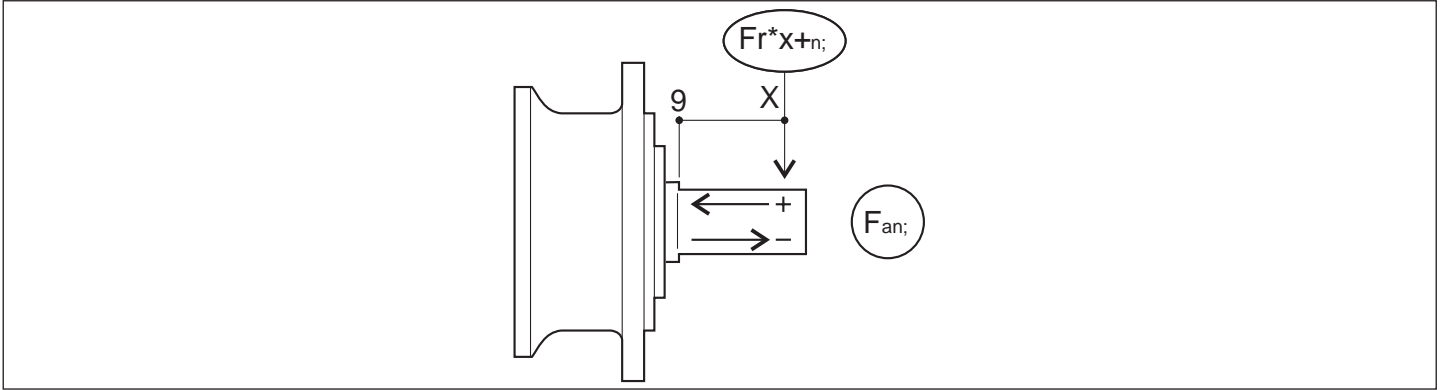
|      |  |  |  |  |  |  |  |  |  | P     |       |  |  |  |  |  |  |  |  |       |       |  |  |  |  |  |  |  |  |
|------|--|--|--|--|--|--|--|--|--|-------|-------|--|--|--|--|--|--|--|--|-------|-------|--|--|--|--|--|--|--|--|
| ECR0 |  |  |  |  |  |  |  |  |  | 108,3 | 116,8 |  |  |  |  |  |  |  |  | 108,3 | 116,8 |  |  |  |  |  |  |  |  |
| ECR1 |  |  |  |  |  |  |  |  |  | 108,3 | 116,8 |  |  |  |  |  |  |  |  | 108,3 | 116,8 |  |  |  |  |  |  |  |  |



6.0 ECR 0-1

6.0 ECR 0-1

6.0 ECR 0-1



D

| Fa <sub>n1</sub> | Direzione/Direction/Направление | ECR 0 | ECR 1 |
|------------------|---------------------------------|-------|-------|
|                  | (+)                             |       | 22491 |
| (-)              |                                 | 19278 | 19278 |

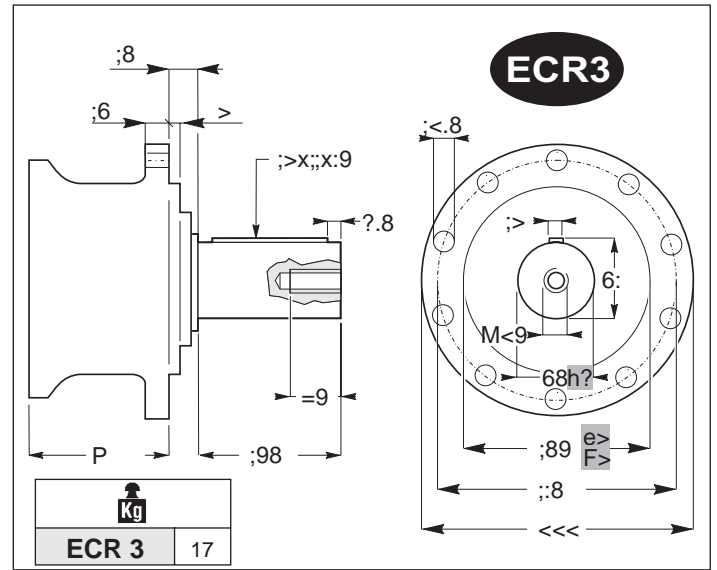
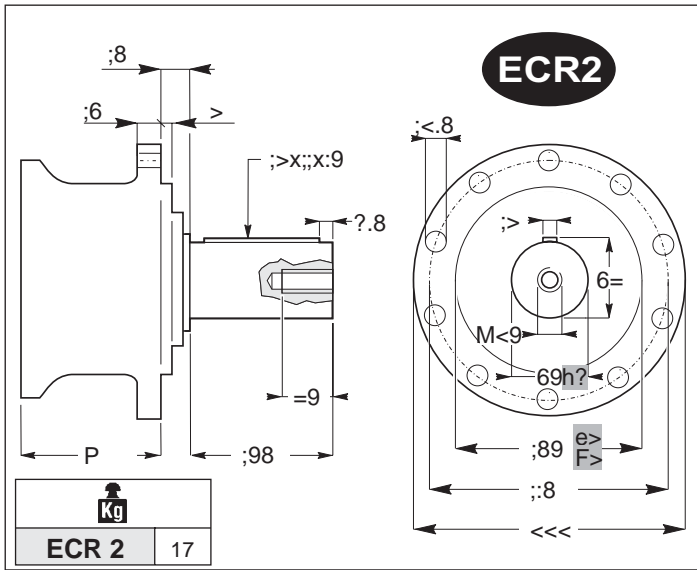




6.0 ECR 2-3-4

6.0 ECR 2-3-4

6.0 ECR 2-3-4



| ECR  | EX1 |     | EX2 EXB2 |     | EX3 EXB3 |     | EX4 EXB4 |     |
|------|-----|-----|----------|-----|----------|-----|----------|-----|
|      | 101 | 102 | 201      | 202 | 251      | 252 | 301      | 302 |
| 10   |     |     |          |     |          |     |          |     |
| 20   |     |     |          |     |          | EXB |          |     |
| 25   |     |     |          |     |          |     |          |     |
| 30   |     |     |          |     |          |     |          |     |
| 40   |     |     |          |     |          |     |          |     |
| 50   |     |     |          |     |          |     |          |     |
| 70   |     |     |          |     |          | EXB |          |     |
| 80   |     |     |          |     |          |     |          |     |
| 90   |     |     |          |     |          |     |          |     |
| 100  |     |     |          |     |          |     |          |     |
| 150  |     |     |          |     |          |     |          |     |
| 180  |     |     |          |     |          |     |          |     |
| 200  |     |     |          |     |          |     |          |     |
| 250  |     |     |          |     |          |     |          |     |
| 280  |     |     |          |     |          |     |          |     |
| 300  |     |     |          |     |          |     |          |     |
| 350  |     |     |          |     |          |     |          |     |
| 420  |     |     |          |     |          |     |          |     |
| 650  |     |     |          |     |          |     |          |     |
| 850  |     |     |          |     |          |     |          |     |
| 1200 |     |     |          |     |          |     |          |     |

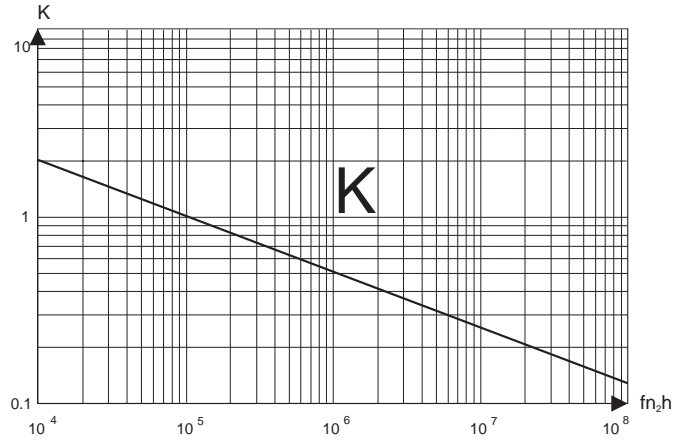
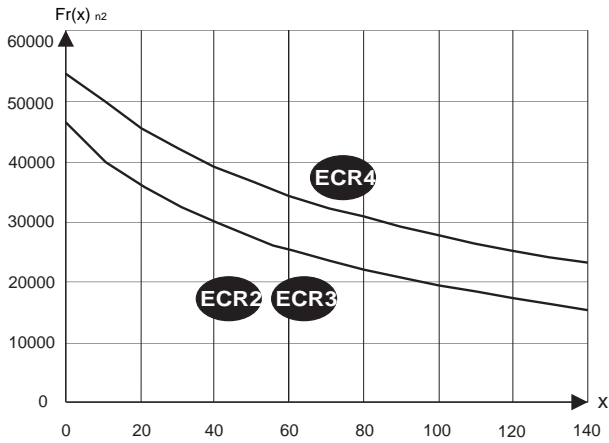
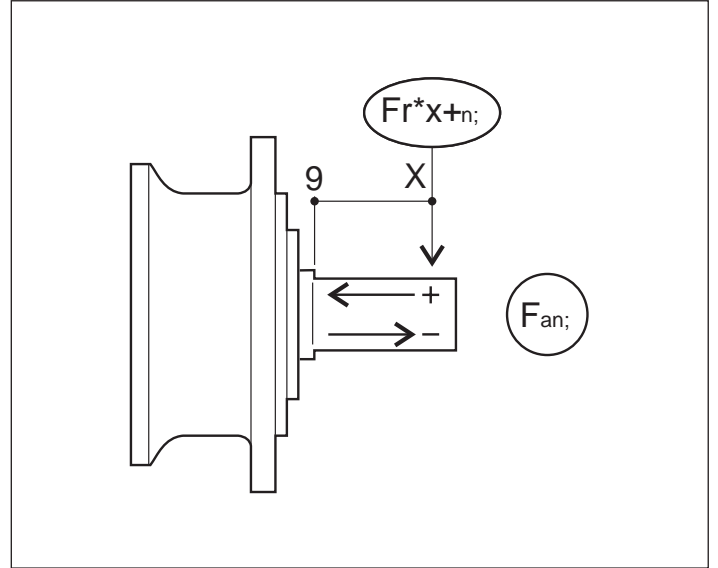
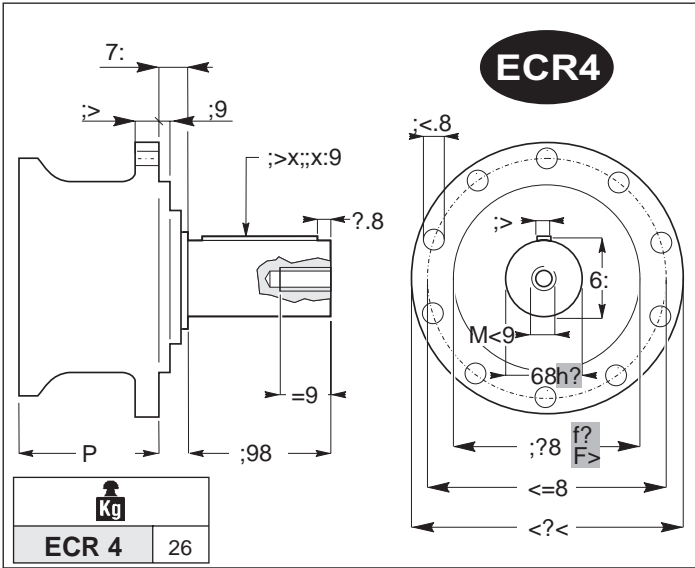
| P    |       |       |       |       |       |       |       |       |       |       |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ECR2 | 114.8 | 141.5 | 157.5 | 157.5 | 114.8 | 141.5 | 157.5 | 157.5 | 114.8 | 141.5 |
| ECR3 | 114.8 | 141.5 | 157.5 | 157.5 | 114.8 | 141.5 | 157.5 | 157.5 | 114.8 | 141.5 |
| ECR4 | 145.5 | 161.5 | 161.5 |       | 145.5 | 161.5 | 161.5 |       | 145.5 | 161.5 |



6.0 ECR 2-3-4

6.0 ECR 2-3-4

6.0 ECR 2-3-4



|           | Direzione/Direction/Направление | ECR 2 | ECR 3 | ECR 4 |
|-----------|---------------------------------|-------|-------|-------|
| $Fa_{n1}$ | (+)                             |       | 38557 | 44398 |
|           | (-)                             |       | 34426 | 38557 |

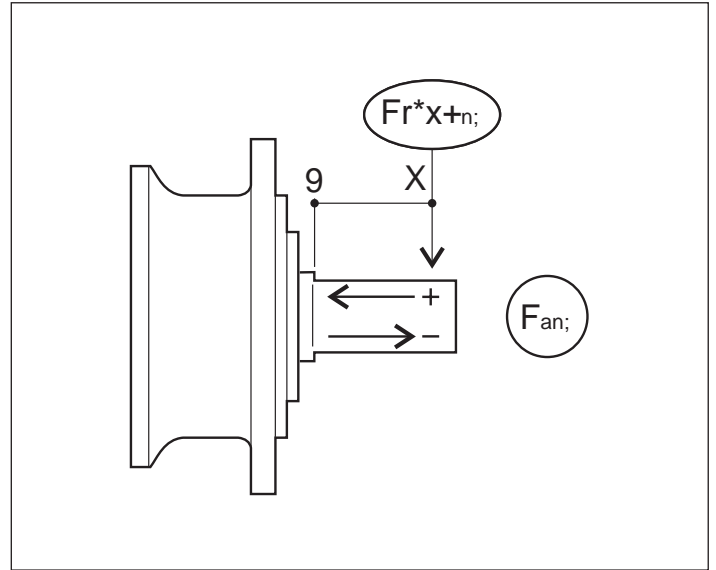
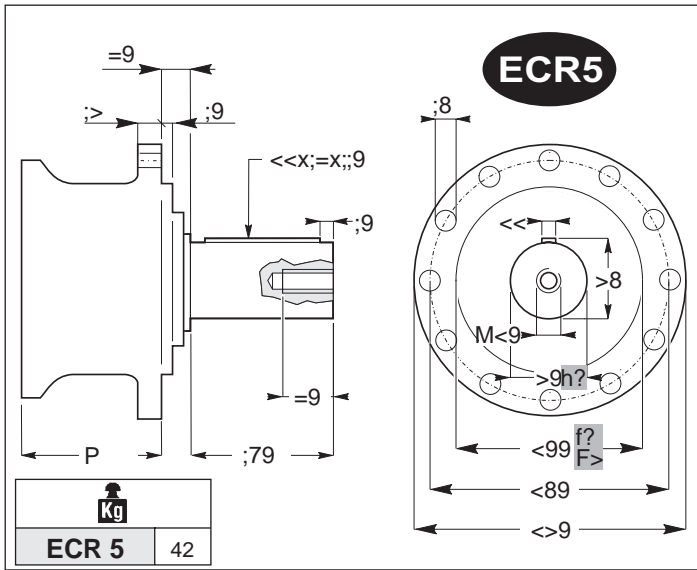




6.0 ECR 5

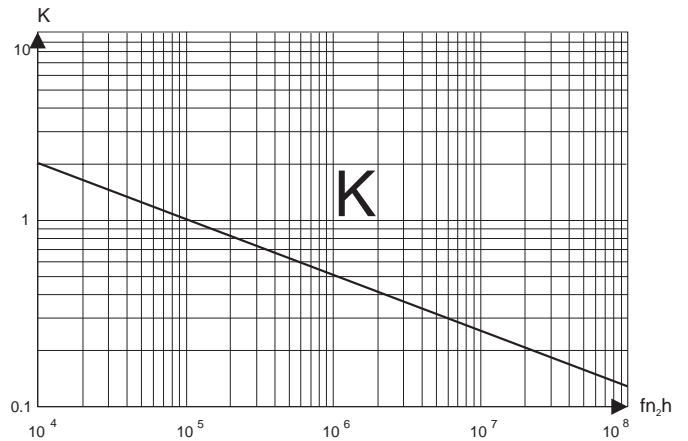
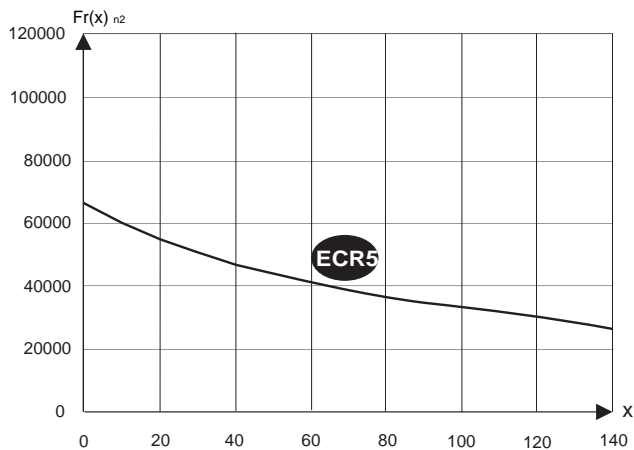
6.0 ECR 5

6.0 ECR 5



| ECR | EX1 | EX2  | EX3  | EX4 |
|-----|-----|------|------|-----|
|     | 80  | 801  |      |     |
| 90  |     |      |      |     |
| 100 |     |      |      |     |
| 150 |     |      |      |     |
| 180 |     |      |      |     |
| 200 |     |      |      |     |
| 250 |     | 2502 |      |     |
| 280 |     |      |      |     |
| 300 |     |      |      |     |
| 350 |     |      |      |     |
| 420 |     |      |      |     |
| 650 |     |      | 6503 |     |

| ECR5 | P |       |       |       |
|------|---|-------|-------|-------|
|      |   | 154.0 | 154.0 | 154.0 |



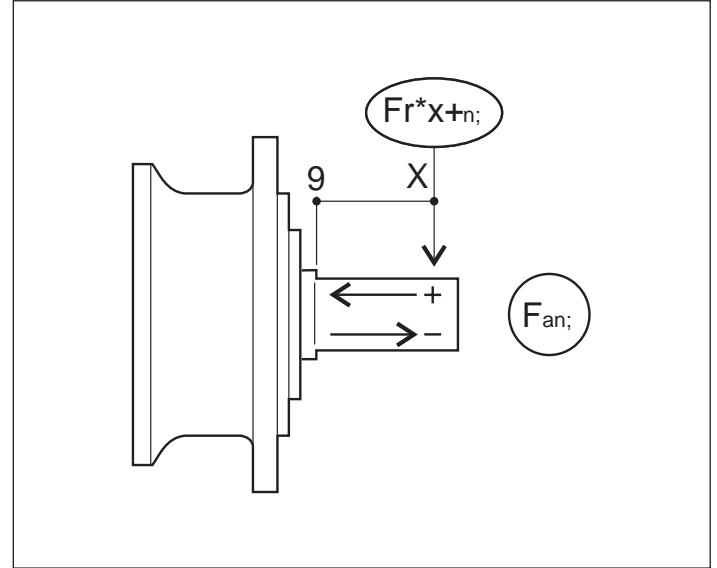
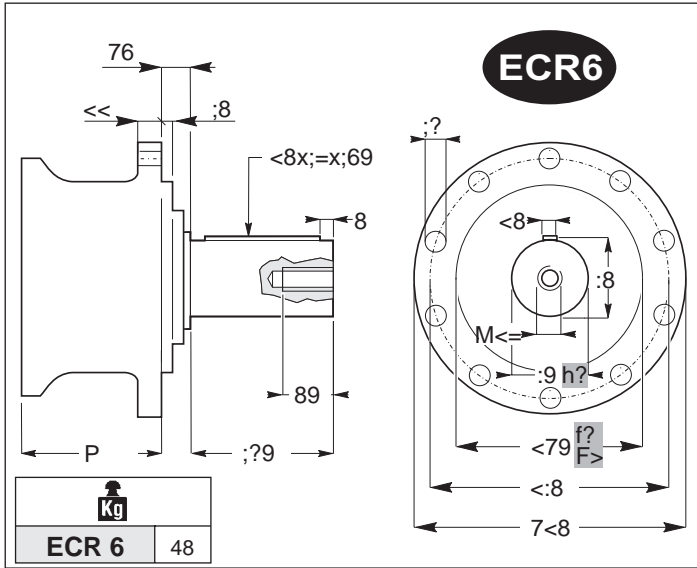
| Fa n1 | Direzione/Direction/Направление | ECR 5 |
|-------|---------------------------------|-------|
|       | (+)                             | 58419 |
|       | (-)                             | 58419 |



6.0 ECR 6

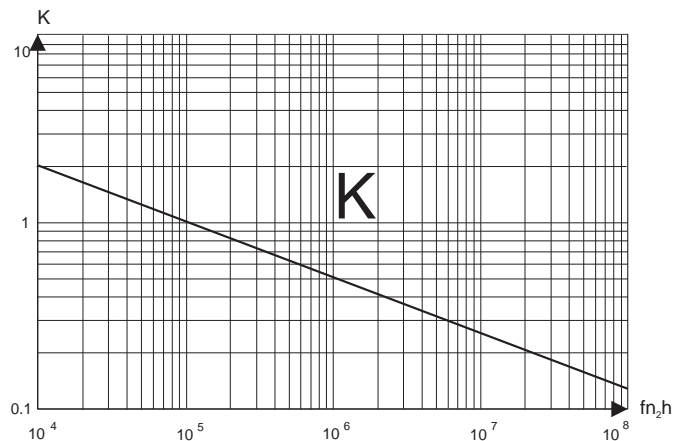
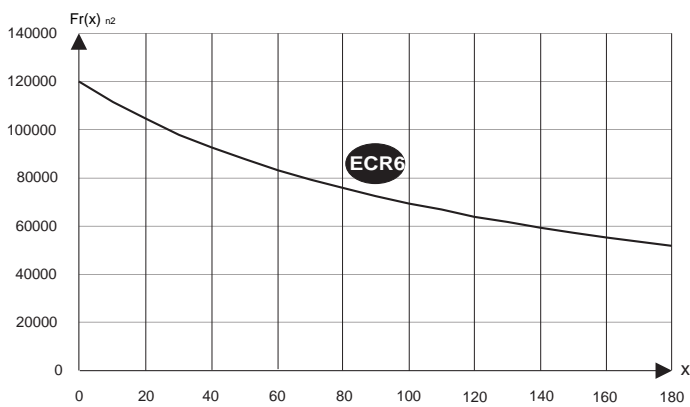
6.0 ECR 6

6.0 ECR 6



| <b>ECR</b>  | <b>EX</b>  |            |            |            |
|-------------|------------|------------|------------|------------|
|             | <b>EX1</b> | <b>EX2</b> | <b>EX3</b> | <b>EX4</b> |
| <b>100</b>  |            | 1001       |            |            |
| <b>150</b>  |            |            |            |            |
| <b>180</b>  |            |            |            |            |
| <b>200</b>  |            |            |            |            |
| <b>250</b>  |            |            |            |            |
| <b>280</b>  |            |            | 2802       |            |
| <b>300</b>  |            |            | 3002       |            |
| <b>350</b>  |            |            | 3502       |            |
| <b>420</b>  |            |            |            |            |
| <b>650</b>  |            |            |            |            |
| <b>850</b>  |            |            |            | 8503       |
| <b>1200</b> |            |            |            | 12003      |

| <b>ECR6</b> |  |  |  |  | <b>P</b> |     |  |     |  |     |
|-------------|--|--|--|--|----------|-----|--|-----|--|-----|
|             |  |  |  |  |          | 207 |  | 207 |  | 207 |



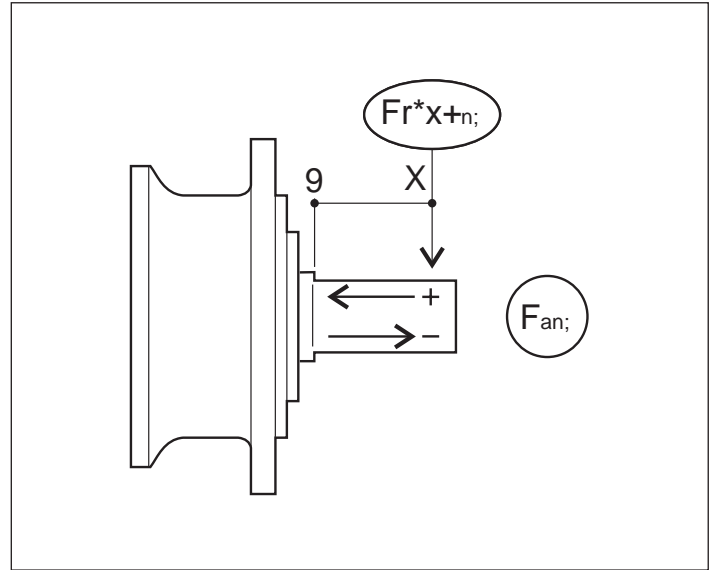
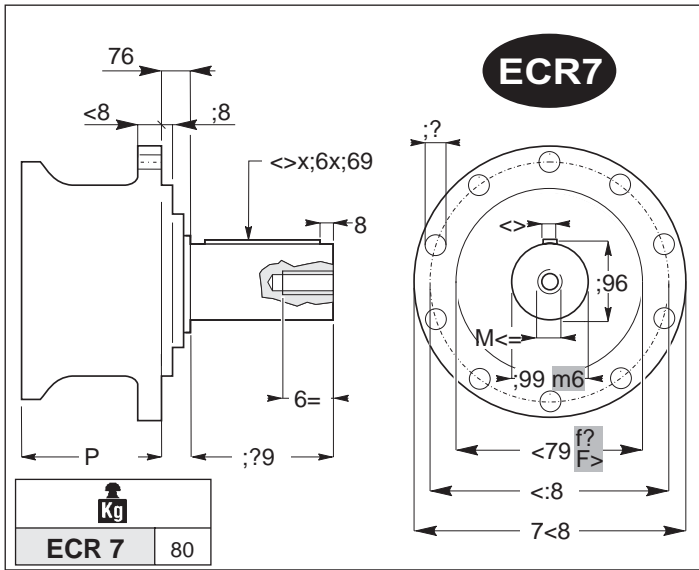
| $F_{a_{n1}}$ | Direzione/Direction/Направление |  | <b>ECR 6</b> |
|--------------|---------------------------------|--|--------------|
|              | (+)                             |  | 104737       |
|              | (-)                             |  | 73441        |



6.0 ECR 7

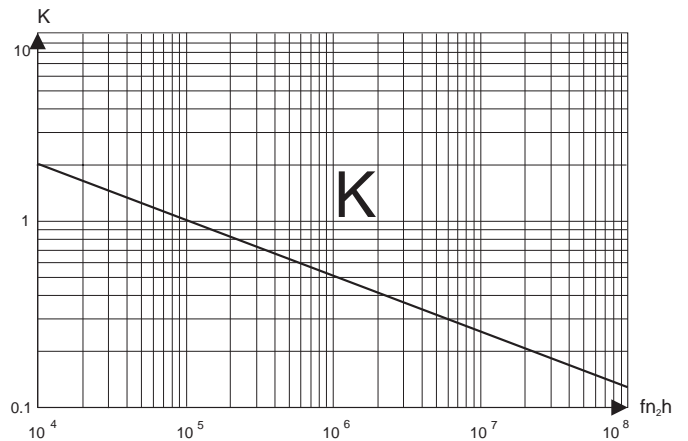
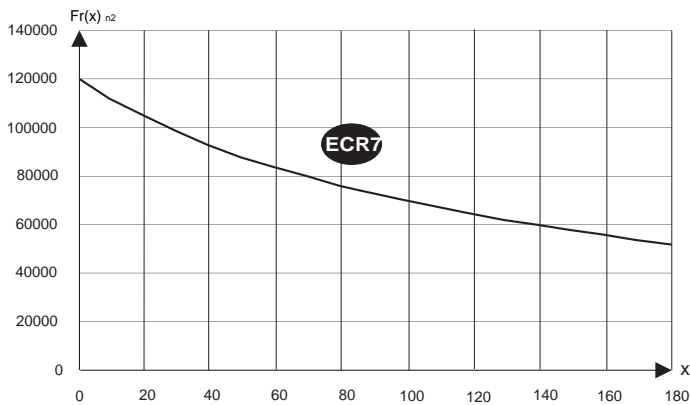
6.0 ECR 7

6.0 ECR 7



| ECR | EX1  | EX2  | EX3  | EX4 |
|-----|------|------|------|-----|
|     | 150  | 1501 |      |     |
| 180 |      |      |      |     |
| 200 | 2001 |      |      |     |
| 250 |      |      |      |     |
| 280 |      |      |      |     |
| 300 |      |      |      |     |
| 350 |      |      |      |     |
| 420 |      |      | 4202 |     |
| 650 |      |      |      |     |
| 850 |      |      |      |     |

| ECR7 | P |     |
|------|---|-----|
|      |   | 219 |

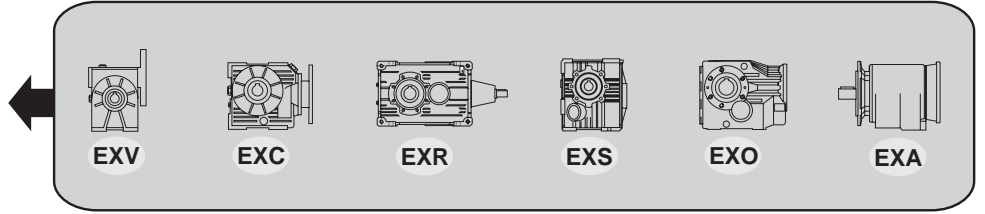
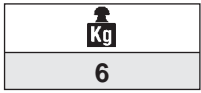
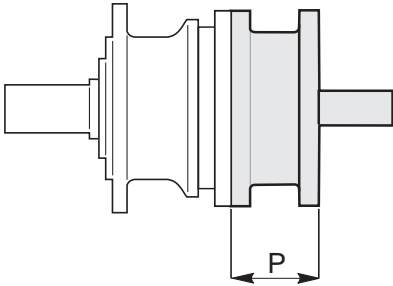


| Fa n1 | Direzione/Direction/Направление | ECR 7 |
|-------|---------------------------------|-------|
|       |                                 | (+)   |
|       | (-)                             | 73441 |





EX.



D



|      | 1   |     |     |     |     |     |     |      |      |      | 2    |  |      |      |  |      |  |      |  |  | 3    |      |      |  |  |  |  |  |  |  | 4    |  |  |  |  |  |  |  |   |  |
|------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|--|------|------|--|------|--|------|--|--|------|------|------|--|--|--|--|--|--|--|------|--|--|--|--|--|--|--|---|--|
| 10   | 101 |     |     |     |     |     |     |      |      |      | 102  |  |      |      |  |      |  |      |  |  | 103  |      |      |  |  |  |  |  |  |  | 104  |  |  |  |  |  |  |  |   |  |
| 20   |     | 201 |     |     |     |     |     |      |      |      | 202  |  |      |      |  |      |  |      |  |  | 203  |      |      |  |  |  |  |  |  |  | 204  |  |  |  |  |  |  |  |   |  |
| 25   |     |     | 251 |     |     |     |     |      |      |      | 252  |  |      |      |  |      |  |      |  |  | 253  |      |      |  |  |  |  |  |  |  | 254  |  |  |  |  |  |  |  |   |  |
| 30   |     |     |     | 301 |     |     |     |      |      |      | 302  |  |      |      |  |      |  |      |  |  | 303  |      |      |  |  |  |  |  |  |  | 304  |  |  |  |  |  |  |  |   |  |
| 40   |     |     |     |     |     |     |     |      |      |      | 402  |  |      |      |  |      |  |      |  |  | 403  |      |      |  |  |  |  |  |  |  | 404  |  |  |  |  |  |  |  |   |  |
| 50   |     |     |     |     | 501 |     |     |      |      |      | 502  |  |      |      |  |      |  |      |  |  | 503  |      |      |  |  |  |  |  |  |  | 504  |  |  |  |  |  |  |  |   |  |
| 70   |     |     |     |     |     | 701 |     |      |      |      | 702  |  |      |      |  |      |  |      |  |  | 703  |      |      |  |  |  |  |  |  |  | 704  |  |  |  |  |  |  |  |   |  |
| 80   |     |     |     |     |     |     | 801 |      |      |      | 802  |  |      |      |  |      |  |      |  |  | 803  |      |      |  |  |  |  |  |  |  | 804  |  |  |  |  |  |  |  |   |  |
| 90   |     |     |     |     |     |     |     |      |      |      | 902  |  |      |      |  |      |  |      |  |  | 903  |      |      |  |  |  |  |  |  |  | 904  |  |  |  |  |  |  |  |   |  |
| 100  |     |     |     |     |     |     |     | 1001 |      |      | 1002 |  |      |      |  |      |  |      |  |  | 1003 |      |      |  |  |  |  |  |  |  | 1004 |  |  |  |  |  |  |  |   |  |
| 150  |     |     |     |     |     |     |     |      | 1501 |      | 1502 |  |      |      |  |      |  |      |  |  | 1503 |      |      |  |  |  |  |  |  |  | 1504 |  |  |  |  |  |  |  |   |  |
| 180  |     |     |     |     |     |     |     |      |      |      | 1802 |  |      |      |  |      |  |      |  |  | 1803 |      |      |  |  |  |  |  |  |  | 1804 |  |  |  |  |  |  |  |   |  |
| 200  |     |     |     |     |     |     |     |      | 2001 |      | 2002 |  |      |      |  |      |  |      |  |  | 2003 |      |      |  |  |  |  |  |  |  | 2004 |  |  |  |  |  |  |  |   |  |
| 250  |     |     |     |     |     |     |     |      |      | 2501 |      |  | 2502 |      |  |      |  |      |  |  | 2503 |      |      |  |  |  |  |  |  |  | 2504 |  |  |  |  |  |  |  |   |  |
| 280  |     |     |     |     |     |     |     |      |      |      |      |  |      | 2802 |  |      |  |      |  |  | 2803 |      |      |  |  |  |  |  |  |  | 2804 |  |  |  |  |  |  |  |   |  |
| 300  |     |     |     |     |     |     |     |      |      | 3001 |      |  |      | 3002 |  |      |  |      |  |  | 3003 |      |      |  |  |  |  |  |  |  | 3004 |  |  |  |  |  |  |  |   |  |
| 350  |     |     |     |     |     |     |     |      |      |      |      |  |      | 3502 |  |      |  |      |  |  | 3503 |      |      |  |  |  |  |  |  |  | 3504 |  |  |  |  |  |  |  |   |  |
| 420  |     |     |     |     |     |     |     |      |      |      |      |  |      |      |  | 4202 |  |      |  |  | 4203 |      |      |  |  |  |  |  |  |  | 4204 |  |  |  |  |  |  |  |   |  |
| 650  |     |     |     |     |     |     |     |      |      |      |      |  |      |      |  |      |  | 6502 |  |  |      | 6503 |      |  |  |  |  |  |  |  | 6504 |  |  |  |  |  |  |  |   |  |
| 850  |     |     |     |     |     |     |     |      |      |      |      |  |      |      |  |      |  | 8502 |  |  |      |      | 8503 |  |  |  |  |  |  |  | 8504 |  |  |  |  |  |  |  |   |  |
| 1200 |     |     |     |     |     |     |     |      |      |      |      |  |      |      |  |      |  |      |  |  |      | 1200 |      |  |  |  |  |  |  |  | 1200 |  |  |  |  |  |  |  | 4 |  |

| P       |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| EXV 50  | * |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXV 63  | * |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXV 70  | * | * |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXV 85  | * | * | * | * | * |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXV 110 |   |   | * | * | * | * | * |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXV 130 |   |   |   | * | * | * |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXV 150 |   |   |   |   | * | * |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXV 180 |   |   |   |   |   |   | * |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXC 50  | * |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXC 70  | * | * |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXC 85  | * | * | * | * | * |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXC 110 |   |   | * | * | * | * | * |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXS 35  | * |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXS 45  | * | * |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXR 704 | * | * |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXR 708 | * | * | * | * | * |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXR 712 |   |   | * | * | * | * | * |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXR 716 |   |   |   | * | * | * |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXR 720 |   |   |   |   |   |   | * |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXO 132 |   |   |   |   |   |   | * |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXO 150 |   |   |   |   |   |   | * |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXO 170 |   |   |   |   |   |   |   | * |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXO 190 |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXA 35  | * | * |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXA 41  | * | * |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXA 45  | * | * |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXA 50  | * | * |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

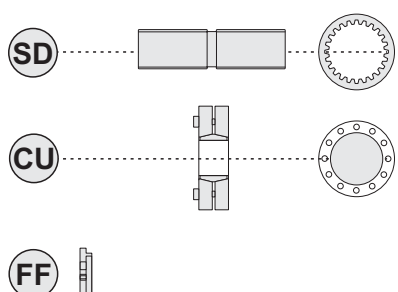
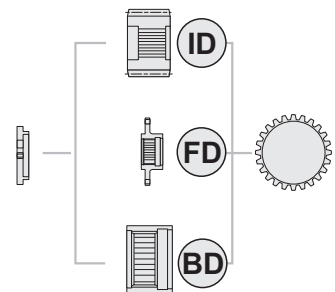
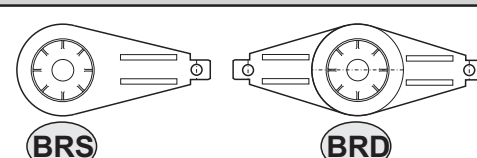

\* Contattare nostro ufficio tecnico commerciale / \* Please, contact our technical sales dept. / \* Свяжитесь с нашим техническим отделом

**ACCESSORI E OPZIONI  
ACCESSORIES AND OPTIONS  
АКСЕССУАРЫ И ОПЦИИ**


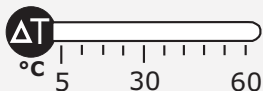
STM  
team

**E**

STM  
team

|  |   |
|--|---|
| <p><b>ACC1</b></p>    | <p><b>РАЗДЕЛ</b></p> <p><b>C</b></p>    |
| <p><b>ACC2</b></p>  | <p><b>РАЗДЕЛ</b></p> <p><b>C</b></p>    |
| <p><b>ACC3</b></p>  | <p><b>РАЗДЕЛ</b></p> <p><b>C</b></p>    |
| <p><b>ACC4</b></p>  | <p><b>СТРАНИЦА</b></p> <p><b>E2</b></p> |

**E**

|  Scelta Grandezza OT<br>OT selection<br>OT выбор |      | Differenza temperatura tra temperatura funzionamento riduttore e temperatura ambiente<br>Temperature difference in between the operating temperature and the ambient temperature<br>Разница температур между температурой окружающей среды и температурой масла редуктора |    |    |    |    |    |    |    |    |    |    |    |
|---|------|---|----|----|----|----|----|----|----|----|----|----|----|
|   |      |  °C 5 30 60  |    |    |    |    |    |    |    |    |    |    |    |
|   |      | 5   | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| Litri Riduttore<br>Gearbox liters<br>Объем масла в редукторе (литр)   | 1.0  |   |    |    |    |    |    |    |    |    |    |    |    |
|   | 2.0  |   |    |    |    |    |    |    |    |    |    |    |    |
|   | 3.0  |   |    |    |    |    |    |    |    |    |    |    |    |
|   | 4.0  |   |    |    |    |    |    |    |    |    |    |    |    |
|   | 5.0  |   |    |    |    |    |    |    |    |    |    |    |    |
|   | 6.0  |   |    |    |    |    |    |    |    |    |    |    |    |
|   | 7.0  |   |    |    |    |    |    |    |    |    |    |    |    |
|   | 8.0  |   |    |    |    |    |    |    |    |    |    |    |    |
|   | 9.0  |   |    |    |    |    |    |    |    |    |    |    |    |
|   | 10.0 |   |    |    |    |    |    |    |    |    |    |    |    |
|   | 11.0 |   |    |    |    |    |    |    |    |    |    |    |    |
|   | 12.0 |   |    |    |    |    |    |    |    |    |    |    |    |
|   | 13.0 |   |    |    |    |    |    |    |    |    |    |    |    |
|   | 14.0 |   |    |    |    |    |    |    |    |    |    |    |    |
|   | 15.0 |   |    |    |    |    |    |    |    |    |    |    |    |
| 16.0  |      |   |    |    |    |    |    |    |    |    |    |    |    |
| 17.0  |      |   |    |    |    |    |    |    |    |    |    |    |    |
| 18.0  |      |   |    |    |    |    |    |    |    |    |    |    |    |
| 19.0  |      |   |    |    |    |    |    |    |    |    |    |    |    |
| 20.0  |      |   |    |    |    |    |    |    |    |    |    |    |    |

