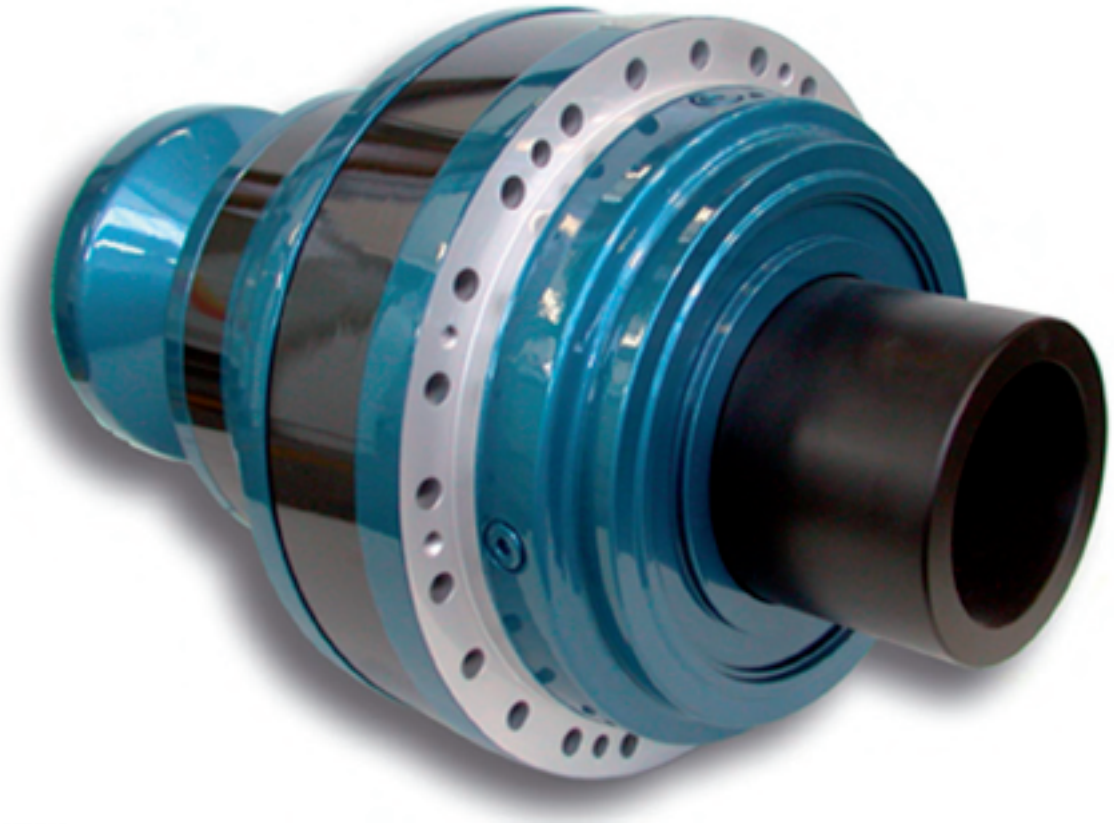
LÖNNE
DRIVE TECHNOLOGY

Products | Solutions | Service

Planetary Gear Boxes

Chapter 10



Keeps your machinery running!

Index

The following pages show the technical Information on performances and dimensions of the PG- PGA planetary. The research and the selection of the required size, you can refer to one page, as the including technical data will be on the corresponding page.

Technical Information

For the purpose of selecting a drive, this value must be considered in relation to the DURATION CONSTANT nxh, as shown in Curve 1 where:
n = output speed (min-1)
h = working time (hours)
To make consultation easier, the Mc values corresponding to a fixed n2xh value are shown on the product technical sheets.

MAXIMUM TORQUE
Mmax [kNm]

This is the maximum output torque that the drive can transmit over a brief time interval without damaging it`s internal components and structure. This value must be considered as the maximum output torque owing to working or start up peaks and never as the continuous working torque. Mmax must also be carefully evaluated in those applications with a high number of start- ups or reversals.

The Mmax value is shown on the single product technical cards.

WORKING TEMPERATURE

The working oil temperature of the drives should range between -20°C and +90°C. Temperatures falling outside this range might be tolerated only if special lubricants and gaskets are used.

THERMAL POWER
Pt [kW]

The thermal power is the maximum power the drive can transmit under continuous duty with normal turbulence lubrication and without exceeding an oil temperature of 90°C. The Pt values shown on the single product technical sheet indicate the maximum values under the following duty conditions:

- continuous duty
- speed n1 = 1500 min-1
- oil ISO VG 150
- horizontal mounting position
- Room temperature 20°C.

If the required power exceeds the values indicated on the drive technical sheet, a lubricant cooling system must be installed.

For foot mounted drives (from the PG 100 to the PG 1600 series), the Pt value can be increased by 15%.

If the duty characteristics differ, you can apply a corrective factor fk to the Pt values as indicated in Table 1 below:

NOTE. Pt refers to the power actually transmitted by the drive. It should not be confused with the power of the motor mounted on the drive which, for various reasons, might be higher.

SERVICE FACTOR
fs

Service factor fs is a multiplication coefficient introduced into the formula for selecting the drive. This factor takes into account the application load conditions.
It is defined in Table 2.

For further information, please contact Lönne Scandinavia main Office service tlf. 24 hours.

Pt1 = Pt x fk

Table 1

Thermal power adjustment factor fk

Work time %	Room temperature °C				
	10°	20°	30°	40°	50°
100	1.1	1.0	0.8	0.7	0.6
80	1.2	1.1	1.0	0.8	0.7
60	1.4	1.2	1.1	1.0	0.8
40	1.6	1.4	1.2	1.1	1.0
20	1.8	1.6	1.4	1.2	1.1

Technical Information

OUTPUT SHAFT LOADS

Fr ; Fa [N]
Fr = radial load
Fa = axial load

The load values that output shafts can bear are indicated on the load curves shown for each drive size.

Maximum radial and axial loads must not occur simultaneously. The values of the tolerated loads Fr, Fa refer to a bearing duration, according to standard ISO 281, corresponding to:

n x h = 10^5 for output shafts
n x h = $5x10^6$ for input shafts

F gear units are usually applied in the transmission of a torque without radial loads. In this case, maximum values Fr and Fa are not shown.
For further information, please contact the Lönne Scandinavia main Office service tlf. 24 hours.

DRIVE SELECTION

In a mechanical transmission system, a drive is a device positioned between the prime mover and the driven equipment. The stress it is subjected to during operation is strictly related to the characteristics of the prime mover and the driven equipment (power absorption and work cycle).

Knowledge of the entire transmission system is mandatory to choose the best drive.
It is necessary to know the following:

DRIVEN EQUIPEMENT
a) type of operation
b) rotation speed
c) power and/ or torque absorption
d) working cycle

PRIME MOVER
e) type and characteristics of the prime mover
f) delivered power and/ or torque
g) operating speed

With this information an initial drive selection can be made, determining the following:

- reduction ratio i
- working torque M [kNm]
- loads Fr and Fa [N] on drive output shafts

Subsequently, we must verify some specific drive parameters as follows::
I) drive input rotation speed ≤ n1 max
II) working torque ≤ Mc
III) loads on output and input shafts ≤ Fr ; Fa
IV) horsepower to be transmitted ≤ Pt (if under continuous duty)
V) room temperature

Relations I and V can be readily verified; as for relations II, III and IV we must proceed as follows:

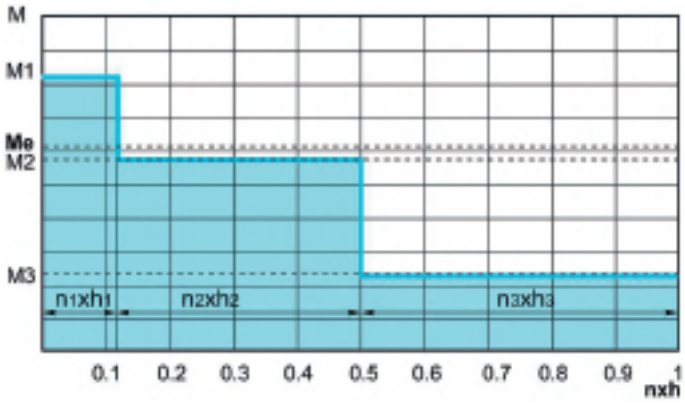
VERIFICATION OF THE PLANETARY UNIT ACCORDING TO THE TORQUE

Calculation of the equivalent working torque Me [kNm]

When loads are intermittent (see Histogram 1), we must determine the equivalent working torque value.

The cumulative load principle, based on the following formula, is used to determine the torque value which produces the same
fatigue after the number of cycles (nxh) required by the project:

Histogram 1



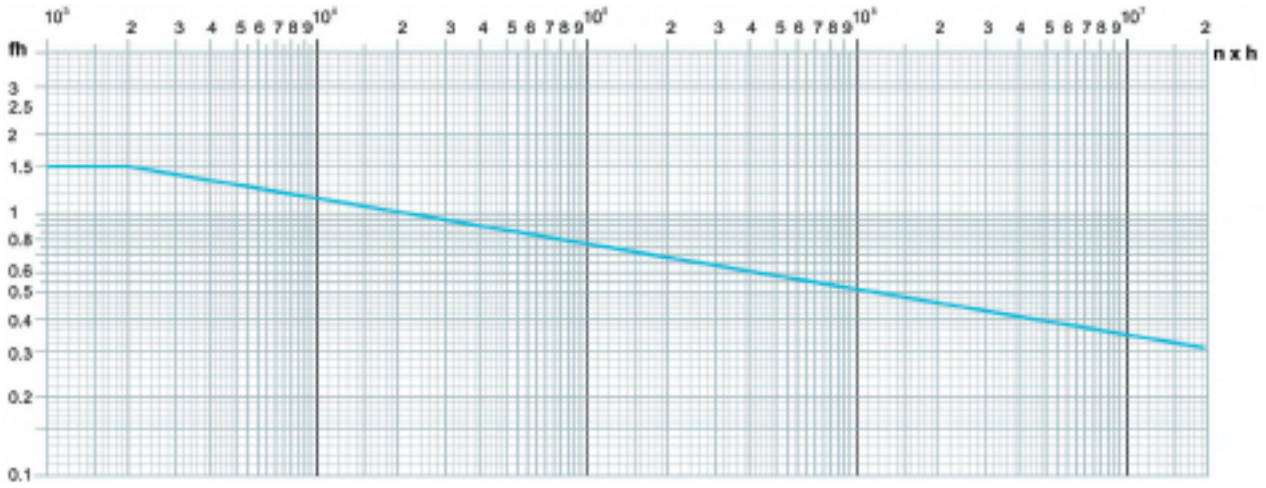
Because our supplier is continuously improving its product, it will make the technical and dimensional changes seemed necessary, without notifying the market in advance.

Technical Information

Duration factor fh

In industrial installations and whenever the number of working cycles nxh exceeds $2x10^4$, we must consider a duration factor fh (see Curve 1) in order to adapt the Mc torque shown in the catalogue to a new value which allows the machine to operate at the number of cycles (nxh) required by the project.

Curve 1



Service factor fs calculation

The effect of shocks generated by intermittent motion and overloads during starts and stops must be calculated, introducing a service factor fs.

Table 2 indicates the service factors fs in relation to the type of operation.

Table 2

	Load classifications											
	Uniform				Moderate				Heavy			
Hours- day	< 1.0	1 - 4	4 - 8	8 - 24	< 1.0	1 - 4	4 - 8	8 - 24	< 1.0	1 - 4	4 - 8	8 - 24
Start- time												
< 5	0.8	0.9	1.0	1.5	0.9	1.0	1.3	1.9	1.0	1.5	1.9	2.4
5 - 50	1.0	1.0	1.4	1.7	1.0	1.3	1.6	1.9	1.4	1.8	2.1	2.5
> 50	1.3	1.5	1.7	1.9	1.4	1.7	1.9	2.2	1.7	2.1	2.5	2.9

Operating values refer to drives with hydraulic and electric motors.

If other types of motors are operated (internal combustion engine), please contact Lönne engineers.

Technical Information

Table 3 at the end of this section includes some examples of load classifications.

Relationship II can be verified by using the following formula:

$$Me \times fs \leq Mc \times fh$$

It is also required that
Mp ≤ Mmax
Mp = working peak torque

VERIFICATION OF THE DRIVE ACCORDING TO OUTPUT SHAFT LOADS

Equivalent working loads
Fre; Fae [N]

In the same manner that we calculated the equivalent working torque, when loads vary over time, we must determine the value of the average equivalent load.
As before, we use the cumulative load principle, based on the following formula, to determine the load value which produces the same fatigue on the bearings after the number of cycles (nxh) required by the project:

$$Fe = \sqrt[10/3]{F_1^{10/3} \frac{(n_1 \times h_1)}{(n \times h)} + F_2^{10/3} \frac{(n_2 \times h_2)}{(n \times h)} + F_3^{10/3} \frac{(n_3 \times h_3)}{(n \times h)}}$$

Service factor fs

Service factor fs can be calculated using Tables 2 and 3 in the same manner as calculating the torque.

Relationship III can be verified by using the following formulas:

$$Fre \times fs \leq Fr \times fh$$
$$Fae \times fs \leq Fa \times fh$$

RADIAL LOADS Fr [N]

This section provides the catalogue user with the information needed to determine the maximum allowable radial load and/ or the service life of the bearings on input and output shafts of the selected drive.

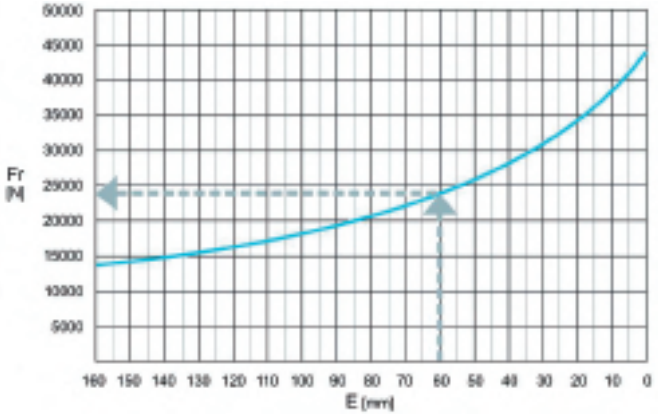
How to determine the admissible radial load of an input or output shaft knowing the required service life of the bearings and the load position..

Known parameters:
• Input or output version
Input:
EL, EML, EM, EP, ET
Output:
MS, MC, PS, PC
• Distance E [mm]
(Distance of the load position from output shaft shoulder)
• Required bearing service life [h]
• Shaft rotation speed [min-1]

To determine the admissible radial load capacity of a selected input or output shaft, based on known parameters, follow the
steps described below::

1. Select the bearing service life chart for the selected input or output shaft.

2. Use the curve to find the radial load (Fr) value with reference to the distance E.



Technical Information

3. Fr will be the max. load the shaft can bear at position E for a bearing service life h of:

Output version

$$h = \frac{10^5}{n_2}$$

Input version

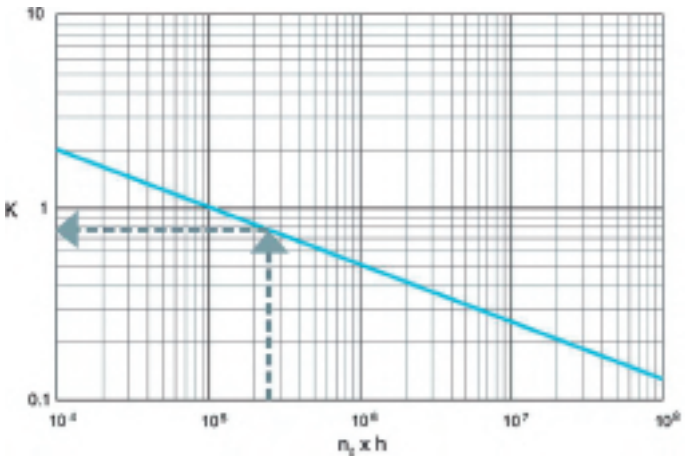
$$h = \frac{5 \times 10^6}{n_1}$$

h = Bearings life time [h]
n_1 = Input shaft speed [min^{-1}]
n_2 = Output shaft speed [min^{-1}]

If the bearing service life, as calculated with the previous formulas, does not meet customer requirements, the radial load correction factor that would allow the bearings to meet the service life requirements must be determined according to the following procedure:

4. Determine the no. of cycles that the shaft will complete during the required service life:
nxh = $n_{1\text{-}2}$ [min^{-1}] x h [h]

5. Use the radial load correction factor curve to determine the K value corresponding to the no. of cycles calculated in point 1



6. Now you can determine the acceptable radial load $Fr_{[nxh]}$ at the known position E to meet the bearing service life requirements, applying the following formula:

$$Fr_{nxh} = Fr \times K$$

How to determine the bearing service life of an input or output shaft version knowing the applied radial load and its load position.

Known parameters:
• Input or output version
Input:
EL, EML, EM, EP, ET
Output:
MS, MC, PS, PC
• Load position E [mm]
(Distance of the load from the output shaft shoulder)
• Applied radial load [kN]
• Shaft speed [min^{-1}]

To determine the bearing service life of the selected input or output shaft, based on known parameters, follow the steps described below:

1. Select the service life curve of the bearings for the selected input or output shaft.

2. Use the chart to find the radial load (Fr) with reference to the load position E.

3. Determine the radial load correction factor K applying the following formula:

$$K = \frac{Fr_{ap}}{Fr}$$

Fr_{ap} = Applied radial load [kN]

4. Once you have determined the K factor, use the radial load correction factor curve to find the corresponding (nxh) value.

5. Finally, to determine the bearing service life based on the applied radial load and its position E, apply the following formula:

$$h = \frac{n \times h}{n_{1\text{-}2}}$$

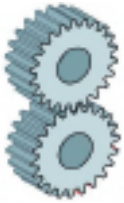
Technical Information

The Fr_a radial load on the drive' s shaft can be calculated with the following formulas according to the type of transmission used.

Elastic coupling

No radial load

Spur gear (pressure angle 20°)



$$Fr_a = \frac{2100 \cdot M_2}{D}$$

Chain drives at low speed (z < 17)

$$Fr_a = \frac{2100 \cdot M_2}{D}$$

Trigger belt

$$Fr_a = \frac{2100 \cdot M_2}{D}$$

Pulley for V belt

$$Fr_a = \frac{4000 \cdot M_2}{D}$$

Flat belt with spanning pulley

$$Fr_a = \frac{8000 \cdot M_2}{D}$$

Fr_a = Radial load on shaft [N]
M2 = Torque on shaft [Nm]
D = Gear or pulley pitch diameter [mm]

VERIFICATION OF THE DRIVE ACCORDING TO THE THERMAL POWER
Pt [kW]

When the drive is used with an output speed greater than 20 min^{-1} under continuous duty or with stops between applications that inhibit normal heat dissipation, make sure that the actual transmitted power does not exceed the power indicated on the data sheet of the individual drive.

For large drives, the maximum input speeds, as always shown on the product' s data sheet, must be taken into account.

The technical information in this catalog is provided as a brief guide for selecting drives and does not substitute the knowledge and experience of the installers who are responsible for selecting the proper drive.

Load Classification

Table 3 LOAD CLASSIFICATION

Blowers, ventilators	U	M	H
Blowers (axial and radial)	U		
Cooling tower fans		M	
Induced draught fans		M	
Rotary piston blowers		M	
Turbo blowers	U		

Chemical industry	U	M	H
Agitators (liquid material)	U		
Agitators (semi- liquid material)		M	
Centrifuges (heavy)		M	
Centrifuges (light)	U		
Cooling drums		M	
Drying drums		M	
Mixers		M	

Compressors	U	M	H
Piston compressors			H
Turbo compressors		M	

Conveyors	U	M	H
Apron conveyors		M	
Ballast elevators		M	
Band pocket conveyors		M	
Belt conveyors (bulk material)		M	
Belt conveyors (piece goods)			H
Bucket conveyors for flour	U		
Chain conveyors		M	
Circular conveyors		M	
Hoists			H
Inclined hoists			H
Steel belt conveyors		M	
Passenger lifts		M	
Screw conveyors		M	
Trough chain conveyors		M	
Winches hauling		M	

Cranes	U	M	H
Derricking jib gear		M	
Hoist gear	U		
Slewing gear		M	
Travelling gear			H

Dredgers	U	M	H
Bucket conveyors			H
Bucket wheels			H
Cutter heads			H
Manoeuvring winches		M	
Pumps		M	
Slewing gear		M	
Travelling gear (caterpillar)			H
Travelling gear (rails)		M	

Food industry machinery	U	M	H
Bottling and container filling machines	U		
Cane crushers		M	
Cane knives			H
Cane mills		M	
Kneading machines		M	
Mash tubs (crystallizers)			H
Packaging machines		U	
Sugar beet cutters	M		
Sugar beet washing machines	M		

Building machinery	U	M	H
Concrete mixers		M	
Hoists		M	
Road construction machinery		M	

Generators, transformers	U	M	H
Frequency transformers			H
Generators			H
Welding generators			H

Laundries	U	M	H
Tumblers		M	
Washing machines		M	
Pressing machines		M	

Metal rolling mills	U	M	H
Billet shears			H
Chain transfers		M	
Cold rolling mills			H
Continuous casting plant			H
Cooling beds		M	
Cropping shears			H
Heavy and medium plate mills			H
Descaling machines			H
Manipulators			H
Ingot pushers			H
Plate tilters		M	
Roller tables (heavy)			H
Roller tables (light)			H
Tube welding machines		M	
Winding machines (strip and wire)		M	
Wire drawing banches		M	

Metal working machines	U	M	H
Contershafts, line shafts	U		
Forging presses			H
Hammers			H
Auxiliary drives, machine tools	U		
Main drives, machine tools		M	
Metal planing machines			H
Plate straightening machines			H
Presses			H
Punch presses			H
Shears			M
Sheet metal bending machines			M

Oil industry	U	M	H
Pipeline pumps		M	
Rotary drilling equipment			H

Paper machines	U	M	H
Calenders			H
Couches			H
Drying cylinders			H
Glazing cylinders			H
Pulpers			H
Pulp grinders			H
Suction rolls			H
Suction presses			H
Wet presses			H
Willows			H

Plastic industry machinery	U	M	H
Calenders		M	
Crushers		M	
Extruders		M	
Mixers		M	

Pumps	U	M	H
Centrifugal pumps (light liquids)	U		
Centrifugal pumps (viscous liquids)			H
Piston pumps			H
Plunger pumps			H
Pressure pumps			H

Rubber machinery	U	M	H
Calenders		M	
Extruders			H
Mixers		M	
Pug mills			H
Rolling mills			H

Stone and clay working machines	U	M	H
Hammer mills			H
Beater mills			H
Breakers			H
Brick presses			H
Rotary ovens			H
Tube mills			H

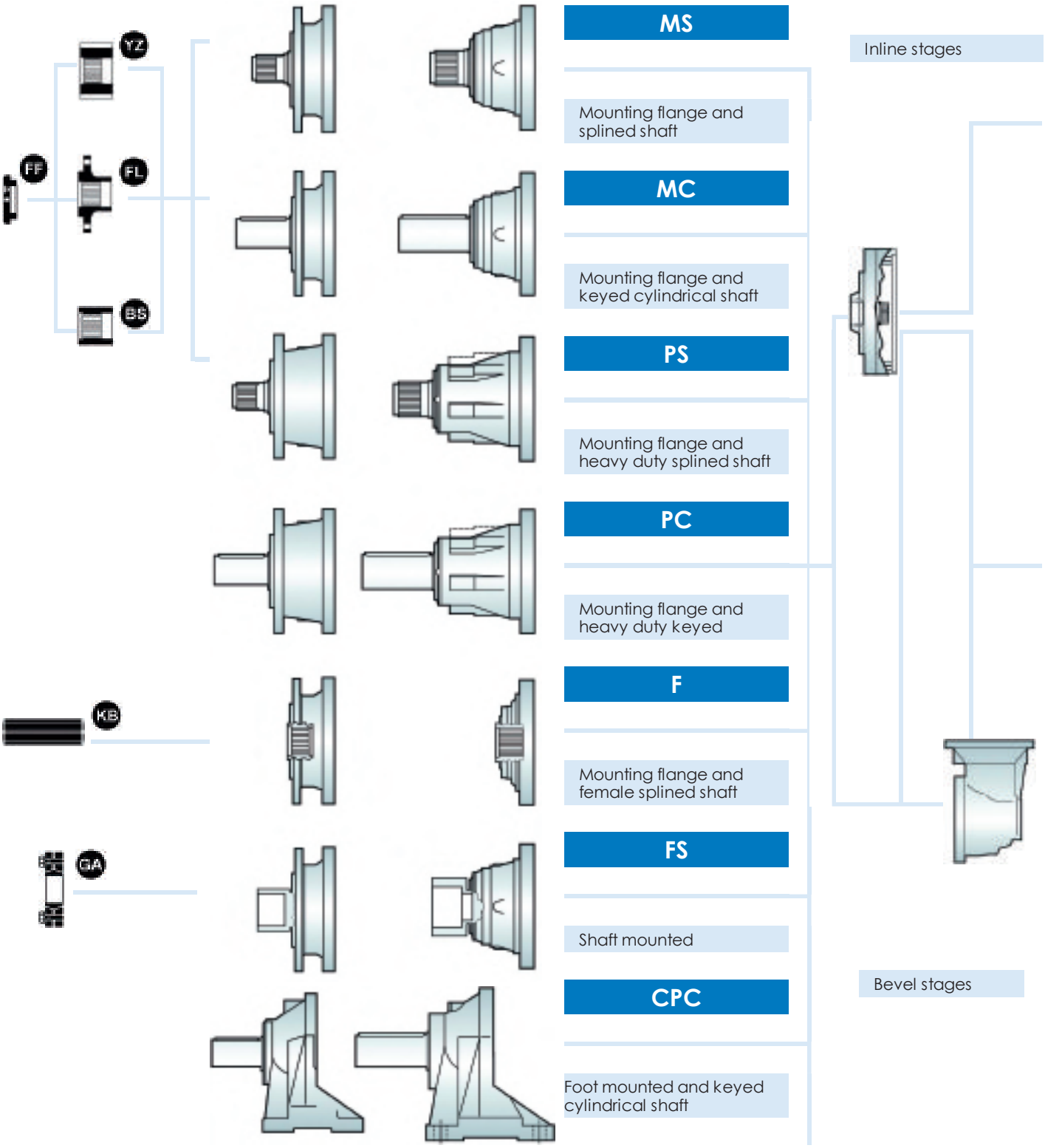
Textile machines	U	M	H
Batchers		M	
Looms		M	
Printing and dyeing machines		M	
Tanning vats		M	
Willows		M	

Water treatment	U	M	H
Aerators		M	
Screw pumps		M	

Wood working machines	U	M	H
Barkers			H
Planing machines		M	
Saw frames			H
Wood working machines	U		

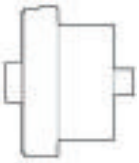
Legend:
U = Uniform load
M = Moderate load
H = Heavy load

Output Types



Input Fittings

Ed — Direct input motor adaptor without brake



EDF — Direct input motor adaptor with brake

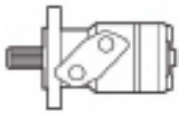
EF — Direct input motor adaptor with brake

RA
RB
Brake

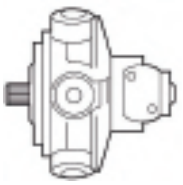
47

Hydraulic motor coupling

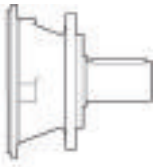
Axial pistons motor



Orbit motor



Radial pistons motor

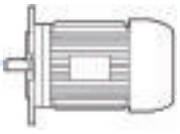


Input shaft

Electric motor coupling

Worm gearbox adaptor

46



Electric motor

100 Series

	i	Mc [kNm] n2 x h 10.000	Mc [kNm] n2 x h 20.000	Mc [kNm] n2 x h 50.000	Mc [kNm] n2 x h 100.000	n1 max [min -1]	Pt [kW]	Kg M	Kg P	Kg CPC	Kg F	Kg FS
PG 101	3.55	1.24	1.10	0.94	0.83							
	4.28	1.24	1.10	0.94	0.83							
	5.60	0.90	0.80	0.68	0.60	2800	12	13	15	18	11	14
	6.75	0.79	0.70	0.60	0.53							
	8.67	0.51	0.45	0.38	0.34							
PG 102	12.6	1.24	1.10	0.94	0.83							
	15.2	1.24	1.10	0.94	0.83							
	19.9	1.24	1.10	0.94	0.83							
	23.9	1.24	1.10	0.94	0.83							
	28.9	1.24	1.10	0.94	0.83	2800	8	19	21	24	17	20
	31.4	0.90	0.80	0.68	0.60							
	37.8	0.90	0.80	0.68	0.60							
	45.5	0.79	0.70	0.60	0.53							
	58.5	0.79	0.70	0.60	0.53							
PG 103	54.1	1.24	1.10	0.94	0.83							
	65.3	1.24	1.10	0.94	0.83							
	70.7	1.24	1.10	0.94	0.83							
	78.7	1.24	1.10	0.94	0.83							
	85.3	1.24	1.10	0.94	0.83							
	102.8	1.24	1.10	0.94	0.83							
	111.5	1.24	1.10	0.94	0.83							
	134.3	1.24	1.10	0.94	0.83							
	161.9	1.24	1.10	0.94	0.83	2800	5	25	27	30	23	26
	172.5	1.24	1.10	0.94	0.83							
	207.9	1.24	1.10	0.94	0.83							
	211.6	0.90	0.80	0.68	0.60							
	255.1	0.90	0.80	0.68	0.60							
	271.7	0.90	0.80	0.68	0.60							
	307.5	0.79	0.70	0.60	0.53							
	327.5	0.90	0.80	0.68	0.60							
	394.8	0.79	0.70	0.60	0.53							
PG 104	337.3	1.24	1.10	0.94	0.83							
	365.7	1.24	1.10	0.94	0.83							
	396.4	1.24	1.10	0.94	0.83							
	440.8	1.24	1.10	0.94	0.83							
	477.8	1.24	1.10	0.94	0.83							
	531.3	1.24	1.10	0.94	0.83							
	575.9	1.24	1.10	0.94	0.83							
	624.4	1.24	1.10	0.94	0.83							
	694.2	1.24	1.10	0.94	0.83							
	752.6	1.24	1.10	0.94	0.83							
	836.8	1.24	1.10	0.94	0.83	2800	1.5	31	33	36	29	32
	907.1	1.24	1.10	0.94	0.83							
	966.3	1.24	1.10	0.94	0.83							
	1093.4	1.24	1.10	0.94	0.83							
	1144.5	1.24	1.10	0.94	0.83							
	1185.4	0.90	0.80	0.68	0.60							
	1318.0	1.24	1.10	0.94	0.83							
	1428.8	0.90	0.80	0.68	0.60							
	1692.3	1.24	1.10	0.94	0.83							
	3422.1	0.79	0.70	0.60	0.53							
PGA 102	10.4	1.24	1.10	0.94	0.83							
	12.5	1.24	1.10	0.94	0.83	2800	8	28	30	33	26	29
	16.4	0.90	0.80	0.68	0.60							
	19.7	0.79	0.70	0.60	0.53							
PGA 103	37.0	1.24	1.10	0.94	0.83							
	44.6	1.24	1.10	0.94	0.83							
	53.8	1.24	1.10	0.94	0.83							
	58.4	1.24	1.10	0.94	0.83							
	70.3	1.24	1.10	0.94	0.83	2800	5	34	36	39	32	35
	84.8	1.24	1.10	0.94	0.83							
	91.9	0.90	0.80	0.68	0.60							
	110.8	0.90	0.80	0.68	0.60							
	133.6	0.79	0.70	0.60	0.53							
	171.5	0.79	0.70	0.60	0.53							
PGA 104	131.8	1.24	1.10	0.94	0.83							
	158.9	1.24	1.10	0.94	0.83							
	191.5	1.24	1.10	0.94	0.83							
	207.6	1.24	1.10	0.94	0.83							
	230.8	1.24	1.10	0.94	0.83							
	301.7	1.24	1.10	0.94	0.83							
	327.0	1.24	1.10	0.94	0.83							
	363.6	1.24	1.10	0.94	0.83							
	394.2	1.24	1.10	0.94	0.83							
	475.1	1.24	1.10	0.94	0.83	2800	1.5	40	42	45	38	41
	515.3	0.90	0.80	0.68	0.60							
	572.7	1.24	1.10	0.94	0.83							
	610.1	1.24	1.10	0.94	0.83							
	735.4	1.24	1.10	0.94	0.83							
	797.2	0.90	0.80	0.68	0.60							
	960.9	0.90	0.80	0.68	0.60							
	1158.2	0.79	0.70	0.60	0.53							
	1233.7	0.90	0.80	0.68	0.60							
	1487.1	0.79	0.70	0.60	0.53							

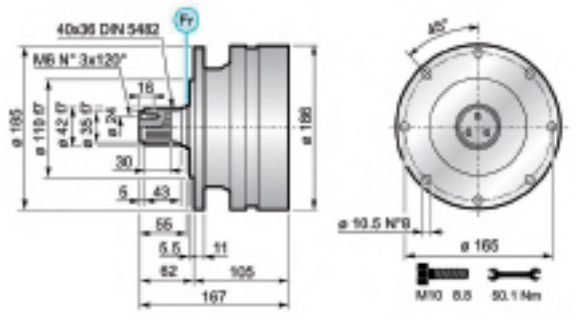
$M_{max} = M_c \times 2$

Types and Dimensions 100 Series

MS

Output shaft accessories

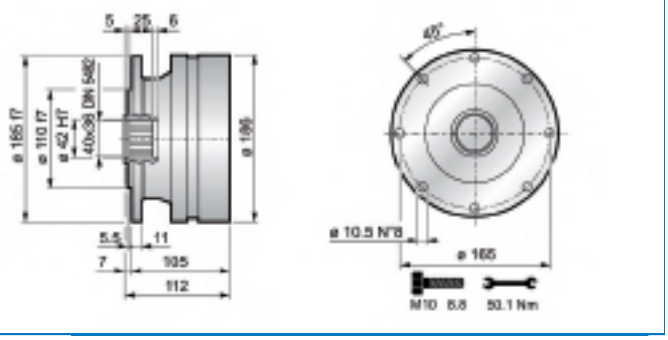
YZ FL BS FF



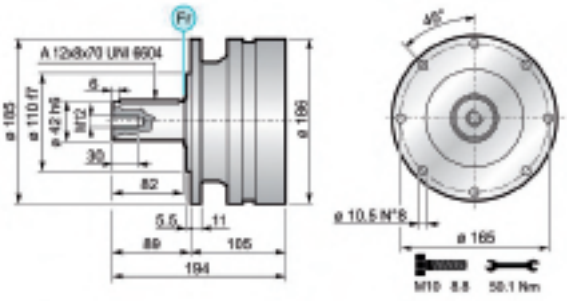
F

Output shaft accessories

KB



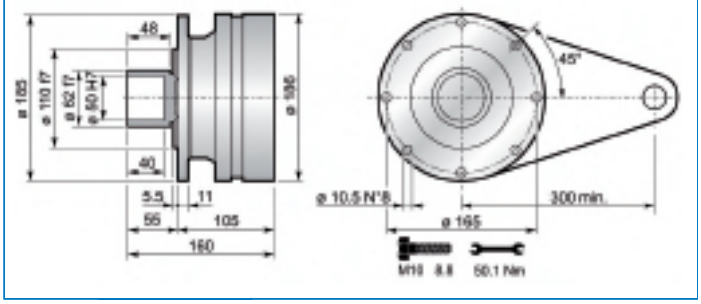
MC

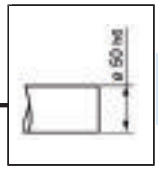


FS

Output shaft accessories

GA





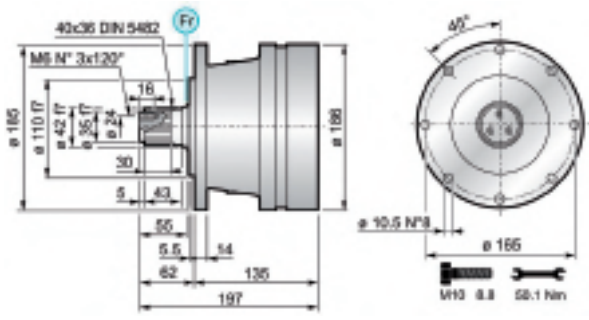
Mmax = 2.2 kNm

The maximum torque indicated is valid only with shrink discs supplied by Lönne (GA type)

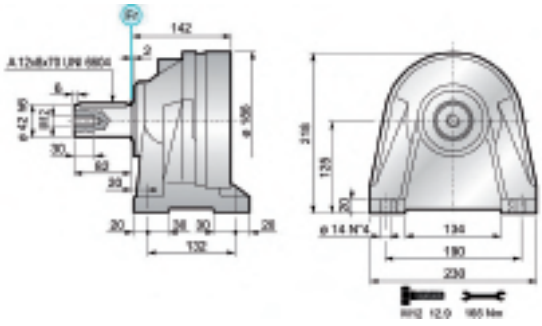
PS

Output shaft accessories

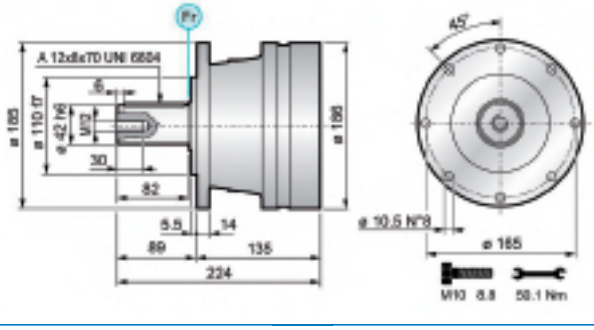
YZ FL BS FF



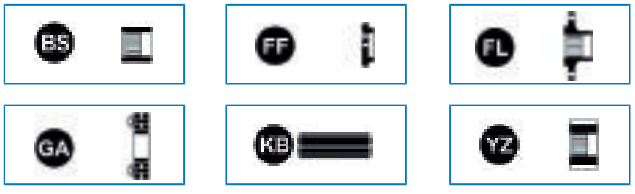
CPC



PC

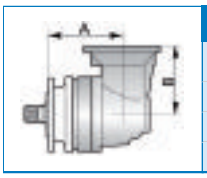


Output shaft accessories

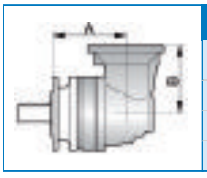


YZ: tailormade by Lönne

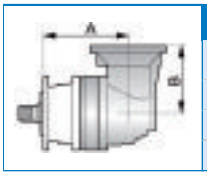
Overall dimensions



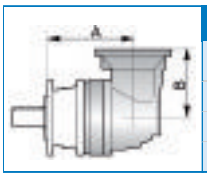
PGA MS	A	B	RA	RB	EF
PGA 102	180	159	*		*
PGA 103	228	159	*		*
PGA 104	276	159	*		*



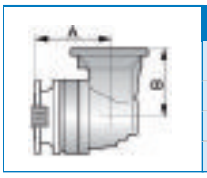
PGA MC	A	B	RA	RB	EF
PGA 102	180	159	*		*
PGA 103	228	159	*		*
PGA 104	276	159	*		*



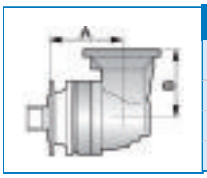
PGA PS	A	B	RA	RB	EF
PGA 102	210	159	*		*
PGA 103	258	159	*		*
PGA 104	306	159	*		*



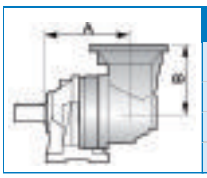
PGA PC	A	B	RA	RB	EF
PGA 102	210	159	*		*
PGA 103	258	159	*		*
PGA 104	306	159	*		*



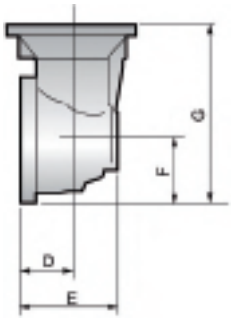
PGA F	A	B	RA	RB	EF
PGA 102	180	159	*		*
PGA 103	228	159	*		*
PGA 104	276	159	*		*



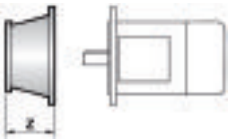
PGA FS	A	B	RA	RB	EF
PGA 102	180	159	*		*
PGA 103	228	159	*		*
PGA 104	276	159	*		*



PGA CPC	A	B	RA	RB	EF
PGA 102	217	159	*		*
PGA 103	265	159	*		*
PGA 104	313	159	*		*

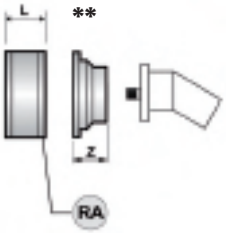


	D	E	F	G
PGA 102	75	141.5	93	252
PGA 103	75	141.5	93	252
PGA 104	75	141.5	93	252



Ref page

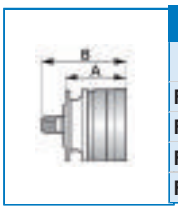
46



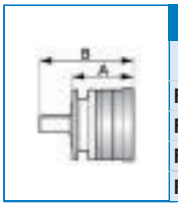
Ref page

47

	L
RA	81

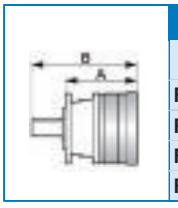


PG MS	A	B	RA	RB	EF	EDF
PG 101	105	167	*			*
PG 102	153	215	*			*
PG 103	201	263	*			*
PG 104	249	311	*			*

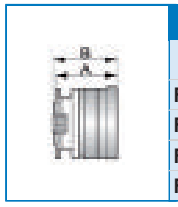


PG MC	A	B	RA	RB	EF	EDF
PG 101	105	194	*			*
PG 102	153	242	*			*
PG 103	201	290	*			*
PG 104	249	338	*			*

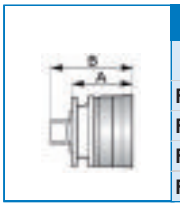
PG PS	A	B	RA	RB	EF	EDF
PG 101	135	197	*			*
PG 102	183	245	*			*
PG 103	231	293	*			*
PG 104	271	341	*			*



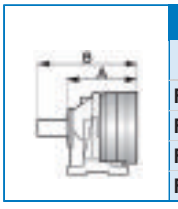
PG PC	A	B	RA	RB	EF	EDF
PG 101	135	224	*			*
PG 102	183	272	*			*
PG 103	231	320	*			*
PG 104	279	368	*			*



PG F	A	B	RA	RB	EF	EDF
PG 101	105	112	*			*
PG 102	153	160	*			*
PG 103	201	208	*			*
PG 104	249	256	*			*



PG FS	A	B	RA	RB	EF	EDF
PG 101	105	160	*			*
PG 102	153	208	*			*
PG 103	201	256	*			*
PG 104	249	304	*			*



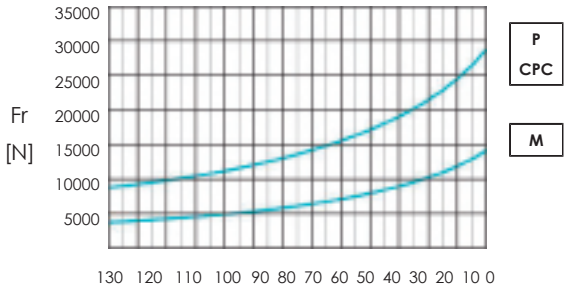
PG CPC	A	B	RA	RB	EF	EDF
PG 101	142	224	*			*
PG 102	190	272	*			*
PG 103	238	320	*			*
PG 104	287	368	*			*

* Input shafts on request
** Hydraulic flanges on request

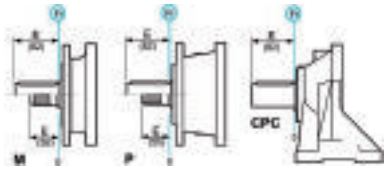
Radial loads

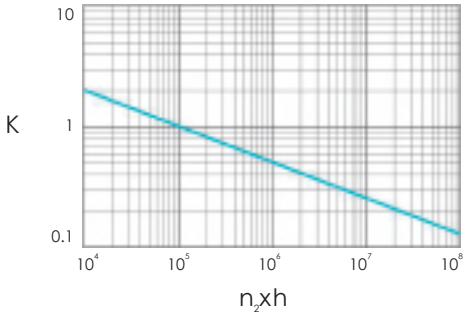
RADIAL LOADS (Fr)

The following curves show the radioal loads and the K factors to obtain the required $n_2$xh value.



	n x h				
	10^5	10^4	10^6	10^7	10^8
M - P	Fr	Fr • K			
*CPC	Fr • 0.75	Fr • K • 0.75			

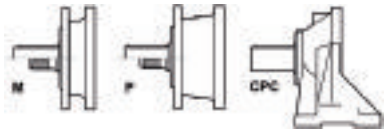




AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

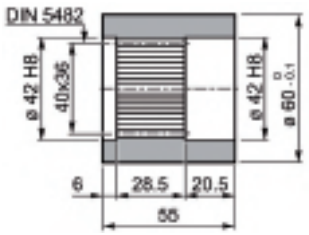
Fa	M	P - CPC	
	16000	18000	←
[N]	16000	18000	→



OUTPUT SHAFT ACCESSORIES

BS

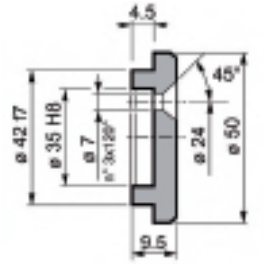
Splined bushing
Material:
UNI C40
SAE 1040
DIN Ck40
Code **1710.100.076**



FF

Stop bottom plate

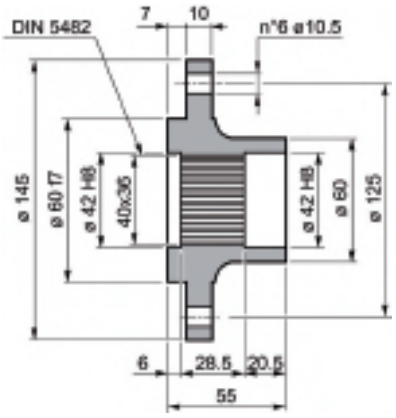
Code **5701.034.000**



FL

Flange

Code **1710.102.025**

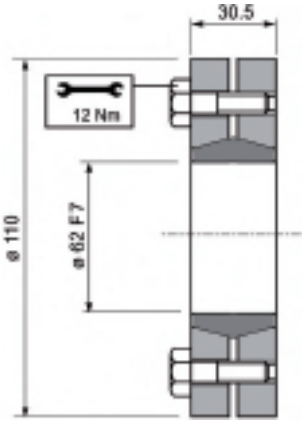


GA

Shrink Disc

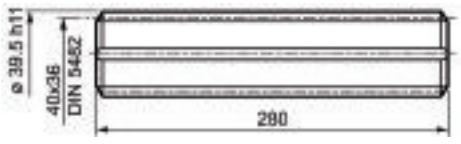
Max torque 2.2 kNm

Code **9015.062.000**



KB

Splined rod
Material:
UNI 39NiCrMo3
Code **1703.179.042**



160 Series

	i	Mc [kNm] n2 x h 10.000	Mc [kNm] n2 x h 20.000	Mc [kNm] n2 x h 50.000	Mc [kNm] n2 x h 100.000	n1 max [min -1]	Pt [kW]	Kg M	Kg P	Kg CPC	Kg F	Kg FS
PG 161	3.55	1.92	1.70	1.45	1.28							
	4.28	1.92	1.70	1.45	1.28	2800	12	15	17	20	13	16
	5.60	1.37	1.21	1.03	0.91							
	6.75	1.13	1.00	0.85	0.75							
PG 162	12.6	1.92	1.70	1.45	1.28							
	15.2	1.92	1.70	1.45	1.28							
	19.9	1.92	1.70	1.45	1.28							
	23.9	1.92	1.70	1.45	1.28							
	28.9	1.92	1.70	1.45	1.28	2800	8	21	23	26	19	22
	31.4	1.37	1.21	1.03	0.91							
	37.8	1.37	1.21	1.03	0.91							
	45.5	1.13	1.00	0.85	0.75							
	58.5	1.13	1.00	0.85	0.75							
PG 163	54.1	1.92	1.70	1.45	1.28							
	65.3	1.92	1.70	1.45	1.28							
	70.7	1.92	1.70	1.45	1.28							
	78.7	1.92	1.70	1.45	1.28							
	85.3	1.92	1.70	1.45	1.28							
	102.8	1.92	1.70	1.45	1.28							
	111.5	1.92	1.70	1.45	1.28							
	134.3	1.92	1.70	1.45	1.28							
	161.9	1.92	1.70	1.45	1.28	2800	5	27	29	32	25	28
	172.5	1.92	1.70	1.45	1.28							
	207.9	1.92	1.70	1.45	1.28							
	211.6	1.37	1.21	1.03	0.91							
	255.1	1.37	1.21	1.03	0.91							
	271.7	1.37	1.21	1.03	0.91							
	307.5	1.13	1.00	0.85	0.75							
	327.5	1.37	1.21	1.03	0.91							
	394.8	1.13	1.00	0.85	0.75							
PG 164	337.3	1.92	1.70	1.45	1.28							
	365.7	1.92	1.70	1.45	1.28							
	396.4	1.92	1.70	1.45	1.28							
	440.8	1.92	1.70	1.45	1.28							
	477.8	1.92	1.70	1.45	1.28							
	531.3	1.92	1.70	1.45	1.28							
	575.9	1.92	1.70	1.45	1.28							
	624.4	1.92	1.70	1.45	1.28							
	694.2	1.92	1.70	1.45	1.28							
	752.6	1.92	1.70	1.45	1.28	2800	1.5	33	35	38	31	34
	836.8	1.92	1.70	1.45	1.28							
	907.1	1.92	1.70	1.45	1.28							
	966.3	1.92	1.70	1.45	1.28							
	1093.4	1.92	1.70	1.45	1.28							
	1144.5	1.92	1.70	1.45	1.28							
	1185.4	1.37	1.21	1.03	0.91							
	1318.0	1.92	1.70	1.45	1.28							
	1428.8	1.37	1.21	1.03	0.91							
	1692.3	1.92	1.70	1.45	1.28							
	3422.1	1.13	1.00	0.85	0.75							
PGA 162	10.4	1.92	1.70	1.45	1.28							
	12.5	1.92	1.70	1.45	1.28	2800	8	30	32	35	28	31
	16.4	1.37	1.21	1.03	0.91							
	19.7	1.13	1.00	0.85	0.75							
PGA 163	37.0	1.92	1.70	1.45	1.28							
	44.6	1.92	1.70	1.45	1.28							
	53.8	1.92	1.70	1.45	1.28							
	58.4	1.92	1.70	1.45	1.28							
	70.3	1.92	1.70	1.45	1.28	2800	5	36	38	41	34	37
	84.8	1.92	1.70	1.45	1.28							
	91.9	1.37	1.21	1.03	0.91							
	110.8	1.37	1.21	1.03	0.91							
	133.6	1.13	1.00	0.85	0.75							
	171.5	1.13	1.00	0.85	0.75							
PGA 164	131.8	1.92	1.70	1.45	1.28							
	158.9	1.92	1.70	1.45	1.28							
	191.5	1.92	1.70	1.45	1.28							
	207.6	1.92	1.70	1.45	1.28							
	230.8	1.92	1.70	1.45	1.28							
	301.7	1.92	1.70	1.45	1.28							
	327.0	1.92	1.70	1.45	1.28							
	363.6	1.92	1.70	1.45	1.28							
	394.2	1.92	1.70	1.45	1.28							
	475.1	1.92	1.70	1.45	1.28	2800	1.5	42	44	47	40	43
	515.3	1.37	1.21	1.03	0.91							
	572.7	1.92	1.70	1.45	1.28							
	610.1	1.92	1.70	1.45	1.28							
	735.4	1.92	1.70	1.45	1.28							
	797.2	1.37	1.21	1.03	0.91							
	960.9	1.37	1.21	1.03	0.91							
	1158.2	1.13	1.00	0.85	0.75							
	1233.7	1.37	1.21	1.03	0.91							
	1487.1	1.13	1.00	0.85	0.75							

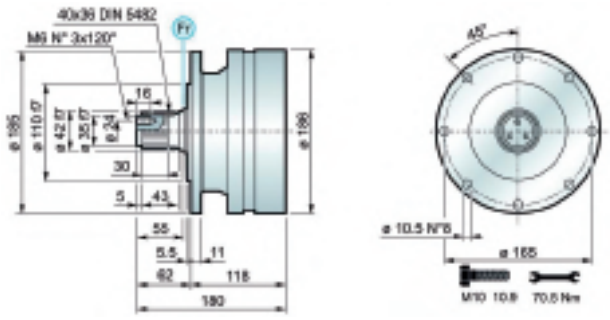
$M_{max} = M_c \times 2$

160 Series Types and Dimensions

MS

Output shaft accessories

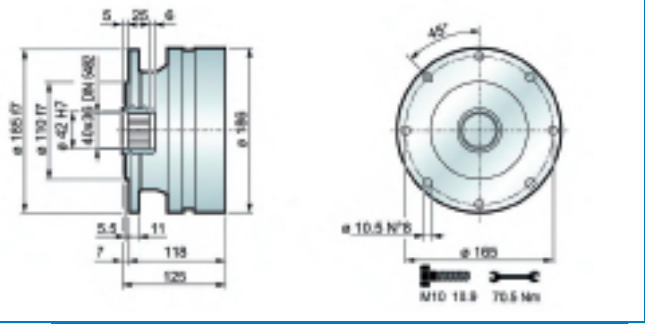
YZ FL BS FF



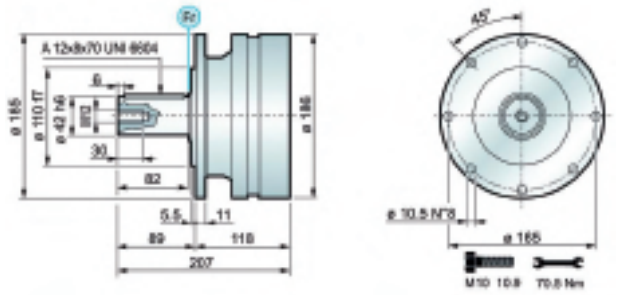
F

Output shaft accessories

KB



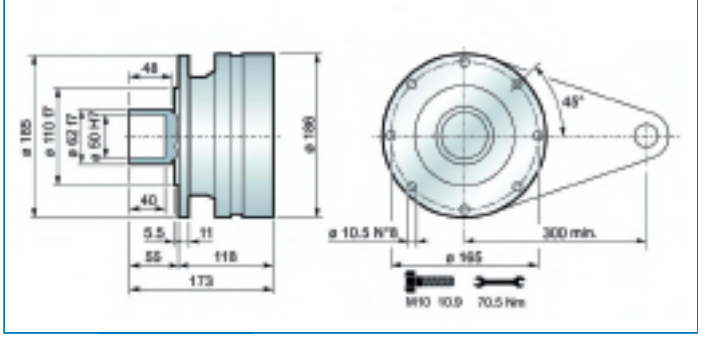
MC

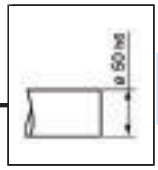


FS

Output shaft accessories

GA



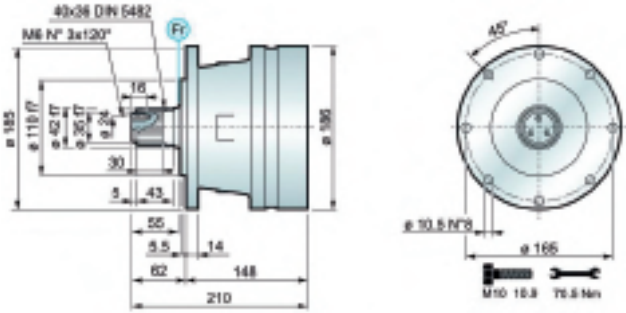


Mmax = 2.2 kNm The maximum torque indicated is valid only with shrink discs supplied by Lönne (GA type)

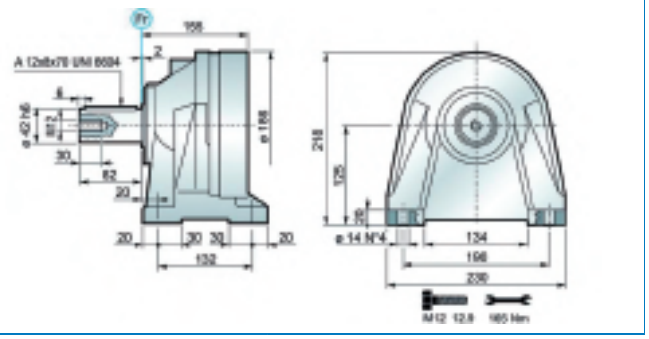
PS

Output shaft accessories

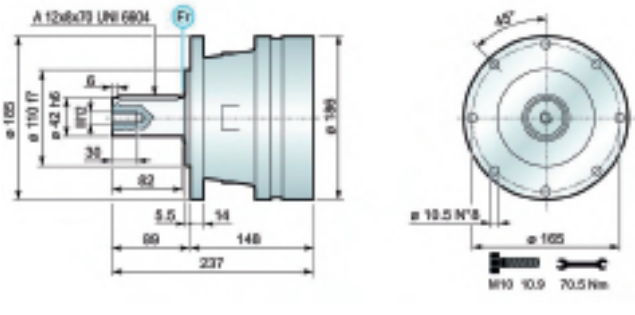
YZ FL BS FF



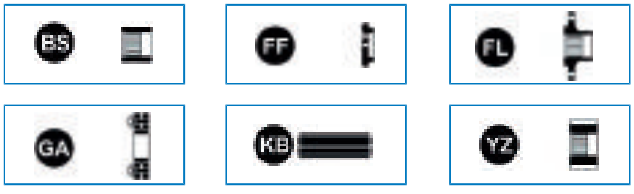
CPC



PC

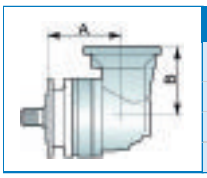


Output shaft accessories

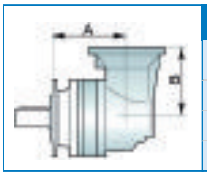


YZ: tailormade by Lönne

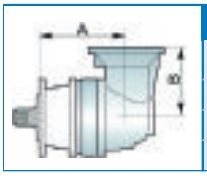
160 Series Overall Dimensions



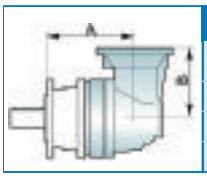
PGA MS	A	B	RA	RB	EF
PGA 162	193	159	*		*
PGA 163	241	159	*		*
PGA 164	289	159	*		*



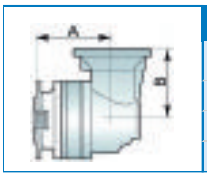
PGA MC	A	B	RA	RB	EF
PGA 162	193	159	*		*
PGA 163	241	159	*		*
PGA 164	289	159	*		*



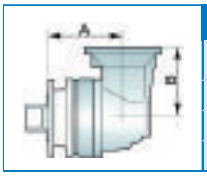
PGA PS	A	B	RA	RB	EF
PGA 162	223	159	*		*
PGA 163	271	159	*		*
PGA 164	319	159	*		*



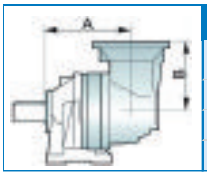
PGA PC	A	B	RA	RB	EF
PGA 162	223	159	*		*
PGA 163	271	159	*		*
PGA 164	319	159	*		*



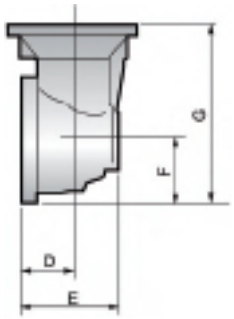
PGA F	A	B	RA	RB	EF
PGA 162	193	159	*		*
PGA 163	241	159	*		*
PGA 164	289	159	*		*



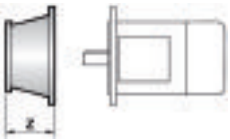
PGA FS	A	B	RA	RB	EF
PGA 162	193	159	*		*
PGA 163	241	159	*		*
PGA 164	289	159	*		*



PGA CPC	A	B	RA	RB	EF
PGA 162	230	159	*		*
PGA 163	278	159	*		*
PGA 164	326	159	*		*

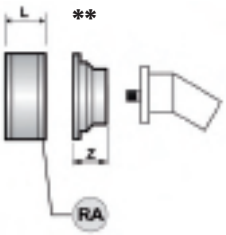


	D	E	F	G
PGA 162	75	141.5	93	252
PGA 163	75	141.5	93	252
PGA 164	75	141.5	93	252



Ref page

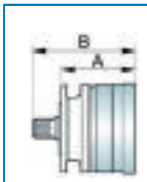
46



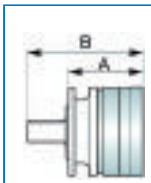
Ref page

47

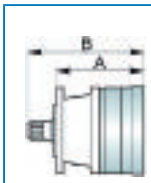
	L
RA	81



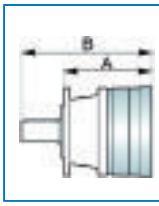
PG MS	A	B	RA	RB	EF	EDF
PG 161	118	180	*			*
PG 162	166	228	*			*
PG 163	214	276	*			*
PG 164	262	324	*			*



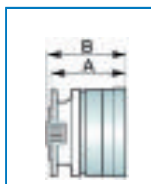
PG MC	A	B	RA	RB	EF	EDF
PG 161	118	207	*			*
PG 162	166	255	*			*
PG 163	214	303	*			*
PG 164	262	351	*			*



PG PS	A	B	RA	RB	EF	EDF
PG 161	148	210	*			*
PG 162	196	258	*			*
PG 163	244	306	*			*
PG 164	292	354	*			*

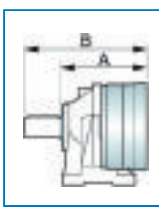


PG PC	A	B	RA	RB	EF	EDF
PG 161	148	237	*			*
PG 162	196	285	*			*
PG 163	244	333	*			*
PG 164	292	381	*			*



PG F	A	B	RA	RB	EF	EDF
PG 161	118	125	*			*
PG 162	166	173	*			*
PG 163	214	221	*			*
PG 164	262	269	*			*

PG FS	A	B	RA	RB	EF	EDF
PG 161	118	173	*			*
PG 162	166	221	*			*
PG 163	214	269	*			*
PG 164	262	317	*			*



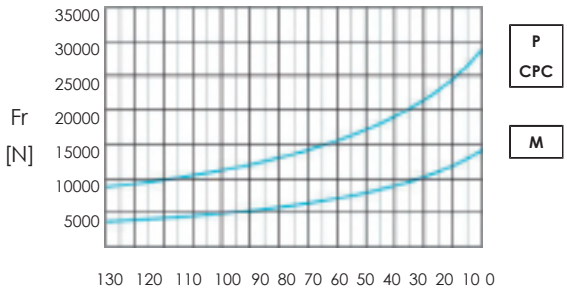
PG CPC	A	B	RA	RB	EF	EDF
PG 161	155	237	*			*
PG 162	203	285	*			*
PG 163	251	333	*			*
PG 164	299	381	*			*

* Input shafts on request
** Hydraulic flanges on request

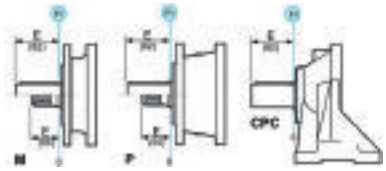
160 Series Radial

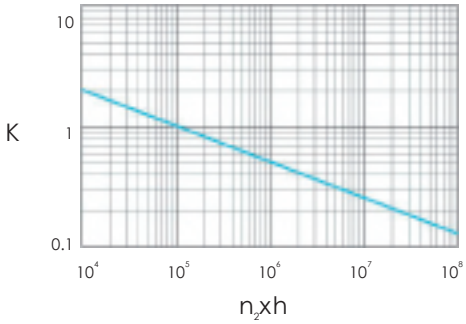
RADIAL LOADS (Fr)

The following curves show the radioal loads and the K factors to obtain the required $n_2$xh value.



	n x h				
	10^5	10^4	10^6	10^7	10^8
M - P	Fr	Fr • K			
*CPC	Fr • 0.75	Fr • K • 0.75			





AXIAL LOADS (Fa)

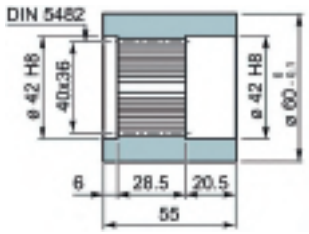
The values of the axial loads in the table refer to the output versions and load direction of application.

Fa	M	P - CPC	
	16000	18000	←
[N]	16000	18000	→

OUTPUT SHAFT ACCESSORIES

BS

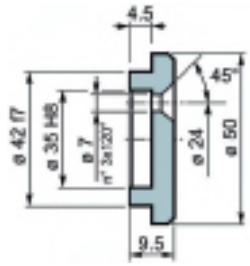
Splined bushing
Material:
UNI C40
SAE 1040
DIN Ck40
Code **1710.100.076**



FF

Stop bottom plate

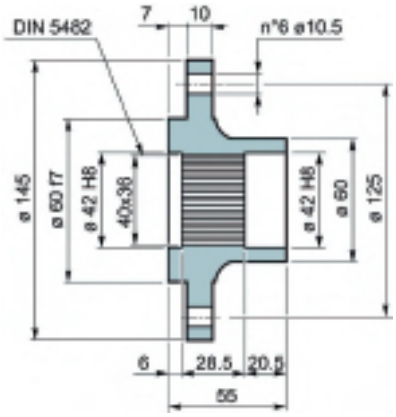
Code **5701.034.000**



FL

Flange

Code **1710.102.025**

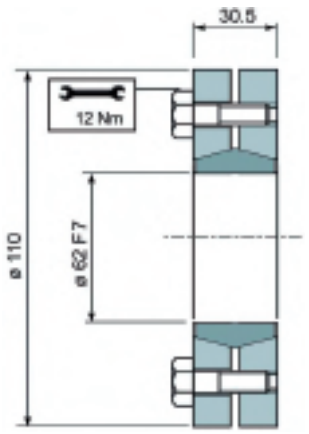


GA

Shrink Disc

Max torque 2.2 kNm

Code **9015.062.000**



KB

Splined rod
Material:
UNI 39NiCrMo3
Code **1703.179.042**

250 Series

	i	Mc [kNm] n2 x h 10.000	Mc [kNm] n2 x h 20.000	Mc [kNm] n2 x h 50.000	Mc [kNm] n2 x h 100.000	n1 max [min -1]	Pt [kW]	Kg M	Kg P	Kg CPC	Kg F	Kg FS
PG 251	3.77	3.98	3.52	3.00	2.65							
	4.12	3.60	3.19	2.71	2.40							
	5.16	3.01	2.66	2.26	2.00	2800	20	29	38	42	20	31
	6.00	2.52	2.23	1.90	1.68							
	7.25	1.95	1.73	1.47	1.30							
PG 252	13.4	3.98	3.52	3.00	2.65							
	16.1	3.98	3.52	3.00	2.65							
	18.3	3.01	2.66	2.26	2.00							
	23.1	3.60	3.19	2.71	2.40							
	28.9	3.01	2.66	2.26	2.00	2800	12	35	44	48	27	37
	34.8	3.01	2.66	2.26	2.00							
	40.5	2.52	2.23	1.90	1.68							
	48.9	1.95	1.73	1.47	1.30							
	62.8	1.95	1.73	1.47	1.30							
PG 253	52.1	3.60	3.19	2.71	2.40							
	57.5	3.98	3.52	3.00	2.65							
	62.8	3.60	3.19	2.71	2.40							
	75.2	3.98	3.52	3.00	2.65							
	82.1	3.60	3.19	2.71	2.40							
	90.6	3.98	3.52	3.00	2.65							
	98.9	3.60	3.19	2.71	2.40							
	119.3	3.60	3.19	2.71	2.40							
	129.3	3.60	3.19	2.71	2.40							
	149.4	3.01	2.66	2.26	2.00	2800	8	41	50	54	32	43
	155.9	3.60	3.19	2.71	2.40							
	162.0	3.01	2.66	2.26	2.00							
	173.5	2.52	2.23	1.90	1.68							
	195.2	3.01	2.66	2.26	2.00							
	235.4	3.01	2.66	2.26	2.00							
	273.3	2.52	2.23	1.90	1.68							
	302.2	3.01	2.66	2.26	2.00							
	330.3	1.95	1.73	1.47	1.30							
	424.1	1.95	1.73	1.47	1.30							
PG 254	351.9	3.60	3.19	2.71	2.40							
	365.7	3.01	2.66	2.26	2.00							
	388.5	3.98	3.52	3.00	2.65							
	413.8	3.98	3.52	3.00	2.65							
	424.2	3.60	3.19	2.71	2.40							
	468.3	3.98	3.52	3.00	2.65							
	511.4	3.60	3.19	2.71	2.40							
	554.3	3.60	3.19	2.71	2.40							
	611.9	3.98	3.52	3.00	2.65							
	668.2	3.60	3.19	2.71	2.40	2800	4	47	56	60	38	49
	737.6	3.98	3.52	3.00	2.65							
	805.4	3.60	3.19	2.71	2.40							
	857.9	3.60	3.19	2.71	2.40							
	907.3	3.01	2.66	2.26	2.00							
	1052.4	3.60	3.19	2.71	2.40							
	1121.1	3.60	3.19	2.71	2.40							
	1318.2	3.01	2.66	2.26	2.00							
	1588.9	3.01	2.66	2.26	2.00							
	1845.2	2.52	2.23	1.90	1.68							
	2369.2	2.52	2.23	1.90	1.68							
PGA 252	12.0	3.60	3.19	2.71	2.40							
	15.1	3.01	2.66	2.26	2.00	2800	12	47	56	60	35	49
	17.5	2.52	2.23	1.90	1.68							
	21.2	1.95	1.73	1.47	1.30							
PGA 253	39.3	3.98	3.52	3.00	2.65							
	47.4	3.98	3.52	3.00	2.65							
	53.8	3.01	2.66	2.26	2.00							
	67.7	3.60	3.19	2.71	2.40							
	75.4	2.52	2.23	1.90	1.68	2800	8	53	62	66	45	55
	84.8	3.01	2.66	2.26	2.00							
	91.1	1.95	1.73	1.47	1.30							
	102.2	3.01	2.66	2.26	2.00							
	118.7	2.52	2.23	1.90	1.68							
	143.5	1.95	1.73	1.47	1.30							
PGA 254	140.0	3.98	3.52	3.00	2.65							
	168.8	3.98	3.52	3.00	2.65							
	184.3	3.60	3.19	2.71	2.40							
	220.6	3.98	3.52	3.00	2.65							
	240.9	3.60	3.19	3.71	2.40							
	265.9	3.98	3.52	3.00	2.65							
	290.3	3.60	3.19	2.71	2.40							
	320.5	3.98	3.52	3.00	2.65							
	350.0	3.60	3.19	2.71	2.40							
	422.3	2.52	2.23	1.90	1.68	2800	4	59	68	72	50	61
	449.4	3.60	3.19	2.71	2.40							
	475.2	3.01	2.66	2.26	2.00							
	509.1	2.52	2.23	1.90	1.68							
	551.9	2.52	2.23	1.90	1.68							
	615.2	1.95	1.73	1.47	1.30							
	665.2	2.52	2.23	1.90	1.68							
	735.5	3.01	2.66	2.26	2.00							
	801.8	2.52	2.23	1.90	1.68							
	1244.0	1.95	1.73	1.47	1.30							

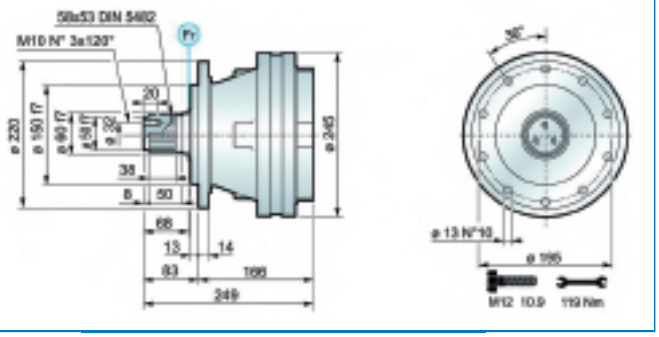
$M_{max} = M_c \times 2$

250 Series Types and Dimensions

MS

Output shaft accessories

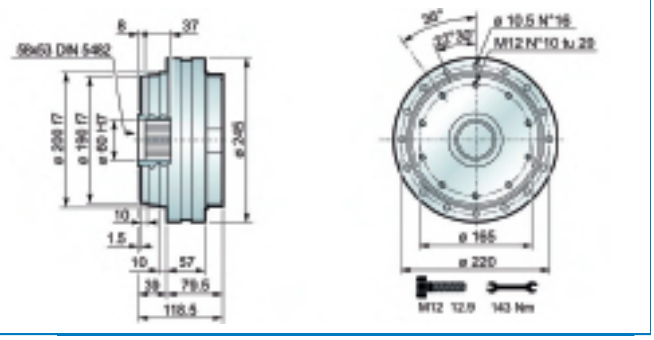
YZ FL BS FF



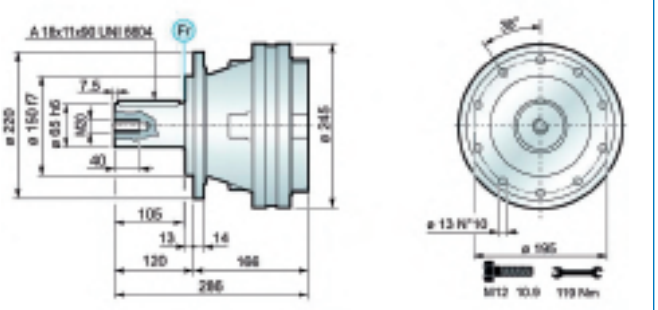
F

Output shaft accessories

KB



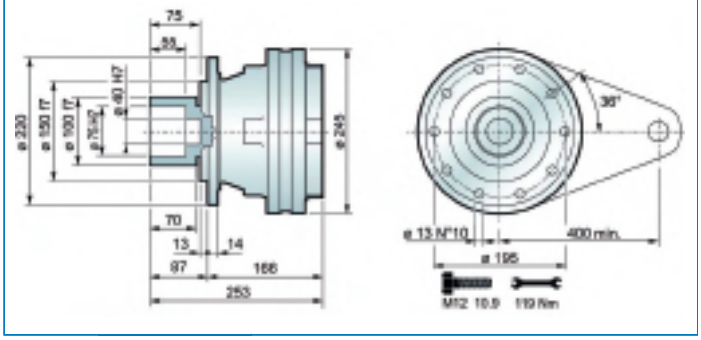
MC

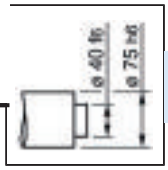


FS

Output shaft accessories

GA





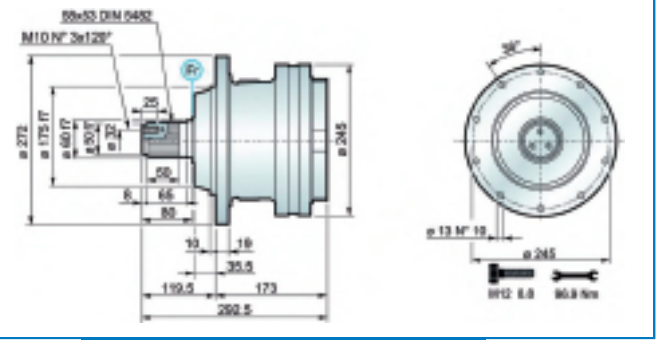
Mmax = 2.2 kNm

The maximum torque indicated is valid only with shrink discs supplied by Lönne (GA type)

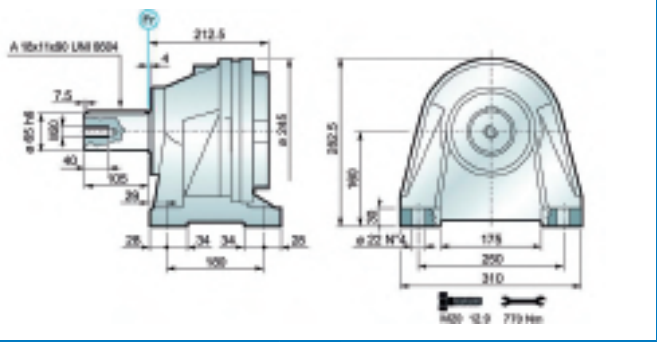
PS

Output shaft accessories

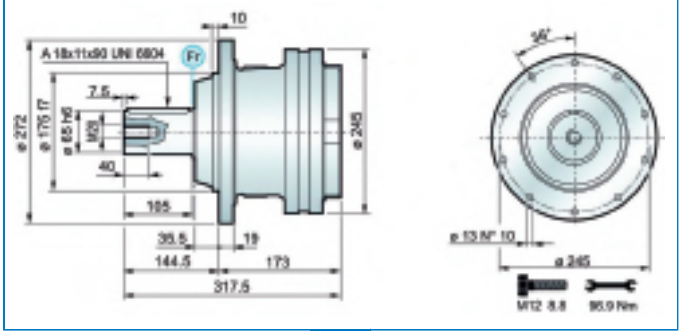
YZ FL BS FF



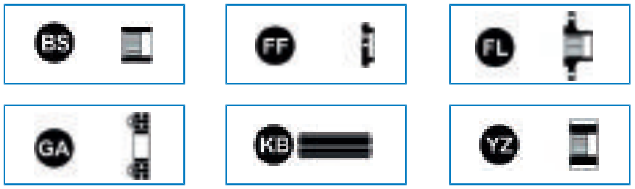
CPC



PC

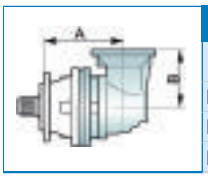


Output shaft accessories

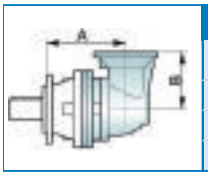


YZ: tailormade by Lönne

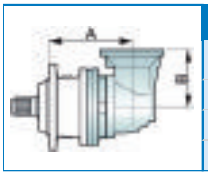
250 Series Overall Dimensions



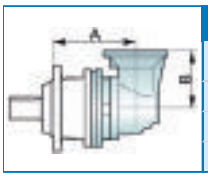
PGA MS	A	B	RA	RB	EF
PGA 252	241	159	*		*
PGA 253	289	159	*		*
PGA 254	337	159	*		*



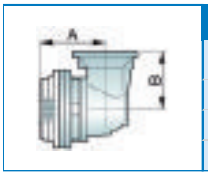
PGA MC	A	B	RA	RB	EF
PGA 252	241	159	*		*
PGA 253	289	159	*		*
PGA 254	337	159	*		*



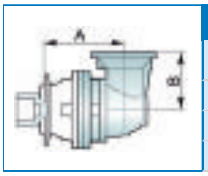
PGA PS	A	B	RA	RB	EF
PGA 252	248	159	*		*
PGA 253	296	159	*		*
PGA 254	344	159	*		*



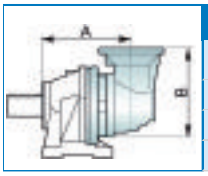
PGA PC	A	B	RA	RB	EF
PGA 252	248	159	*		*
PGA 253	296	159	*		*
PGA 254	344	159	*		*



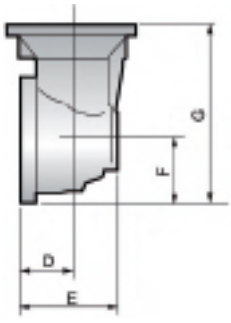
PGA F	A	B	RA	RB	EF
PGA 252	192	159	*		*
PGA 253	240	159	*		*
PGA 254	288	159	*		*



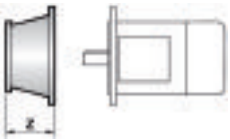
PGA FS	A	B	RA	RB	EF
PGA 252	241	159	*		*
PGA 253	289	159	*		*
PGA 254	337	159	*		*



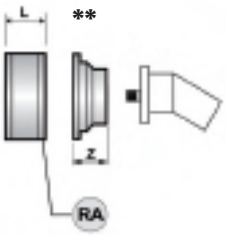
PGA CPC	A	B	RA	RB	EF
PGA 252	287,5	159	*		*
PGA 253	335,5	159	*		*
PGA 254	383,5	159	*		*



	D	E	F	G
PGA 252	75	141.5	93	252
PGA 253	75	141.5	93	252
PGA 254	75	141.5	93	252

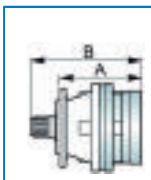


Ref page
46

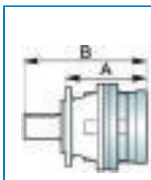


Ref page
47

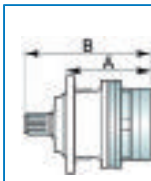
	L
RA	81
RB	125



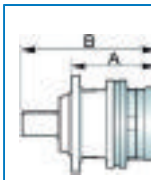
PG MS	A	B	RA	RB	EF	EDF
PG 251	166	249	*	o	*	
PG 252	214	297	*			*
PG 253	262	345	*			*
PG 254	310	393	*			*



PG MC	A	B	RA	RB	EF	EDF
PG 251	166	286	*	o	*	
PG 252	214	334	*			*
PG 253	262	382	*			*
PG 254	310	430	*			*

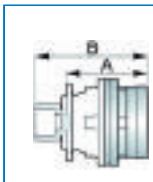


PG PS	A	B	RA	RB	EF	EDF
PG 251	173	292,5	*	o	*	
PG 252	221	340,5	*			*
PG 253	269	388,5	*			*
PG 254	317	436,5	*			*

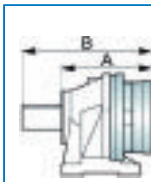


PG PC	A	B	RA	RB	EF	EDF
PG 251	173	317,5	*	o	*	
PG 252	221	365,5	*			*
PG 253	269	413,5	*			*
PG 254	317	461,5	*			*

PG F	A	B	RA	RB	EF	EDF
PG 251	79,5	118,5	*	o	*	
PG 252	127,5	166,5	*			*
PG 253	175,5	214,5	*			*
PG 254	223,5	262,5	*			*



PG FS	A	B	RA	RB	EF	EDF
PG 251	166	253	*	o	*	
PG 252	214	301	*			*
PG 253	262	349	*			*
PG 254	310	397	*			*



PG CPC	A	B	RA	RB	EF	EDF
PG 251	212,5	317,5	*	o	*	
PG 252	260,5	365,5	*			*
PG 253	308,5	413,5	*			*
PG 254	356,5	461,5	*			*

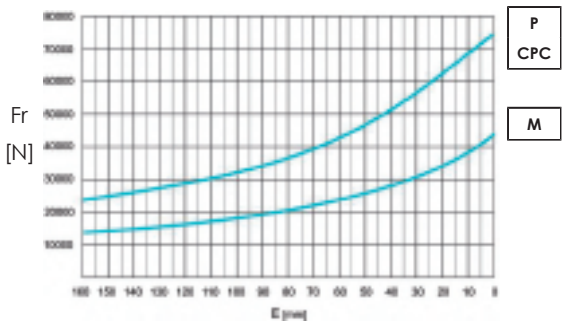
A + 13.5	B + 13.5	o

* Input shafts on request
** Hydraulic flanges on request

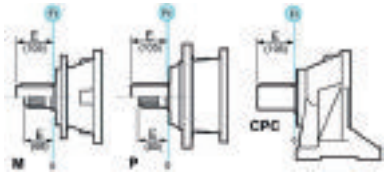
250 Series Radial loads

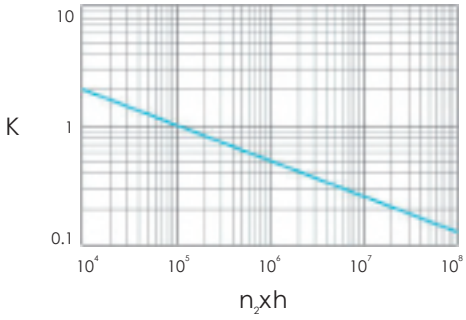
RADIAL LOADS (Fr)

The following curves show the radioal loads and the K factors to obtain the required $n_2$xh value.



	n x h				
	10^5	10^4	10^6	10^7	10^8
M - P	Fr	Fr • K			
*CPC	Fr • 0.75	Fr • K • 0.75			

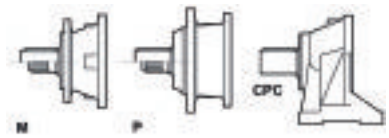




AXIAL LOADS (Fa)

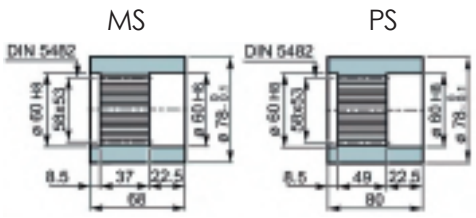
The values of the axial loads in the table refer to the output versions and load direction of application.

Fa	M	P - CPC	
	32000	32000	←
[N]	32000	48000	→



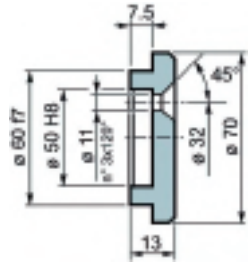
OUTPUT SHAFT ACCESSORIES

BS
Splined bushing
Material:
UNI C40
SAE 1040
DIN Ck40
MS
Code **1712.101.076**
PS
Code **1714.101.076**



FF
Stop bottom plate

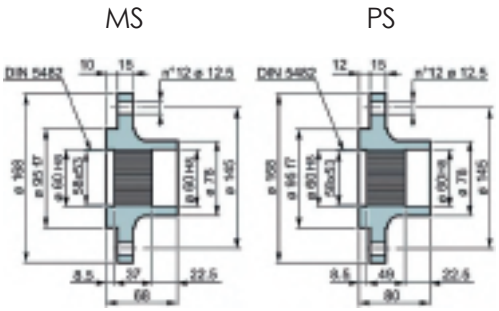
Code **5701.015.000**



FL
Flange

MS
Code **1712.103.025**

PS
Code **1714.103.098**

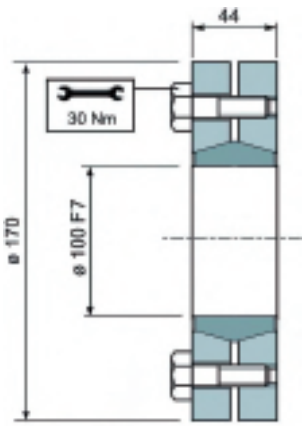


GA

Shrink Disc

Max torque 7.5 kNm

Code **9015.100.000**



KB
Splined rod
Material:
UNI 39NiCrMo3
Code **1703.181.042**

500 Series

	i	Mc [kNm] n2 x h 10.000	Mc [kNm] n2 x h 20.000	Mc [kNm] n2 x h 50.000	Mc [kNm] n2 x h 100.000	n1 max [min -1]	Pt [kW]	Kg M	Kg P	Kg CPC	Kg F	Kg FS
PG 501	3,77	5,77	5,11	4,35	3,85							
	4,12	5,26	4,66	3,97	3,51							
	5,16	4,3	3,81	3,24	2,87	2800	20	33	42	46	25	35
	6,00	3,77	3,34	2,84	2,52							
	7,25	2,95	2,61	2,22	1,97							
PG 502	13,4	5,77	5,11	4,35	3,85							
	16,1	5,77	5,11	4,35	3,85							
	18,3	4,3	3,81	3,24	2,87							
	23,1	5,26	4,66	3,97	3,51	2800	15	41	50	54	32	43
	28,9	4,3	3,81	3,24	2,87							
	34,8	4,3	3,81	3,24	2,87							
	40,5	3,77	3,34	2,84	2,52							
	48,9	2,95	2,61	2,22	1,97							
PG 503	52,1	5,26	4,66	3,97	3,51							
	57,5	5,77	5,11	4,35	3,85							
	62,8	5,26	4,66	3,97	3,51							
	75,2	5,77	5,11	4,35	3,85							
	82,1	5,26	4,66	3,97	3,51							
	90,6	5,77	5,11	4,35	3,85							
	98,9	5,26	4,66	3,97	3,51							
	119,3	5,26	4,66	3,97	3,51							
	129,3	5,26	4,66	3,97	3,51	2800	10	47	56	60	38	49
	149,4	4,3	3,81	3,24	2,87							
	155,9	5,26	4,66	3,97	3,51							
	162	4,3	3,81	3,24	2,87							
	173,5	3,77	3,34	2,84	2,52							
	195,2	4,3	3,81	3,24	2,87							
	235,4	4,3	3,81	3,24	2,87							
	273,3	3,77	3,34	2,84	2,52							
	302,2	4,3	3,81	3,24	2,87							
	330,3	2,95	2,61	2,22	1,97							
PG 504	351,9	5,26	4,66	3,97	3,51							
	365,7	4,3	3,81	3,24	2,87							
	388,5	5,77	5,11	4,35	3,85							
	413,8	5,77	5,11	4,35	3,85							
	424,2	5,26	4,66	3,97	3,51							
	468,3	5,77	5,11	4,35	3,85							
	511,4	5,26	4,66	3,97	3,51							
	554,3	5,26	4,66	3,97	3,51							
	611,9	5,77	5,11	4,35	3,85	2800	6	53	62	66	44	55
	668,2	5,26	4,66	3,97	3,51							
	737,6	5,77	5,11	4,35	3,85							
	805,4	5,26	4,66	3,97	3,51							
	857,9	5,26	4,66	3,97	3,51							
	907,3	4,3	3,81	3,24	2,87							
	1052,4	5,26	4,66	3,97	3,51							
	1121,1	5,26	4,66	3,97	3,51							
	1318,2	4,3	3,81	3,24	2,87							
	1588,9	4,3	3,81	3,24	2,87							
	1845,2	3,77	3,34	2,84	2,52							
PGA 502	13	5,77	5,11	4,35	3,85							
	14,2	5,26	4,66	3,97	3,51							
	17,8	4,3	3,81	3,24	2,87							
	20,5	5,77	5,11	4,35	3,85	2800	15	51	60	64	43	53
	22,4	5,26	4,66	3,97	3,51							
	28,1	4,3	3,81	3,24	2,87							
	32,6	3,77	3,34	2,84	2,52							
	39,7	2,95	2,61	2,22	1,97							
PGA 503	39,3	5,77	5,11	4,35	3,85							
	47,4	5,77	5,11	4,35	3,85							
	53,8	4,3	3,81	3,24	2,87							
	67,7	5,26	4,66	3,97	3,51							
	75,4	3,77	3,34	2,84	2,52	2800	10	59	68	72	50	61
	84,8	4,3	3,81	3,24	2,87							
	91,1	2,95	2,61	2,22	1,97							
	102,2	4,3	3,81	3,24	2,87							
	118,7	3,77	3,34	2,84	2,52							
	143,5	2,95	2,61	2,22	1,97							
PGA 504	140	5,77	5,11	4,35	3,85							
	168,8	5,77	5,11	4,35	3,85							
	184,3	5,26	4,66	3,97	3,51							
	220,6	5,77	5,11	4,35	3,85							
	240,9	5,26	4,66	3,97	3,51							
	265,9	5,77	5,11	4,35	3,85							
	290,3	5,26	4,66	3,97	3,51							
	320,5	5,77	5,11	4,35	3,85							
	350	5,26	4,66	3,97	3,51							
	422,3	3,77	3,34	2,84	2,52	2800	6	65	74	78	56	67
	449,4	5,26	4,66	3,97	3,51							
	475,2	4,3	3,81	3,24	2,87							
	509,1	3,77	3,34	2,84	2,52							
	551,9	3,77	3,34	2,84	2,52							
	615,2	2,95	2,61	2,22	1,97							
	665,2	3,77	3,34	2,84	2,52							
	735,5	4,3	3,81	3,24	2,87							
	801,8	3,77	3,34	2,84	2,52							
	1244	2,95	2,61	2,22	1,97							

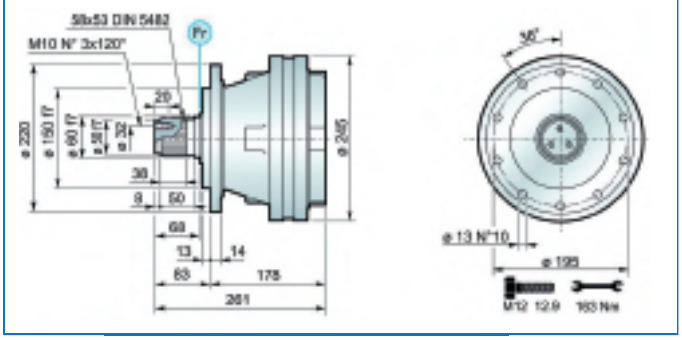
$M_{max} = M_c \times 2$

500 Series Types and Dimensions

MS

Output shaft accessories

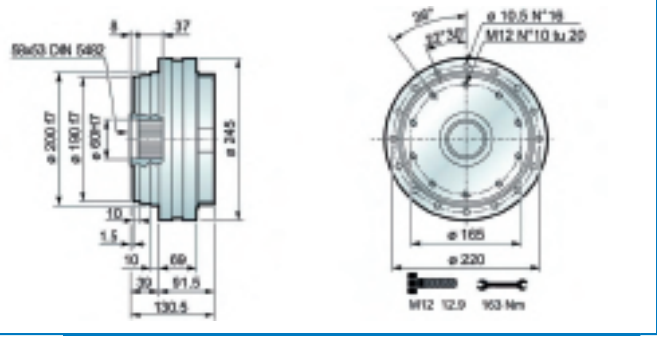
YZ FL BS FF



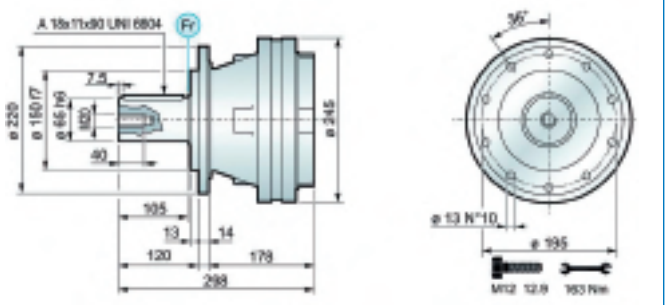
F

Output shaft accessories

KB



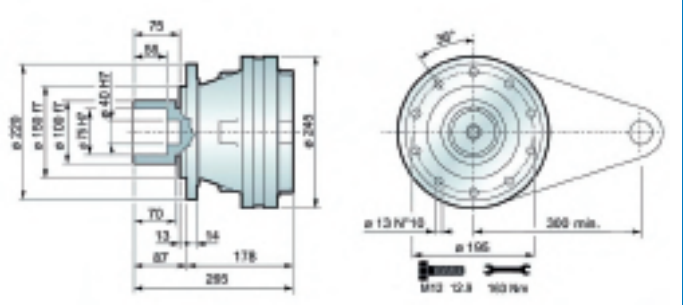
MC

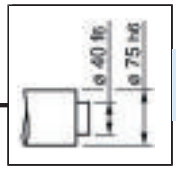


FS

Output shaft accessories

GA





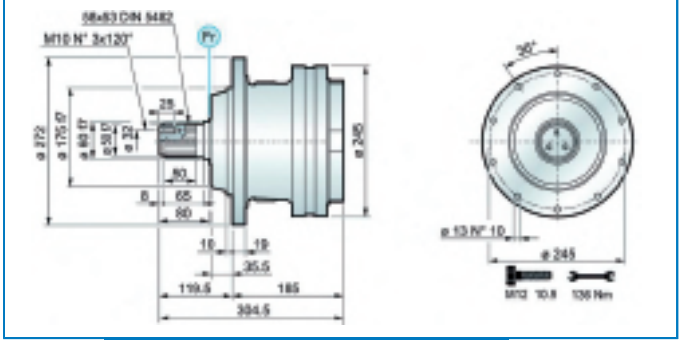
Mmax = 2.2 kNm

The maximum torque indicated is valid only with shrink discs supplied by Lönne (GA type)

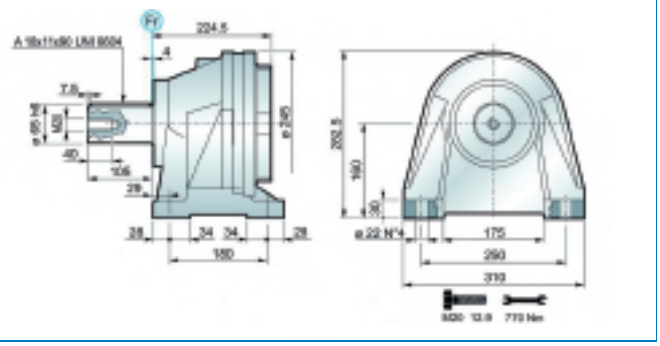
PS

Output shaft accessories

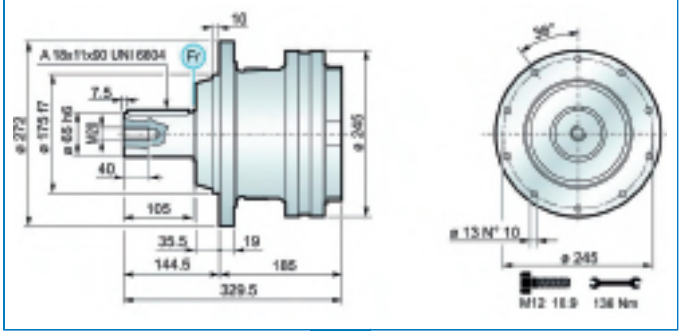
YZ FL BS FF



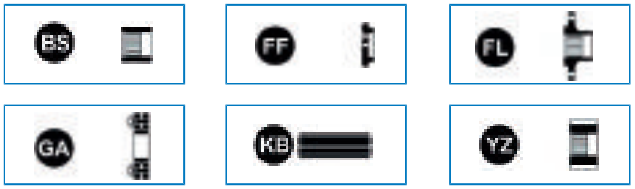
CPC



PC

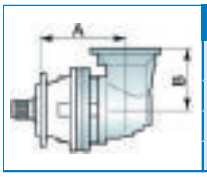


Output shaft accessories

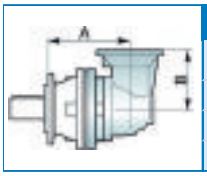


YZ: tailormade by Lönne

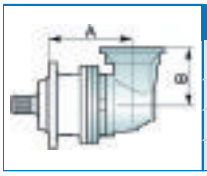
500 Series Overall Dimensions



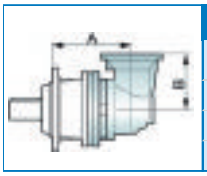
PGA MS	A	B	RA	RB	EF
PGA 502	279,5	240	*		*
PGA 503	314	159	*		*
PGA 504	362	159	*		*



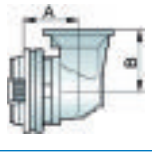
PGA MC	A	B	RA	RB	EF
PGA 502	279,5	240	*		*
PGA 503	314	159	*		*
PGA 504	362	159	*		*



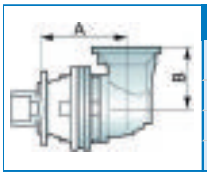
PGA PS	A	B	RA	RB	EF
PGA 502	286,5	240	*		*
PGA 503	321	159	*		*
PGA 504	369	159	*		*



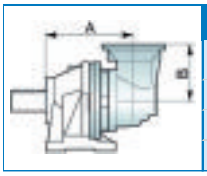
PGA PC	A	B	RA	RB	EF
PGA 502	286,5	240	*		*
PGA 503	321	159	*		*
PGA 504	369	159	*		*



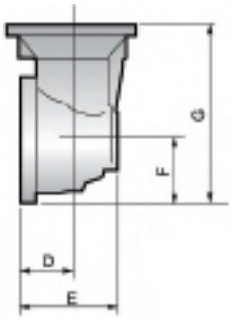
PGA F	A	B	RA	RB	EF
PGA 502	193	240	*		*
PGA 503	227,5	159	*		*
PGA 504	275,5	159	*		*



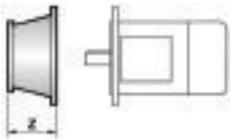
PGA FS	A	B	RA	RB	EF
PGA 502	279,5	240	*		*
PGA 503	314	159	*		*
PGA 504	362	159	*		*



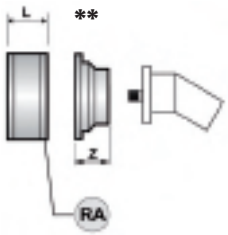
PGA CPC	A	B	RA	RB	EF
PGA 502	326	240	*		*
PGA 503	360,5	159	*		*
PGA 504	408,5	159	*		*



	D	E	F	G
PGA 502	88	164	140	380
PGA 503	75	141.5	93	252
PGA 504	75	141.5	93	252

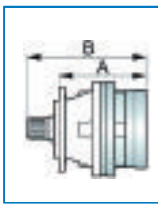


Ref page
46

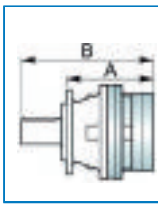


Ref page
47

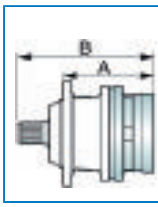
	L
RA	81
RB	125



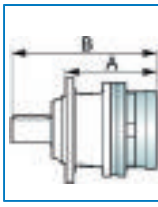
PG MS	A	B	RA	RB	EF	EDF
PG 501	178	261	*	o	*	
PG 502	239	322	*			*
PG 503	287	370	*			*
PG 504	335	418	*			*



PG MC	A	B	RA	RB	EF	EDF
PG 501	178	298	*	o	*	
PG 502	239	359	*			*
PG 503	287	407	*			*
PG 504	335	455	*			*

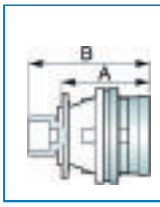


PG PS	A	B	RA	RB	EF	EDF
PG 501	185	304,5	*	o	*	
PG 502	246	365,5	*			*
PG 503	294	413,5	*			*
PG 504	342	461,5	*			*

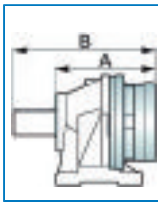


PG PC	A	B	RA	RB	EF	EDF
PG 501	185	329,5	*	o	*	
PG 502	246	390,5	*			*
PG 503	294	438,5	*			*
PG 504	342	486,5	*			*

PG F	A	B	RA	RB	EF	EDF
PG 501	91,5	130,5	*	o	*	
PG 502	152,5	191,5	*			*
PG 503	200,5	239,5	*			*
PG 504	248,5	287,5	*			*



PG FS	A	B	RA	RB	EF	EDF
PG 501	178	265	*	o	*	
PG 502	239,5	326	*			*
PG 503	287	374	*			*
PG 504	335	422	*			*



PG CPC	A	B	RA	RB	EF	EDF
PG 501	224,5	329,5	*	o	*	
PG 502	285,5	390,5	*			*
PG 503	333,5	438,5	*			*
PG 504	381,5	486,5	*			*

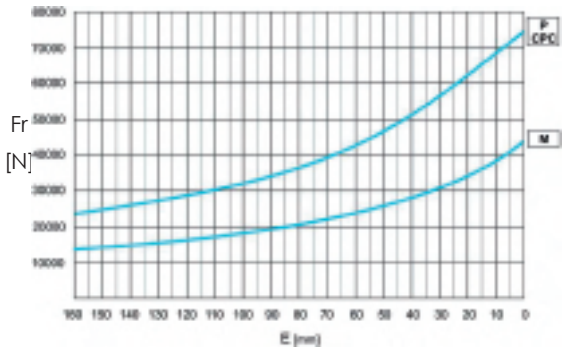
A + 13.5	B + 13.5	o

* Input shafts on request
** Hydraulic flanges on request

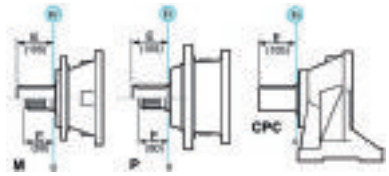
500 Series Radial loads

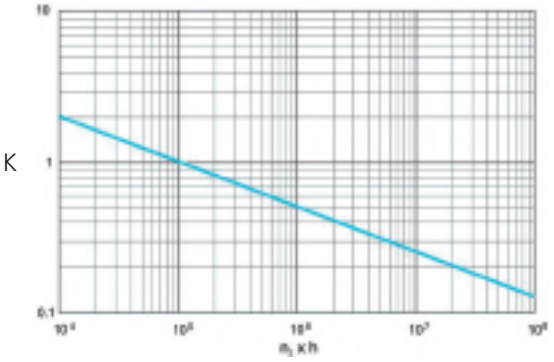
RADIAL LOADS (Fr)

The following curves show the radioal loads and the K factors to obtain the required $n_2 x h$ value.



	n x h				
	10^5	10^4	10^6	10^7	10^8
M - P	Fr	Fr • K			
*CPC	Fr • 0.75	Fr • K • 0.75			

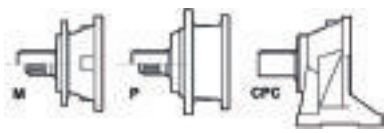




AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

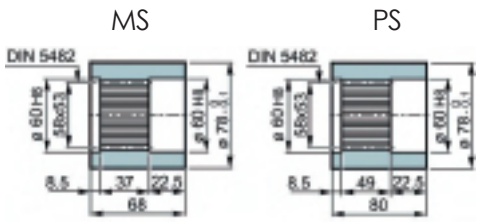
Fa	M	P - CPC	
	32000	32000	←
[N]	32000	48000	→



OUTPUT SHAFT ACCESSORIES

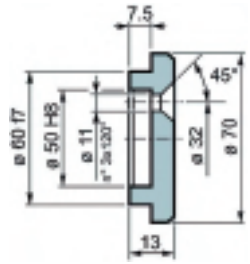
BS
Splined bushing
Material:
UNI C40
SAE 1040
DIN Ck40

MS
Code **1712.101.076**
PS
Code **1714.101.076**



FF
Stop bottom plate

Code **5701.015.000**



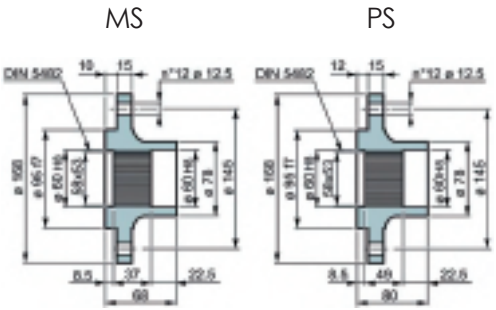
FL
Flange

MS

Code **1712.103.025**

PS

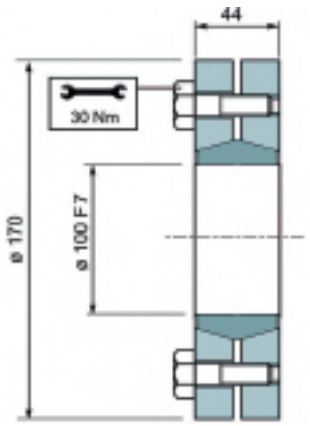
Code **1714.103.098**



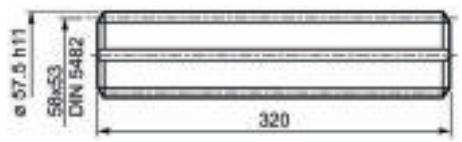
GA
Shrink Disc

Max torque 7.5 kNm

Code **9015.100.000**



KB
Splined rod
Material:
UNI 39NiCrMo3
Code **1703.181.042**



700 Series

	i	Mc [kNm] n2 x h 10.000	Mc [kNm] n2 x h 20.000	Mc [kNm] n2 x h 50.000	Mc [kNm] n2 x h 100.000	n1 max [min -1]	Pt [kW]	Kg M	Kg P	Kg CPC	Kg F	Kg FS
PG 701	3,66	7,93	7,02	5,97	5,29							
	4,42	7,24	6,41	5,45	4,83							
	5,00	6,36	5,63	4,79	4,24	2800	30		67	83	49	70
	5,8	5,38	4,76	4,05	3,59							
	7,00	4,35	3,85	3,28	2,90							
PG 702	13,8	7,93	7,02	5,97	5,29							
	18,2	7,24	6,41	5,45	4,83							
	20,6	6,36	5,63	4,79	4,24							
	22,8	7,24	6,41	5,45	4,83							
	26,5	7,24	6,41	5,45	4,83	2800	18		79	95	61	82
	30,0	6,36	5,63	4,79	4,24							
	36,2	6,36	5,63	4,79	4,24							
	42,0	5,38	4,76	4,05	3,59							
	50,7	4,35	3,85	3,28	2,90							
PG 703	53,7	7,93	7,02	5,97	5,29							
	64,8	7,93	7,02	5,97	5,29							
	71,6	7,24	6,41	5,45	4,83							
	78,2	7,24	6,41	5,45	4,83							
	88,3	6,36	5,63	4,79	4,24							
	93,6	7,24	6,41	5,45	4,83							
	102,1	7,93	7,02	5,97	5,29							
	112,9	7,24	6,41	5,45	4,83							
	127,8	7,93	7,02	5,97	5,29	2800	14		85	101	67	88
	139,2	6,36	5,63	4,79	4,24							
	148,7	7,24	6,41	5,45	4,83							
	155,3	6,36	5,63	4,79	4,24							
	174,3	6,36	5,63	4,79	4,24							
	194,8	5,38	4,76	4,05	3,59							
	216,7	7,24	6,41	5,45	4,83							
	244,6	6,36	5,63	4,79	4,24							
	283,8	5,38	4,76	4,05	3,59							
	342,5	4,35	3,85	3,28	2,90							
PG 704	301,1	7,93	7,02	5,97	5,29							
	332,4	7,93	7,02	5,97	5,29							
	347,9	7,93	7,02	5,97	5,29							
	400,6	7,93	7,02	5,97	5,29							
	434,3	7,93	7,02	5,97	5,29							
	474,3	7,93	7,02	5,97	5,29							
	523,5	7,93	7,02	5,97	5,29							
	571,7	7,93	7,02	5,97	5,29							
	632,7	7,24	6,41	5,45	4,83							
	661,8	7,24	6,41	5,45	4,83	2800	8		91	107	73	94
	747,3	6,36	5,63	4,79	4,24							
	768,6	7,24	6,41	5,45	4,83							
	832,3	7,24	6,41	5,45	4,83							
	869,9	6,36	5,63	4,79	4,24							
	976,4	6,36	5,63	4,79	4,24							
	1048,6	6,36	5,63	4,79	4,24							
	1177,0	6,36	5,63	4,79	4,24							
	1366,8	6,36	5,63	4,79	4,24							
	1651,4	6,36	5,63	4,79	4,24							
	2968,8	4,35	3,85	3,28	2,90							
PGA 702	12,6	7,93	7,02	5,97	5,29							
	15,2	7,24	6,41	5,45	4,83							
	17,2	6,36	5,63	4,79	4,24							
	20,0	5,38	4,76	4,05	3,59	2800	18		104	120	86	107
	24,1	7,24	6,41	5,45	4,83							
	27,2	6,36	5,63	4,79	4,24							
	31,5	5,38	4,76	4,05	3,59							
	38,1	4,35	3,85	3,28	2,90							
PGA 703	53,8	7,24	6,41	5,45	4,83							
	55,5	7,24	6,41	5,45	4,83							
	60,4	6,36	5,63	4,79	4,24							
	67,1	7,24	6,41	5,45	4,83							
	77,9	7,24	6,41	5,45	4,83	2800	14		94	110	76	97
	87,9	6,36	5,63	4,79	4,24							
	94,1	7,24	6,41	5,45	4,83							
	106,3	6,36	5,63	4,79	4,24							
	123,3	5,38	4,76	4,05	3,59							
	148,8	4,35	3,85	3,28	2,90							
PGA 704	157,7	7,93	7,02	5,97	5,29							
	174,1	7,93	7,02	5,97	5,29							
	190,1	7,93	7,02	5,97	5,29							
	210,3	7,24	6,41	5,45	4,83							
	229,6	7,24	6,41	5,45	4,83							
	248,4	7,93	7,02	5,97	5,29							
	274,8	7,24	6,41	5,45	4,83							
	300,7	7,24	6,41	5,45	4,83							
	331,2	7,24	6,41	5,45	4,83							
	361,6	7,24	6,41	5,45	4,83	2800	8		100	116	82	103
	393,0	5,38	4,76	4,05	3,59							
	453,0	7,24	6,41	5,45	4,83							
	511,4	6,36	5,63	4,79	4,24							
	557	5,38	4,76	4,05	3,59							
	593,9	6,36	5,63	4,79	4,24							
	656,7	6,36	5,63	4,79	4,24							
	717,7	6,36	5,63	4,79	4,24							
	832,5	5,38	4,76	4,05	3,59							
	921,5	6,36	5,63	4,79	4,24							
	1068,9	5,38	4,76	4,05	3,59							

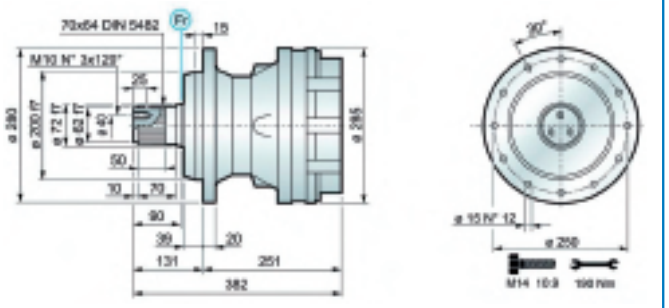
$M_{max} = M_c \times 2$

700 Series Types and Dimensions

PS

Output shaft accessories

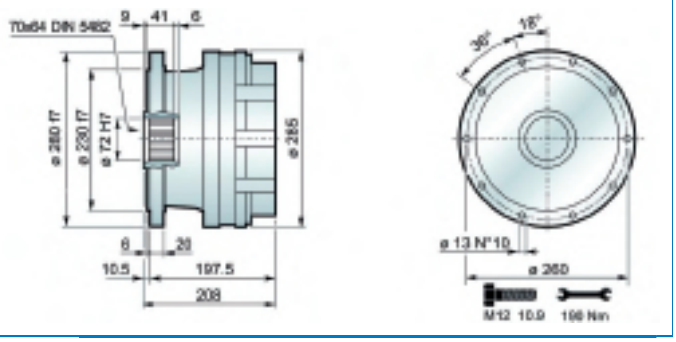
YZ FL BS FF



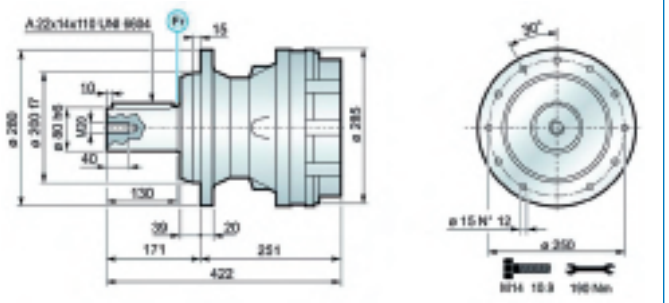
F

Output shaft accessories

KB



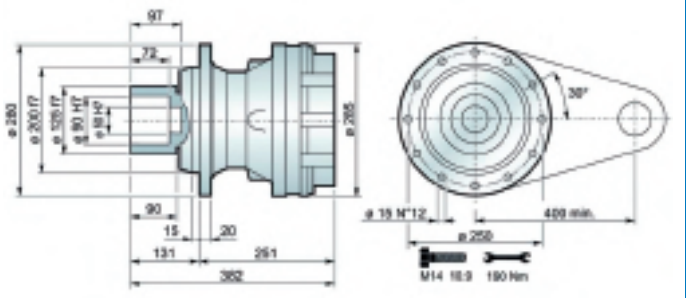
PC

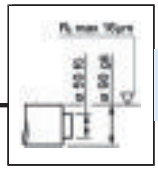


FS

Output shaft accessories

GA

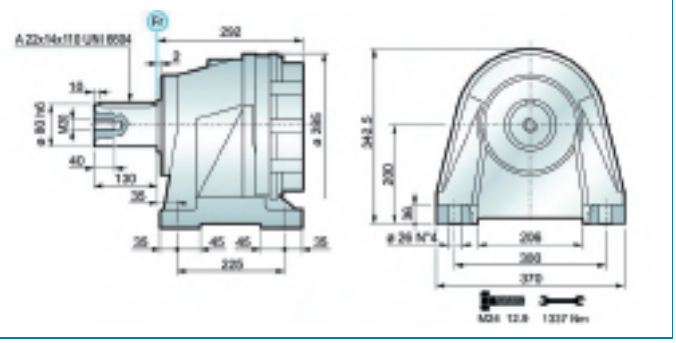




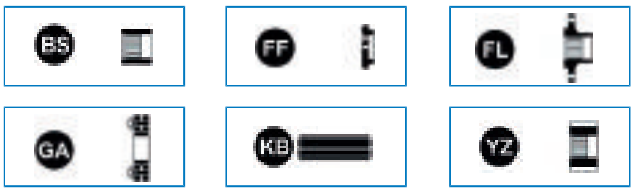
Mmax = 2.2 kNm

The maximum torque indicated is valid only with shrink discs supplied by Lönne (GA type)

CPC

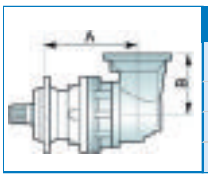


Output shaft accessories

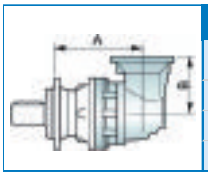


YZ: tailormade by Lönne

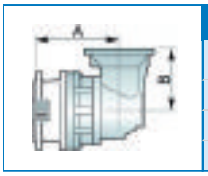
700 Series Overall Dimensions



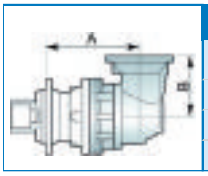
PGA PS	A	B	RA	RB	EF
PGA 702	339	240	*	o	*
PGA 703	385.5	159	*		*
PGA 704	433.5	159	*		*



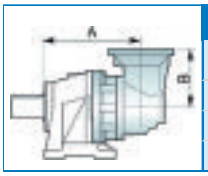
PGA PC	A	B	RA	RB	EF
PGA 702	339	240	*	o	*
PGA 703	385.5	159	*		*
PGA 704	433.5	159	*		*



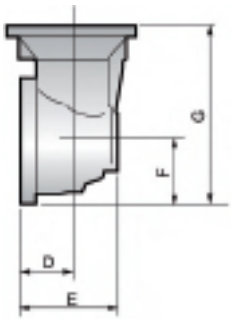
PGA F	A	B	RA	RB	EF
PGA 702	285.5	240	*	o	*
PGA 703	332	159	*		*
PGA 704	380	159	*		*



PGA FS	A	B	RA	RB	EF
PGA 702	339	240	*	o	*
PGA 703	385.5	159	*		*
PGA 704	433.5	159	*		*

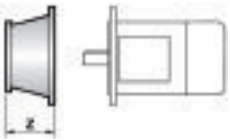


PGA CPC	A	B	RA	RB	EF
PGA 702	380	240	*	o	*
PGA 703	426.5	159	*		*
PGA 704	474.5	159	*		*



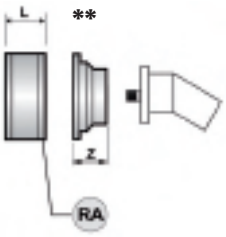
	D	E	F	G
PGA 702	88	164	140	380
PGA 703	75	141.5	93	252
PGA 704	75	141.5	93	252

A	B	*
A	B + 16.5	o



Ref page

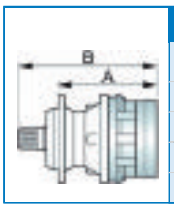
46



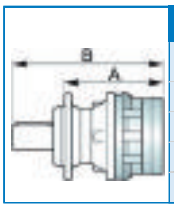
Ref page

47

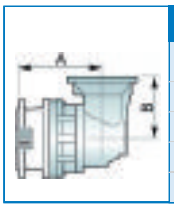
	L
RA	81
RB	125



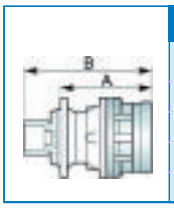
PG PS	A	B	RA	RB	EF	EDF
PG 701	251	382		*		
PG 702	310,5	441,5	*	o	*	
PG 703	358,5	489,5	*			*
PG 704	406,5	537,5	*			*



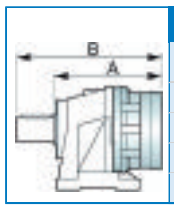
PG PC	A	B	RA	RB	EF	EDF
PG 701	251	422		*		
PG 702	310,5	481,5	*	o	*	
PG 703	358,5	529,5	*			*
PG 704	406,5	577,5	*			*



PG F	A	B	RA	RB	EF	EDF
PG 701	197,5	208		*		
PG 702	257	285	*	o	*	
PG 703	305	315,5	*			*
PG 704	353	363,5	*			*



PG FS	A	B	RA	RB	EF	EDF
PG 701	251	382		*		
PG 702	310,5	441,5	*	o	*	
PG 703	358,5	489,5	*			*
PG 704	406,5	537,5	*			*



PG CPC	A	B	RA	RB	EF	EDF
PG 701	292	422		*		
PG 702	351,5	481,5	*	o	*	
PG 703	399,5	529,5	*			*
PG 704	447,5	577,5	*			*

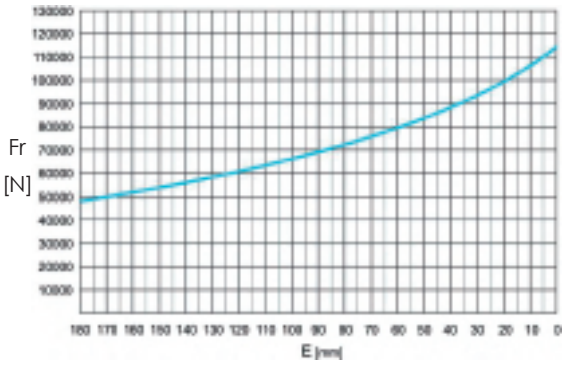
A + 13.5	B + 13.5	o

* Input shafts on request
** Hydraulic flanges on request

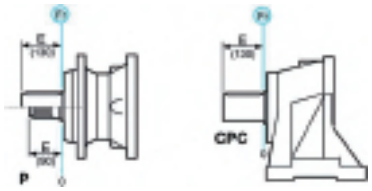
700 Series Radial loads

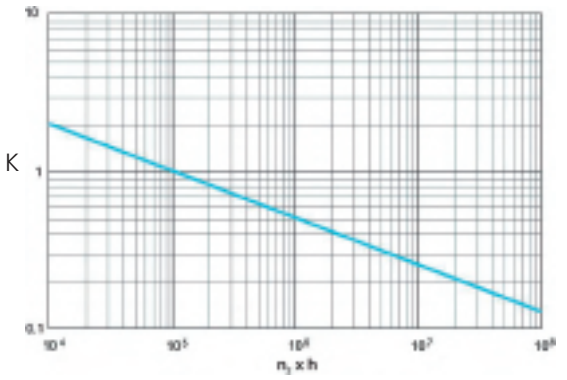
RADIAL LOADS (Fr)

The following curves show the radioal loads and the K factors to obtain the required n $_z$xh value.



	n x h				
	10^5	10^4	10^6	10^7	10^8
M - P	Fr	Fr • K			
*CPC	Fr • 0.75	Fr • K • 0.75			

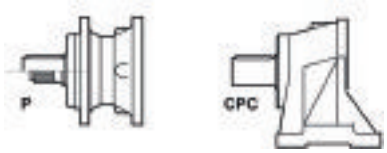




AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

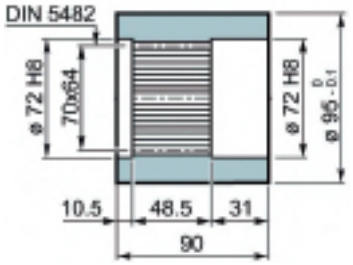
Fa	P	CPC	
	40000	40000	←
[N]	60000	60000	→



OUTPUT SHAFT ACCESSORIES

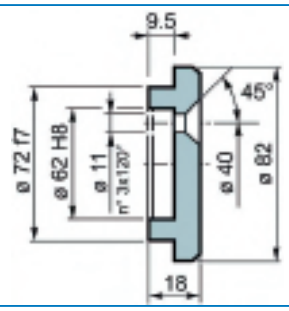
BS
Splined bushing
Material: UNI C40
SAE 1040
DIN Ck40

Code **1715.102.076**



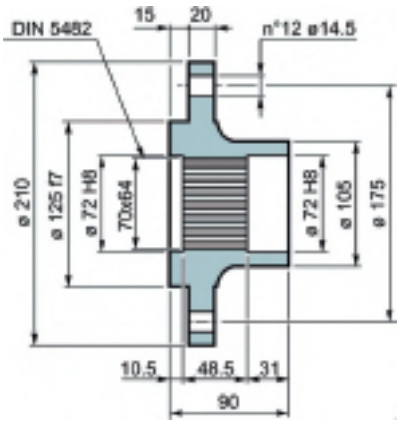
FF
Stop bottom plate

Code **5701.012.000**



FL
Flange

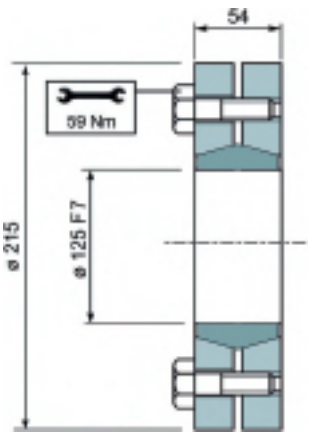
Code **1715.108.098**



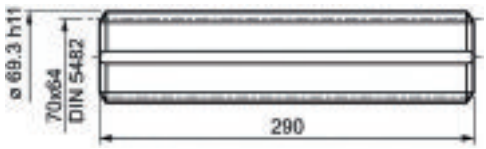
GA
Shrink Disc

Max torque 13 kNm

Code **9015.125.000**



KB
Splined rod
Material:
UNI 39NiCrMo3
Code **1703.405.042**



1000 Series

	i	Mc [kNm] n2 x h 10.000	Mc [kNm] n2 x h 20.000	Mc [kNm] n2 x h 50.000	Mc [kNm] n2 x h 100.000	n1 max [min -1]	Pt [kW]	Kg M	Kg P	Kg CPC	Kg F	Kg FS
PG 1001	3,55	13,8	12,21	10,39	9,2							
	4,28	11,86	10,5	8,94	7,91							
	5,6	9,22	8,16	6,94	6,15	2000	40	97		147	65	102
	6,75	7,04	6,23	5,3	4,69							
	8,66	4,98	4,41	3,75	3,32							
PG 1002	13,4	13,8	12,21	10,39	9,2							
	16,1	11,86	10,5	8,94	7,91							
	18,3	13,8	12,21	10,39	9,2							
	22,1	11,86	10,5	8,94	7,91							
	25,7	11,86	10,5	8,94	7,91	2800	23	113		163	81	118
	28,9	9,22	8,16	6,94	6,15							
	33,6	9,22	8,16	6,94	6,15							
	40,5	7,04	6,23	5,3	4,69							
	48,9	7,04	6,23	5,3	4,69							
PG 1003	57,5	13,8	12,21	10,39	9,2							
	62,8	13,8	12,21	10,39	9,2							
	75,2	13,8	12,21	10,39	9,2							
	82,1	13,8	12,21	10,39	9,2							
	94,8	11,86	10,5	8,94	7,91							
	109,2	11,86	10,5	8,94	7,91							
	118,4	9,22	8,16	6,94	6,15							
	123,9	11,86	10,5	8,94	7,91							
	129,3	9,22	8,16	6,94	6,15							
	143,9	11,86	10,5	8,94	7,91	2800	15	121		171	89	126
	155,9	9,22	8,16	6,94	6,15							
	173,5	11,86	10,5	8,94	7,91							
	188,1	9,22	8,16	6,94	6,15							
	195,2	9,22	8,16	6,94	6,15							
	209,7	7,04	6,23	5,3	4,69							
	226,8	9,22	8,16	6,94	6,15							
	235,4	7,04	6,23	5,3	4,69							
	274	9,22	8,16	6,94	6,15							
	330,3	7,04	6,23	5,3	4,69							
PG 1004	351,9	13,8	12,21	10,39	9,2							
	388,5	13,8	12,21	10,39	9,2							
	421,2	13,8	12,21	10,39	9,2							
	440,8	11,86	10,5	8,94	7,91							
	459,9	13,8	12,21	10,39	9,2							
	507,7	13,8	12,21	10,39	9,2							
	531,4	11,86	10,5	8,94	7,91							
	554,3	13,8	12,21	10,39	9,2							
	576	9,22	8,16	6,94	6,15							
	611,9	11,86	10,5	8,94	7,91	2800	11	127		177	95	132
	640,5	11,86	10,5	8,94	7,91							
	724,4	9,22	8,16	6,94	6,15							
	806,4	9,22	8,16	6,94	6,15							
	907,3	9,22	8,16	6,94	6,15							
	1008,8	11,86	10,5	8,94	7,91							
	1093,6	9,22	8,16	6,94	6,15							
	1270	9,22	8,16	6,94	6,15							
	1530,9	9,22	8,16	6,94	6,15							
	1849,8	9,22	8,16	6,94	6,15							
	2229,7	7,04	6,23	5,3	4,69							
PGA 1002	12,2	13,8	12,21	10,39	9,2							
	14,8	11,86	10,5	8,94	7,91							
	19,3	9,22	8,16	6,94	6,15	2800	23	134		184	102	139
	23,3	7,04	6,23	5,3	4,69							
	30,4	9,22	8,16	6,94	6,15							
	36,7	7,04	6,23	5,3	4,69							
PGA 1003	46,4	13,8	12,21	10,39	9,2							
	50,6	13,8	12,21	10,39	9,2							
	61	11,86	10,5	8,94	7,91							
	73,1	13,8	12,21	10,39	9,2							
	88,8	11,86	10,5	8,94	7,91							
	96,2	11,86	10,5	8,94	7,91							
	116	9,22	8,16	6,94	6,15	2800	15	153		203	121	158
	120,5	11,86	10,5	8,94	7,91							
	125,7	9,22	8,16	6,94	6,15							
	139,9	11,86	10,5	8,94	7,91							
	157,5	9,22	8,16	6,94	6,15							
	182,9	9,22	8,16	6,94	6,15							
	221	9,22	8,16	6,94	6,15							
	266,4	7,04	6,23	5,3	4,69							
PGA 1004	140	13,8	12,21	10,39	9,2							
	168,8	13,8	12,21	10,39	9,2							
	184,3	11,86	10,5	8,94	7,91							
	203,5	11,86	10,5	8,94	7,91							
	230,9	13,8	12,21	10,39	9,2							
	265,9	11,86	10,5	8,94	7,91							
	278,3	11,86	10,5	8,94	7,91							
	301,7	13,8	12,21	10,39	9,2							
	320,5	11,86	10,5	8,94	7,91	2800	11	136		186	104	141
	350	11,86	10,5	8,94	7,91							
	379,4	9,22	8,16	6,94	6,15							
	418,8	9,22	8,16	6,94	6,15							
	457,3	9,22	8,16	6,94	6,15							
	510,3	9,22	8,16	6,94	6,15							
	551,9	9,22	8,16	6,94	6,15							
	665,2	9,22	8,16	6,94	6,15							
	803,8	9,22	8,16	6,94	6,15							
	968,9	7,04	6,23	5,3	4,69							

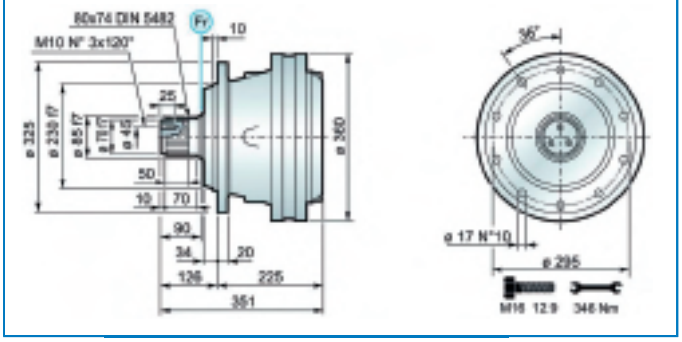
$M_{max} = M_c \times 2$

1000 Series Types and Dimensions

MS

Output shaft accessories

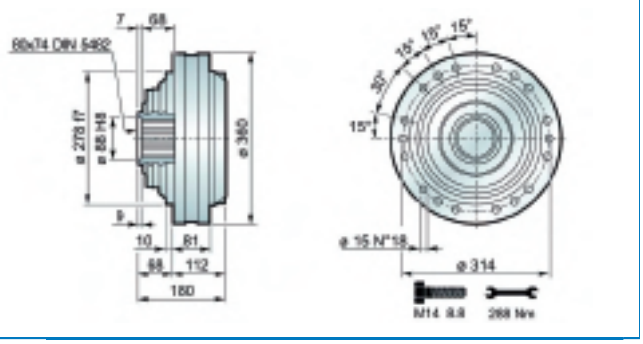
YZ FL BS FF



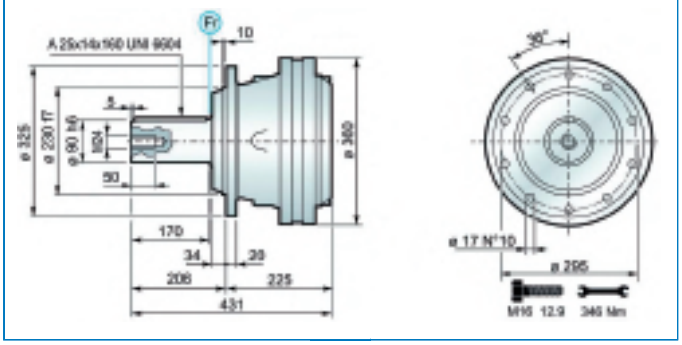
F

Output shaft accessories

KB



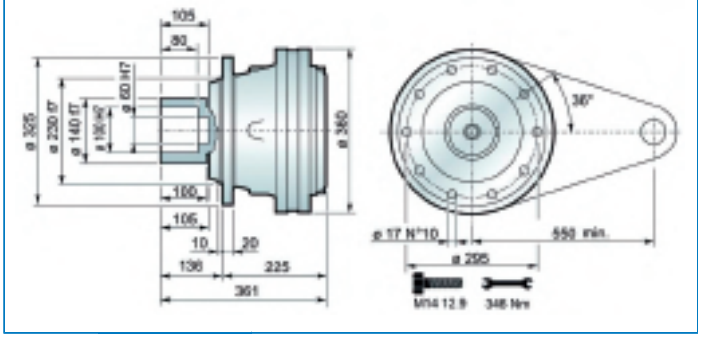
MC

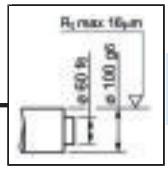


FS

Output shaft accessories

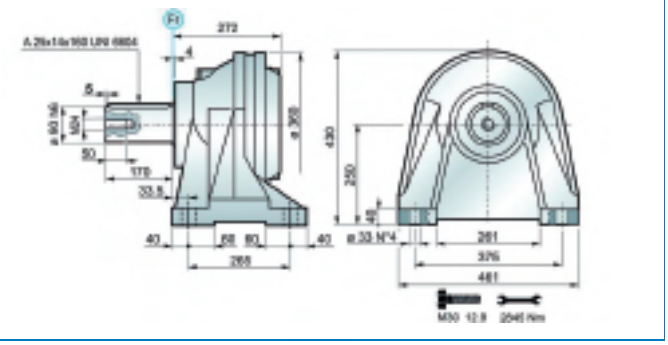
GA



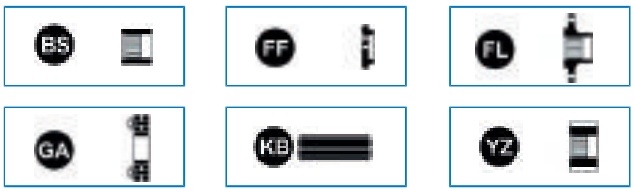


Mmax = 2.2 kNm — The maximum torque indicated is valid only with shrink discs supplied by Lönne (GA type)

CPC

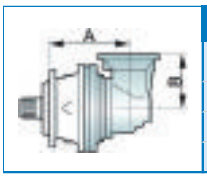


Output shaft accessories

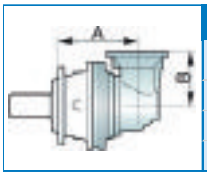


YZ: tailormade by Lönne

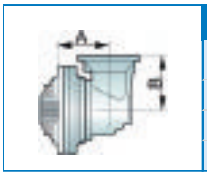
1000 Series Overall Dimensions



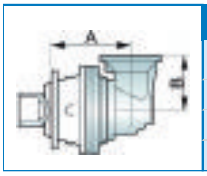
PGA MS	A	B	RA	RB	EF
PGA 1002	313	240	*	o	*
PGA 1003	398	240	*	o	*
PGA 1004	432.5	159	*		*



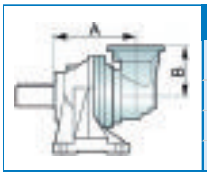
PGA MC	A	B	RA	RB	EF
PGA 1002	313	240	*	o	*
PGA 1003	398	240	*	o	*
PGA 1004	432.5	159	*		*



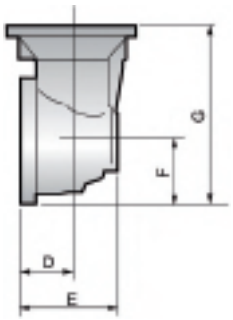
PGA F	A	B	RA	RB	EF
PGA 1002	200	240	*	o	*
PGA 1003	285	240	*	o	*
PGA 1004	319.5	159	*		*

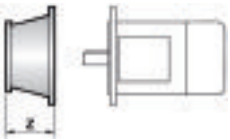


PGA FS	A	B	RA	RB	EF
PGA 1002	313	240	*	o	*
PGA 1003	398	240	*	o	*
PGA 1004	432.5	159	*		*

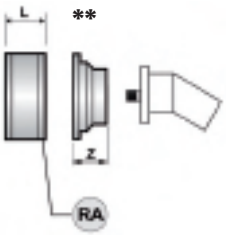


PGA CPC	A	B	RA	RB	EF
PGA 1002	360	240	*	o	*
PGA 1003	445	240	*	o	*
PGA 1004	479.5	159	*		*



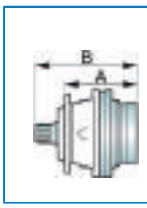


Ref page
46

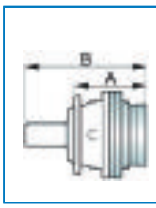


Ref page
47

	L
RA	81
RB	125

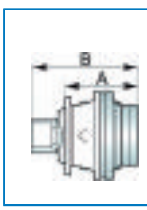


PG MS	A	B	RA	RB	EF	EDF
PG 1001	225	351		*		
PG 1002	296,5	422,5	*	o	*	
PG 1003	357,5	483,5	*			*
PG 1004	405,5	531,5	*			*

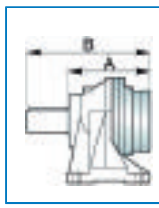


PG MC	A	B	RA	RB	EF	EDF
PG 1001	225	431		*		
PG 1002	296,5	502,5	*	o	*	
PG 1003	357,5	563,5	*			*
PG 1004	405,5	611,5	*			*

PG F	A	B	RA	RB	EF	EDF
PG 1001	112	180		*		
PG 1002	183,5	251,5	*	o	*	
PG 1003	244,5	383,5	*			*
PG 1004	292,5	360,5	*			*



PG FS	A	B	RA	RB	EF	EDF
PG 1001	225	361		*		
PG 1002	296,5	432,5	*	o	*	
PG 1003	357,5	493,5	*			*
PG 1004	405,5	541,5	*			*



PG CPC	A	B	RA	RB	EF	EDF
PG 1001	272	442		*		
PG 1002	343,5	513,5	*	o	*	
PG 1003	404,5	574,5	*			*
PG 1004	452,5	622,5	*			*

	B + 16.5	o

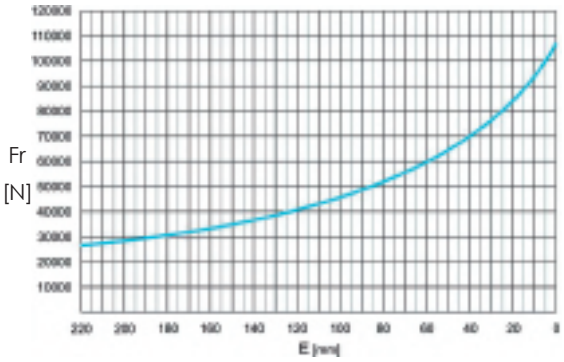
A + 13.5	B + 13.5	o

* Input shafts on request
** Hydraulic flanges on request

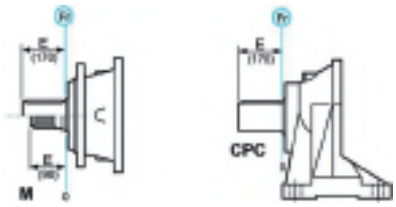
1000 Series Radial loads

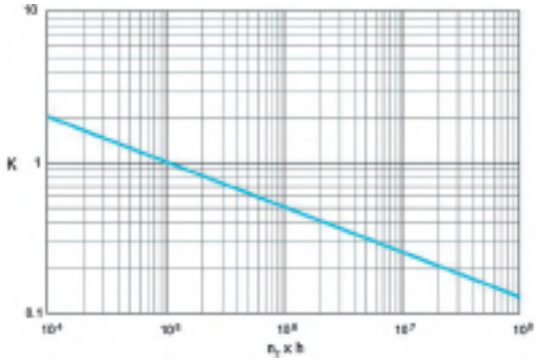
RADIAL LOADS (Fr)

The following curves show the radioal loads and the K factors to obtain the required n $_2$xh value.



	n x h				
	10^5	10^4	10^6	10^7	10^8
M - P	Fr	Fr • K			
*CPC	Fr • 0.75	Fr • K • 0.75			

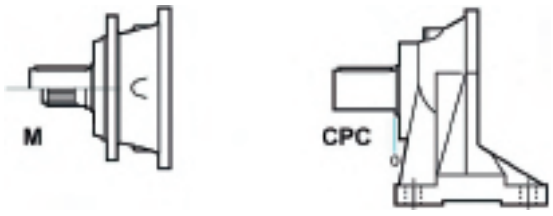




AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

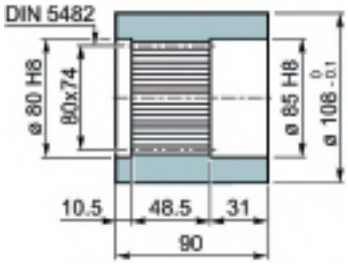
Fa	P	CPC	
	40000	40000	←
[N]	60000	60000	→



OUTPUT SHAFT ACCESSORIES

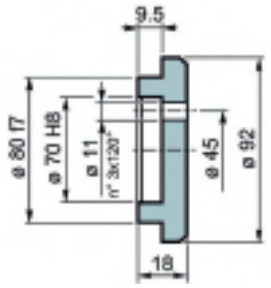
BS
Splined bushing
Material:
SAE 1040
SAE 1040
DIN Ck40

Code **1716.103.076**



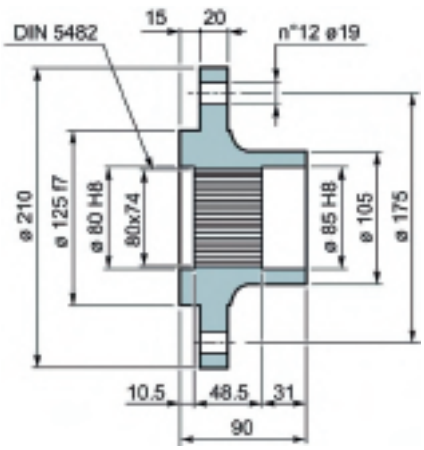
FF
Stop bottom plate

Code **5701.030.000**



FL
Flange

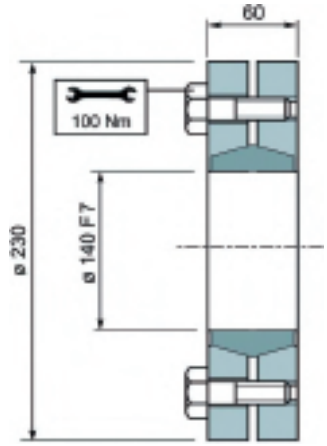
Code **1716.105.098**



GA
Shrink Disc

Max torque 17,6 kNm

Code **9015.140.000**



KB
Splined rod
Material:
UNI 39NiCrMo3
Code **1703.406.042**

1600 Series

	i	Mc [kNm] n2 x h 10.000	Mc [kNm] n2 x h 20.000	Mc [kNm] n2 x h 50.000	Mc [kNm] n2 x h 100.000	n1 max [min -1]	Pt [kW]	Kg M	Kg P	Kg CPC	Kg F	Kg FS
PG 1601	3,55	20,36	18,02	15,33	13,57	2000	40	105	132	155	74	110
	4,28	17,74	15,7	13,36	11,83							
	5,6	13,57	12,01	10,22	9,05							
	6,75	10,32	9,13	7,77	6,88							
PG 1602	13,4	20,36	18,02	15,33	13,57	2800	23	121	148	171	90	126
	16,1	17,74	15,7	13,36	11,83							
	22,1	17,74	15,7	13,36	11,83							
	28,9	13,57	12,01	10,22	9,05							
	33,6	13,57	12,01	10,22	9,05							
	40,5	10,32	9,13	7,77	6,88							
	48,9	10,32	9,13	7,77	6,88							
PG 1603	57,5	20,36	18,02	15,33	13,57	2800	15	129	156	179	98	134
	62,8	20,36	18,02	15,33	13,57							
	75,2	20,36	18,02	15,33	13,57							
	82,1	20,36	18,02	15,33	13,57							
	94,8	17,74	15,7	13,36	11,83							
	109,2	17,74	15,7	13,36	11,83							
	118,4	13,57	12,01	10,22	9,05							
	123,9	17,74	15,7	13,36	11,83							
	129,3	13,57	12,01	10,22	9,05							
	143,9	13,57	12,01	10,22	9,05							
	155,9	13,57	12,01	10,22	9,05							
	188,1	13,57	12,01	10,22	9,05							
	195,2	13,57	12,01	10,22	9,05							
	209,7	10,32	9,13	7,77	6,88							
	226,8	13,57	12,01	10,22	9,05							
	235,4	10,32	9,13	7,77	6,88							
	274	13,57	12,01	10,22	9,05							
	330,3	10,32	9,13	7,77	6,88							
PG 1604	351,9	20,36	18,02	15,33	13,57	2800	11	135	162	185	104	140
	388,5	20,36	18,02	15,33	13,57							
	421,2	20,36	18,02	15,33	13,57							
	440,8	17,74	15,7	13,36	11,83							
	459,9	20,36	18,02	15,33	13,57							
	507,7	20,36	18,02	15,33	13,57							
	531,4	17,74	15,7	13,36	11,83							
	554,3	20,36	18,02	15,33	13,57							
	576	13,57	12,01	10,22	9,05							
	611,9	17,74	15,7	13,36	11,83							
	640,5	17,74	15,7	13,36	11,83							
	724,4	13,57	12,01	10,22	9,05							
	806,4	13,57	12,01	10,22	9,05							
	907,3	13,57	12,01	10,22	9,05							
	1008,8	17,74	15,7	13,36	11,83							
	1093,6	13,57	12,01	10,22	9,05							
	1270	13,57	12,01	10,22	9,05							
	1530,9	13,57	12,01	10,22	9,05							
	1849,8	13,57	12,01	10,22	9,05							
	2229,7	10,32	9,13	7,77	6,88							
PGA 1602	12,2	20,36	18,02	15,33	13,57	2800	23	142	169	192	111	147
	14,8	17,74	15,7	13,36	11,83							
	19,3	13,57	12,01	10,22	9,05							
	23,3	10,32	9,13	7,77	6,88							
	30,4	13,57	12,01	10,22	9,05							
	36,7	10,32	9,13	7,77	6,88							
PGA 1603	46,4	20,36	18,02	15,33	13,57	2800	15	161	188	211	130	166
	50,6	20,36	18,02	15,33	13,57							
	61	17,74	15,7	13,36	11,83							
	76,5	17,74	15,7	13,36	11,83							
	88,8	17,74	15,7	13,36	11,83							
	96,2	17,74	15,7	13,36	11,83							
	116	13,57	12,01	10,22	9,05							
	120,5	17,74	15,7	13,36	11,83							
	125,7	13,57	12,01	10,22	9,05							
	139,9	17,74	15,7	13,36	11,83							
	157,5	13,57	12,01	10,22	9,05							
	182,9	13,57	12,01	10,22	9,05							
	221	13,57	12,01	10,22	9,05							
	226,4	10,32	9,13	7,77	6,88							
PGA 1604	140	20,36	18,02	15,33	13,57	2800	11	144	171	194	113	149
	168,8	20,36	18,02	15,33	13,57							
	184,3	17,74	15,7	13,36	11,83							
	203,5	17,74	15,7	13,36	11,83							
	230,9	17,74	15,7	13,36	11,83							
	240,9	13,57	12,01	10,22	9,05							
	290,4	17,74	15,7	13,36	11,83							
	301,7	13,57	12,01	10,22	9,05							
	320,6	17,74	15,5	13,36	11,83							
	347,5	13,57	12,01	10,22	9,05							
	379,4	13,57	12,01	10,22	9,05							
	418,8	13,57	12,01	10,22	9,05							
	457,3	13,57	12,01	10,22	9,05							
	510,3	13,57	12,01	10,22	9,05							
	551,9	13,57	12,01	10,22	9,05							
	665,2	13,57	12,01	10,22	9,05							
	803,8	13,57	12,01	10,22	9,05							
	968,9	10,32	9,13	7,77	6,88							

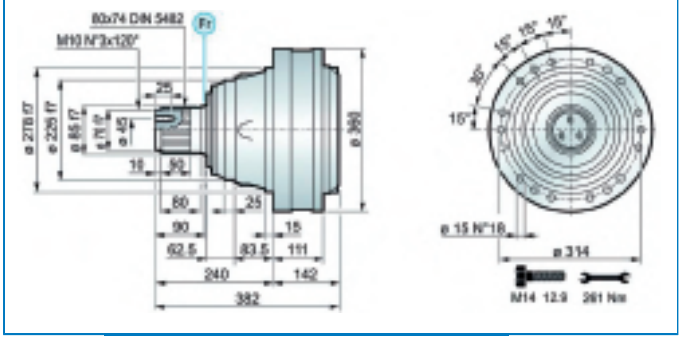
$M_{max} = M_c \times 2$

1600 Series Types and dimensions

MS

Output shaft accessories

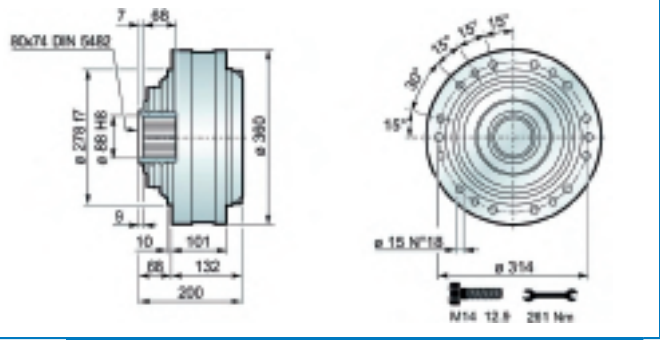
YZ FL BS FF



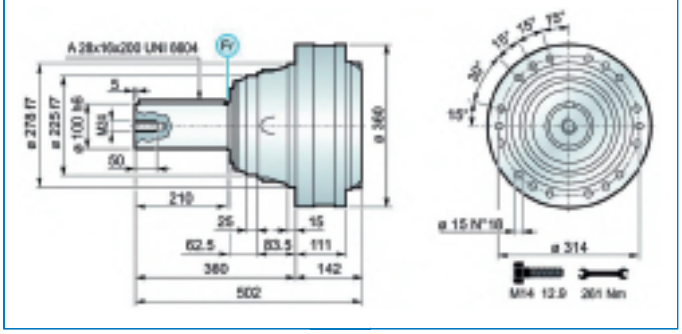
F

Output shaft accessories

KB



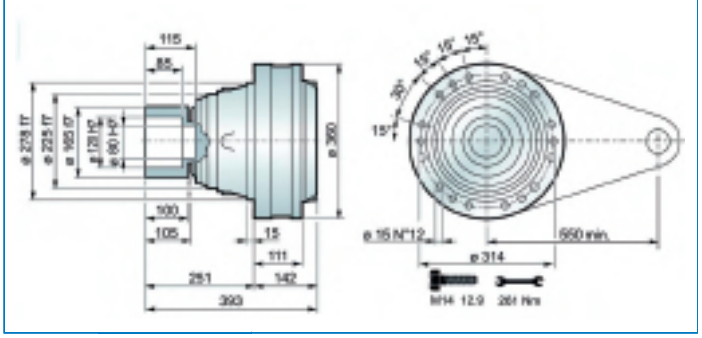
MC

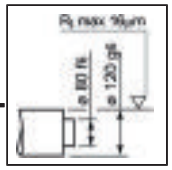


FS

Output shaft accessories

GA





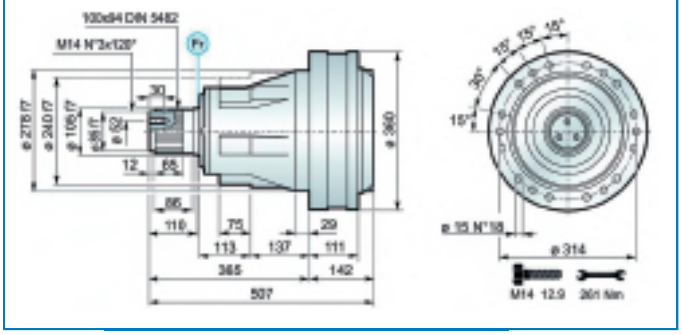
Mmax = 2.2 kNm

The maximum torque indicated is valid only with shrink discs supplied by Lönne (GA type)

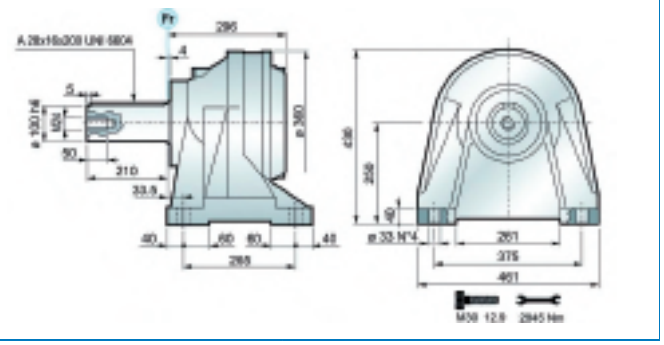
PS

Output shaft accessories

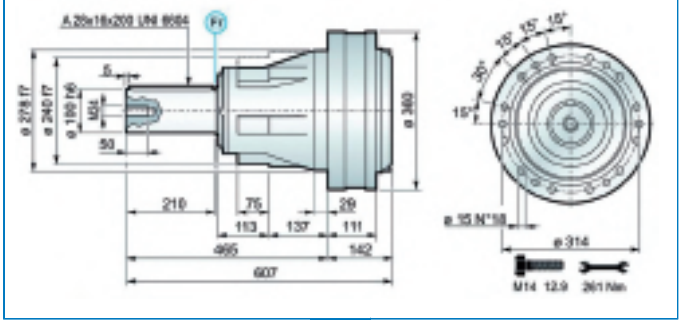
YZ FL BS FF



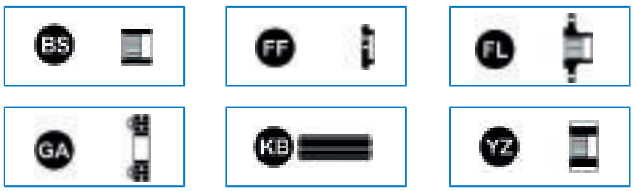
CPC



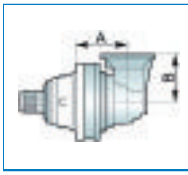
PC



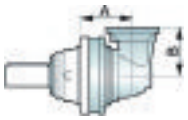
Output shaft accessories



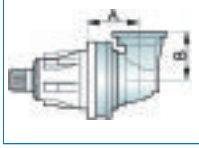
1600 Series Overall dimensions



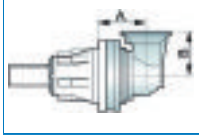
PGA MS	A	B	RA	RB	EF
PGA 1602	230	240	*	o	*
PGA 1603	315	240	*	o	*
PGA 1604	349.5	159	*		*



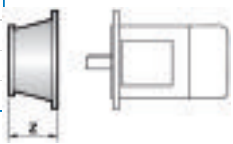
PGA MC	A	B	RA	RB	EF
PGA 1602	230	240	*	o	*
PGA 1603	315	240	*	o	*
PGA 1604	349.5	159	*		*



PGA PS	A	B	RA	RB	EF
PGA 1602	230	240	*	o	*
PGA 1603	315	240	*	o	*
PGA 1604	349.5	159	*		*

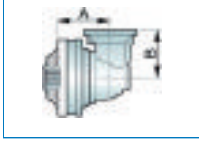


PGA PC	A	B	RA	RB	EF
PGA 1602	230	240	*	o	*
PGA 1603	315	240	*	o	*
PGA 1604	349.5	159	*		*



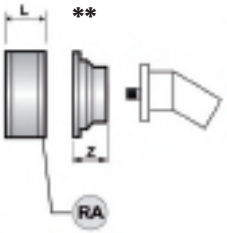
Ref page

46



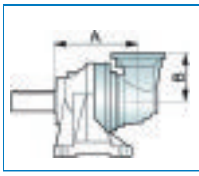
PGA F	A	B	RA	RB	EF
PGA 1602	220	240	*	o	*
PGA 1603	305	240	*	o	*
PGA 1604	339.5	159	*		*

PGA FS	A	B	RA	RB	EF
PGA 1602	220	240	*	o	*
PGA 1603	305	240	*	o	*
PGA 1604	339.5	159	*		*



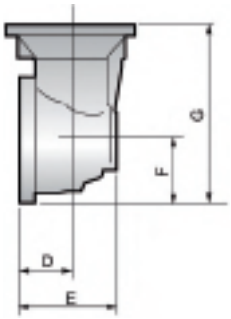
Ref page

47



PGA CPC	A	B	RA	RB	EF
PGA 1602	384	240	*	o	*
PGA 1603	469	240	*	o	*
PGA 1604	503.5	159	*		*

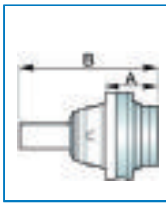
	L
RA	81
RB	125



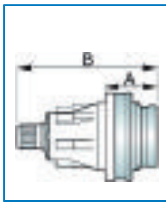
	D	E	F	G
PGA 1602	88	164	140	380
PGA 1603	88	164	140	380
PGA 1604	75	141.5	93	252

	B + 16.5	o

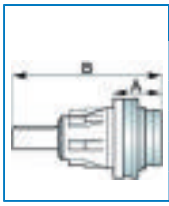
PG MS	A	B	RA	RB	EF	EDF
PG 1601	142	382		*		
PG 1602	213,5	453,5	*	o	*	
PG 1603	274,5	514,5	*			*
PG 1604	322,5	562,5	*			*



PG MC	A	B	RA	RB	EF	EDF
PG 1601	142	502		*		
PG 1602	213,5	573,5	*	o	*	
PG 1603	274,5	634,5	*			*
PG 1604	322,5	682,5	*			*

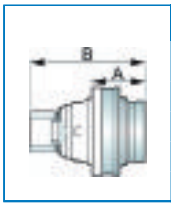


PG PS	A	B	RA	RB	EF	EDF
PG 1601	142	507		*		
PG 1602	213,5	578,5	*	o	*	
PG 1603	274,5	639,5	*			*
PG 1604	322,5	687,5	*			*

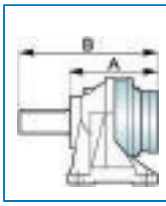


PG PC	A	B	RA	RB	EF	EDF
PG 1601	142	607		*		
PG 1602	213,5	678,5	*	o	*	
PG 1603	274,5	739,5	*			*
PG 1604	322,5	787,5	*			*

PG F	A	B	RA	RB	EF	EDF
PG 1601	132	200		*		
PG 1602	203,5	271,5	*	o	*	
PG 1603	264,5	332,5	*			*
PG 1604	312,5	380,5	*			*



PG FS	A	B	RA	RB	EF	EDF
PG 1601	142	393		*		
PG 1602	213,5	464,5	*	o	*	
PG 1603	274,5	525,5	*			*
PG 1604	322,5	573,5	*			*



PG CPC	A	B	RA	RB	EF	EDF
PG 1601	296	506		*		
PG 1602	317,5	577,5	*	o	*	
PG 1603	428,5	638,5	*			*
PG 1604	476,5	686,5	*			*

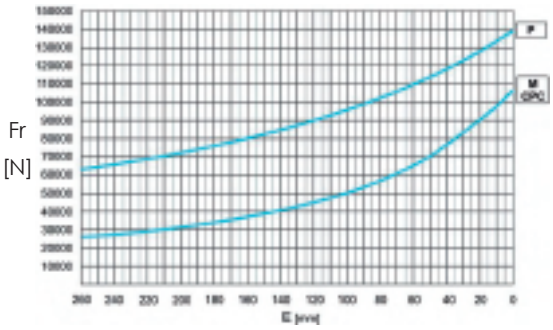
A + 13.5	B + 13.5	o

* Input shafts on request
** Hydraulic flanges on request

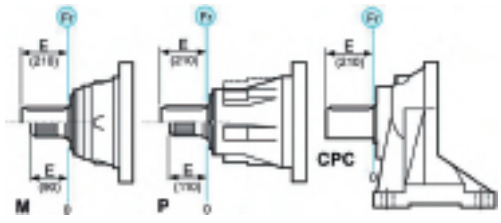
1600 Series Radial and Axial

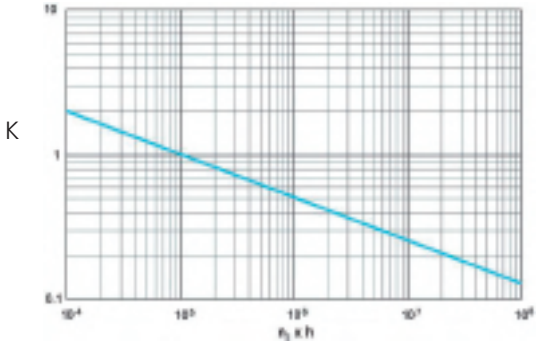
RADIAL LOADS (Fr)

The following curves show the radioal loads and the K factors to obtain the required n $_2$xh value.



	n x h				
	10^5	10^4	10^6	10^7	10^8
M - P	Fr	Fr • K			
*CPC	Fr • 0.75	Fr • K • 0.75			

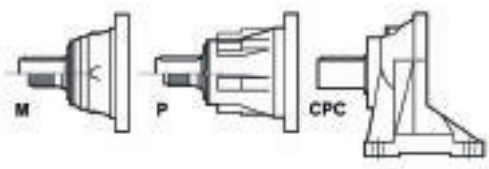




AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

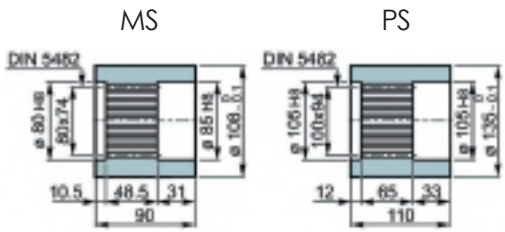
Fa	P	CPC	
	45000	85000	←
[N]	65000	85000	→



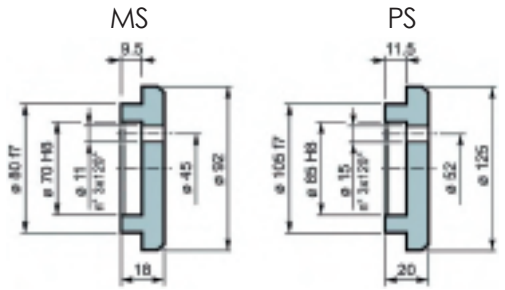
OUTPUT SHAFT ACCESSORIES

BS
Splined bushing
Material:
UNI C40
SAE 1040
DIN Ck40

MS
Code **1716.103.076**
PS
Code **1718.112.041**



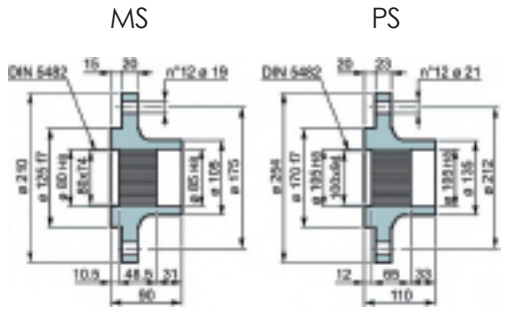
FF
Stop bottom plate



Code **5701.030.000**
Code **5701.042.000**

FL
Flange

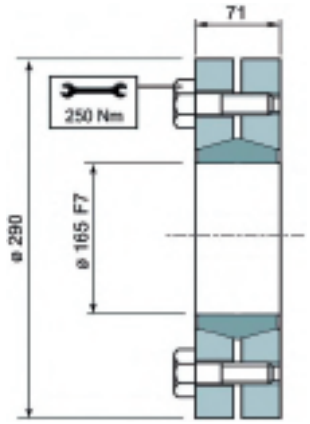
MS
Code **1716.105.098**
PS
Code **1718.104.098**



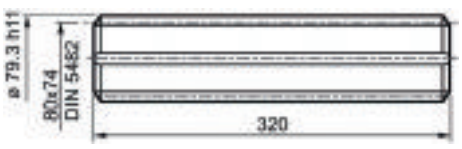
GA
Shrink Disc

Max torque 35 kNm

Code **9015.165.000**



KB
Splined rod
Material:
UNI 39NiCrMo3
Code **1703.406.042**



1800 Series

	i	Mc [kNm]				n1 max	Pt	Kg				
		n2 x h 10.000	n2 x h 20.000	n2 x h 50.000	n2 x h 100.000	[min -1]	[kW]	M	P	CPC	F	FS
PG 1802	13	20,36	18,02	15,33	13,57							
	15,7	20,36	18,02	15,33	13,57							
	19	17,74	15,7	13,36	11,83	2800	25	130	157	180	99	135
	21,4	17,74	15,7	13,36	11,83							
	24,9	17,74	15,7	13,36	11,83							
	30	17,74	15,7	13,36	11,83							
PG 1803	53,8	20,36	18,02	15,33	13,57							
	65	20,36	18,02	15,33	13,57							
	73,3	20,36	18,02	15,33	13,57							
	81,3	20,36	18,02	15,33	13,57							
	94,5	20,36	18,02	15,33	13,57	2800	17	142	169	192	111	147
	106,6	20,36	18,02	15,33	13,57							
	128,4	17,74	15,7	13,36	11,83							
	149,1	17,74	15,7	13,36	11,83							
	180,2	17,74	15,7	13,36	11,83							
PG 1804	348,6	20,36	18,02	15,33	13,57							
	377,2	20,36	18,02	15,33	13,57							
	438,4	20,36	18,02	15,33	13,57							
	489,2	20,36	18,02	15,33	13,57							
	549,1	20,36	18,02	15,33	13,57							
	620	20,36	18,02	15,33	13,57							
	677,9	20,36	18,02	15,33	13,57							
	720	20,36	18,02	15,33	13,57	2800	13	149	176	199	118	154
	770,5	20,36	18,02	15,33	13,57							
	818,8	20,36	18,02	15,33	13,57							
	849,8	17,74	15,7	13,36	11,83							
	928,8	17,74	15,7	13,36	11,83							
	987,4	17,74	15,7	13,36	11,83							
	1113	17,74	15,7	13,36	11,83							
	1216,4	17,74	15,7	13,36	11,83							
PGA 1802	10,9	20,36	18,02	15,33	13,57							
	13,2	17,74	15,7	13,36	11,83	2000	25	197	224	247	166	202
	16,6	20,36	18,02	15,33	13,57							
	20	17,74	15,7	13,36	11,83							
PGA 1803	54,4	20,36	18,02	15,33	13,57							
	71,2	20,36	18,02	15,33	13,57							
	85,7	20,36	18,02	15,33	13,57							
	103,3	17,74	15,7	13,36	11,83	2800	17	167	194	217	136	172
	116,7	17,74	15,7	13,36	11,83							
	135,5	20,36	18,02	15,33	13,57							
	163,3	17,74	15,7	13,36	11,83							
PGA 1804	185,8	20,36	18,02	15,33	13,57							
	224,4	20,36	18,02	15,33	13,57							
	281	20,36	18,02	15,33	13,57							
	323,8	20,36	18,02	15,33	13,57							
	353,6	20,36	18,02	15,33	13,57							
	394,3	20,36	18,02	15,33	13,57							
	442,9	20,36	18,02	15,33	13,57							
	500	20,36	18,02	15,33	13,57	2800	13	169	196	219	138	174
	558,2	17,74	15,7	13,36	11,83							
	580,7	20,36	18,02	15,33	13,57							
	622,5	17,74	15,7	13,36	11,83							
	699,2	17,74	15,7	13,36	11,83							
	749,1	17,74	15,7	13,36	11,83							
	812	17,74	15,7	13,36	11,83							
	981,1	17,74	15,7	13,36	11,83							

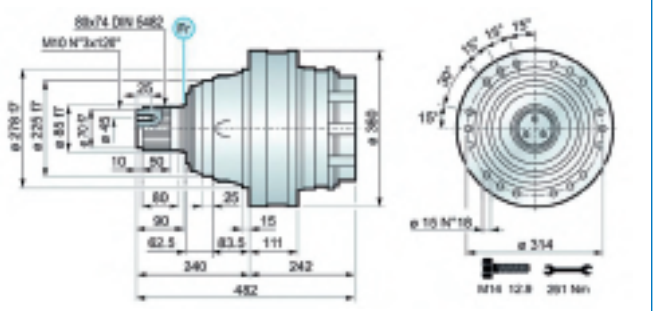
$M_{max} = M_c \times 2$

1800 Series Types and Dimensions

MS

Output shaft accessories

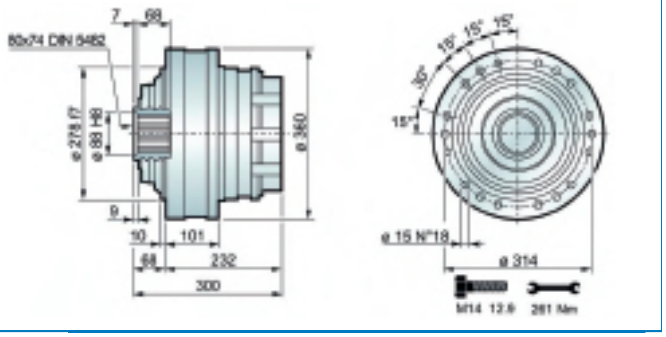
YZ FL BS FF



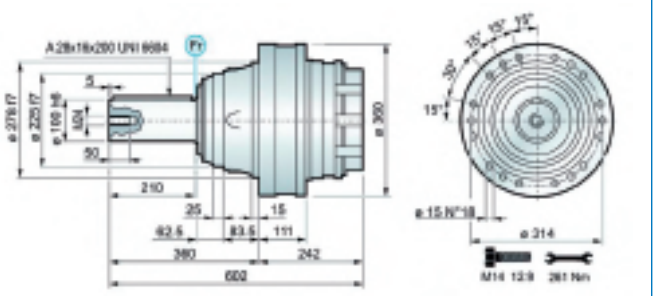
F

Output shaft accessories

KB



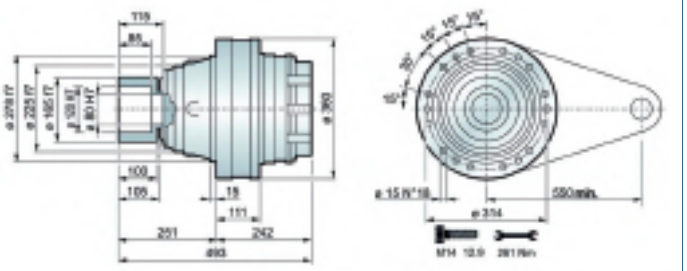
MC

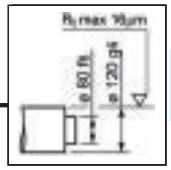


FS

Output shaft accessories

GA





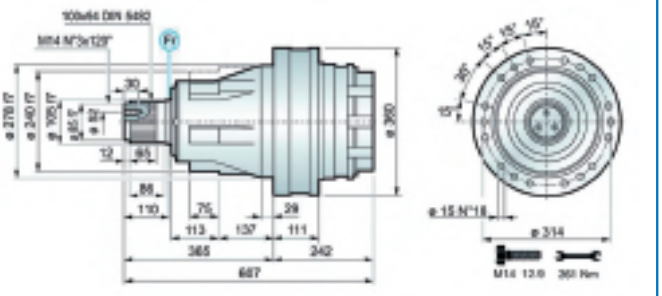
Mmax = 2.2 kNm

The maximum torque indicated is valid only with shrink discs supplied by Lönne (GA type)

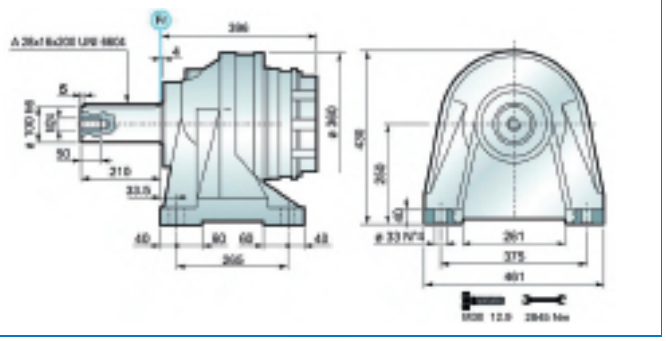
PS

Output shaft accessories

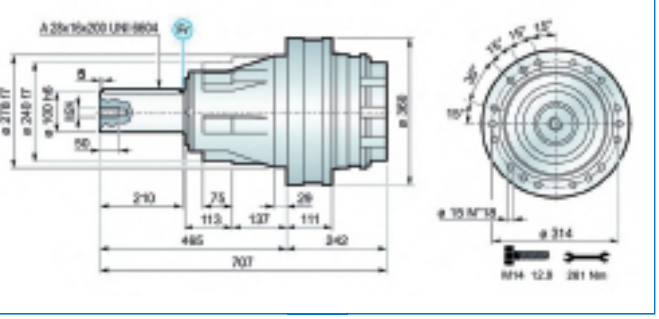
YZ FL BS FF



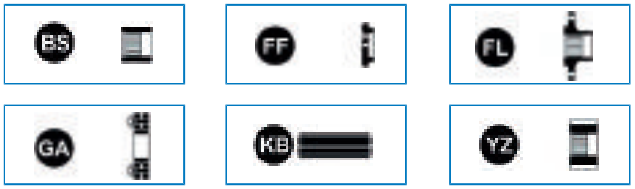
CPC



PC



Output shaft accessories

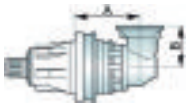


YZ: tailormade by Lönne

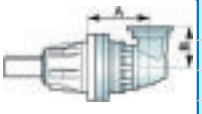
1800 Series Overall Dimensions

PGA MS	A	B	RA	RB	EF
PGA 1802	277	315		*	
PGA 1803	334	240	*	o	*
PGA 1804	407	240	*		*

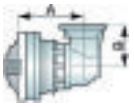
PGA MC	A	B	RA	RB	EF
PGA 1802	277	315		*	
PGA 1803	334	240	*	o	*
PGA 1804	407	240	*		*



PGA PS	A	B	RA	RB	EF
PGA 1802	277	315		*	
PGA 1803	334	240	*	o	*
PGA 1804	407	240	*		*



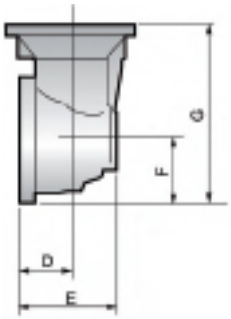
PGA PC	A	B	RA	RB	EF
PGA 1802	277	315		*	
PGA 1803	334	240	*	o	*
PGA 1804	407	240	*		*



PGA F	A	B	RA	RB	EF
PGA 1802	267	315		*	
PGA 1803	324	240	*	o	*
PGA 1804	397	240	*		*

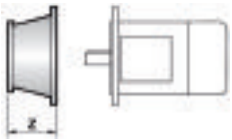
PGA FS	A	B	RA	RB	EF
PGA 1802	277	315		*	
PGA 1803	334	240	*	o	*
PGA 1804	407	240	*		*

PGA CPC	A	B	RA	RB	EF
PGA 1802	431	315		*	
PGA 1803	484	240	*	o	*
PGA 1804	543,5	240	*		*



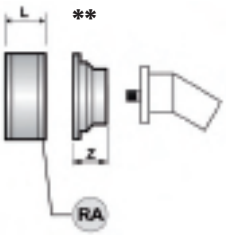
	D	E	F	G
PGA 1802	88	256	235	550
PGA 1803	88	164	140	380
PGA 1804	88	164	140	380

	B + 16.5	o



Ref page

46

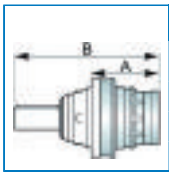


Ref page

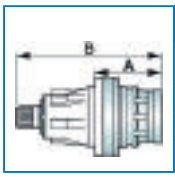
47

	L
RA	81
RB	125

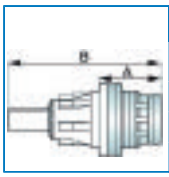
PGA MS	A	B	RA	RB	EF	EDF
PG 1802	242	482		*		
PG 1803	301,5	541,5	*	o	*	
PG 1804	345,5	585,5	*			*



PGA MC	A	B	RA	RB	EF	EDF
PG 1802	242	602		*		
PG 1803	301,5	661,5	*	o	*	
PG 1804	345,5	705,5	*			*



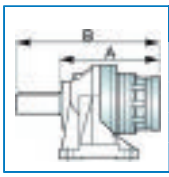
PG PS	A	B	RA	RB	EF	EDF
PG 1802	242	607		*		
PG 1803	301,5	666,5	*	o	*	
PG 1804	345,5	710,5	*			*



PG PC	A	B	RA	RB	EF	EDF
PG 1802	242	707		*		
PG 1803	301,5	766,5	*	o	*	
PG 1804	345,5	810,5	*			*

PG F	A	B	RA	RB	EF	EDF
PG 1802	232	300		*		
PG 1803	291,5	359,5	*	o	*	
PG 1804	335,5	403,5	*			*

PG FS	A	B	RA	RB	EF	EDF
PG 1802	242	493		*		
PG 1803	301,5	552,5	*	o	*	
PG 1804	345,5	596,5	*			*



PG CPC	A	B	RA	RB	EF	EDF
PG 1802	396	606		*		
PG 1803	455,5	665,5	*	o	*	
PG 1804	503,5	713,5	*			*

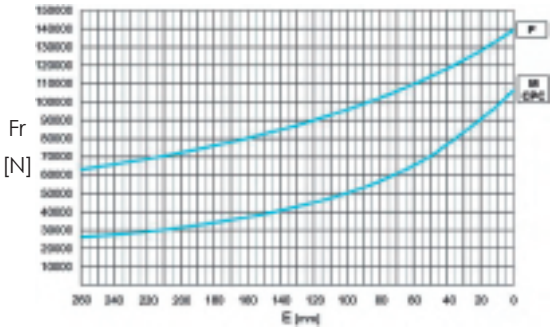
A + 13.5	B + 13.5	o

* Input shafts on request
** Hydraulic flanges on request

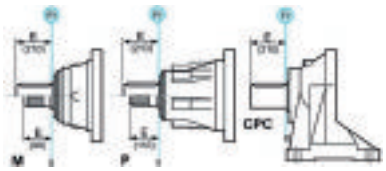
1800 Series Radial Loads

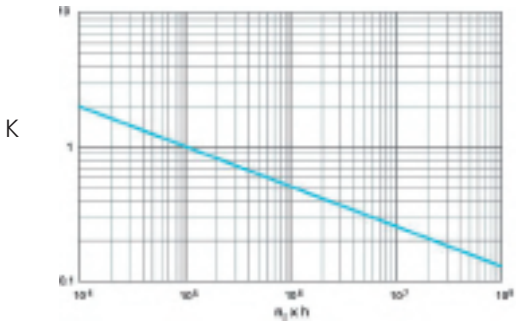
RADIAL LOADS (Fr)

The following curves show the radioal loads and the K factors to obtain the required $n_2 x h$ value.



	n x h				
	10^5	10^6	10^6	10^7	10^8
M - P	Ff	Ff • K			
*CPC	Ff • 0.75	Ff • K • 0.75			

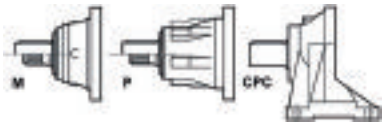




AXIAL LOADS (Fa)

The values of the axial loads in the table refer to the output versions and load direction of application.

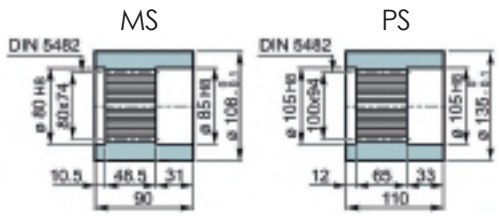
Fa	P	CPC	
	45000	85000	←
[N]	65000	85000	→



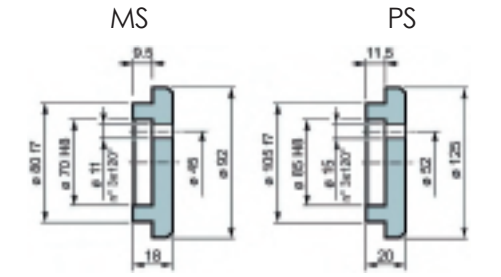
OUTPUT SHAFT ACCESSORIES

BS
Splined bushing
Material:
UNI C40
SAE 1040
DIN Ck40

MS
Code **1716.103.076**
PS
Code **1718.112.041**



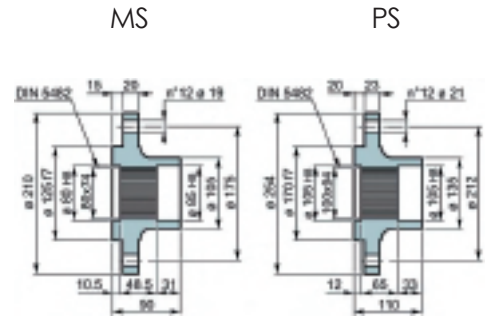
FF
Stop bottom plate



Code **5701.030.000**
Code **5701.042.000**

FL
Flange

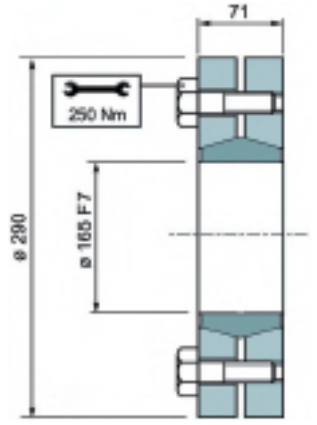
MS
Code **1716.105.098**
PS
Code **1718.104.098**



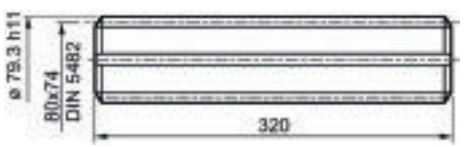
GA
Shrink Disc

Max torque 35 kNm

Code **9015.165.000**



KB
Splined rod
Material:
UNI 39NiCrMo3
Code **1703.406.042**



2500 Series

	i	Mc [kNm] n2 x h 10.000	Mc [kNm] n2 x h 20.000	Mc [kNm] n2 x h 50.000	Mc [kNm] n2 x h 100.000	n1 max [min -1]	Pt [kW]	Kg M	Kg P	Kg CPC	Kg F	Kg FS
PG 2501	4	34,75	30,76	26,18	23,17							
	5,2	26,87	23,78	20,24	17,91	1500	50	183		244	147	155
	6,25	20,73	18,35	15,62	13,82							
PG 2502	14,6	34,75	30,76	26,18	23,17							
	17,7	34,75	30,76	26,18	23,17							
	20	34,75	30,76	26,18	23,17							
	23	26,87	23,78	20,24	17,91	2800	30	210		271	174	182
	26	26,87	23,78	20,24	17,91							
	30,1	26,87	23,78	20,24	17,91							
	36,2	20,73	18,35	15,62	13,82							
	43,7	20,73	18,35	15,62	13,82							
PG 2503	55,4	34,75	30,76	26,18	23,17							
	60,5	34,75	30,76	26,18	23,17							
	73	34,75	30,76	26,18	23,17							
	88	34,75	30,76	26,18	23,17							
	95	26,87	23,78	20,24	17,91							
	106,3	34,75	30,76	26,18	23,17							
	114,4	26,87	23,78	20,24	17,91							
	128,4	34,75	30,76	26,18	23,17	2800	20	222		283	186	194
	134,3	26,87	23,78	20,24	17,91							
	156	26,87	23,78	20,24	17,91							
	167	26,87	23,78	20,24	17,91							
	188,5	26,87	23,78	20,24	17,91							
	218,6	26,87	23,78	20,24	17,91							
	226,5	20,73	18,35	15,62	13,82							
	262,8	20,73	18,35	15,62	13,82							
	317,1	20,73	18,35	15,62	13,82							
PG 2504	338,7	34,75	30,76	26,18	23,17							
	373,9	34,75	30,76	26,18	23,17							
	408,3	34,75	30,76	26,18	23,17							
	424,3	34,75	30,76	26,18	23,17							
	455,5	34,75	30,76	26,18	23,17							
	493,2	34,75	30,76	26,18	23,17							
	556,8	34,75	30,76	26,18	23,17							
	617,7	34,75	30,76	26,18	23,17							
	697,4	34,75	30,76	26,18	23,17							
	752,2	26,84	23,76	20,22	17,9	2800	15	228		289	192	200
	803	26,84	23,76	20,22	17,9							
	873,6	26,84	23,76	20,22	17,9							
	934,9	26,84	23,76	20,22	17,9							
	1013,3	26,84	23,76	20,22	17,9							
	1126,9	26,84	23,76	20,22	17,9							
	1272,3	26,84	23,76	20,22	17,9							
	1354,4	20,73	18,35	15,62	13,82							
	1475,9	26,84	23,76	20,22	17,9							
	1529,3	20,73	18,35	15,62	13,82							
	1773,9	20,73	18,35	15,62	13,82							
PGA 2502	12,2	34,75	30,76	26,18	23,17							
	15,9	26,87	23,78	20,24	17,91							
	19,1	20,73	18,35	15,62	13,82	2000	30	279		340	242	250
	24,2	26,87	23,78	20,24	17,91							
	29,1	20,73	18,35	15,62	13,82							
PGA 2503	50,6	34,75	30,76	26,18	23,17							
	61,2	34,75	30,76	26,18	23,17							
	69	34,75	30,76	26,18	23,17							
	79,5	26,87	23,78	20,24	17,91							
	89,8	26,87	23,78	20,24	17,91							
	96,4	34,75	30,76	26,18	23,17	2800	20	247		308	211	219
	104,1	26,87	23,78	20,24	17,91							
	125,3	26,87	23,78	20,24	17,91							
	141,5	26,87	23,78	20,24	17,91							
	164,2	26,87	23,78	20,24	17,91							
	197,3	20,73	18,35	15,62	13,82							
	238,1	20,73	18,35	15,62	13,82							
PGA 2504	252,4	34,75	30,76	26,18	23,17							
	284,9	34,75	30,76	26,18	23,17							
	303,9	34,75	30,76	26,18	23,17							
	364,3	34,75	30,76	26,18	23,17							
	397,8	34,75	30,76	26,18	23,17							
	449,1	34,75	30,76	26,18	23,17							
	498,2	34,75	30,76	26,18	23,17							
	562,5	34,75	30,76	26,18	23,17	2800	15	262		323	226	234
	651,1	26,87	23,78	20,24	17,91							
	731,3	26,87	23,78	20,24	17,91							
	789,4	34,75	30,76	26,18	23,17							
	985,2	26,87	23,78	20,24	17,91							
	1190,4	26,87	23,78	20,24	17,91							
	1430,8	20,73	18,35	15,62	13,82							
	1726,8	20,73	18,35	15,62	13,82							

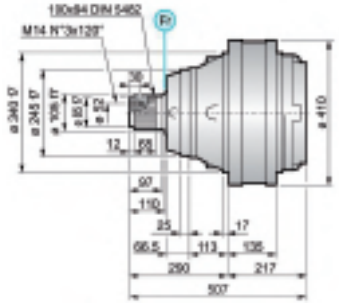
$M_{max} = M_c \times 2$

2500 Series Types and Dimensions

MS

Output shaft accessories

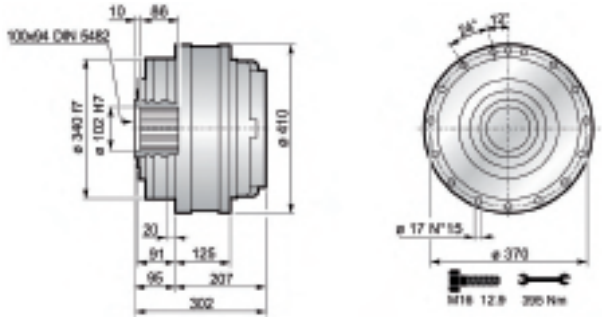
YZ FL BS FF



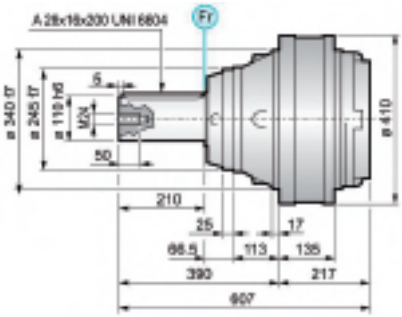
F

Output shaft accessories

KB



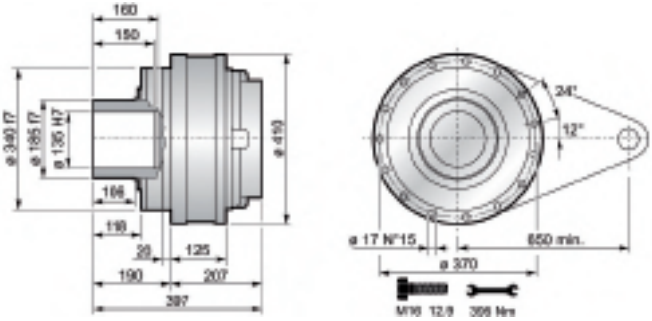
MC

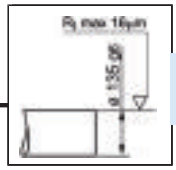


FS

Output shaft accessories

GA

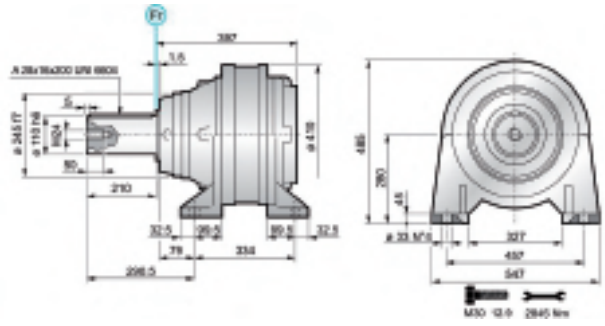




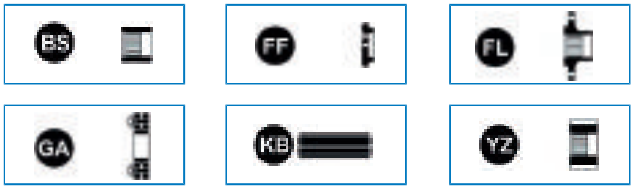
Mmax = 2.2 kNm

The maximum torque indicated is valid only with shrink discs supplied by Lönne (GA type)

CPC

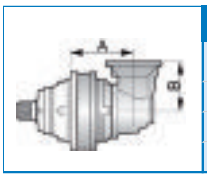


Output shaft accessories

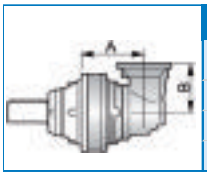


YZ: tailormade by Lönne

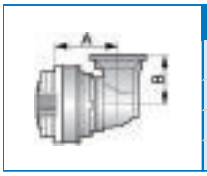
2500 Series Overall Dimensions



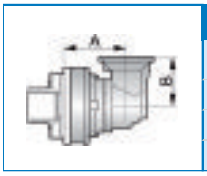
PGA MS	A	B	RA	RB	EF
PGA 2502	297	315		*	
PGA 2503	399	240	*	o	
PGA 2504	472	240	*		*



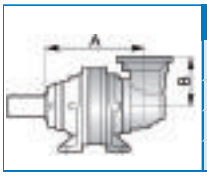
PGA MC	A	B	RA	RB	EF
PGA 2502	297	315		*	
PGA 2503	399	240	*	o	
PGA 2504	472	240	*		*



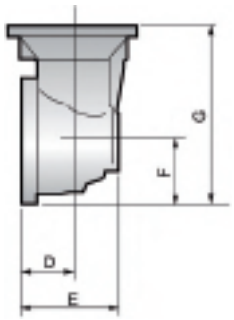
PGA F	A	B	RA	RB	EF
PGA 2502	287	315		*	
PGA 2503	389	240	*	o	
PGA 2504	462	240	*		*



PGA FS	A	B	RA	RB	EF
PGA 2502	287	315		*	
PGA 2503	389	240	*	o	
PGA 2504	462	240	*		*

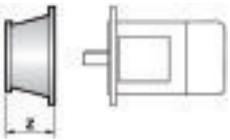


PGA CPC	A	B	RA	RB	EF
PGA 2502	477	315		*	
PGA 2503	579	240	*	o	
PGA 2504	638.5	240	*		*



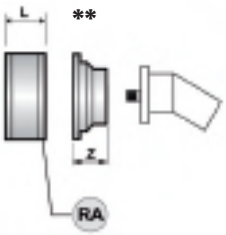
	D	E	F	G
PGA 2502	88	256	235	550
PGA 2503	88	164	140	380
PGA 2504	88	164	140	380

	B + 16.5	o



Ref page

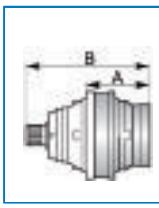
46



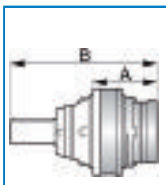
Ref page

47

	L
RA	81
RB	125

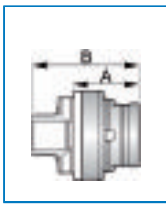


PG MS	A	B	RA	RB	EF	EDF
PG 2501	217	507				
PG 2502	311	601		*		
PG 2503	370,5	660,5	*	o	*	
PG 2504	418,5	708,5	*			*

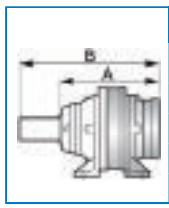


PG MC	A	B	RA	RB	EF	EDF
PG 2501	217	607				
PG 2502	311	701		*		
PG 2503	370,5	760,5	*	o	*	
PG 2504	418,5	808,5	*			*

PG F	A	B	RA	RB	EF	EDF
PG 2501	207	302				
PG 2502	301	396		*		
PG 2503	360,5	455,5	*	o	*	
PG 2504	408,5	503,5	*			*



PG FS	A	B	RA	RB	EF	EDF
PG 2501	207	397				
PG 2502	301	491		*		
PG 2503	360,5	550,5	*	o	*	
PG 2504	408,5	598,5	*			*



PG CPC	A	B	RA	RB	EF	EDF
PG 2501	397	607				
PG 2502	491	701		*		
PG 2503	550,5	760,5	*	o	*	
PG 2504	598,5	808,5	*			*

	A + 13.5	B + 13.5	o

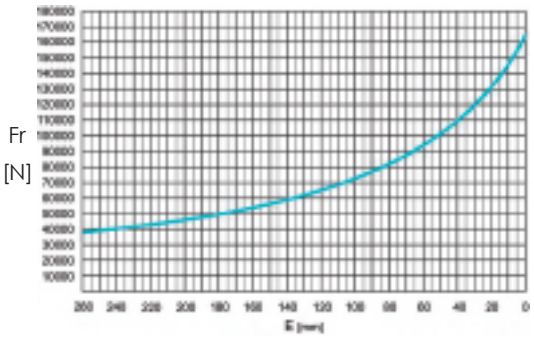
* Input shafts on request
** Hydraulic flanges on request

2500 Series Radial and Axial loads

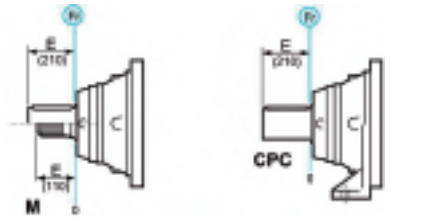
RADIAL LOADS (Fr)

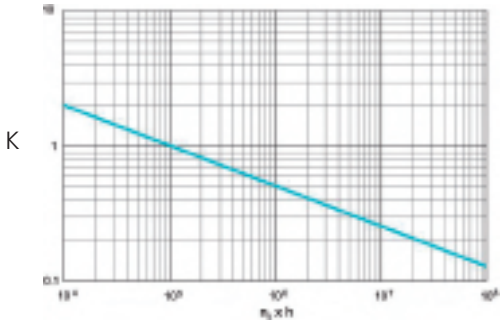
The following curves show the radioal loads and the K factors to obtain the required n $_2$xh value.

M- CPC



	n x h				
	10^5	10^4	10^6	10^7	10^8
M - P	Fr	Fr • K			
*CPC	Fr • 0.75	Fr • K • 0.75			





AXIAL LOADS (Fa)

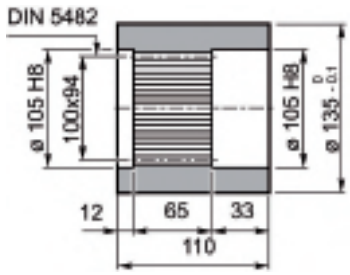
The values of the axial loads in the table refer to the output versions and load direction of application.

Fa	M	CPC	
	75000	75000	←
[N]	95000	95000	→

OUTPUT SHAFT ACCESSORIES

BS
Splined bushing
Material:
UNI C $0
SAE 1040
DIN Ck40

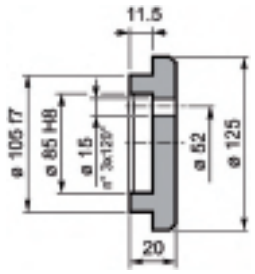
Code **1718.112.041**



FF

Stop bottom plate

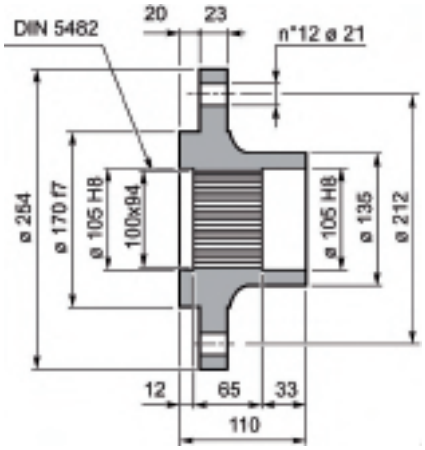
Code **5701.042.000**



FL

Flange

Code **1718.104.098**

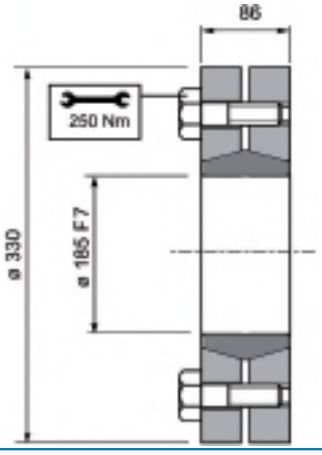


GA

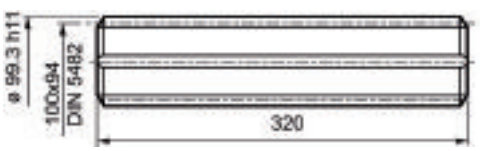
Shrink Disc

Max torque 52 kNm

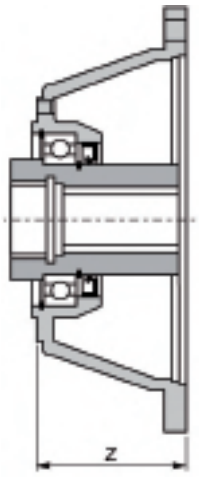
Code **9015.185.000**



KB
Splined rod
Material:
UNI 39NiCrMo3
Code **1703.407.042**



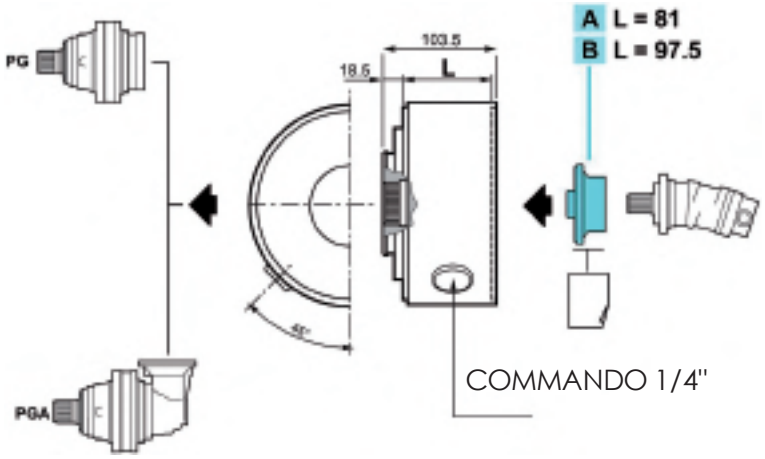
Electric Motor Coupling



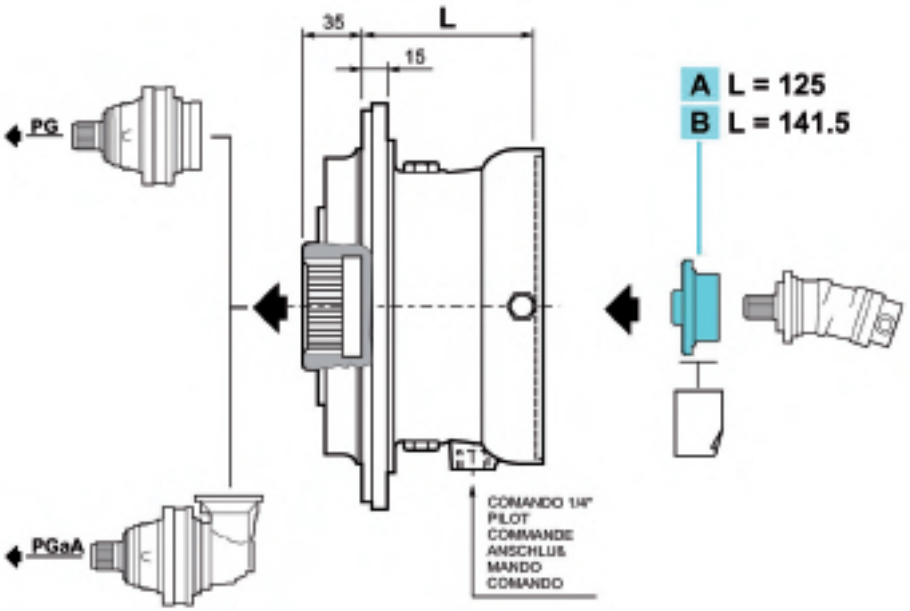
IEC B5			
	Z	Code	
H63	36	4702.011.005	A
H71	36	4702.011.006	
H80	56	4702.011.001	
H90	56	4702.011.002	
H100/112	66	4702.011.003	
H132	100	4702.011.004	
H160	139	4702.011.047	
H180	139	4702.011.048	
H160	118	4702.051.001	B
H180	118	4702.051.002	
H200	148	4702.051.015	
H225	139	4702.051.016	
H250	148,5	4702.051.024	
H280	148,5	4702.051.025	
H160	150	4702.071.001	C
H180	150	4702.071.002	
H200	150	4702.071.003	
H225	139	4702.071.004	
H250	139	4702.071.005	
H280	139	4702.071.006	
H160	150	4702.081.001	D
H180	150	4702.081.002	
H200	150	4702.081.003	
H225	139	4702.081.004	
H250	139	4702.081.005	
H280	139	4702.081.006	

Modular Brakes

Planetary Drives planetary reduction units are equipped with hydraulic brakes with oil- bath disks, expressly designed for static or parking braking.
The lubrication for the brakes is separated from the lubrication of the planetary gear units. Thus, during the lubricant inlet phase, it is necessary to pour the fluid also into the brake through the proper hole mounted on its casing.
We suggest to use lubricant ISO VG 32 (however, hydraulic lubricant can be used as well).



RA							
	Cfs min [Nm]	Pa min [bar]	Code	P max [bar]	Oil [lt] V1	Oil [lt] B5	Kg
RA 10	90	17	4706.000.500				
RA 16	140	23	4706.001.500				
RA 25	220	19	4706.002.500	300	0.4	0.2	14
RA 35	330	23	4706.003.500				
RA 45	430	33	4706.004.500				
RA 55	550	39	4706.006.500				



RB							
	Cfs min [Nm]	Pa min [bar]	Code	P max [bar]	Oil [lt] V1	Oil [lt] B5	Kg
RB 25	250	22	4705.300.500				
RB 40	400	35	4705.301.500				
RB 63	650	50	4705.302.500				
RB 80	800	38	4705.303.500	300	0.6	0.7	21
RB 100	1000	45	4705.304.500				
RB 125	1250	45	4705.305.500				
RB 160	1500	45	4705.306.500				
RB 180	1700	50	4705.307.500				

Important addresses and phone numbers

NORWAY		
Bergen	Lönne Scandinavia AS	Phones/ Faxes
Postal address: Postboks 144 Ulset N-5873 BERGEN	Visit address Liamyrane12, N-5132 NYBORG	ph: +47 55 39 10 00 fax: +47 55 39 11 00 24- h.service: +47 918 33 073
Oslo:	Lönne Scandinavia AS	Phones/ Faxes
Postal and visit address:	Frysjaveien 40 N-0884 OSLO	ph: +47 22 02 10 30 fax: +47 22 02 10 50
Ålesund:	Lönne Scandinavia AS	Phones/ Faxes
Postal address: Po.Box 7892 6022 Ålesund	Visit address: Spjelkavikveien 9 N-6011 ÅLESUND	 ph: +47 70 15 39 00 fax: +47 70 15 39 01
SWEDEN		
Helsingborg	Lönne Scandinavia AB	Phones/ Faxes
Postal and visit address:	Kastellgatan 5 S-254 66 HELSINGBORG	ph +46(0)42 38 03 00 fax: +46(0)42 38 03 09 24- h. service: +46 (0) 70 885 5431
Stockholm:	Lönne Scandinavia AB	Phones/ Faxes
Postal and visit address:	Lovisagatan 4 S-115 23 STOCKHOLM	ph: +46-8 662 62 85 fax: +46-8 545 697 20
FINLAND		
Helsinki	Lönne Scandinavia OY	Phones/ Faxes
Postal and visit address:	Hernepellontie 11Service phone: +358 50 570 4070 FI-00710 HELSINKI	ph: +358(0)9342 4300 fax: +358(0)9342 43099 Service phone: +358 50 570 4070
DENMARK		
Vejle	Lönne Scandinavia AS	Phones/ Faxes
Postal and visit address:	Bugattivej 5G .....DK-7100 VEJLE	ph: +45 76 40 87 00 fax: +45 76 40 87 01 24- h. service: +45 24 45 74 03

Lönne Service Main Office
Solgaard Skog 7, P.O. Box 460, N-1502 MOSS, Norway. www Telephone +47 69 24 40 00 Fax +47 69 24 07 45 24- h. service +47 924 32 085

Price Policy
Prices occur in special lists on requirement in specified currency, ex warehouse exclusive packaging. The sales tax (value added tax) is not included in the prices. It shall be debited separately at the respective rate according to the applicable legal regulations.

Terms of Sales and Delivery
Terms of Sales and delivery are specified on our web site; www.lonne.com

Environmental Protection - Information Requirement
Electric and electronic products, so- called EE products may contain toxins which can damage our health and the environment. Therefore, all importers and producers of EE products are obliged to take responsibility for their products until they have been scrapped and recycled. You may return any cast- off Lönne products to a Lönne Warehouse. Lönne is obliged to fulfil the authorities' requirements regarding an environmentally sound handling of EE-waste in accordance with the EE regulations.

General
Export and Import Regulations regarding Lönne Product Range of Drives and Controls will be subject to the Export Import Regulations actual in the area of delivery. We hereby reserve the right to change the content of data in this catalogue at any time without notice. Furthermore, our company shall not be held responsible for neither possible discrepancies in catalogue content nor any damage caused by wrong use of products or information.

LÖNNE
DRIVE TECHNOLOGY

Products | Solutions | Services

Lönne Main Catalogue Chapters:

Lönne
Lönne Scandinavia AS was founded in 1949 in Bergen, Norway. Present board member Mr Terje Lönne entered as second generation, and started the expansion into the Nordic market.

Lönne has specialized within electric motors, generators, frequency inverters, gearboxes, transmissions and bearings. Lönne reference list covers a wide range of customers within on shore, off shore, maritime and marine industries.
Step by step the company has grown to become a leading, Nordic supplier within drive technology.
Lönne one stop shop concept is a strong force for customers whom operate the total value chain of drive technology components.
Lönne is today widely recognized both as a supplier of high quality components and engineered solutions.

Lönne head quarter is located in Bergen, Norway, with subsidiaries in Denmark, Finland and Sweden. The central warehouse, workshop and testing department in Helsingborg provides quick delivery service overnight, to the Nordic market. Smaller express warehouses and workshops are also located in Bergen and Helsinki. See map on the back page for the total Lönne Group.

Lönne Service is a separate part of the Lönne Group. With a total of six workshops in Norway, Lönne Service is specializing in services and repairing of electric motors and generators, both towards on shore and off shore markets. Lönne Service is ranked to have one of the market's largest and most updated machine parks, operated by highly skilled personnel.

Lönne people take pride in every job done, with a high level of professionalism, and really care to "**keep your machinery running!**"

Lönne Quality Management System Standards is certified for ISO 9001:2008.
For further information, please have a look at our website or feel free to call us!

Keeps your machinery running!

Norway
Head Office
Lönne Scandinavia AS
Liamyrane 12, Bergen
N-5132 Nyborg Bergen
Tel: +47 55 39 10 00
Fax: +47 55 39 11 00
Local mail: info.norway@lonne.com
24-h. service: +47 91 83 30 73

Sweden
Lönne Scandinavia AB
Kastellgatan 5
S-254 66 Helsingborg
Tel: +46 (0) 42 38 03 00
Fax: +46 (0) 42 38 03 09
Local mai: info.sweden@lonne.com
24-h. service: +46 (0) 70 88 55 43 1

Denmark
Lönne Scandinavia AS
Bugattivej 5G
DK-7100 Vejle
Tel: +45 (0) 76 40 87 00
Fax: +45 (0) 76 40 87 01
Local mail: info.denmark@lonne.com
24-h. service: +45 (0) 24 45 74 03

Finland
Lönne Scandinavia OY
Hernepellontie
FI-00560 Helsinki
Tel: +358 (0) 9 342 4300
Fax: +358 (0) 9 3424 3099
Local mai: info.finland@lonne.com