



PRODUCT CARD



GEAR PUMPS AND MOTORS "B" SERIES GROUP 1

E0.14.0503.02.01



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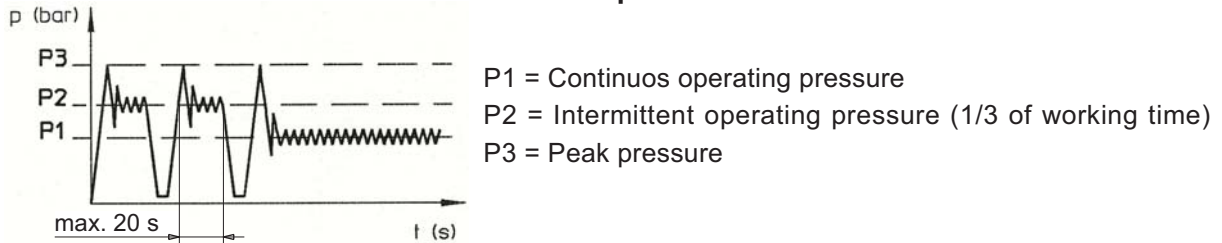
The data in this catalogue refers to the standard product.

The policy of Salami S.p.A. consists of a continuous improvement of its products. It reserves the right to change the specifications of the different products whenever necessary and without giving prior information.

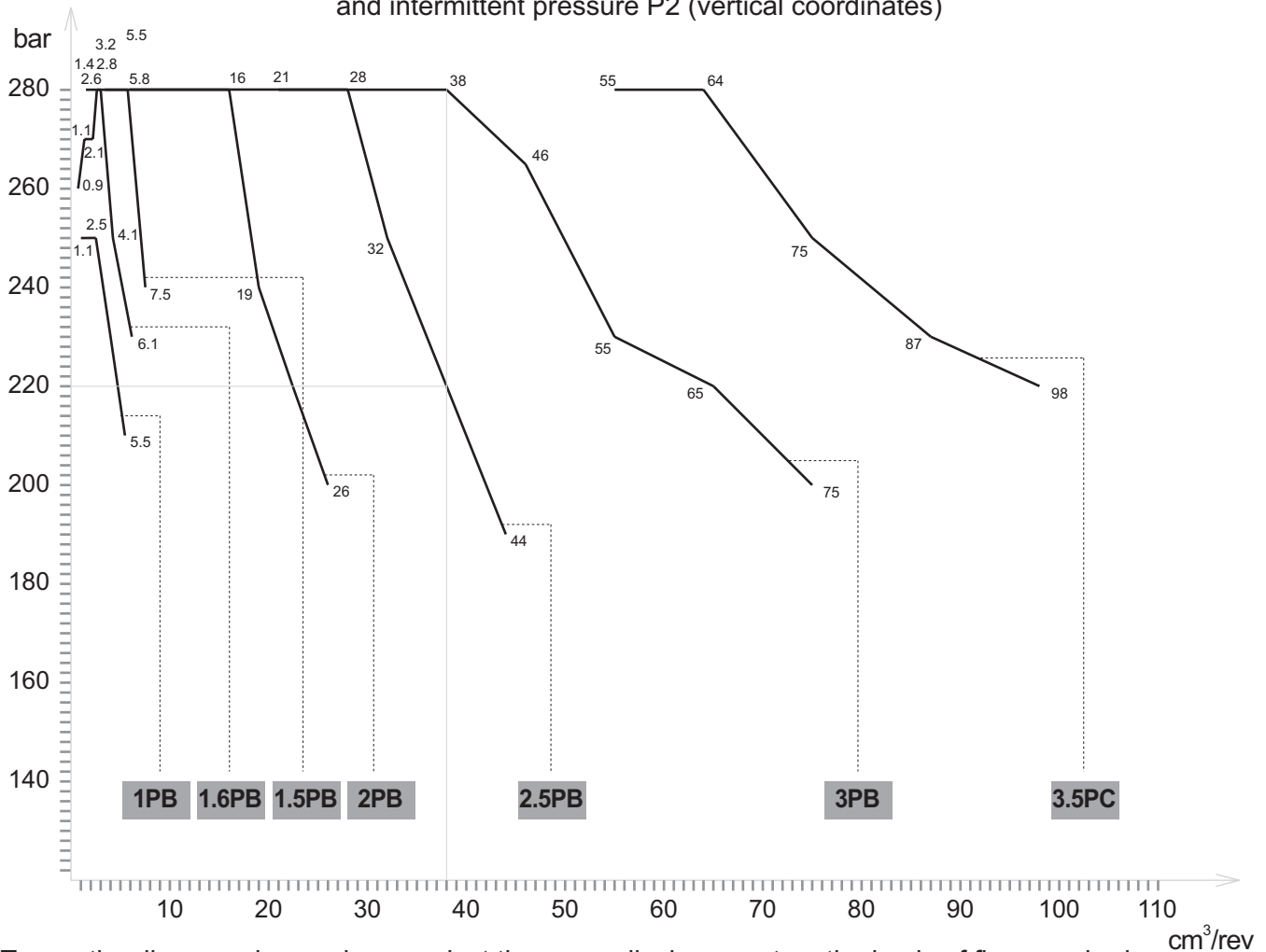
If any doubts, please get in touch with our sales department.

QUICK GUIDE TO SELECT THE RIGHT PUMP SIZE

Definition of pressures



The diagram shown here below is used as a first dimensioning aid for the choice of pump group. It is based on the value of displacements (horizontal coordinates) and intermittent pressure P2 (vertical coordinates)



To use the diagram shown above, select the pump displacement on the basis of flow required. Then draw a vertical line to intersect the line representing the pump series. Now you can select the group on the basis of required application pressure.

Example: 38 cm^3/rev — 2.5PB 38 220 bar (3140 psi)
If required application pressure is more than 220 bar, use a 3 PB



GENERAL

SALAMI gear pumps and motors are available in seven series giving options of displacements from 1.1 cm³/rev to 98 cm³/rev (from 0.06 cu.in./rev to 6.03 cu.in./rev).

All pumps are available as multiple units either of the same or different series.

With all sizes of pumps and motors there are options of shafts, flanges and ports as for European, German and American standards.

SALAMI gear pumps and motors offer:

- High volumetric efficiency by innovative design and accurate control of machining tolerances.
- Axial compensation achieved by the use of floating bushes that allow high volumetric efficiency throughout the working pressure range.
- DU bearings ensure high pressure capability.
- 12 teeth integral gear and shaft.
- Extruded alluminum body.
- Die cast alluminum cover and flange - cast iron rear.
- Double shafts seals in all pump series except Group 1.
- Nitrile seals as standard and viton seals in high temperature applications.

All pumps and motors are hydraulic tested after assembly to ensure the high standard performance required by SALAMI'S engineering.

WORKING CONDITIONS

THE VALUES OF PRESSURE ARE ABSOLUTE

- Pump inlet pressure 0,7 to 2,5 bar
10 to 36 *psi*
- Return pipe line continuous pressure for motors MAX 2,5 bar - 36 *psi*
- Return pipe line intermit. pressure for motors MAX 6 bar for 15 sec - 85 *psi*
- Return pipe line peak pressure for motors MAX 15 bar - 215 *psi*
- Minimum operating fluid viscosity 12 mm² / sec
- Max starting viscosity 800 mm² / sec
- Suggested fluid viscosity range 17 - 65 mm² / sec
- Fluid operating temperature range -15 to +85 °C
- Hydraulic fluid mineral oil

Important:

in case of assembling of pumps without shaft seals (eg. B2 - B3...), you have to keep the value of min. suction pressure (0.7 bar (abs)) in the vane between pump and coupling too.

Lower pressure can lead to suction of oil through the front flange (seat of the shaft without seal); this can damage seriously the pump.

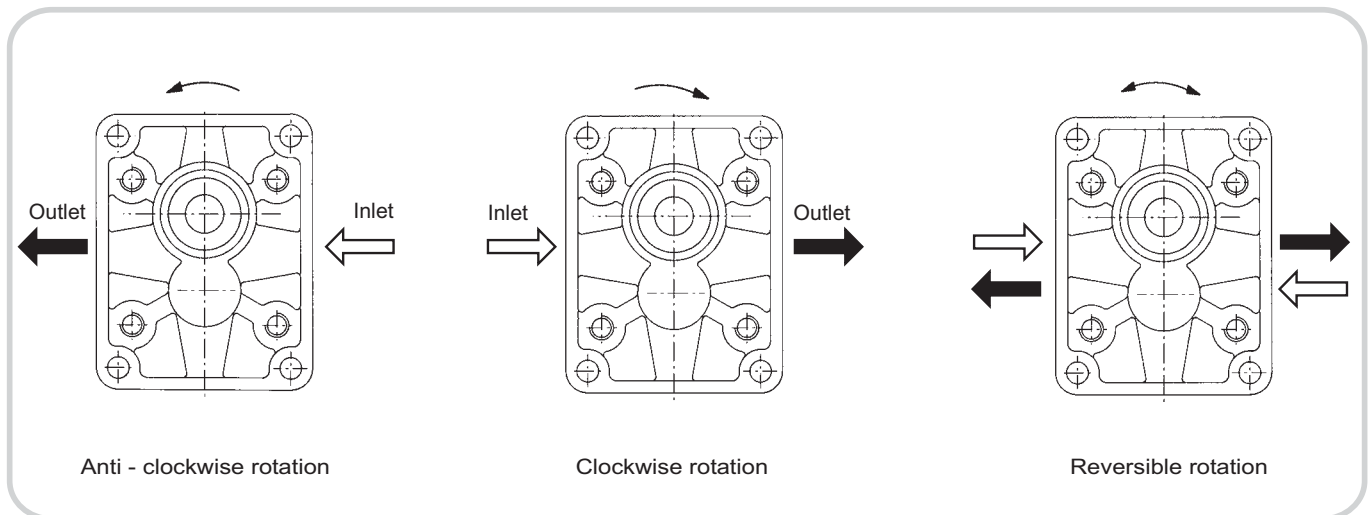
FIRE RESISTENT FLUID

Type	Description	Max pressure	Max speed (rpm)	Temperature
HFB	oil emulsion with 40% water	130 bar/1880 <i>psi</i>	2500	3°C +65°C
HFC	Water glycol	180 bar/2600 <i>psi</i>	1500	-20°C +65°C
HFD	Phosphate esters		1750	-10°C +80°C

DRIVE SHAFT

Radial and axial loads on the shafts must be avoided since they reduce the life of the unit. Pumps driven by power take - off on engines must always be connected by placing an "Oldham" coupling or coupling having convex toothed hub. This is to ensure that inevitable misalignment during assembly is reduced to minimum.

PUMP ROTATION DIRECTION VIEWED AT THE DRIVE SHAFT



HYDRAULIC PIPE LINE

To ensure favorable suction conditions it is important to keep pressure drop in suction pipe line to a minimum value (see WORKING CONDITIONS).

To calculate hydraulic pipe line size, the designer can use; as an approximate guide, the following fluid speed figures:

From 1 to 2 m/sec on suction pipe line
From 6 to 10 m/sec on pressure pipe line

From 3.28 to 6.36 ft/sec on suction pipe line
From 19.7 to 32.8 ft/sec on pressure pipe line

The lowest fluid speed values in pipe lines is recommended when the operating temperature range is high and/or for continuous duty.

The highest value is recommended when the temperature difference is low and/or for intermittent duty.

When tandem pumps are supplied by 2 different reservoirs with 2 different fluids it is necessary to specify "AS" version. In case of reversible motor allowance must be made to ensure the motor is not drained, through the case drain, when stationary.

FILTRATION INDEX RECOMMENDED

Working pressure	> 200 bar / 2900 psi	< 200 bar / 2900 psi
Contamination class NAS 1638	9	10
Contamination class ISO 4406	18/15	19/16
Achieved with filter $\beta_x = 75$	15 μm	25 μm

TIGHTENING TORQUE

OUR BOLTS AND TIE-RODS HAVE ALWAYS HEATING TREATMENT OF BLACK BURNISHING

PUMP TYPE		BOLT TYPE		TORQUE Nm	FOR SCREWS ZINC PLATED REDUCE TIGHTENING TORQUE OF 10%
SIZE	SERIE	DIAMETER	CLASS		
1	B SINGLE	M 8 x 1.25	8.8	20.5 - 25.5	
1	B MULTIPLE	M 8 x 1.25	8.8	20.5 - 25.5	
2	B SINGLE	M 10 x 1.5	8.8	47-51	
2	B MULTIPLE	M 10 x 1.5	10.9	50-55	
2.5	B SINGLE	M 12	8.8	70-75	
2.5	B MULTIPLE	M 12	10.9	75-80	
3	B	M 10	HEX. BOLT 10.9 HEX. SOCKET H.C.B. 12.9	47-51	
3.5	C	M 12	8.8	74-85	
3	H	M 14	10.9	BOLT 180 150-160 TIE ROD	

COMMON FORMULAS

$$C = \text{Input torque} = \frac{q \cdot \Delta p}{62.8 \cdot \eta_m} \text{ (Nm)}$$

$$P = \text{Input power} = \frac{q \cdot n \cdot \Delta p \cdot 10^{-3}}{600 \eta_m} \text{ (kW)}$$

$$Q = \text{Outlet flow} = \frac{q \cdot n \cdot \eta_v}{1000} \text{ (l/min)}$$

LEGENDA

Δp = Working pressure (bar)

q = Displacement (cm^3/rev)

n = Speed (min^{-1})

η_m = Mechanical eff. (0.92)

η_v = Volumetric eff. (0.95)

Description of the product identification label

Based on the firm certification ISO 9001 - UNI EN 29001, section 4.8 (identification and traceability of the product), we have adopted a new identification label starting from the 1st march 1995. Pls, see following example:

A			
B			
C		D	
E	sa am	F	G

- A = Product short description (VD8A/FDD/U4G).**
- B = Customer part number.**
- C = Salami part number (6235 0025 0).**
- D = Production batch (for Salami management)**
- E = Rotation sense (only for pumps).**
- F = Manufacturing date (see data sheet here below)**
- G = Progressive number of assembling.**

Only for pumps 2PB and 2PZ (except triple 2PB) the identification product is marked on the top of the pump body as shown here below:



SALAMI 09/02
MADE IN ITALY 4010998
612271211 nr. 13
2PB 19S B25 B5

- Product short description. _____
- Salami part number and progressive number of assembling. _____
- Production code (for Salami management). _____
- Month and year of made: maybe in the future you can find this type of production date in the label beside too. _____
- Rotation sense. _____

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
JANUARY	0A	1A	2A	3A	4A	5A	6A	7A	8M	9M	0M	1M	2M	3M	4M	5M
FEBRUARY	0B	1B	2B	3B	4B	5B	6B	7B	8N	9N	0N	1N	2N	3N	4N	5N
MARCH	0C	1C	2C	3C	4C	5C	6C	7C	8P	9P	0P	1P	2P	3P	4P	5P
APRIL	0D	1D	2D	3D	4D	5D	6D	7D	8Q	9Q	0Q	1Q	2Q	3Q	4Q	5Q
MAY	0E	1E	2E	3E	4E	5E	6E	7E	8R	9R	0R	1R	2R	3R	4R	5R
JUNE	0F	1F	2F	3F	4F	5F	6F	7F	8S	9S	0S	1S	2S	3S	4S	5S
JULY	0G	1G	2G	3G	4G	5G	6G	7G	8T	9T	0T	1T	2T	3T	4T	5T
AUGUST	0H	1H	2H	3H	4H	5H	6H	7H	8U	9U	0U	1U	2U	3U	4U	5U
SEPTEMBER	0I	1I	2I	3I	4I	5I	6I	7I	8V	9V	0V	1V	2V	3V	4V	5V
OCTOBER	0J	1J	2J	3J	4J	5J	6J	7J	8Z	9Z	0Z	1Z	2Z	3Z	4Z	5Z
NOVEMBER	0K	1K	2K	3K	4K	5K	6K	7K	8X	9X	0X	1X	2X	3X	4X	5X
DECEMBER	0L	1L	2L	3L	4L	5L	6L	7L	8Y	9Y	0Y	1Y	2Y	3Y	4Y	5Y



Rotation changing instructions for pumps GROUP 1

Before starting, be sure that the pump is cleaned externally as well as the working area to avoid that particles dangerous for pump working can find their way into the pump.

Pump represented is an anti-clockwise rotation pump.

Picture "A"

- 1 - Loosen and fully unscrew the clamp bolts.
- 2 - Lay the pump on the working area in order to have the mounting flange turned upside.
- 3 - Coat the shaft extension with grease to avoid damaging the shaft seal.
- 4 - Remove the flange and lay it on the working area; verify that the seal is correctly located in the body seat.

Picture "B"

- 1 - Mark the position of the bushing relative to the body.
- 2 - Remove the bushing and the driving gear taking care to avoid driven gear axial shifts.

Picture "C"

- 1 - Draw out the driven gear from its housing, taking care to avoid rear cover axial shifts.
- 2 - Re-locate the driven gear in the position previously occupied by the driving gear.

Picture "D"

- 1 - Re-locate the driving gear in the position previously occupied by the driven gear.

Picture "E"

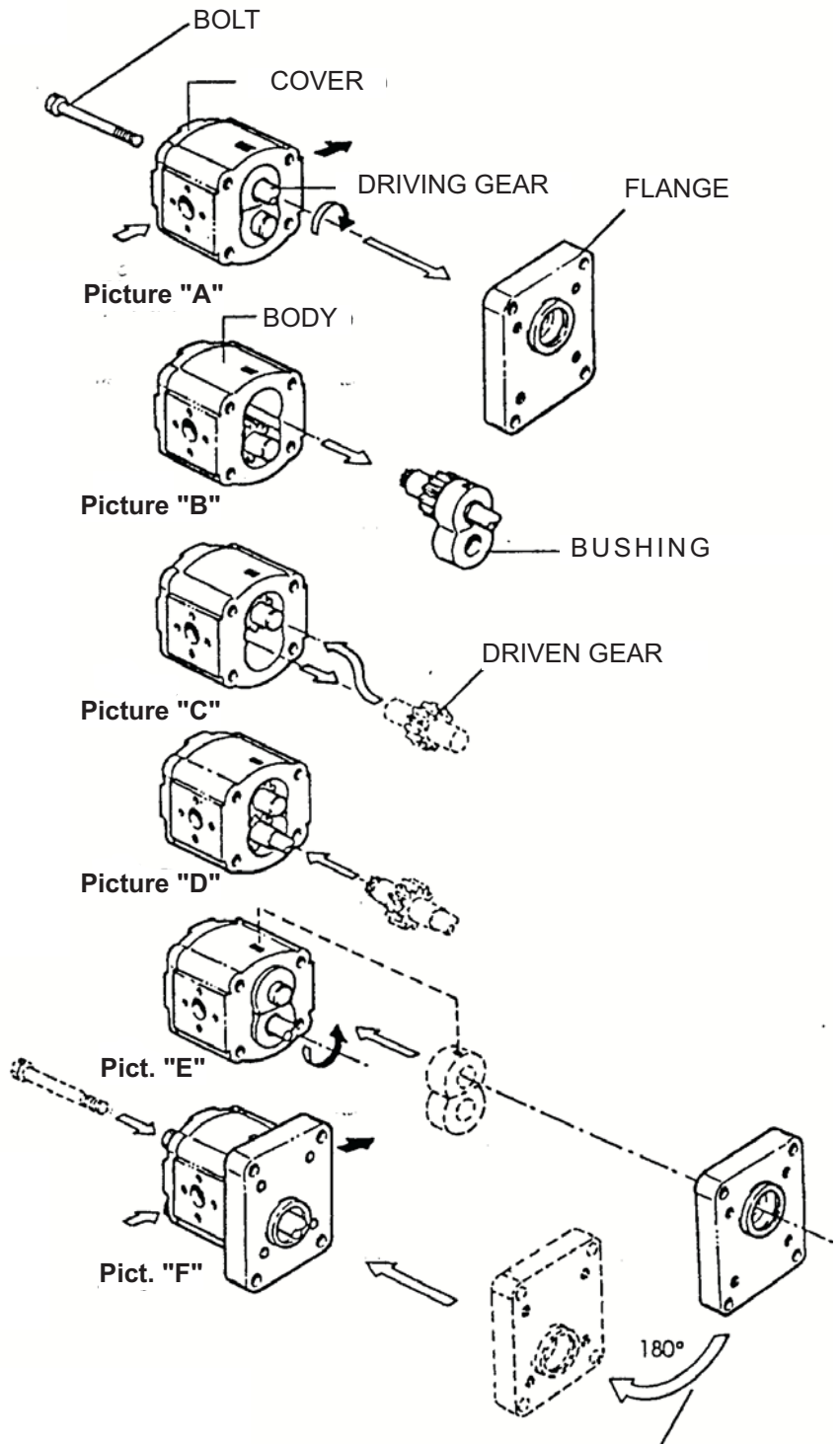
- 1 - Replace the bushing taking care that:
 - marks are located as on the picture
 - surface containing the seal is visible
 - seal and its protection are correctly located

Picture "F"

- 1 - Clean body and mounting flange refaced surfaces.
- 2 - Verify that the two plugs are located in the body.
- 3 - Refit the front flange on the body. You can find the appropriate rotation mounting flange codes on this catalogue.
- 4 - Replace the clamp bolts and tighten crosswise evenly to a torque of 24 - 25 Nm for 1PB, 1.5PB and 1.6PB.
- 5 - Check that the shaft rotates freely.
- 6 - Mark on the plate the new direction of rotation.

IMPORTANT:

to reverse rotation in pump 1PB, 1.5PB, 1.6PB you need to change the front flange. For these pumps there is one front flange for clockwise rotation and one for anti-clockwise rotation.



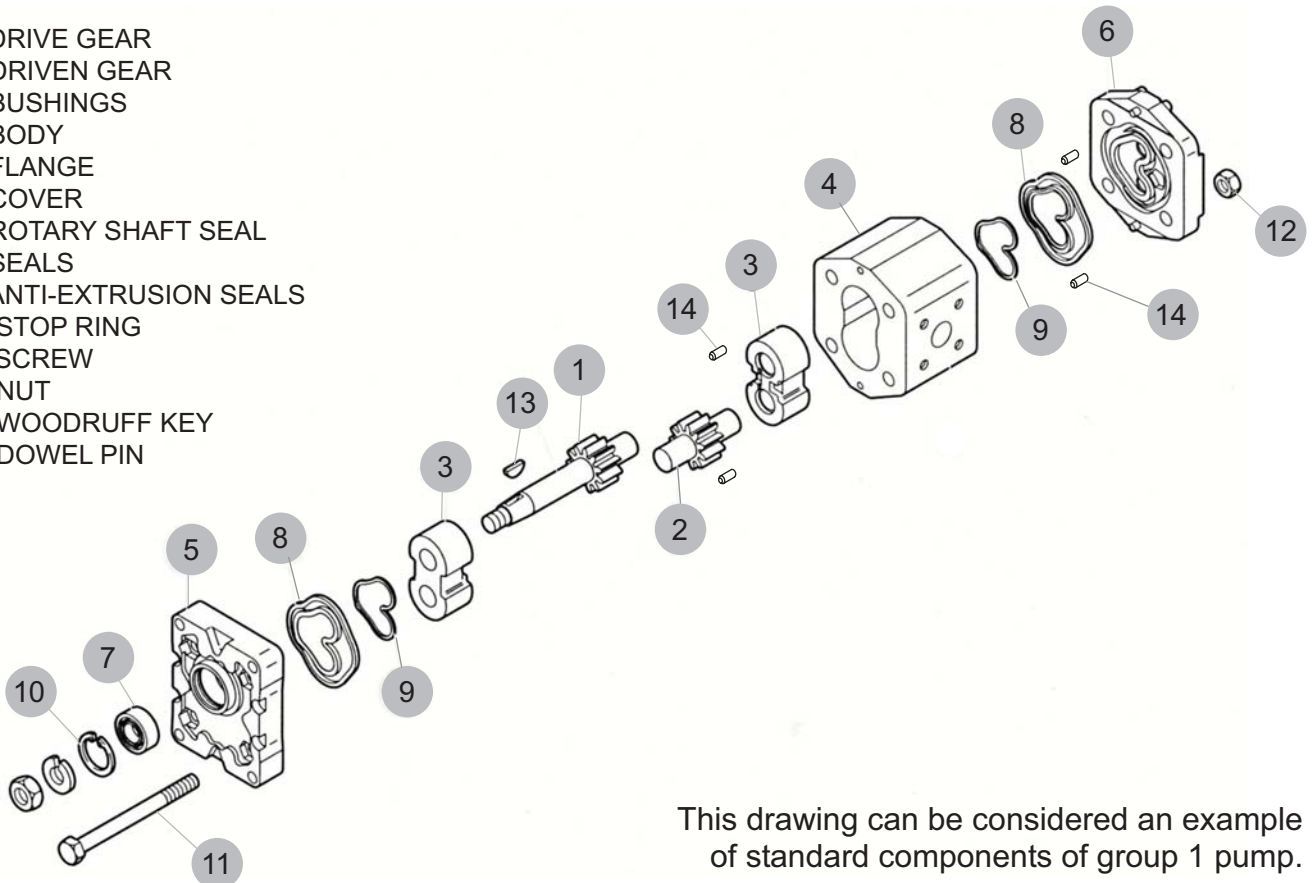
For 1PB, 1.5PB and 1.6PB see picture "F" point 3

IMPORTANT: TO AVOID A PERFORMANCE LOSS DO NOT CHANGE MOTOR ROTATION



GEAR PUMP IN DETAIL

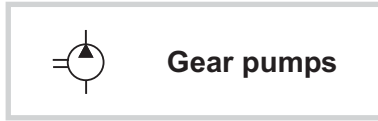
- 1 - DRIVE GEAR
- 2 - DRIVEN GEAR
- 3 - BUSHINGS
- 4 - BODY
- 5 - FLANGE
- 6 - COVER
- 7 - ROTARY SHAFT SEAL
- 8 - SEALS
- 9 - ANTI-EXTRUSION SEALS
- 10 - STOP RING
- 11 - SCREW
- 12 - NUT
- 13 - WOODRUFF KEY
- 14 - DOWEL PIN



This drawing can be considered an example of standard components of group 1 pump.

Displacements up to 0.35 cu.in./rev
Pressure up to 3750 psi

Displacements up to 5.83 cm³/rev
Pressure up to 260 bar

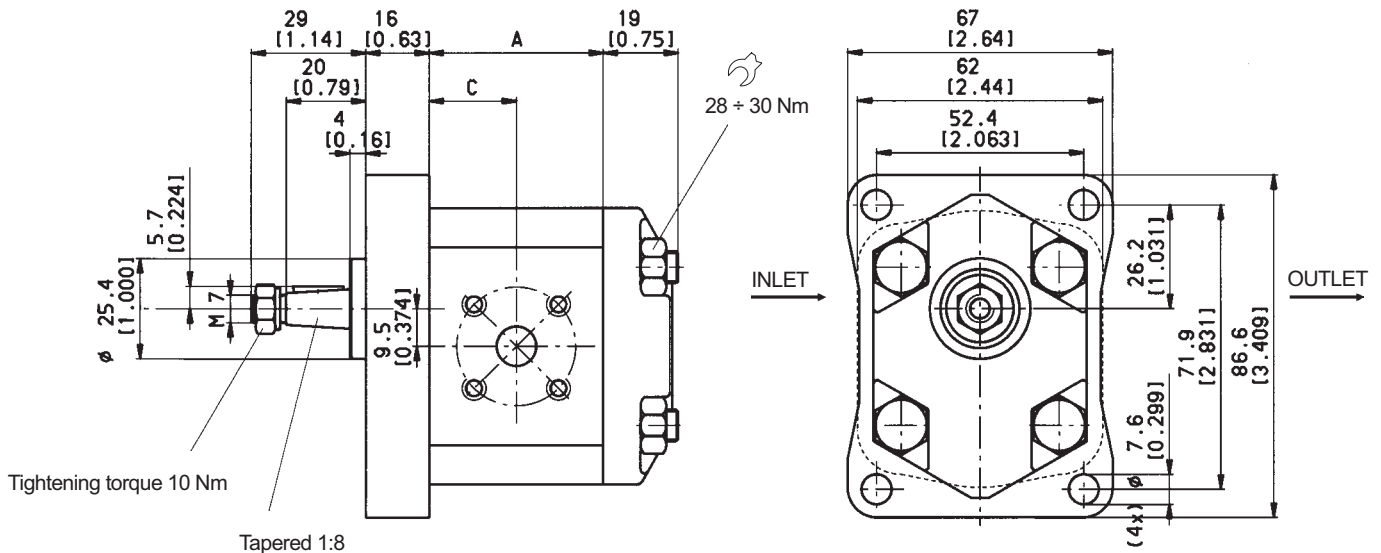


1PB is available only as single pump, motors and tandem pumps are not available

ASSEMBLING DIMENSIONS AND VALUES OF PRESSURE AND SPEED

Type		*1.1	1.3	*1.6	*2	2.5	*3	3.5	*4	4.5	5.5
Displacement	cm ³ /rev	1.06	1.25	1.65	2.12	2.65	3.18	3.71	4.24	4.77	5.83
	cu.in./rev	0.06	0.08	0.10	0.12	0.16	0.19	0.22	0.25	0.28	0.35
Dimension A	mm	36	36.8	38	40	42	44	46	48	50	54
	in	1.40	1.43	1.48	1.56	1.63	1.71	1.79	1.87	1.95	2.13
Dimension C	mm	18	18.4	19	20	21	22	23	24	25	27
	in	0.70	0.71	0.74	0.78	0.81	0.85	0.89	0.93	0.97	1.05
Working pressure p1	bar	230					210			190	
	psi	3300					3000			2756	
Intermittent pressure p2	bar	250					230			210	
	psi	3600					3300			3000	
Peak pressure p3	bar	270					250			230	
	psi	3900					3600			3300	
Max speed at p2	rpm	6000					5000	4500	4000	3500	3000
Min speed at p1	rpm	1000				800				600	
Weight	rpm	0.8		0.85			0.95		1.10		
	lbs	1.76		1.87			2.10		2.43		

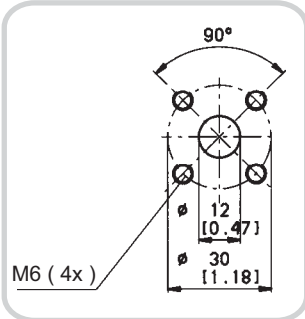
* Types available as rear pumps (combination 2pB / 1pB)



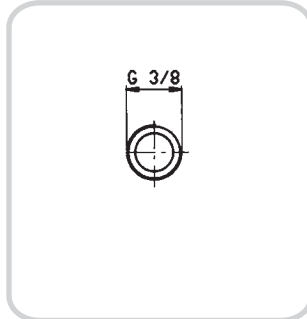
The order code of the pump shown is: **1PB 3D - B18 P0**



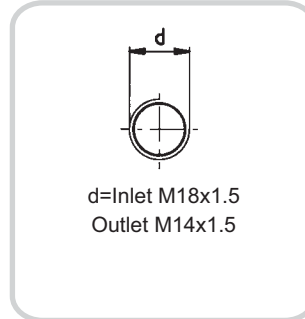
INLET - OUTLET PORTS



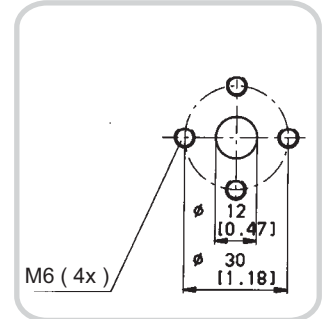
code B



code G



code M

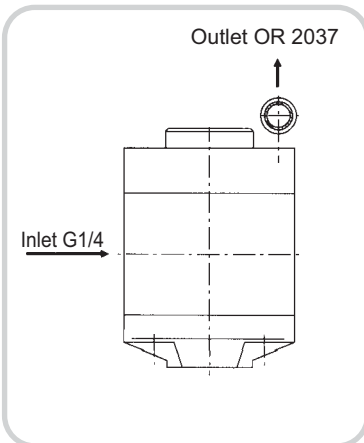


code P

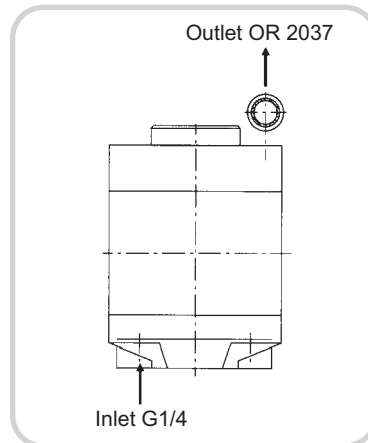
Tightening torque for screws M6 = 10 Nm

Available on request

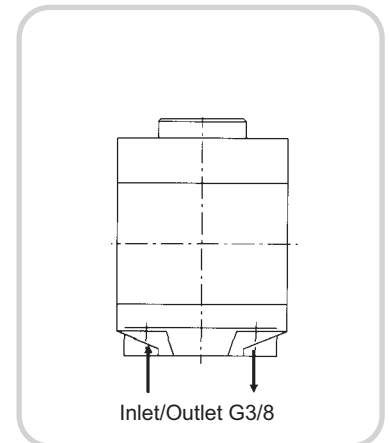
SPECIAL PORTS POSITION



code A

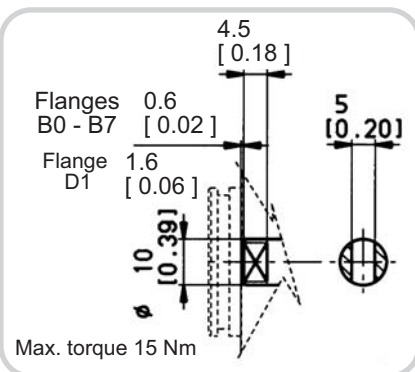


code C



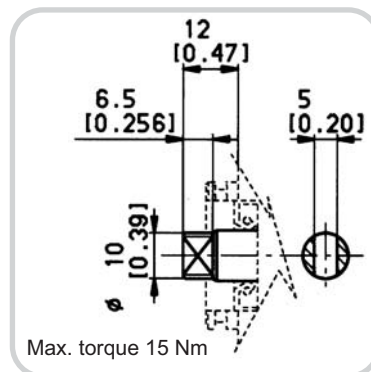
code D

DRIVE SHAFTS



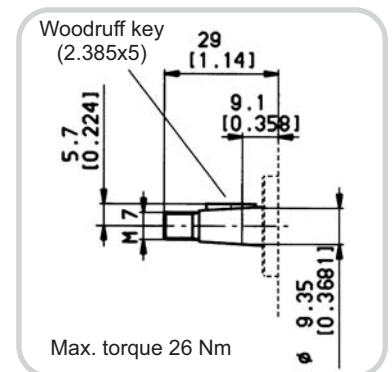
code 00

Tang drive.
Available for types:
1,1 - 2 - 3 - 4



code 06

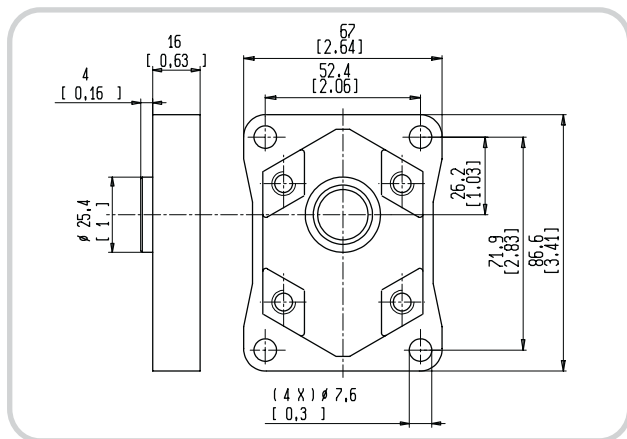
Tang drive.



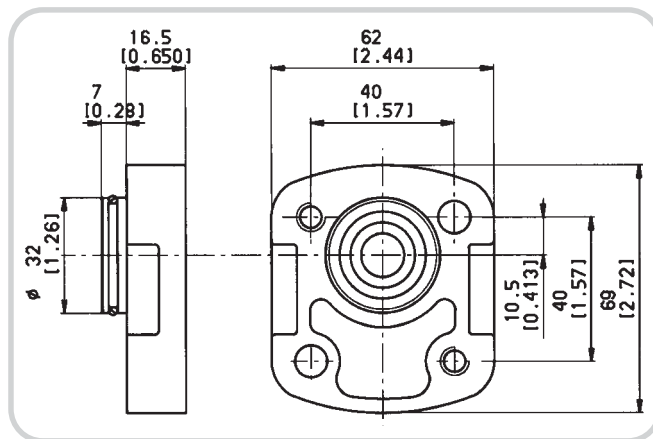
code 18

Tapered 1:8

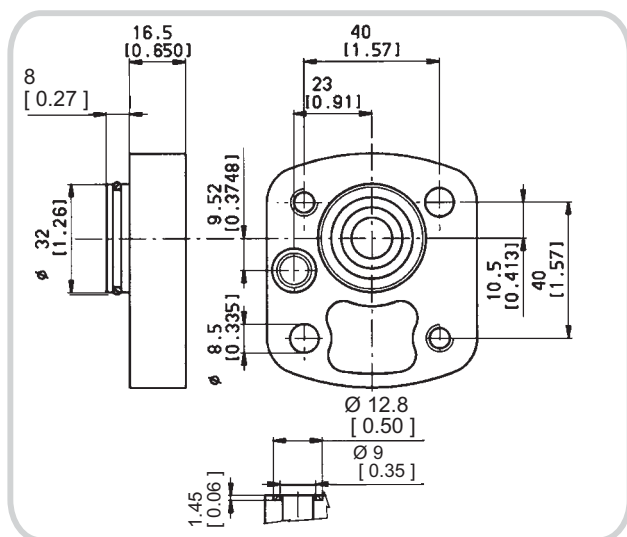
MOUNTING FLANGES



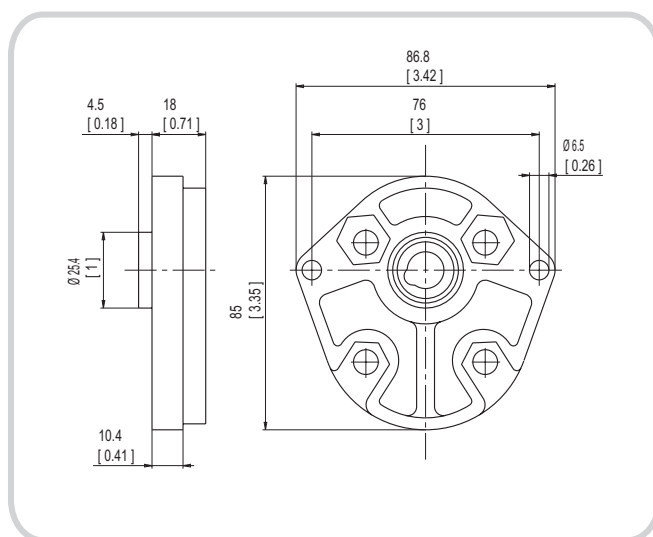
code P0 With shaft code 18



code B0 With shaft code 00 and 06

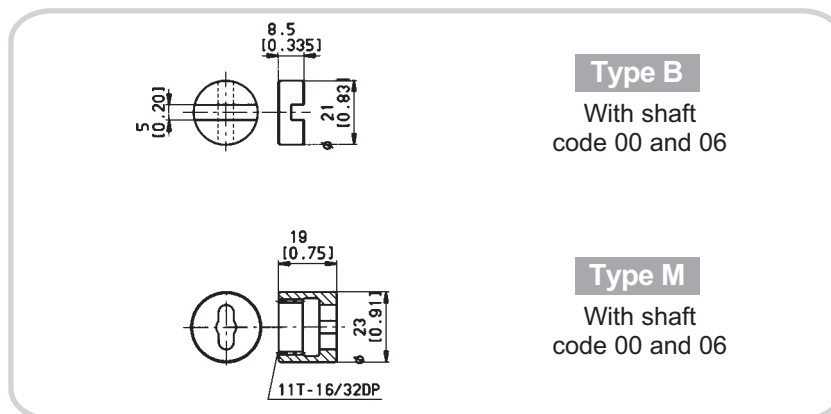


code B7 With shaft code 00 and 06



code D1 With shaft code 00

COUPLINGS



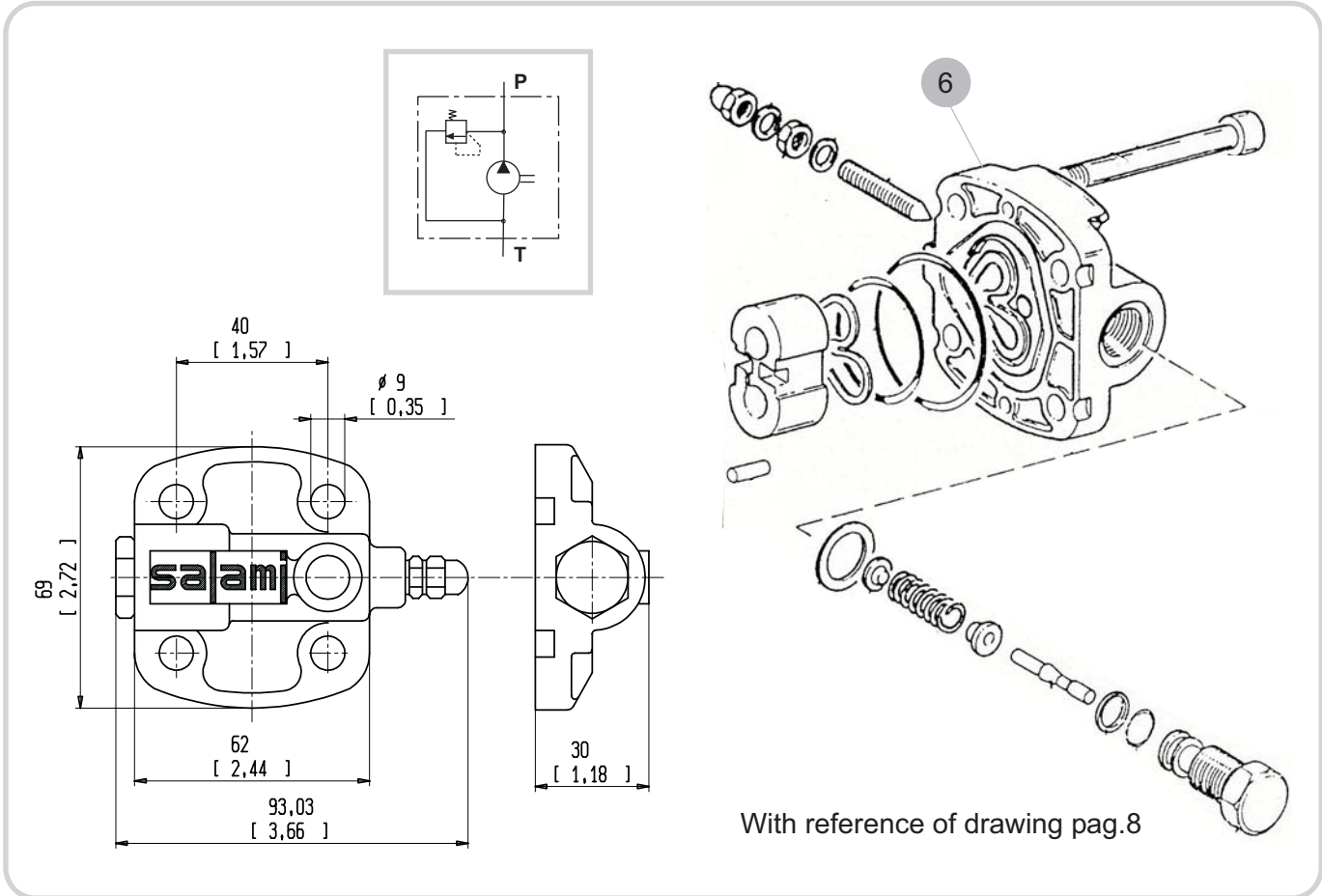
Type B

With shaft code 00 and 06

Type M

With shaft code 00 and 06

REAR COVER WITH MAIN RELIEF VALVE

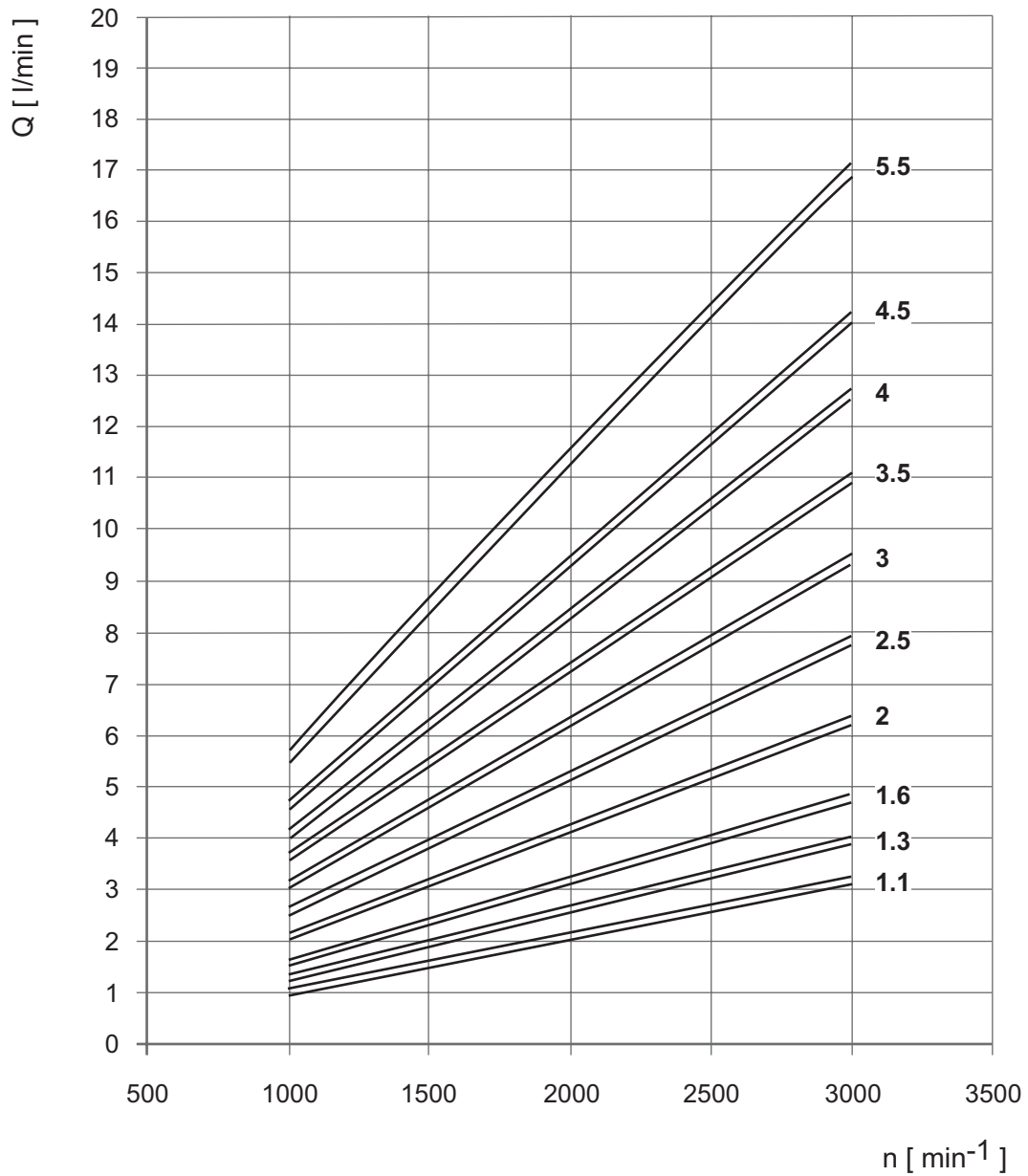


code VS Main relief valve with internal discharge

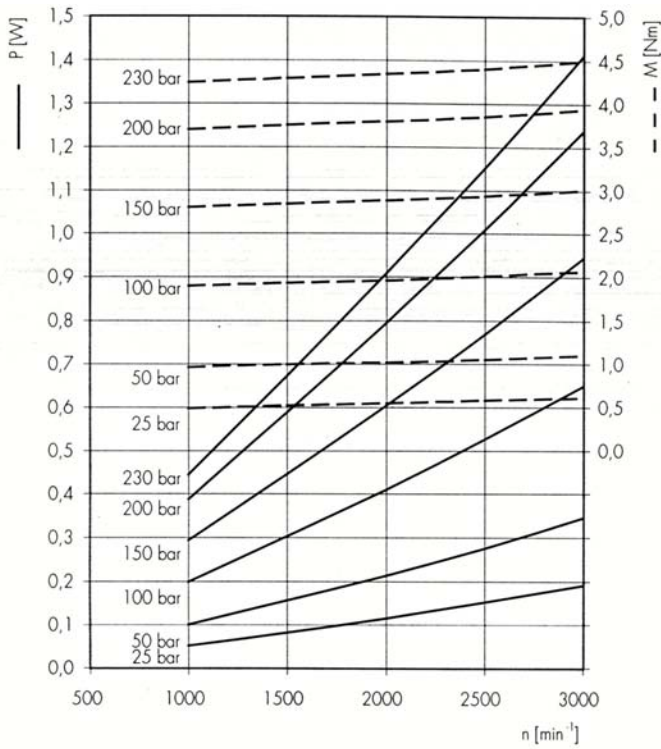
PUMP PERFORMANCE CURVES

Each curves has been obtained at 50° C, using oil with viscosity 30cSt at these pressure.

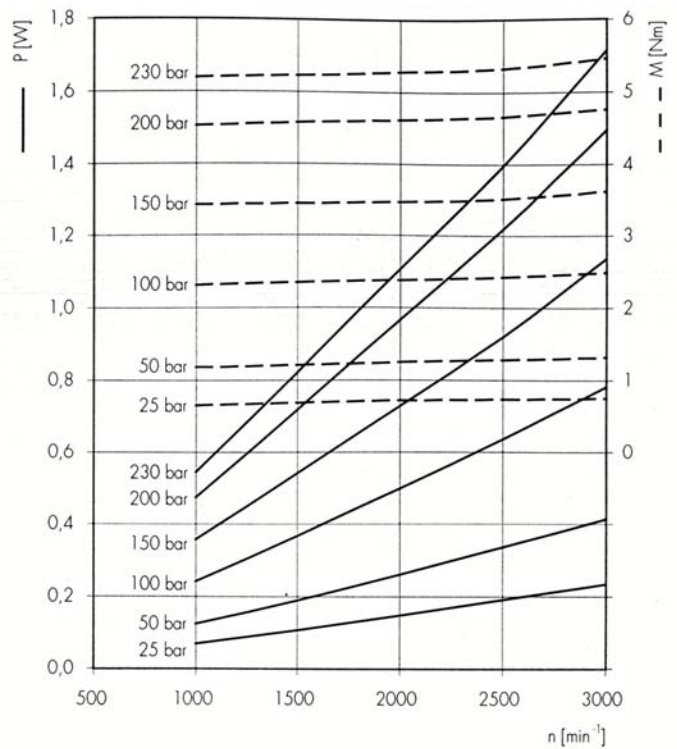
1.1 1.3 1.6 2 2.5	-25 - 230 bar	3 3.5 4	-25 - 210 bar	4.5 5.5	-25 - 190 bar
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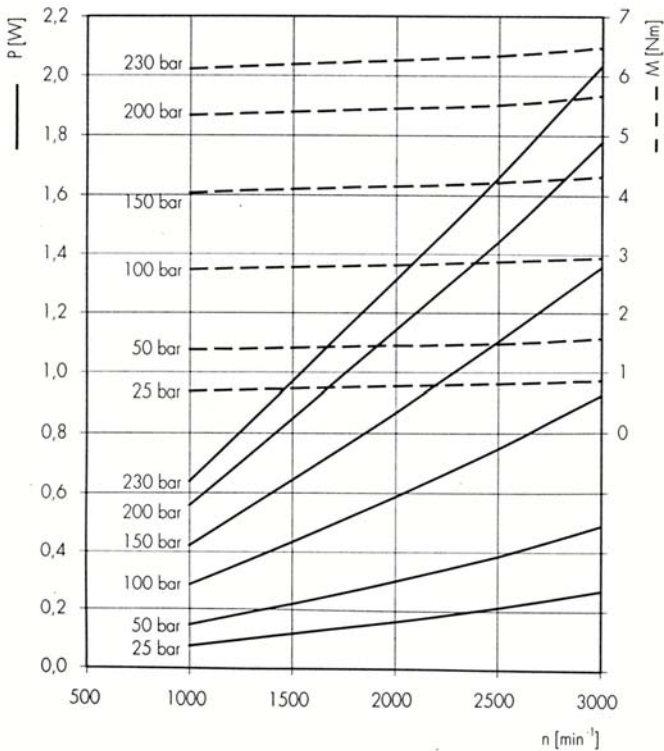
1PB 1.1



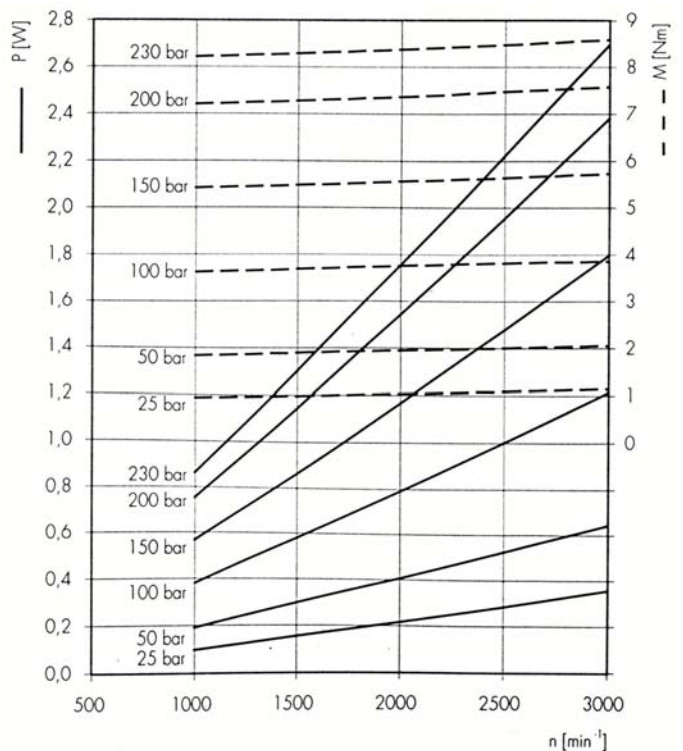
1PB 1.3



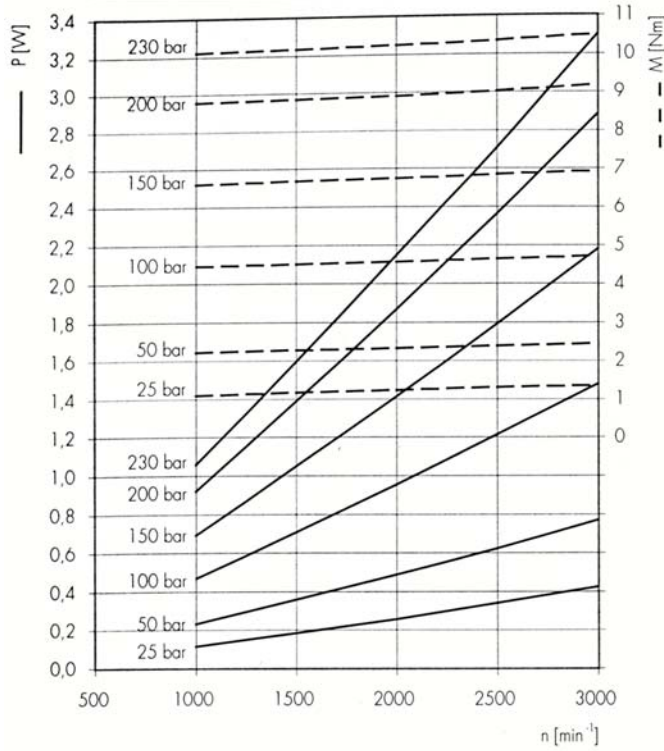
1PB 1.6



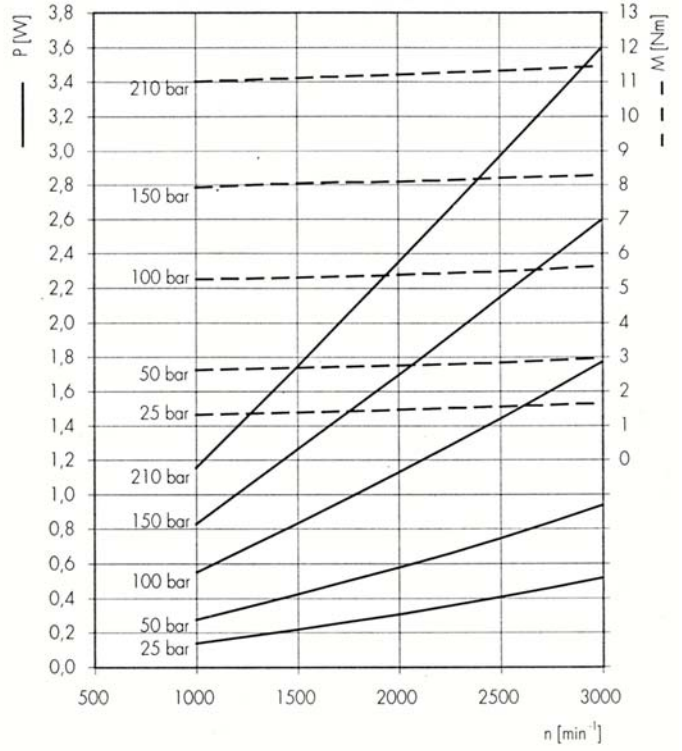
1PB 2



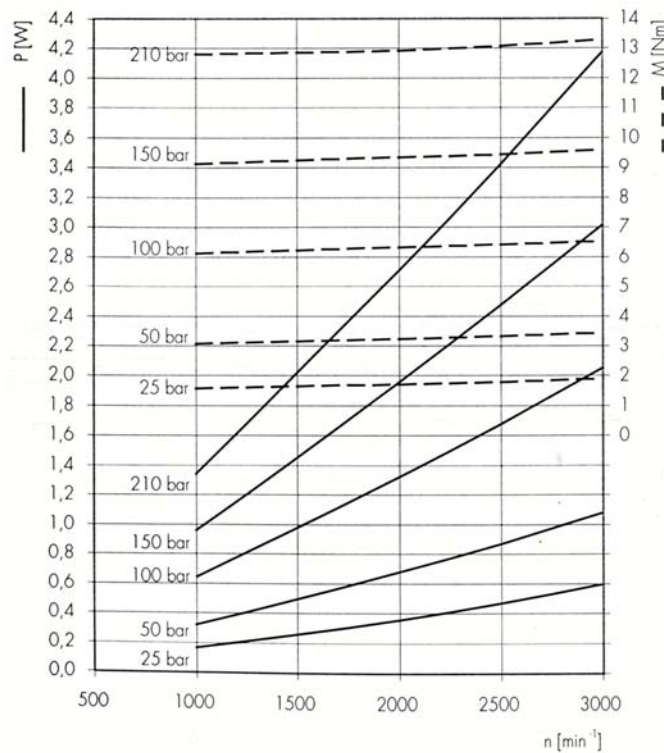
1PB 2.5



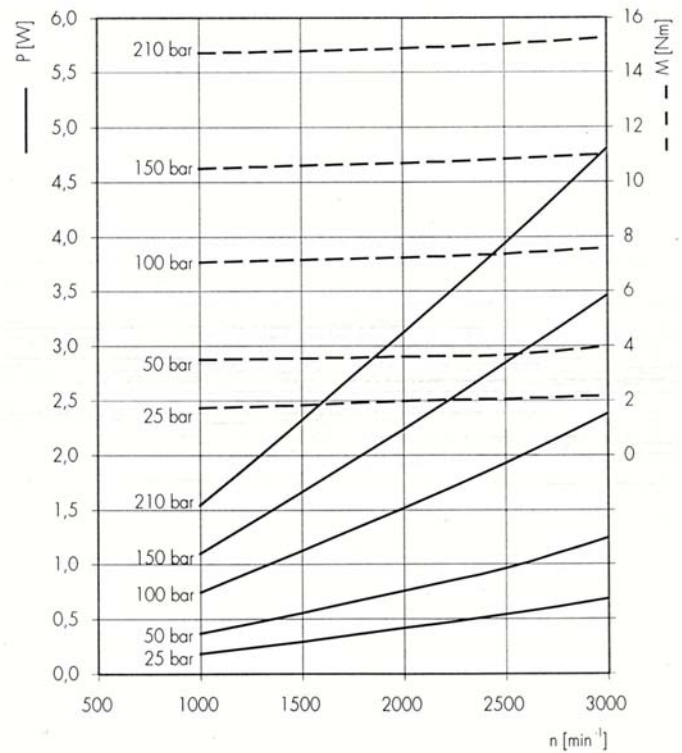
1PB 3



1PB 3.5

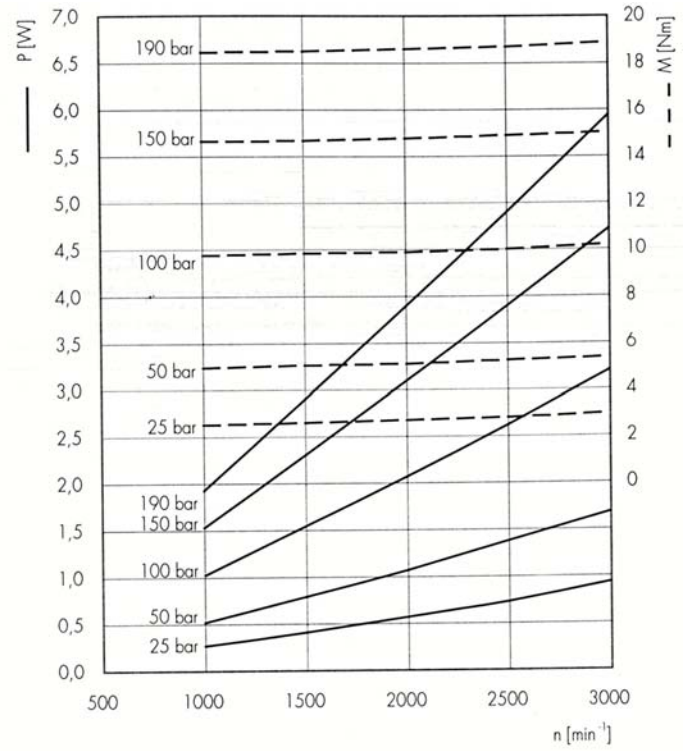
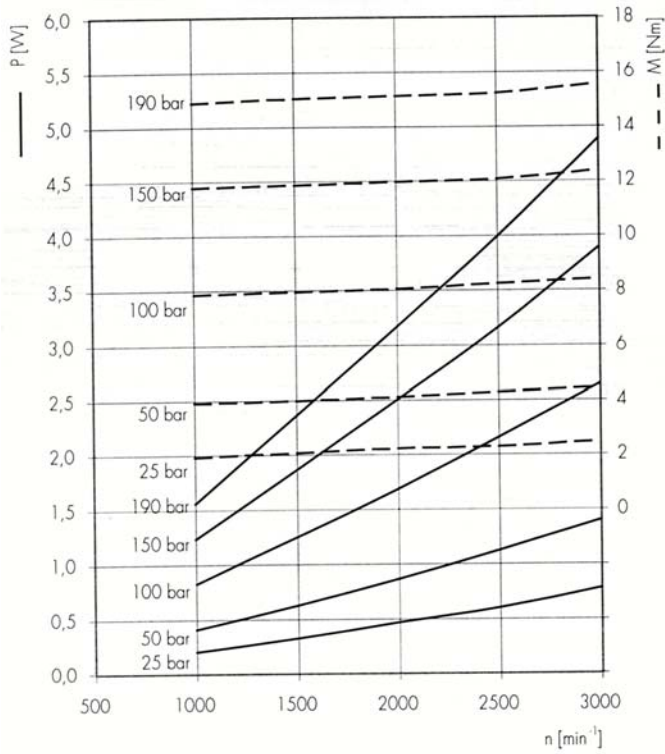


1PB 4

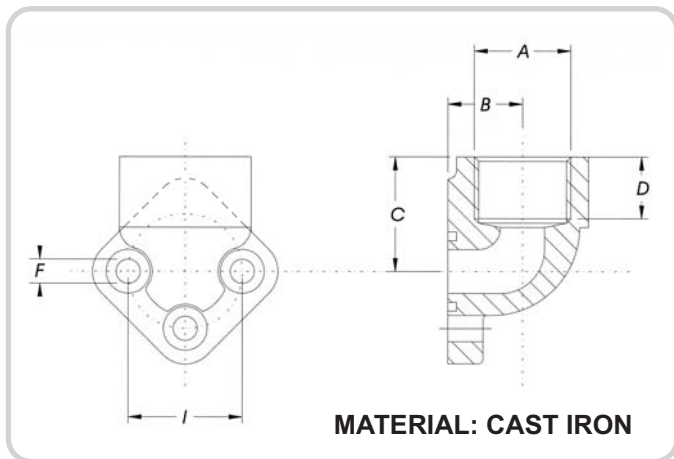


1PB 4.5

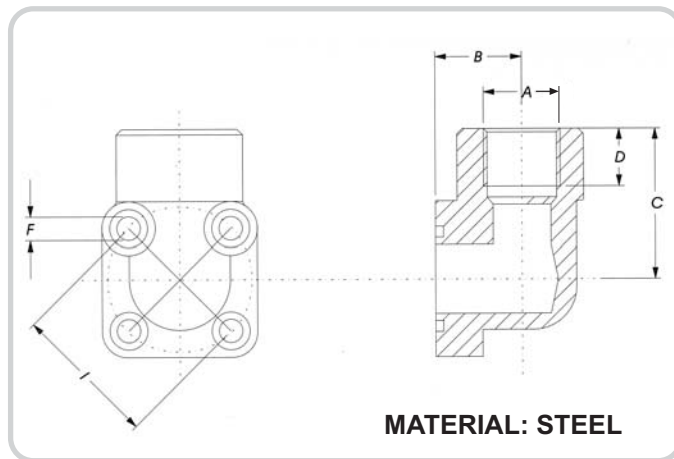
1PB 5.5



PORT CONNECTORS



Type G

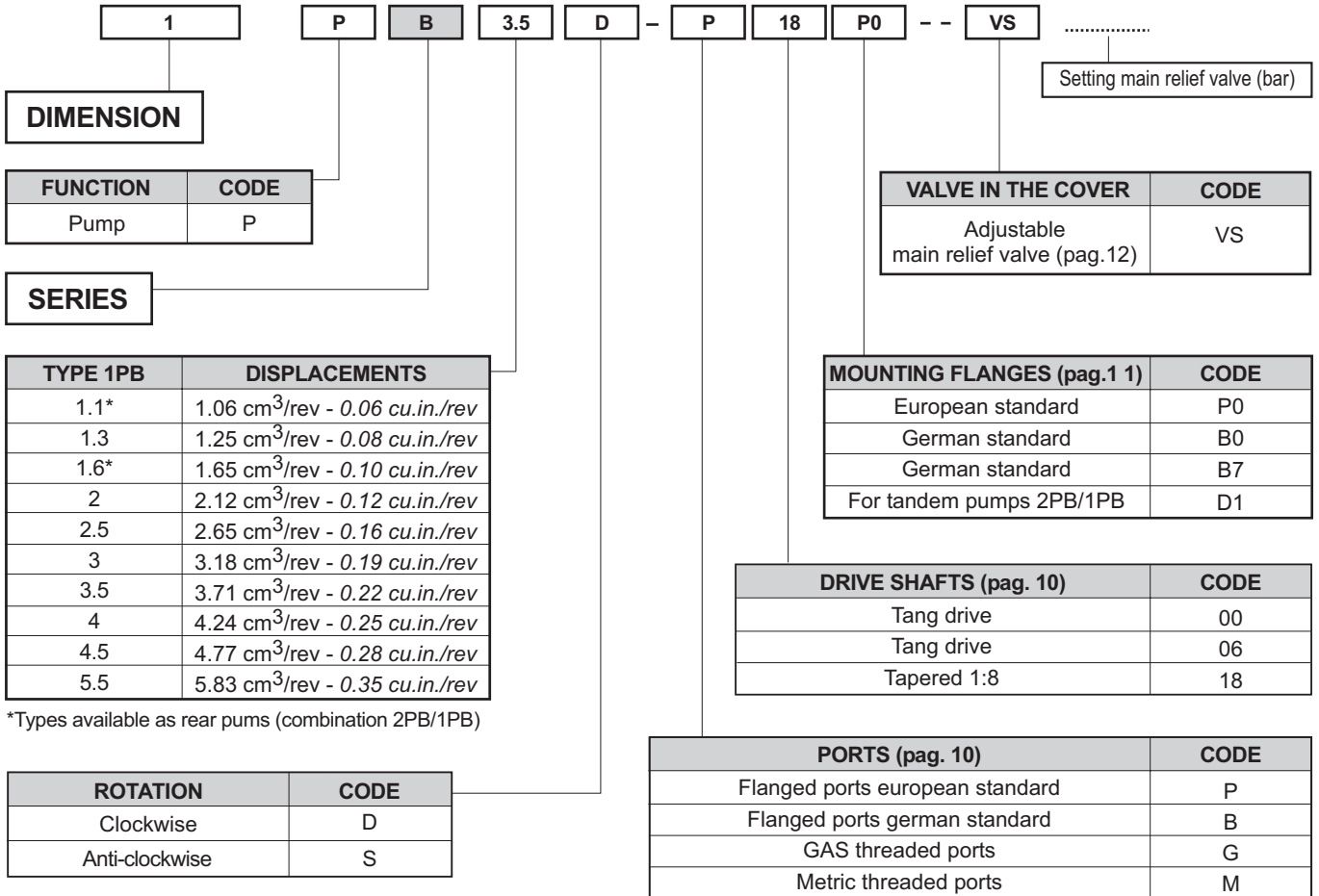


Type GB

AVAILABLE CONNECTORS - DIMENSIONS AND CODE

Type	C	B	I	D	Ø F	Ø A	ORDERING CODE COMPLETE OF SCREW - SPRING WASHER - O RING
1 G/1	26	17.5	30	14	6.5	M18x1.5	4352 7004 0
1 G/2	26	17.5	30	14	6.5	G 3/8	4352 7005 0
1 G/3	26	17.5	30	14	6.5	G 1/2	4352 7006 0
0.5 GB/1	40	18	30	16	6.5	M18x1.5	4352 7000 1
0.5 GB/2	40	18	30	16	6.5	G 3/8	4352 7001 1
0.5 GB/3	40	18	30	16	6.5	G 1/2	4352 7002 1

SINGLE PUMP 1PB



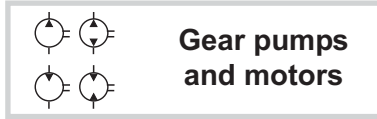
Example to order a 1PB pump with main relief valve: 1PB 3D - P18 P0 - VS150

GEAR PUMPS AND MOTORS "B" SERIES

1.5P/MB / Group 1

Displacements up to 0.457 cu.in./rev
Pressure up to 4300 psi

Displacements up to 7.5 cm³/rev
Pressure up to 300 bar

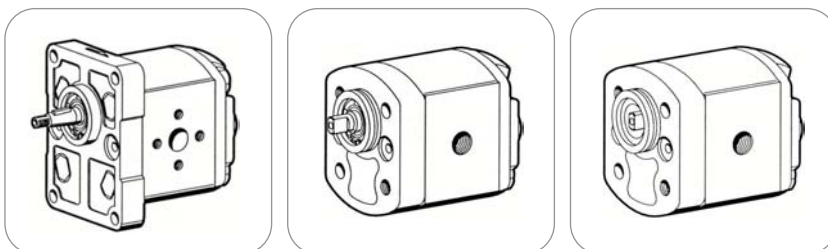
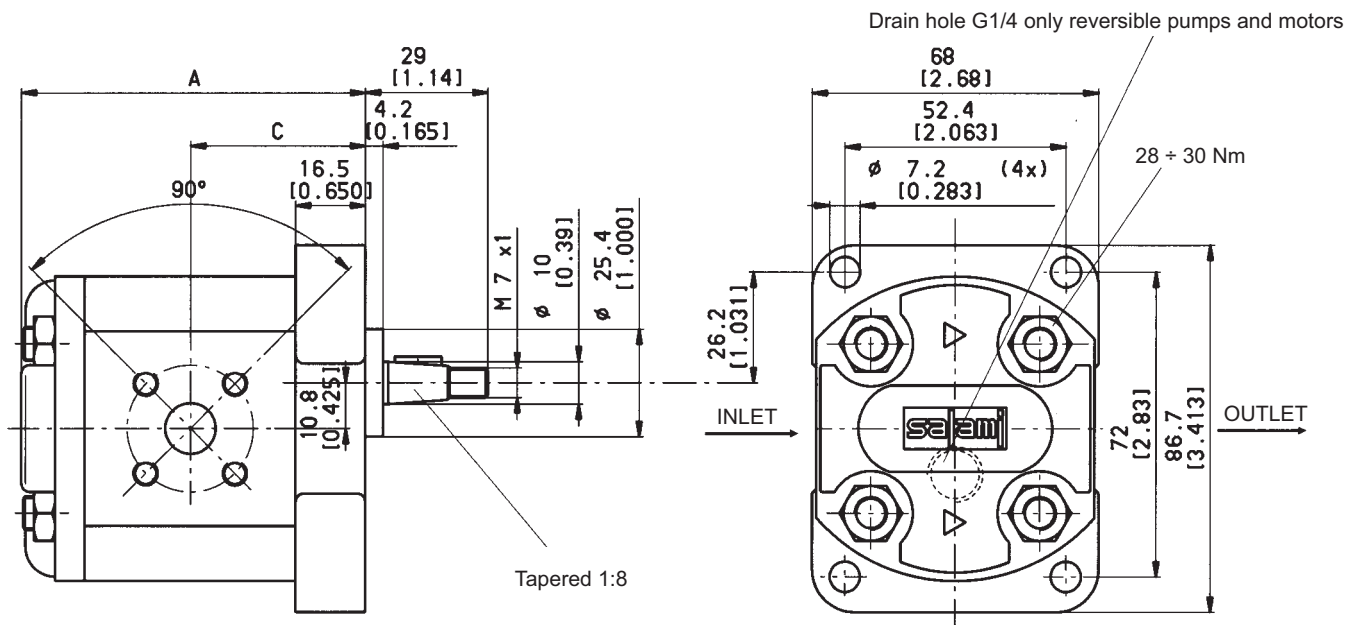


1.5PB single pump are not pre-arranged for tandem pumps

ASSEMBLING DIMENSIONS AND VALUES OF PRESSURE AND SPEED

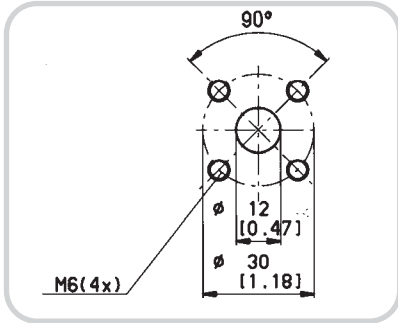
Type		0.9*	1.1*	1.6*	2.1	2.6	3.1	3.6	4.2	4.9	5.8	7.5
Displacements	cm ³ /rev	0.91	1.1	1.5	2.1	2.6	3.1	3.6	4.2	4.9	5.8	7.5
	cu.in./rev	0.055	0.067	0.091	0.128	0.158	0.189	0.219	0.256	0.299	0.354	0.457
Dimension A	mm	77.1	78	79	82	84	86	88	89	93	96	103
	in	3.03	3.07	3.11	3.22	3.22	3.38	3.46	3.50	3.66	3.77	4.05
Dimension C	mm	37.3	38	39	40	41	42	43	44	45	47	50
	in	1.47	1.49	1.53	1.57	1.61	1.65	1.69	1.73	1.77	1.85	1.96
Working pressure	p1	bar	240	250						220		
		psi	3481	3600						3191		
Intermittent pressure	p2	bar	260	270		280				240		
		psi	3771	3900		4061				3481		
Peak pressure	p3	bar	280	290		300				260		
		psi	4061	4206		4300				3771		
Max. speed	rpm	6000									5000	
Min. speed	rpm	700									700	
Weight	rpm	0.95	1.02	1.05	1.08	1.11	1.14	1.17	1.20	1.24	1.30	1.41
	lbs	2.09	2.24	2.31	2.37	2.44	2.50	2.57	2.64	2.72	2.86	3.10

* Type 0.9 - 1.1 and 1.6 are not available as motors

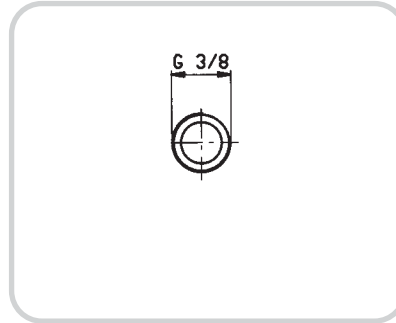


The pump shown is: **1.5PB 3.6S - B18 P0**

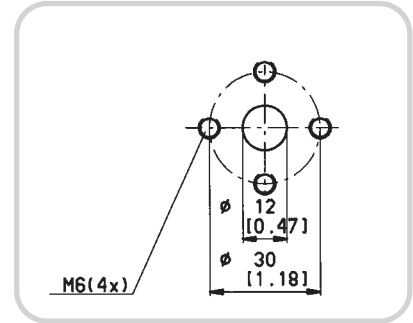
INLET - OUTLET PORTS



code B

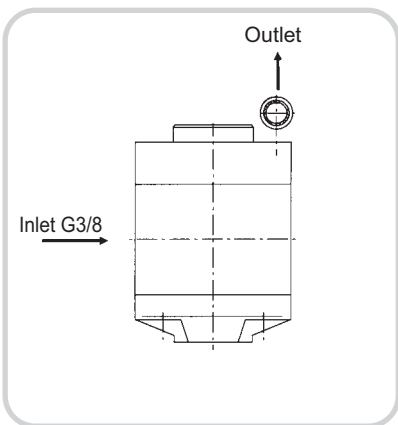


code G

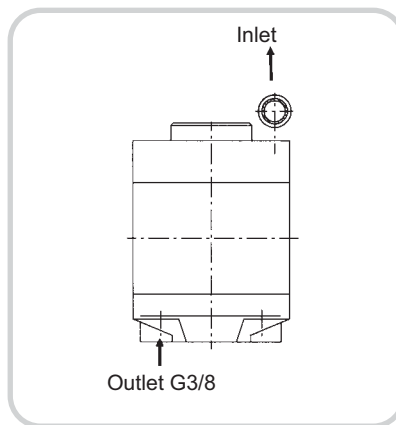


code P

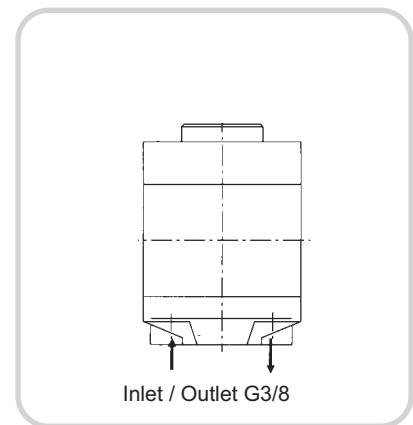
SPECIAL PORTS POSITION



code A

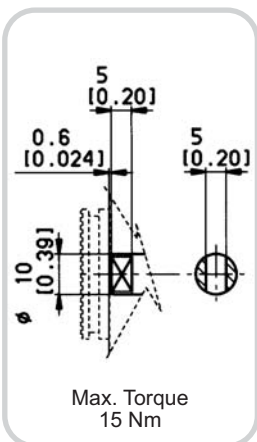


code C

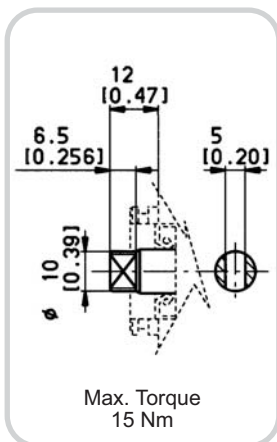


code D

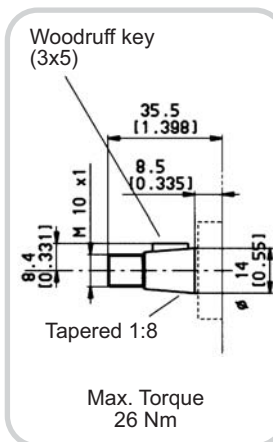
DRIVE SHAFTS



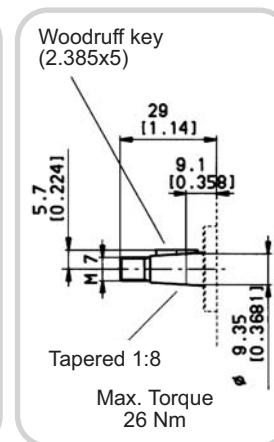
code 00



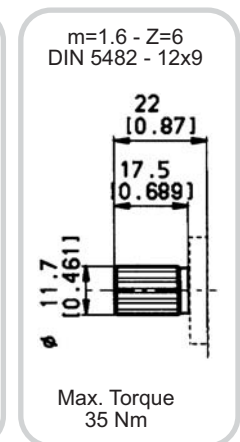
code 06



code 17

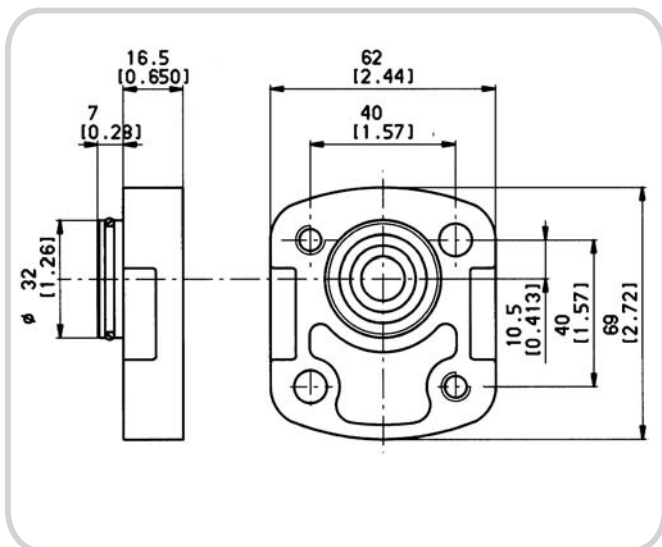


code 18

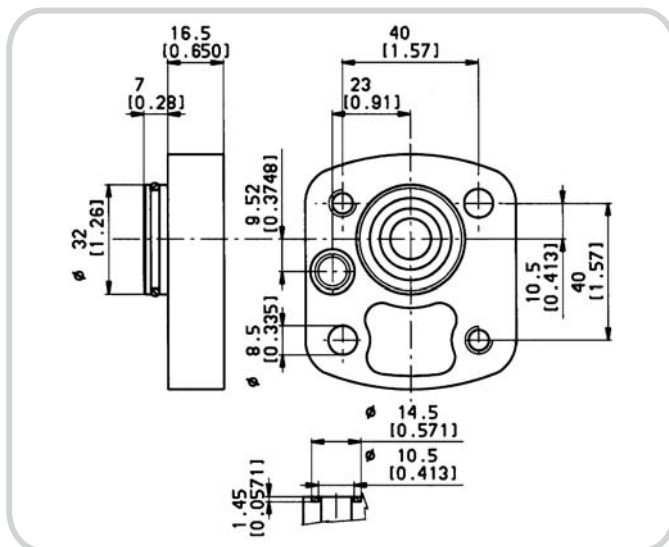


code 50

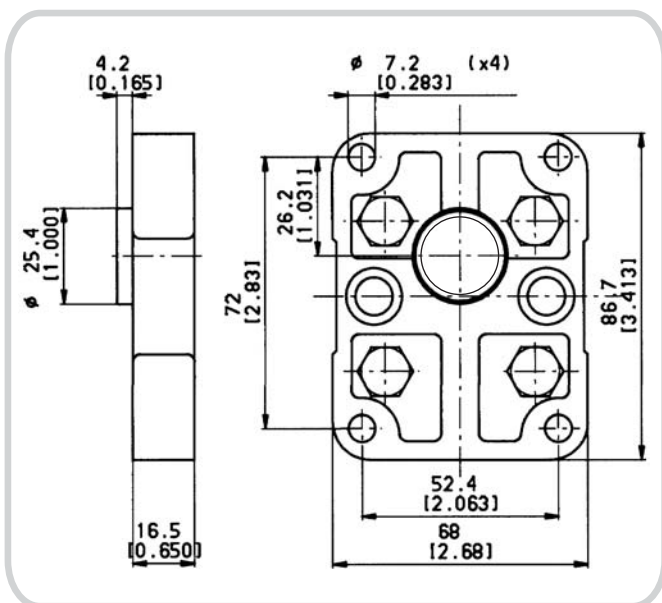
MOUNTING FLANGES



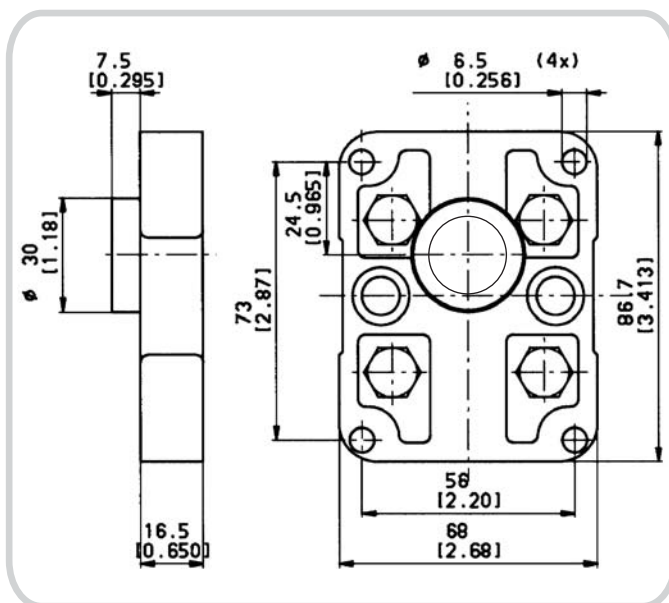
code B0 With shafts code 00-06



code B7 With shaft code 06



code P0 With shaft code 18



code PR Flange with bearing for radial loads only with shaft code 17

1.5P/MB / Group 1

GEAR PUMPS AND MOTORS "B" SERIES

Displacements up to 0.457 cu.in./rev

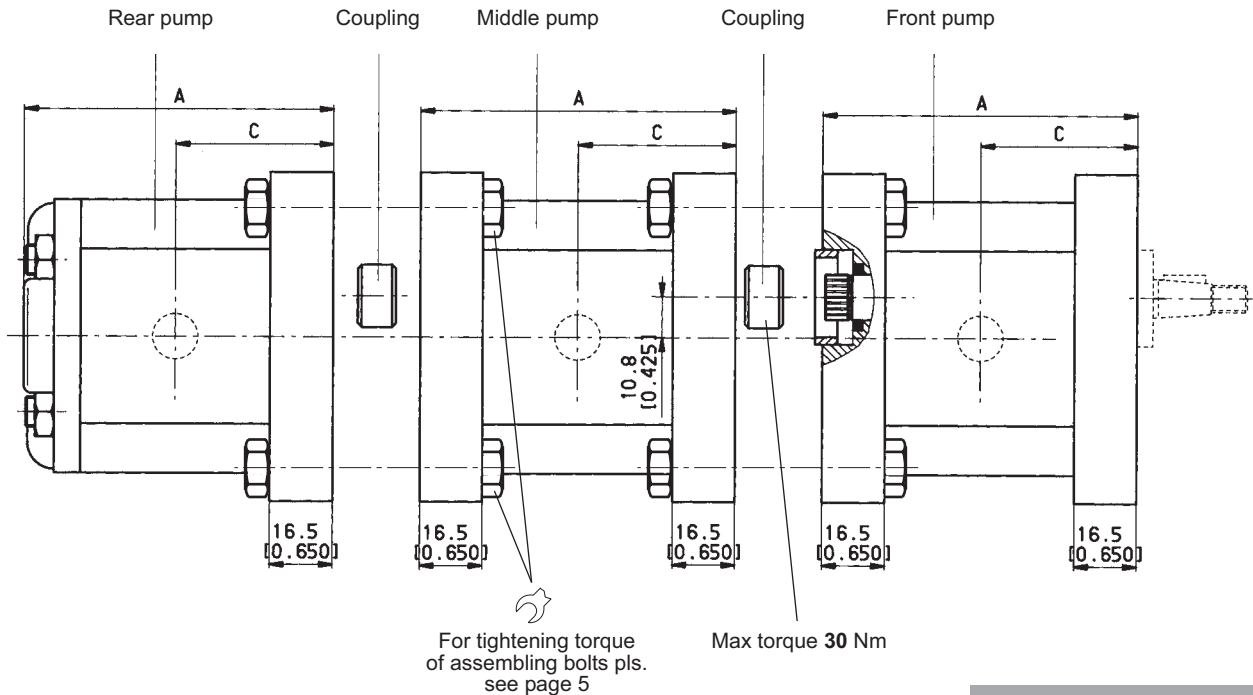
Displacements up to 7.5 cm³/rev



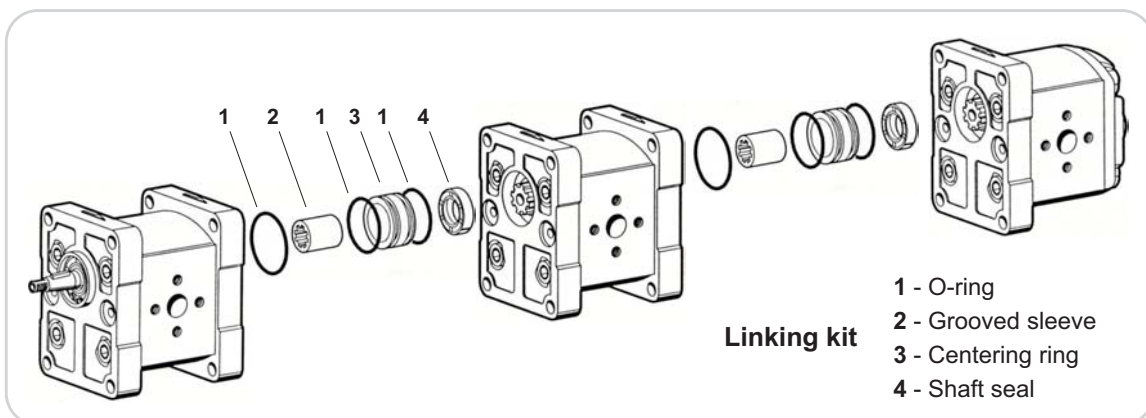
Type		0.9	1.1	1.6	2.1	2.6	3.1	3.6	4.2	4.9	5.8	7.5
Displacements	cm ³ /rev	0.91	1.1	1.5	2.1	2.6	3.1	3.6	4.2	4.9	5.8	7.5
	cu.in./rev	0.05	0.067	0.091	0.128	0.158	0.189	0.219	0.256	0.299	0.354	0.457
Dimension A	mm	77.1	78	79	82	84	86	88	89	93	96	103
	in	3.03	3.07	3.11	3.22	3.22	3.38	3.46	3.50	3.66	3.77	4.05
Dimension C	mm	37.3	38	39	40	41	42	43	44	45	47	50
	in	1.47	1.49	1.53	1.57	1.61	1.65	1.69	1.73	1.77	1.85	1.96
Performance data		See corresponding single pumps										

IMPORTANT:

Single pumps are not pre-arranged for tandem pumps.
Pre-arranged stages can be supplied to build tandem pumps.

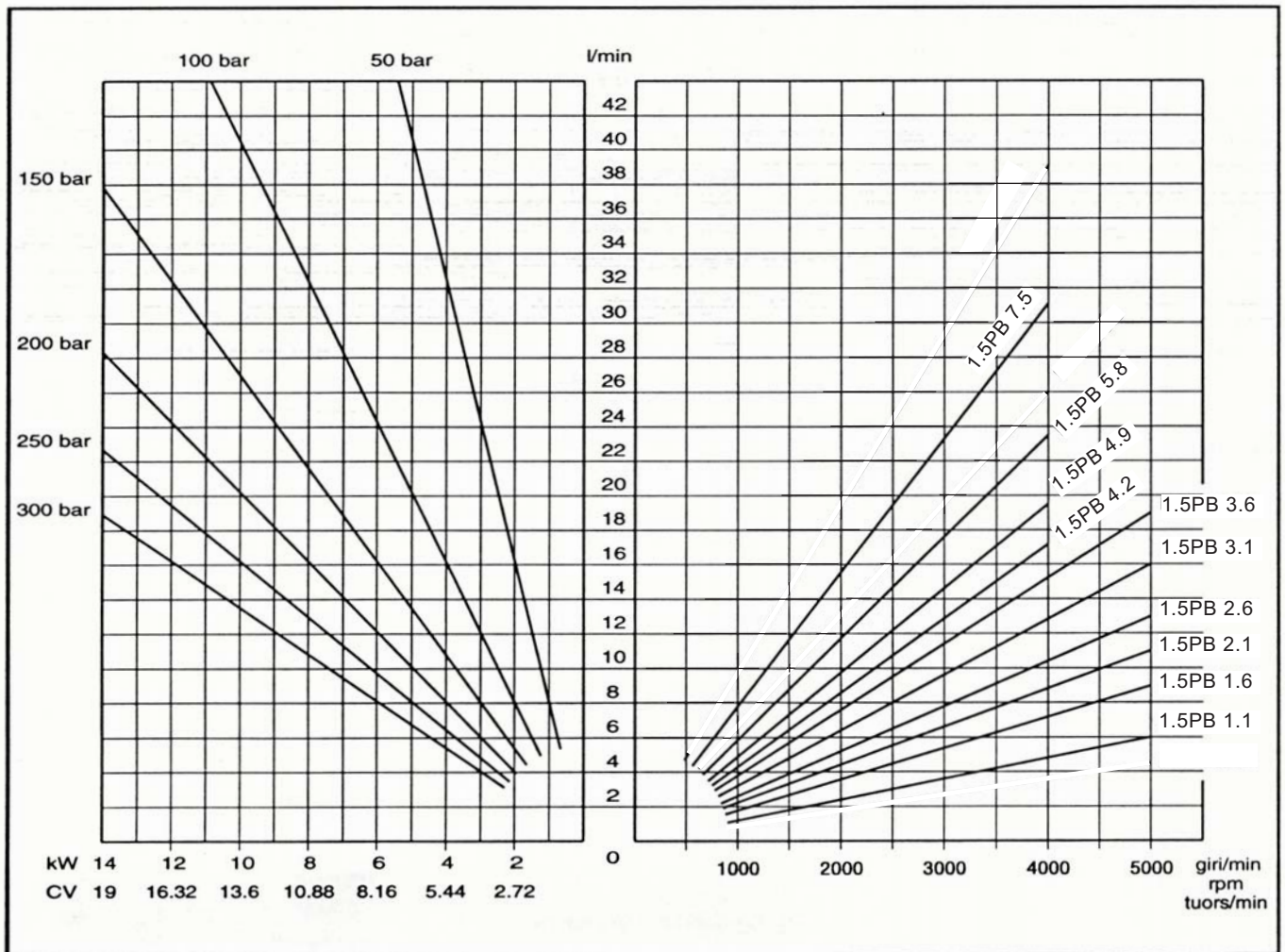


The triple pump shown is: **1.5PB 4.2/2.1/1.6D - P18 P0**

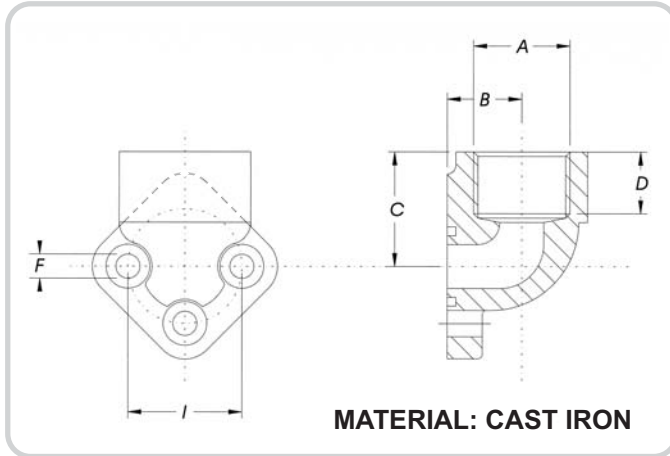


Performance curves carried out with oil viscosity at 20 - 40 cSt and oil temperature at 50°C

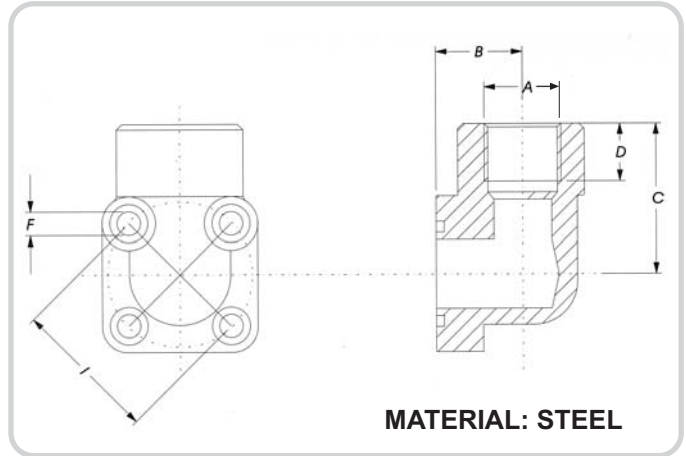
PUMP PERFORMANCE CURVES



PORT CONNECTORS



Type G

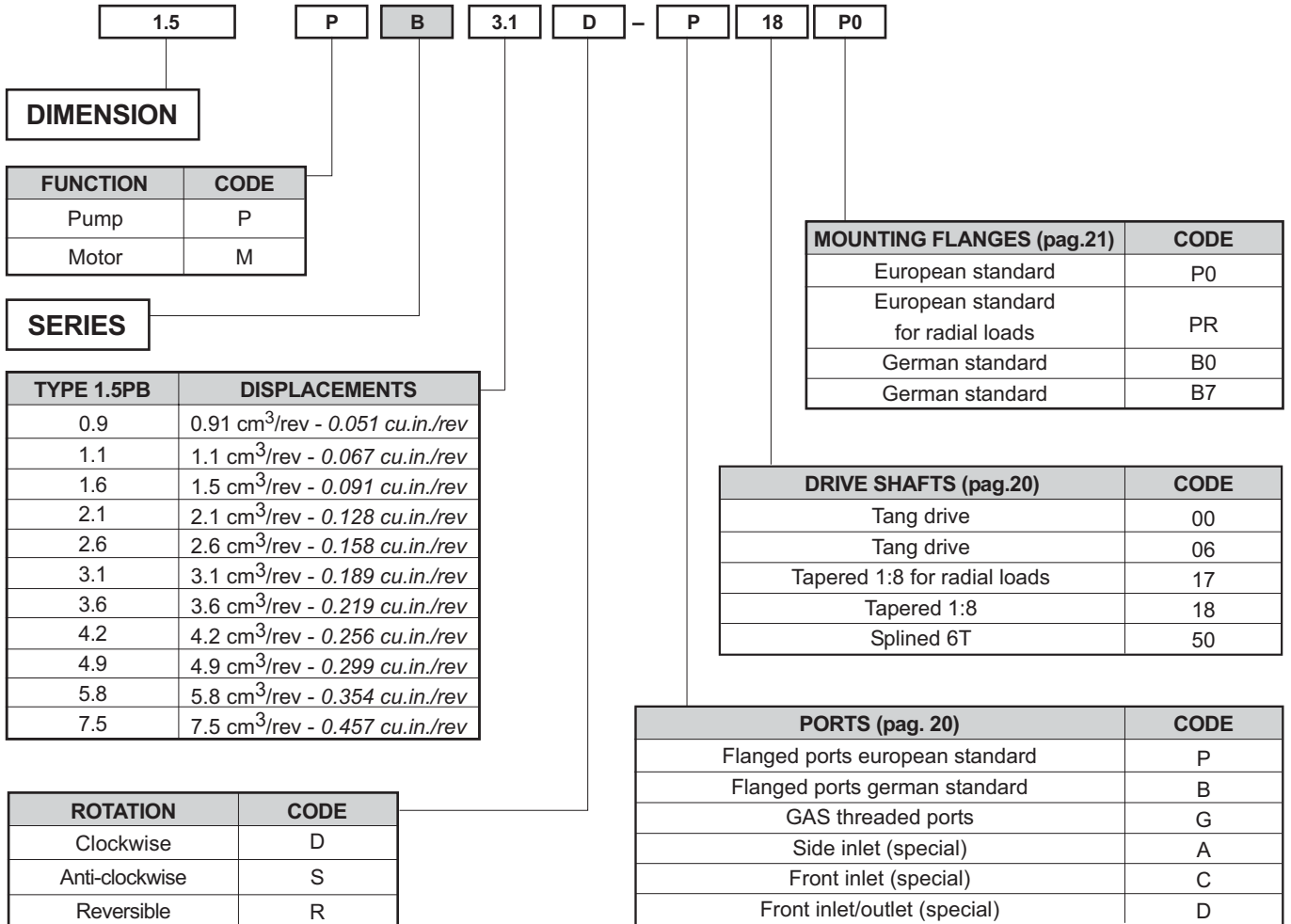


Type GB

AVAILABLE CONNECTORS - DIMENSIONS AND CODE

Type	C	B	I	D	Ø F	Ø A	ORDERING CODE COMPLETE OF SCREW - SPRING WASHER - O RING
1 G/1	26	17.5	30	14	6.5	M18x1.5	4352 7004 0
1 G/2	26	17.5	30	14	6.5	G 3/8	4352 7005 0
1 G/3	26	17.5	30	14	6.5	G 1/2	4352 7006 0
0.5 GB/1	40	18	30	16	6.5	M18x1.5	4352 7000 1
0.5 GB/2	40	18	30	16	6.5	G 3/8	4352 7001 1
0.5 GB/3	40	18	30	16	6.5	G 1/2	4352 7002 1

SINGLE PUMP/MOTOR 1.5PB



DIMENSION

FUNCTION	CODE
Pump	P
Motor	M

SERIES

TYPE 1.5PB	DISPLACEMENTS
0.9	0.91 cm ³ /rev - 0.051 cu.in./rev
1.1	1.1 cm ³ /rev - 0.067 cu.in./rev
1.6	1.5 cm ³ /rev - 0.091 cu.in./rev
2.1	2.1 cm ³ /rev - 0.128 cu.in./rev
2.6	2.6 cm ³ /rev - 0.158 cu.in./rev
3.1	3.1 cm ³ /rev - 0.189 cu.in./rev
3.6	3.6 cm ³ /rev - 0.219 cu.in./rev
4.2	4.2 cm ³ /rev - 0.256 cu.in./rev
4.9	4.9 cm ³ /rev - 0.299 cu.in./rev
5.8	5.8 cm ³ /rev - 0.354 cu.in./rev
7.5	7.5 cm ³ /rev - 0.457 cu.in./rev

ROTATION	CODE
Clockwise	D
Anti-clockwise	S
Reversible	R

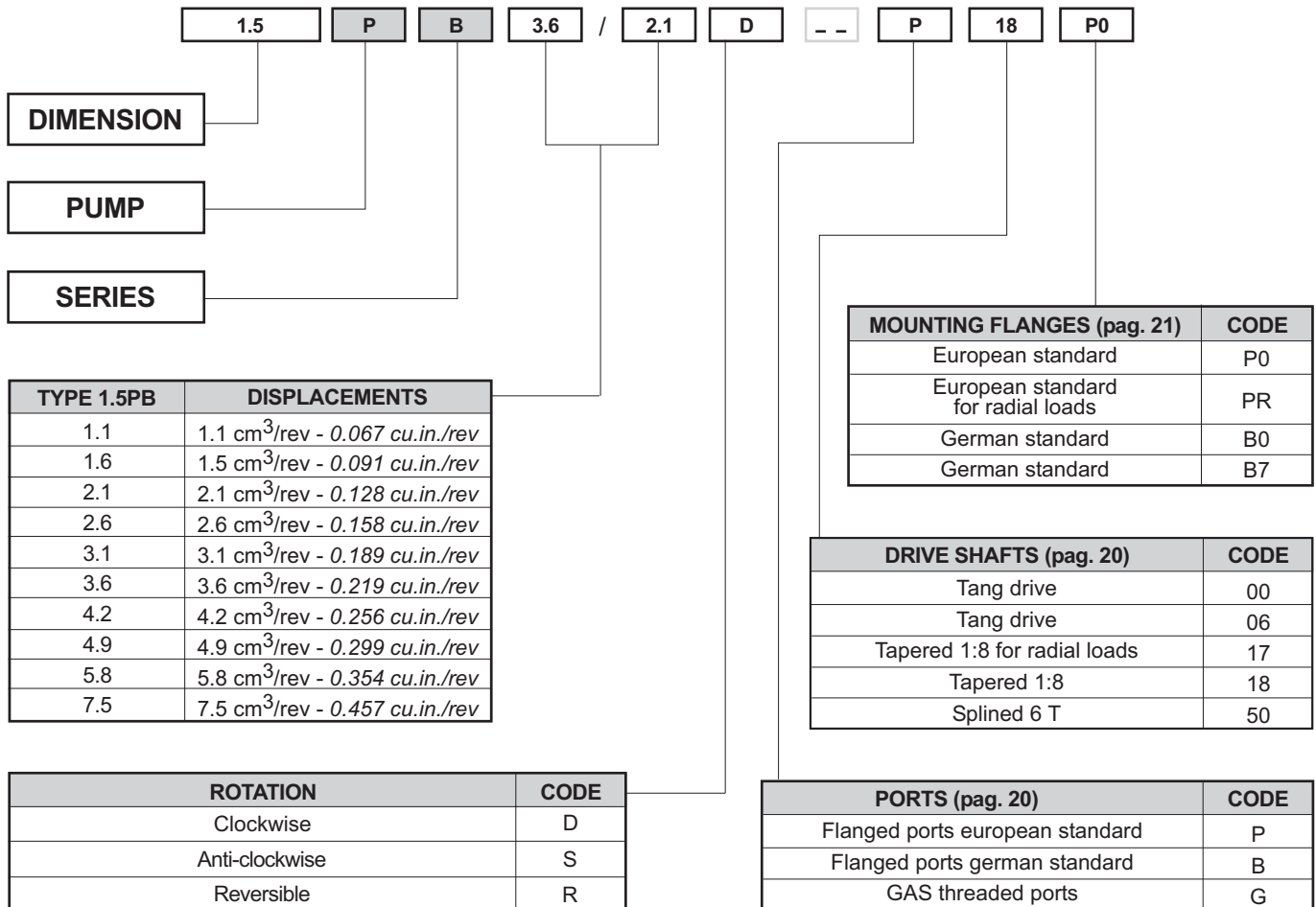
MOUNTING FLANGES (pag.21)	CODE
European standard	P0
European standard for radial loads	PR
German standard	B0
German standard	B7

DRIVE SHAFTS (pag.20)	CODE
Tang drive	00
Tang drive	06
Tapered 1:8 for radial loads	17
Tapered 1:8	18
Splined 6T	50

PORTS (pag. 20)	CODE
Flanged ports european standard	P
Flanged ports german standard	B
GAS threaded ports	G
Side inlet (special)	A
Front inlet (special)	C
Front inlet/outlet (special)	D

Example to order a 1.5PB pump: 1.5PB 4.2D - P18 P0

MULTIPLE PUMPS 1.5PB



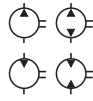
Example to order a triple pump: 1.5PB 5.8/4.2/2.1D - P18 P0



Displacements up to 0.369 cu.in./rev
Pressure up to 4300 psi

SAE version

Displacements up to 6.1 cm³/rev
Pressure up to 300 bar



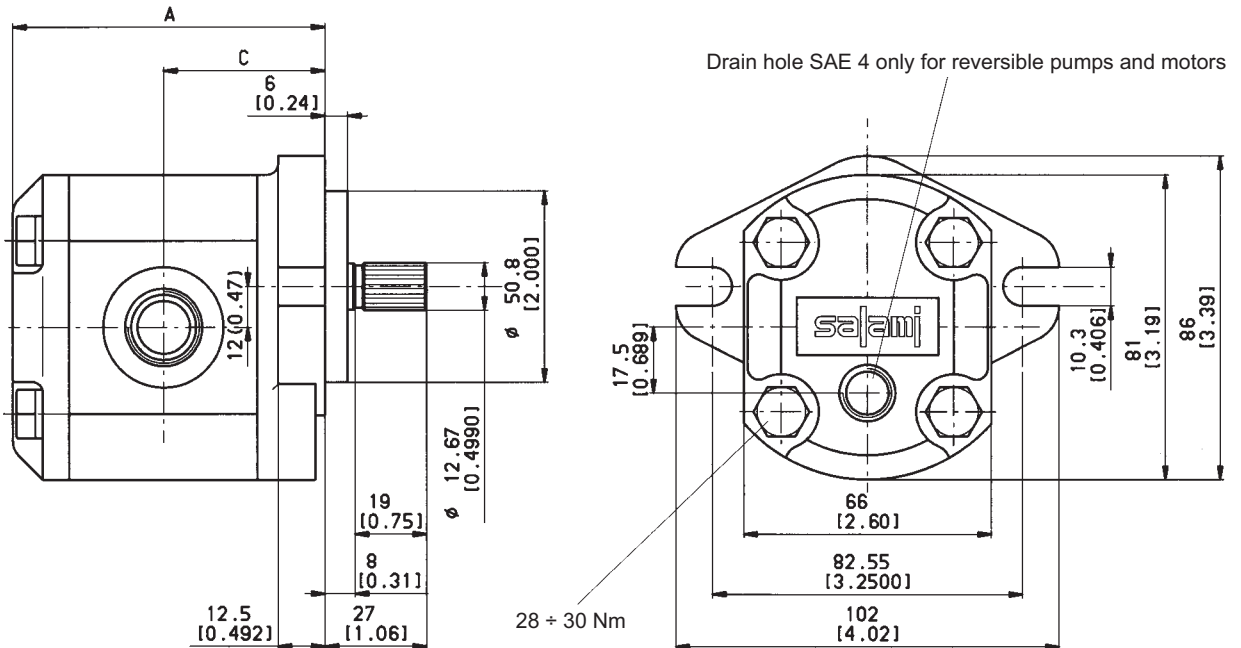
**Gear pumps
and motors**

1.6PB single pump are not pre-arranged for tandem pumps

ASSEMBLING DIMENSIONS AND VALUES OF PRESSURE AND SPEED

Type		1.4	2.1	2.8	3.5*	4.1	5.2*	6.1
Displacements	cm ³ /rev cu.in./rev	1.33 0.081	2.06 0.126	2.73 0.166	3.4 0.200	4.06 0.248	5.15 0.317	6.06 0.369
Dimension A	mm in	82 3.23			88 3.46		94 3.70	
Dimension C	mm in	42 1.65			45 1.77		48 1.89	
Working pressure	p1 bar psi	250 3600			230 3300		210 3000	
Intermittent pressure	p2 bar psi	280 4000			250 3600		230 3300	
Peak pressure	p3 bar psi	300 4300			280 4000		260 3750	
Max. speed	rpm	6000		5000		4000		
Min. speed	rpm	500						
Weight	rpm lbs	1.02 2.25	1.05 2.30	1.08 2.40	1.11 2.45	1.14 2.50	1.17 2.60	1.20 2.65

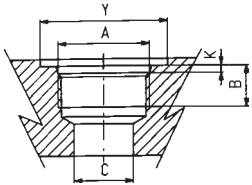
* Type 3,5 and 5,2 available on request



The pump shown is: **1.6pB 4.1S - R51S0**

Pump 1,6PB4,1S with body code "R", shaft code 51, flange code S0

THREADED PORTS

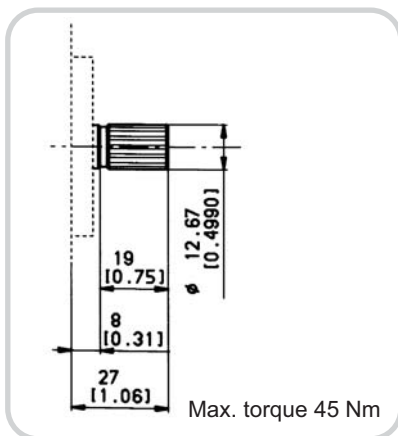


code R

Type	INLET					OUTLET				
	A	B	C	Y	K	A	B	C	Y	K
1.4	3/4-16 UNF (SAE 8)	14.5 (0.56")	12 (0.46")	30 (1.17")	2.5 (0.09")	9/16-18 UNF (SAE 6)	13 (0.50")	9 (0.35")	25 (0.97")	2.5 (0.09")
2.1										
2.8										
3.5										
4.1										
5.2										
6.1										

Inlet SAE 8 - Outlet SAE 8 (for reversible pumps and motors)

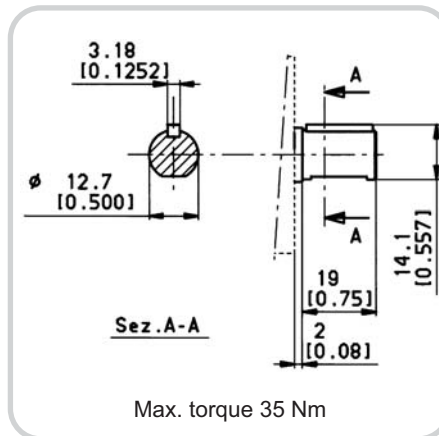
DRIVE SHAFTS



Max. torque 45 Nm

code 51

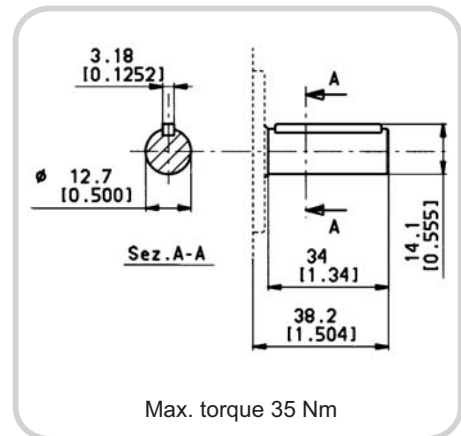
SAE A 9T-20/40DP
Ansi B92 1a 1976



Max. torque 35 Nm

code 80

SAE "AA" parallel

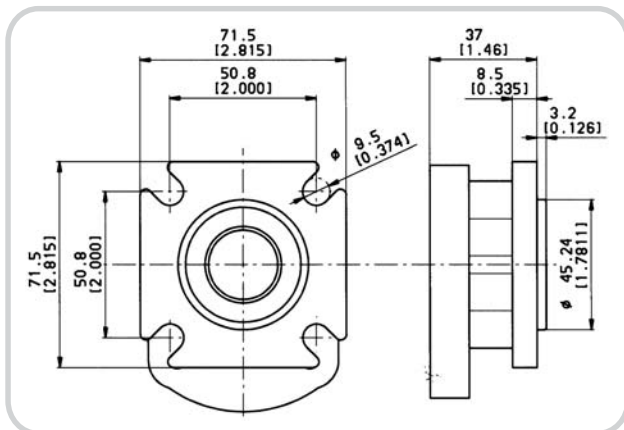


Max. torque 35 Nm

code 83

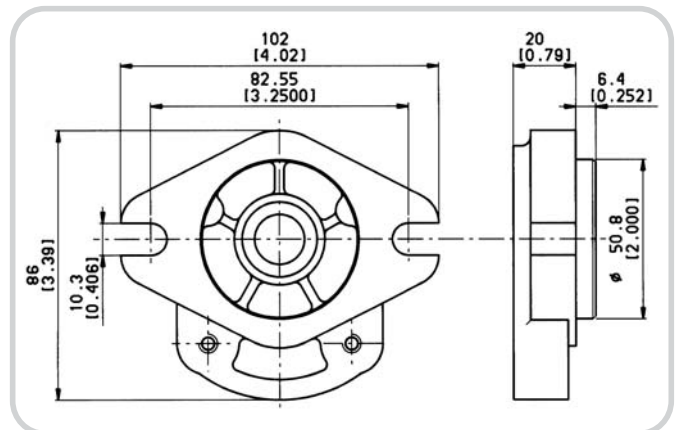
Only with flange S1

MOUNTING FLANGES



code S1

4 bolts SAE "AA" flange
only with shaft code 83



code S0

2 bolts SAE "AA" flange
with shafts code 51-80

Displacements up to 0.369 cu.in./rev

SAE version

Displacements up to 6.1 cm³/rev

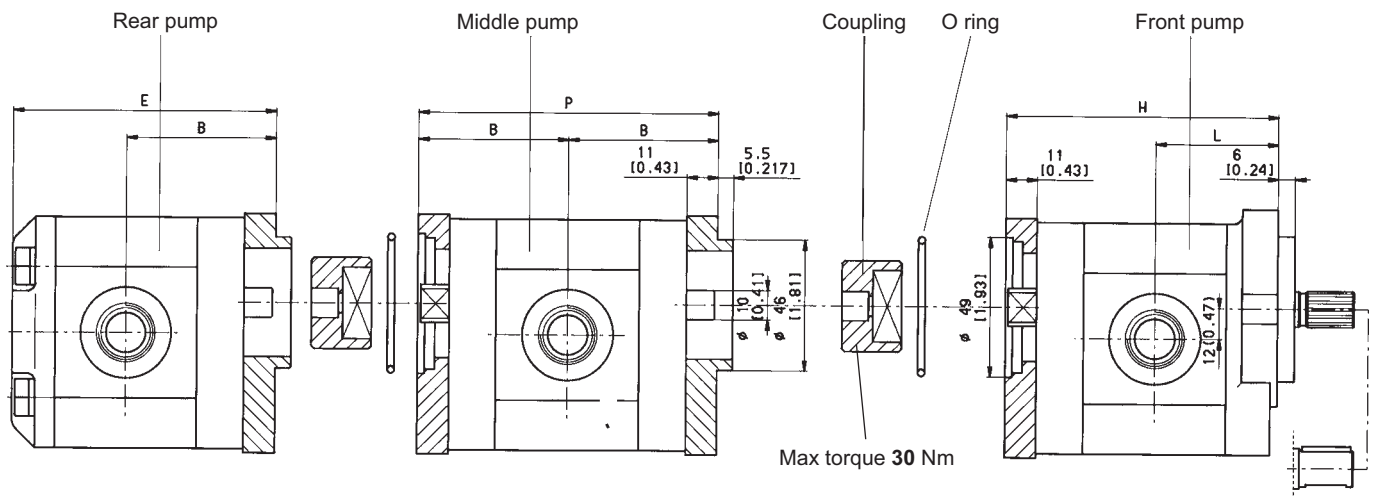


Type		1.4	2.1	2.8	3.5	4.1	5.2	6.1
Displacements	cm ³ /rev	1.33	2.06	2.73	3.4	4.06	5.15	6.06
	cu.in./rev	0.081	0.126	0.166	0.200	0.248	0.317	0.369
Dimension H	mm	86	88	90	92	94	97	100
	in	3.39	3.46	3.54	3.62	3.70	3.81	3.93
Dimension L	mm	40	41	42	43	44	45.5	47
	in	1.57	1.61	1.65	1.69	1.73	1.80	1.85
Dimension P	mm	92	94	96	98	100	103	106
	in	3.62	3.70	3.77	3.85	3.93	4.05	4.17
Dimension B	mm	46	47	48	49	50	51.5	53
	in	1.81	1.85	1.88	1.92	1.96	2.02	2.08
Dimension E	mm	84	86	88	90	92	95	98
	in	3.30	3.39	3.46	3.54	3.62	3.74	3.85
Performance data		See corresponding single pump						

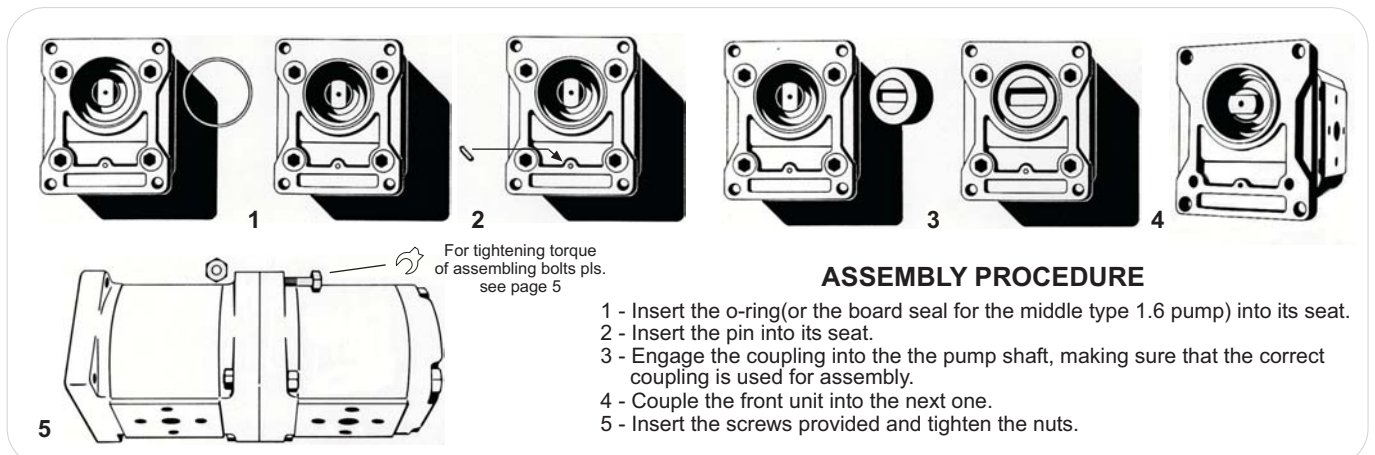
Multiple 1.6PB are available on request

IMPORTANT:

Single pumps are not pre-arranged for tandem pumps.
Pre-arranged stages can be supplied to build tandem pumps.



The triple pump shown is: **1.6PB 6.1/4.1/2.8D - R51 S0** Body code R, shaft code 51 and flange code S0



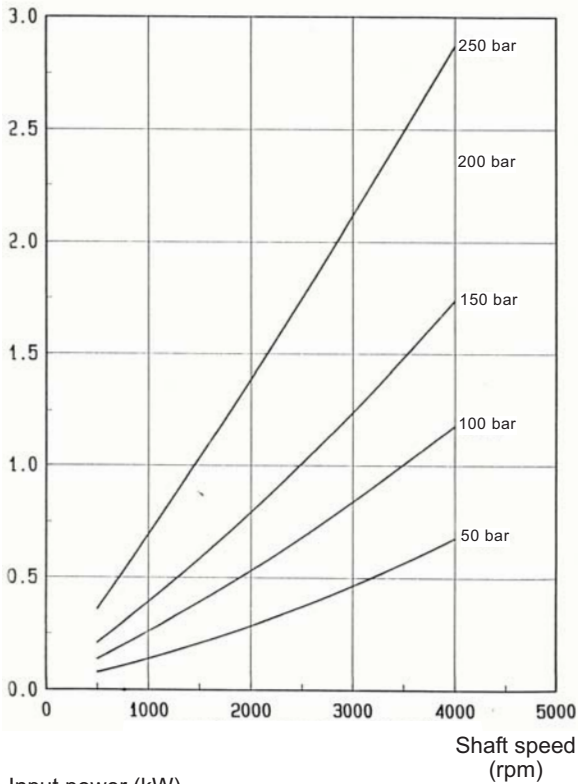
ASSEMBLY PROCEDURE

- 1 - Insert the o-ring (or the board seal for the middle type 1.6 pump) into its seat.
- 2 - Insert the pin into its seat.
- 3 - Engage the coupling into the the pump shaft, making sure that the correct coupling is used for assembly.
- 4 - Couple the front unit into the next one.
- 5 - Insert the screws provided and tighten the nuts.

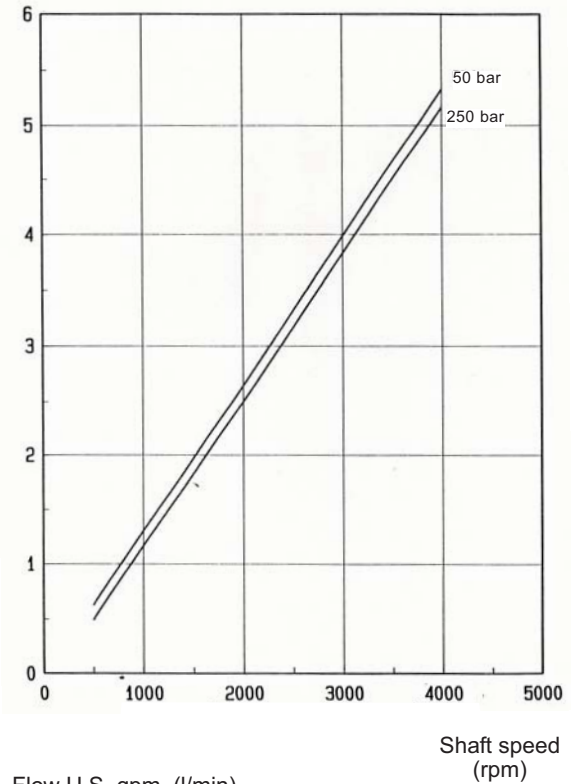
Performance curves carried out with oil viscosity at 28 cSt and oil temperature at 50°C

PUMP PERFORMANCE CURVES

Input power (kW)

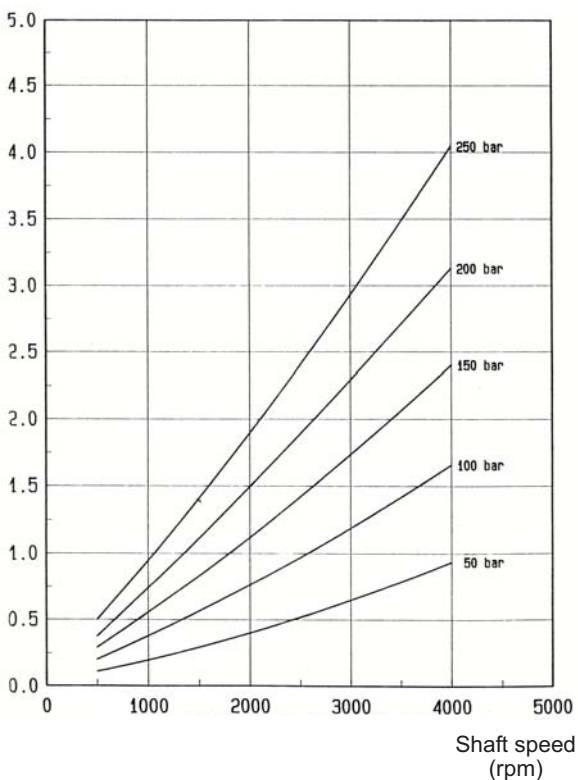


Flow U.S. gpm (l/min)

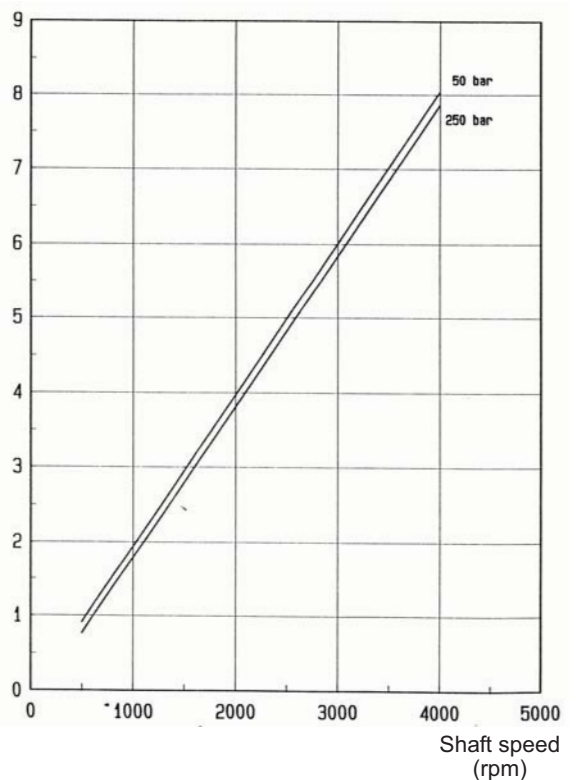


1.6PB 1.4

Input power (kW)



Flow U.S. gpm (l/min)



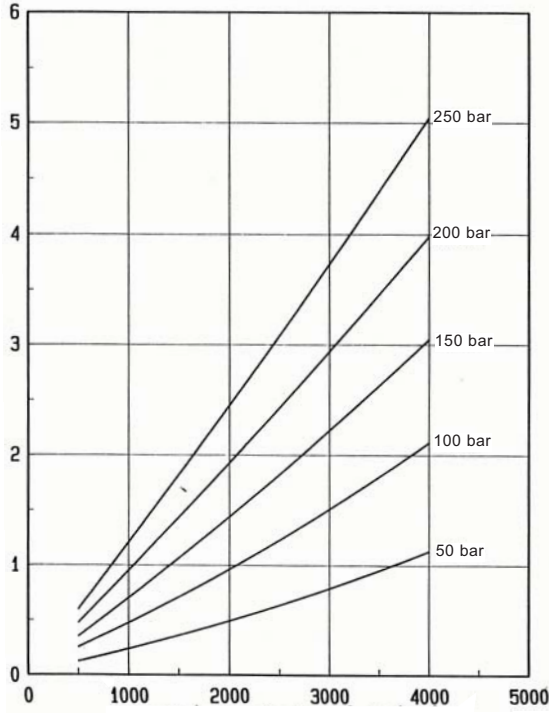
1.6PB 2.1

GEAR PUMPS AND MOTORS "B" SERIES

1.6P/MB / Group 1

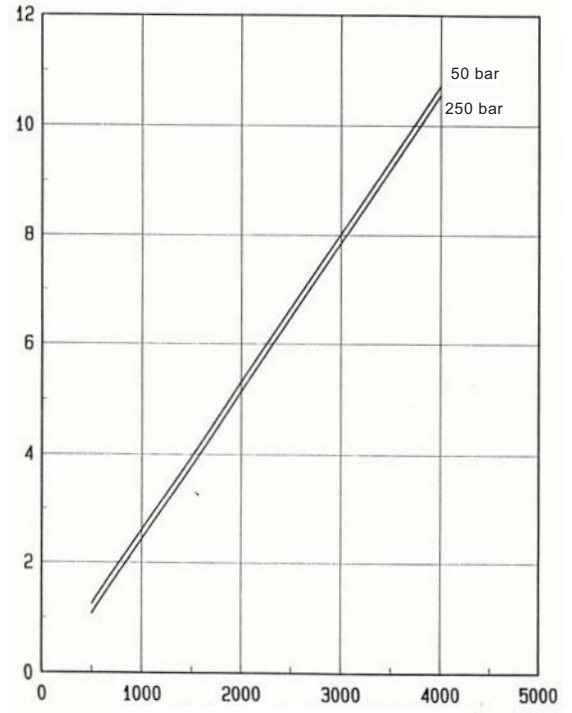
Performance curves carried out with oil viscosity at 28 cSt and oil temperature at 50°C

Input power (kW)

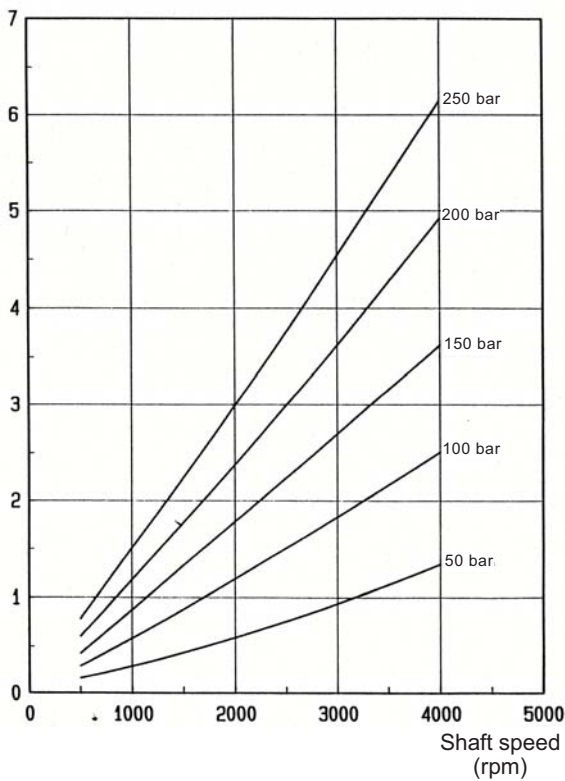


1.6PB 2.8

Flow U.S. gpm (l/min)

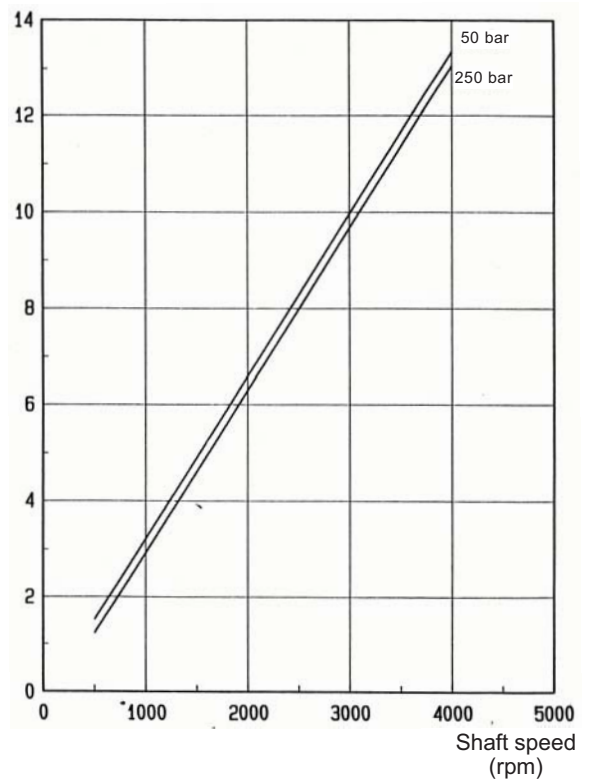


Input power (kW)

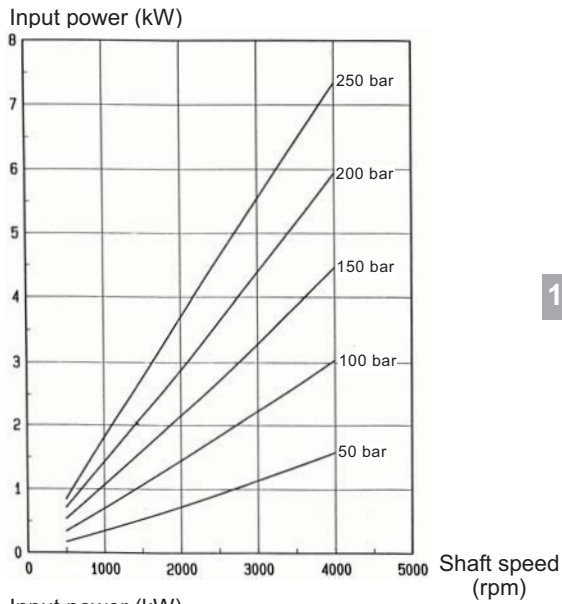


1.6PB 3.5

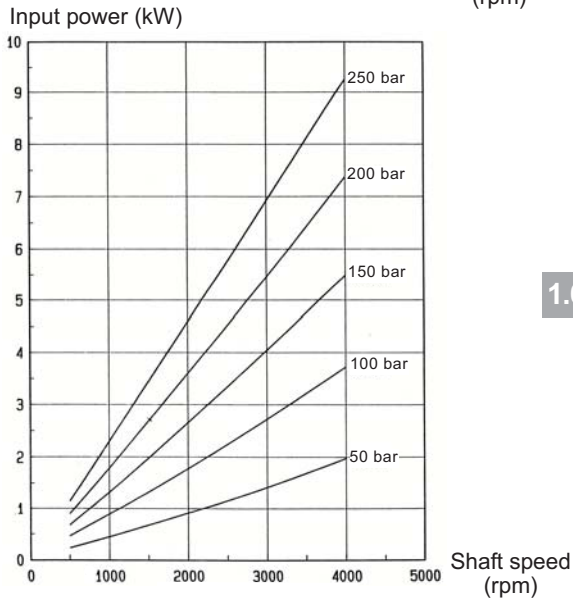
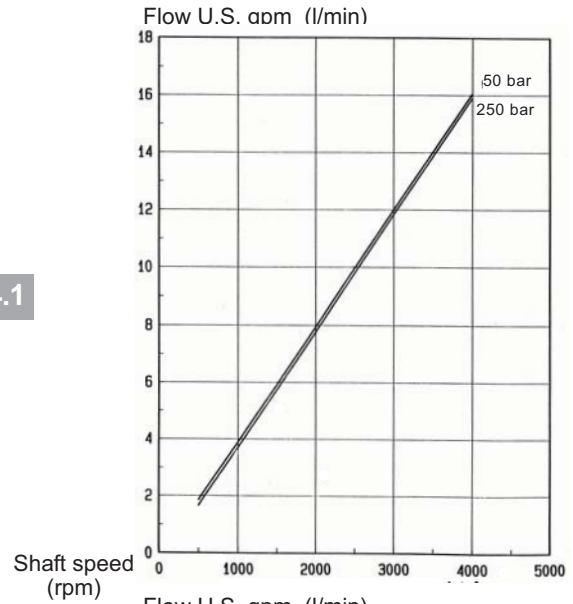
Flow U.S. gpm (l/min)



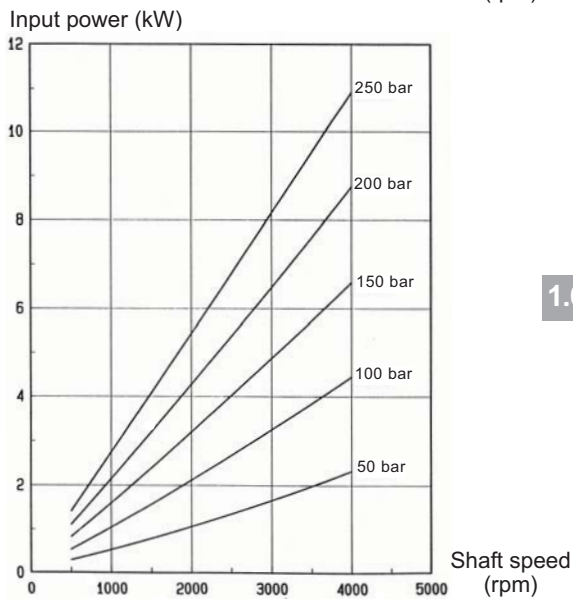
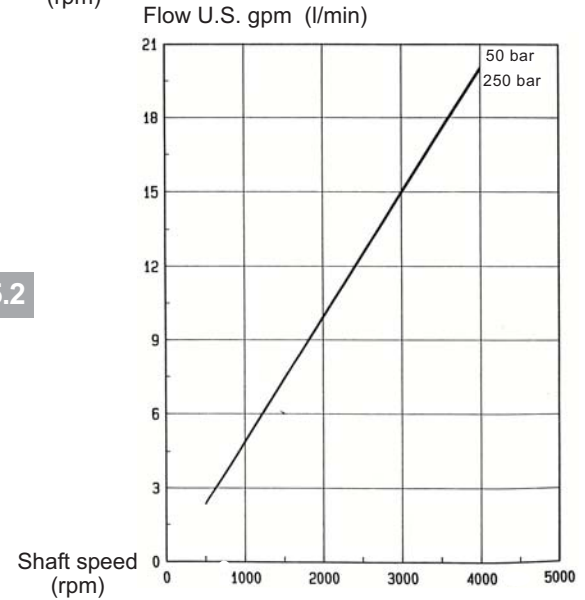
Performance curves carried out with oil viscosity at 28 cSt and oil temperature at 50°C



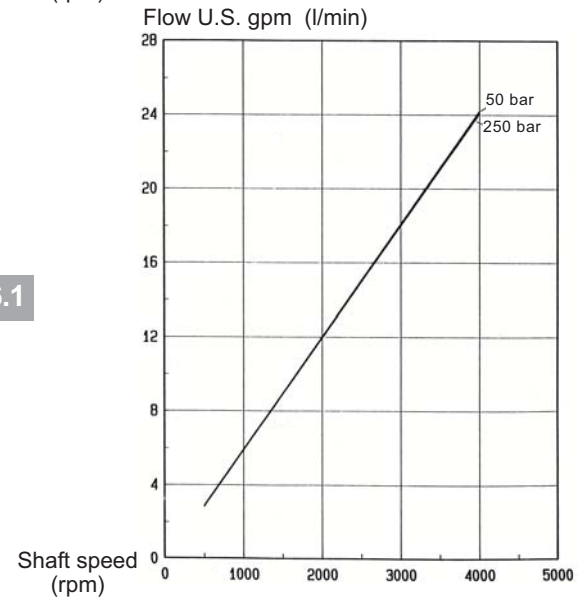
1.6PB 4.1



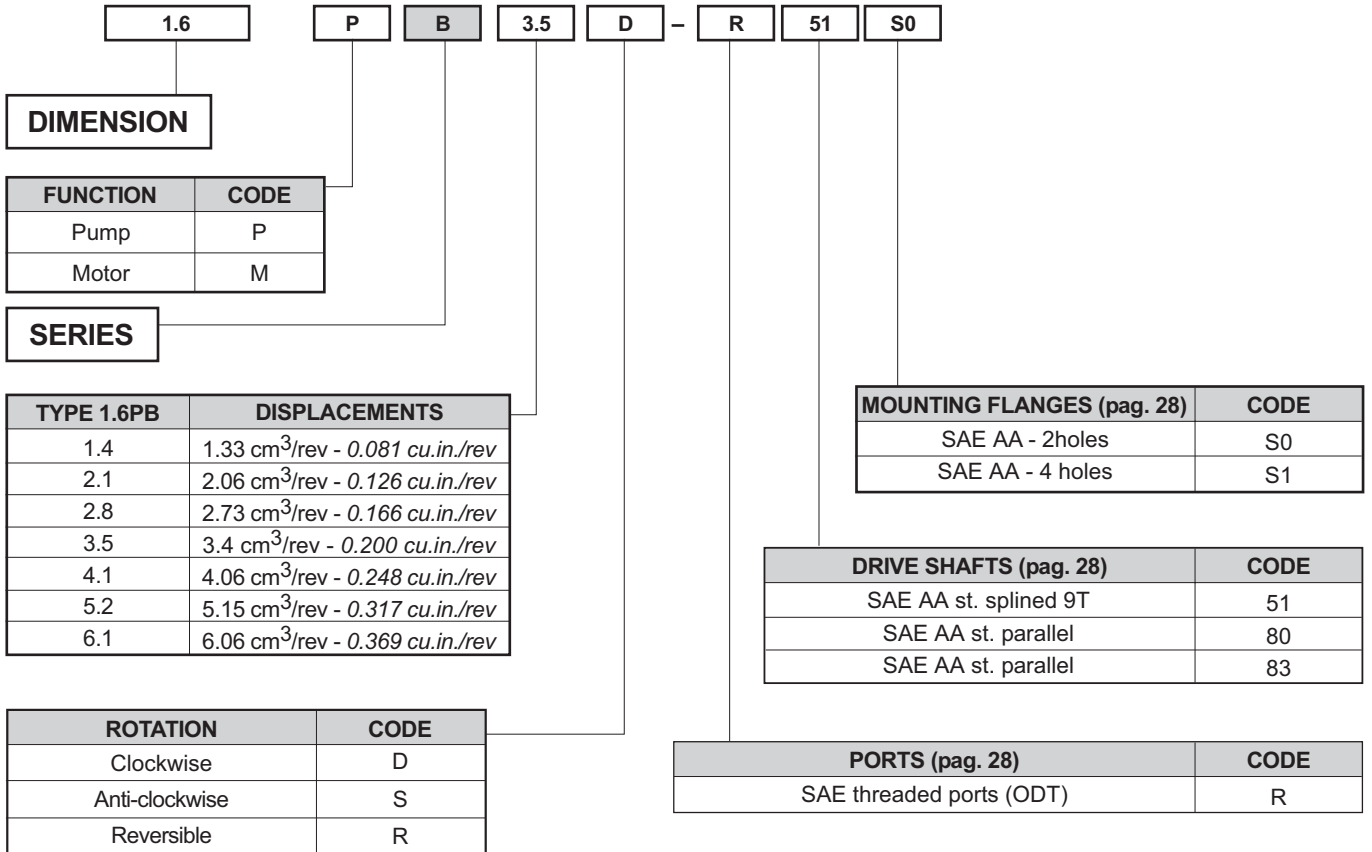
1.6PB 5.2



1.6PB 6.1

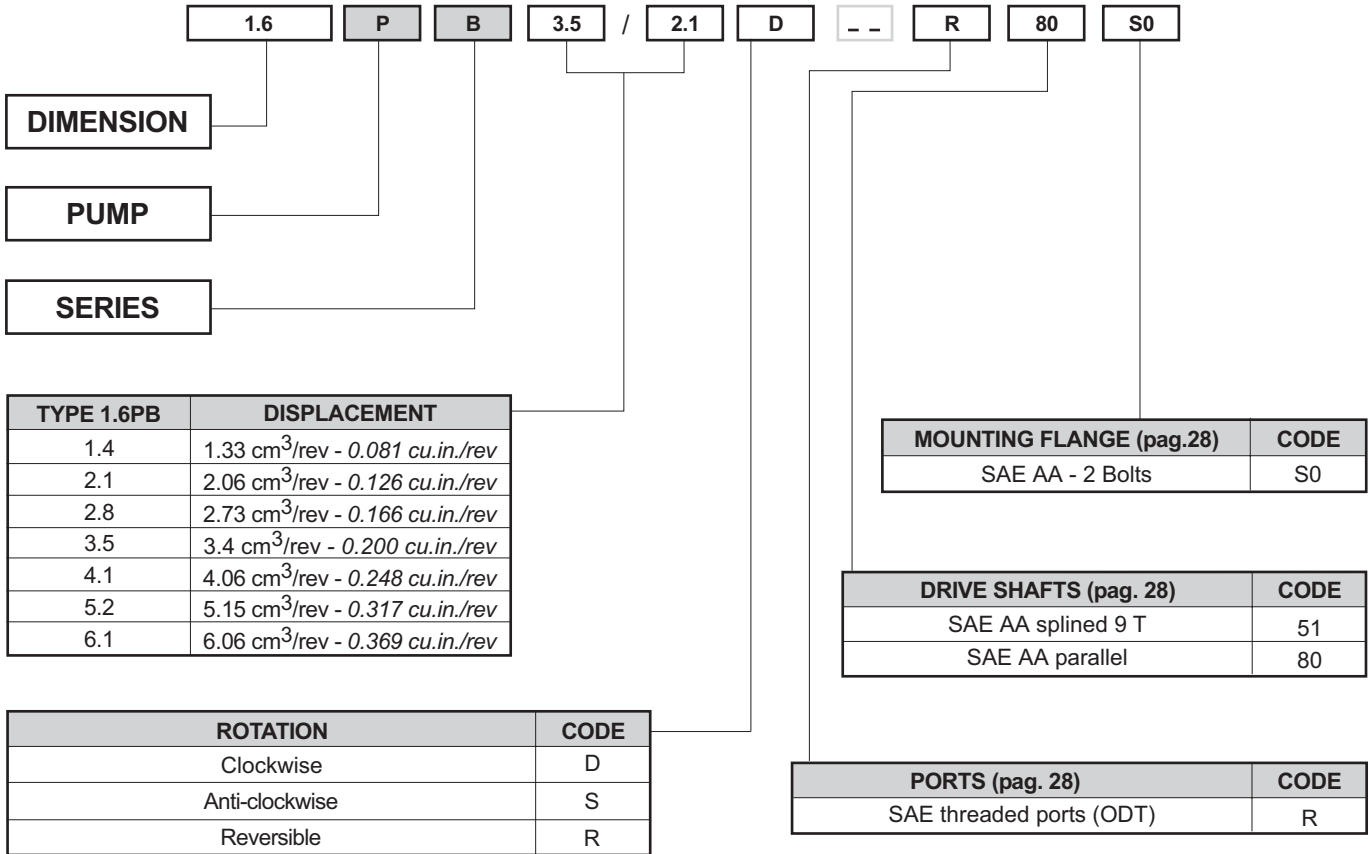


SINGLE PUMP/MOTOR 1.6PB



Example to order a 1.6PB pump: 1.5PB 3.5D - R51S0

MULTIPLE PUMPS 1.6PB



1.6PB multiple pump is available only with drive shafts codes 51 - 80 and flange code S0

Example to order a triple pump: 1.6PB 5.2/4.1/2.1D - R80S0

WARRANTY

- We warrant products sold by us to be free from defects in material and workmanship.
- Our sole obligation to buyer under this warranty is the repair or replacement, at our option, of any products or parts thereof which, under normal use and proper maintenance, have proven defective in material or workmanship, this warranty does not cover ordinary wear and tear, abuse, misuse, overloading, alteration.
- No claims under this warranty will be valid unless buyer notifies SALAMI in writing within a reasonable time of the buyer's discovery of such defects, but in no event later than twelve (12) months from date of shipment to buyer.
- Our obligation under this warranty shall not include any transportation charges or cost of installation, replacement, field repair, or other charges related to returning products to us; or any liability for direct, indirect or consequential damage or delay. If requested by us, products or parts for which a warranty claim is made are to be returned transportation prepaid to our factory. The risk of loss of any products or parts thereof returned to SALAMI will be on buyer.
- No employee or representative is authorized to change any warranty in any way or grant any other warranty unless such change is made in writing and signed by an officer of SALAMI.



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