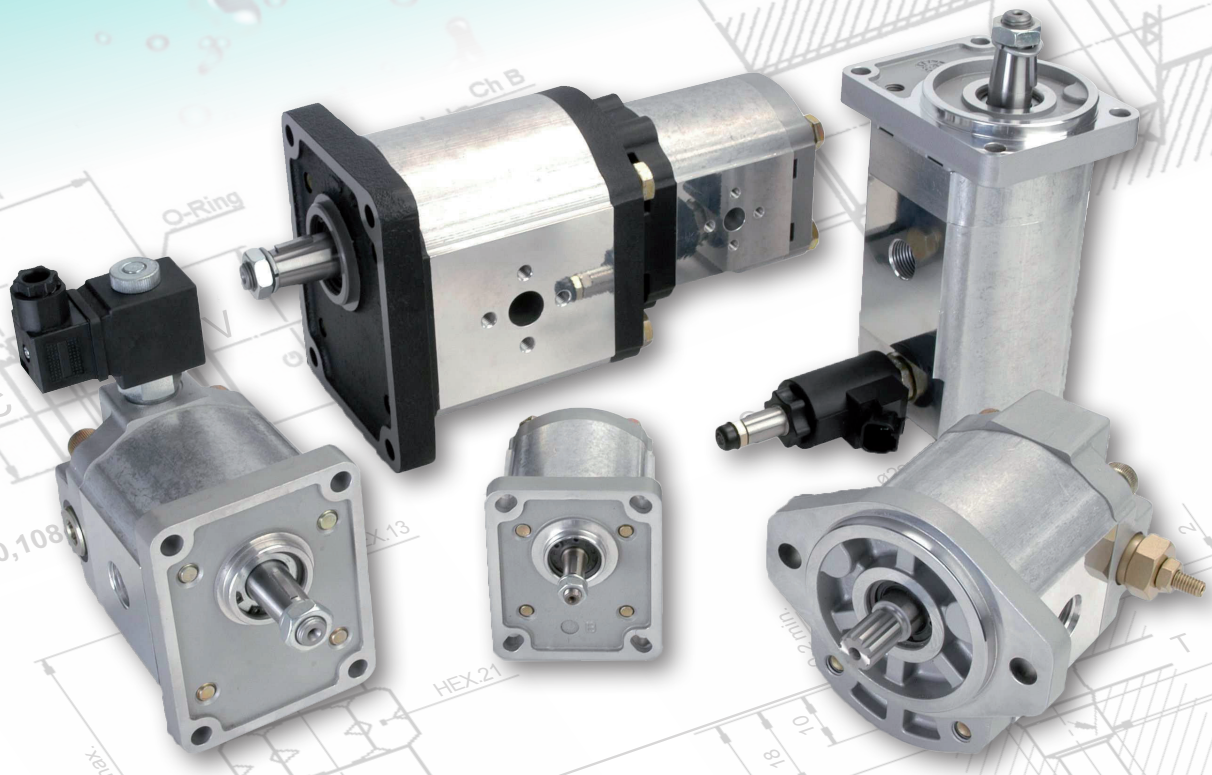
FER HYDRAULIK

COMPONENTI OLEODINAMICI



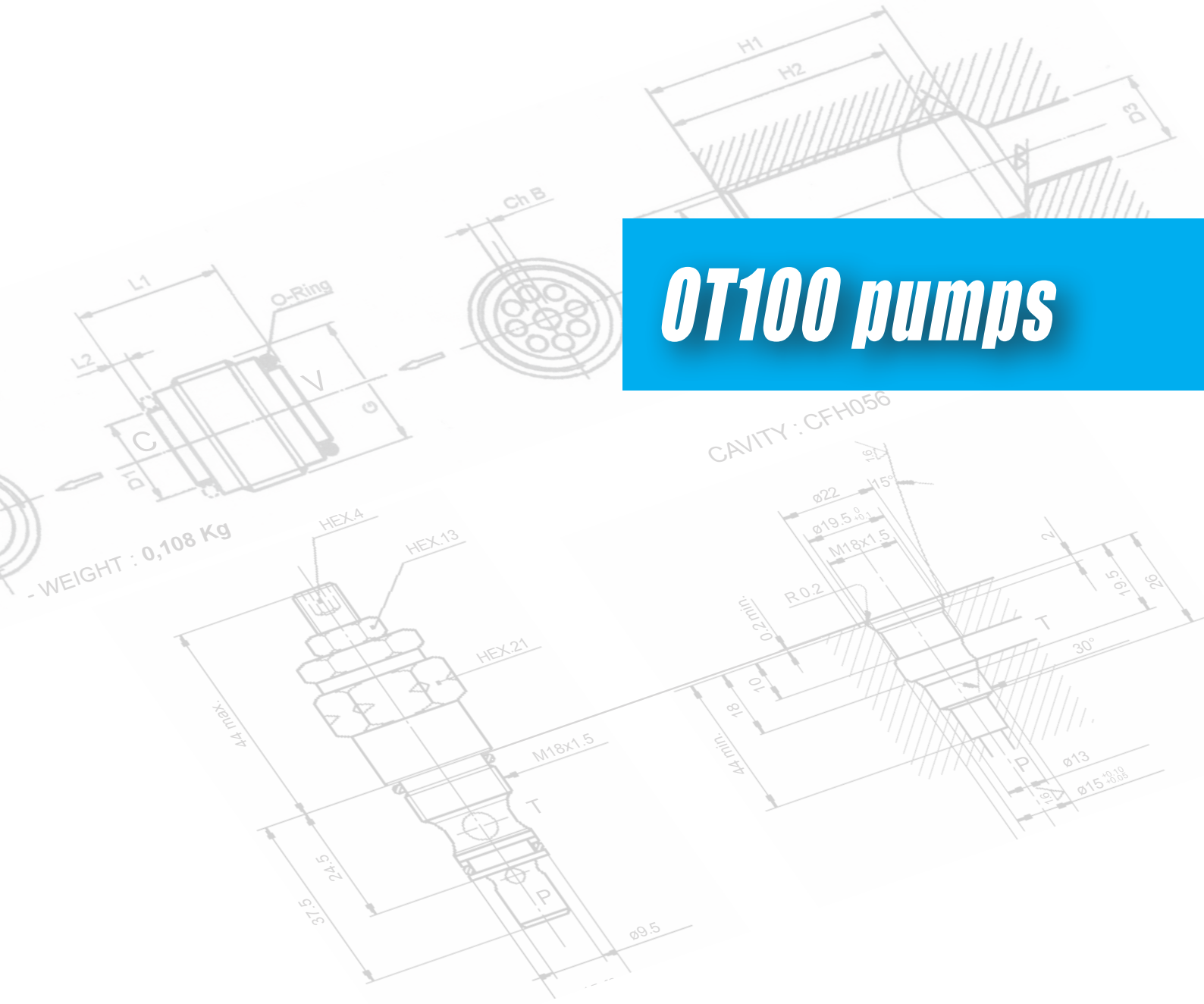
GEAR PUMPS AND MOTORS CATALOGUE

INDEX

Ch A

FER HYDRAULIK
COMPONENTI OLEODINAMICI

OT100 pumps



GROUP 1 PUMPS

GEAR HOUSING

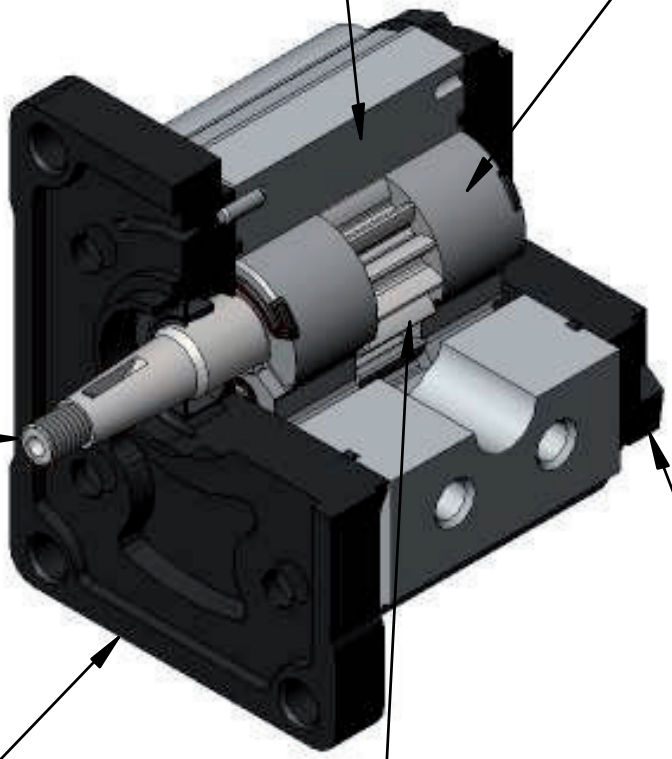
Extruded in aluminium alloy

DRIVE SHAFTS

Choice of several standard drive shafts

BEARINGS

Hi-resistant aluminium alloy with DU sleeve bearings to offer high performances.



MOUNTING FLANGES

Choice of several mounting flanges in cast iron

GEARS

Designed specifically to reduce the noise level and offer the best performance between flow pulsation and displacements

COVER

Made in cast iron material and available with suction port

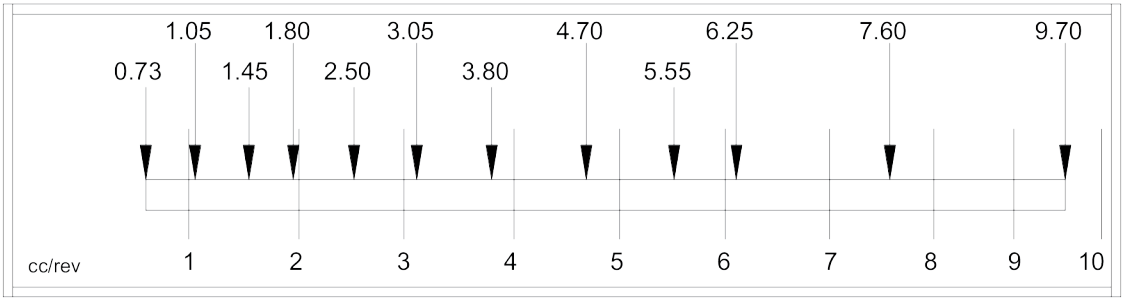
CONSTRUCTIVE CHARACTERISTICS:

PART	MATERIAL	CHARACTERISTICS
GEARS	**Hardened steel UNI 7846**	**Rs= 1250 N/mm²** **Rm= 1450 N/mm²**
FLANGE AND COVER	**G25 / G30 cast iron**	**Rs= 300 N/mm²** **Rm= 450 N/mm²**
BEARINGS	**Sical 3** **Bearings with DU**	**Rs= 350 N/mm²** **Rm= 390 N/mm²**
BODY	**Etruded in aluminium alloy** **Series 7020**	**Rs= 350 N/mm²** **Rm= 390 N/mm²**
O-RINGS	**Buna N** **Viton**	**90 Shore, up to 90°C** **80 Shore, for high temperature**
ANTIEXTRUSION	**Zitel**	**With glass fibres**

Rs= Enervation load
Rm= Breaking load

GENERAL CHARACTERISTICS:

Maximum pressures up to 300 bar
Weight : from 0.9 Kg to 1.6 kg
Maximum speed up to 5.000 rpm
Type of shafts: **Taper 1:8**
Oldham
Slined DIN 5482
SAE AA
Keyed
Type of flanges: **European standard**
Standard for power units
SAE AA standard
Displacements from 0.73 cc/rev to 9.9 cc/rev
The displacements are available according this table:



There is also available a special version with built-in support and a bigger taper 1:8 shaft (diameter Ø14) for 9.9 cc/rev pump.
In the range there are tandem pumps with unloading valve in the back cover and pumps with built in maximum pressure relief valve (with internal or external drain)

DRIVE:

The connection of the pump to the motor must be done preferably with the use of a flexible coupling to avoid any radial and/or axial force on the shaft, otherwise pump efficiency will dramatically drop due to early wear of inner moving parts.
In any applications where the motion is trasmitted through belts, it is necessary to use a support to avoid any radial or axial load to the pump shaft.
In any applications where are used splined shafts ot Oldham couplings, it is suggested to assure a costant lubrification through grease or similar products.

WORKING CONDITIONS- LIMIT PERFORMANCES

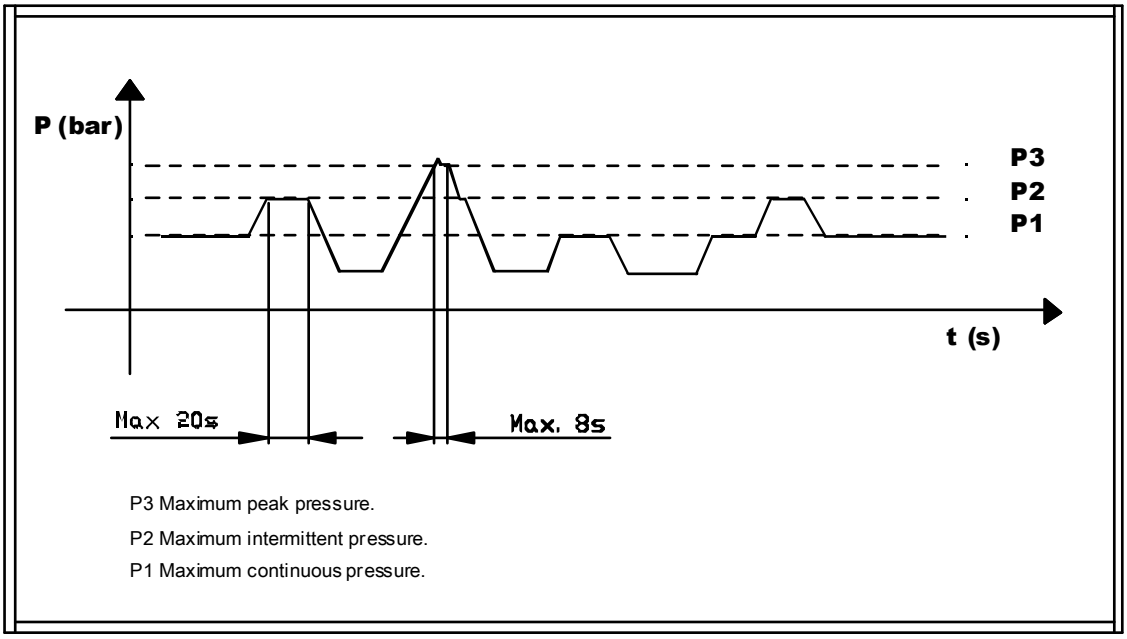
In normal working conditions there must be, in the suction pipe, a pressure lower than the atmospheric pressure.

The pressure range in suction must be:

Min. 0.75 bar (absolute)	Max 2,0 bar (absolute)

The maximun pressure values "P1" are referred to a continuous working at 1500 rpm with standard hydraulic fluids with minimum viscosity of 10 cSt.
For heavier working conditions (viscosity or high temperature) it is necessary to reduce the "P1" values.

In the following table are described the admitted pressures:

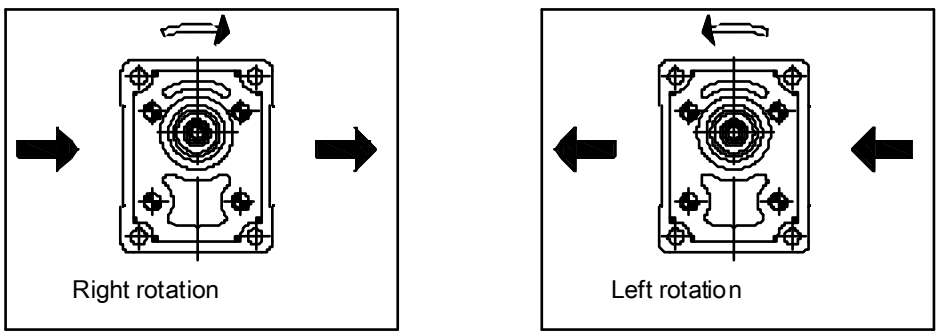


P3 Maximum peak pressure.
P2 Maximum intermittent pressure.
P1 Maximum continuous pressure.

The standard working speeds (minimum and maximum) are the following:

Min. = 750 rpm	Max = (See following tables)

DIRECTION OF ROTATION LOOKING AT THE SHAFT:



FLUID FILTRATION

It is known that in many cases the premature pump performances reduction is due to a non correct filtration in the circuit.
The presence of contamination particles in the fluid usually corresponds to an irreparable wear of the pump internal parts.
It is raccomanded to pay attention to the plant cleaning, mainly in the starting activity.
The starting fluid contamination it must be according to the Norms ISO 4406 and it should not exceed the Class 19/16 with a filter 3x75.

Here below the technical parameters to respect:

FILTRATION IN SUCTION LINE	**30 / 60 Nominal micron**
FILTRATION IN PRESSURE LINE	**10 / 25 absolute micron**
MAXIMUM SPEED IN SUCTION	**0.5 / 1.5 m/s**
MAXIMUM SPEED IN OUTPUT	**3.0 / 5.5 m/s**

Sometime in contaminated places it is racommended to improve the filtration in pressure line and fit also an air filter.

HYDRAULIC FLUIDS

It is recommended the use of fluids made for hydraulic circuits.
Usually they are hydraulic oils with mineral basis HLP HV (DIN 51524).
Here below the technical parameters to respect:

MINIMUM VISCOSITY	**10 mm^2/s**
MAXIMUM VISCOSITY	**100 mm^2/s**
SUGGESTED VISCOSITY	**20 mm^2/s / 100 mm /s**
SUGGESTED TEMPERATURE	**30°C / 50°C**
WORKING TEMPERATURE	**-15°C / +80°C**

For applications with water-glycol (HF-C) it is racommended to consider the following limitations: 1500 rpm maximum speed and 200 bar maximum pressure.
For applications with phosphate ester fluids, please contact our Technical department.

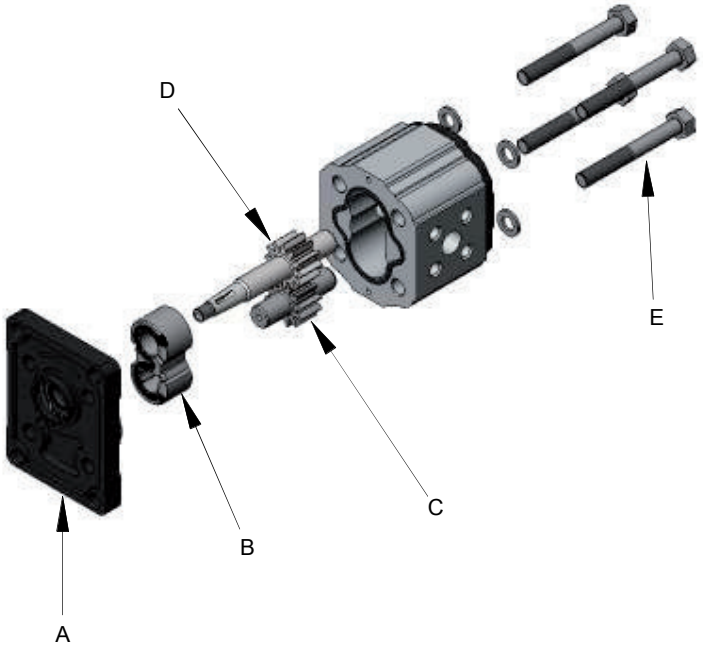
ISTALLATION INSTRUCTION

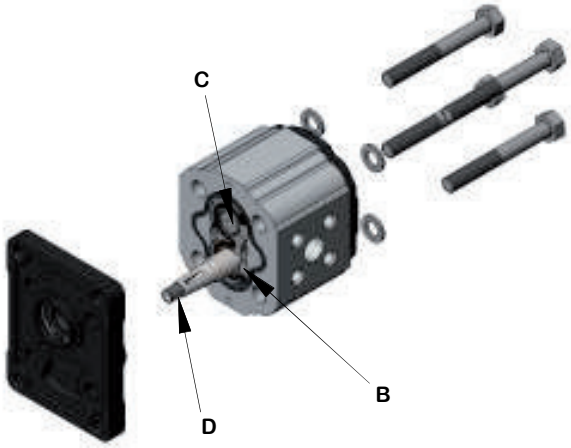
During the first starting it is racommended:
- to set the maximum pressure relief valves to a low value and gradually increase the pressure.
- to check, with single rotation pumps, that the rotation direction it is correct.
- to check that the connection betwen the motor and pump shaft is correct: without radial or axial load.
- to avoid starting under pressure in low temperature conditions or after long period of inactivity
- to check the fluid level in the tank
- to disconnect the return pipe and purge any air in the circuit
- to protect the pumpshaft seal when painting power pack
- to use suitable systems in the return lines to tank, to avoid turbulence in the circuit and ingress of air, water or contamination
- to check the torque that must be lower than the maximum torque admissible on the pump shaft
- to use new oil filters with absence of water or any other emulsifying substance
- to avoid starting with a air-oil solution
It is important to specify an oil tank at least twice the flow from the pump.

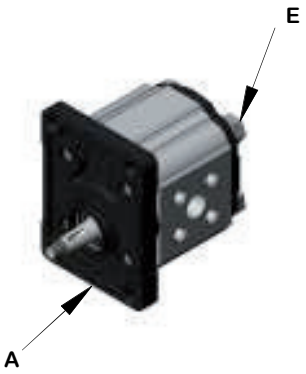
GROUP 1 PUMPS- CHANGING ROTATION

TO CHANGE ROTATION OF OT100 PUMP IT'S NECESSARY TO OPERATE IN THE FOLLOWING WAY:

1. **Clean the pump externally with care.**
2. **Loosen, and remove, the clamp bolts (E).**
3. **Coat the sharp edges of the drive shaft (D) with adesive tape and smear a layer of clean grease on the shaft end extension to avoid damaging the lip of the shaft seal when removing the mounting flange.**
4. **Remove the mounting flange (A), taking care to keep the flange as straight as possible during removal. Ensure that while removing the front mounting flange, the drive shaft and other components ramain in position.**
5. **Ease the drive gear (D) up to facilitate removal of bearings (B), taking care that the precision ground surfaces do not become damaged, and removed the drive gear.**
6. **Remove the driven gear (D) without overturning. The rear flange has not to be removed.**
7. **Re-locate the driven gear (C) in the position previously occupied by the drive gear (D).**
8. **Re-locate the drive gear (D) in the position previously occupied by the driven gear (C).**
9. **Replace the front flange (A) in its original position.**
10. **Gently wipe the machined surface of the front flange (A) and the body with a canvas.**
11. **Refit the front mounting flange (A) turned by 180° from its original position.**
12. **Refit the clamp bolts (E).(SCREW TIGHTENING TORQUE = 28 Nm)**
13. **Check that the pump rotates freely when the drive shaft (D) is turned by hand. If not a pressure plate seal may be pinched.**
14. **The pump is ready for installation with the original rotation reversed.**

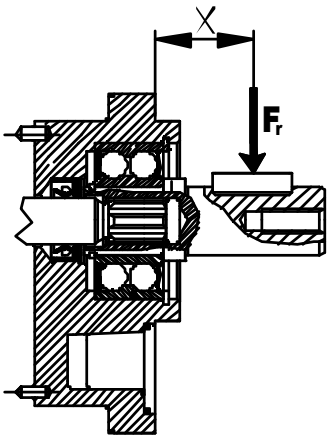






GROUP 1 PUMPS- WITH FRONT BEARING

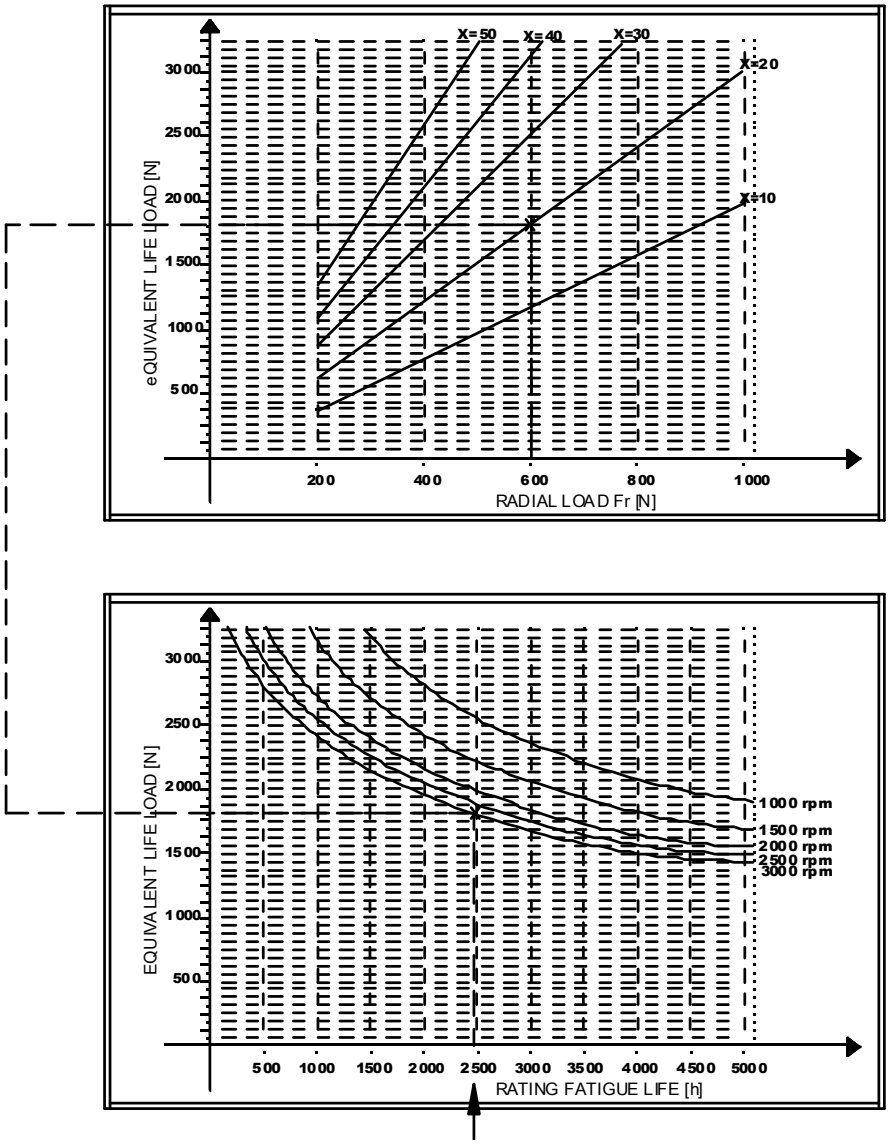
VERIFY OF BEARING LIFE



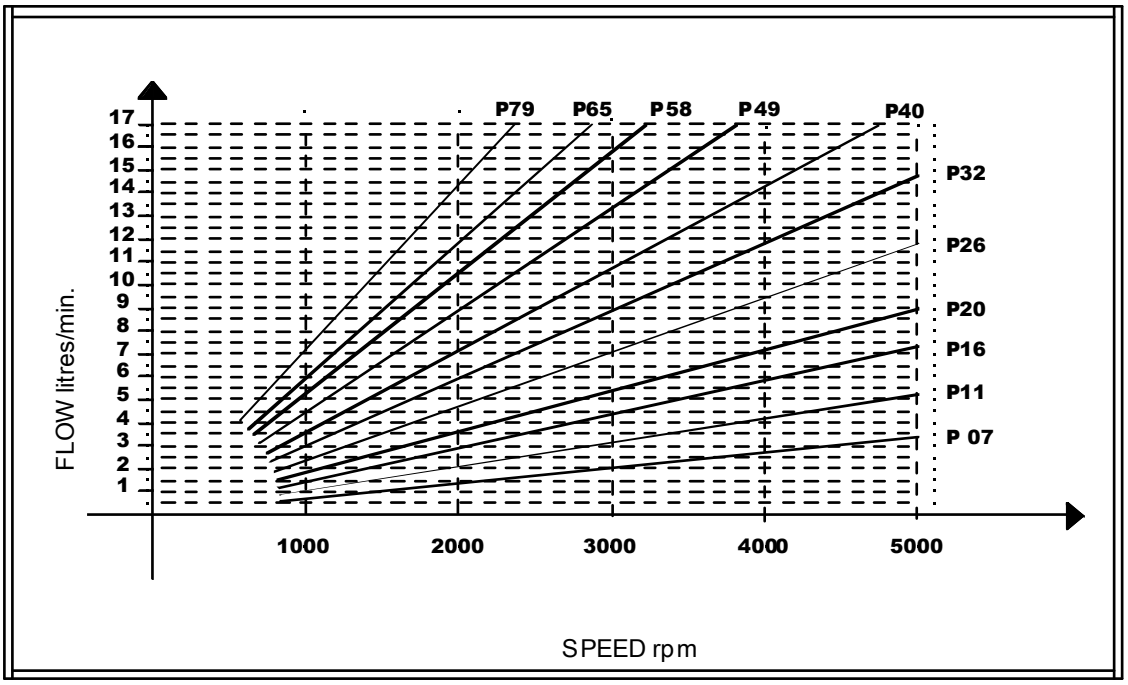
X = Distance of the radial flange result from the mounting flange

Each curve has been obtained at:
Lubrificant oil ISO VG 46
Temperature 60° C (140° F)
Without or with very low axial load

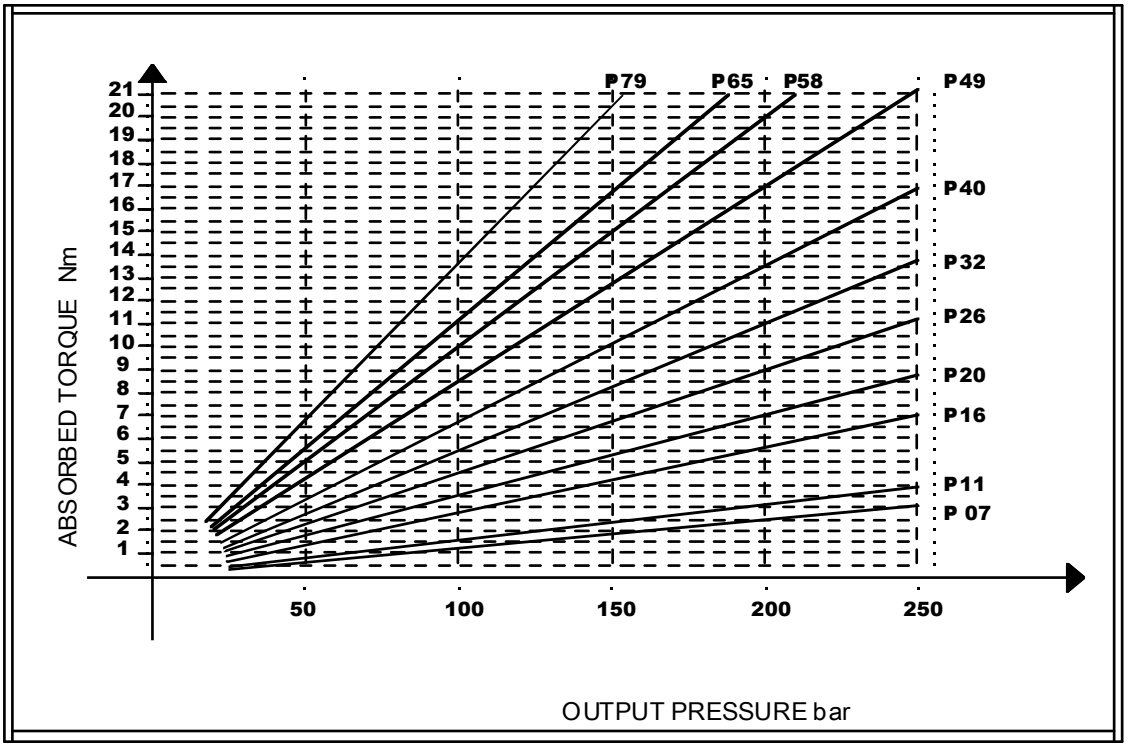
Example
Fr = 600 N
X = 20 mm
Speed = 3000 rpm
Rating fatigue life ≈ 2500 h



FLOW CHARACTERISTICS CURVES



ABSORBED TORQUE



NOTE

Above flow characteristics curves have been made considering a volumetric efficiency of 95%

PUMP CALCULATION

V	**Displacement**	**cc / rev**
Q	**Flow**	**l/min**
P	**Power**	**kW**
C	**Torque**	**N · m**
N	**Speed**	**rpm**
ΔP	**Pressure**	**bar**
n_v	**Volumetric efficiency**	**0.95**
n_m	**Mechanical efficiency**	**0.9**
n_t	**Total efficiency**	**0.85**

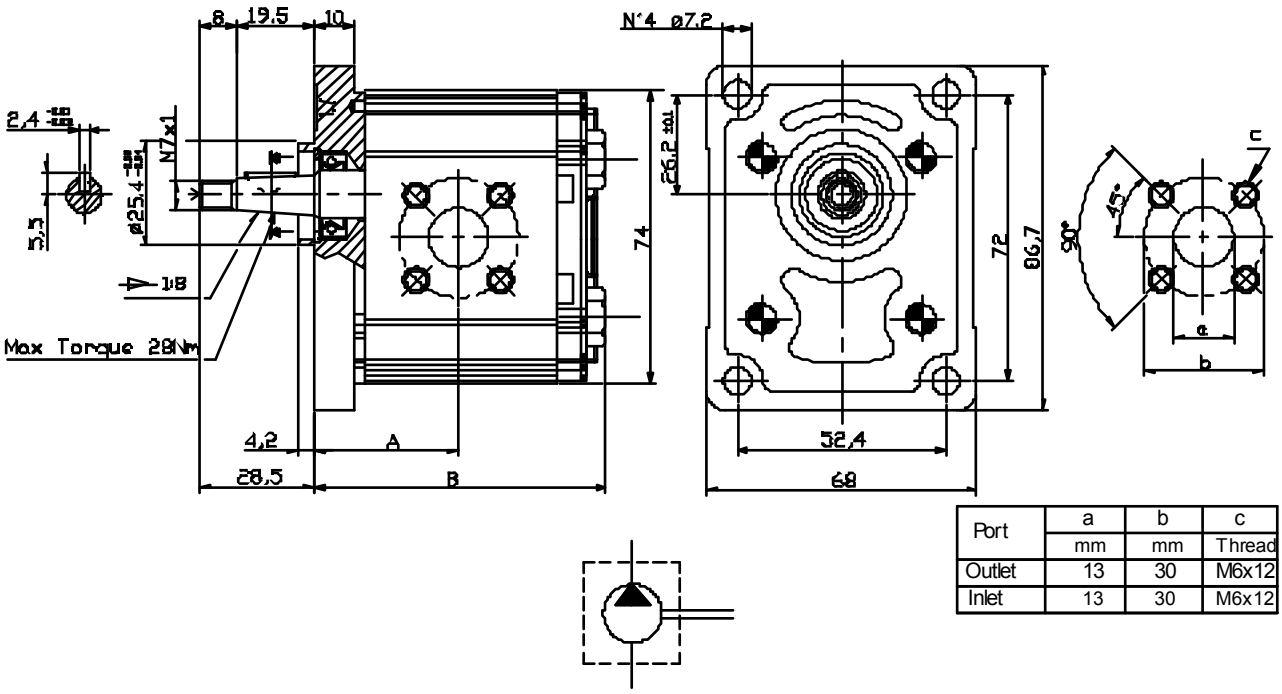
$$Q = V \cdot n_v \cdot N \cdot 10^{-3} \qquad l/min$$

$$C = \frac{\Delta P \cdot V}{62.8 \cdot n_m} \qquad N \cdot m$$

$$P = \frac{\Delta P \cdot V \cdot N}{612000 \cdot n_t} \qquad kW$$

GROUP 1 PUMPS - EUROPEAN STANDARD

VERSION: B18 P1



Port	a	b	c
	mm	mm	Thread
Outlet	13	30	M6x12
Inlet	13	30	M6x12

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Anti-clockwise)	Code (Clockwise)
OT 100 P07	0.73	200	240	5000	31.30	64.5	1.8	PS1007081S	PS1007081D
OT 100 P11	1.05	250	290	5000	31.90	65.6	2.4	PS1007082S	PS1007082D
OT 100 P16	1.45	260	300	5000	32.75	67.3	4.2	PS1007083S	PS1007083D
OT 100 P20	1.80	260	300	5000	33.45	68.7	5.2	PS1007084S	PS1007084D
OT 100 P25	2.45	260	300	5000	34.50	70.8	6.7	PS1007085S	PS1007085D
OT 100 P32	3.05	260	300	5000	35.50	72.8	8.3	PS1007086S	PS1007086D
OT 100 P40	3.80	260	300	4500	36.90	75.6	10.1	PS1007087S	PS1007087D
OT 100 P49	4.70	240	280	4500	38.45	78.7	12.7	PS1007088S	PS1007088D
OT 100 P58	5.55	200	240	4000	40.00	81.8	15.0	PS1007089S	PS1007089D
OT 100 P65	6.25	190	230	3750	41.25	84.3	16.8	PS1007090S	PS1007090D
OT 100 P79	7.60	170	220	3500	43.60	89.0	20.5	PS1017091S	PS1017091D

EXAMPLE OF ORDERING CODE

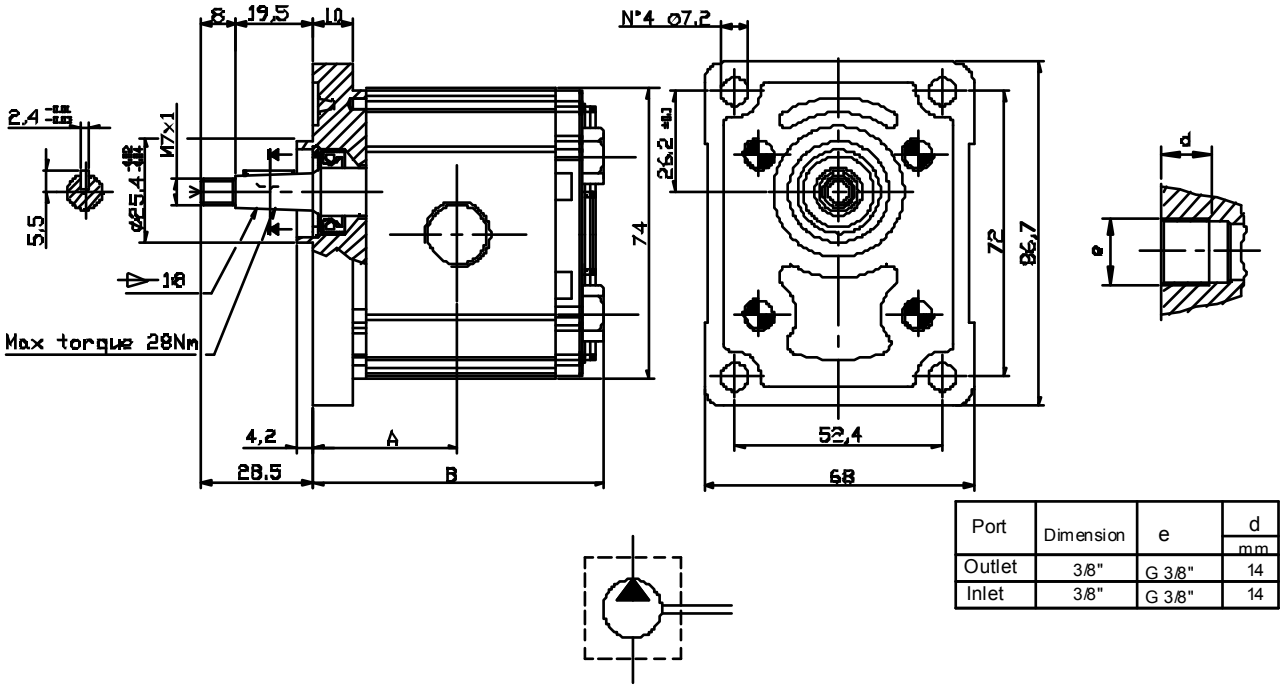
OT100 P 20 S / B 18 P1

- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- S — Rotation: S Anti-clockwise, D Clockwise
- B — Body for European flanges
- 18 — Taper shaft (1:8)
- P1 — European standard flange

AVAILABLE FOR QUANTITIES

GROUP 1 PUMPS - EUROPEAN STANDARD

VERSION: G18 P1



Port	Dimension	e	d
			mm
Outlet	3/8"	G 3/8"	14
Inlet	3/8"	G 3/8"	14

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Anti-clockwise)	Code (Clockwise)
OT 100 P07	0.73	200	240	5000	31.30	64.5	1.8	PS1007061S	PS1007061D
OT 100 P11	1.05	240	280	5000	31.90	65.6	2.4	PS1007062S	PS1007062D
OT 100 P16	1.45	260	300	5000	32.75	67.3	4.2	PS1007063S	PS1007063D
OT 100 P20	1.80	260	300	5000	33.45	68.7	5.2	PS1007064S	PS1007064D
OT 100 P25	2.45	260	300	5000	34.50	70.8	6.7	PS1007065S	PS1007065D
OT 100 P32	3.05	260	300	5000	35.50	72.8	8.3	PS1007066S	PS1007066D
OT 100 P40	3.80	260	300	4500	36.90	75.6	10.1	PS1007067S	PS1007067D
OT 100 P49	4.70	240	280	4500	38.45	78.7	12.7	PS1007068S	PS1007068D
OT 100 P58	5.55	200	240	4000	40.00	81.8	15.0	PS1007069S	PS1007069D
OT 100 P65	6.25	190	230	3750	41.25	84.3	16.8	PS1007070S	PS1007070D
OT 100 P79	7.60	170	220	3500	43.60	89.0	20.5	PS1017071S	PS1017071D

EXAMPLE OF ORDERING CODE

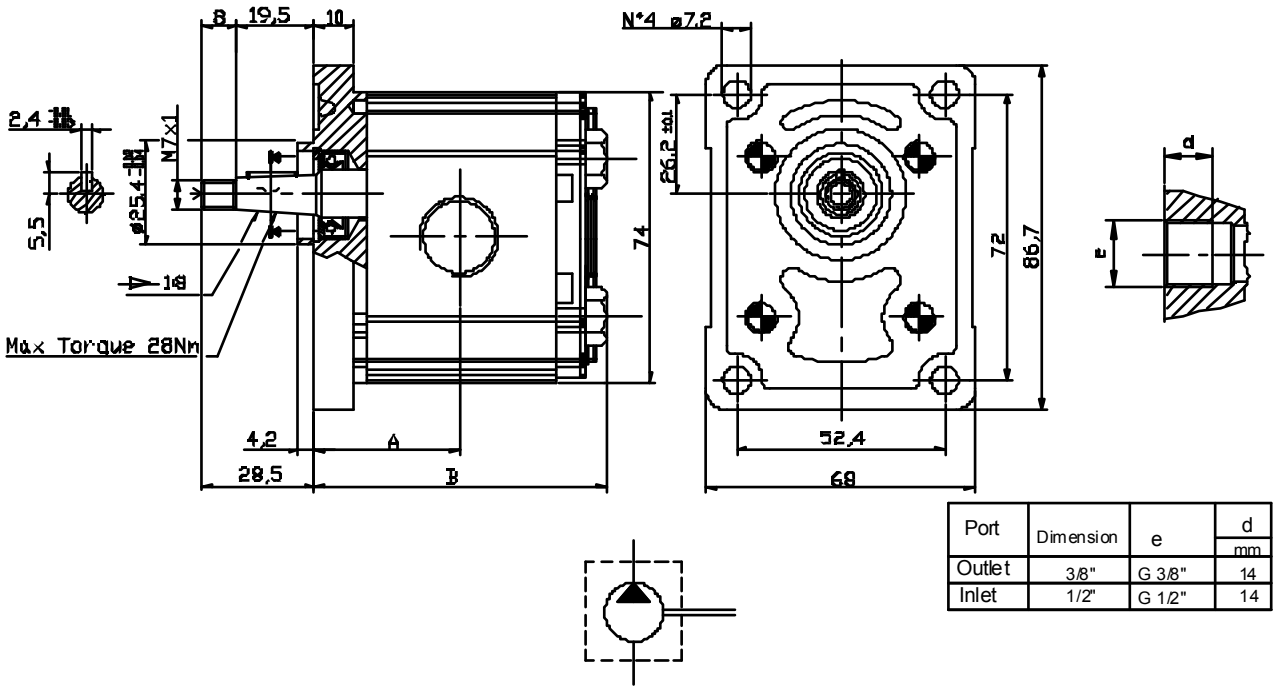
OT100 P 20 S / G 18 P1

- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- S — Rotation: S Anti-clockwise, D Clockwise
- G — Body with threated ports (BSP)
- 18 — Taper shaft (1:8)
- P1 — European standard flange

AVAILABLE FOR QUANTITIES

GROUP 1 PUMPS - EUROPEAN STANDARD

VERSION: G2 18 P1



Port	Dimension	e	d
			mm
Outlet	3/8"	G 3/8"	14
Inlet	1/2"	G 1/2"	14

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Anti-clockwise)	Code (Clockwise)
OT 100 P49	4.70	240	280	4500	38.45	78.7	12.7	PS1027035S	PS1027035D
OT 100 P58	5.55	200	240	4000	40.00	81.8	15.0	PS1027036S	PS1027036D
OT 100 P65	6.25	190	230	3750	41.25	84.3	16.8	PS1027037S	PS1027037D
OT 100 P79	7.60	170	220	3500	43.60	89.0	20.5	PS1027038S	PS1027038D

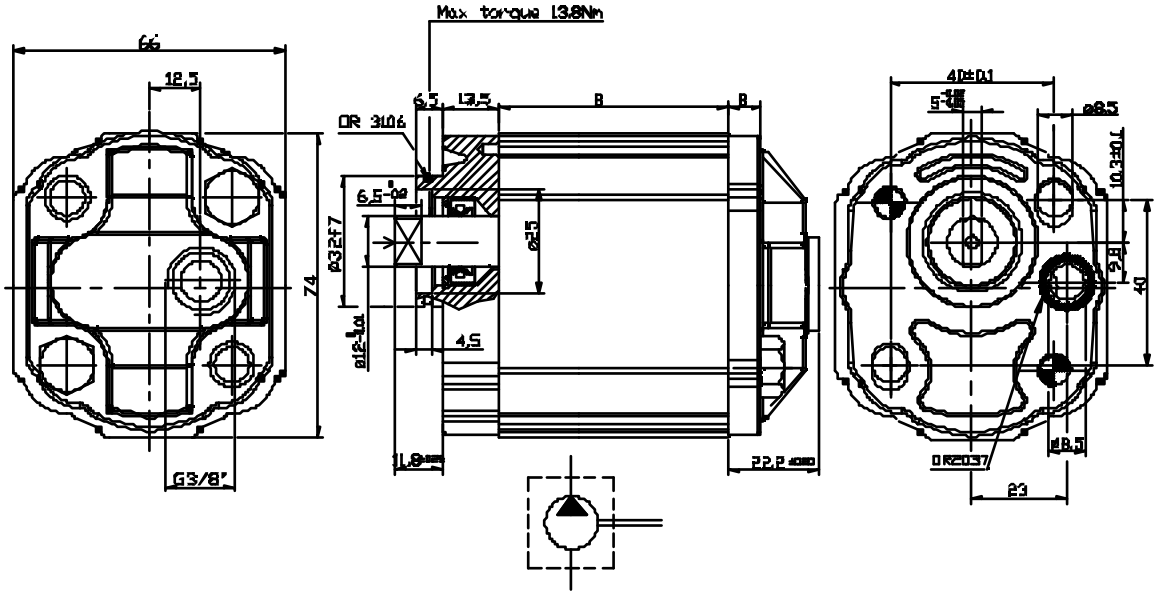
EXAMPLE OF ORDERING CODE

OT100 P 65 S / G2 18 P1

- OT100 — Series
- P — Pump
- 65 — Displacement (see above table)
- S — Rotation: S Anti-clockwise, D Clockwise
- G2 — Body with threated ports (BSP) Inlet G 1/2"
- 18 — Taper shaft (1:8)
- P1 — European standard flange

AVAILABLE FOR QUANTITIES

VERSION: N 14 B2



Type	Displacement (cc/ rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (rpm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Clockwise)
OT 100 P07	0.73	200	240	5000	36.7	1.8	PS1007001D
OT 100 P11	1.05	240	280	5000	37.8	2.4	PS1007002D
OT 100 P16	1.45	260	300	5000	39.5	4.2	PS1007003D
OT 100 P20	1.80	240	300	5000	40.9	5.2	PS1007004D
OT 100 P26	2.45	240	280	5000	43.0	6.7	PS1007005D
OT 100 P32	3.05	240	280	5000	45.0	8.3	PS1007006D
OT 100 P40	3.80	220	260	4500	47.8	10.1	PS1007007D
OT 100 P49	4.70	200	240	4500	50.9	12.7	PS1007008D
OT 100 P58	5.55	180	220	4000	54.0	15.0	PS1007009D
OT 100 P65	6.25	160	200	3750	56.5	16.8	PS1007010D
OT 100 P79	7.60	140	180	3500	61.2	20.5	PS1017001D

EXAMPLE OF ORDERING CODE

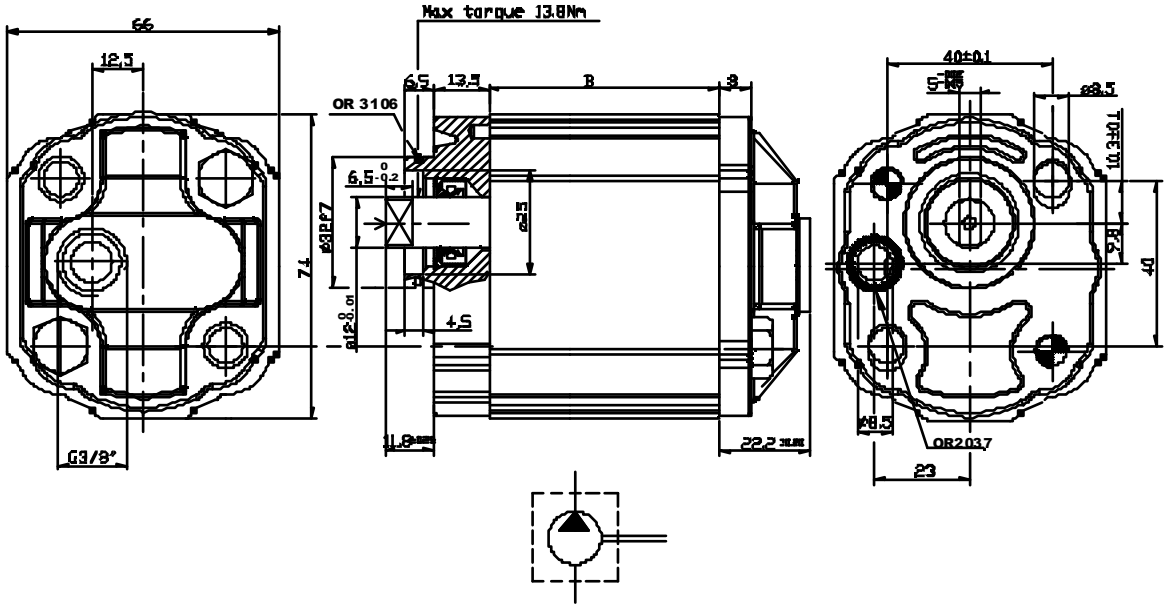
OT100 P 20 D / N 14 B2

- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- D — Rotation: D = clockwise
- N — Body without ports
- 14 — Tang shaft
- B2 — B2= Flange for clockwise

Screws tightening torque : 28÷30 Nm

GROUP 1 PUMPS - FOR POWER UNITS

VERSION: N 14 B1



Type	Displacement (cc/ rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (rpm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Anti- Clockwise)
OT 100 P07	0.73	200	240	5000	36.7	1.8	PS1007001S
OT 100 P11	1.05	240	280	5000	37.8	2.4	PS1007002S
OT 100 P16	1.45	260	300	5000	39.5	4.2	PS1007003S
OT 100 P20	1.80	240	300	5000	40.9	5.2	PS1007004S
OT 100 P26	2.45	240	280	5000	43.0	6.7	PS1007005S
OT 100 P32	3.05	240	280	5000	45.0	8.3	PS1007006S
OT 100 P40	3.80	220	260	4500	47.8	10.1	PS1007007S
OT 100 P49	4.70	200	240	4500	50.9	12.7	PS1007008S
OT 100 P58	5.55	180	220	4000	54.0	15.0	PS1007009S
OT 100 P65	6.25	160	200	3750	56.5	16.8	PS1007010S
OT 100 P79	7.60	140	180	3500	61.2	20.5	PS1017001S

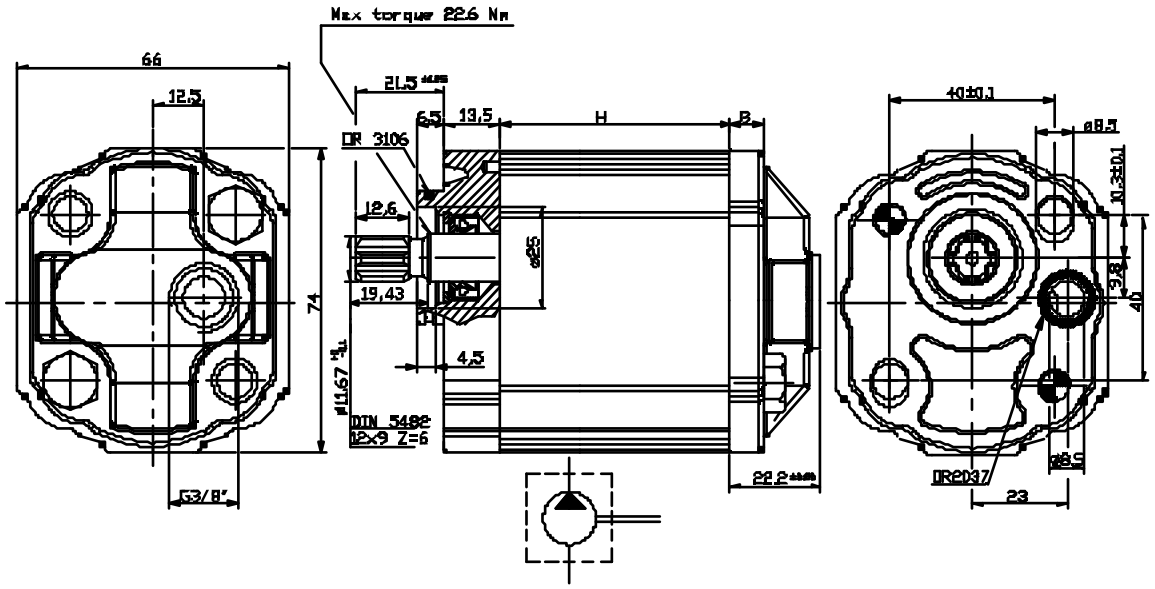
EXAMPLE OF ORDERING CODE

OT100 P 20 S / N 14 B1

- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- S — Rotation: S = Anti-clockwise
- N — Body without ports
- 14 — Tang shaft
- B1 — B1= Flange for Anti-clockwise

Screws tightening torque : 28 ÷ 30 Nm

VERSION: N 16 B2



Type	Displacement (cc/ rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (rpm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Clockwise)
OT 100 P07	0.73	200	240	5000	36.7	1.8	PS1007101D
OT 100 P11	1.05	240	280	5000	37.8	2.4	PS1007102D
OT 100 P13	1.25	240	280	5000	38.5	2.4	PS1007102D
OT 100 P16	1.45	260	300	5000	39.5	4.2	PS1007103D
OT 100 P20	1.80	240	300	5000	40.9	5.2	PS1007104D
OT 100 P26	2.50	240	280	5000	43.0	6.7	PS1007105D
OT 100 P32	3.05	240	280	5000	45.0	8.3	PS1007106D
OT 100 P40	3.80	220	260	4500	47.8	10.1	PS1007107D
OT 100 P43	4.30	200	240	4500	49.5	12.0	PS1027075D
OT 100 P49	4.70	200	240	4500	50.9	12.7	PS1007108D
OT 100 P58	5.55	180	220	4000	54.0	15.0	PS1007109D
OT 100 P65	6.25	160	200	3750	56.5	16.8	PS1007110D
OT 100 P79	7.60	140	180	3500	61.2	20.5	PS1017111D
OT 100 P99	9.70	130	170	3500	70.0	26.3	PS1027082D

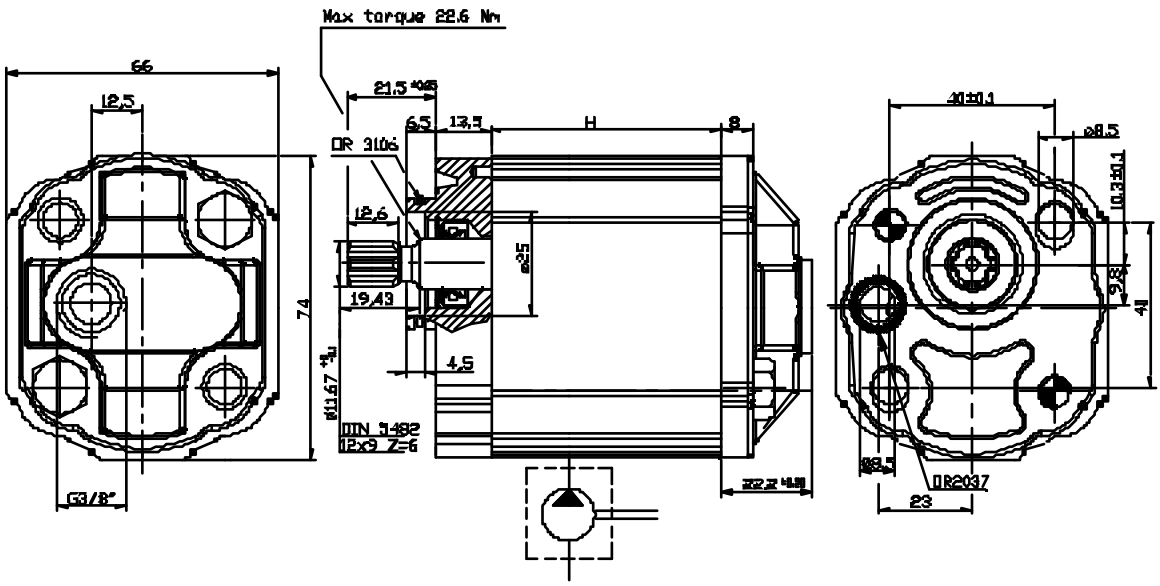
EXAMPLE OF ORDERING CODE

OT100 P 20 D / N 16 B2

- OT100 — Series
- P — Pump
- 20 — displacement (see above table)
- D — Rotation: D Clockwise
- N — Body without ports
- 16 — Splined shaft (DIN5482)
- B2 — B2= Flange for clockwise

Screws tightening torque : 28÷ 30 Nm

VERSION: N 16 B1



Type	Displacement (cc/ rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (rpm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Anti-Clockwise)
OT 100 P07	0.73	200	240	5000	36.7	1.8	PS1007101S
OT 100 P11	1.05	240	280	5000	37.8	2.4	PS1007102S
OT 100 P13	1.25	240	280	5000	38.5	2.4	PS1007102S
OT 100 P16	1.45	260	300	5000	39.5	4.2	PS1007103S
OT 100 P20	1.80	240	300	5000	40.9	5.2	PS1007104S
OT 100 P26	2.50	240	280	5000	43.0	6.7	PS1007105S
OT 100 P32	3.05	240	280	5000	45.0	8.3	PS1007106S
OT 100 P40	3.80	220	260	4500	47.8	10.1	PS1007107S
OT 100 P43	4.30	200	240	4500	49.5	12.0	PS1027075S
OT 100 P49	4.70	200	240	4500	50.9	12.7	PS1007108S
OT 100 P58	5.55	180	220	4000	54.0	15.0	PS1007109S
OT 100 P65	6.25	160	200	3750	56.5	16.8	PS1007110S
OT 100 P79	7.60	140	180	3500	61.2	20.5	PS1017111S
OT 100 P99	9.70	130	170	3500	70.0	26.3	PS1027082S

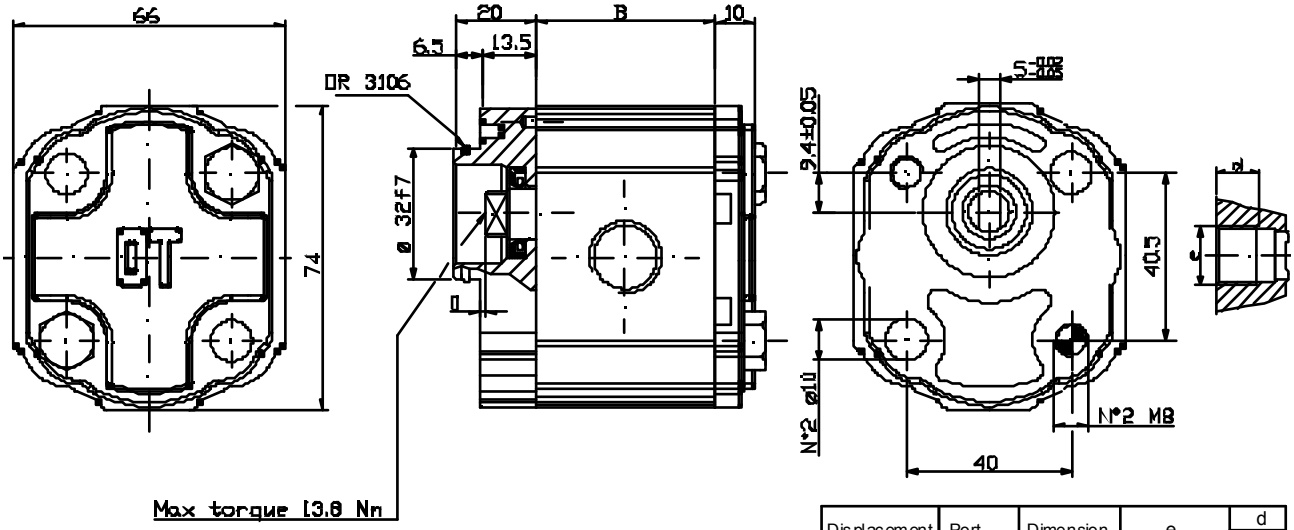
EXAMPLE OF ORDERING CODE

OT100 P 20 S / N 16 B1

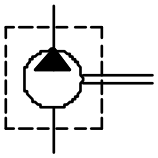
- OT100 — Series
- P — Pump
- 20 — displacement (see above table)
- S — Rotation: S = Anticlockwise
- N — Body without ports
- 16 — Splined shaft (DIN5482)
- B1 — B1= Flange for anticlockwise

Screws tightening torque : 28 ÷ 30 Nm

VERSION: G 13 B0



Displacement	Port	Dimension	e	d mm
From 0,70 to 4,50	Outlet	3/8"	G 3/8"	14
	Inlet	3/8"	G 3/8"	14
From 5,55 to 7,60	Outlet	3/8"	G 3/8"	14
	Inlet	1/2"	G 1/2"	14



Type	Displacement (cc/ rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (rpm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Anti-clockwise)	Code (Clockwise)
OT 100 P07	0.73	200	240	5000	36.7	1.8	PS1007031S	PS1007031D
OT 100 P11	1.05	240	280	5000	37.8	2.4	PS1007032S	PS1007032D
OT 100 P16	1.45	260	300	5000	39.5	4.2	PS1007033S	PS1007033D
OT 100 P20	1.80	240	300	5000	40.9	5.2	PS1007034S	PS1007034D
OT 100 P26	2.50	240	280	5000	43.0	6.7	PS1007035S	PS1007035D
OT 100 P32	3.05	240	280	5000	45.0	8.3	PS1007036S	PS1007036D
OT 100 P40	3.80	220	260	4500	47.8	10.1	PS1007037S	PS1007037D
OT 100 P49	4.70	200	240	4500	50.9	12.7	PS1007038S	PS1007038D
OT 100 P58	5.55	180	220	4000	54.0	15.0	PS1007039S	PS1007039D
OT 100 P65	6.25	160	200	3750	56.5	16.8	PS1007040S	PS1007040D
OT 100 P79	7.60	140	180	3500	61.2	20.5	PS1017031S	PS1017031D

EXAMPLE OF ORDERING CODE

OT100 P 20 S / G 13 B0

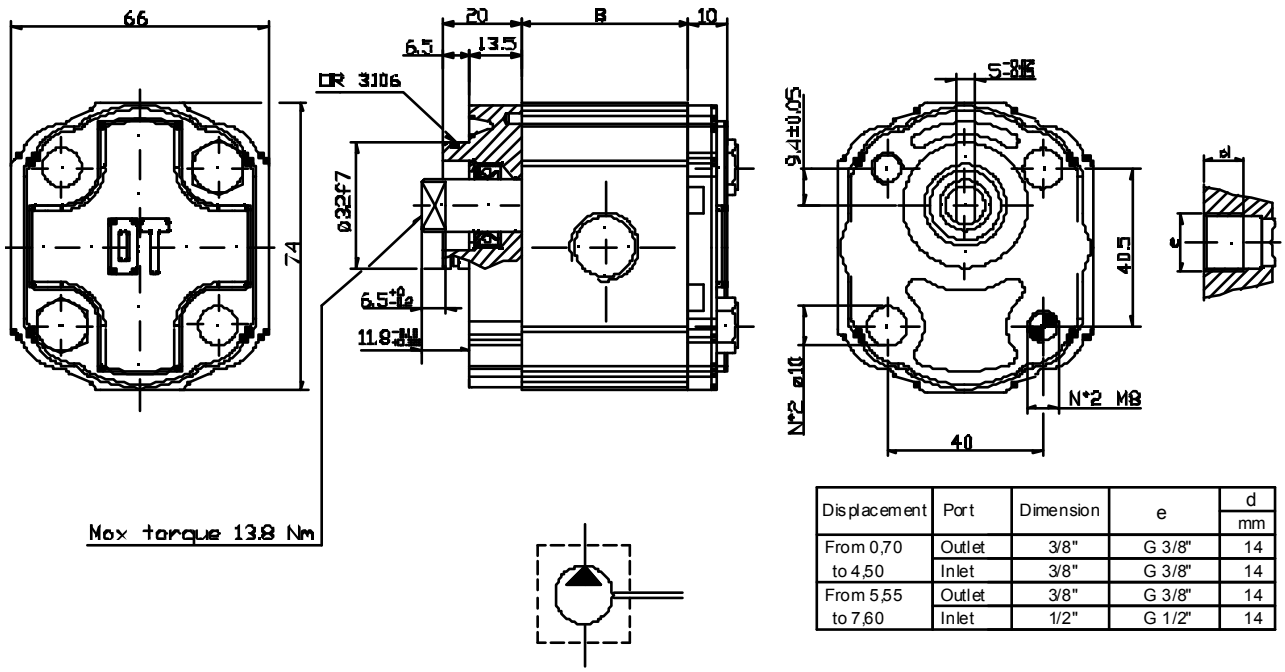
- OT100 — Series
- P — Pump
- 20 — displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- 13 — Tang shaft short type
- B0 — Neutral flange

Screws tightening torque : 28÷30 Nm

AVAILABLE FOR QUANTITIES

GROUP 1 PUMPS - FOR POWER UNITS

VERSION : G14 B0



Displacement	Port	Dimension	e	d mm
From 0,70 to 4,50	Outlet	3/8"	G 3/8"	14
	Inlet	3/8"	G 3/8"	14
From 5,55 to 7,60	Outlet	3/8"	G 3/8"	14
	Inlet	1/2"	G 1/2"	14

Type	Displacement (cc/ rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (rpm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Anti-clockwise)	Code (Clockwise)
OT 100 P07	0.73	200	240	5000	36.7	1.8	PS1017001S	PS1017001D
OT 100 P11	1.05	240	280	5000	37.8	2.4	PS1017002S	PS1017002D
OT 100 P16	1.45	260	300	5000	39.5	4.2	PS1017003S	PS1017003D
OT 100 P20	1.80	240	300	5000	40.9	5.2	PS1017004S	PS1017004D
OT 100 P26	2.50	240	280	5000	43.0	6.7	PS1017005S	PS1017005D
OT 100 P32	3.05	240	280	5000	45.0	8.3	PS1017006S	PS1017006D
OT 100 P40	3.80	220	260	4500	47.8	10.1	PS1017007S	PS1017007D
OT 100 P49	4.70	200	240	4500	50.9	12.7	PS1017008S	PS1017008D
OT 100 P58	5.55	180	220	4000	54.0	15.0	PS1017009S	PS1017009D
OT 100 P65	6.25	160	200	3750	56.5	16.8	PS1017010S	PS1017010D
OT 100 P79	7.60	140	180	3500	61.2	20.5	PS1017012S	PS1017012D

EXAMPLE OF ORDERING CODE

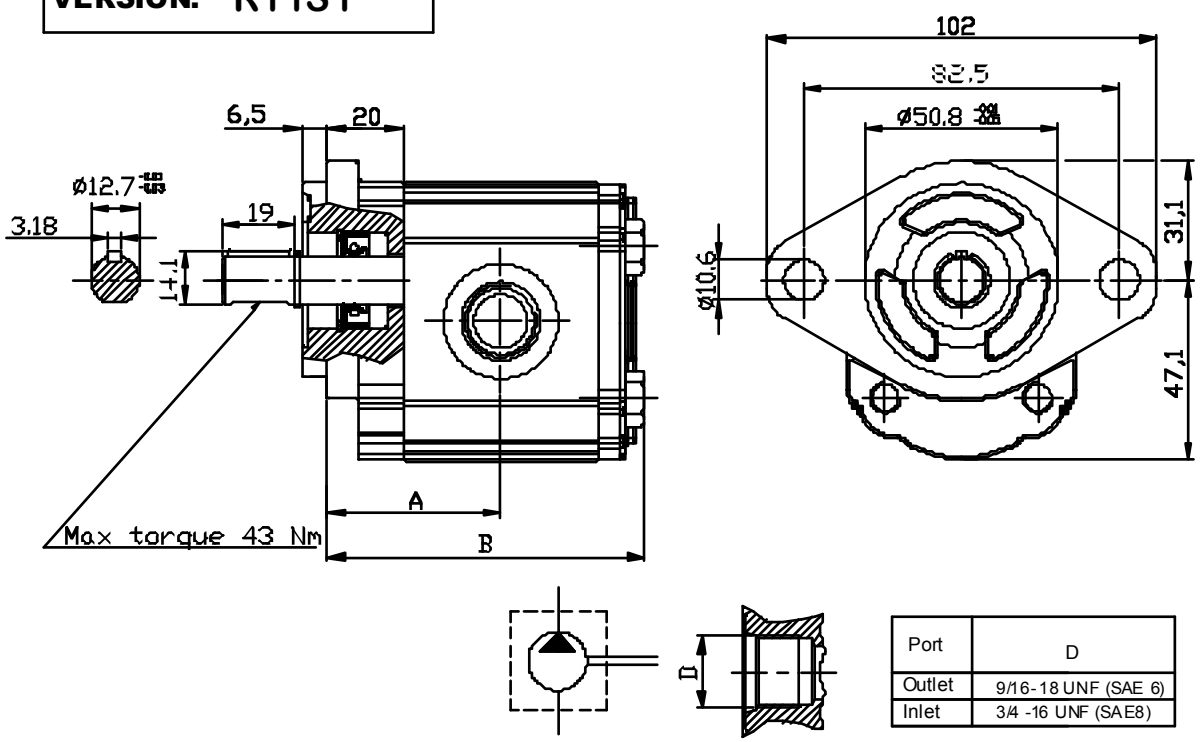
OT100 P 20 S / G 14 B0

- OT100 — Series
- P — Pump
- 20 — displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- 14 — Tang shaft
- B0 — Neutral flange

☐ Screws tightening torque : 28 ÷ 30 Nm

GROUP 1 PUMPS - SAE "AA" STANDARD

VERSION: R11S1



Port	D
Outlet	9/16-18 UNF (SAE 6)
Inlet	3/4 -16 UNF (SAE8)

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Anti-clockwise)	Code (Clockwise)
OT 100 P07	0.73	200	240	5000	38.35	69.00	1.8	PS1007120S	PS1007120D
OT 100 P11	1.05	240	280	5000	38.90	70.10	2.4	PS1007121S	PS1007121D
OT 100 P16	1.55	260	300	5000	39.75	71.80	4.2	PS1007122S	PS1007122D
OT 100 P20	1.90	260	300	5000	40.45	72.75	5.2	PS1007123S	PS1007123D
OT 100 P25	2.50	260	300	5000	41.50	75.30	6.7	PS1007124S	PS1007124D
OT 100 P32	3.10	260	300	5000	42.50	77.30	8.3	PS1007125S	PS1007125D
OT 100 P40	3.80	260	300	4500	43.90	80.10	10.1	PS1007126S	PS1007126D
OT 100 P49	4.70	240	280	4500	45.45	83.20	12.7	PS1007127S	PS1007127D
OT 100 P58	5.55	200	240	4000	47.00	86.30	15.0	PS1007128S	PS1007128D
OT 100 P65	6.25	190	230	3750	48.25	88.80	16.8	PS1007129S	PS1007129D
OT 100 P79	7.60	170	220	3500	50.60	93.50	20.5	PS1007130S	PS1007130D

EXAMPLE OF ORDERING CODE

OT100 P 20 S / R 11 S1

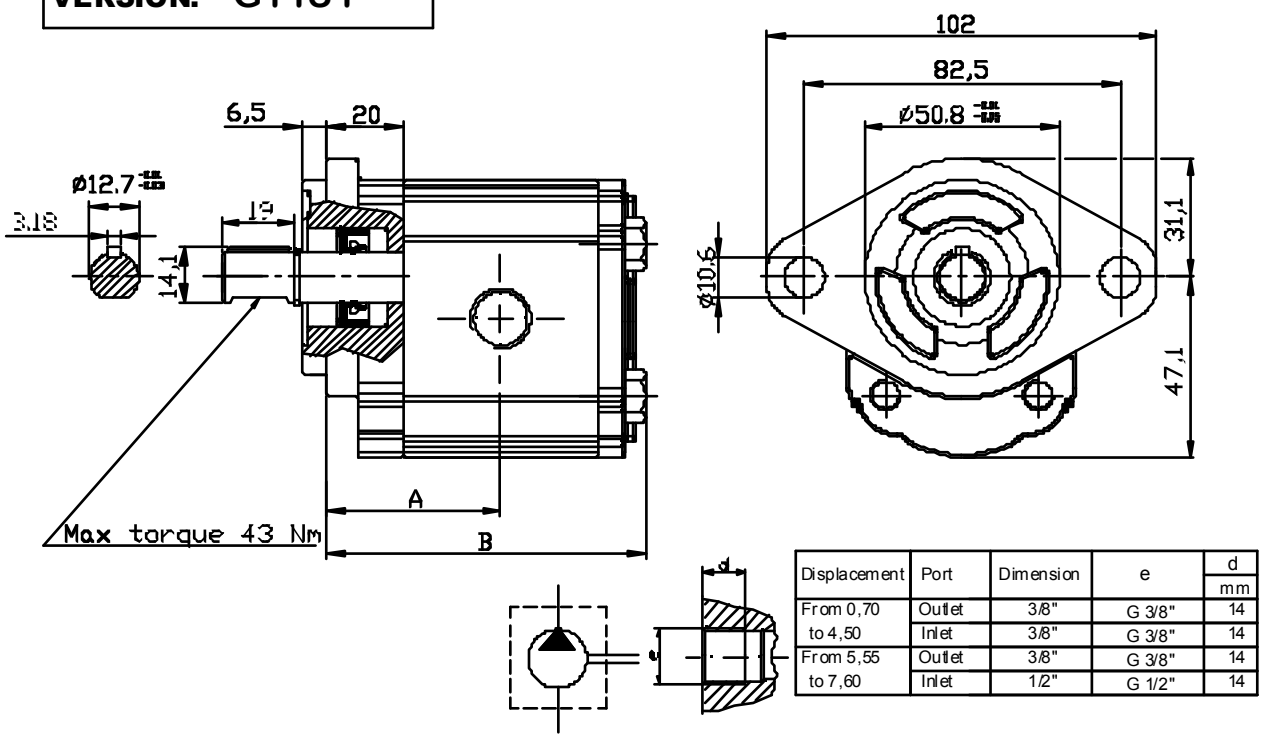
- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- S — Rotation: S Anti-clockwise, D Clockwise
- R — Body with O-ring boss ports
- 11 — SAE AA cilindrical shaft
- S1 — SAE- AA flange 2 bolts

Screws tightening torque : 28 ÷ 30 Nm

AVAILABLE FOR QUANTITIES

GROUP 1 PUMPS - SAE "AA" STANDARD

VERSION: G11S1



Displacement	Port	Dimension	e	d mm
From 0,70 to 4,50	Outlet	3/8"	G 3/8"	14
	Inlet	3/8"	G 3/8"	14
From 5,55 to 7,60	Outlet	3/8"	G 3/8"	14
	Inlet	1/2"	G 1/2"	14

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Anti-clockwise)	Code (Clockwise)
OT 100 P07	0.73	200	240	5000	38.35	69.00	1.8	PS1007131S	PS1007131D
OT 100 P11	1.05	240	280	5000	38.90	70.10	2.4	PS1007132S	PS1007132D
OT 100 P16	1.55	260	300	5000	39.75	71.80	4.2	PS1007133S	PS1007133D
OT 100 P20	1.90	260	300	5000	40.45	72.75	5.2	PS1007134S	PS1007134D
OT 100 P25	2.50	260	300	5000	41.50	75.30	6.7	PS1007135S	PS1007135D
OT 100 P32	3.10	260	300	5000	42.50	77.30	8.3	PS1007136S	PS1007136D
OT 100 P40	3.80	260	300	4500	43.90	80.10	10.1	PS1007137S	PS1007137D
OT 100 P49	4.70	240	280	4500	45.45	83.20	12.7	PS1007138S	PS1007138D
OT 100 P58	5.55	200	240	4000	47.00	86.30	15.0	PS1007139S	PS1007139D
OT 100 P65	6.25	190	230	3750	48.25	88.80	16.8	PS1007140S	PS1007140D
OT 100 P79	7.60	170	220	3500	50.60	93.50	20.5	PS1007141S	PS1007141D

EXAMPLE OF ORDERING CODE

OT100 P 20 S / G 11 S1

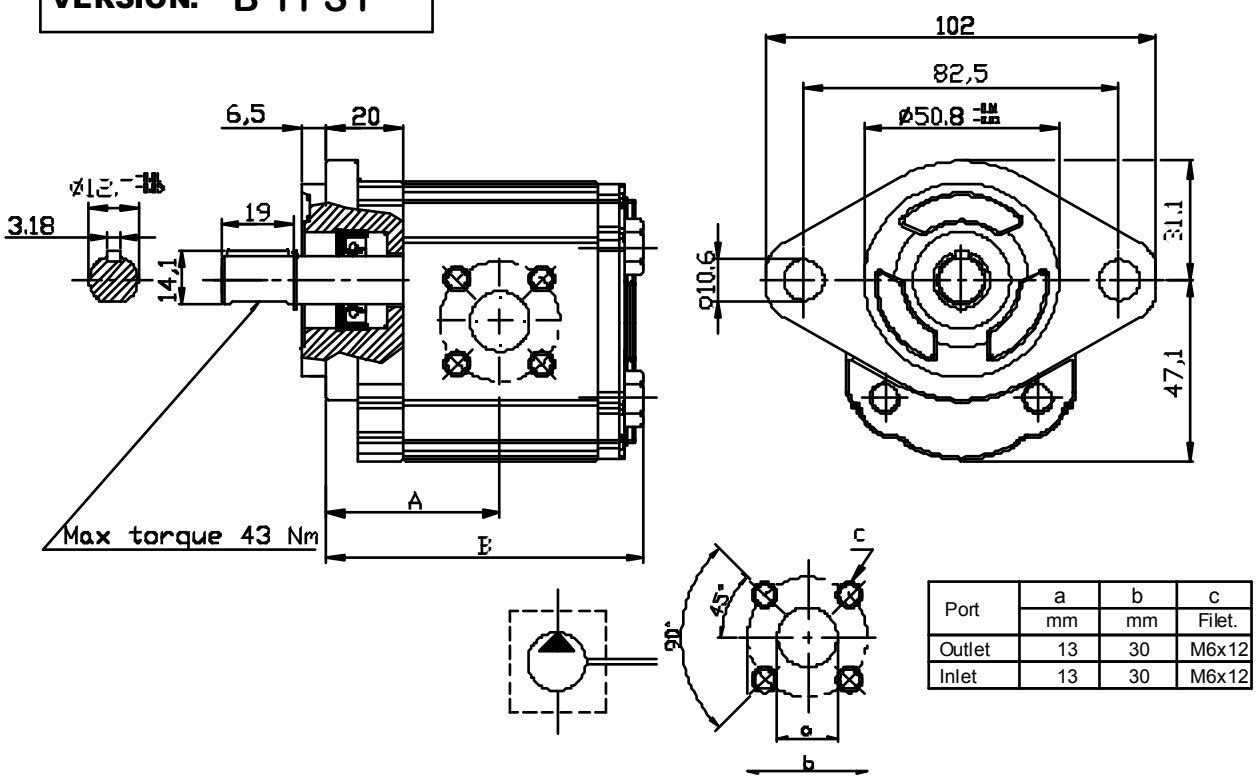
- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- 11 — SAE AA cilindrical shaft
- S1 — SAE- AA flange 2 bolts

Screws tightening torque : 28 ÷ 30 Nm

AVAILABLE FOR QUANTITIES

GROUP 1 PUMPS - SAE "AA" STANDARD

VERSION: B 11 S1



Port	a	b	c
	mm	mm	Filet.
Outlet	13	30	M6x12
Inlet	13	30	M6x12

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Anti-clockwise)	Code (Clockwise)
OT 100 P07	0.73	200	240	5000	38.35	69.00	1.8	PS1007142S	PS1007142D
OT 100 P11	1.05	240	280	5000	38.90	70.10	2.4	PS1007143S	PS1007143D
OT 100 P16	1.55	260	300	5000	39.75	71.80	4.2	PS1007144S	PS1007144D
OT 100 P20	1.90	260	300	5000	40.45	72.75	5.2	PS1007145S	PS1007145D
OT 100 P25	2.50	260	300	5000	41.50	75.30	6.7	PS1007146S	PS1007146D
OT 100 P32	3.10	260	300	5000	42.50	77.30	8.3	PS1007147S	PS1007147D
OT 100 P40	3.80	260	300	4500	43.90	80.10	10.1	PS1007148S	PS1007148D
OT 100 P49	4.70	240	280	4500	45.45	83.20	12.7	PS1007149S	PS1007149D
OT 100 P58	5.55	200	240	4000	47.00	86.30	15.0	PS1007150S	PS1007150D
OT 100 P65	6.25	190	230	3750	48.25	88.80	16.8	PS1007151S	PS1007151D
OT 100 P79	7.60	170	220	3500	50.60	93.50	20.5	PS1007152S	PS1007152D

EXAMPLE OF ORDERING CODE

OT100 P 20 S / B 11 S1

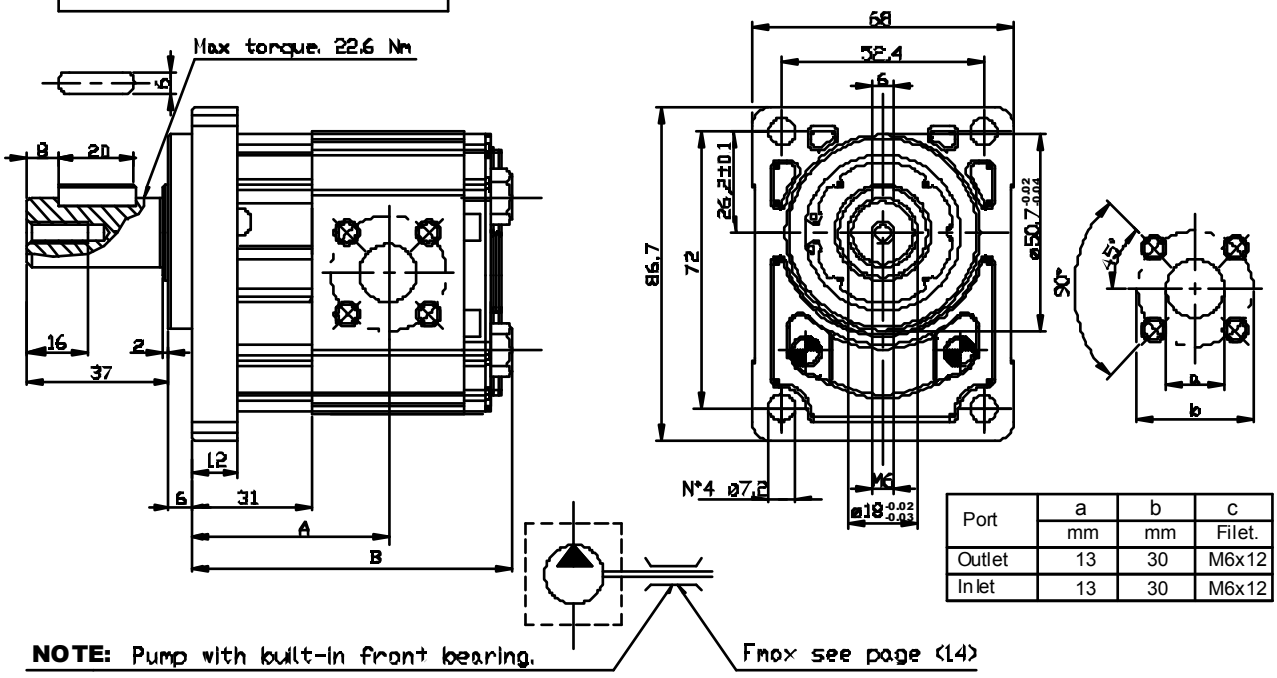
- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- S — Rotation: S Anti-clockwise, D Clockwise
- B — Body for European flanges
- 11 — SAE AA cilindrical shaft
- S1 — SAE- AA flange 2 bolts

Screws tightening torque : 28 ÷ 30 Nm

AVAILABLE FOR QUANTITIES

GROUP 1 PUMPS- WITH FRONT BEARING

VERSION: B16 T P1



Port	a	b	c
	mm	mm	Filet.
Outlet	13	30	M6x12
Inlet	13	30	M6x12

NOTE: Pump with built-in front bearing. Fmax see page (14)

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Anti-clockwise)	Code (Clockwise)
OT 100 P07	0.73	200	240	5000	49.30	82.5	1.8	PS1027101S	PS1027101D
OT 100 P11	1.05	240	280	5000	49.90	83.6	2.4	PS1027102S	PS1027102D
OT 100 P13	1.25	260	300	5000	50.60	84.3	3.2	PS1027125S	PS1027125D
OT 100 P16	1.45	260	300	5000	50.75	85.3	4.2	PS1027103S	PS1027103D
OT 100 P20	1.80	260	300	5000	51.45	86.7	5.2	PS1027104S	PS1027104D
OT 100 P25	2.50	260	300	5000	52.50	88.8	6.7	PS1027105S	PS1027105D
OT 100 P32	3.05	260	300	5000	53.50	90.8	8.3	PS1027106S	PS1027106D
OT 100 P40	3.80	260	300	4500	54.90	93.6	10.1	PS1027107S	PS1027107D
OT 100 P43	4.30	240	280	4500	55.45	95.7	12.0	PS1027124S	PS1027124D
OT 100 P49	4.50	240	280	4500	56.45	96.7	12.7	PS1027108S	PS1027108D
OT 100 P58	5.55	200	240	4000	58.00	99.8	15.0	PS1027109S	PS1027109D
OT 100 P65	6.25	190	230	3750	59.25	102.3	16.8	PS1027110S	PS1027110D
OT 100 P79	7.60	170	220	3500	61.60	107.0	20.5	PS1027111S	PS1027111D
OT 100 P99	9.90	130	170	3500	70.40	115.8	26.3	PS1027123S	PS1027123D

EXAMPLE OF ORDERING CODE

OT100 P 20 S / B / T 16 P1

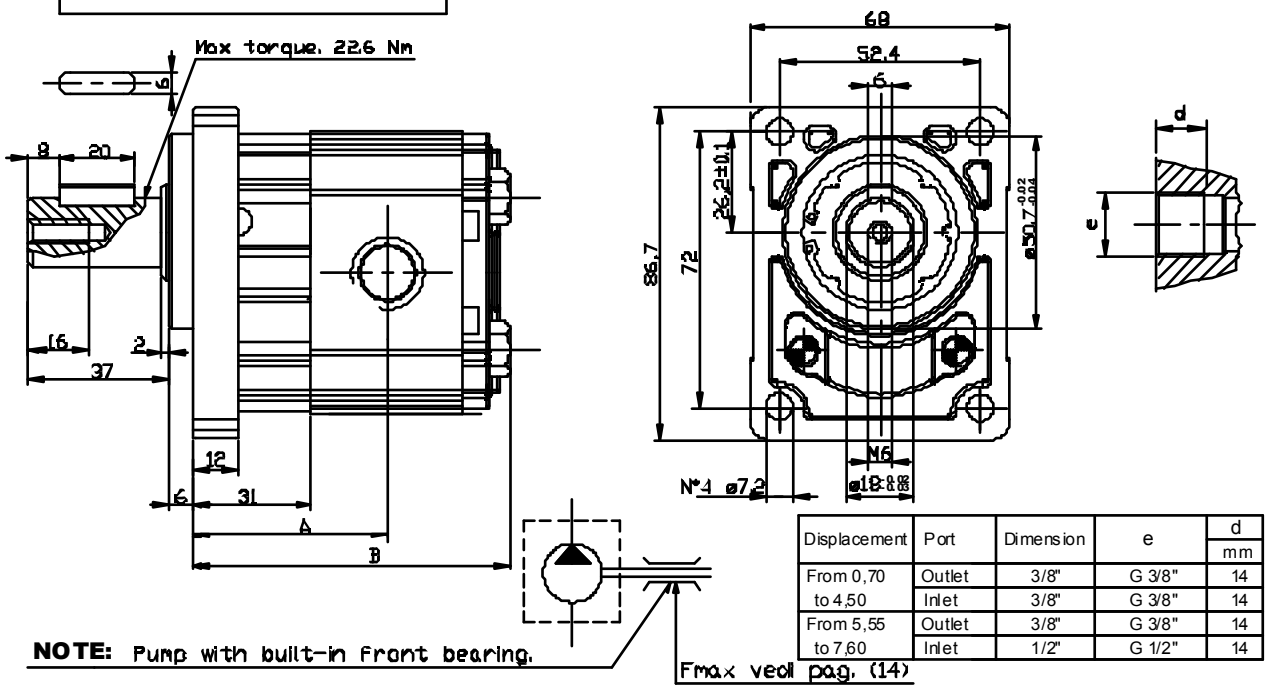
- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- S — Rotation: S Anti-clockwise, D Clockwise
- B — Body for European flanges
- T — Front bearing
- 16 — Pump shaft
- P1 — European standard flange

Screws tightening torque : 28÷30 Nm

AVAILABLE FOR QUANTITIES

GROUP 1 PUMPS- WITH FRONT BEARING

VERSION: G 16 T P1



Displacement	Port	Dimension	e	d mm
From 0,70 to 4,50	Outlet	3/8"	G 3/8"	14
	Inlet	3/8"	G 3/8"	14
From 5,55 to 7,60	Outlet	3/8"	G 3/8"	14
	Inlet	1/2"	G 1/2"	14

NOTE: Pump with built-in front bearing.

Fmax vedi pag. (14)

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Anti-clockwise)	Code (Clockwise)
OT 100 P 07	0.73	200	240	5000	49.30	82.5	1.8	PS1027112S	PS1027112D
OT 100 P 11	1.05	240	280	5000	49.90	83.6	2.4	PS1027113S	PS1027113D
OT 100 P 13	1.25	260	300	5000	50.60	84.3	3.2	PS1027128S	PS1027128D
OT 100 P 16	1.45	260	300	5000	50.75	85.3	4.2	PS1027114S	PS1027114D
OT 100 P 20	1.80	260	300	5000	51.45	86.7	5.2	PS1027115S	PS1027115D
OT 100 P 25	2.50	260	300	5000	52.50	88.8	6.7	PS1027116S	PS1027116D
OT 100 P 32	3.05	260	300	5000	53.50	90.8	8.3	PS1027117S	PS1027117D
OT 100 P 40	3.80	260	300	4500	54.90	93.6	10.1	PS1027118S	PS1027118D
OT 100 P 43	4.30	240	280	4500	55.45	95.7	12.0	PS1027127S	PS1027127D
OT 100 P 49	4.50	240	280	4500	56.45	96.7	12.7	PS1027119S	PS1027119D
OT 100 P 58	5.55	200	240	4000	58.00	99.8	15.0	PS1027120S	PS1027120D
OT 100 P 65	6.25	190	230	3750	59.25	102.3	16.8	PS1027121S	PS1027121D
OT 100 P 79	7.60	170	220	3500	61.60	107.0	20.5	PS1027122S	PS1027122D
OT 100 P 99	9.90	130	170	3500	70.40	115.8	26.3	PS1027126S	PS1027126D

EXAMPLE OF ORDERING CODE

OT100 P 20 S / G / T 16 P1

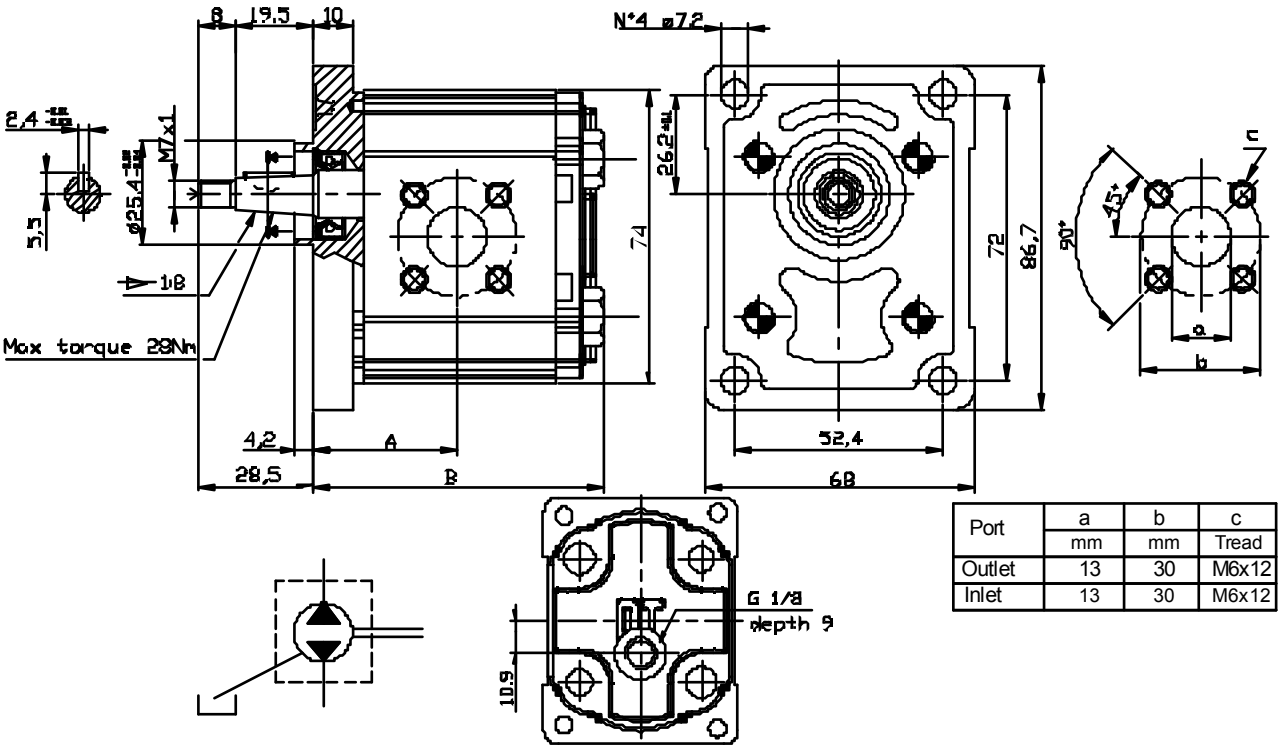
- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- S / D — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- T — Front bearing
- 16 — Pump shaft
- P1 — European standard flange

Screws tightening torque : 28÷30 Nm

AVAILABLE FOR QUANTITIES

GROUP 1 REVERSIBLE PUMPS - EUROPEAN STANDARD

VERSION: B18 P1



Port	a	b	c
	mm	mm	Tread
Outlet	13	30	M6x12
Inlet	13	30	M6x12

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code
OT 100 P16	1.45	180	230	5000	32.75	67.3	4.2	PS1007083R
OT 100 P20	1.80	210	250	5000	33.45	68.7	5.2	PS1007084R
OT 100 P25	2.45	210	250	5000	34.50	70.8	6.7	PS1007085R
OT 100 P32	3.05	210	250	5000	35.50	72.8	8.3	PS1007086R
OT 100 P40	3.80	210	250	4500	36.90	75.6	10.1	PS1007087R
OT 100 P49	4.70	200	240	4500	38.45	78.7	12.7	PS1007088R
OT 100 P58	5.55	200	220	4000	40.00	81.8	15.0	PS1007089R
OT 100 P65	6.25	180	210	3750	41.25	84.3	16.8	PS1007090R
OT 100 P79	7.60	160	200	3500	43.60	89.0	20.5	PS1017091R

EXAMPLE OF ORDERING CODE

OT100 P 20 R / B 18 P1

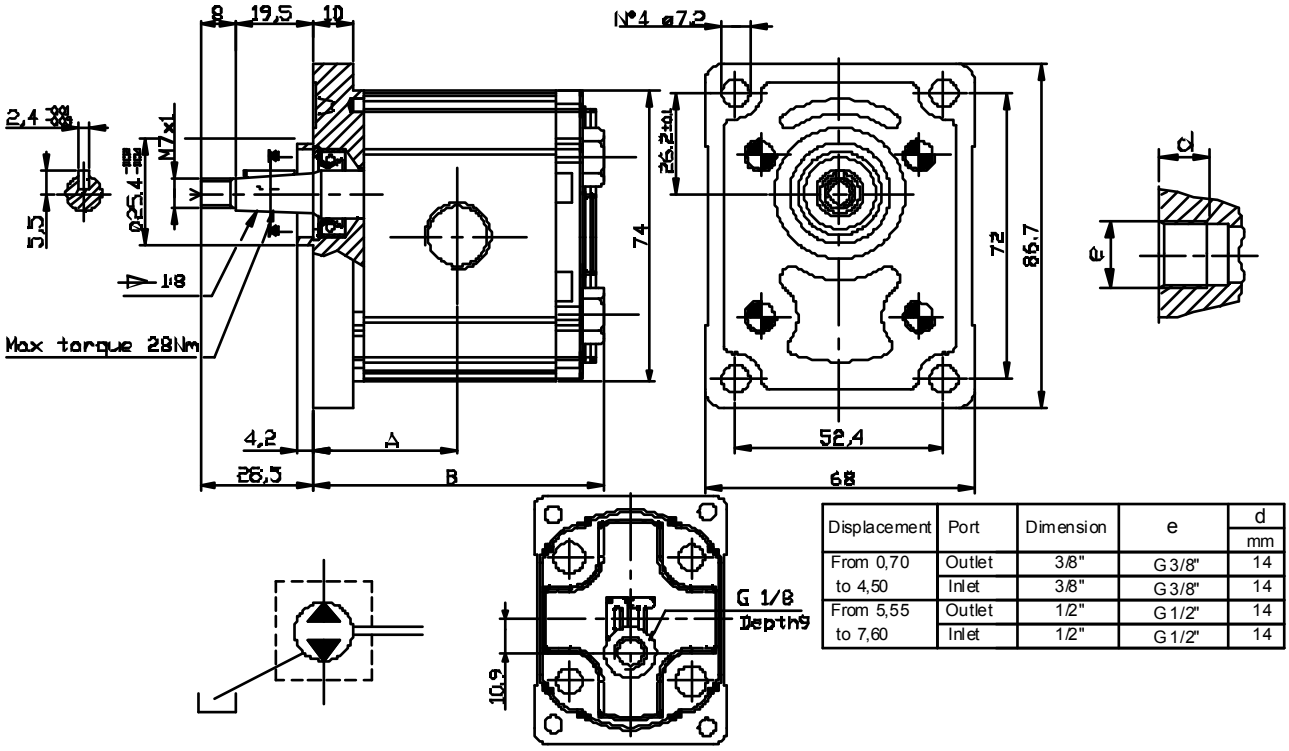
- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- R — Rotation: R Reversible
- B — Body for European flanges
- 18 — Taper shaft (1:8)
- P1 — European standard flange

Screws tightening torque : 25 ÷ 28 Nm

AVAILABLE FOR QUANTITIES

GROUP 1 REVERSIBLE PUMPS - EUROPEAN STANDARD

VERSION: G 18 P1



Displacement	Port	Dimension	e	d
				mm
From 0,70 to 4,50	Outlet	3/8"	G 3/8"	14
	Inlet	3/8"	G 3/8"	14
From 5,55 to 7,60	Outlet	1/2"	G 1/2"	14
	Inlet	1/2"	G 1/2"	14

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code
OT 100 P16	1.45	180	230	5000	32.75	67.3	4.2	PS1007063R
OT 100 P20	1.80	210	250	5000	33.45	68.7	5.2	PS1007064R
OT 100 P25	2.45	210	250	5000	34.50	70.8	6.7	PS1007065R
OT 100 P32	3.05	210	250	5000	35.50	72.8	8.3	PS1007066R
OT 100 P40	3.80	210	250	4500	36.90	75.6	10.1	PS1007067R
OT 100 P49	4.70	200	240	4500	38.45	78.7	12.7	PS1007068R
OT 100 P58	5.55	200	220	4000	40.00	81.8	15.0	PS1007069R
OT 100 P65	6.25	180	210	3750	41.25	84.3	16.8	PS1007070R
OT 100 P79	7.60	160	200	3500	43.60	89.0	20.5	PS1017071R

EXAMPLE OF ORDERING CODE

OT100 P 20 R / G 18 P1

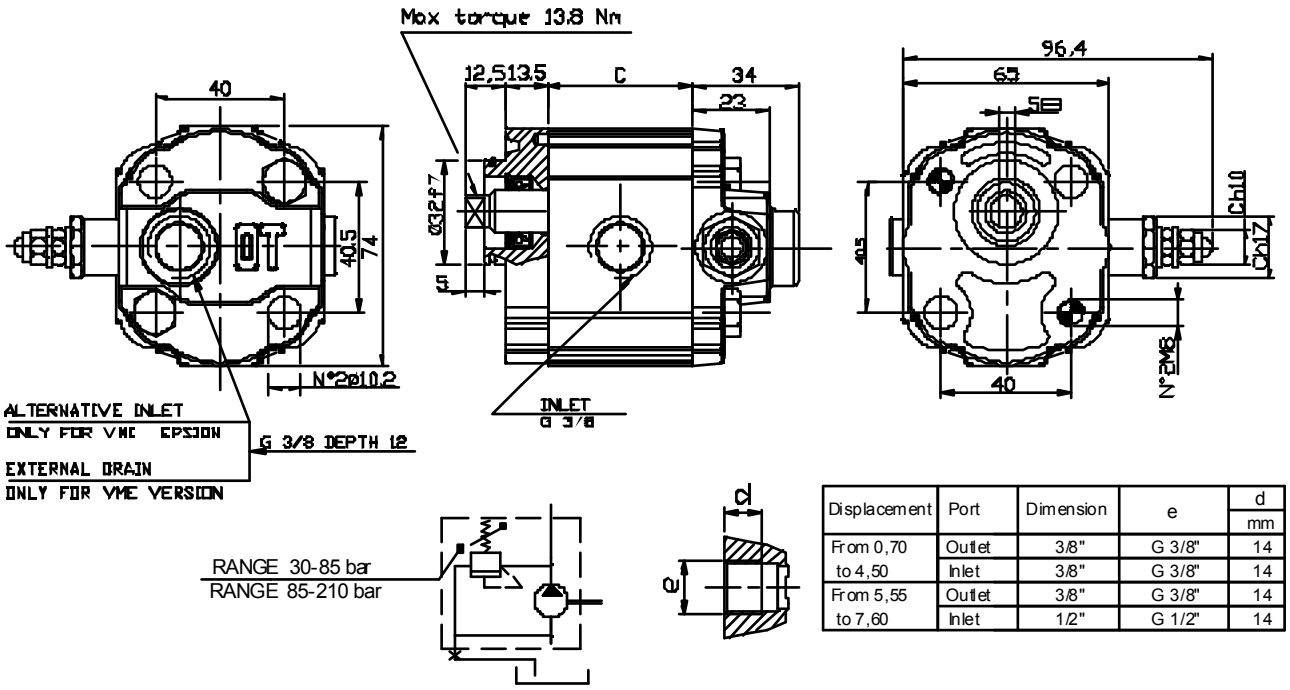
- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- R — Rotation: R Reversible
- G — Body with threated ports (BSP)
- 18 — Taper shaft (1:8)
- P1 — European standard flange

Screws tightening torque : 25 ÷ 28 Nm

AVAILABLE FOR QUANTITIES

GROUP 1 PUMPS - WITH MAIN RELIEF VALVE

VERSION: G14B0-VM

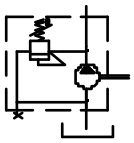


Displacement	Port	Dimension	e	d mm
From 0,70 to 4,50	Outlet	3/8"	G 3/8"	14
	Inlet	3/8"	G 3/8"	14
From 5,55 to 7,60	Outlet	3/8"	G 3/8"	14
	Inlet	1/2"	G 1/2"	14

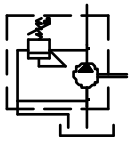
Type	Displacement (cc/rev)	Max speed (r.p.m)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)
OT 100 P07	0.73	5000	36.7	1.8
OT 100 P11	1.05	5000	37.8	2.4
OT 100 P16	1.45	5000	39.5	4.2
OT 100 P20	1.80	5000	40.9	5.2
OT 100 P26	2.45	5000	43.0	6.7
OT 100 P32	3.05	5000	45.0	8.3
OT 100 P40	3.80	4500	47.8	10.1
OT 100 P49	4.70	4500	50.9	12.7
OT 100 P58	5.55	4000	54.0	15.0
OT 100 P65	6.25	3750	56.5	16.8
OT 100 P79	7.60	3500	61.2	20.5

AVAILABLE VERSIONS :

1) Lateral or alternative posterior inlet with internal drain.



2) Lateral inlet with external drain.



EXAMPLE OF ORDERING CODE

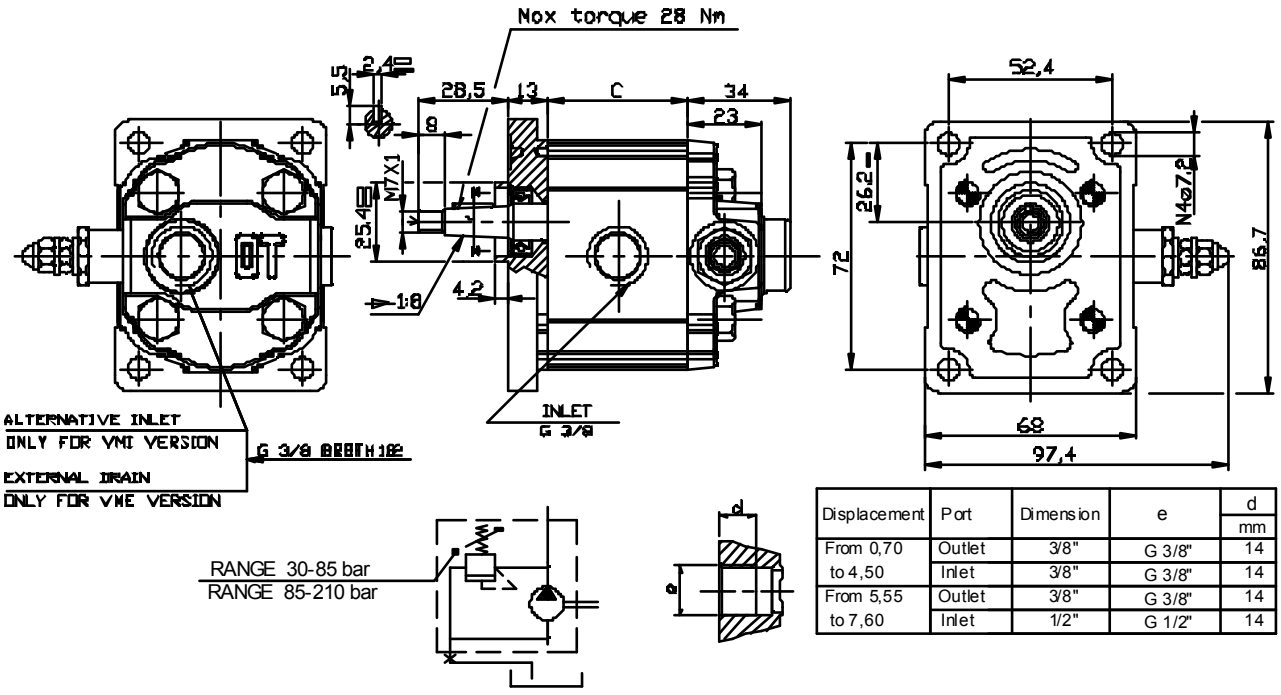
OT100 P 20 S / G 14 B0 - VMI 120

- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — See above corrispondent single pumps
- 14 — Body with threated ports (BSP)
- B0 — Tang shaft
- VMI — Neutral flange; Relief valve: VMI Internal drain, VME External drain
- 120 — Setting 120 bar

Screws tightening torque : 25 ÷ 28 Nm

GROUP 1 PUMPS - WITH MAIN RELIEF VALVE

VERSION: G18P1-VM

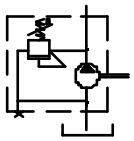


Displacement	Port	Dimension	e	d mm
From 0,70 to 4,50	Outlet	3/8"	G 3/8"	14
	Inlet	3/8"	G 3/8"	14
From 5,55 to 7,60	Outlet	3/8"	G 3/8"	14
	Inlet	1/2"	G 1/2"	14

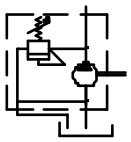
Type	Displacement (cc/rev)	Max speed (r.p.m)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)
OT 100 P07	0.73	5000	36.7	1.8
OT 100 P11	1.05	5000	37.8	2.4
OT 100 P16	1.45	5000	39.5	4.2
OT 100 P20	1.80	5000	40.9	5.2
OT 100 P26	2.45	5000	43.0	6.7
OT 100 P32	3.05	5000	45.0	8.3
OT 100 P40	3.80	4500	47.8	10.1
OT 100 P49	4.70	4500	50.9	12.7
OT 100 P58	5.55	4000	54.0	15.0
OT 100 P65	6.25	3750	56.5	16.8
OT 100 P79	7.60	3500	61.2	20.5

AVAILABLE VERSIONS :

1) Lateral or alternative posterior inlet with internal drain.



2) Lateral inlet with external drain.



EXAMPLE OF ORDERING CODE

OT100 P 20 S / G 18 P1 - VMI 120

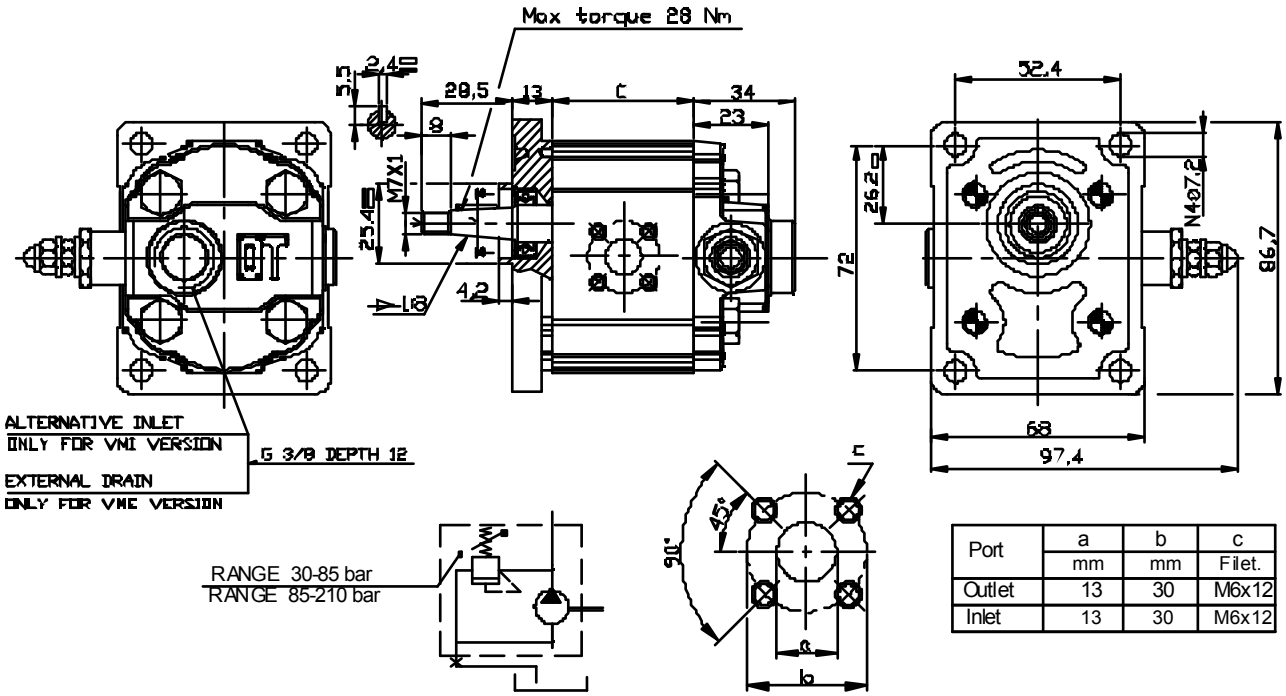
- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- S / G — See above corrispondent single pumps
- 18 — Taper shaft (1:8)
- P1 — European standard flange
- VMI — Relief valve: VMI Internal drain; VME External drain
- 120 — Setting 120 bar

Body with threated ports (BSP)

Screws tightening torque : 25÷28 Nm

GROUP 1 PUMPS - WITH MAIN RELIEF VALVE

VERSION: B18P1-VM

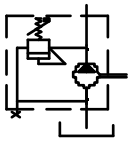


Port	a	b	c
	mm	mm	Filet.
Outlet	13	30	M6x12
Inlet	13	30	M6x12

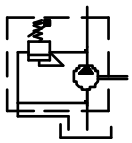
Type	Displacement (cc/rev)	Max speed (r.p.m)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)
OT 100 P07	0.73	5000	36.7	1.8
OT 100 P11	1.05	5000	37.8	2.4
OT 100 P16	1.45	5000	39.5	4.2
OT 100 P20	1.80	5000	40.9	5.2
OT 100 P26	2.45	5000	43.0	6.7
OT 100 P32	3.05	5000	45.0	8.3
OT 100 P40	3.80	4500	47.8	10.1
OT 100 P49	4.70	4500	50.9	12.7
OT 100 P58	5.55	4000	54.0	15.0
OT 100 P65	6.25	3750	56.5	16.8
OT 100 P79	7.60	3500	61.2	20.5

AVAILABLE VERSIONS :

1) Lateral or alternative posterior inlet with internal drain.



2) Lateral inlet with external drain.



EXAMPLE OF ORDERING CODE

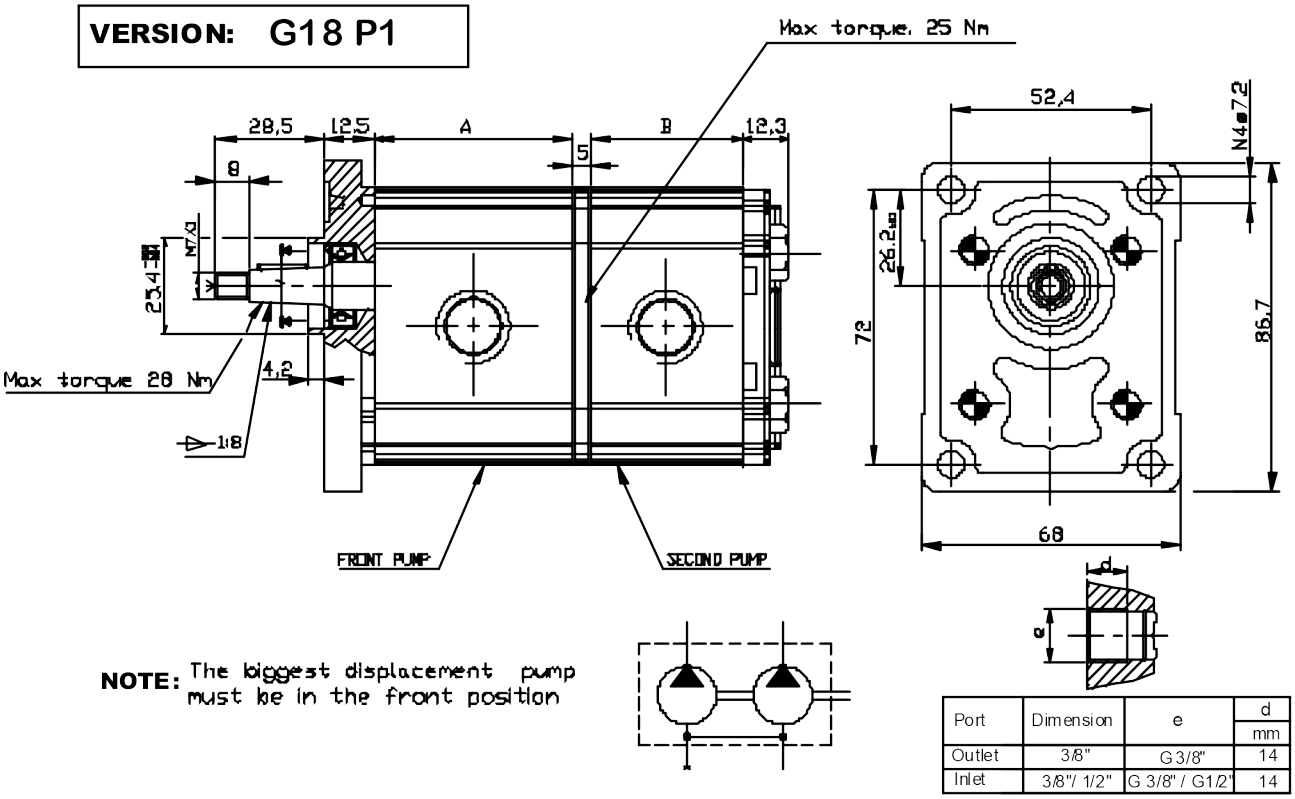
OT100 P 20 S / B 18 P1 - VMI 120

- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- B — See above corrispondent single pumps
- 18 — Dimension B
- P1 — European standard flange; Taper shaft (1:8); Body for European flanges
- VMI — Relief valve: VMI Internal drain; VME External drain
- 120 — Setting 120 bar

Screws tightening torque : 25÷28 Nm

GROUP 1 PUMPS - TANDEM PUMPS

VERSION: G18 P1



NOTE: The biggest displacement pump must be in the front position

Port	Dimension	e	d
			mm
Outlet	3/8"	G 3/8"	14
Inlet	3/8"/ 1/2"	G 3/8" / G1/2"	14

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)
OT 100 P07	0.73	200	240	4000	36.7	36.7	1.8
OT 100 P11	1.05	240	280	4000	37.8	37.8	2.4
OT 100 P16	1.55	260	300	4000	39.5	39.5	4.2
OT 100 P20	1.90	260	300	4000	40.9	40.9	5.2
OT 100 P26	2.50	260	300	4000	43.0	43.0	6.7
OT 100 P32	3.10	260	300	4000	45.0	45.0	8.3
OT 100 P40	3.80	260	300	3500	47.8	47.8	10.1
OT 100 P49	4.70	240	280	3500	50.9	50.9	12.7
OT 100 P58	5.55	200	240	3000	54.0	54.0	15.0
OT 100 P65	6.25	190	230	2750	56.5	56.5	16.8
OT 100 P79	7.60	170	220	2500	61.2	61.2	20.5

EXAMPLE OF ORDERING CODE

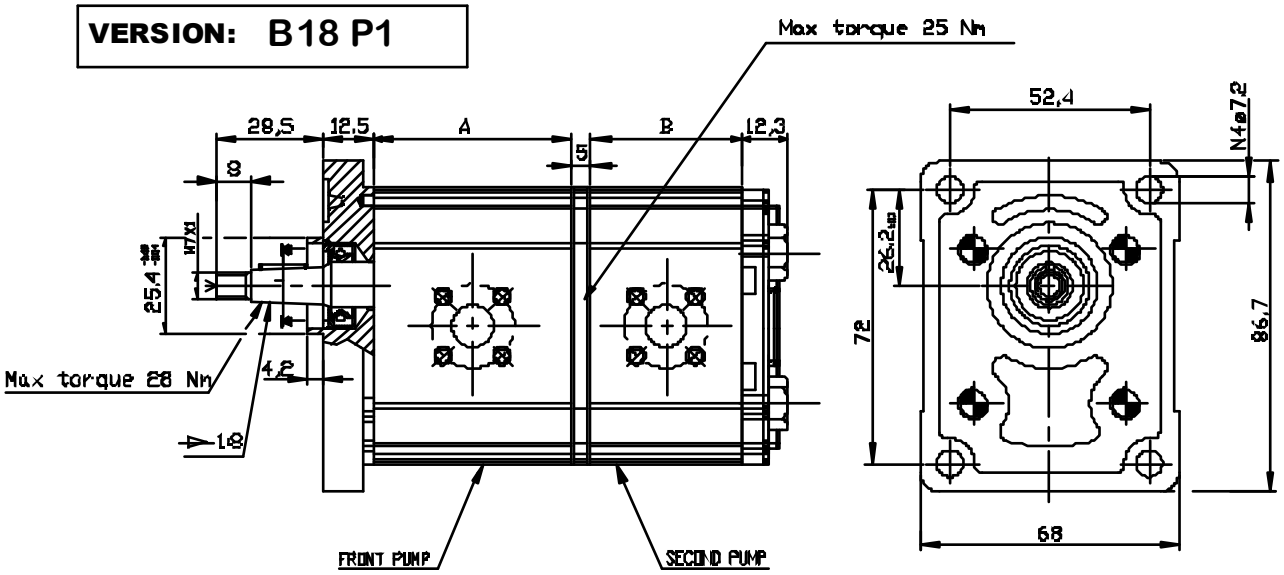
OT100 P 40 / 20 S / G 18 P1 / 2

- OT100 — Series
- P — Pump
- 40 — Front pump displacement (see above table)
- 20 — Second pump displacement (see above table)
- S — Rotation: S = Anti-clockwise, D = Clockwise
- G — Body with threated ports (BSP)
- 18 — Taper shaft (1:8)
- P1 — European standard flange
- 2 — 1 = One inlet port, 2 = Two inlet ports

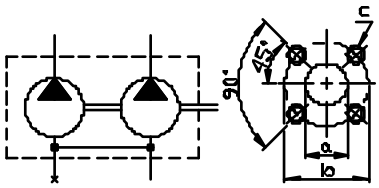
AVAILABLE FOR QUANTITIES AS SECOND PUMP

GROUP 1 PUMPS - TANDEM PUMPS

VERSION: B18 P1



NOTE: The biggest displacement pump must be in the front position



Port	a	b	c
	mm	mm	Tread
Outlet	13	30	M6x12
Inlet	13	30	M6x12

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)
OT 100 P07	0.73	200	240	4000	36.7	36.7	1.8
OT 100 P11	1.05	240	280	4000	37.8	37.8	2.4
OT 100 P16	1.55	260	300	4000	39.5	39.5	4.2
OT 100 P20	1.90	260	300	4000	40.9	40.9	5.2
OT 100 P26	2.50	260	300	4000	43.0	43.0	6.7
OT 100 P32	3.10	260	300	4000	45.0	45.0	8.3
OT 100 P40	3.80	260	300	3500	47.8	47.8	10.1
OT 100 P49	4.70	240	280	3500	50.9	50.9	12.7
OT 100 P58	5.55	200	240	3000	54.0	54.0	15.0
OT 100 P65	6.25	190	230	2750	56.5	56.5	16.8
OT 100 P79	7.60	170	220	2500	61.2	61.2	20.5

EXAMPLE OF ORDERING CODE

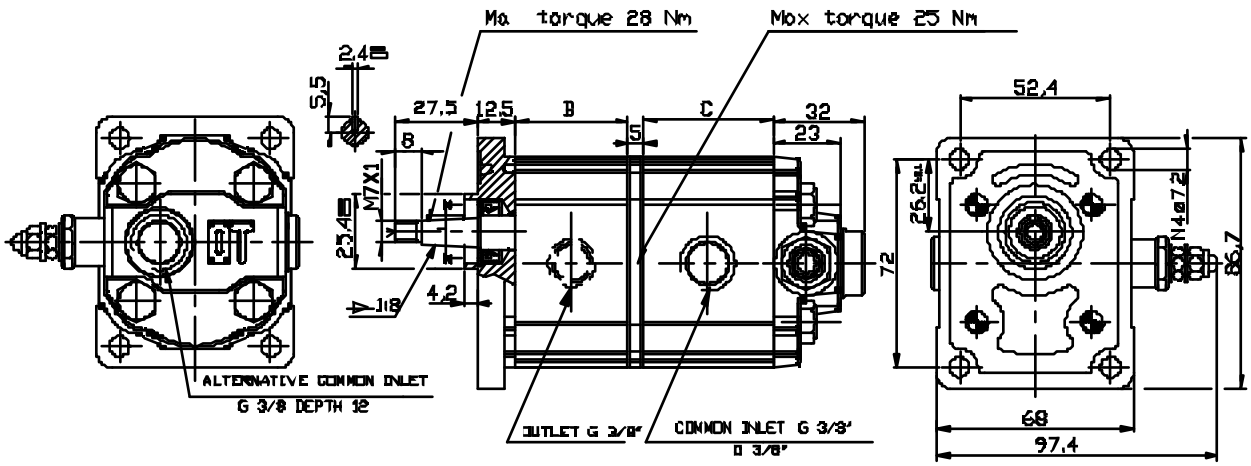
OT100 P 40 / 20 S / B 18 P1 / 2

- OT100 — Series
- P — Pump
- 40 / 20 — Front pump displacement / Second pump displacement (see above table)
- S — Rotation: S Anti-dockwise, D Clockwise
- B — Body for European flanges
- 18 — Taper shaft (1:8)
- P1 — European standard flange
- 2 — 1 = One inlet port, 2 = Two inlet ports

AVAILABLE FOR QUANTITIES AS SECOND PUMP

GROUP 1 PUMPS - TANDEM WITH SEQUENCE VALVE HI-LOW

VERSION: G18 P1-SV

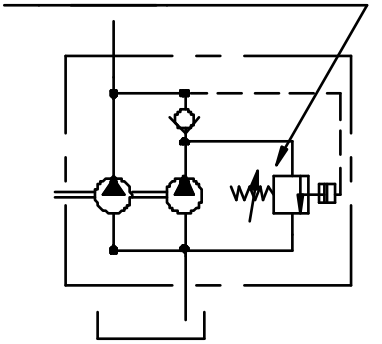


FRONT PUMP				
TIPO	P1	P3	B	Cy
OT 100 P11	240	280	37.8	1.05
OT 100 P16	260	300	39.5	1.45
OT 100 P20	260	300	40.9	1.80
OT 100 P26	260	300	43	2.45
OT 100 P32	260	300	40.9	3.05
OT 100 P40	260	300	43	3.80

SECOND PUMP			
TIPO	P1	C	Cy
OT 100 P26	15/65	43	2.4
OT 100 P40	15/65	47.8	3.8
OT 100 P49	15/65	50.9	4.6
OT 100 P65	15/65	50.9	6.2

P1 = working pressure (bar)
P3 = peak pressure (bar)
Cy= displacement (cc/rev)

RANGE 15/25 bar (blue spring)
RANGE 25/65 bar (red spring)



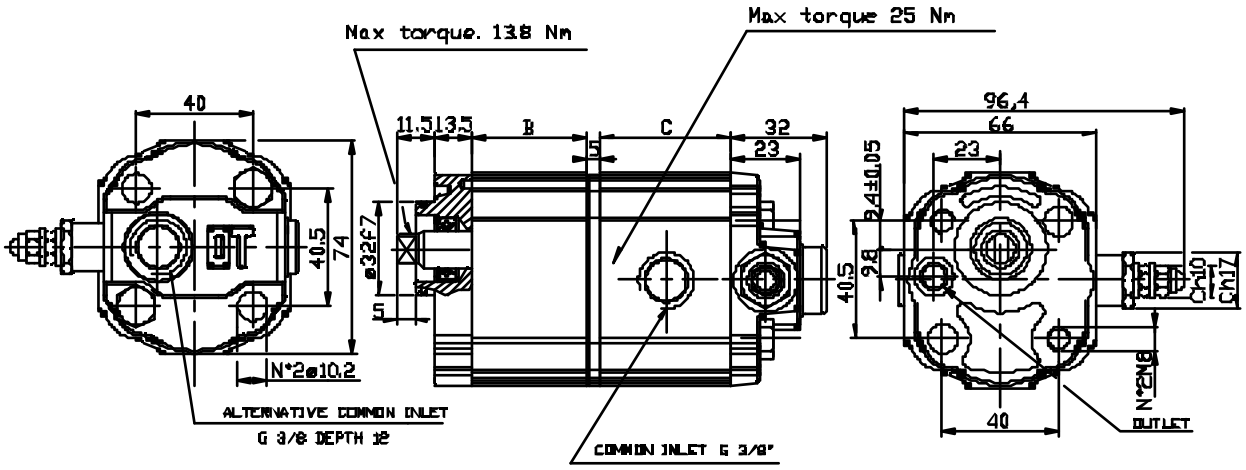
EXAMPLE OF ORDERING CODE

OT100 P 11 / 49 S / G 18 P1 - SV 30

- OT100 — Series
- P — Pump
- 11 — Front pump displacement (see above table)
- 49 — Second pump displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — See above corrispondent single pumps
- 18 — European standard flange
- P1 — Taper shaft (1:8)
- SV — Sequence valve Hi-Low
- 30 — Setting value (bar)
- Body with threated ports (BSP)

GROUP 1 PUMPS - TANDEM WITH SEQUENCE VALVE HI-LOW

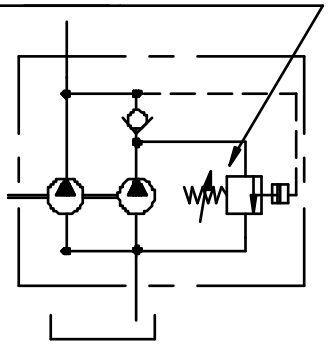
VERSION: N14 B1-SV



FRONT PUMP				
TIPO	P1	P3	B	Cy
OT 100 P11	240	280	37.8	1.05
OT 100 P16	260	300	39.5	1.45
OT 100 P20	260	300	40.9	1.80
OT 100 P26	260	300	43	2.45
OT 100 P32	260	300	40.9	3.05
OT 100 P40	260	300	43	3.80

SECOND PUMP			
TIPO	P1	C	Cy
OT 100 P26	15/65	43	2.4
OT 100 P40	15/65	47.8	3.8
OT 100 P49	15/65	50.9	4.6
OT 100 P65	15/65	50.9	6.2

RANGE 15/25 bar (blue spring)
RANGE 25/65 bar (red spring)



P1 = work pressure (bar)
P3 = peak pressure (bar)
Cy= displacement (cc/rev)

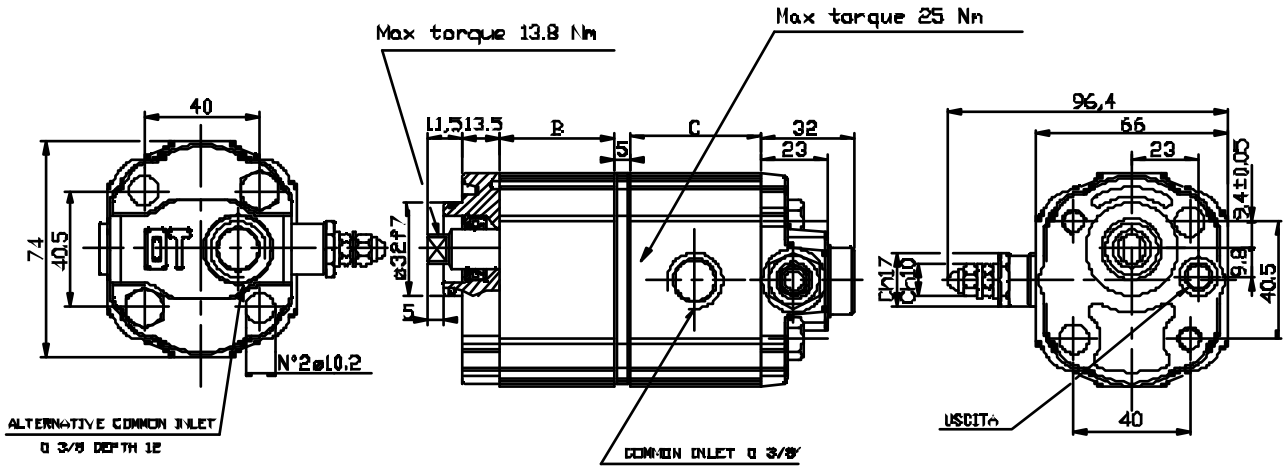
EXAMPLE OF ORDERING CODE

OT100 P 11 / 49 S / N 14 B1 - SV 30

- OT100 — Series
- P — Pump
- 11 — Front pump displacement (see above table)
- 49 — Second pump displacement (see above table)
- S — Rotation: Anti-clockwise
- N — See above corrispondent single pumps
- 14 — Tang shaft
- B1 — B1= Flange for Anti-clockwise
- SV — Sequence valve Hi-Low
- 30 — Setting value (bar)
- Neutral body

GROUP 1 PUMPS - TANDEM WITH SEQUENCE VALVE HI-LOW

VERSION: N14 B2-VS

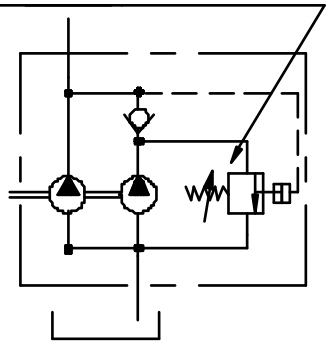


FRONT PUMP				
TIPO	P1	P3	B	Cy
OT 100 P11	240	280	37.8	1.05
OT 100 P16	260	300	39.5	1.45
OT 100 P20	260	300	40.9	1.80
OT 100 P26	260	300	43	2.45
OT 100 P32	260	300	40.9	3.05
OT 100 P40	260	300	43	3.80

SECOND PUMP			
TIPO	P1	C	Cy
OT 100 P26	15/55	43	2.4
OT 100 P40	15/55	47.8	3.8
OT 100 P49	15/55	50.9	4.6
OT 100 P65	15/55	50.9	6.2

P1 = work pressure (bar)
P3 = peak pressure (bar)
Cy = displacement (cc/rev)

RANGE 15/25 bar (blue spring)
RANGE 25/65 bar (red spring)



EXAMPLE OF ORDERING CODE

OT100 P 11 / 49 D / N 14 B2 - SV 30

- OT100 — Series
- P — Pump
- 11 — Front pump displacement (see above table)
- 49 — Second pump displacement (see above table)
- D — Rotation: D = Clockwise
- N — See above corrispondent single pumps
- 14 — Tang shaft
- B2 — B2= Flange for clockwise
- SV — Sequence valve Hi-Low
- 30 — Setting value (bar)
- Neutral body

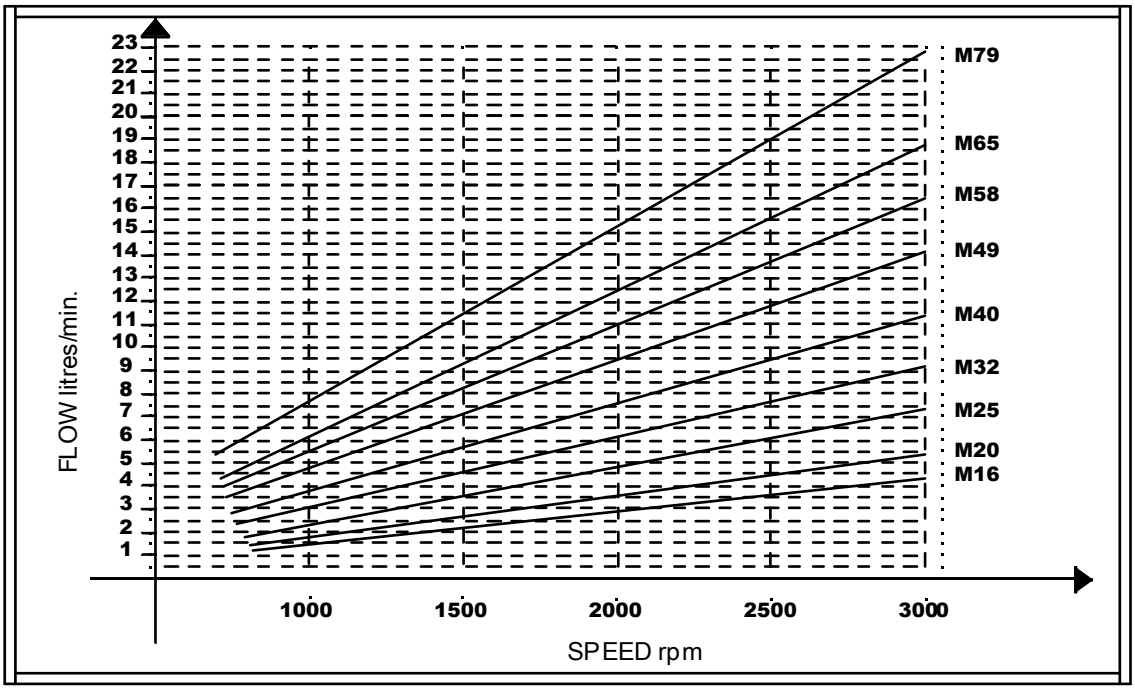
OT100 SINGLE ROTATION MOTORS GENERAL DATA

MOTOR TYPE	DISPLACEMENT	MAX. PRESSURE			MAX. SPEED	MIN. SPEED
		P1	P2	P3		
	cc / rev	bar			rev	rev
OT100 M16	**1.45**	**250**	**280**	**300**	**5000**	**600**
OT100 M20	**1.80**					
OT100 M25	**2.45**					
OT100 M32	**3.05**					
OT100 M40	**3.80**					
OT100 M49	**4.70**	**200**	**220**	**240**	**4500**	**500**
OT100 M58	**5.55**	**200**	**210**	**230**		
OT100 M65	**6.25**	**170**	**190**	**220**	**3500**	
OT100 M79	**7.60**					

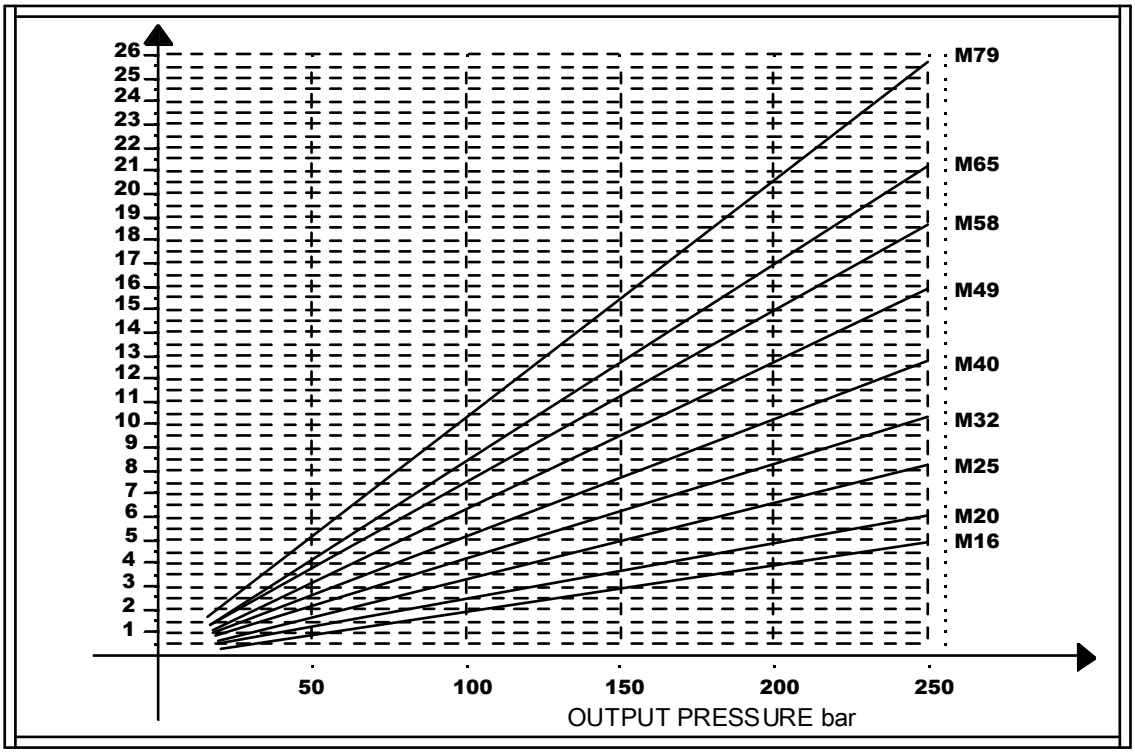
P1= Max. continuous pressure **P2= Max. intermittent pressure** **P3= Max. peak pressure**

FOR DIMENSION PLEASE CHECK
RELATIVE SINGLE PUMP TABLES

FLOW CHARACTERISTICS CURVES



ABSORBED TORQUE



NOTE

The flow characteristics curves have been made at P1 pressure.

MOTOR CALCULATION

V	**Displacement**	**cc/rev**
Q	**Flow**	**l/min**
P	**Power**	**kW**
C	**Torque**	**N · m**
N	**Speed**	**rpm**
ΔP	**Pressure**	**bar**
n_v	**Volumetric efficiency**	**0.95**
n_m	**Mechanical efficiency**	**0.85**
n_t	**Total efficiency**	**0.81**

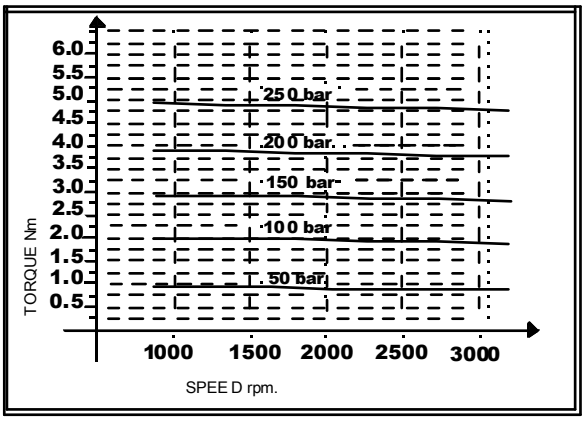
$$Q = \frac{V \cdot N \cdot 10^{-3}}{n_v} \quad \text{l/min}$$

$$C = \frac{\Delta P \cdot V \cdot n_m}{62.8} \quad \text{N} \cdot \text{m}$$

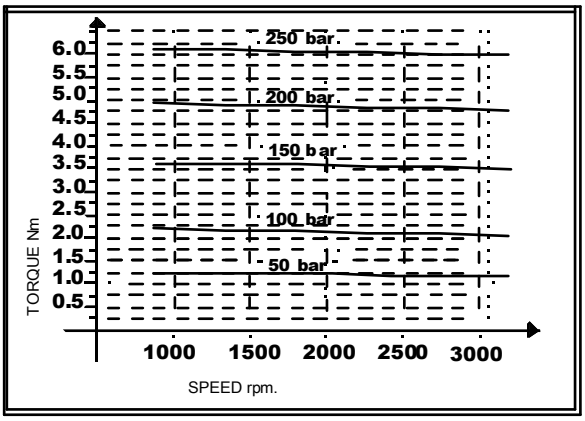
$$P = \frac{\Delta P \cdot V \cdot N \cdot n_t}{612000} \quad \text{kW}$$

GROUP 1 MOTORS - TORQUE CHARACTERISTICS CURVES

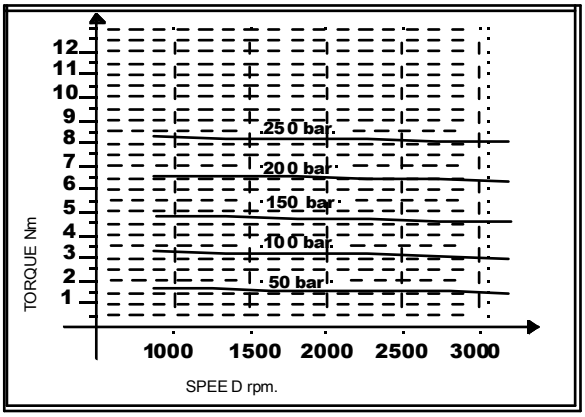
MOTORS OT100 M16



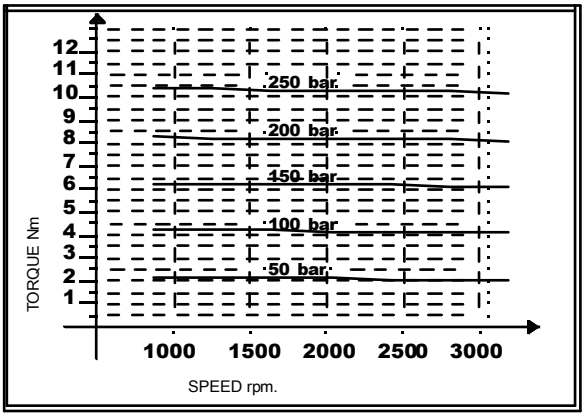
MOTORS OT100 M20



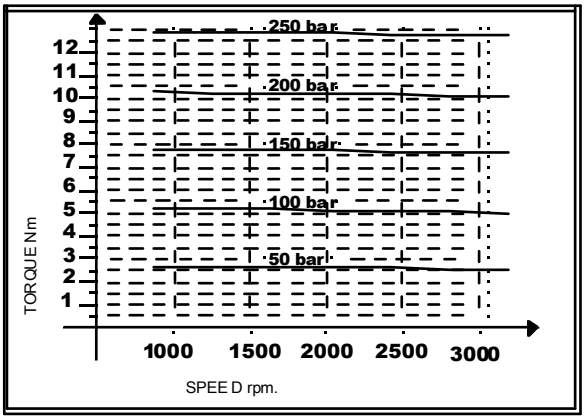
MOTORS OT100 M25



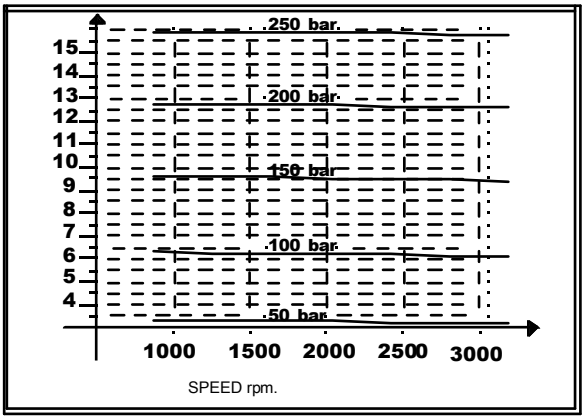
MOTORS OT100 M32



MOTORS OT100 M40

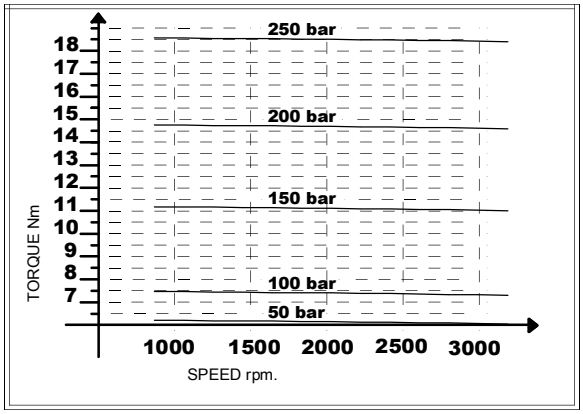


MOTORS OT100 M49

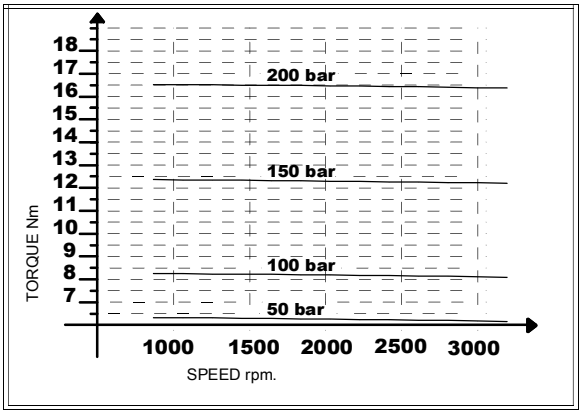


GROUP 1 MOTORS - TORQUE CHARACTERISTICS CURVES

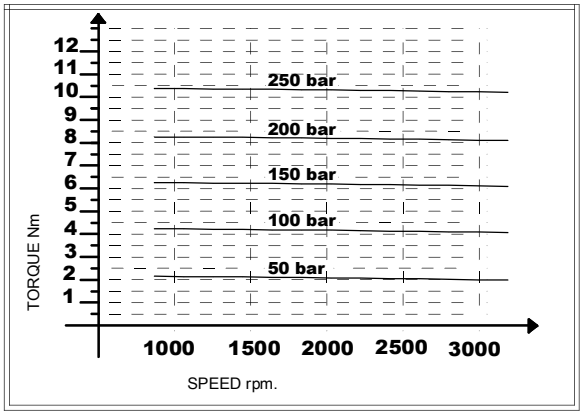
MOTORS OT100 M58



MOTORS OT100 M65

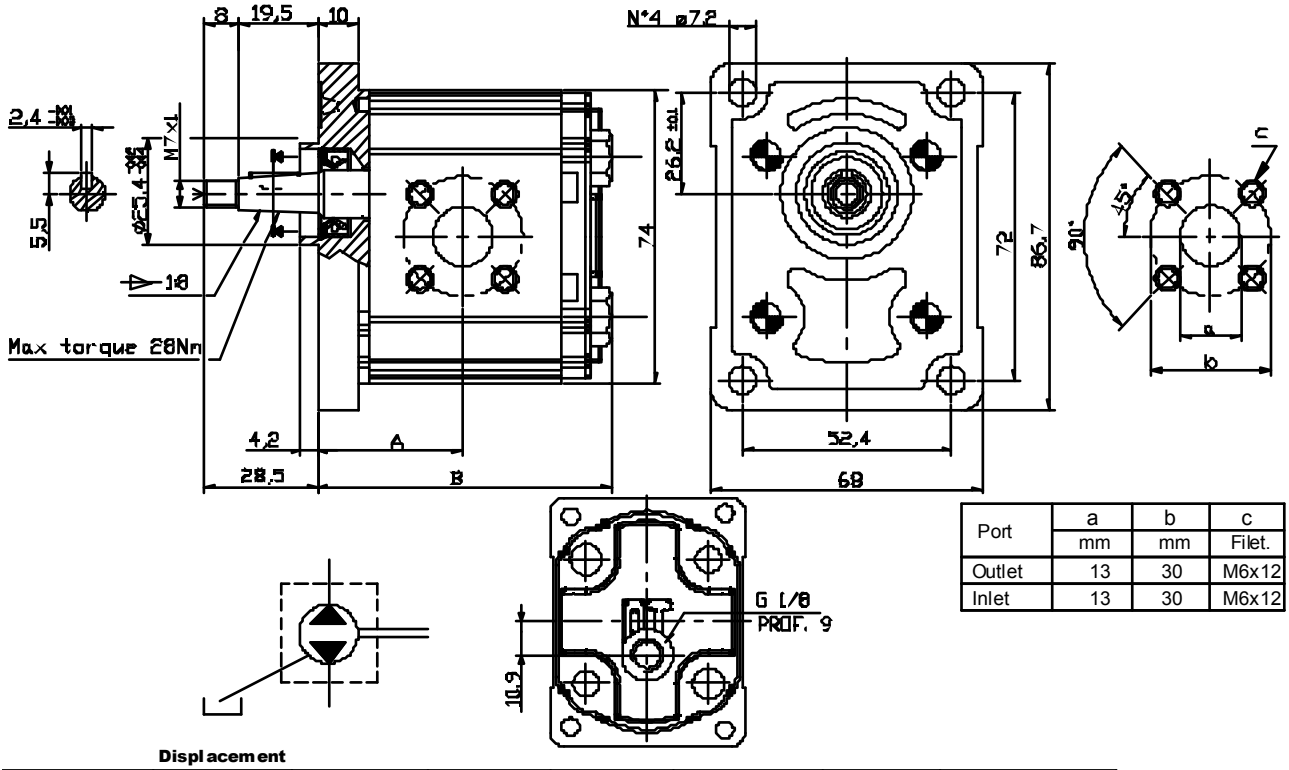


MOTORS OT100 M79



GROUP 1 REVERSIBLE MOTORS - EUROPEAN STANDARD

VERSION: B18 P1



Port	a	b	c
	mm	mm	Filet.
Outlet	13	30	M6x12
Inlet	13	30	M6x12

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code
OT 100 M16	1.45	180	230	5000	32.75	67.3	4.2	PS1009083R
OT 100 M20	1.80	210	250	5000	33.45	68.7	5.2	PS1009084R
OT 100 M25	2.45	210	250	5000	34.50	70.8	6.7	PS1009085R
OT 100 M32	3.05	210	250	5000	35.50	72.8	8.3	PS1009086R
OT 100 M40	3.80	210	250	4500	36.90	75.6	10.1	PS1009087R
OT 100 M49	4.70	200	240	4500	38.45	78.7	12.7	PS1009088R
OT 100 M58	5.55	200	220	4000	40.00	81.8	15.0	PS1009089R
OT 100 M65	6.25	180	210	3750	41.25	84.3	16.8	PS1009090R
OT 100 M79	7.60	160	200	3500	43.60	89.0	20.5	PS1019091R

EXAMPLE OF ORDERING CODE

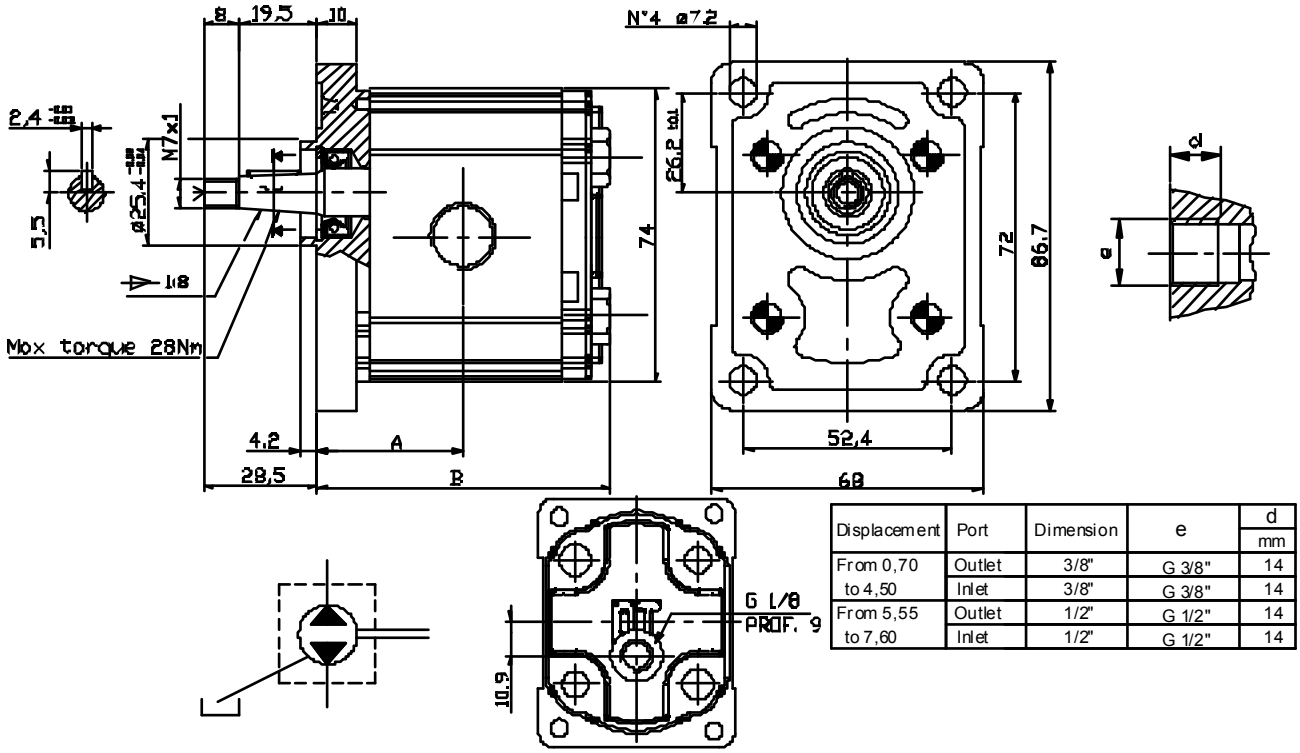
OT100 M 20 R / B 18 P1

- OT100 M — Series
- M — Motor
- 20 — Displacement (see above table)
- R — Rotation: R Reversible
- B — Body for European flanges
- 18 — Taper shaft (1:8)
- P1 — European standard flange

Screws tightening torque : 25÷28 Nm

GROUP 1 REVERSIBLE MOTORS - EUROPEAN STANDARD

VERSION: G 18 P1



Displacement	Port	Dimension	e	d mm
From 0,70 to 4,50	Outlet	3/8"	G 3/8"	14
	Inlet	3/8"	G 3/8"	14
From 5,55 to 7,60	Outlet	1/2"	G 1/2"	14
	Inlet	1/2"	G 1/2"	14

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code
OT 100 M16	1.45	180	230	5000	32.75	67.3	4.2	PS1009063R
OT 100 M20	1.80	210	250	5000	33.45	68.7	5.2	PS1009064R
OT 100 M25	2.45	210	250	5000	34.50	70.8	6.7	PS1009065R
OT 100 M32	3.05	210	250	5000	35.50	72.8	8.3	PS1009066R
OT 100 M40	3.80	210	250	4500	36.90	75.6	10.1	PS1009067R
OT 100 M49	4.70	200	240	4500	38.45	78.7	12.7	PS1009068R
OT 100 M58	5.55	200	220	4000	40.00	81.8	15.0	PS1009069R
OT 100 M65	6.25	180	210	3750	41.25	84.3	16.8	PS1009070R
OT 100 M79	7.60	160	200	3500	43.60	89.0	20.5	PS1019071R

EXAMPLE OF ORDERING CODE

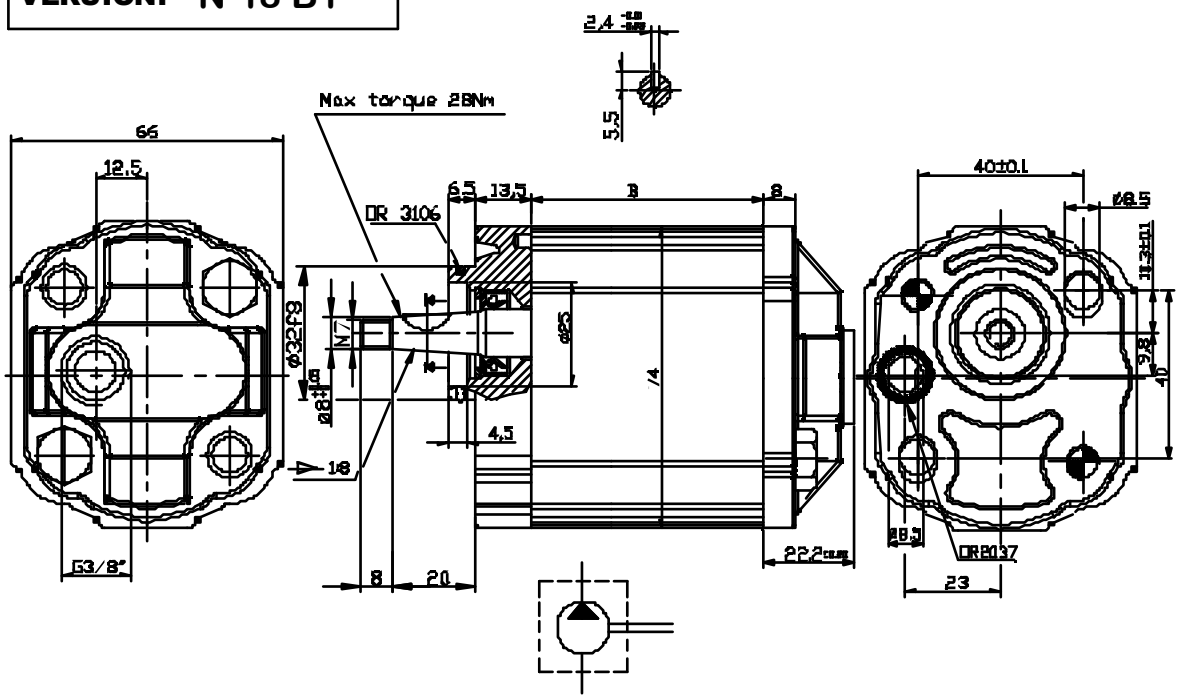
OT100 M 20 R / G 18 P1

- OT100 — Series
- M — Pump
- 20 — Displacement (see above table)
- R — Rotation: R = Reversible
- G — Body with threated ports (BSP)
- 18 — Taper shaft (1:8)
- P1 — European standard flange

Screws tightening torque : 25÷28 Nm

GROUP 1 PUMPS - SPECIAL VERSION FOR POWER UNITS

VERSION: N 18 B1



Type	Displacement (cc/ rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (rpm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Anti- Clockwise)
OT 100 P11	1.05	240	280	5000	37.8	2.4	PS1007302S
OT 100 P16	1.45	260	300	5000	39.5	4.2	PS1007303S
OT 100 P20	1.80	240	300	5000	40.9	5.2	PS1007304S
OT 100 P26	2.45	240	280	5000	43.0	6.7	PS1007305S
OT 100 P32	3.05	240	280	5000	45.0	8.3	PS1007306S
OT 100 P40	3.80	220	260	4500	47.8	10.1	PS1007307S
OT 100 P49	4.70	200	240	4500	50.9	12.7	PS1007308S
OT 100 P58	5.55	180	220	4000	54.0	15.0	PS1007309S
OT 100 P65	6.25	160	200	3750	56.5	16.8	PS1007310S
OT 100 P79	7.60	140	180	3500	61.2	20.5	PS1017301S

EXAMPLE OF ORDERING CODE

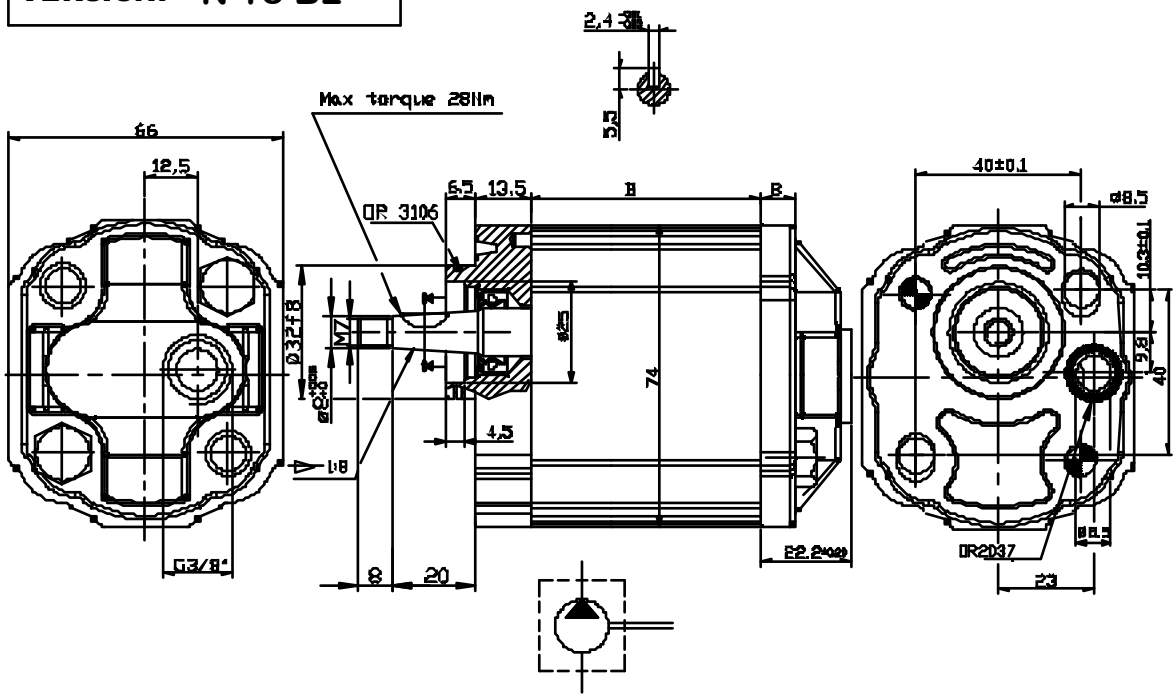
OT100 P 20 S / N 18 B1

- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- S — Rotation: S = Anti-clockwise
- N — Body without ports
- 18 — Taper shaft (1:8)
- B1 — B1 = Flange for Anti-clockwise

Screws tightening torque : 28÷30 Nm

GROUP 1 PUMPS - SPECIAL VERSION FOR POWER UNITS

VERSION: N 18 B2



Type	Displacement (cc/ rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (rpm)	Dimension B (mm)	Absorbed torque at 150 bar (Nm)	Code (Anti- Clockwise)
OT 100 P11	1.05	240	280	5000	37.8	2.4	PS1007302D
OT 100 P16	1.45	260	300	5000	39.5	4.2	PS1007303D
OT 100 P20	1.80	240	300	5000	40.9	5.2	PS1007304D
OT 100 P26	2.45	240	280	5000	43.0	6.7	PS1007305D
OT 100 P32	3.05	240	280	5000	45.0	8.3	PS1007306D
OT 100 P40	3.80	220	260	4500	47.8	10.1	PS1007307D
OT 100 P49	4.70	200	240	4500	50.9	12.7	PS1007308D
OT 100 P58	5.55	180	220	4000	54.0	15.0	PS1007309D
OT 100 P65	6.25	160	200	3750	56.5	16.8	PS1007310D
OT 100 P79	7.60	140	180	3500	61.2	20.5	PS1017301D

EXAMPLE OF ORDERING CODE

OT100 P 20 D / N 18 B2

- OT100 — Series
- P — Pump
- 20 — Displacement (see above table)
- D — Rotation: clockwise
- N — Body without ports
- 18 — Taper shaft (1:8)
- B2 — B2= Flange for clockwise

Screws tightening torque : 28 ÷ 30 Nm

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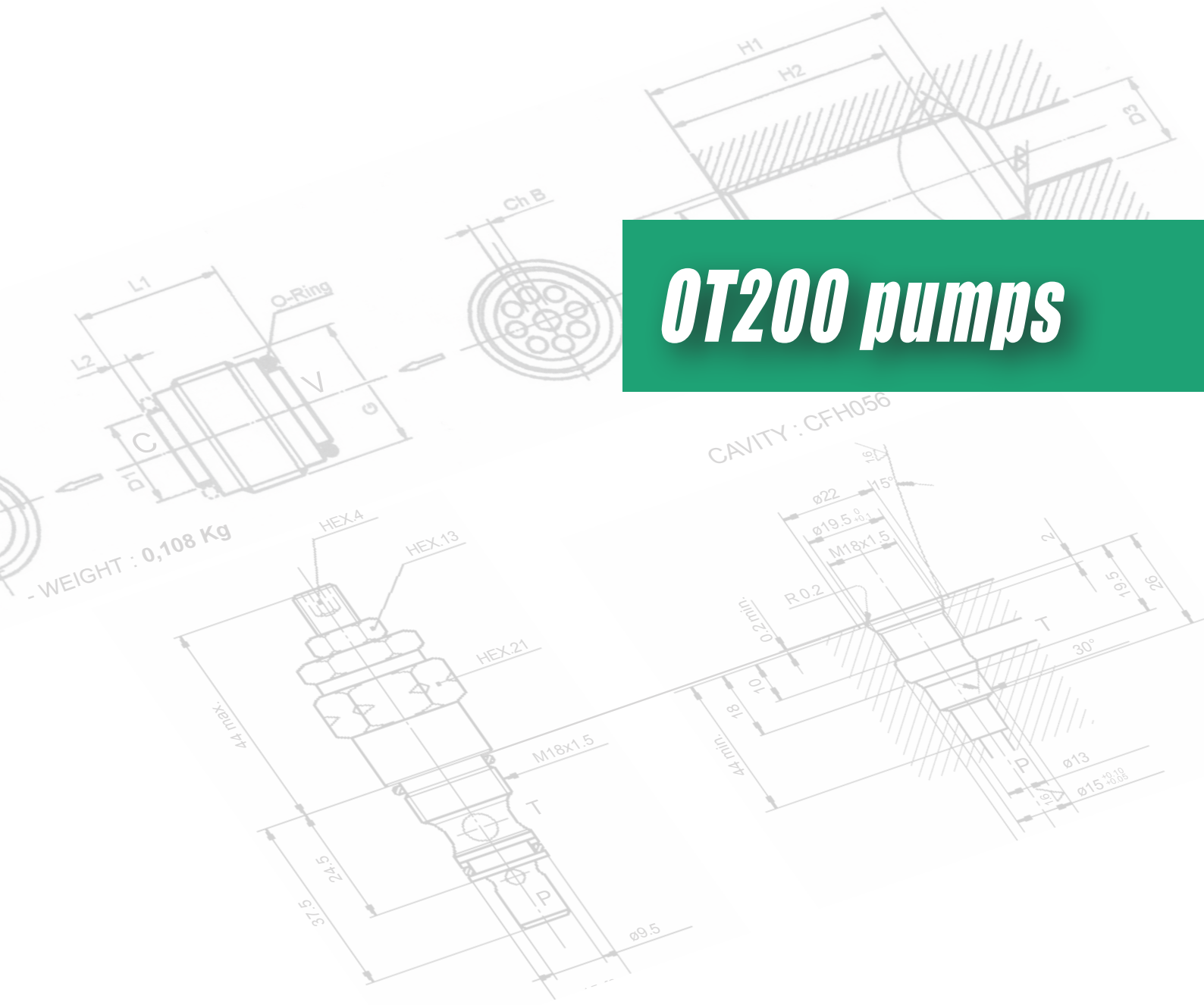
COMPONENTI OLEODINAMICI

OT200 pumps



GROUP 2 PUMPS

GEAR HOUSING

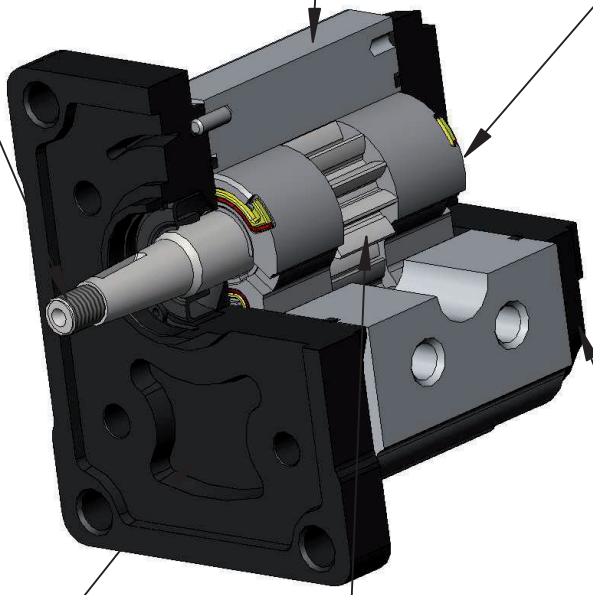
Extruded in aluminium alloy

DRIVE SHAFTS

Choice of several standard drive shafts

BEARINGS

Hi-resistant aluminium alloy with DU sleeve bearings to offer high performances.



MOUNTING FLANGES

Choice of several mounting flanges in cast iron

COVER

Made in cast iron material and available with suction port

GEARS

Designed specifically to reduce the noise level and offer the best performance between flow pulsation and displacements

GROUP 2 PUMPS

CONSTRUCTIVE CHARACTERISTICS:

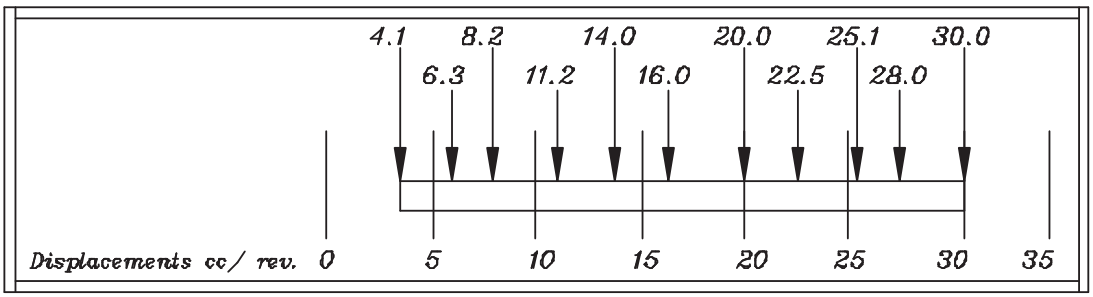
PART	MATERIAL	CHARACTERISTICS
GEARS	Hardened steel UNI 7846	Rs= 1250 N/mm^2 Rm= 1450 N/mm^2
FLANGE AND COVER	G25 / G30 cast iron	Rs= 300 N/mm^2 Rm= 450 N/mm^2
BEARINGS	Avional Bearings with DU	Rs= 350 N/mm^2 Rm= 390 N/mm^2
BODY	Etruded in aluminium alloy Series 7020	Rs= 350 N/mm^2 Rm= 390 N/mm^2
O-RINGS	Buna N Viton	90 Shore, up to 90°C 80 Shore, for high temperature
ANTIEXTRUSION	Zitel	With glass fibres

Rs= Enervation load
Rm= Breaking load

GENERAL CHARACTERISTICS:

Maximum pressures up to 300 bar.
Weight : from 3.1 Kg to 4.3 kg
Maximum speed up to 4.000 rpm.
Type of shafts: Taper 1:8 and 1:5
Oldham
Slined DIN 5482 17x14.
SAE A splined-9 TEETH
SAE A cylindrical - Ø15.85 - SAE A 11 TEETH
Type of flanges: European standard
German standard
SAE A standard.

Displacements from 4 cc/rev to 30cc/rev.
The displacements are available according this table:



There is also available a special version with built-in support.

DRIVE:

The connection of the pump to the motor must be done preferably with the use of a flexible coupling to avoid any radial and/or axial force on the shaft, otherwise pump efficiency will dramatically drop due to early wear of inner moving parts.
In any applications where the motion is trasmitted through belts, it is necessary to use a support to avoid any radial or axial load to the pump shaft.
In any applications where are used splined shafts ot Oldham couplings, it is suggested to assure a costant lubrification through grease or similar products.

WORKING CONDITIONS- LIMIT PERFORMANCES

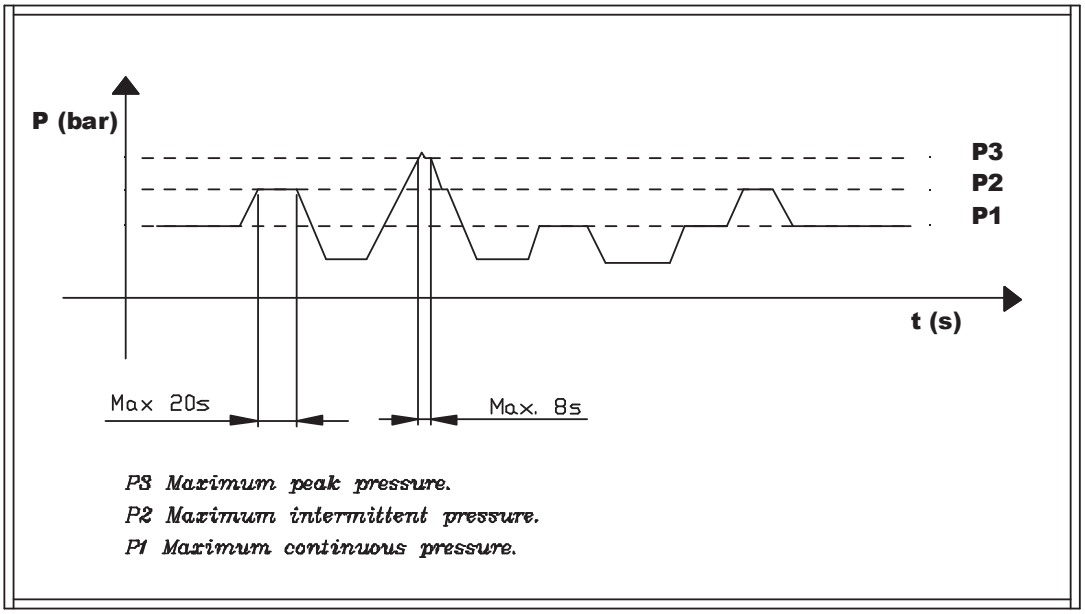
In normal working conditions there must be, in the suction pipe, a pressure lower than the atmospheric pressure.

The pressure range in suction must be:

Min. 0.75 bar (absolute)	MAX 2,0 bar (absolute)

The maximun pressure values "P1" are referred to a continuous working at 1500 rpm with standard hydraulic fluids with minimum viscosity of 10 cSt.
For heavier working conditions (viscosity or high temperature) it is necessary to reduce the "P1" values.

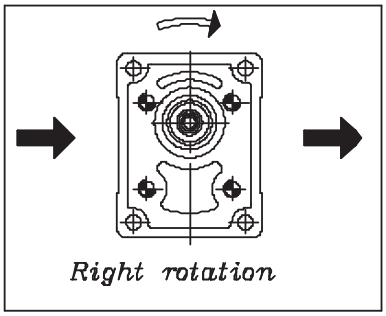
In the following table are described the admitted pressures:

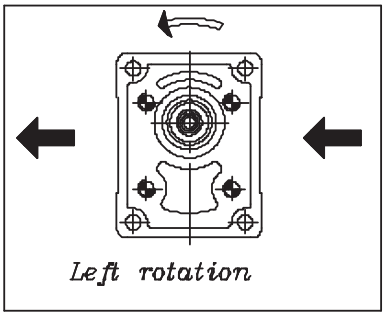


The standard working speeds (minimum and maximum) are the following:

Min. = 400 rpm	Max = (See following table)

DIRECTION OF ROTATION LOOKING AT THE SHAFT:





GROUP 2 PUMPS

FLUID FILTRATION

It is known that in many cases the premature pump performances reduction is due to a non correct filtration in the circuit.
The presence of contamination particles in the fluid usually corresponds to an irreparable wear of the pump internal parts.
It is raccomanded to pay attention to the plant cleaning, mainly in the starting activity.
The starting fluid contamination it must be according to the Norms ISO 4406 and it should not exceed the Class 19/16 with a filter 3x75.

Here below the technical parameters to respect:

FILTRATION IN SUCTION LINE	**120 / 150 Nominal micron**
FILTRATION IN PRESSURE LINE	**10 / 25 absolute micron**
MAXIMUM SPEED IN SUCTION	**0.5 / 1.5 m/s**
MAXIMUM SPEED IN OUTPUT	**3.0 / 5.5 m/s**

Sometime (contaminated places) it is racommended to improve the filtration in pressure line and fit also an air filter.

HYDRAULIC FLUIDS

It is recommended the use of fluids made for hydraulic circuits.
Usually they are hydraulic oils with mineral basis HLP HV (DIN 51524).
Here below the technical parameters to respect:

MINIMUM VISCOSITY	**10 mm^2/s**
MAXIMUM VISCOSITY	**100 mm^2/s**
SUGGESTED VISCOSITY	**20 mm^2/s - 100 mm^2/s**
SUGGESTED TEMPERATURE	**30°C / 50°C**
WORKING TEMPERATURE	**-15°C / +80°C**

For applications with water-glycol (HF-C) it is racommended to consider the following limitations: 1500 rpm maximum speed and 200 bar maximum pressure.
For applications with phosphate ester fluids, please contact our Technical department.

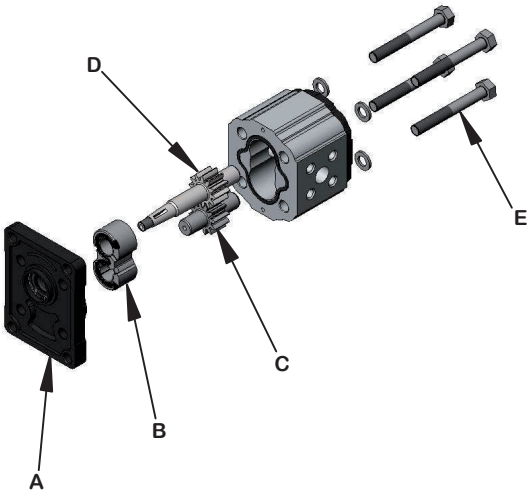
ISTALLATION INSTRUCTION

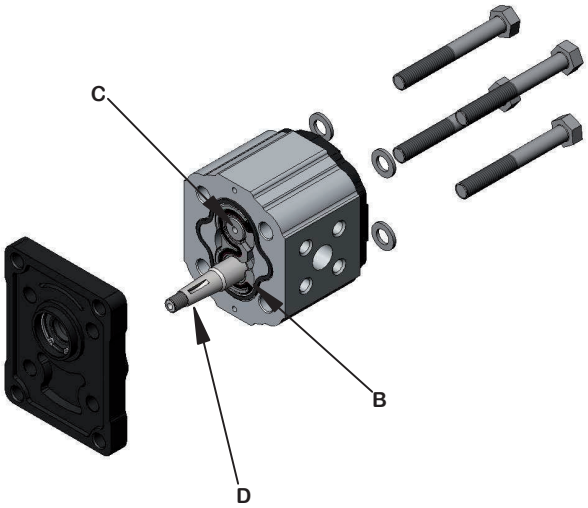
During the first starting it is racommended:
- to set the maximum pressure relief valves to a low value and gradually increase the pressure.
- to check, with single rotation pumps, that the rotation direction it is correct.
- to check that the connection betwen the motor and pump shaft is correct: without radial or axial load.
- to avoid starting under pressure in low temperature conditions or after long period of inactivity
- to check the fluid level in the tank
- to disconnect the return pipe and purge any air in the circuit
- to protect the pumpshaft seal when painting power pack
- to use suitable systems in the return lines to tank, to avoid turbulence in the circuit and ingress of air, water or contamination
- to check the torque that must be lower than the maximum torque admissible on the pump shaft
- to use new oil filters with absence of water or any other emulsifying substance
- to avoid starting with a air-oil solution
It is important to specify an oil tank at least twice the flow from the pump.

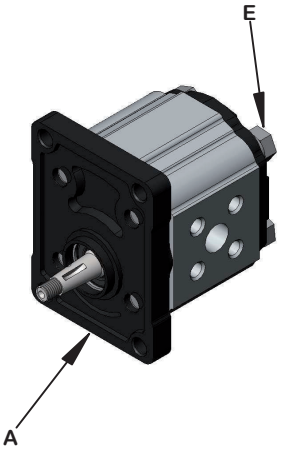
GROUP 2 PUMPS - CHANGING ROTATION

TO CHANGE ROTATION OF OT200 PUMP IT'S NECESSARY TO OPERATE IN THE FOLLOWING WAY:

1. Clean the pump externally with care.
2. Loosen, and remove, the clamp bolts (E).
3. Coat the sharp edges of the drive shaft (D) with adesive tape and smear a layer of clean grease on the shaft end extension to avoid damaging the lip of the shaft seal when removing the mounting flange.
4. Remove the mounting flange (A), taking care to keep the flange as straight as possible during removal. Ensure that while removing the front mounting flange, the drive shaft and other components ramain in position.
5. Ease the drive gear (D) up to facilitate removal of bearings (B), taking care that the precision ground surfaces do not become damaged, and removed the drive gear.
6. Remove the driven gear (D) without overturning. The rear flange has not to be removed.
7. Re-locate the driven gear (C) in the position previously occupied by the drive gear (D).
8. Re-locate the drive gear (D) in the position previously occupied by the driven gear (C).
9. Replace the front flange (A) in its original position.
10. Gently wipe the machined surface of the front flange (A) and the body with a canvas.
11. Refit the front mounting flange (A) turned by 180° from its original position.
12. Refit the clamp bolts (E).**(SCREW TIGHTENING TORQUE = 28 Nm)**
13. Check that the pump rotates freely when the drive shaft (D) is turned by hand. If not a pressure plate seal may be pinched.
14. The pump is ready for installation with the original rotation reversed.

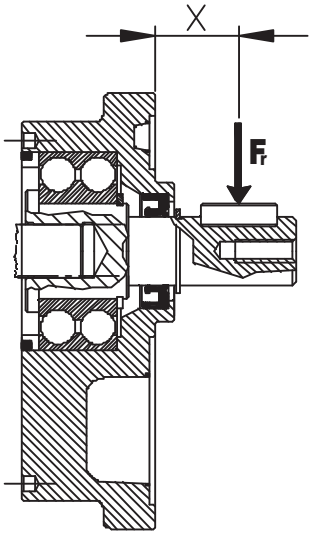






GROUP 2 PUMPS- WITH FRONT BEARING

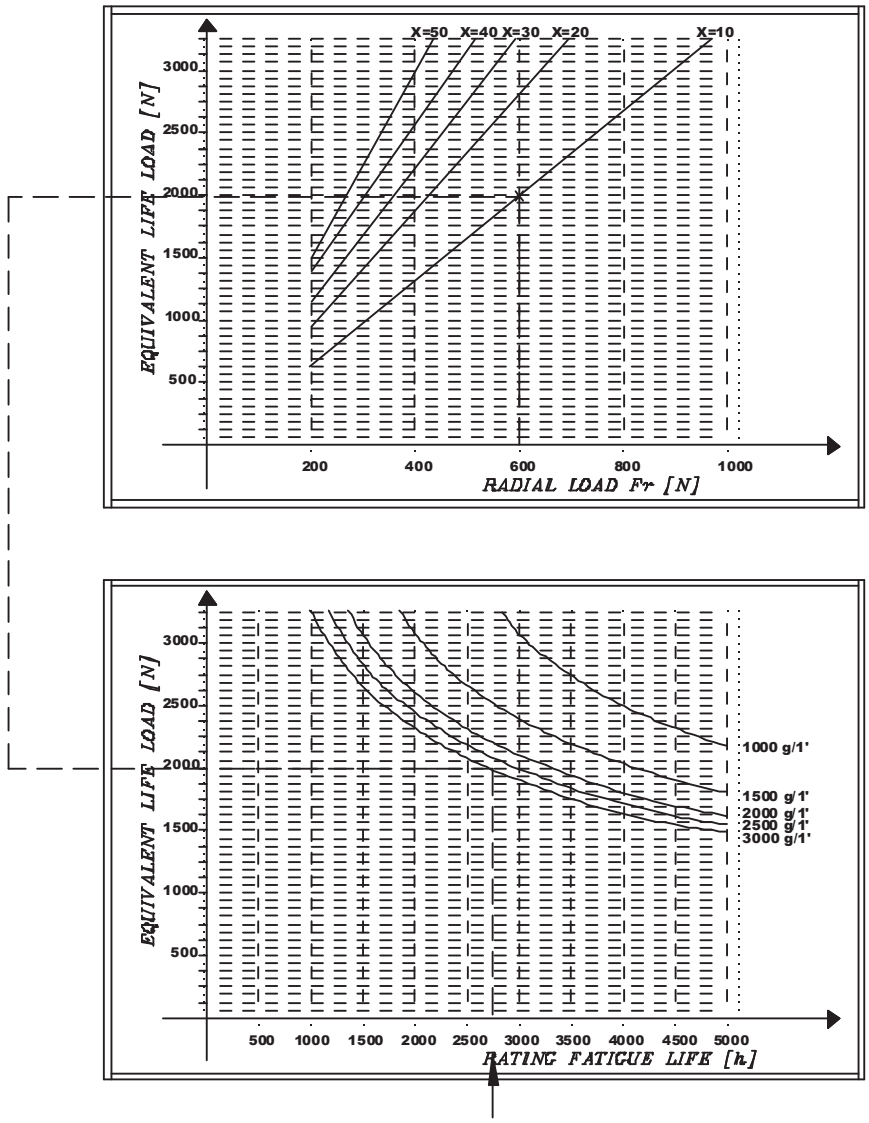
VERIFY OF BEARING LIFE



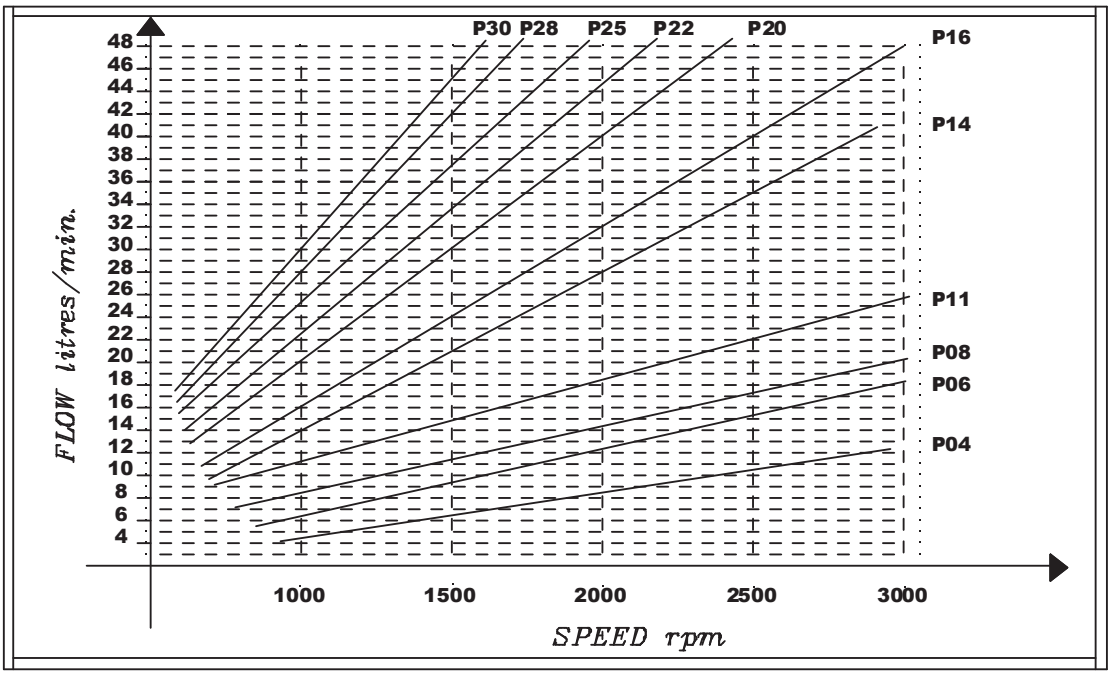
X = Distance of the radial flange result from the mounting flange

Each curve has been obtained at:
Lubrificant oil ISO VG 46
Temperature 60° C (140° F)
Without or with very low axial load

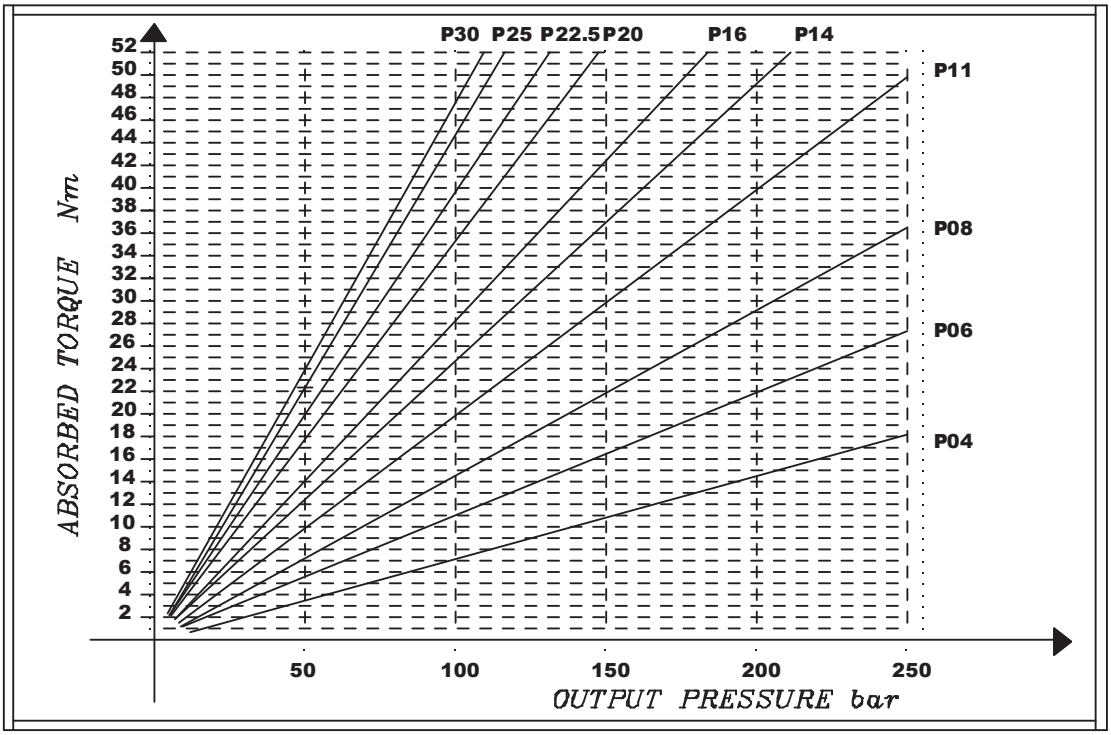
Example
Fr = 600 N
X = 20 mm
Speed = 3000 rpm
Rating fatigue life ≈ 2750 h



FLOW CHARACTERISTICS CURVES



ABSORBED TORQUE



NOTE

Above flow characteristics curves have been made considering a volumetric efficiency of 95%

PUMP CALCULATION

V	**Displacement**	**cc / rev**
Q	**Flow**	**l/min**
P	**Power**	**kW**
C	**Torque**	**Nm**
N	**Speed**	**rpm**
ΔP	**Pressure**	**bar**
n_v	**Volumetric efficiency**	**0.85**
n_m	**Mechanical efficiency**	**0.9**
n_t	**Total efficiency**	**0.80**

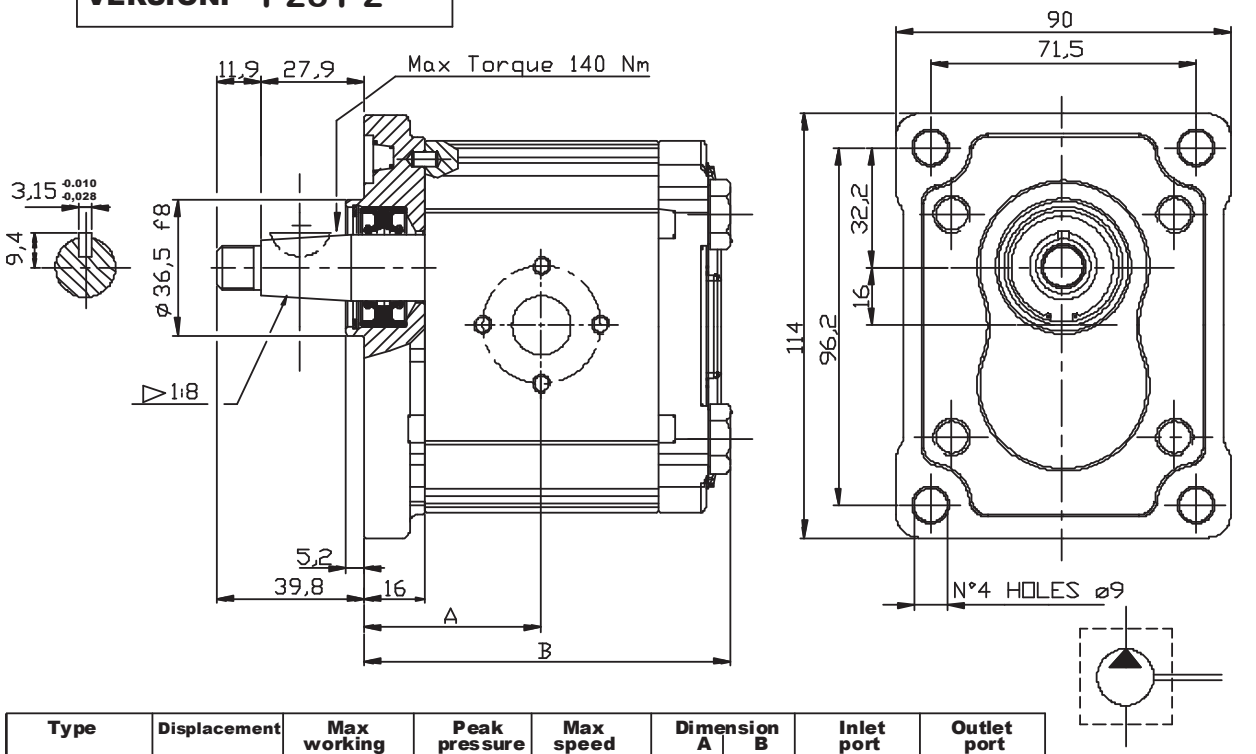
$$Q = V \cdot n_v \cdot N \cdot 10^{-3} \qquad l/min$$

$$C = \frac{\Delta P \cdot V}{62.8 \cdot n_m} \qquad Nm$$

$$P = \frac{\Delta P \cdot V \quad N}{612000 \cdot n_t} \qquad kW$$

GROUP 2 PUMPS - EUROPEAN STANDARD

VERSION: P28 P2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	40,00	83,50	13	30	M6	13	30	M6
OT 200 P06	06,20	250	300	3500	41,50	86,50	13	30	M6	13	30	M6
OT 200 P08	08,20	250	300	3500	43,00	89,50	13	30	M6	13	30	M6
OT 200 P11	11,20	250	300	3500	45,15	93,80	13	30	M6	13	30	M6
OT 200 P14	14,00	240	300	3000	47,15	97,80	20	40	M8	13	30	M6
OT 200 P16	16,00	240	300	3000	48,60	100,7	20	40	M8	13	30	M6
OT 200 P20	20,00	200	240	3000	51,50	106,5	20	40	M8	13	30	M6
OT 200 P22	22,50	170	210	2500	57,35	118,2	20	40	M8	13	30	M6
OT 200 P25	25,10	170	210	2500	59,25	122,0	20	40	M8	13	30	M6
OT 200 P28	28,00	140	180	2500	61,35	126,2	20	40	M8	13	30	M6
OT 200 P30	30,00	130	170	2000	62,75	129,0	20	40	M8	13	30	M6

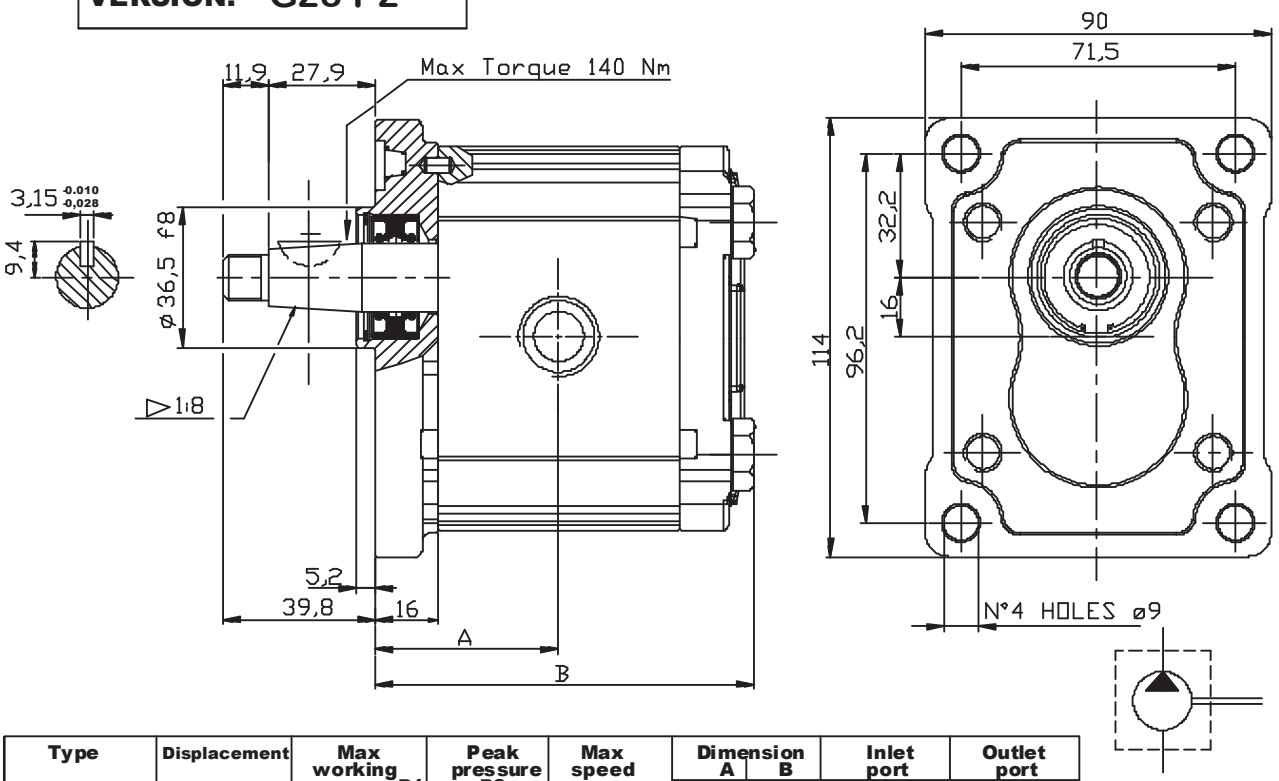
EXAMPLE OF ORDERING CODE

OT200 P 08 S / P 28 P2

- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- P — Body for European flanges
- 28 — Taper shaft (1:8)
- P2 — European standard flange

GROUP 2 PUMPS - EUROPEAN STANDARD

VERSION: G28 P2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	250	300	4000	40,00	83,50	G1/2	14	G1/2	14
OT 200 P06	06,20	250	300	3500	41,50	86,50	G1/2	14	G1/2	14
OT 200 P08	08,20	250	300	3500	43,00	89,50	G1/2	14	G1/2	14
OT 200 P11	11,20	250	300	3500	45,15	93,80	G1/2	14	G1/2	14
OT 200 P14	14,00	240	300	3000	47,15	97,80	G3/4	16	G1/2	14
OT 200 P16	16,00	240	300	3000	48,60	100,7	G3/4	16	G1/2	14
OT 200 P20	20,00	200	240	3000	51,50	106,5	G3/4	16	G1/2	14
OT 200 P22	22,50	170	210	2500	57,35	118,2	G3/4	16	G1/2	14
OT 200 P25	25,10	170	210	2500	59,25	122,0	G3/4	16	G1/2	14
OT 200 P28	28,00	140	180	2500	61,35	126,2	G3/4	16	G1/2	14
OT 200 P30	30,00	130	170	2000	62,75	129,0	G3/4	16	G1/2	14

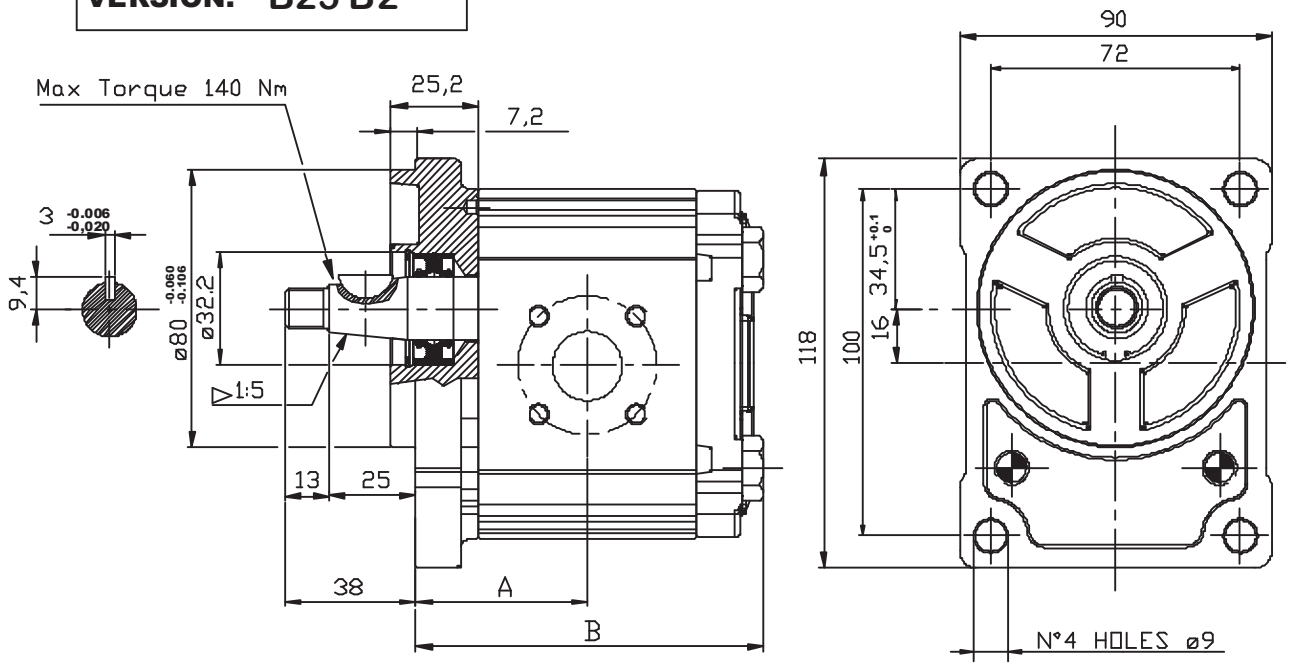
EXAMPLE OF ORDERING CODE

OT200 P 08 S / G 28 P2

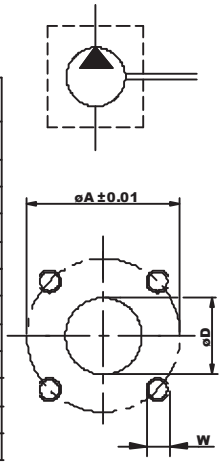
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- 28 — Taper shaft (1:8)
- P2 — European standard flange

GROUP 2 PUMPS - GERMAN STANDARD

VERSION: B25 B2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	42,00	85,50	20	40	M6	15	35	M6
OT 200 P06	06,20	250	300	3500	43,50	88,50	20	40	M6	15	35	M6
OT 200 P08	08,20	250	300	3500	45,00	91,50	20	40	M6	15	35	M6
OT 200 P11	11,20	250	300	3500	47,15	95,80	20	40	M6	15	35	M6
OT 200 P14	14,00	240	300	3000	49,15	99,80	20	40	M6	15	35	M6
OT 200 P16	16,00	240	300	3000	50,60	102,7	20	40	M6	15	35	M6
OT 200 P20	20,00	200	240	3000	53,50	108,5	20	40	M6	15	35	M6
OT 200 P22	22,50	170	210	2500	59,35	120,2	20	40	M6	15	35	M6
OT 200 P25	25,10	170	210	2500	61,25	124,0	20	40	M6	15	35	M6
OT 200 P28	28,00	140	180	2500	63,35	128,2	20	40	M6	15	35	M6
OT 200 P30	30,00	130	170	2000	64,75	131,0	20	40	M6	15	35	M6



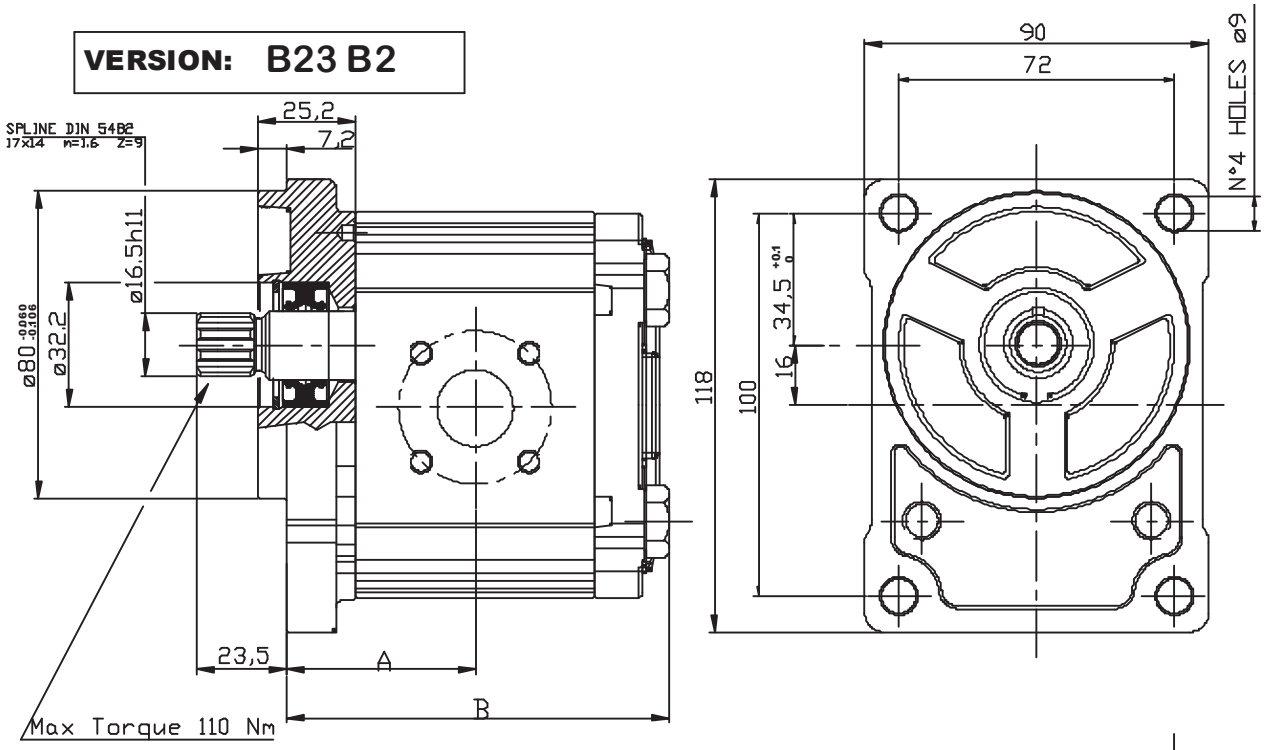
EXAMPLE OF ORDERING CODE

OT200 P 08 S / B 25 B2

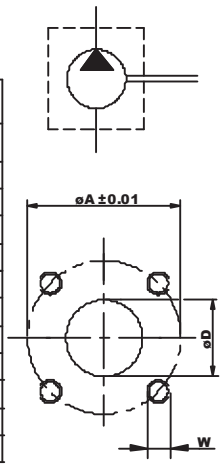
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- B — Body for German flanges
- 25 — Taper shaft (1:5)
- B2 — German standard flange

GROUP 2 PUMPS - GERMAN STANDARD

VERSION: B23 B2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	42,00	85,50	20	40	M6	15	35	M6
OT 200 P06	06,20	250	300	3500	43,50	88,50	20	40	M6	15	35	M6
OT 200 P08	08,20	250	300	3500	45,00	91,50	20	40	M6	15	35	M6
OT 200 P11	11,20	250	300	3500	47,15	95,80	20	40	M6	15	35	M6
OT 200 P14	14,00	240	300	3000	49,15	99,80	20	40	M6	15	35	M6
OT 200 P16	16,00	240	300	3000	50,60	102,7	20	40	M6	15	35	M6
OT 200 P20	20,00	200	240	3000	53,50	108,5	20	40	M6	15	35	M6
OT 200 P22	22,50	170	210	2500	59,35	120,2	20	40	M6	15	35	M6
OT 200 P25	25,10	170	210	2500	61,25	124,0	20	40	M6	15	35	M6
OT 200 P28	28,00	140	180	2500	63,35	128,2	20	40	M6	15	35	M6
OT 200 P30	30,00	130	170	2000	64,75	131,0	20	40	M6	15	35	M6



EXAMPLE OF ORDERING CODE

OT200 P 08 S / B 23 B2

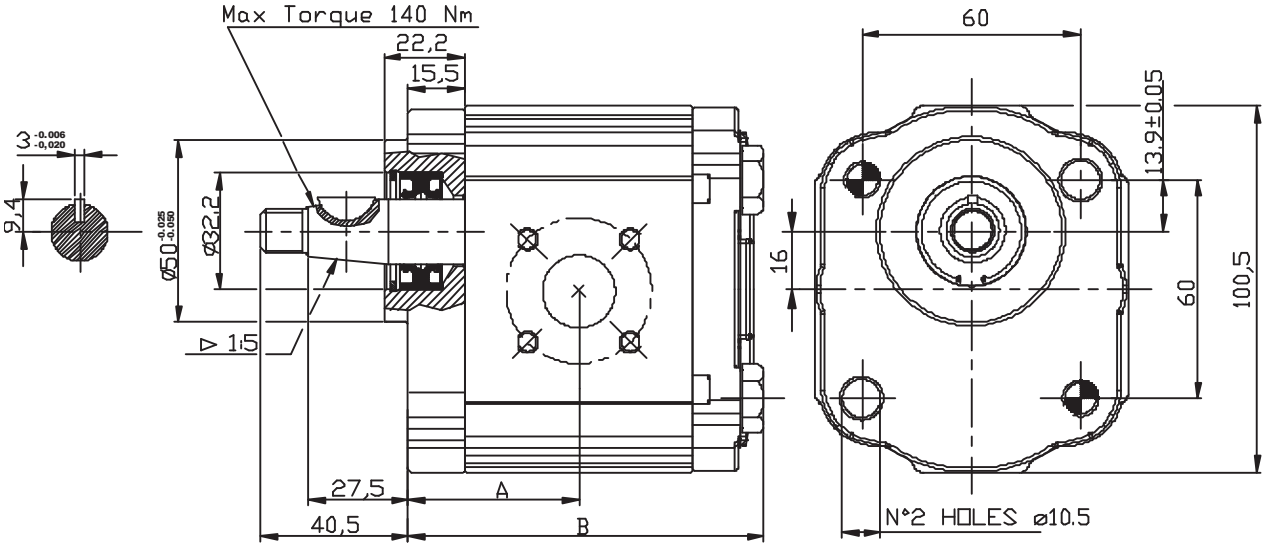
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation

S	Anti-clockwise
D	Clockwise

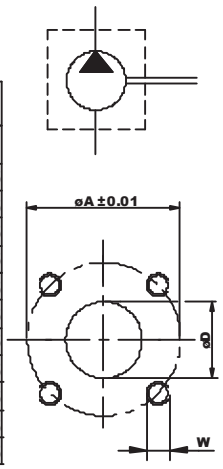
- B — Body for German flanges
- 23 — DIN 5482 B 17x14 shaft
- B2 — German standard flange

GROUP 2 PUMPS - GERMAN STANDARD

VERSION: B25 B4



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	39.50	83,00	20	40	M6	15	35	M6
OT 200 P06	06,20	250	300	3500	41.00	86,00	20	40	M6	15	35	M6
OT 200 P08	08,20	250	300	3500	42.50	89,00	20	40	M6	15	35	M6
OT 200 P11	11,20	250	300	3500	45.65	93.30	20	40	M6	15	35	M6
OT 200 P14	14,00	240	300	3000	46.65	97.30	20	40	M6	15	35	M6
OT 200 P16	16,00	240	300	3000	48.10	100.2	20	40	M6	15	35	M6
OT 200 P20	20,00	200	240	3000	51.00	103,5	20	40	M6	15	35	M6
OT 200 P22	22,50	170	210	2500	56.85	117.7	20	40	M6	15	35	M6
OT 200 P25	25,10	170	210	2500	58.75	121.5	20	40	M6	15	35	M6
OT 200 P28	28,00	140	180	2500	60.85	125.7	20	40	M6	15	35	M6
OT 200 P30	30,00	130	170	2000	62.25	128.5	20	40	M6	15	35	M6



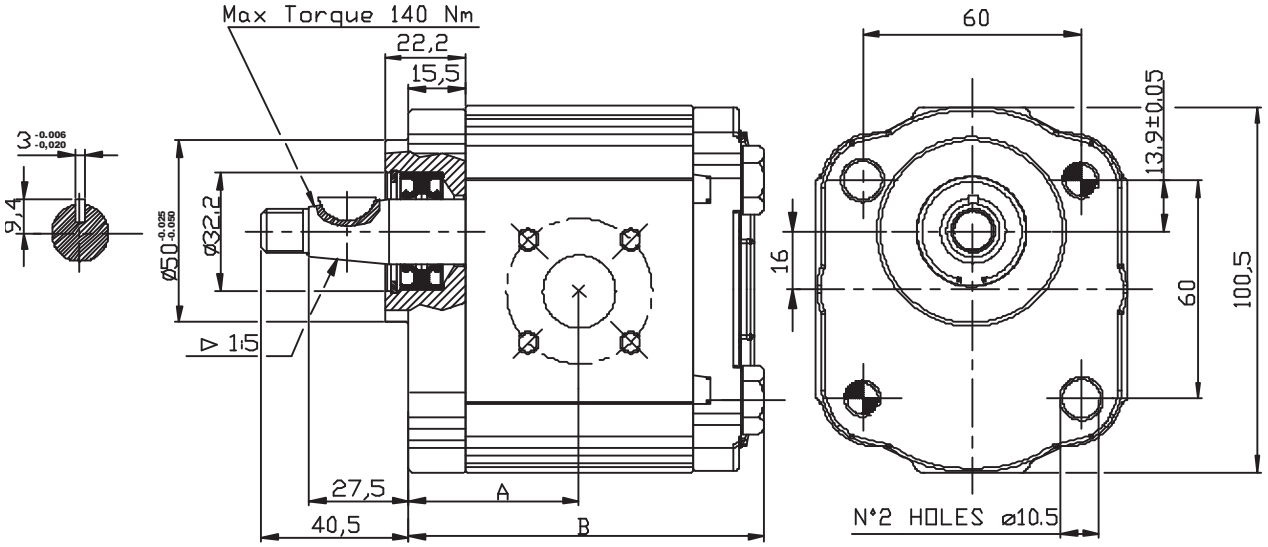
EXAMPLE OF ORDERING CODE

OT200 P 08 S / B 25 B4

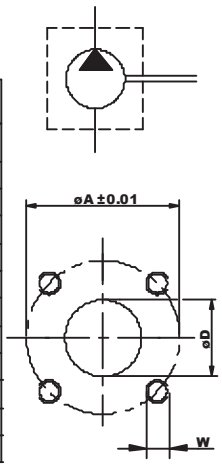
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- B — Body for German flanges
- 25 — Taper shaft (1:5)
- B4 — German standard flange

GROUP 2 PUMPS - GERMAN STANDARD

VERSION: B25 B5



Type	Displacement	Max working pressure P1	Peak pressure P3	Max speed	Dimension A	Dimension B	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
	(cc/rev)	(bar)	(bar)	(r.p.m)	(mm)							
OT 200 P04	04,10	250	300	4000	39.50	83,00	20	40	M6	15	35	M6
OT 200 P06	06,20	250	300	3500	41.00	86,00	20	40	M6	15	35	M6
OT 200 P08	08,20	250	300	3500	42.50	89,00	20	40	M6	15	35	M6
OT 200 P11	11,20	250	300	3500	45.65	93.30	20	40	M6	15	35	M6
OT 200 P14	14,00	240	300	3000	46.65	97.30	20	40	M6	15	35	M6
OT 200 P16	16,00	240	300	3000	48.10	100.2	20	40	M6	15	35	M6
OT 200 P20	20,00	200	240	3000	51.00	103,5	20	40	M6	15	35	M6
OT 200 P22	22,50	170	210	2500	56.85	117.7	20	40	M6	15	35	M6
OT 200 P25	25,10	170	210	2500	58.75	121.5	20	40	M6	15	35	M6
OT 200 P28	28,00	140	180	2500	60.85	125.7	20	40	M6	15	35	M6
OT 200 P30	30,00	130	170	2000	62.25	128.5	20	40	M6	15	35	M6



EXAMPLE OF ORDERING CODE

OT200 P 08 S / B 25 B5

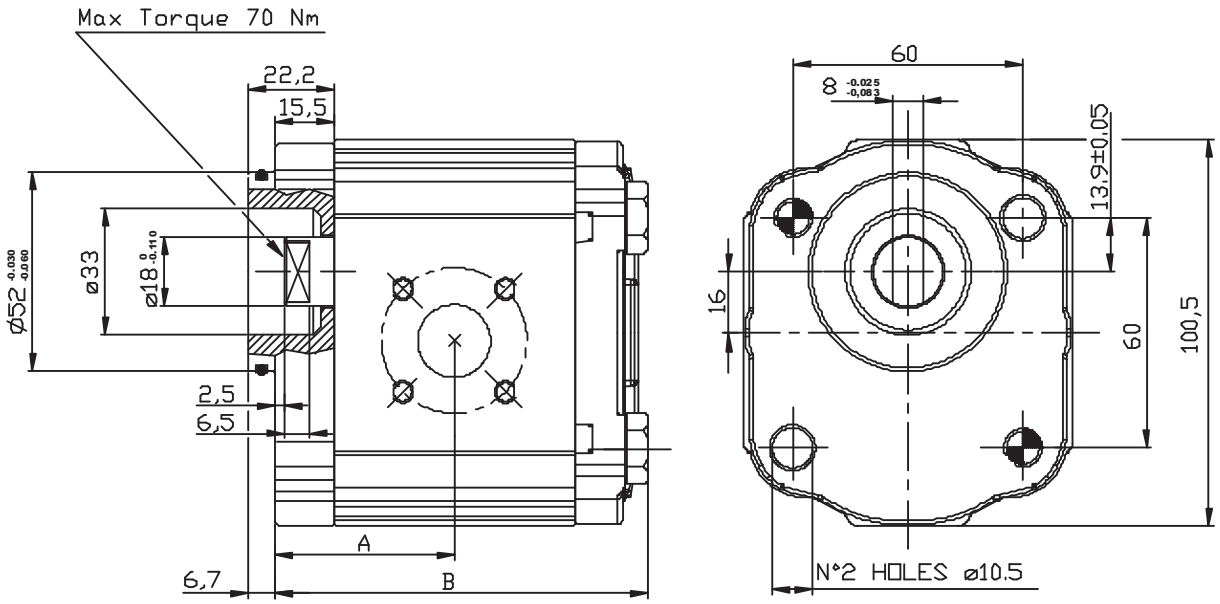
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation

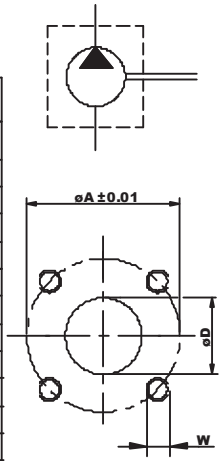
S	Anti-clockwise
D	Clockwise

- B — Body for German flanges
- 25 — Taper shaft (1:5)
- B5 — German standard flange

GROUP 2 PUMPS - GERMAN STANDARD

VERSION: B24 B6





Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	39.50	83,00	20	40	M6	15	35	M6
OT 200 P06	06,20	250	300	3500	41.00	86,00	20	40	M6	15	35	M6
OT 200 P08	08,20	250	300	3500	42.50	89,00	20	40	M6	15	35	M6
OT 200 P11	11,20	250	300	3500	45.65	93.30	20	40	M6	15	35	M6
OT 200 P14	14,00	240	300	3000	46.65	97.30	20	40	M6	15	35	M6
OT 200 P16	16,00	240	300	3000	48.10	100.2	20	40	M6	15	35	M6
OT 200 P20	20,00	200	240	3000	51.00	103,5	20	40	M6	15	35	M6
OT 200 P22	22,50	170	210	2500	56.85	117.7	20	40	M6	15	35	M6
OT 200 P25	25,10	170	210	2500	58.75	121.5	20	40	M6	15	35	M6
OT 200 P28	28,00	140	180	2500	60.85	125.7	20	40	M6	15	35	M6
OT 200 P30	30,00	130	170	2000	62.25	128.5	20	40	M6	15	35	M6

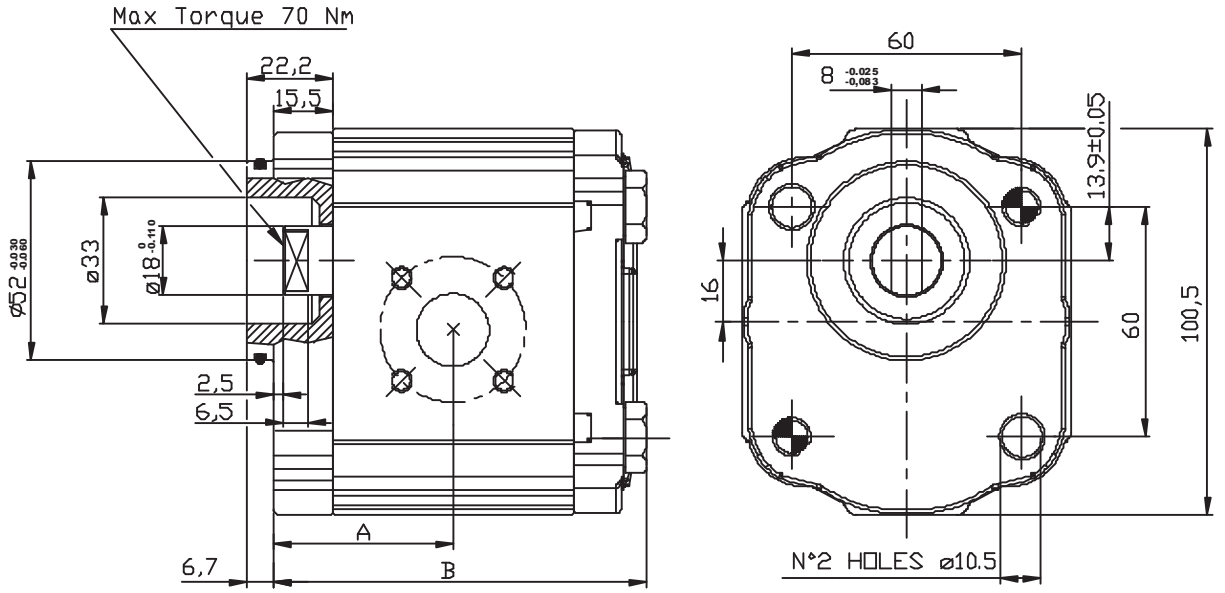
EXAMPLE OF ORDERING CODE

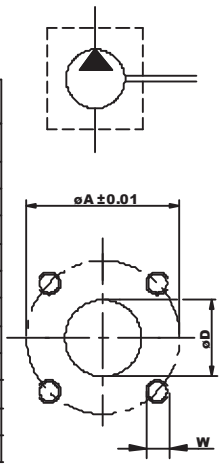
OT200 P 08 S / B 24 B6

- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- B — Body for German flanges
- 24 — Tang shaft
- B6 — German standard flange

GROUP 2 PUMPS - GERMAN STANDARD

VERSION: B24 B7





Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	39.50	83,00	20	40	M6	15	35	M6
OT 200 P06	06,20	250	300	3500	41.00	86,00	20	40	M6	15	35	M6
OT 200 P08	08,20	250	300	3500	42.50	89,00	20	40	M6	15	35	M6
OT 200 P11	11,20	250	300	3500	45.65	93.30	20	40	M6	15	35	M6
OT 200 P14	14,00	240	300	3000	46.65	97.30	20	40	M6	15	35	M6
OT 200 P16	16,00	240	300	3000	48.10	100.2	20	40	M6	15	35	M6
OT 200 P20	20,00	200	240	3000	51.00	103,5	20	40	M6	15	35	M6
OT 200 P22	22,50	170	210	2500	56.85	117.7	20	40	M6	15	35	M6
OT 200 P25	25,10	170	210	2500	58.75	121.5	20	40	M6	15	35	M6
OT 200 P28	28,00	140	180	2500	60.85	125.7	20	40	M6	15	35	M6
OT 200 P30	30,00	130	170	2000	62.25	128.5	20	40	M6	15	35	M6

EXAMPLE OF ORDERING CODE

OT200 P 08 S / B 24 B7

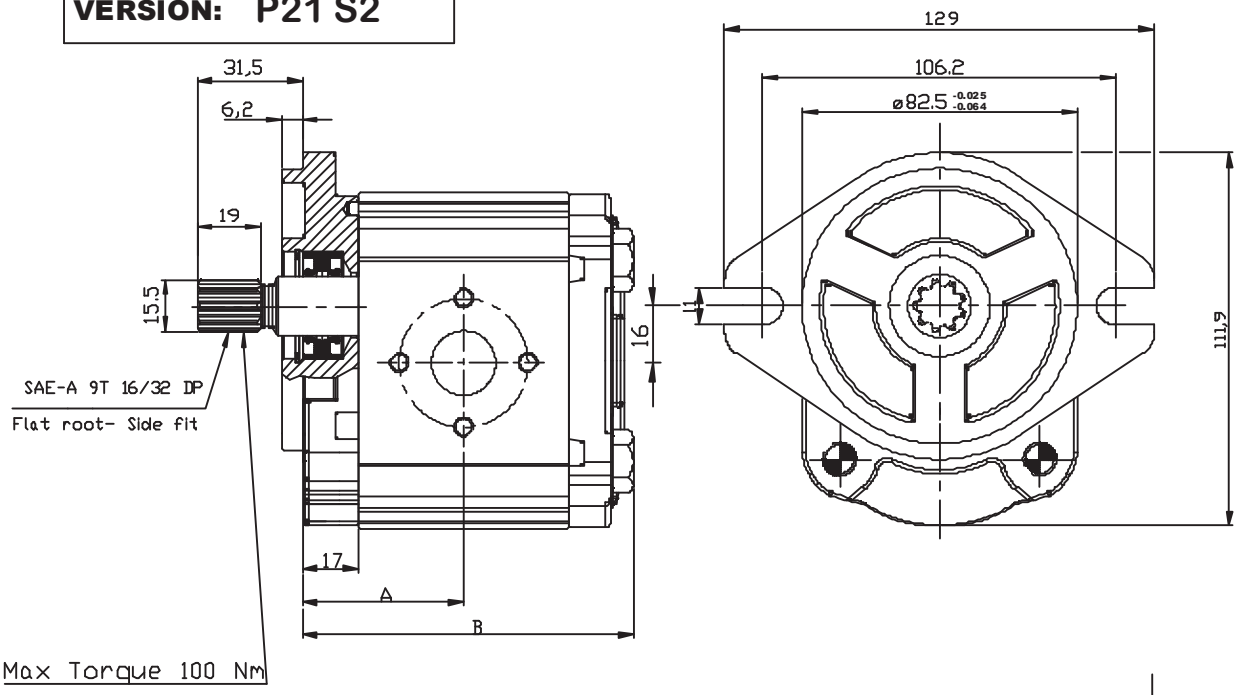
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation

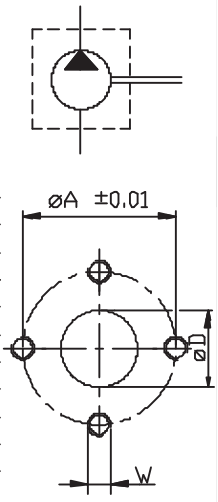
Rotation	
S	Anti-clockwise
D	Clockwise

- B — Body for German flanges
- 24 — Tang shaft
- B7 — German standard flange

GROUP 2 PUMPS - SAE "A" STANDARD

VERSION: P21 S2





Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	41,00	84,50	13	30	M6	13	30	M6
OT 200 P06	06,20	250	300	3500	42,50	87,50	13	30	M6	13	30	M6
OT 200 P08	08,20	250	300	3500	44,00	90,50	13	30	M6	13	30	M6
OT 200 P11	11,20	250	300	3500	46,15	94,80	13	30	M6	13	30	M6
OT 200 P14	14,00	240	300	3000	48,15	98,80	20	40	M8	13	30	M6
OT 200 P16	16,00	240	300	3000	49,60	101,7	20	40	M8	13	30	M6
OT 200 P20	20,00	200	240	3000	52,50	107,5	20	40	M8	13	30	M6
OT 200 P22	22,50	170	210	2500	58,35	119,2	20	40	M8	13	30	M6
OT 200 P25	25,10	170	210	2500	60,25	123,0	20	40	M8	13	30	M6
OT 200 P28	28,00	140	180	2500	62,35	127,2	20	40	M8	13	30	M6
OT 200 P30	30,00	130	170	2000	63,75	130,0	20	40	M8	13	30	M6

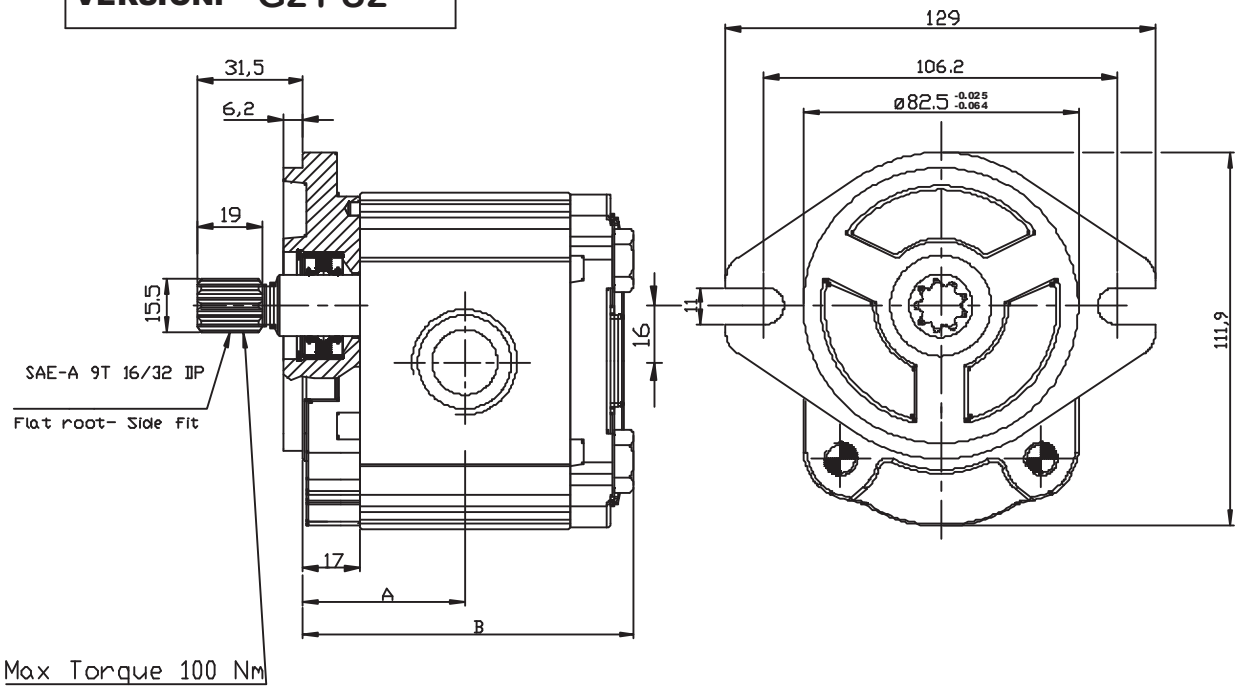
EXAMPLE OF ORDERING CODE

OT200 P 08 S / P 21 S2

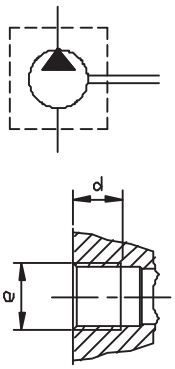
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- P — Body for European flanges
- 21 — SAE A -9T 16/32 DP shaft
- S2 — SAE- A flange

GROUP 2 PUMPS - SAE "A" STANDARD

VERSION: G21 S2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	250	300	4000	41,00	84,50	G1/2	14	G1/2	14
OT 200 P06	06,20	250	300	3500	42,50	87,50	G1/2	14	G1/2	14
OT 200 P08	08,20	250	300	3500	44,00	90,50	G1/2	14	G1/2	14
OT 200 P11	11,20	250	300	3500	46,15	94,80	G1/2	14	G1/2	14
OT 200 P14	14,00	240	300	3000	48,15	98,80	G3/4	16	G1/2	14
OT 200 P16	16,00	240	300	3000	49,60	101,7	G3/4	16	G1/2	14
OT 200 P20	20,00	200	240	3000	52,50	107,5	G3/4	16	G1/2	14
OT 200 P22	22,50	170	210	2500	58,35	119,2	G3/4	16	G1/2	14
OT 200 P25	25,10	170	210	2500	60,25	123,0	G3/4	16	G1/2	14
OT 200 P28	28,00	140	180	2500	62,35	127,2	G3/4	16	G1/2	14
OT 200 P30	30,00	130	170	2000	63,75	130,0	G3/4	16	G1/2	14



EXAMPLE OF ORDERING CODE

OT200 P 08 S / G 21 S2

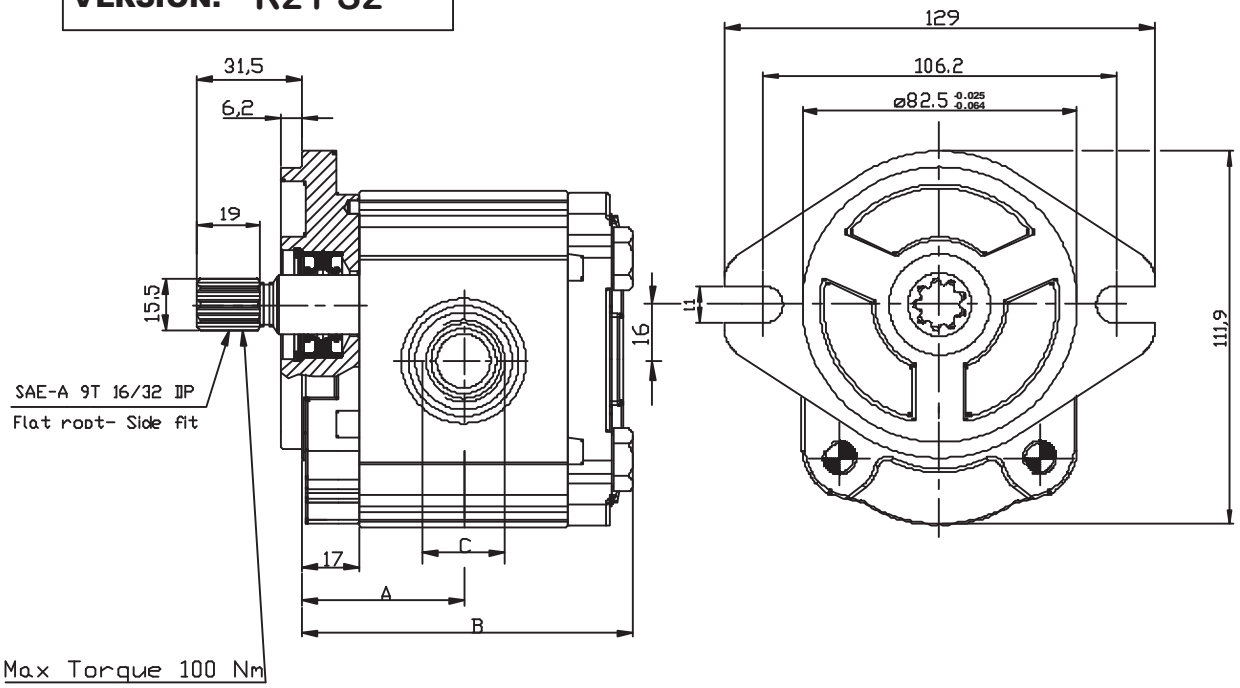
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation

S	Anti-clockwise
D	Clockwise

- G — Body with threated ports (BSP)
- 21 — SAE A -9T 16/32 DP shaft
- S2 — SAE- A flange

GROUP 2 PUMPS - SAE "A" STANDARD

VERSION: R21 S2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port C	Outlet port C
OT 200 P04	04,10	250	300	4000	41,00	84,50	7/8-14UNF-2B	7/8-14UNF-2B
OT 200 P06	06,20	250	300	3500	42,50	87,50		
OT 200 P08	08,20	250	300	3500	44,00	90,50		
OT 200 P11	11,20	250	300	3500	46,15	94,80		
OT 200 P14	14,00	240	300	3000	48,15	98,80	1-1/16-12UN-2B	
OT 200 P16	16,00	240	300	3000	49,60	101,7		
OT 200 P20	20,00	200	240	3000	52,50	107,5		
OT 200 P22	22,50	170	210	2500	58,35	119,2		
OT 200 P25	25,10	170	210	2500	60,25	123,0		
OT 200 P28	28,00	140	180	2500	62,35	127,2		
OT 200 P30	30,00	130	170	2000	63,75	130,0		

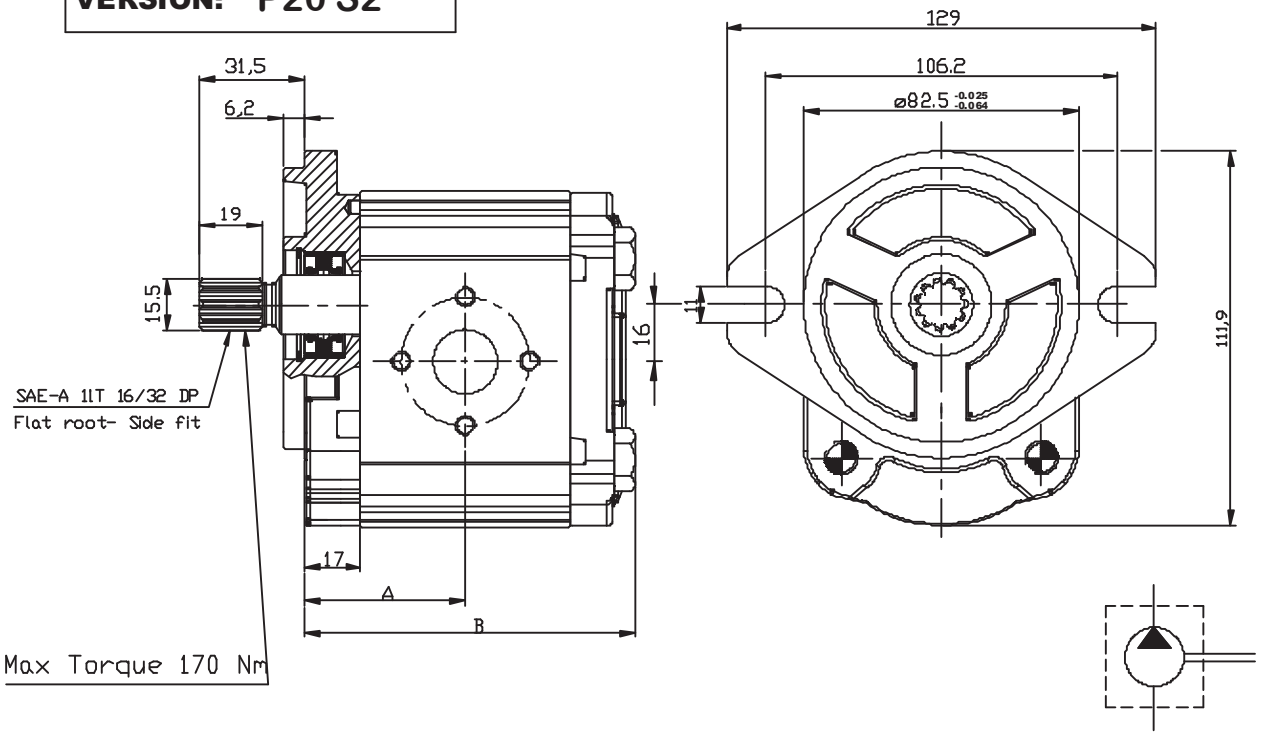
EXAMPLE OF ORDERING CODE

OT200 P 08 S / R 21 S2

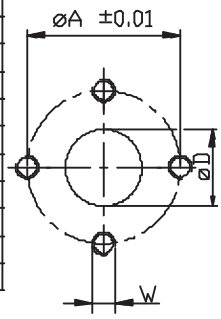
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- R — Body with O-ring boss ports
- 21 — SAE A -9T 16/32 DP shaft
- S2 — SAE- A flange

GROUP 2 PUMPS - SAE "A" STANDARD

VERSION: P20 S2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	41,00	84,50	13	30	M6	13	30	M6
OT 200 P06	06,20	250	300	3500	42,50	87,50	13	30	M6	13	30	M6
OT 200 P08	08,20	250	300	3500	44,00	90,50	13	30	M6	13	30	M6
OT 200 P11	11,20	250	300	3500	46,15	94,80	13	30	M6	13	30	M6
OT 200 P14	14,00	240	300	3000	48,15	98,80	20	40	M8	13	30	M6
OT 200 P16	16,00	240	300	3000	49,60	101,7	20	40	M8	13	30	M6
OT 200 P20	20,00	200	240	3000	52,50	107,5	20	40	M8	13	30	M6
OT 200 P22	22,50	170	210	2500	58,35	119,2	20	40	M8	13	30	M6
OT 200 P25	25,10	170	210	2500	60,25	123,0	20	40	M8	13	30	M6
OT 200 P28	28,00	140	180	2500	62,35	127,2	20	40	M8	13	30	M6
OT 200 P30	30,00	130	170	2000	63,75	130,0	20	40	M8	13	30	M6



EXAMPLE OF ORDERING CODE

OT200 P 08 S / P 20 S2

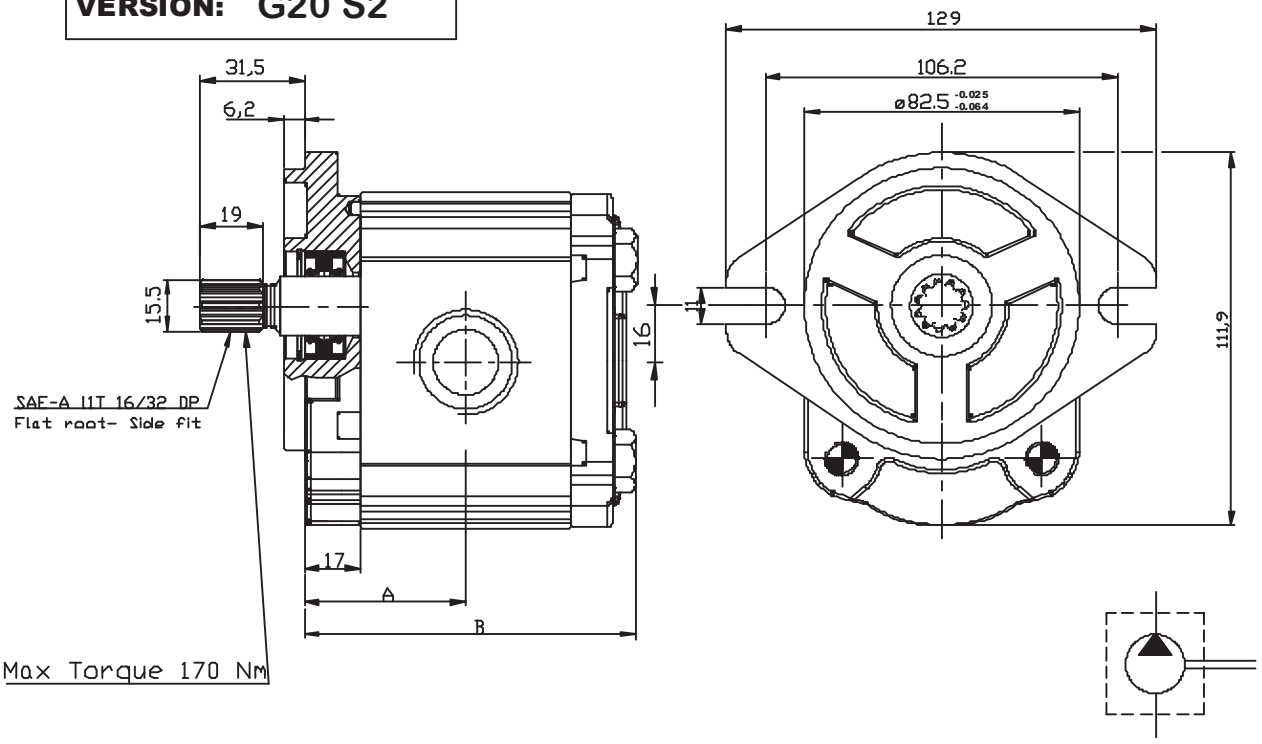
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation

S	Anti-clockwise
D	Clockwise

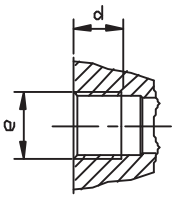
- P — Body for European flanges
- 20 — SAE A -11T 16/32 DP shaft
- S2 — SAE- A flange

GROUP 2 PUMPS - SAE "A" STANDARD

VERSION: G20 S2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	250	300	4000	41,00	84,50	G1/2	14	G1/2	14
OT 200 P06	06,20	250	300	3500	42,50	87,50	G1/2	14	G1/2	14
OT 200 P08	08,20	250	300	3500	44,00	90,50	G1/2	14	G1/2	14
OT 200 P11	11,20	250	300	3500	46,15	94,80	G1/2	14	G1/2	14
OT 200 P14	14,00	240	300	3000	48,15	98,80	G3/4	16	G1/2	14
OT 200 P16	16,00	240	300	3000	49,60	101,7	G3/4	16	G1/2	14
OT 200 P20	20,00	200	240	3000	52,50	107,5	G3/4	16	G1/2	14
OT 200 P22	22,50	170	210	2500	58,35	119,2	G3/4	16	G1/2	14
OT 200 P25	25,10	170	210	2500	60,25	123,0	G3/4	16	G1/2	14
OT 200 P28	28,00	140	180	2500	62,35	127,2	G3/4	16	G1/2	14
OT 200 P30	30,00	130	170	2000	63,75	130,0	G3/4	16	G1/2	14



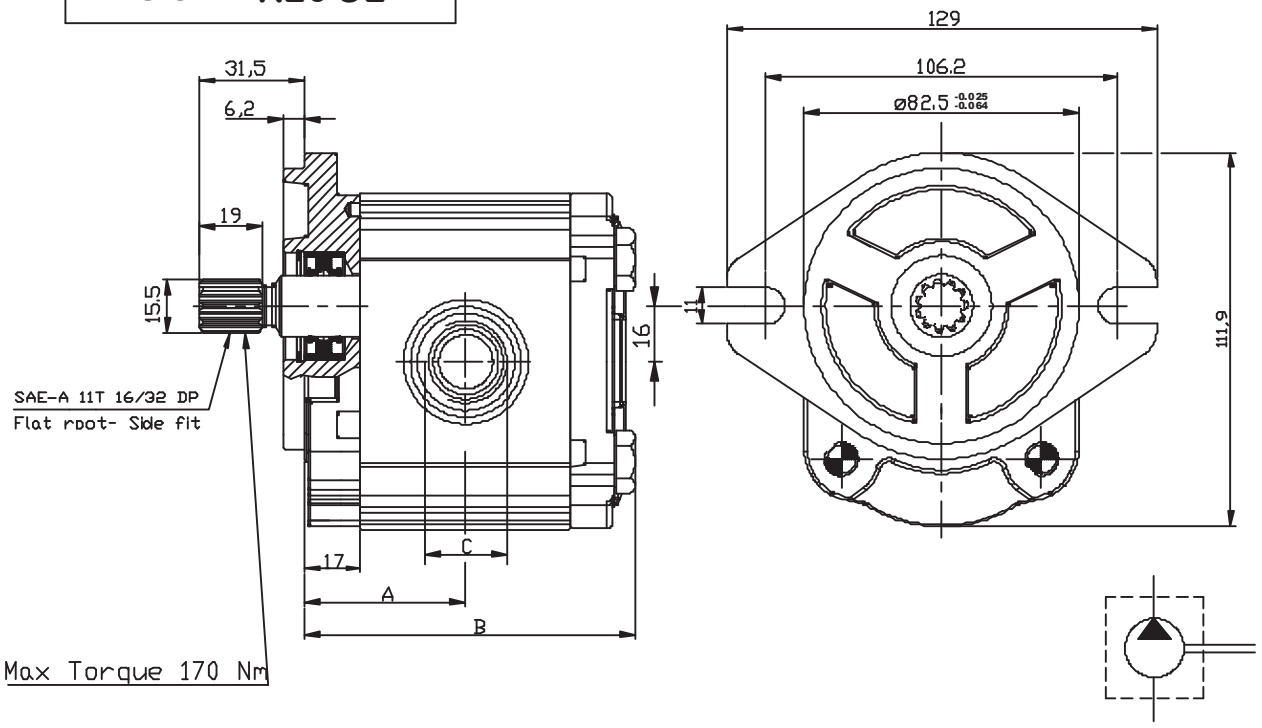
EXAMPLE OF ORDERING CODE

OT200 P 08 S / G 20 S2

- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- 20 — SAE A -11T 16/32 DP shaft
- S2 — SAE- A flange

GROUP 2 PUMPS - SAE "A" STANDARD

VERSION: R20 S2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port C	Outlet port C
OT 200 P04	04,10	250	300	4000	41,00	84,50	7/8-14UNF-2B	7/8-14UNF-2B
OT 200 P06	06,20	250	300	3500	42,50	87,50		
OT 200 P08	08,20	250	300	3500	44,00	90,50		
OT 200 P11	11,20	250	300	3500	46,15	94,80		
OT 200 P14	14,00	240	300	3000	48,15	98,80	1-1/16-12UN-2B	
OT 200 P16	16,00	240	300	3000	49,60	101,7		
OT 200 P20	20,00	200	240	3000	52,50	107,5		
OT 200 P22	22,50	170	210	2500	58,35	119,2		
OT 200 P25	25,10	170	210	2500	60,25	123,0		
OT 200 P28	28,00	140	180	2500	62,35	127,2		
OT 200 P30	30,00	130	170	2000	63,75	130,0		

EXAMPLE OF ORDERING CODE

OT200 P 08 S / R 20 S2

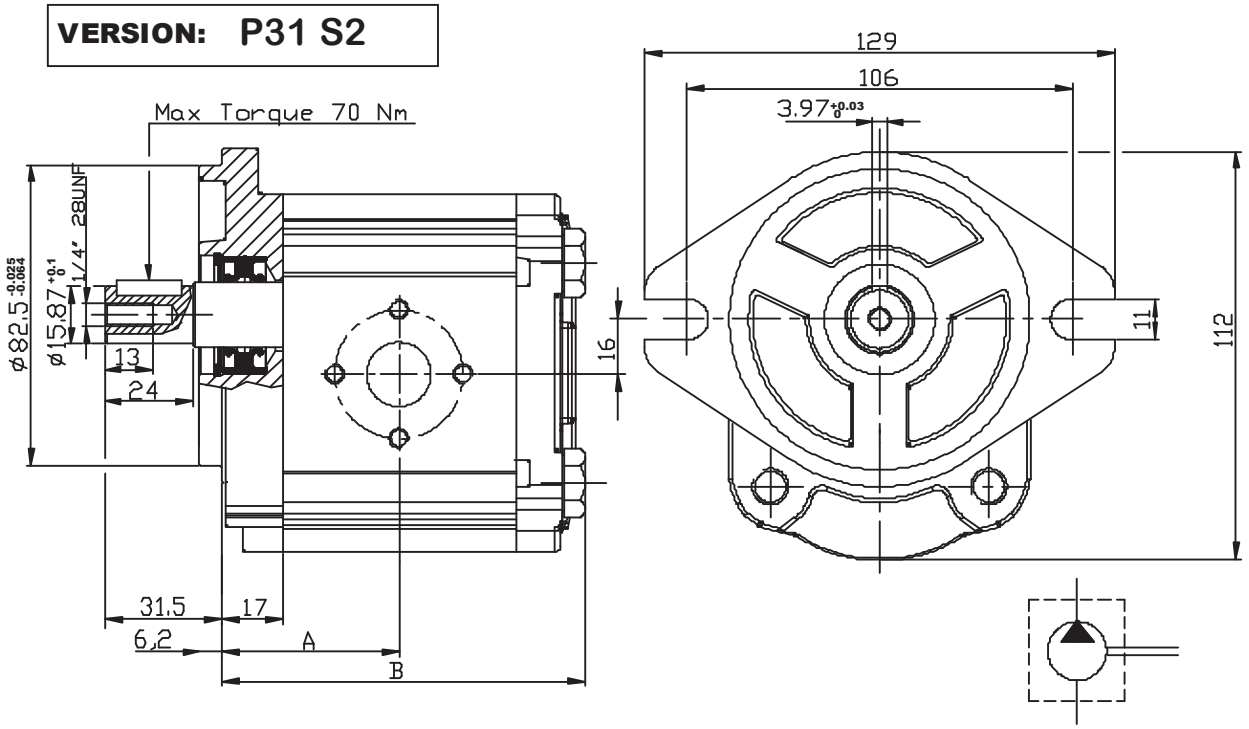
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation

S	Anti-clockwise
D	Clockwise

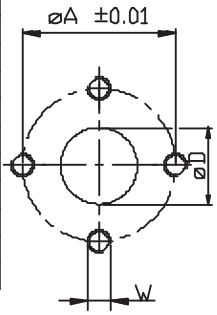
- R — Body with O-Ring Boss ports
- 20 — SAE A-11T 16/32 DP shaft
- S2 — SAE- A flange

GROUP 2 PUMPS - SAE "A" STANDARD

VERSION: P31 S2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	B	Inlet port ØD	ØA	W	Outlet port ØD	ØA	W
OT 200 P04	04,10	250	300	4000	41,00	84,50	13	30	M6	13	30	M6
OT 200 P06	06,20	250	300	3500	42,50	87,50	13	30	M6	13	30	M6
OT 200 P08	08,20	250	300	3500	44,00	90,50	13	30	M6	13	30	M6
OT 200 P11	11,20	250	300	3500	46,15	94,80	13	30	M6	13	30	M6
OT 200 P14	14,00	240	300	3000	48,15	98,80	20	40	M8	13	30	M6
OT 200 P16	16,00	240	300	3000	49,60	101,7	20	40	M8	13	30	M6
OT 200 P20	20,00	200	240	3000	52,50	107,5	20	40	M8	13	30	M6
OT 200 P22	22,50	170	210	2500	58,35	119,2	20	40	M8	13	30	M6
OT 200 P25	25,10	170	210	2500	60,25	123,0	20	40	M8	13	30	M6
OT 200 P28	28,00	140	180	2500	62,35	127,2	20	40	M8	13	30	M6
OT 200 P30	30,00	130	170	2000	63,75	130,0	20	40	M8	13	30	M6



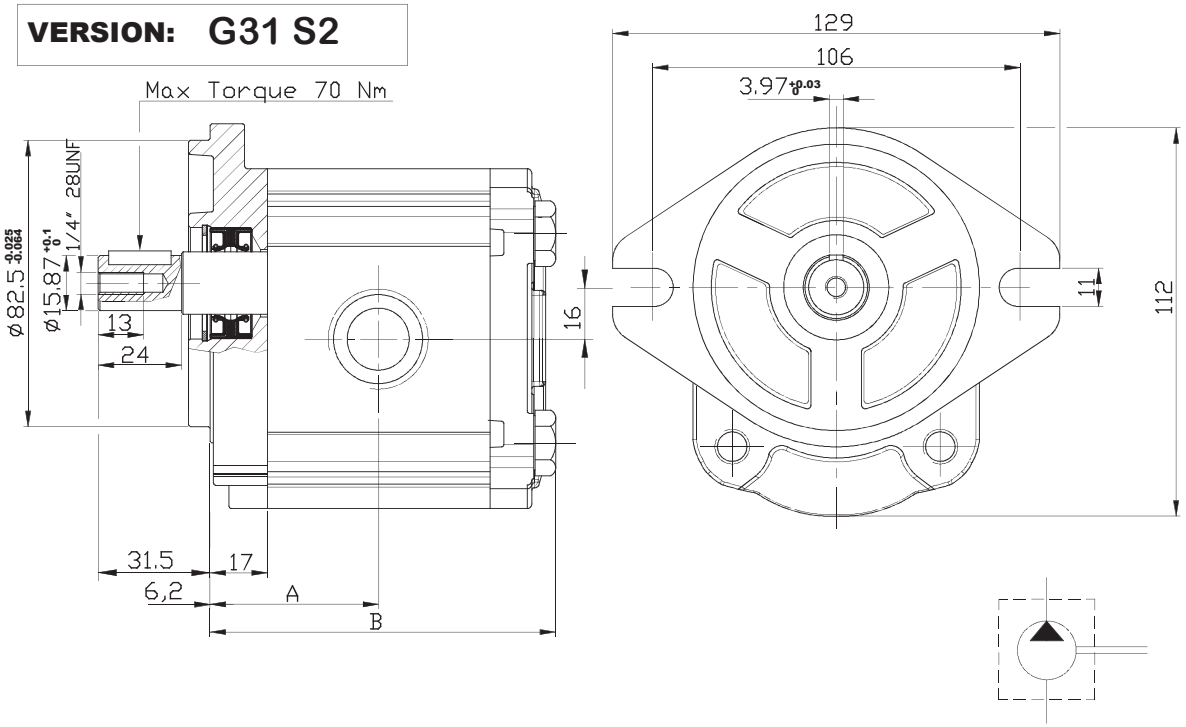
EXAMPLE OF ORDERING CODE

OT200 P 08 S / P 31 S2

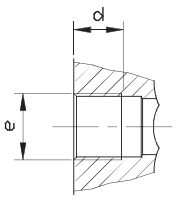
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- P — Body for European flanges
- 31 — Straight shaft Ø15.87
- S2 — SAE-A flange

GROUP 2 PUMPS - SAE "A" STANDARD

VERSION: G31 S2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	250	300	4000	41,00	84,50	G1/2	14	G1/2	14
OT 200 P06	06,20	250	300	3500	42,50	87,50	G1/2	14	G1/2	14
OT 200 P08	08,20	250	300	3500	44,00	90,50	G1/2	14	G1/2	14
OT 200 P11	11,20	250	300	3500	46,15	94,80	G1/2	14	G1/2	14
OT 200 P14	14,00	240	300	3000	48,15	98,80	G3/4	16	G1/2	14
OT 200 P16	16,00	240	300	3000	49,60	101,7	G3/4	16	G1/2	14
OT 200 P20	20,00	200	240	3000	52,50	107,5	G3/4	16	G1/2	14
OT 200 P22	22,50	170	210	2500	58,35	119,2	G3/4	16	G1/2	14
OT 200 P25	25,10	170	210	2500	60,25	123,0	G3/4	16	G1/2	14
OT 200 P28	28,00	140	180	2500	62,35	127,2	G3/4	16	G1/2	14
OT 200 P30	30,00	130	170	2000	63,75	130,0	G3/4	16	G1/2	14



EXAMPLE OF ORDERING CODE

OT200 P 08 S / G 31 S2

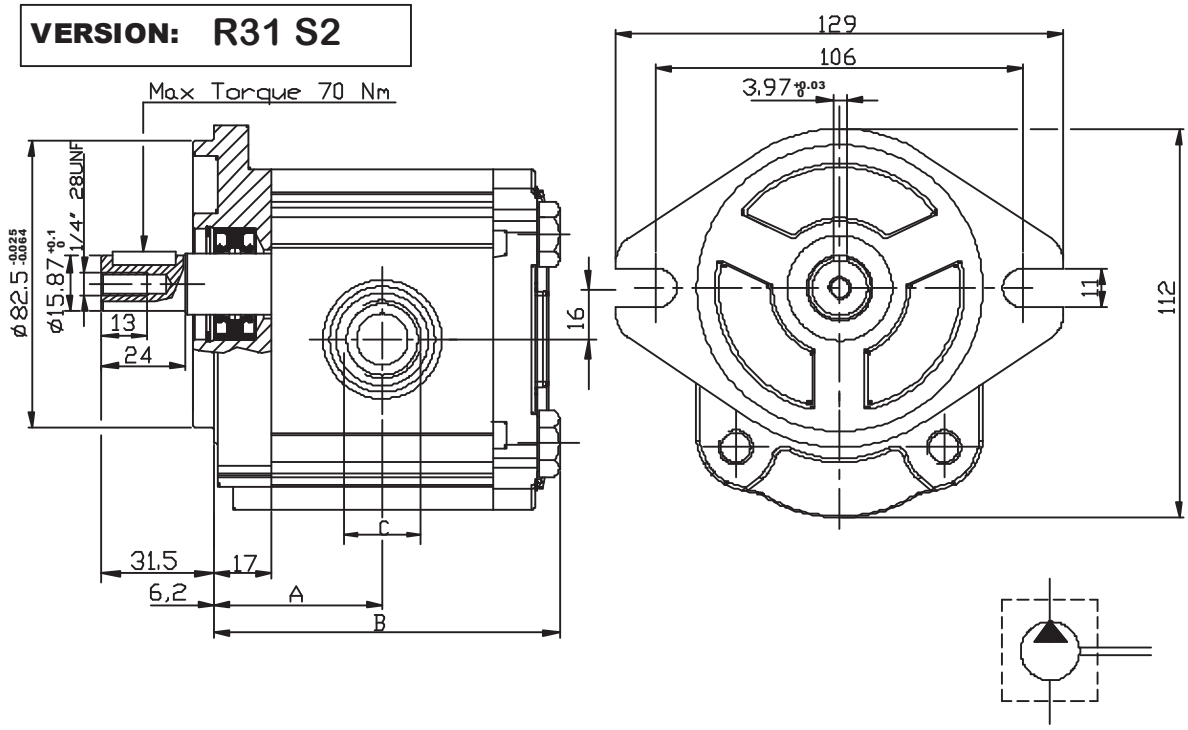
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation

S	Anti-clockwise
D	Clockwise

- G — Body with threated ports (BSP)
- 31 — Straight shaft Ø15.87
- S2 — SAE- A flange

GROUP 2 PUMPS - SAE "A" STANDARD

VERSION: R31 S2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port C	Outlet port C
OT 200 P04	04,10	250	300	4000	41,00	84,50	7/8-14UNF-2B	7/8-14UNF-2B
OT 200 P06	06,20	250	300	3500	42,50	87,50		
OT 200 P08	08,20	250	300	3500	44,00	90,50		
OT 200 P11	11,20	250	300	3500	46,15	94,80		
OT 200 P14	14,00	240	300	3000	48,15	98,80	1-1/16-12UN-2B	
OT 200 P16	16,00	240	300	3000	49,60	101,7		
OT 200 P20	20,00	200	240	3000	52,50	107,5		
OT 200 P22	22,50	170	210	2500	58,35	119,2		
OT 200 P25	25,10	170	210	2500	60,25	123,0		
OT 200 P28	28,00	140	180	2500	62,35	127,2		
OT 200 P30	30,00	130	170	2000	63,75	130,0		

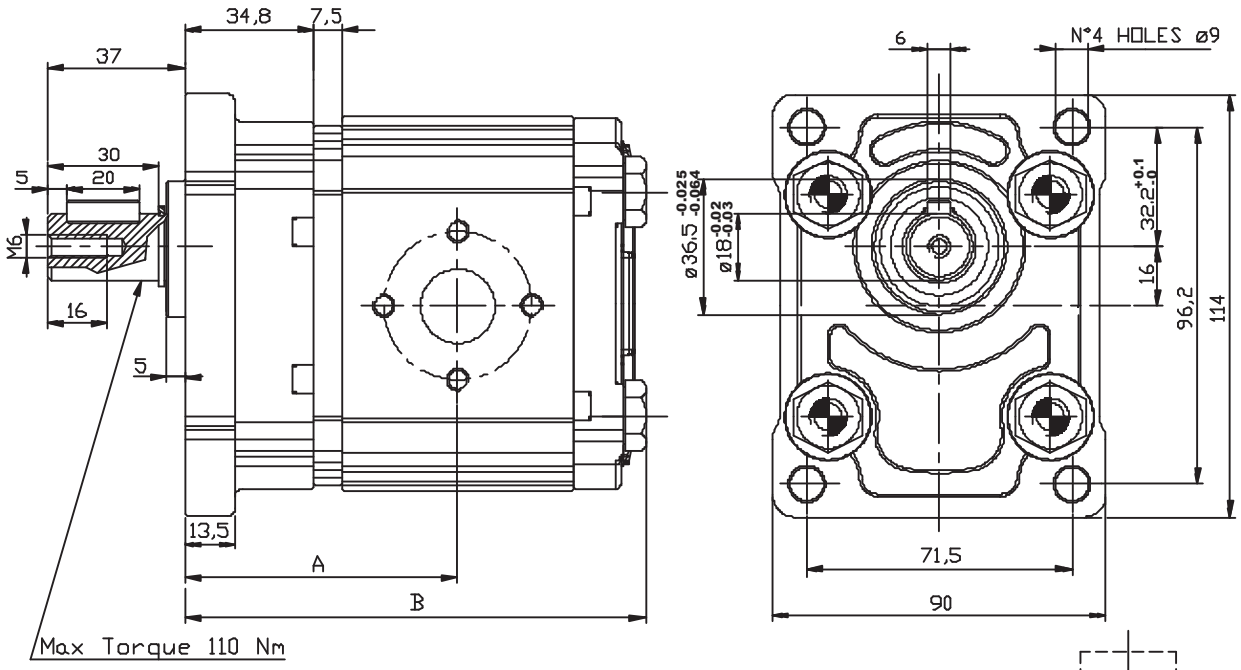
EXAMPLE OF ORDERING CODE

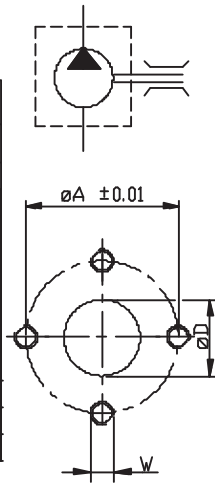
OT200 P 08 S / R 31 S2

- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation (S Anti-clockwise, D Clockwise)
- R — Body with O-ring boss ports
- 31 — Straight shaft Ø15.87
- S2 — SAE-A flange

GROUP 2 PUMPS - WITH FRONT BEARING

VERSION: P T 22 P2





Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	66.30	109.80	13	30	M6	13	30	M6
OT 200 P06	06,20	250	300	3500	67.80	112.80	13	30	M6	13	30	M6
OT 200 P08	08,20	250	300	3500	69.30	115.80	13	30	M6	13	30	M6
OT 200 P11	11,20	250	300	3500	71.45	120.10	13	30	M6	13	30	M6
OT 200 P14	14,00	240	300	3000	73.45	124.10	20	40	M8	13	30	M6
OT 200 P16	16,00	240	300	3000	74.90	127.00	20	40	M8	13	30	M6
OT 200 P20	20,00	200	240	3000	77.80	132.80	20	40	M8	13	30	M6
OT 200 P22	22,50	170	210	2500	82.65	144.50	20	40	M8	13	30	M6
OT 200 P25	25,10	170	210	2500	85.55	148.30	20	40	M8	13	30	M6
OT 200 P28	28,00	140	180	2500	87.65	152.50	20	40	M8	13	30	M6
OT 200 P30	30,00	130	170	2000	89.05	155.30	20	40	M8	13	30	M6

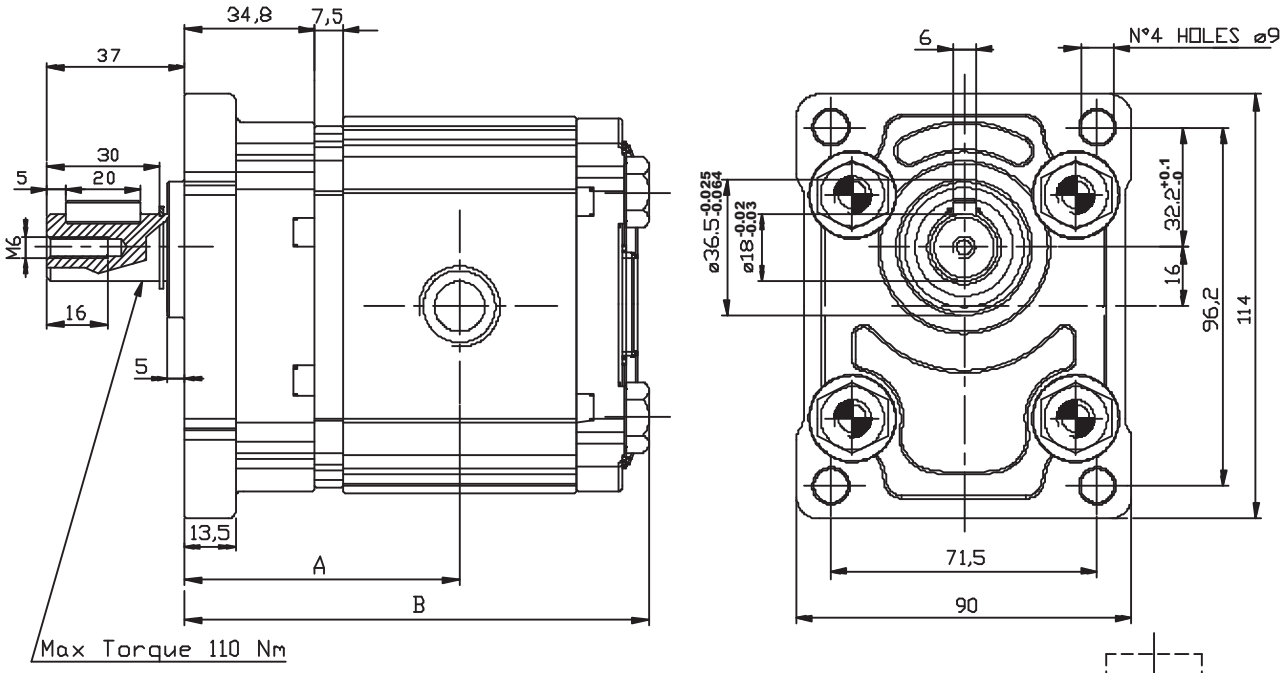
EXAMPLE OF ORDERING CODE

OT200 P 08 S / P / T 22 P2

- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- P — Body for European flanges
- T — Front bearing
- 22 — Straight shaft Ø18
- P2 — European standard flange

GROUP 2 PUMPS - WITH FRONT BEARING

VERSION: G T 22 P2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	250	300	4000	66.30	109.80	G1/2	14	G1/2	14
OT 200 P06	06,20	250	300	3500	67.80	112.80	G1/2	14	G1/2	14
OT 200 P08	08,20	250	300	3500	69.30	115.80	G1/2	14	G1/2	14
OT 200 P11	11,20	250	300	3500	71.45	120.10	G1/2	14	G1/2	14
OT 200 P14	14,00	240	300	3000	73.45	124.10	G3/4	16	G1/2	14
OT 200 P16	16,00	240	300	3000	74.90	127.00	G3/4	16	G1/2	14
OT 200 P20	20,00	200	240	3000	77.80	132.80	G3/4	16	G1/2	14
OT 200 P22	22,50	170	210	2500	82.65	144.50	G3/4	16	G1/2	14
OT 200 P25	25,10	170	210	2500	85.55	148.30	G3/4	16	G1/2	14
OT 200 P28	28,00	140	180	2500	87.65	152.50	G3/4	16	G1/2	14
OT 200 P30	30,00	130	170	2000	89.05	155.30	G3/4	16	G1/2	14

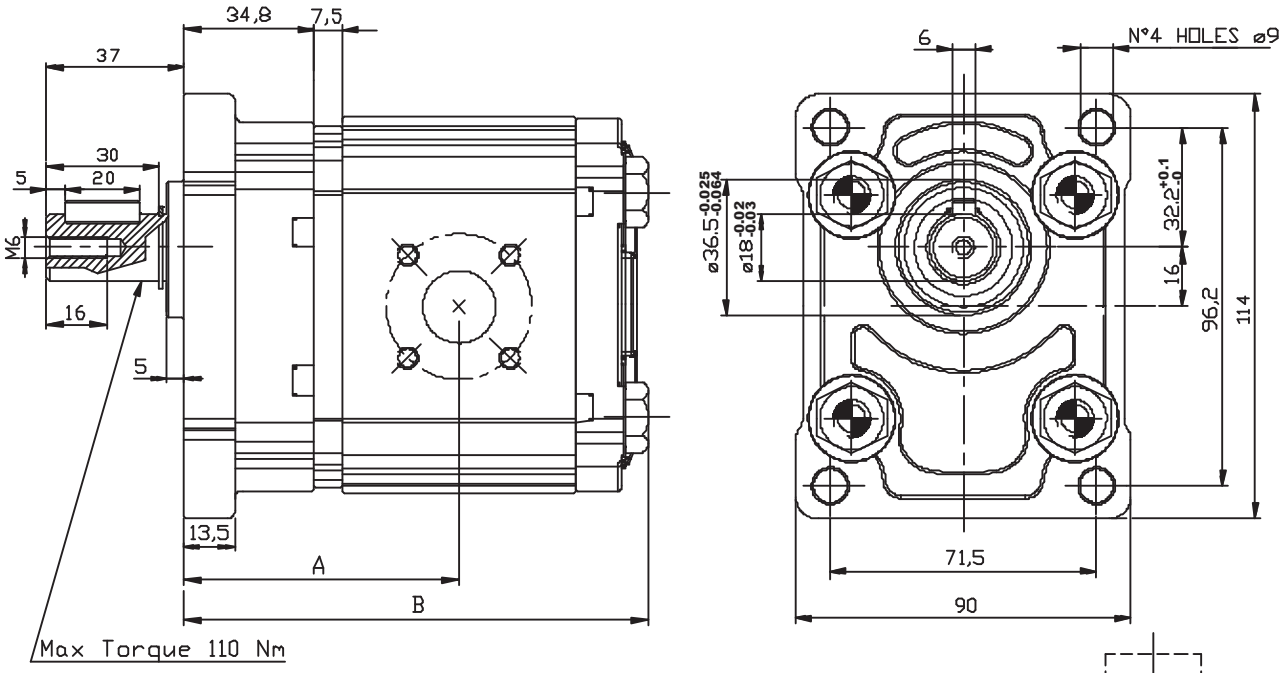
EXAMPLE OF ORDERING CODE

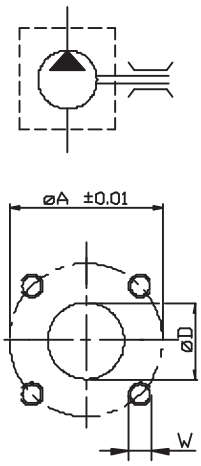
OT200 P 08 S / G / T 22 P2

- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- T — Front bearing
- 22 — Straight shaft Ø18
- P2 — European standard flange

GROUP 2 PUMPS - WITH FRONT BEARING

VERSION: B T 22 P2





Type	Displacement	Max working pressure P1	Peak pressure P3	Max speed	Dimension A	Dimension B	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
	(cc/rev)	(bar)	(bar)	(r.p.m)	(mm)							
OT 200 P04	04,10	250	300	4000	66.30	109.80	20	40	M6	15	35	M6
OT 200 P06	06,20	250	300	3500	67.80	112.80	20	40	M6	15	35	M6
OT 200 P08	08,20	250	300	3500	69.30	115.80	20	40	M6	15	35	M6
OT 200 P11	11,20	250	300	3500	71.45	120.10	20	40	M6	15	35	M6
OT 200 P14	14,00	240	300	3000	73.45	124.10	20	40	M6	15	35	M6
OT 200 P16	16,00	240	300	3000	74.90	127.00	20	40	M6	15	35	M6
OT 200 P20	20,00	200	240	3000	77.80	132.80	20	40	M6	15	35	M6
OT 200 P22	22,50	170	210	2500	82.65	144.50	20	40	M6	15	35	M6
OT 200 P25	25,10	170	210	2500	85.55	148.30	20	40	M6	15	35	M6
OT 200 P28	28,00	140	180	2500	87.65	152.50	20	40	M6	15	35	M6
OT 200 P30	30,00	130	170	2000	89.05	155.30	20	40	M6	15	35	M6

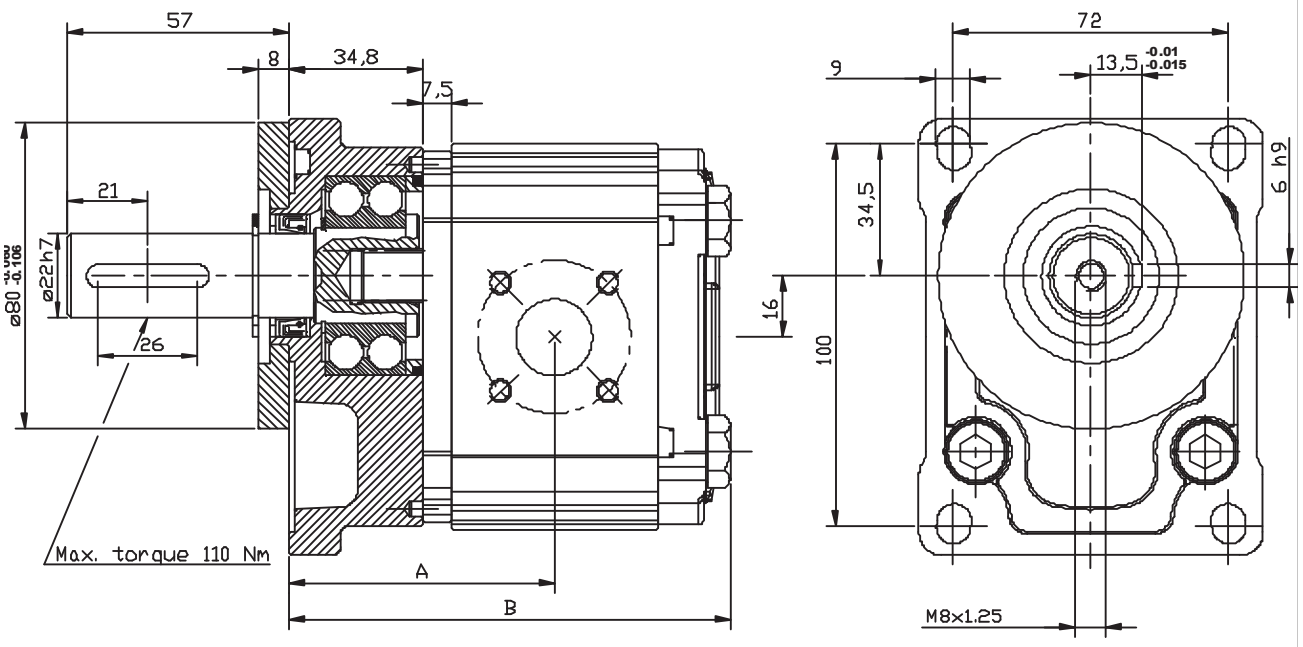
EXAMPLE OF ORDERING CODE

OT200 P 08 S / B / T 22 P2

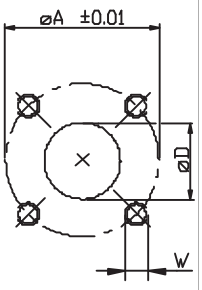
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- B — Body for German flanges
- T — Front bearing
- 22 — Straight shaft Ø18
- P2 — European standard flange

GROUP 2 PUMPS - WITH FRONT BEARING

VERSION: B T 29 B2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	66.30	109.80	20	40	M6	15	35	M6
OT 200 P06	06,20	250	300	3500	67.80	112.80	20	40	M6	15	35	M6
OT 200 P08	08,20	250	300	3500	69.30	115.80	20	40	M6	15	35	M6
OT 200 P11	11,20	250	300	3500	71.45	120.10	20	40	M6	15	35	M6
OT 200 P14	14,00	240	300	3000	73.45	124.10	20	40	M6	15	35	M6
OT 200 P16	16,00	240	300	3000	74.90	127.00	20	40	M6	15	35	M6
OT 200 P20	20,00	200	240	3000	77.80	132.80	20	40	M6	15	35	M6
OT 200 P22	22,50	170	210	2500	82.65	144.50	20	40	M6	15	35	M6
OT 200 P25	25,10	170	210	2500	85.55	148.30	20	40	M6	15	35	M6
OT 200 P28	28,00	140	180	2500	87.65	152.50	20	40	M6	15	35	M6
OT 200 P30	30,00	130	170	2000	89.05	155.30	20	40	M6	15	35	M6



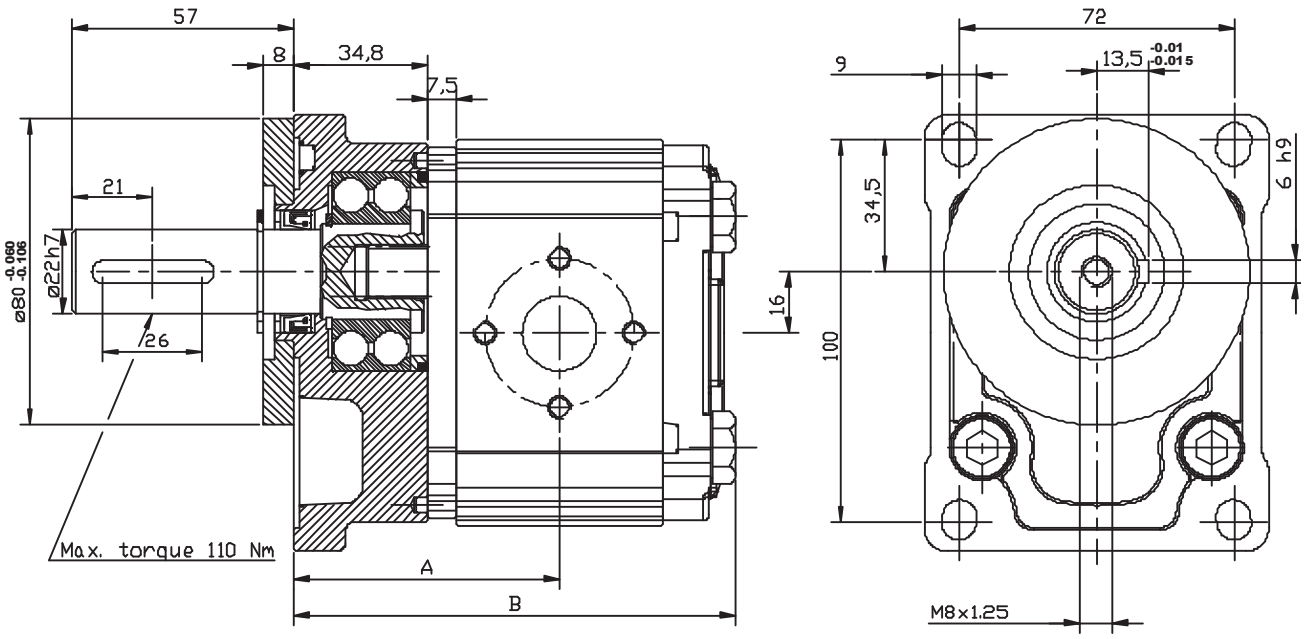
EXAMPLE OF ORDERING CODE

OT200 P 08 S / B / T 29 B2

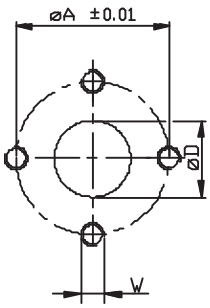
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- B — Body for German flanges
- T — Front bearing
- 29 — Straight shaft Ø22
- B2 — German standard flange

GROUP 2 PUMPS - WITH FRONT BEARING

VERSION: P T 29 B2



Type	Displacement	Max working pressure P1	Peak pressure P3	Max speed	Dimension A	Dimension B	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
	(cc/rev)	(bar)	(bar)	(r.p.m)	(mm)							
OT 200 P04	04,10	250	300	4000	66.30	109.80	20	40	M6	15	35	M6
OT 200 P06	06,20	250	300	3500	67.80	112.80	20	40	M6	15	35	M6
OT 200 P08	08,20	250	300	3500	69.30	115.80	20	40	M6	15	35	M6
OT 200 P11	11,20	250	300	3500	71.45	120.10	20	40	M6	15	35	M6
OT 200 P14	14,00	240	300	3000	73.45	124.10	20	40	M6	15	35	M6
OT 200 P16	16,00	240	300	3000	74.90	127.00	20	40	M6	15	35	M6
OT 200 P20	20,00	200	240	3000	77.80	132.80	20	40	M6	15	35	M6
OT 200 P22	22,50	170	210	2500	82.65	144.50	20	40	M6	15	35	M6
OT 200 P25	25,10	170	210	2500	85.55	148.30	20	40	M6	15	35	M6
OT 200 P28	28,00	140	180	2500	87.65	152.50	20	40	M6	15	35	M6
OT 200 P30	30,00	130	170	2000	89.05	155.30	20	40	M6	15	35	M6



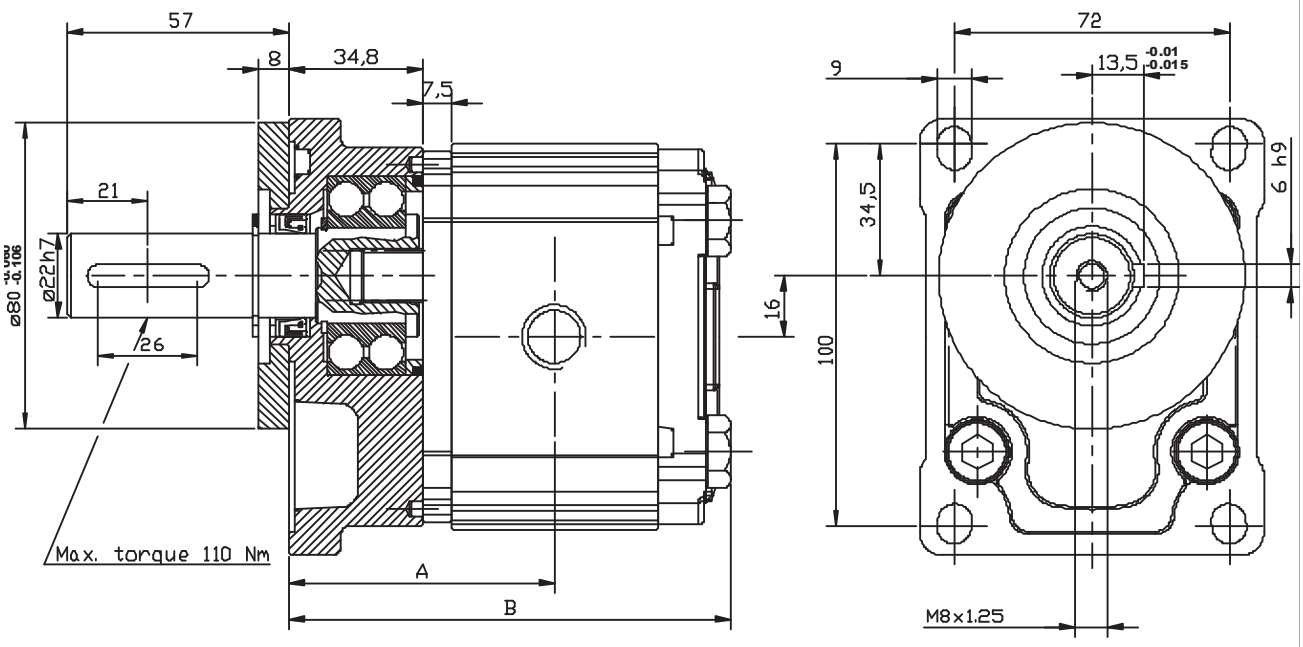
EXAMPLE OF ORDERING CODE

OT200 P 08 S / P / T 29 B2

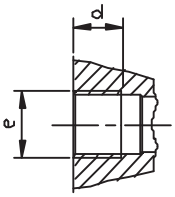
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- P — Body for European flanges
- T — Front bearing
- 29 — Straight shaft Ø22
- B2 — German standard flange

GROUP 2 PUMPS - WITH FRONT BEARING

VERSION: G T 29 B2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	250	300	4000	66.30	109.80	G1/2	14	G1/2	14
OT 200 P06	06,20	250	300	3500	67.80	112.80	G1/2	14	G1/2	14
OT 200 P08	08,20	250	300	3500	69.30	115.80	G1/2	14	G1/2	14
OT 200 P11	11,20	250	300	3500	71.45	120.10	G1/2	14	G1/2	14
OT 200 P14	14,00	240	300	3000	73.45	124.10	G3/4	16	G3/4	16
OT 200 P16	16,00	240	300	3000	74.90	127.00	G3/4	16	G3/4	16
OT 200 P20	20,00	200	240	3000	77.80	132.80	G3/4	16	G3/4	16
OT 200 P22	22,50	170	210	2500	82.65	144.50	G3/4	16	G3/4	16
OT 200 P25	25,10	170	210	2500	85.55	148.30	G3/4	16	G3/4	16
OT 200 P28	28,00	140	180	2500	87.65	152.50	G3/4	16	G3/4	16
OT 200 P30	30,00	130	170	2000	89.05	155.30	G3/4	16	G3/4	16



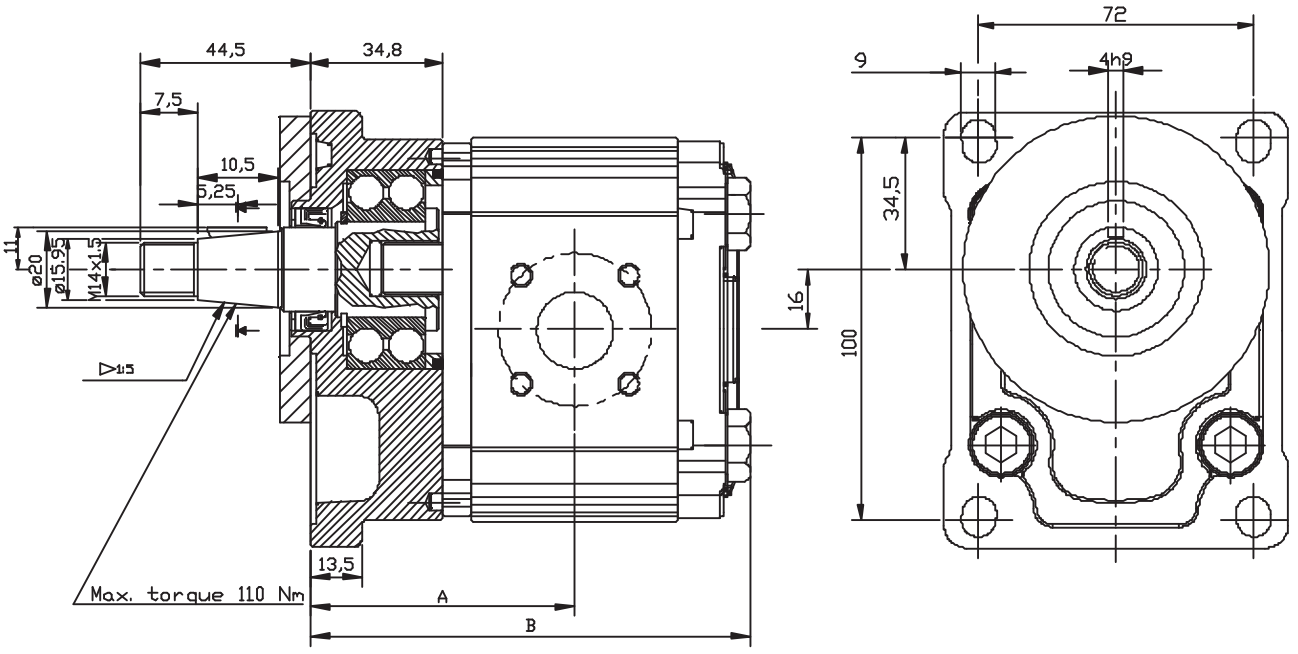
EXAMPLE OF ORDERING CODE

OT200 P 08 S / G / T 29 B2

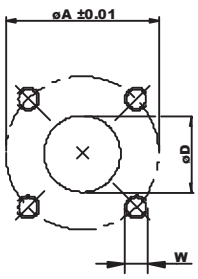
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- T — Front bearing
- 29 — Straight shaft Ø22
- B2 — German standard flange

GROUP 2 PUMPS - WITH FRONT BEARING

VERSION: B T 27 B2



Type	Displacement	Max working pressure P1	Peak pressure P3	Max speed	Dimension A	Dimension B	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
	(cc/rev)	(bar)	(bar)	(r.p.m)	(mm)							
OT 200 P04	04,10	250	300	4000	66.30	109.80	20	40	M6	15	35	M6
OT 200 P06	06,20	250	300	3500	67.80	112.80	20	40	M6	15	35	M6
OT 200 P08	08,20	250	300	3500	69.30	115.80	20	40	M6	15	35	M6
OT 200 P11	11,20	250	300	3500	71.45	120.10	20	40	M6	15	35	M6
OT 200 P14	14,00	240	300	3000	73.45	124.10	20	40	M6	15	35	M6
OT 200 P16	16,00	240	300	3000	74.90	127.00	20	40	M6	15	35	M6
OT 200 P20	20,00	200	240	3000	77.80	132.80	20	40	M6	15	35	M6
OT 200 P22	22,50	170	210	2500	82.65	144.50	20	40	M6	15	35	M6
OT 200 P25	25,10	170	210	2500	85.55	148.30	20	40	M6	15	35	M6
OT 200 P28	28,00	140	180	2500	87.65	152.50	20	40	M6	15	35	M6
OT 200 P30	30,00	130	170	2000	89.05	155.30	20	40	M6	15	35	M6



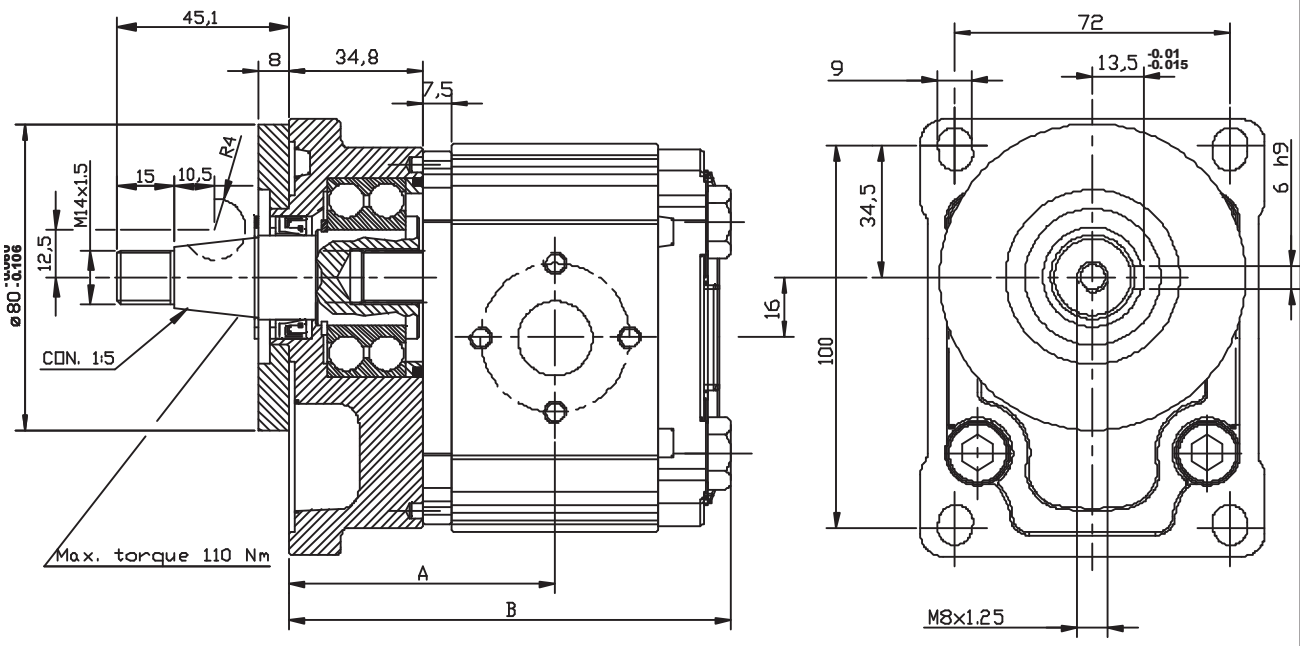
EXAMPLE OF ORDERING CODE

OT200 P 08 S / B / T 27 B2

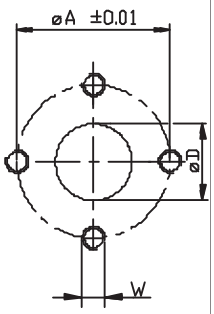
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- B — Body for German flanges
- T — Front bearing
- 27 — Taper shaft (1:5)
- B2 — German standard flange

GROUP 2 PUMPS - WITH FRONT BEARING

VERSION: P T 27 B2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	66.30	109.80	20	40	M6	15	35	M6
OT 200 P06	06,20	250	300	3500	67.80	112.80	20	40	M6	15	35	M6
OT 200 P08	08,20	250	300	3500	69.30	115.80	20	40	M6	15	35	M6
OT 200 P11	11,20	250	300	3500	71.45	120.10	20	40	M6	15	35	M6
OT 200 P14	14,00	240	300	3000	73.45	124.10	20	40	M6	15	35	M6
OT 200 P16	16,00	240	300	3000	74.90	127.00	20	40	M6	15	35	M6
OT 200 P20	20,00	200	240	3000	77.80	132.80	20	40	M6	15	35	M6
OT 200 P22	22,50	170	210	2500	82.65	144.50	20	40	M6	15	35	M6
OT 200 P25	25,10	170	210	2500	85.55	148.30	20	40	M6	15	35	M6
OT 200 P28	28,00	140	180	2500	87.65	152.50	20	40	M6	15	35	M6
OT 200 P30	30,00	130	170	2000	89.05	155.30	20	40	M6	15	35	M6



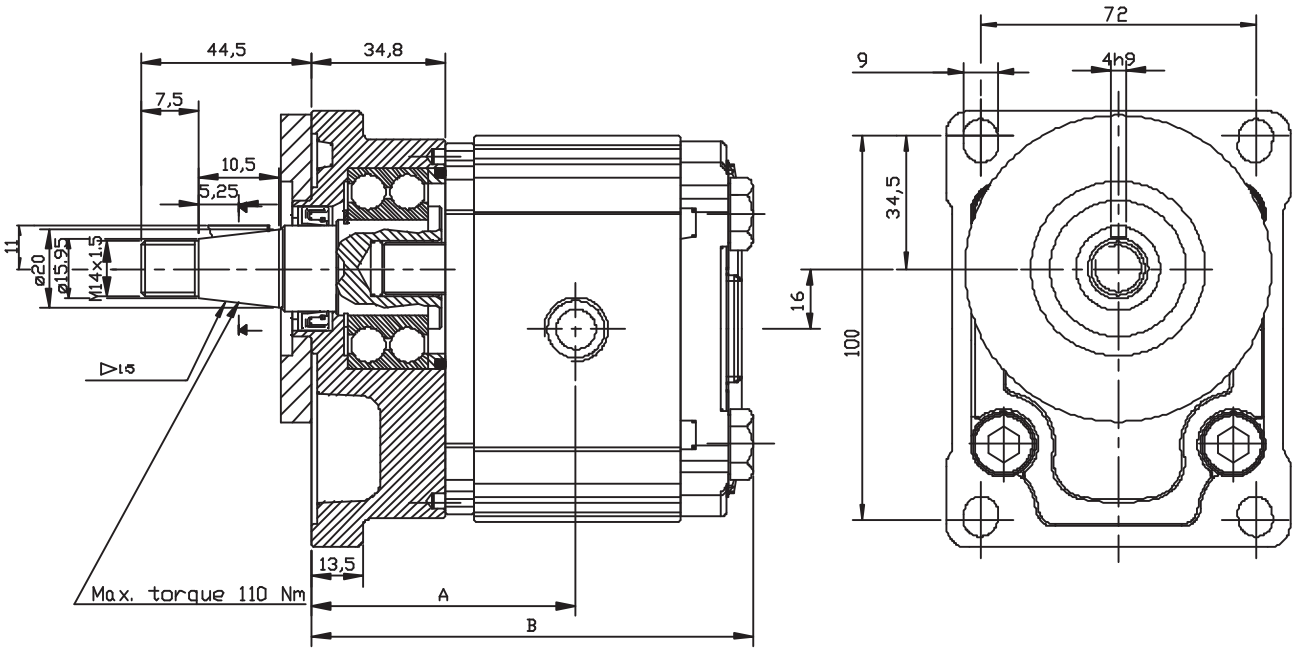
EXAMPLE OF ORDERING CODE

OT200 P 08 S / P / T 27 B2

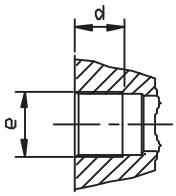
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- P — Body for European flanges
- T — Front bearing
- 27 — Taper shaft (1:5)
- B2 — German standard flange

GROUP 2 PUMPS - WITH FRONT BEARING

VERSION: G T 27 B2



Type	Displacement	Max working pressure P1	Peak pressure P3	Max speed	Dimension A	Dimension B	Inlet port e	Inlet port d	Outlet port e	Outlet port d
	(cc/rev)	(bar)	(bar)	(r.p.m)	(mm)					
OT 200 P04	04,10	250	300	4000	66.30	109.80	G1/2	14	G1/2	14
OT 200 P06	06,20	250	300	3500	67.80	112.80	G1/2	14	G1/2	14
OT 200 P08	08,20	250	300	3500	69.30	115.80	G1/2	14	G1/2	14
OT 200 P11	11,20	250	300	3500	71.45	120.10	G1/2	14	G1/2	14
OT 200 P14	14,00	240	300	3000	73.45	124.10	G3/4	16	G1/2	14
OT 200 P16	16,00	240	300	3000	74.90	127.00	G3/4	16	G1/2	14
OT 200 P20	20,00	200	240	3000	77.80	132.80	G3/4	16	G1/2	14
OT 200 P22	22,50	170	210	2500	82.65	144.50	G3/4	16	G1/2	14
OT 200 P25	25,10	170	210	2500	85.55	148.30	G3/4	16	G1/2	14
OT 200 P28	28,00	140	180	2500	87.65	152.50	G3/4	16	G1/2	14
OT 200 P30	30,00	130	170	2000	89.05	155.30	G3/4	16	G1/2	14



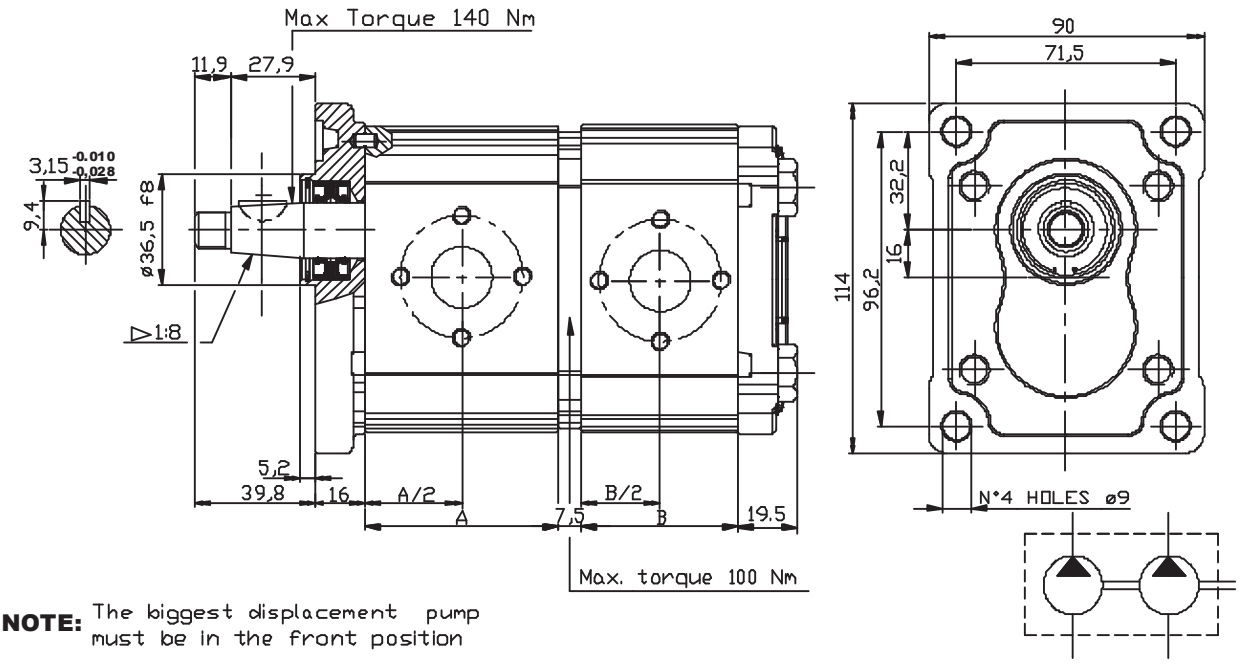
EXAMPLE OF ORDERING CODE

OT200 P 08 S / G / T 27 B2

- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body for European flanges
- T — Front bearing
- 27 — Taper shaft (1:5)
- B2 — German standard flange

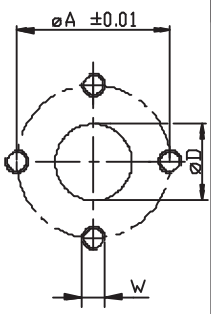
GROUP 2 PUMPS - TANDEM

VERSION: P28 P2



NOTE: The biggest displacement pump must be in the front position

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	48.00	48.00	13	30	M6	13	30	M6
OT 200 P06	06,20	250	300	3500	51.00	51.00	13	30	M6	13	30	M6
OT 200 P08	08,20	250	300	3500	54.00	54.00	13	30	M6	13	30	M6
OT 200 P11	11,20	250	300	3500	58.30	58.30	13	30	M6	13	30	M6
OT 200 P14	14,00	240	300	3000	62.30	62.30	20	40	M8	13	30	M6
OT 200 P16	16,00	240	300	3000	65.20	65.20	20	40	M8	13	30	M6
OT 200 P20	20,00	200	240	3000	71.00	71.00	20	40	M8	13	30	M6
OT 200 P22	22,50	170	210	2500	82.70	82.70	20	40	M8	13	30	M6
OT 200 P25	25,10	170	210	2500	86.50	86.50	20	40	M8	13	30	M6
OT 200 P28	28,00	140	180	2500	90.70	90.70	20	40	M8	13	30	M6
OT 200 P30	30,00	130	170	2000	93.50	93.50	20	40	M8	13	30	M6



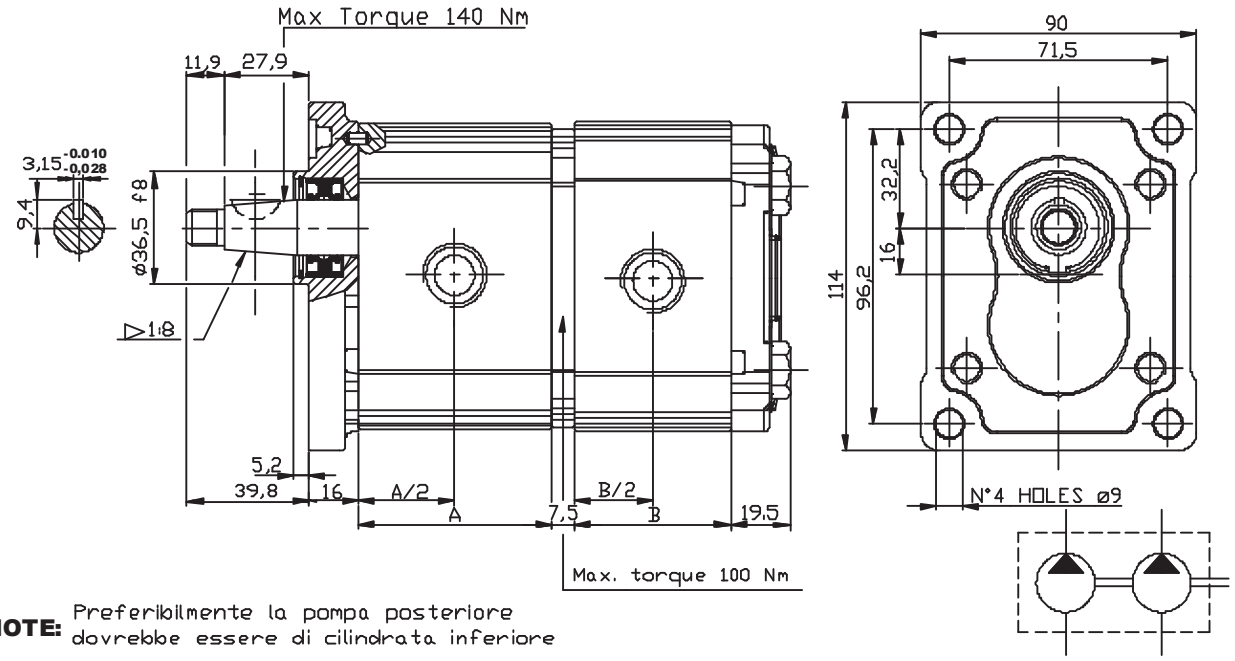
EXAMPLE OF ORDERING CODE

OT200 P 16 / 06 S / P 28 P2 / 2

- OT200 — Series
- P — Pump
- 16 — Front pump displacement (see above table)
- 06 — Second pump displacement (see above table)
- S — Rotation: S = Anti-clockwise, D = Clockwise
- P — Body for European flanges
- 28 — Taper shaft (1:8)
- P2 — European standard flange
- 2 — 1 = One inlet port, 2 = Two inlet ports

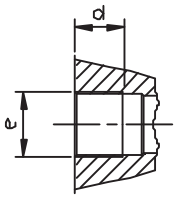
GROUP 2 PUMPS - TANDEM

VERSION: G28 P2



NOTE: Preferibilmente la pompa posteriore dovrebbe essere di cilindrata inferiore

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	250	300	4000	48.00	48.00	G1/2	14	G1/2	14
OT 200 P06	06,20	250	300	3500	51.00	51.00	G1/2	14	G1/2	14
OT 200 P08	08,20	250	300	3500	54.00	54.00	G1/2	14	G1/2	14
OT 200 P11	11,20	250	300	3500	58.30	58.30	G1/2	14	G1/2	14
OT 200 P14	14,00	240	300	3000	62.30	62.30	G3/4	16	G1/2	14
OT 200 P16	16,00	240	300	3000	65.20	65.20	G3/4	16	G1/2	14
OT 200 P20	20,00	200	240	3000	71.00	71.00	G3/4	16	G1/2	14
OT 200 P22	22,50	170	210	2500	82.70	82.70	G3/4	16	G1/2	14
OT 200 P25	25,10	170	210	2500	86.50	86.50	G3/4	16	G1/2	14
OT 200 P28	28,00	140	180	2500	90.70	90.70	G3/4	16	G1/2	14
OT 200 P30	30,00	130	170	2000	93.50	93.50	G3/4	16	G1/2	14



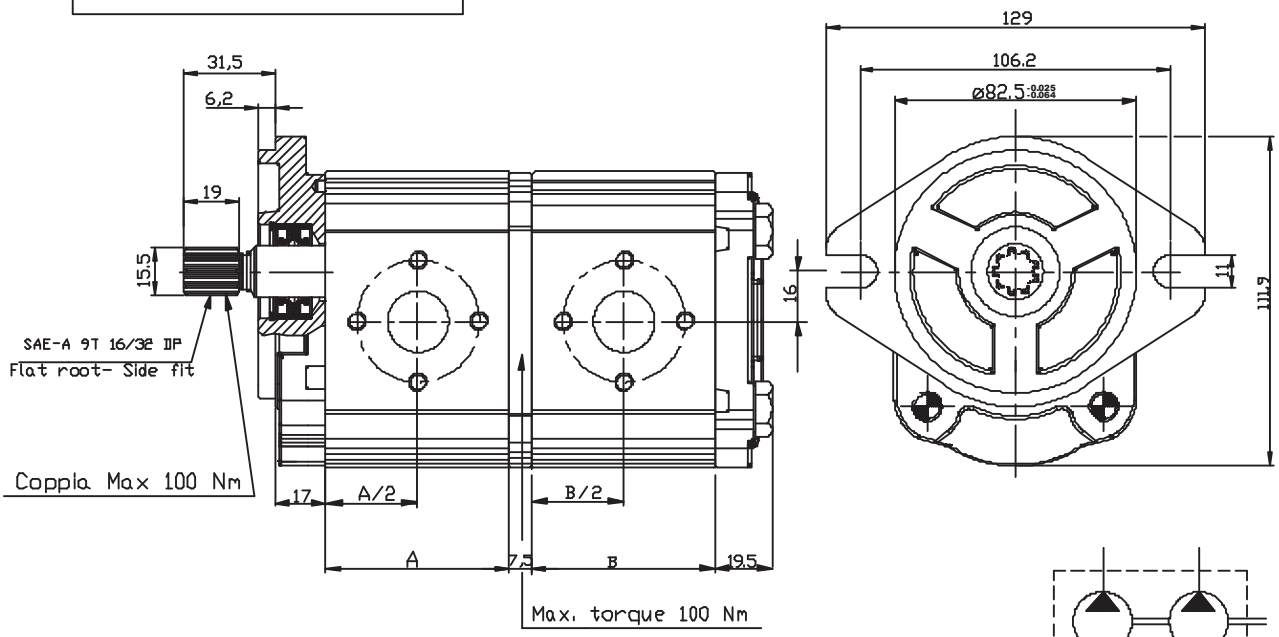
EXAMPLE OF ORDERING CODE

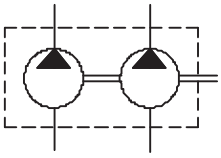
OT200 P 16 / 06 S / G 28 P2 / 2

- OT200 — Series
- P — Pump
- 16 / 06 — Front pump displacement (see above table) / Second pump displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threaded ports (BSP)
- 28 — Taper shaft (1:8)
- P2 — European standard flange
- 2 — 1 = One inlet port; 2 = Two inlet ports

GROUP 2 PUMPS - TANDEM SAE "A" STANDARD

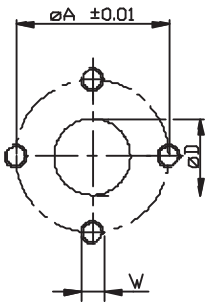
VERSION: P21 S2





NOTE: Preferibilmente la pompa posteriore dovrebbe essere di cilindrata inferiore

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	48.00	48.00	13	30	M6	13	30	M6
OT 200 P06	06,20	250	300	3500	51.00	51.00	13	30	M6	13	30	M6
OT 200 P08	08,20	250	300	3500	54.00	54.00	13	30	M6	13	30	M6
OT 200 P11	11,20	250	300	3500	58.30	58.30	13	30	M6	13	30	M6
OT 200 P14	14,00	240	300	3000	62.30	62.30	20	40	M8	13	30	M6
OT 200 P16	16,00	240	300	3000	65.20	65.20	20	40	M8	13	30	M6
OT 200 P20	20,00	200	240	3000	71.00	71.00	20	40	M8	13	30	M6
OT 200 P22	22,50	170	210	2500	82.70	82.70	20	40	M8	13	30	M6
OT 200 P25	25,10	170	210	2500	86.50	86.50	20	40	M8	13	30	M6
OT 200 P28	28,00	140	180	2500	90.70	90.70	20	40	M8	13	30	M6
OT 200 P30	30,00	130	170	2000	93.50	93.50	20	40	M8	13	30	M6



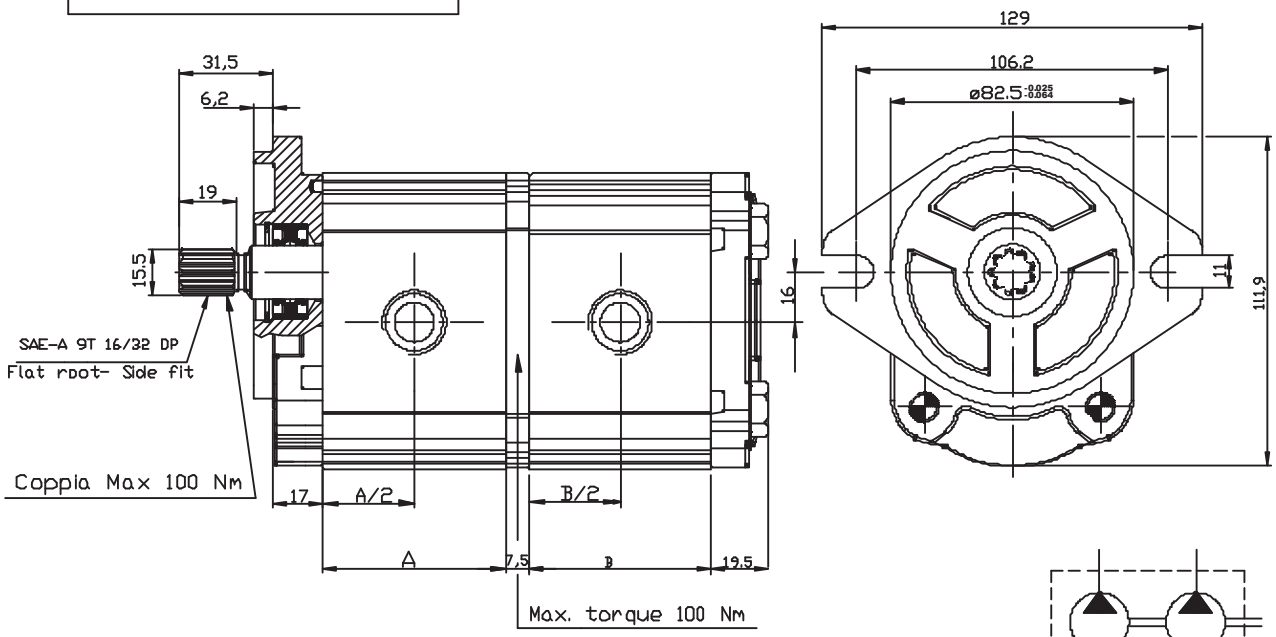
EXAMPLE OF ORDERING CODE

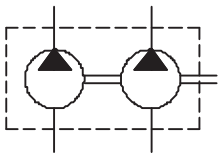
OT200 P 16 / 06 S / P 21 S2 / 2

- OT200 — Series
- P — Pump
- 16 — Front pump displacement (see above table)
- 06 — Second pump displacement (see above table)
- S — Rotation: S = Anti-clockwise, D = Clockwise
- P — Body for european flanges
- 21 — SAE A -9T 16/32 DP shaft
- S2 — SAE- A flange
- 2 — 1 = One inlet port, 2 = Two inlet ports

GROUP 2 PUMPS - TANDEM SAE "A" STANDARD

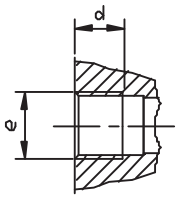
VERSION: G21 S2





NOTE: Preferibilmente la pompa posteriore dovrebbe essere di cilindrata inferiore

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	250	300	4000	48.00	48.00	G1/2	14	G1/2	14
OT 200 P06	06,20	250	300	3500	51.00	51.00	G1/2	14	G1/2	14
OT 200 P08	08,20	250	300	3500	54.00	54.00	G1/2	14	G1/2	14
OT 200 P11	11,20	250	300	3500	58.30	58.30	G1/2	14	G1/2	14
OT 200 P14	14,00	240	300	3000	62.30	62.30	G3/4	16	G1/2	14
OT 200 P16	16,00	240	300	3000	65.20	65.20	G3/4	16	G1/2	14
OT 200 P20	20,00	200	240	3000	71.00	71.00	G3/4	16	G1/2	14
OT 200 P22	22,50	170	210	2500	82.70	82.70	G3/4	16	G1/2	14
OT 200 P25	25,10	170	210	2500	86.50	86.50	G3/4	16	G1/2	14
OT 200 P28	28,00	140	180	2500	90.70	90.70	G3/4	16	G1/2	14
OT 200 P30	30,00	130	170	2000	93.50	93.50	G3/4	16	G1/2	14



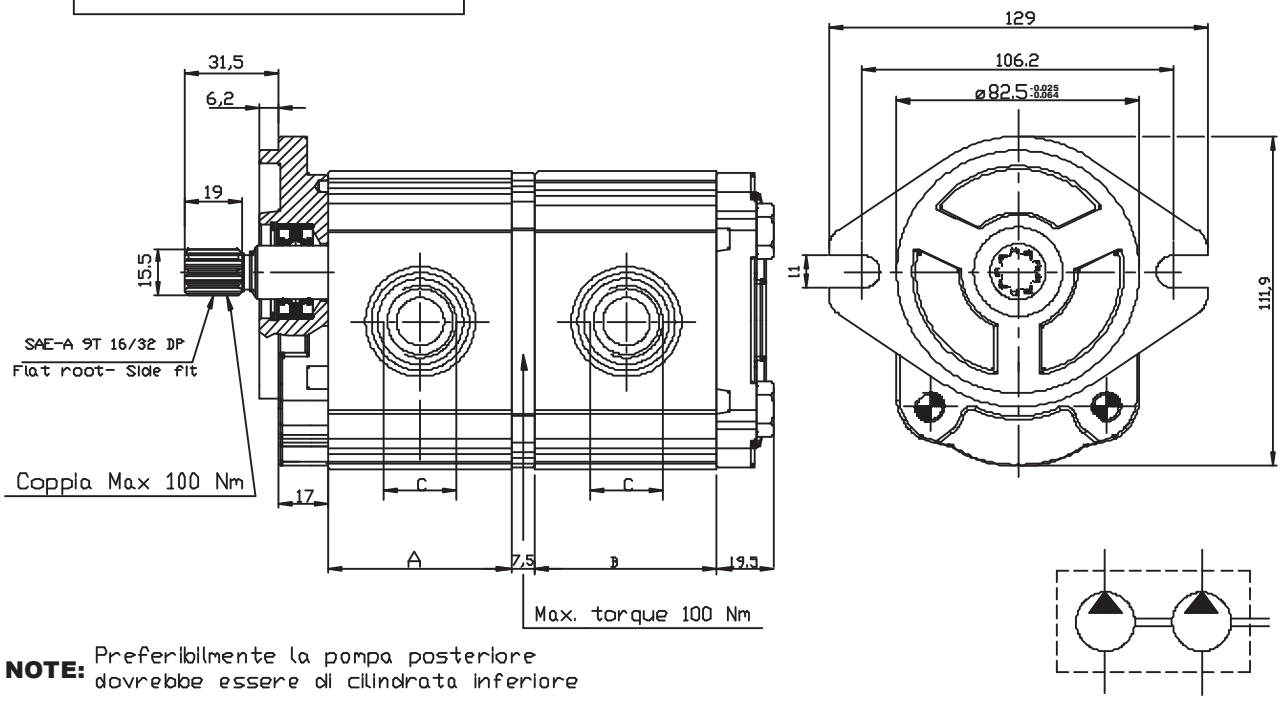
EXAMPLE OF ORDERING CODE

OT200 P 16 / 06 S / G 21 S2 / 2

- OT200 — Series
- P — Pump
- 16 / 06 — Front pump displacement (see above table) / Second pump displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- 21 — SAE A -9T 16/32 DP shaft
- S2 — SAE- A flange
- 2 — 1 = One inlet port; 2 = Two inlet ports

GROUP 2 PUMPS - TANDEM SAE "A" STANDARD

VERSION: R21 S2



NOTE: Preferibilmente la pompa posteriore dovrebbe essere di cilindrata inferiore

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port C	Outlet port C
OT 200 P04	04,10	250	300	4000	48.00	48.00	7/8-14UNF-2B	7/8-14UNF-2B
OT 200 P06	06,20	250	300	3500	51.00	51.00		
OT 200 P08	08,20	250	300	3500	54.00	54.00		
OT 200 P11	11,20	250	300	3500	58.30	58.30		
OT 200 P14	14,00	240	300	3000	62.30	62.30	1-1/16-12UN-2B	
OT 200 P16	16,00	240	300	3000	65.20	65.20		
OT 200 P20	20,00	200	240	3000	71.00	71.00		
OT 200 P22	22,50	170	210	2500	82.70	82.70		
OT 200 P25	25,10	170	210	2500	86.50	86.50		
OT 200 P28	28,00	140	180	2500	90.70	90.70		
OT 200 P30	30,00	130	170	2000	93.50	93.50		

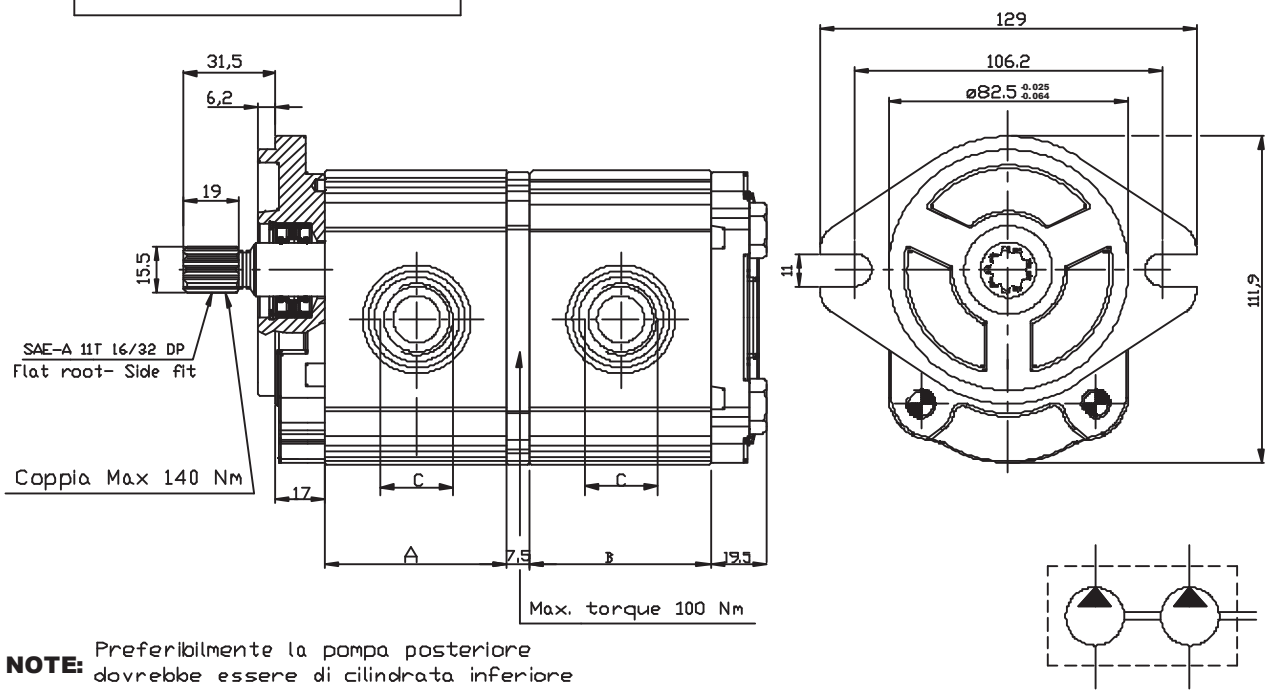
EXAMPLE OF ORDERING CODE

OT200 P 16 / 06 S / R 21 S2 / 2

- OT200 — Series
- P — Pump
- 16 / 06 — Front pump displacement (see above table) / Second pump displacement (see above table)
- S / R — Rotation: S = Anti-clockwise, D = Clockwise
- 21 — SAE A -9T 16/32 DP shaft
- S2 — SAE- A flange
- 2 — 1 = One inlet port, 2 = Two inlet ports
- R — Body with O-ring boss ports

GROUP 2 PUMPS - TANDEM SAE "A" STANDARD

VERSION: R20 S2



NOTE: Preferibilmente la pompa posteriore dovrebbe essere di cilindrata inferiore

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port C	Outlet port C
OT 200 P04	04,10	250	300	4000	48.00	48.00	7/8-14UNF-2B	7/8-14UNF-2B
OT 200 P06	06,20	250	300	3500	51.00	51.00		
OT 200 P08	08,20	250	300	3500	54.00	54.00		
OT 200 P11	11,20	250	300	3500	58.30	58.30		
OT 200 P14	14,00	240	300	3000	62.30	62.30	1-1/16-12UN-2B	
OT 200 P16	16,00	240	300	3000	65.20	65.20		
OT 200 P20	20,00	200	240	3000	71.00	71.00		
OT 200 P22	22,50	170	210	2500	82.70	82.70		
OT 200 P25	25,10	170	210	2500	86.50	86.50		
OT 200 P28	28,00	140	180	2500	90.70	90.70		
OT 200 P30	30,00	130	170	2000	93.50	93.50		

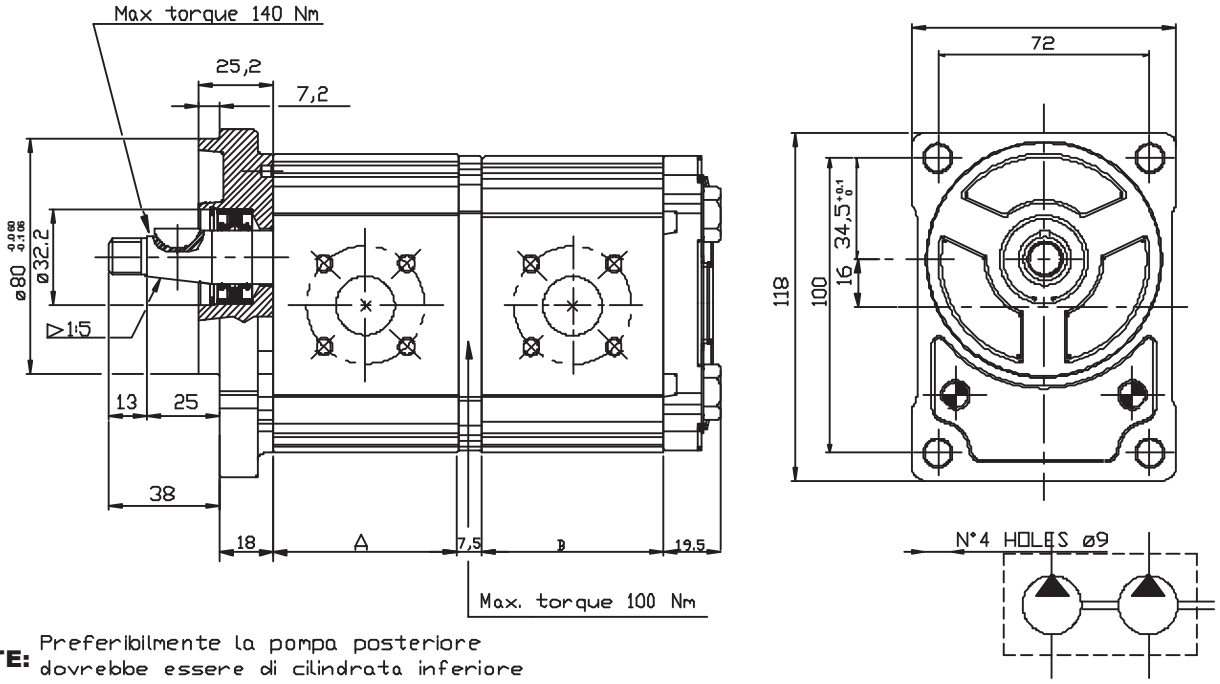
EXAMPLE OF ORDERING CODE

OT200 P 16 / 06 S / R 20 S2 / 2

- OT200 — Series
- P — Pump
- 16 / 06 — Front pump displacement (see above table) / Second pump displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- R — Body with O-ring boss ports
- 20 — SAE A -11T 16/32 DP shaft
- S2 — SAE- A flange
- 2 — 1 = One inlet port; 2 = Two inlet ports

GROUP 2 PUMPS - TANDEM GERMAN STANDARD

VERSION: B25 B2



NOTE: Preferibilmente la pompa posteriore dovrebbe essere di cilindrata inferiore

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	48.00	48.00	20	40	M6	15	35	M6
OT 200 P06	06,20	250	300	3500	51.00	51.00	20	40	M6	15	35	M6
OT 200 P08	08,20	250	300	3500	54.00	54.00	20	40	M6	15	35	M6
OT 200 P11	11,20	250	300	3500	58.30	58.30	20	40	M6	15	35	M6
OT 200 P14	14,00	240	300	3000	62.30	62.30	20	40	M6	15	35	M6
OT 200 P16	16,00	240	300	3000	65.20	65.20	20	40	M6	15	35	M6
OT 200 P20	20,00	200	240	3000	71.00	71.00	20	40	M6	15	35	M6
OT 200 P22	22,50	170	210	2500	82.70	82.70	20	40	M6	15	35	M6
OT 200 P25	25,10	170	210	2500	86.50	86.50	20	40	M6	15	35	M6
OT 200 P28	28,00	140	180	2500	90.70	90.70	20	40	M6	15	35	M6
OT 200 P30	30,00	130	170	2000	93.50	93.50	20	40	M6	15	35	M6

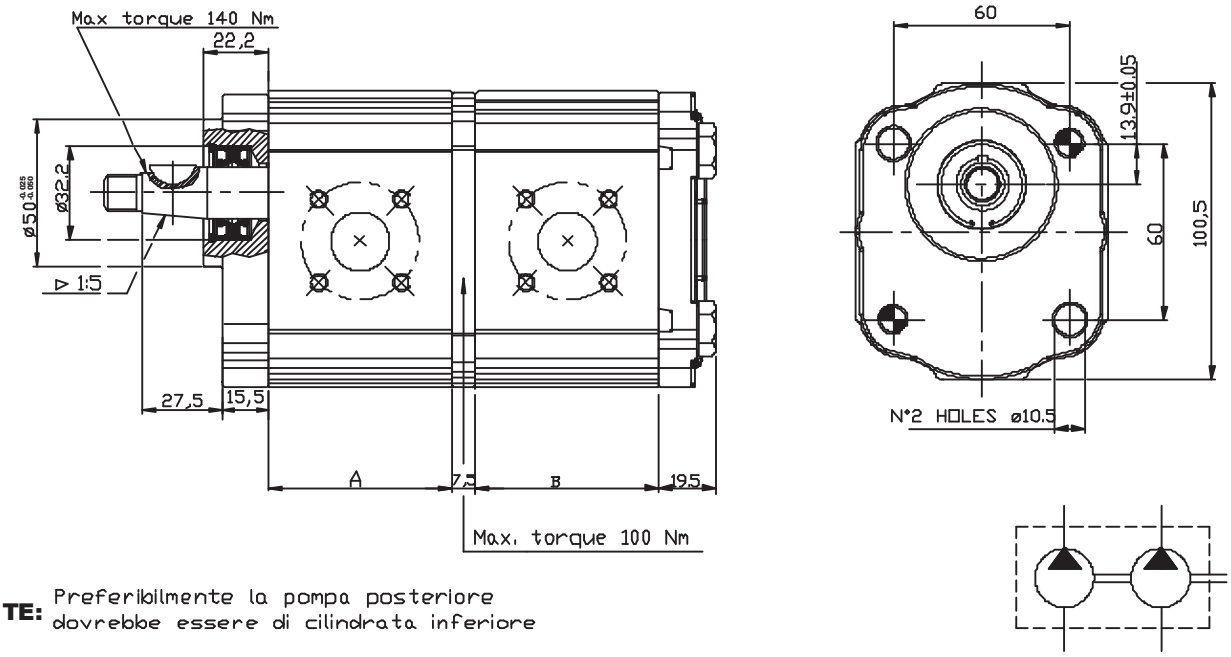
EXAMPLE OF ORDERING CODE

OT200 P 16 / 06 S / B 25 B2 / 2

- OT200 — Series
- P — Pump
- 16 — Front pump displacement (see above table)
- 06 — Second pump displacement (see above table)
- S — Rotation: S = Anti-clockwise, D = Clockwise
- B — Body for German flanges
- 25 — Taper shaft (1:5)
- B2 — German standard flange
- 2 — 1 = One inlet port, 2 = Two inlet ports

GROUP 2 PUMPS - TANDEM GERMAN STANDARD

VERSION: B25 B5



NOTE: Preferibilmente la pompa posteriore dovrebbe essere di cilindrata inferiore

Type	Displacement	Max working pressure P1	Peak pressure P3	Max speed	Dimension A	Dimension B	Inlet port			Outlet port		
	(cc/rev)	(bar)	(bar)	(r.p.m)	(mm)		ØD	ØA	W	ØD	ØA	W
OT 200 P04	04,10	250	300	4000	48.00	48.00	20	40	M6	15	35	M6
OT 200 P06	06,20	250	300	3500	51.00	51.00	20	40	M6	15	35	M6
OT 200 P08	08,20	250	300	3500	54.00	54.00	20	40	M6	15	35	M6
OT 200 P11	11,20	250	300	3500	58.30	58.30	20	40	M6	15	35	M6
OT 200 P14	14,00	240	300	3000	62.30	62.30	20	40	M6	15	35	M6
OT 200 P16	16,00	240	300	3000	65.20	65.20	20	40	M6	15	35	M6
OT 200 P20	20,00	200	240	3000	71.00	71.00	20	40	M6	15	35	M6
OT 200 P22	22,50	170	210	2500	82.70	82.70	20	40	M6	15	35	M6
OT 200 P25	25,10	170	210	2500	86.50	86.50	20	40	M6	15	35	M6
OT 200 P28	28,00	140	180	2500	90.70	90.70	20	40	M6	15	35	M6
OT 200 P30	30,00	130	170	2000	93.50	93.50	20	40	M6	15	35	M6

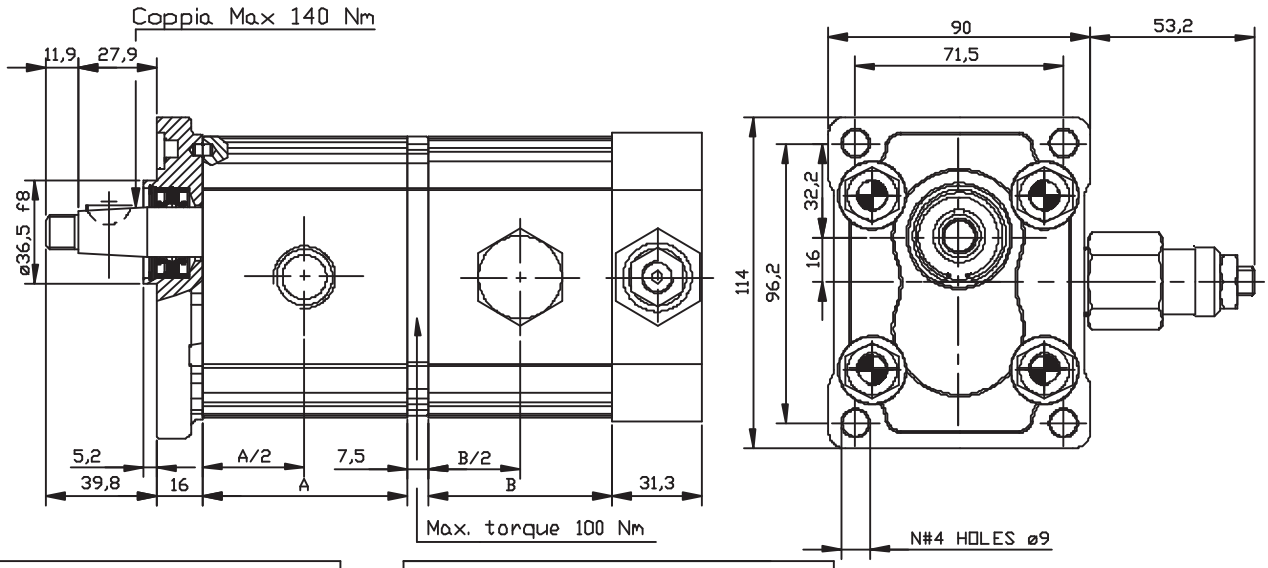
EXAMPLE OF ORDERING CODE

OT200 P 16 / 06 S / B 25 B5 / 2

- OT200 — Series
- P — Pump
- 16 — Front pump displacement (see above table)
- 06 — Second pump displacement (see above table)
- S — Rotation: S = Anti-clockwise, D = Clockwise
- B — Body for German flanges
- 25 — Taper shaft (1:5)
- B5 — German standard flanges
- 2 — 1 = One inlet port, 2 = Two inlet ports

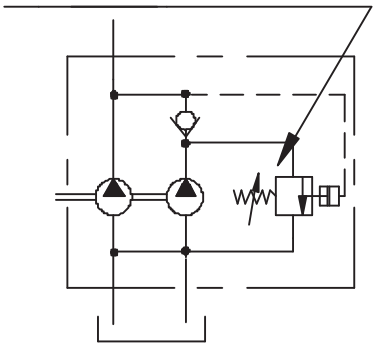
GROUP 2 PUMPS - TANDEM WITH SEQUENCE VALVE HI-LOW

VERSION: G28 P2-SV



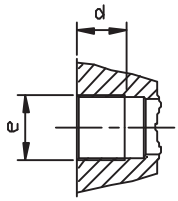
FIRST PUMP					SECOND PUMP				
TYPE	P1	P3	A	Cy	TYPE	P1	P3	B	Cy
OT 200 P04	250	300	48.00	4.10	OT 200 P06	250	300	51.00	6.20
OT 200 P06	250	300	51.00	6.20	OT 200 P08	250	300	54.00	8.20
OT 200 P08	250	300	54.00	8.20	OT 200 P11	250	300	58.30	11.20
OT 200 P11	250	300	58.30	11.20	OT 200 P14	240	300	62.30	14.00
OT 200 P14	240	300	62.30	14.00	OT 200 P16	240	300	65.20	16.00
OT 200 P16	240	300	65.20	16.00	OT 200 P20	200	240	71.00	20.00
OT 200 P20	200	240	71.00	20.00	OT 200 P22	170	210	82.70	22.50
OT 200 P22	170	210	82.70	22.50	OT 200 P25	170	210	86.50	25.10
OT 200 P25	170	210	86.50	25.10					

RANGE 25/100 bar



P1 = WORKING PRESSURE (bar)
P3 = PEAK PRESSURE (bar)
Cy = DISPLACEMENT (cc/rev)

	Inlet port		Outlet port	
	e	d	e	d
P04 to P11	G1/2	14	G1/2	14
P14 to P25	G3/4	16		



EXAMPLE OF ORDERING CODE

OT200 P 11 / 08 S / G 28 P2 - SV 40

- OT200 — Series
- P — Pump
- 11 / 08 — Front pump displacement / Second pump displacement (see above table)
- S / G — Rotation

S	Anti-clockwise
D	Clockwise

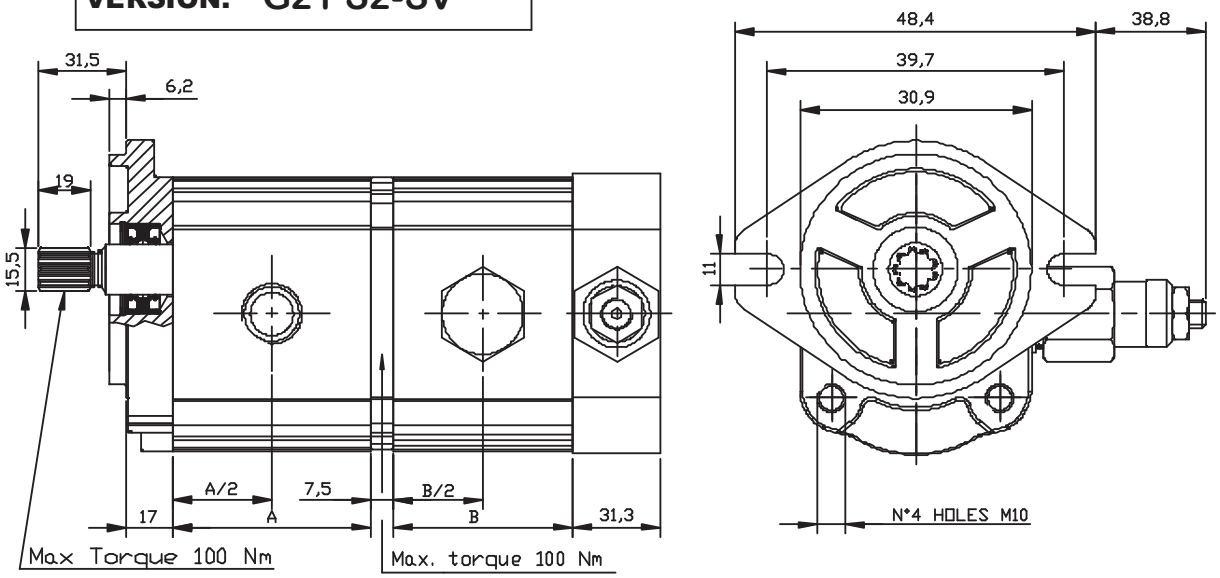
- 28 — See above corrispondent single pumps
- P2 — European standard flange
- SV — Sequence valve Hi-Low
- 40 — Setting value (bar)

Taper shaft (1:8)

Body with threated ports (BSP)

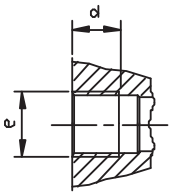
GROUP 2 PUMPS - TANDEM WITH SEQUENCE VALVE HI-LOW

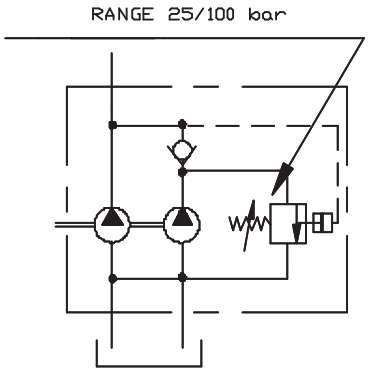
VERSION: G21 S2-SV



FIRST PUMP					SECOND PUMP				
TYPE	P1	P3	A	Cy	TYPE	P1	P3	B	Cy
OT 200 P04	250	300	48.00	4.10	OT 200 P06	250	300	51.00	6.20
OT 200 P06	250	300	51.00	6.20	OT 200 P08	250	300	54.00	8.20
OT 200 P08	250	300	54.00	8.20	OT 200 P11	250	300	58.30	11.20
OT 200 P11	250	300	58.30	11.20	OT 200 P14	240	300	62.30	14.00
OT 200 P14	240	300	62.30	14.00	OT 200 P16	240	300	65.20	16.00
OT 200 P16	240	300	65.20	16.00	OT 200 P20	200	240	71.00	20.00
OT 200 P20	200	240	71.00	20.00	OT 200 P22	170	210	82.70	22.50
OT 200 P22	170	210	82.70	22.50	OT 200 P25	170	210	86.50	25.10
OT 200 P25	170	210	86.50	25.10					

	e	d	e	d
P04 to P11	G1/2	14	G1/2	14
P14 to P25	G3/4	16		





P1 = WORKING PRESSURE (bar)
P3 = PEAK PRESSURE (bar)
Cy = DISPLACEMENT (cc/rev)

EXAMPLE OF ORDERING CODE

OT200 P 11 / 08 S / G 21 S2 - SV 40

- OT200 — Series
- P — Pump
- 11 — Front pump displacement (see above table)
- 08 — Second pump displacement (see above table)
- S / G — Rotation

S	Anti-clockwise
D	Clockwise

- 21 — See above corrispondent single pumps
- S2 — SAE A Flange
- SV — Sequence valve Hi-Low
- 40 — Setting value (bar)
- Shaft SAE A - 9t 16/32 DP
- Body with threated ports (BSP)

GROUP 2 PUMPS - OT200 + OT100

VERSION: P-B28 P2

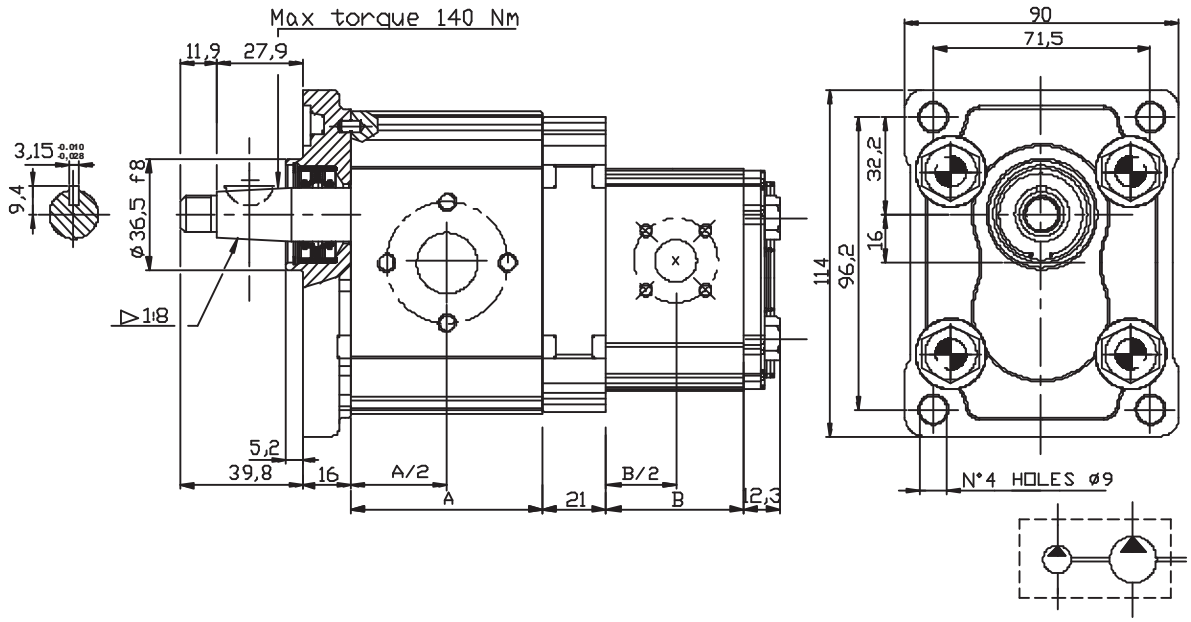


TABLE OT200									
Type	Displacement	Dim. A	Inlet port			Outlet port		
	(cc/rev)	(mm)	ØD	ØA	W	ØD	ØA	W
OT 200 P04	04,10	48.00	13	30	M6	13	30	M6
OT 200 P06	06,20	51.00	13	30	M6	13	30	M6
OT 200 P08	08,20	54.00	13	30	M6	13	30	M6
OT 200 P11	11,20	58.30	13	30	M6	13	30	M6
OT 200 P14	14,00	62.30	20	40	M8	13	30	M6
OT 200 P16	16,00	65.20	20	40	M8	13	30	M6
OT 200 P20	20,00	71.00	20	40	M8	13	30	M6
OT 200 P22	22,50	82.70	20	40	M8	13	30	M6
OT 200 P25	25,10	86.50	20	40	M8	13	30	M6
OT 200 P28	28,00	90.70	20	40	M8	13	30	M6
OT 200 P30	30,00	93.50	20	40	M8	13	30	M6

TABLE OT100								
	Displacement	Dim. B	Inlet port			Outlet port		
	(cc/rev)	(mm)	ØD	ØA	W	ØD	ØA	W
OT 100 P07	0.73	36.7	13	30	M6	13	30	M6
OT 100 P11	1.05	37.8	13	30	M6	13	30	M6
OT 100 P16	1.55	39.5	13	30	M6	13	30	M6
OT 100 P20	1.90	40.9	13	30	M6	13	30	M6
OT 100 P25	2.50	43.0	20	40	M8	13	30	M6
OT 100 P32	3.10	45.0	20	40	M8	13	30	M6
OT 100 P40	3.80	47.8	20	40	M8	13	30	M6
OT 100 P49	4.70	50.9	20	40	M8	13	30	M6
OT 100 P58	5.55	54.0	20	40	M8	13	30	M6
OT 100 P65	6.25	56.5	20	40	M8	13	30	M6
OT 100 P79	7.60	61.2	20	40	M8	13	30	M6

NOTE: **Define relative working and peak pressure consulting relative single pump table.**

EXAMPLE OF ORDERING CODE

OT200/100 P 16 / 32 S / P-B 28 P2 /2

- Series
- Pump
- Displacement front pump (See table1- OT200)
- Displacement second pump (See table2- OT100)

Rotation	
S	Anti-clockwise
D	Clockwise

- Two inlet ports
- European standard flange
- Taper shaft (1:8)
- Body for european flanges type P-B

GROUP 2 PUMPS - OT200 + OT100

VERSION: G28 P2

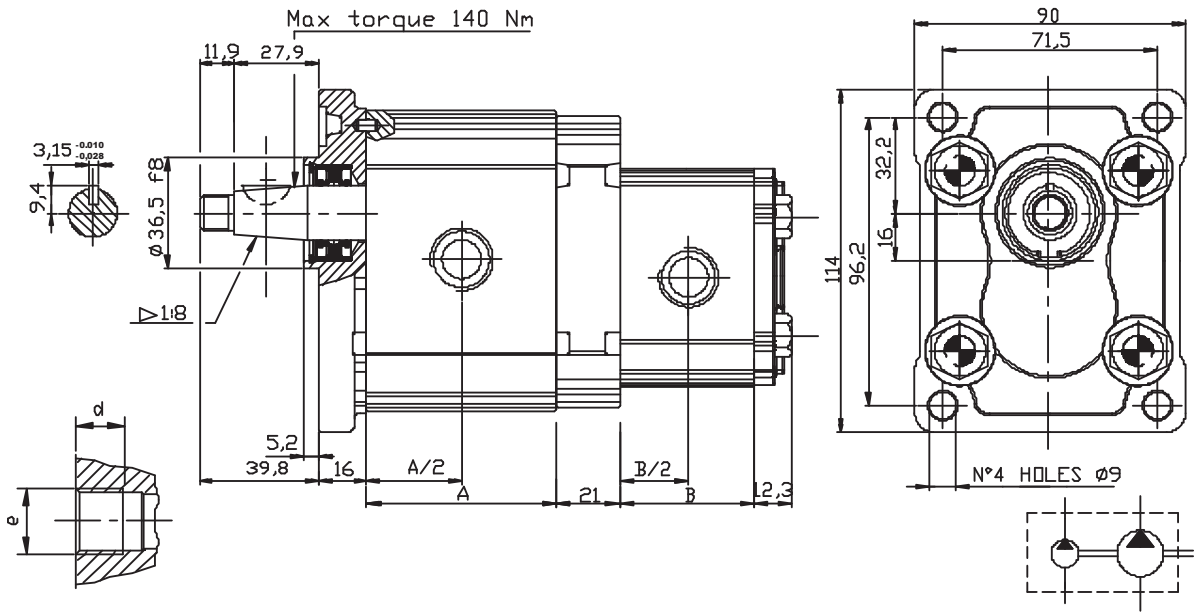


TABLE OT200

Type	Displacement	Dim. A	Inlet port		Outlet port	
	(cc/rev)	(mm)	e	d	e	d
OT 200 P04	04,10	48.00	G1/2	14	G1/2	14
OT 200 P06	06,20	51.00	G1/2	14	G1/2	14
OT 200 P08	08,20	54.00	G1/2	14	G1/2	14
OT 200 P11	11,20	58.30	G1/2	14	G1/2	14
OT 200 P14	14,00	62.30	G3/4	16	G1/2	14
OT 200 P16	16,00	65.20	G3/4	16	G1/2	14
OT 200 P20	20,00	71.00	G3/4	16	G1/2	14
OT 200 P22	22,50	82.70	G3/4	16	G1/2	14
OT 200 P25	25,10	86.50	G3/4	16	G1/2	14
OT 200 P28	28,00	90.70	G3/4	16	G1/2	14
OT 200 P30	30,00	93.50	G3/4	16	G1/2	14

TABLE OT100

	Displacement	Dim. B	Inlet port		Outlet port	
	(cc/rev)	(mm)	e	d	e	d
OT 100 P07	0.73	36.7	G3/8	14	G3/8	14
OT 100 P11	1.05	37.8	G3/8	14	G3/8	14
OT 100 P16	1.55	39.5	G3/8	14	G3/8	14
OT 100 P20	1.90	40.9	G3/8	14	G3/8	14
OT 100 P25	2.50	43.0	G3/8	14	G3/8	14
OT 100 P32	3.10	45.0	G3/8	14	G3/8	14
OT 100 P40	3.80	47.8	G3/8	14	G3/8	14
OT 100 P49	4.70	50.9	G3/8	14	G3/8	14
OT 100 P58	5.55	54.0	G1/2	14	G3/8	14
OT 100 P65	6.25	56.5	G1/2	14	G3/8	14
OT 100 P79	7.60	61.2	G1/2	14	G3/8	14

NOTE: **Define relative working and peak pressure consulting relative single pump table.**

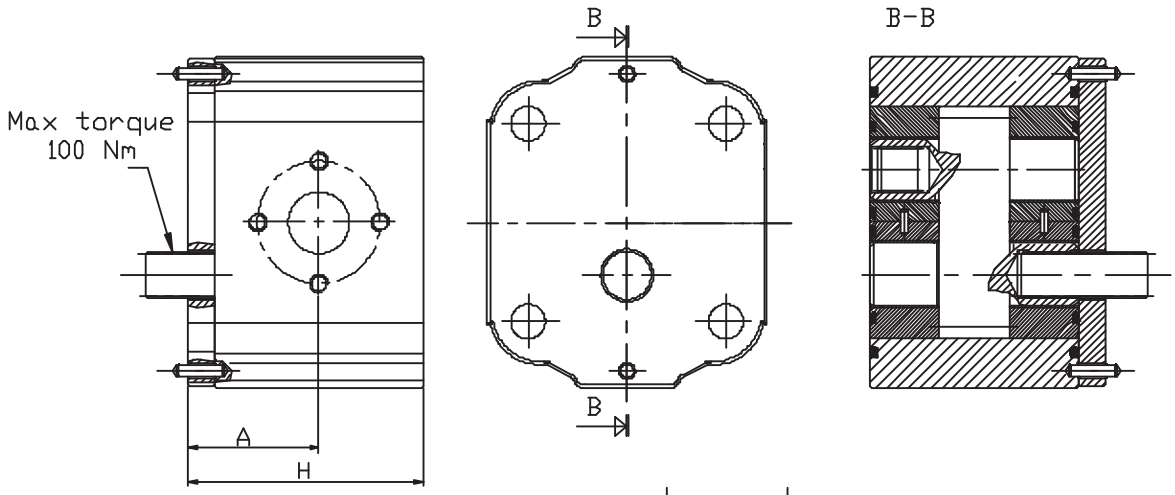
EXAMPLE OF ORDERING CODE

OT200/100 P 16 / 32 S / G 28 P2 /2

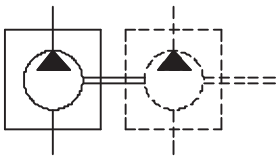
- OT200/100 — Series
- P — Pump
- 16 / 32 — Displacement front pump (See table1- OT200) / Displacement second pump (See table2- OT100)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- 28 — Taper shaft (1:8)
- P2 — European standard flange
- /2 — Two inlet ports

INTERMEDIATE GROUP 2 PUMPS FOR TANDEM UNITS

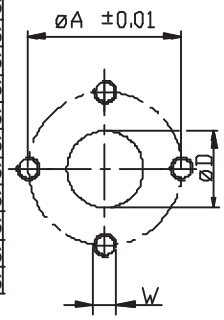
VERSION : P X X INTERMEDIATE



NOTE : Screw tightening torque 48 Nm



Type	Displacement	Max working pressure P1	Peak pressure P3	Max speed	Dimension H	Dimension A	Inlet port			Outlet port		
	(cc/rev)	(bar)	(bar)	(r.p.m)	(mm)		ØD	ØA	W	ØD	ØA	W
OT 200 P04	04,10	250	300	4000	55.50	31.50	13	30	M6	13	30	M6
OT 200 P06	06,20	250	300	3500	58.50	33.00	13	30	M6	13	30	M6
OT 200 P08	08,20	250	300	3500	61.50	34.50	13	30	M6	13	30	M6
OT 200 P11	11,20	250	300	3500	65.80	36.65	13	30	M6	13	30	M6
OT 200 P14	14,00	240	300	3000	69.80	36.65	20	40	M8	13	30	M6
OT 200 P16	16,00	240	300	3000	72.70	40.10	20	40	M8	13	30	M6
OT 200 P20	20,00	200	240	3000	78.50	43.00	20	40	M8	13	30	M6
OT 200 P22	22,50	170	210	2500	90.20	48.85	20	40	M8	13	30	M6
OT 200 P25	25,10	170	210	2500	94.00	50.75	20	40	M8	13	30	M6
OT 200 P28	28,00	140	180	2500	98.20	52.85	20	40	M8	13	30	M6
OT 200 P30	30,00	130	170	2000	101.00	54.25	20	40	M8	13	30	M6



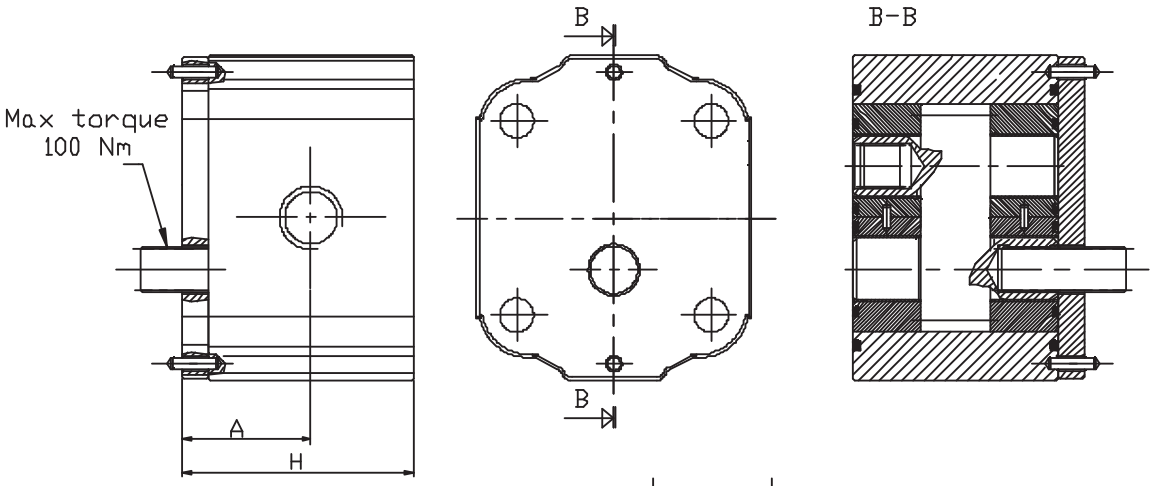
EXAMPLE OF ORDERING CODE

OT200 P 08 S / P X X INTERMEDIATE

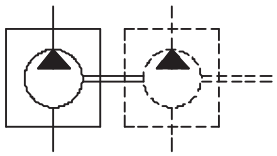
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- P — Body for European flanges

INTERMEDIATE GROUP 2 PUMPS FOR TANDEM UNITS

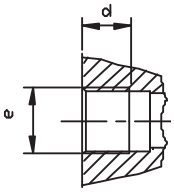
VERSION : G X X INTERMEDIATE



NOTE : Screw tightening torque 48 Nm



Type	Displacement	Max working pressure P1	Peak pressure P3	Max speed	Dimension H	Dimension A	Inlet port		Outlet port	
	(cc/rev)	(bar)	(bar)	(r.p.m)	(mm)		e	d	e	d
OT 200 P04	04,10	250	300	4000	55.50	31.50	G1/2	14	G1/2	14
OT 200 P06	06,20	250	300	3500	58.50	33.00	G1/2	14	G1/2	14
OT 200 P08	08,20	250	300	3500	61.50	34.50	G1/2	14	G1/2	14
OT 200 P11	11,20	250	300	3500	65.80	36.65	G1/2	14	G1/2	14
OT 200 P14	14,00	240	300	3000	69.80	36.65	G3/4	16	G3/4	16
OT 200 P16	16,00	240	300	3000	72.70	40.10	G3/4	16	G3/4	16
OT 200 P20	20,00	200	240	3000	78.50	43.00	G3/4	16	G3/4	16
OT 200 P22	22,50	170	210	2500	90.20	48.85	G3/4	16	G3/4	16
OT 200 P25	25,10	170	210	2500	94.00	50.75	G3/4	16	G3/4	16
OT 200 P28	28,00	140	180	2500	98.20	52.85	G3/4	16	G3/4	16
OT 200 P30	30,00	130	170	2000	101.00	54.25	G3/4	16	G3/4	16

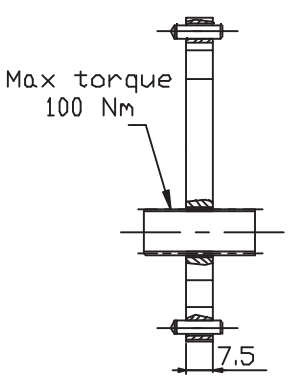


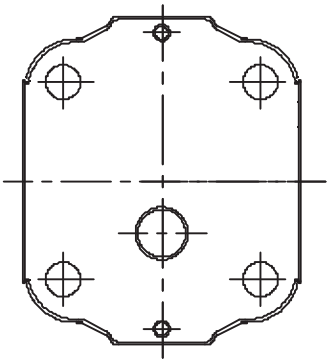
EXAMPLE OF ORDERING CODE

OT200 P 08 S / G X X INTERMEDIATE

- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- X X — INTERMEDIATE

OT 200+OT200 MOUNTING KIT

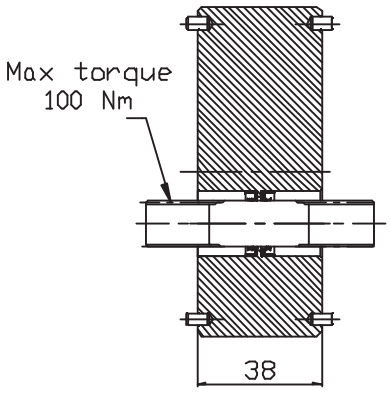


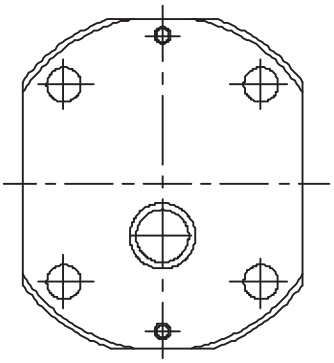


NOTE : Screw tightening torque 48 Nm

ORDERING CODE: PS20370001

OT200+OT200 MOUNTING KIT FOR SEPARATE UNITS





NOTE : Screw tightening torque 48 Nm

ORDERING CODE: PS20370050

GROUP 2 MOTORS

OT200 SINGLE ROTATION MOTORS GENERAL DATA

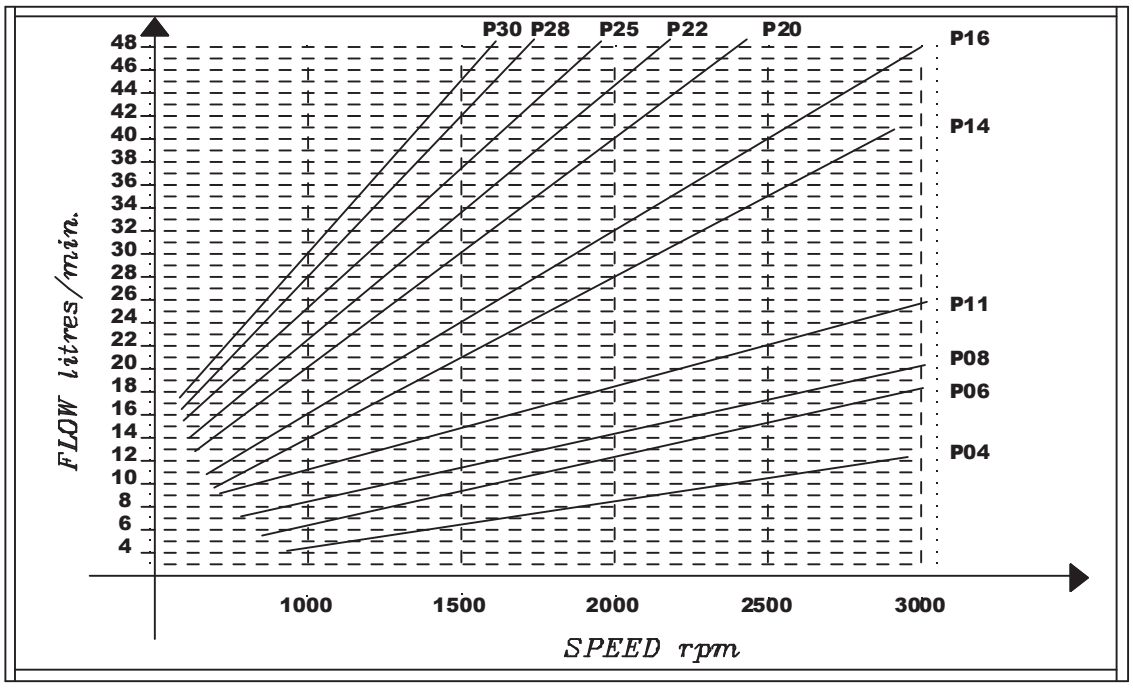
MOTOR TYPE	DISPLACEMENT	MAX. PRESSURE			MAX. SPEED	MIN. SPEED
		P1	P2	P3		
	cc / rev	bar			rpm	rpm
OT200 M04	4.1	230	260	280	4000	600
OT200 M06	6.2	250	280	300		
OT200 M08	8.2				3500	
OT200 M11	11.2					
OT200 M14	14.0					500
OT200 M16	16.0				3000	
OT200 M20	20.0	200	220	240		
OT200 M22	22.5	170	190	210	2500	
OT200 M25	25.1					
OT200 M28	28.0	130	150	170	2000	
OT200 M30	30.0					

P1= Max. continuous pressure **P2= Max. intermittent pressure** **P3= Max. peak pressure**

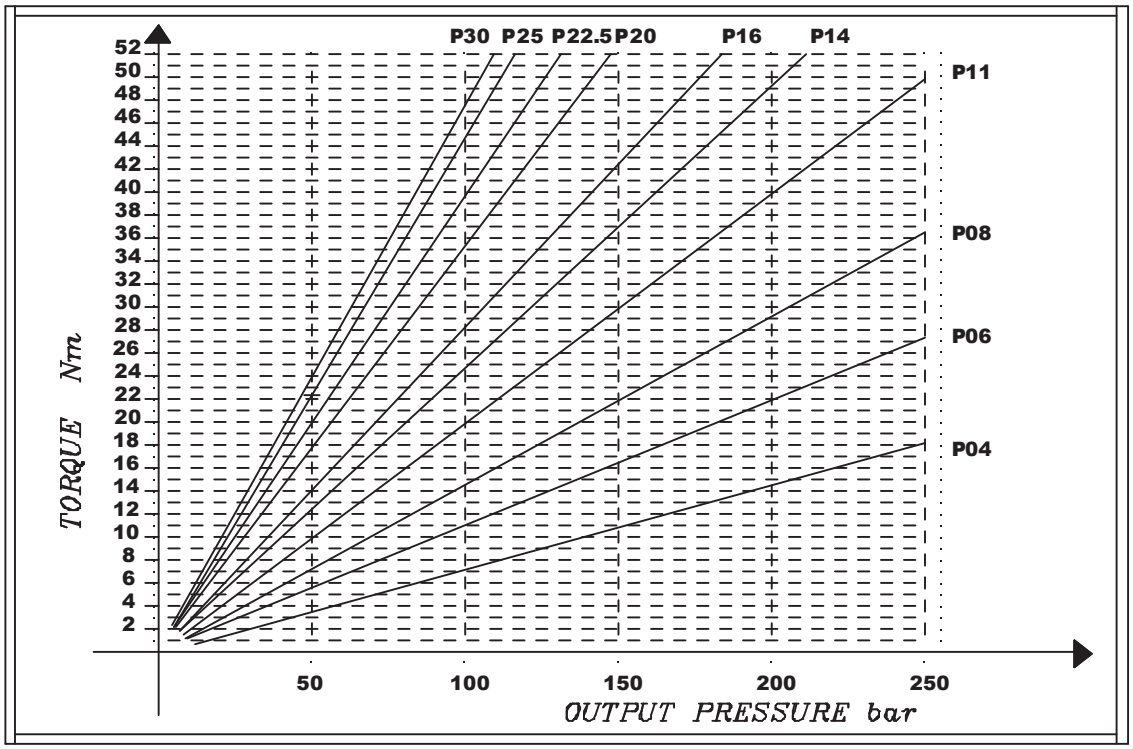
FOR DIMENSION PLEASE CHECK
RELATIVE SINGLE PUMP TABLES

GROUP 2 MOTORS

FLOW CHARACTERISTICS CURVES



ABSORBED TORQUE

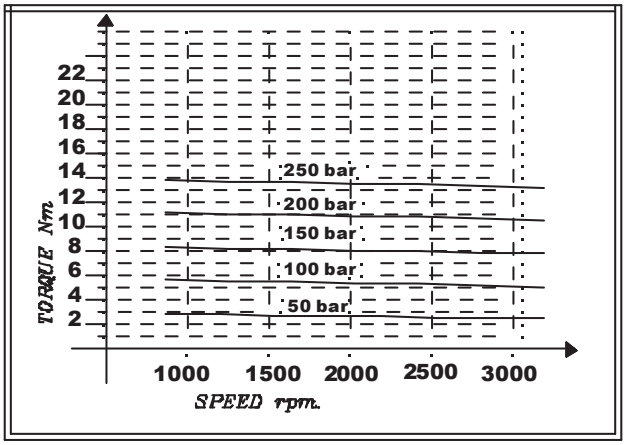


NOTE

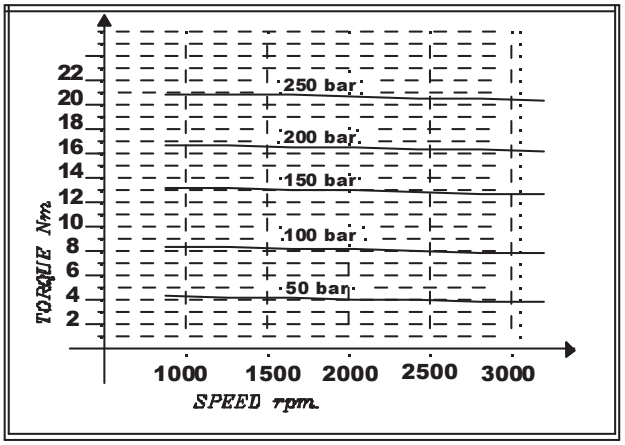
The flow characteristics curves have been made at P1 pressure.

GROUP 2 MOTORS - TORQUE CHARACTERISTICS CURVES

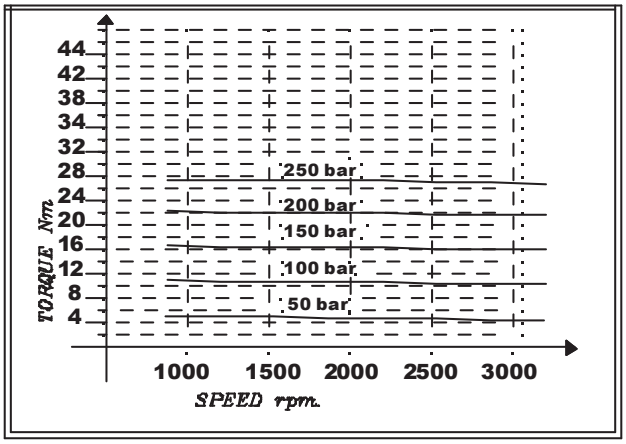
MOTORS OT200 M04



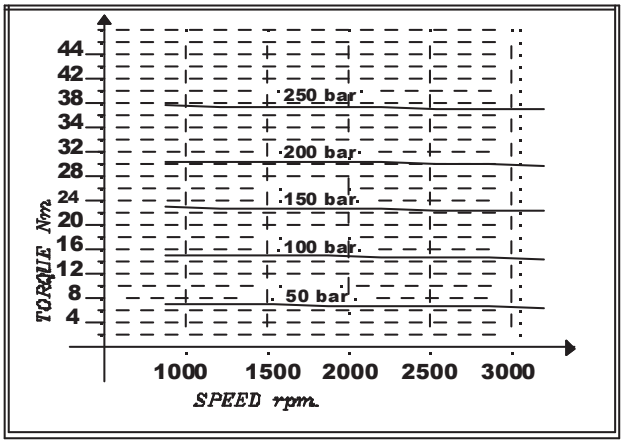
MOTORS OT200 M06



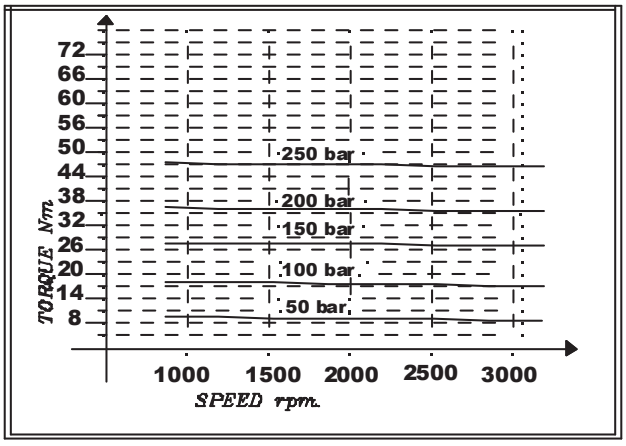
MOTORS OT200 M08



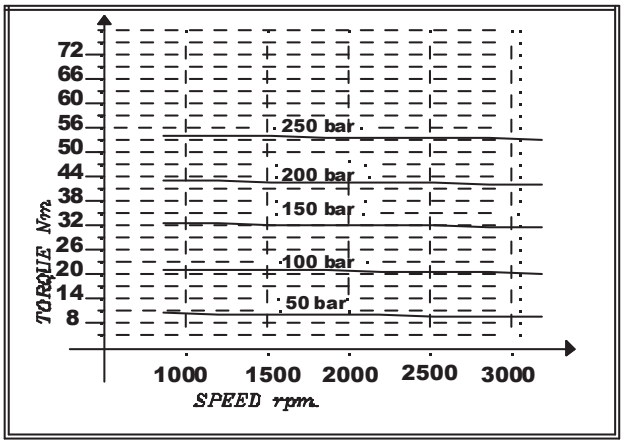
MOTORS OT200 M11



MOTORS OT200 M14

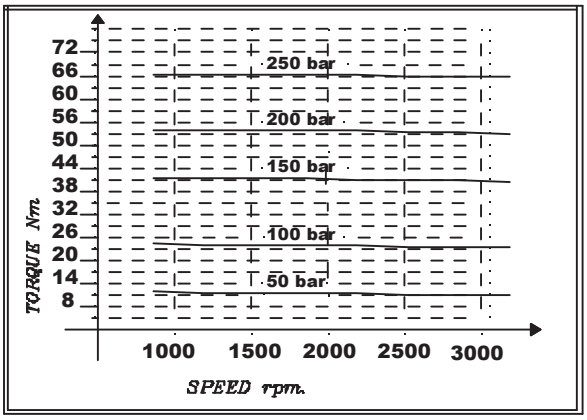


MOTORS OT200 M16

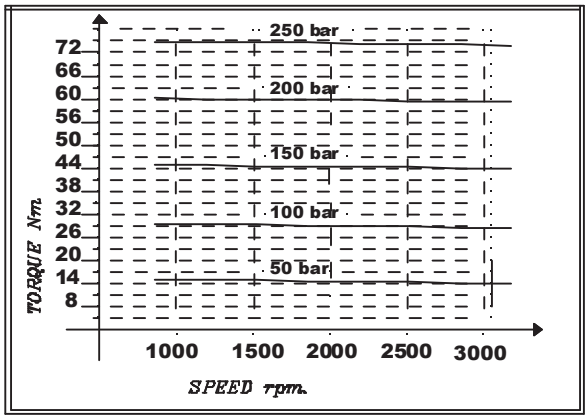


GROUP 2 MOTORS - TORQUE CHARACTERISTICS CURVES

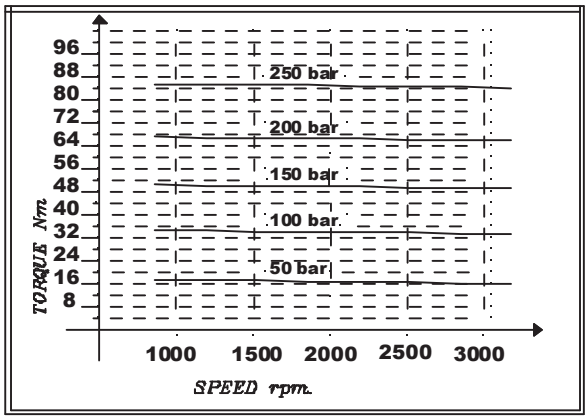
MOTORS OT200 M20



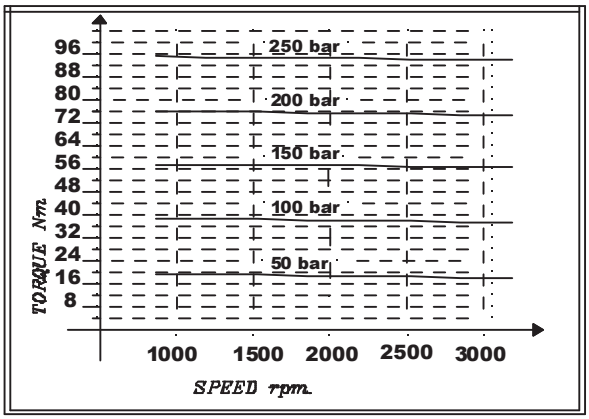
MOTORS OT200 M22



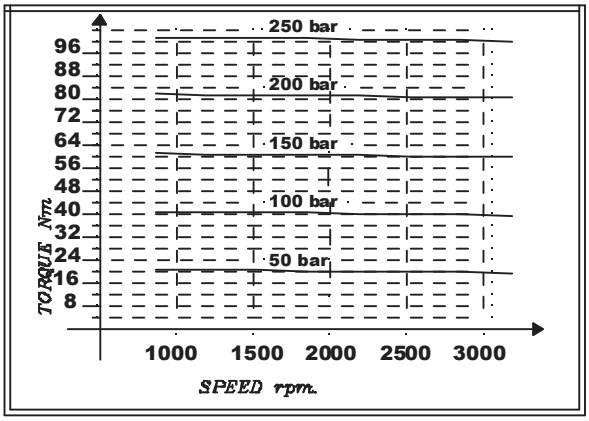
MOTORS OT200 M25



MOTORS OT200 M28



MOTORS OT200 M30



GROUP 2 REVERSIBLE PUMPS AND MOTORS

GENERAL DATA

	Displacem. (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (rpm)	Dimension A (mm)	Dimension B (mm)
OT 200 P04	04,10	210	240	4000	40,00	83,50
OT 200 P06	06,20	220	255	3500	41,50	86,50
OT 200 P08	08,20	220	255	3500	43,00	89,50
OT 200 P11	11,20	220	255	3500	45,15	93,80
OT 200 P14	14,00	220	255	3000	47,15	97,80
OT 200 P16	16,00	220	255	3000	48,60	100,7
OT 200 P20	20,00	200	240	3000	51,50	106,5
OT 200 P22	22,50	170	210	2500	57,35	118,2
OT 200 P25	25,10	170	180	2500	59,25	122,0
OT 200 P28	28,00	140	180	2500	61,35	126,2
OT 200 P30	30,00	130	170	2000	62,75	129,0

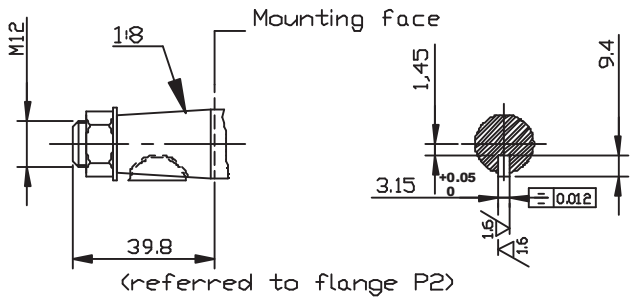
EFFICIENCIES

$\eta_v=\eta_v\ (V, \Delta p, n)$	**Minimal volumetric efficiency**	**≈ 0.85**
$\eta_m=\eta_m\ (V, \Delta p, n)$	**Mechanical efficiency**	**≈ 0.9**
$\eta_t=\eta_v \times \eta_m$	**Overall efficiency**	**≈ 0.8**

DRIVE SHAFTS

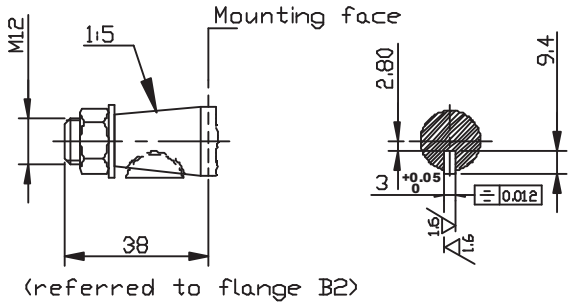
SHAFT CODE 28

Max torque 140 Nm



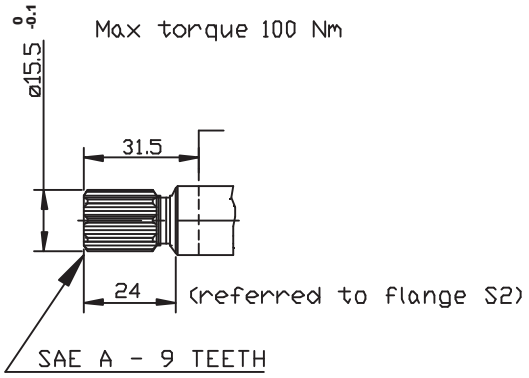
SHAFT CODE 25

Max torque 140 Nm



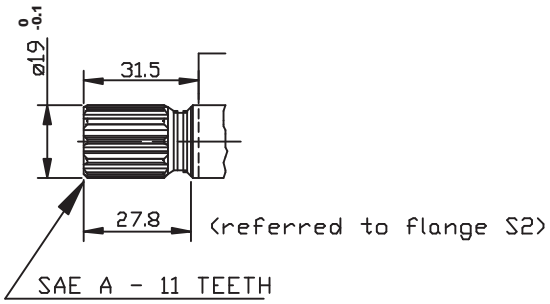
SHAFT CODE 21

Max torque 100 Nm



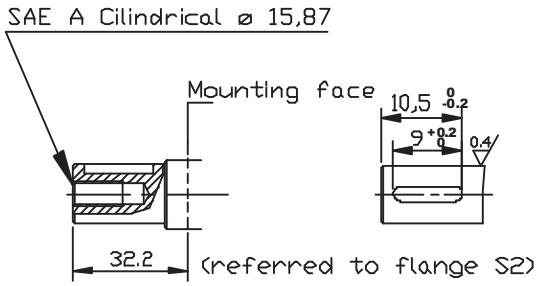
SHAFT CODE 20

Max torque 170 Nm



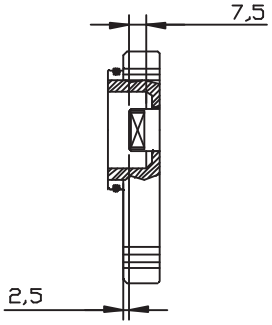
SHAFT CODE 31

Max torque 70 Nm



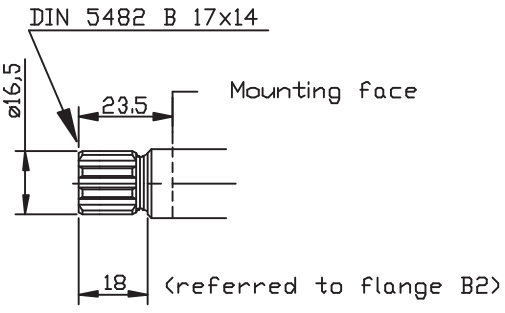
SHAFT CODE 24

Max torque 70 Nm



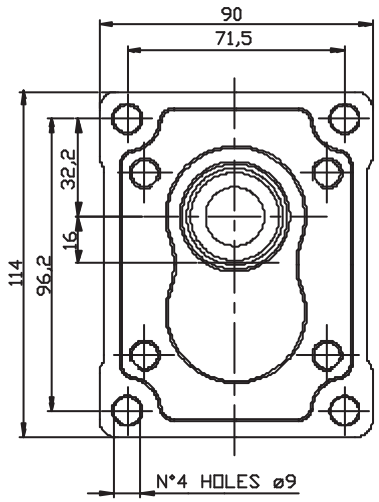
SHAFT CODE 23

Max Torque 110 Nm

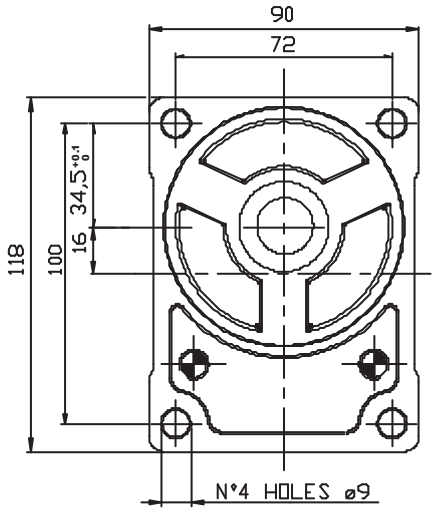


MOUNTING FLANGES

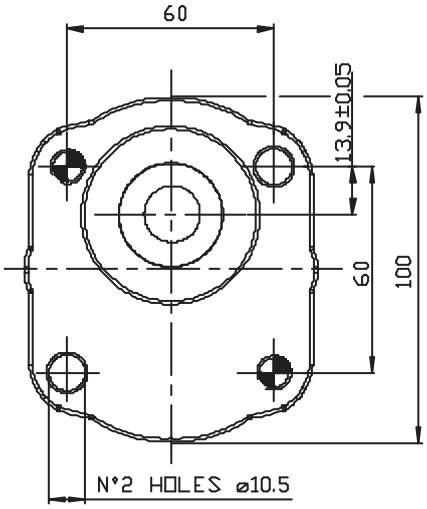
EUROPEAN STANDARD CODE P2



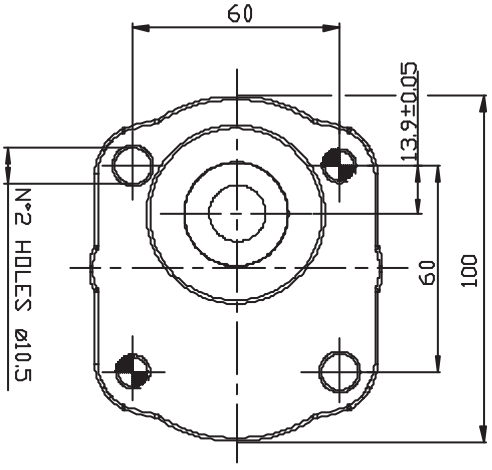
GERMAN STANDARD CODE B2



GERMAN STANDARD CODE B4

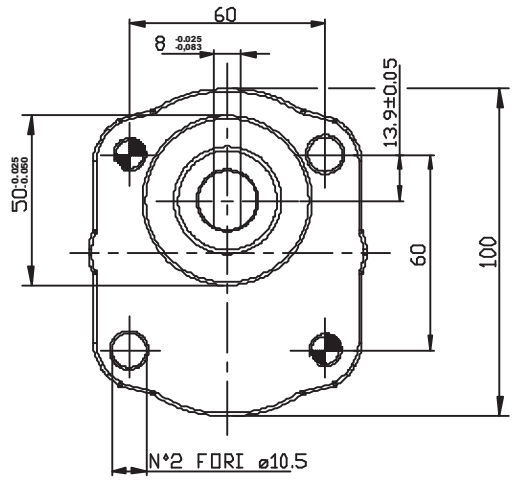


GERMAN STANDARD CODE B5

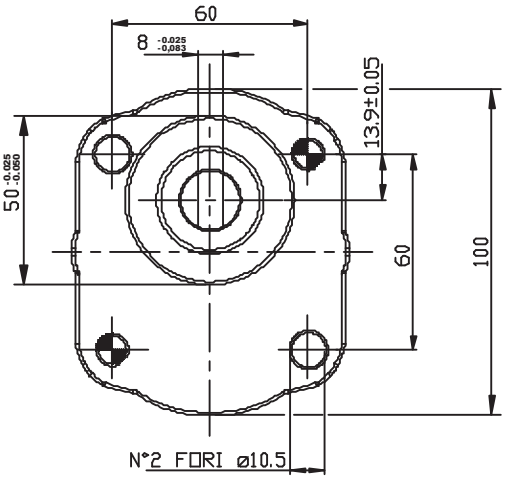


MOUNTING FLANGES

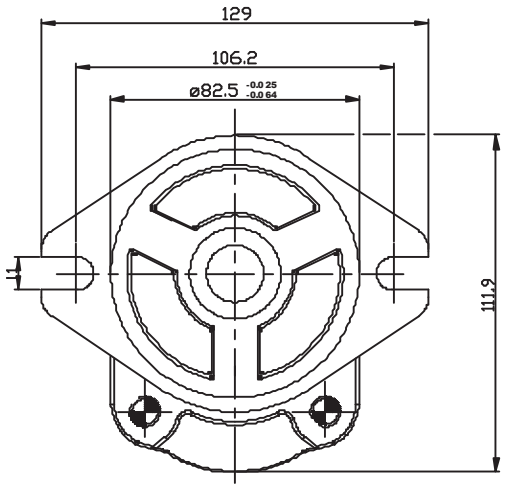
GERMAN STANDARD CODE B6



GERMAN STANDARD CODE B7

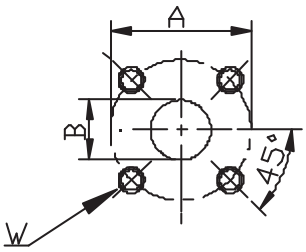


SAE A STANDARD CODE S2



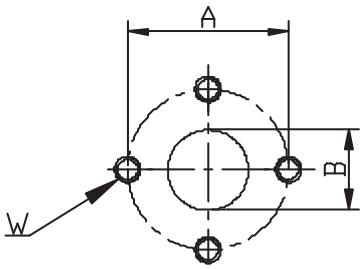
PORT SIZES

CODE B



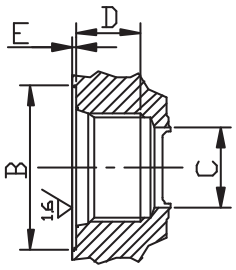
Quote	Dimension left side	Dimension right side
A	Ø40	Ø35
B	Ø20	
W	M6	

CODE P



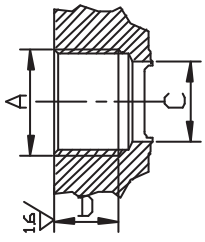
Quote	Displacement from 04 to 11 (mm)	Displacement from 14 to 30 (mm)
A	Ø30	Ø40
B	Ø13	Ø20
W	M6	M8

CODE R



Quote	SAE 10 from 04 to 11 (mm)	SAE 12 from 14 to 30 (mm)
C	Ø13	Ø20
E	0.8	0.5
D	14	16
B	7/8-14 UNF	1-1/16 UNF

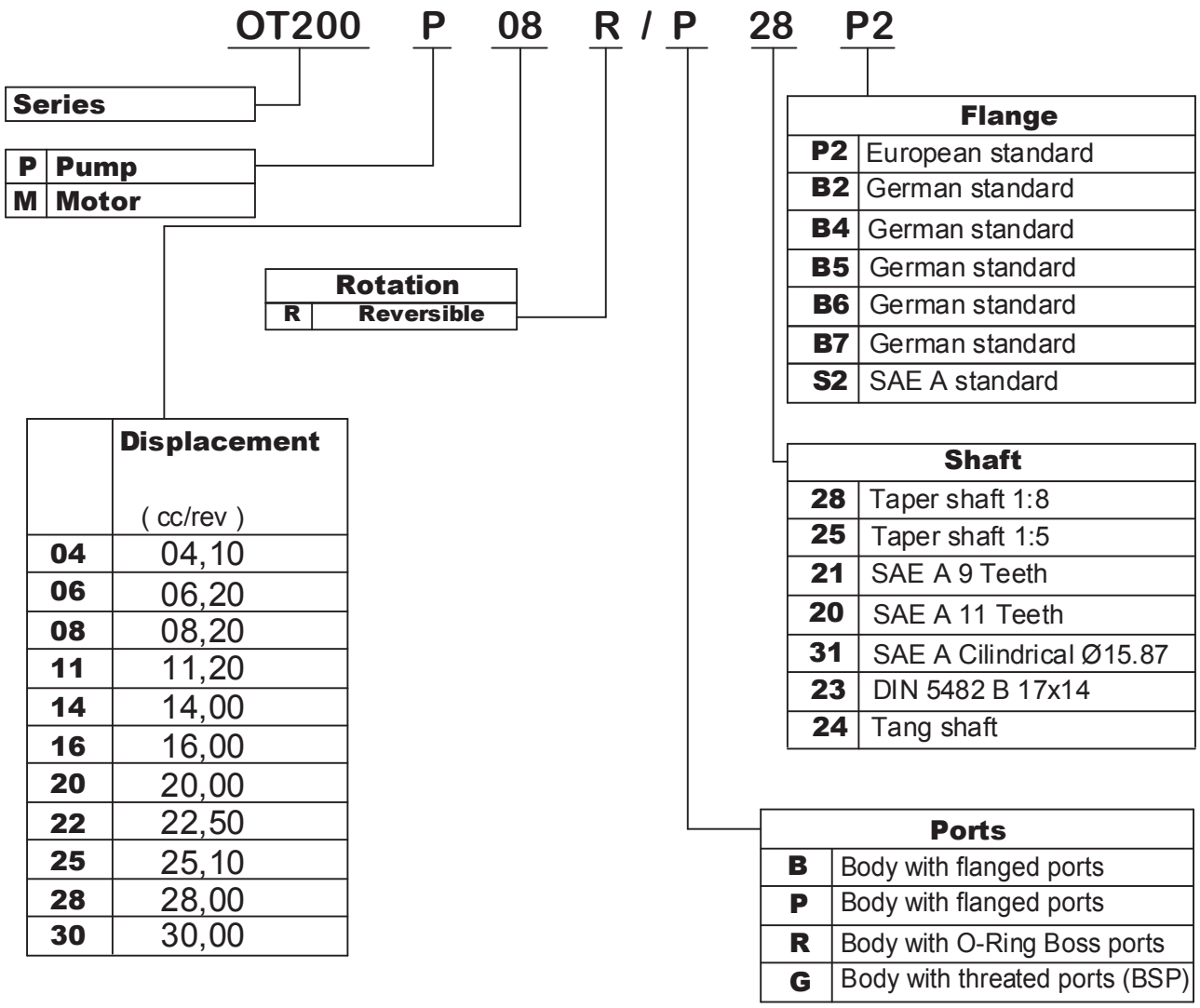
CODE G



Quote	Displacement from 04 to 11 (mm)	Displacement from 14 to 30 (mm)
A	1/2"	3/4"
C	Ø13	Ø20
D	14	16

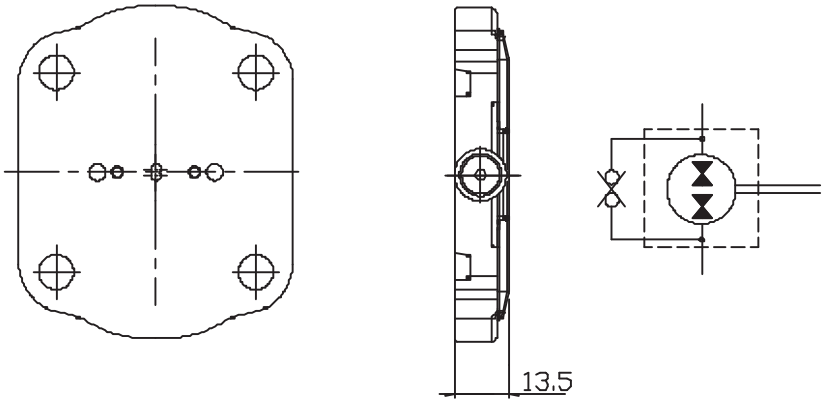
GROUP 2 REVERSIBLE PUMPS AND MOTORS

EXAMPLE OF ORDERING CODE



REAR COVERS FOR GROUP 2 PUMPS AND MOTORS

INTERNAL DRAIN REAR COVER FOR PUMPS AND MOTORS



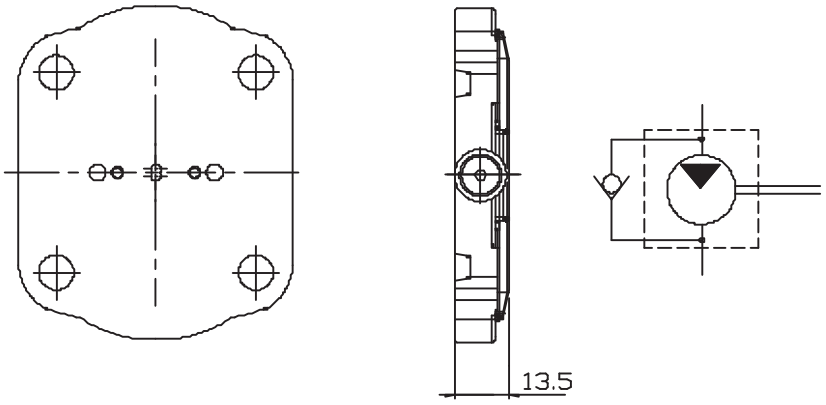
NOTE : Max back pressure 5 - 7 [bar]

EXAMPLE OF ORDERING CODE

OT200 M 08 R / G 28 P2 - DI

- OT200 M 08 R / G 28 P2 : See corrispondent reversible motors and pumps tables
- DI : Cover for INTERNAL DRAIN

REAR COVER WITH ANTICAVITATION VALVE



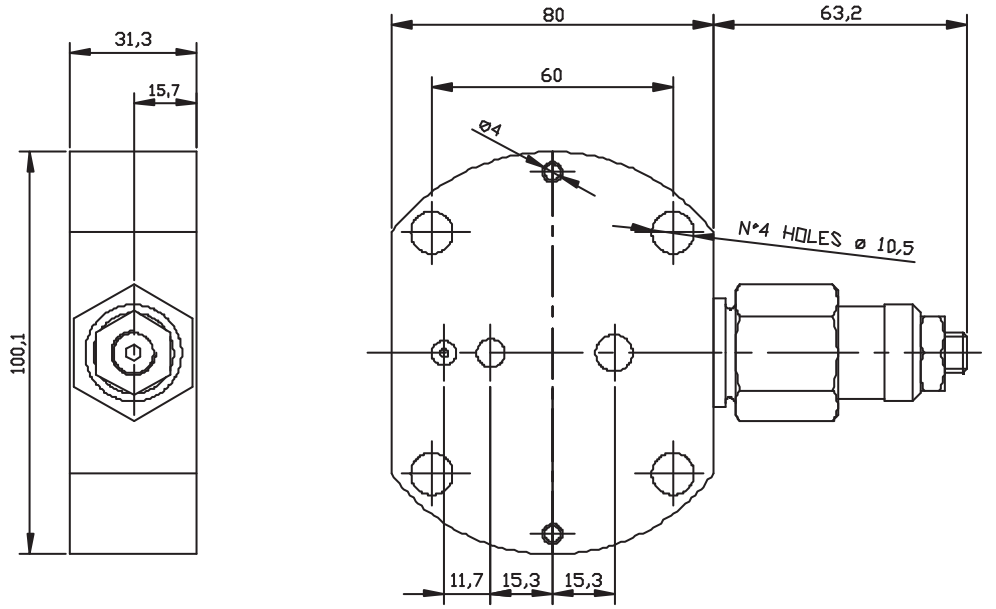
NOTE : Max back pressure 5 - 7 [bar]

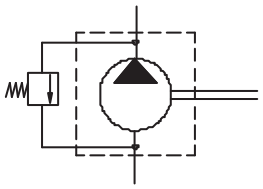
EXAMPLE OF ORDERING CODE

OT200 M 08 D / G 28 P2 - VA

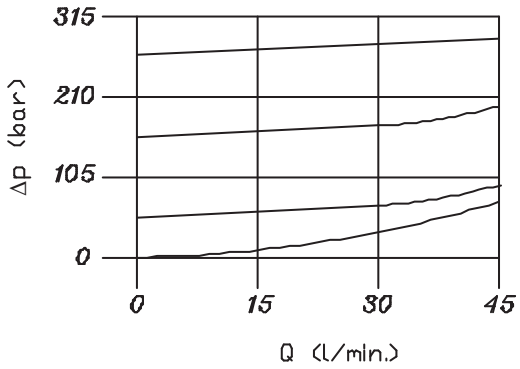
- OT200 M 08 D / G 28 P2 : See corrispondent UNIDIRECTIONAL motor tables
- VA : Rear cover with ANTICAVITION VALVE

REAR COVER WITH MAX. PRESSURE VALVE





NOTE: Max Flow 50 (l/min)
Valve opening pressure 95% of calibration value
Valve closing pressure 75% of calibration value

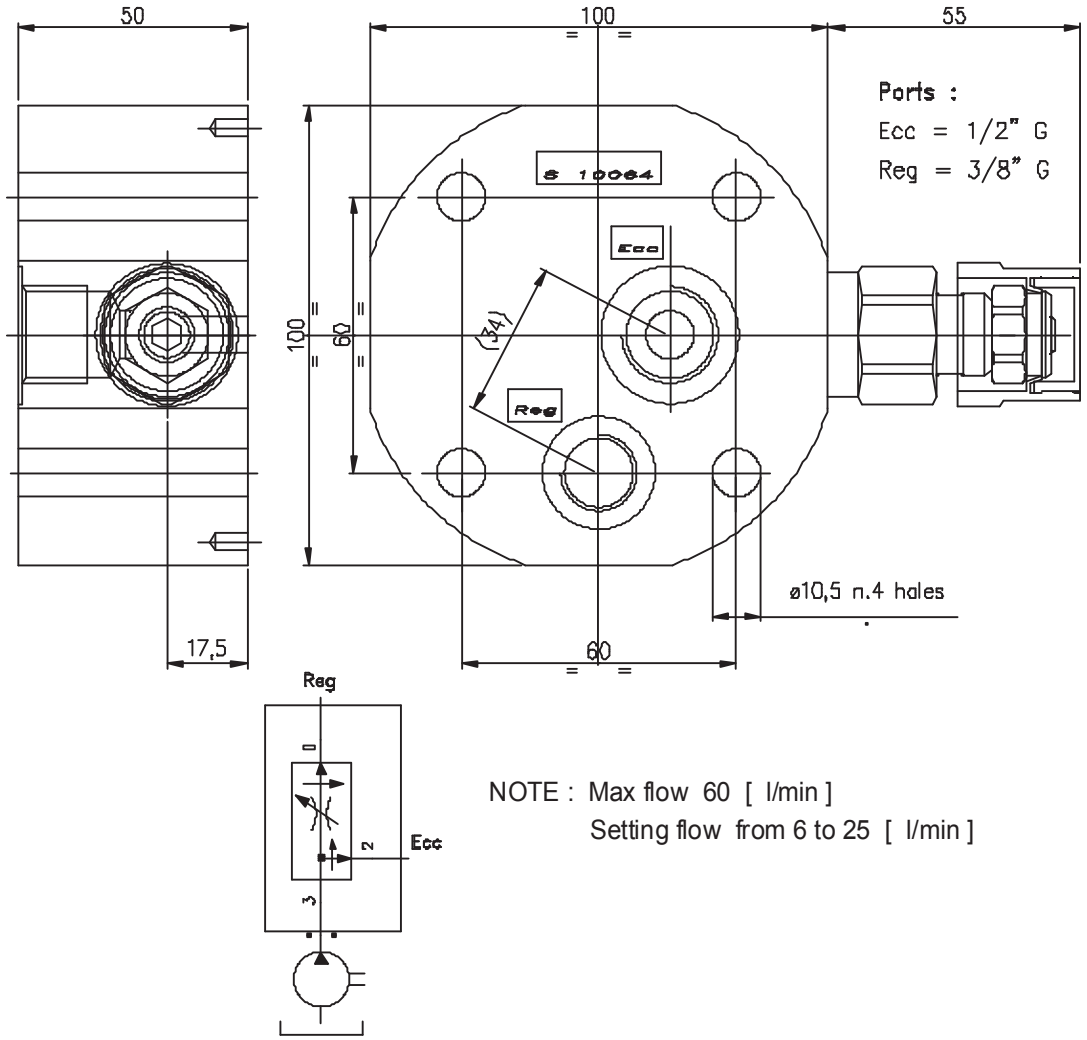


EXAMPLE OF ORDERING CODE

OT200 P 08 D / G 28 P2 - VMI - 180

- OT200 P 08 D / G 28 P2: e corrispondent UNIDIRECTIONAL pumps tables
- VMI: Rear cover with max. press. valve
- 180: Adjustable setting PRESSURE

REAR COVER WITH PRIORITY VALVE



NOTE : Max flow 60 [l/min]
Setting flow from 6 to 25 [l/min]

EXAMPLE OF ORDERING CODE

OT200 P 08 D / G 28 P2 - VP6

- OT200 P 08 D / G 28 P2 : See corrispondent UNIDIRECTIONAL pumps tables
- VP6 : Rear cover with PRIORITY valve

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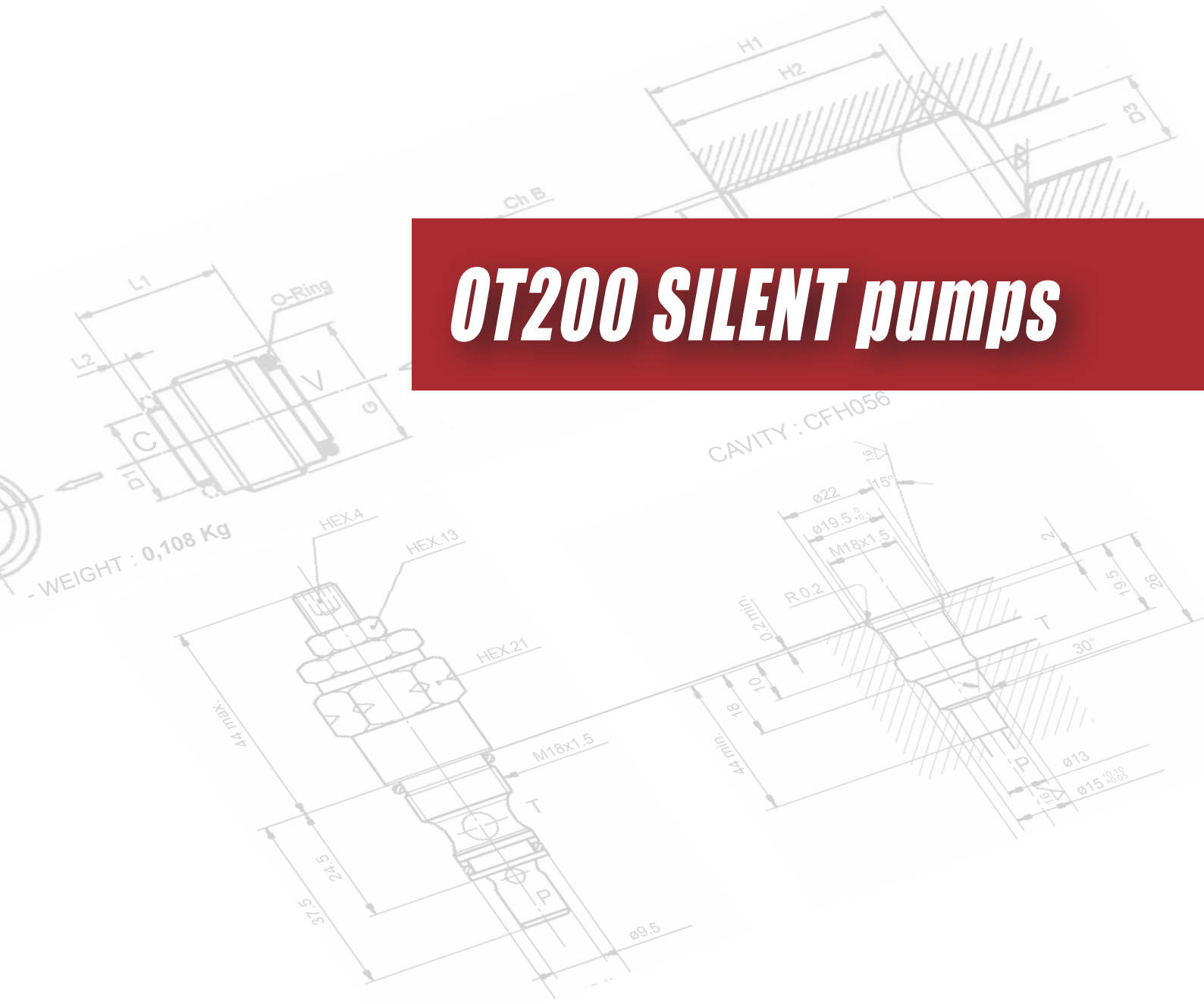
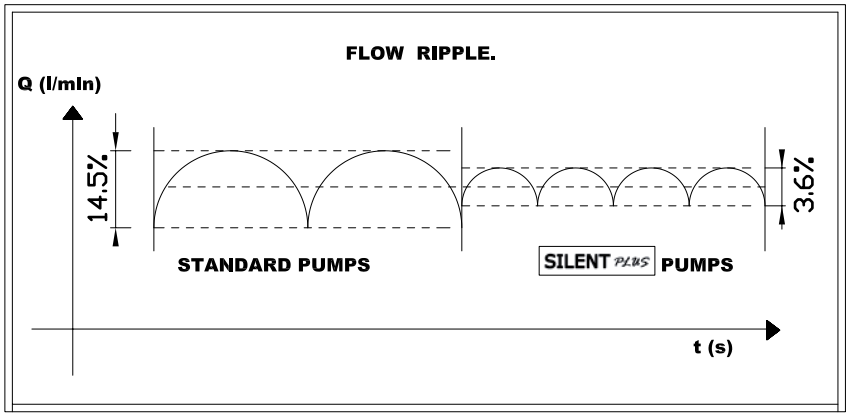
OT200 SILENT pumps



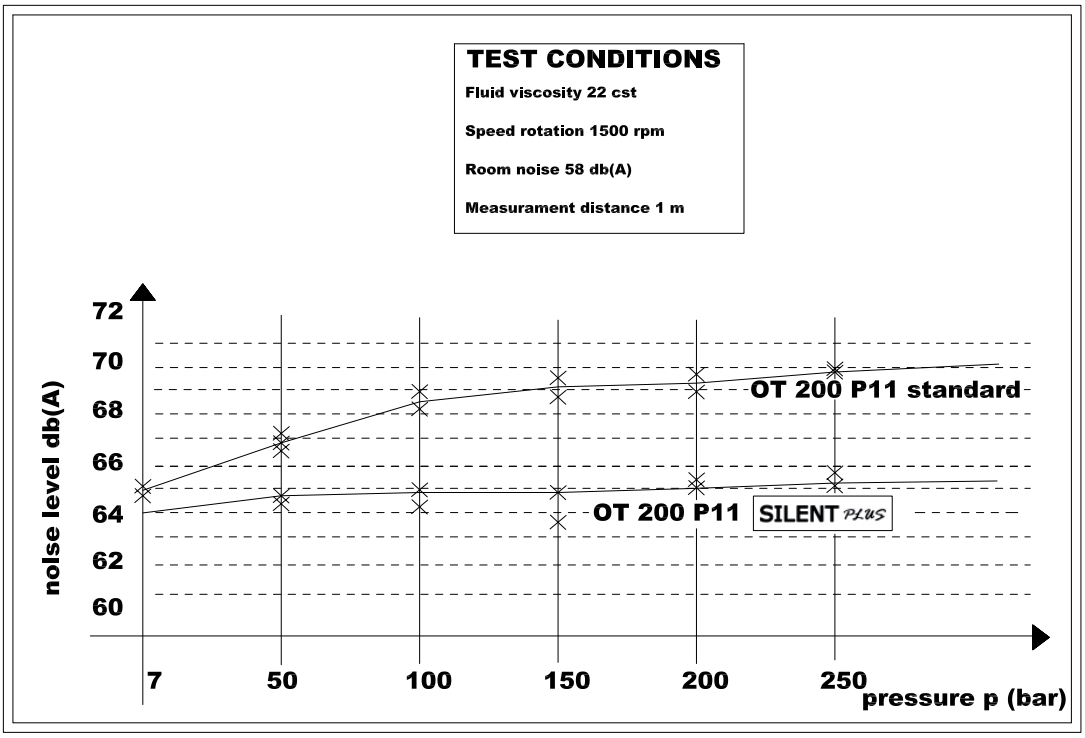
SILENT PLUS GROUP 2 PUMPS

The SILENT PLUS gear pumps represent a very good solution to reducing noise level.
The project includes the use of helical gears that reduce down the pulsations between the gear wheels.
The SILENT PLUS gear pumps guarantee an important reduction of noise level in comparison with standard gear pumps.

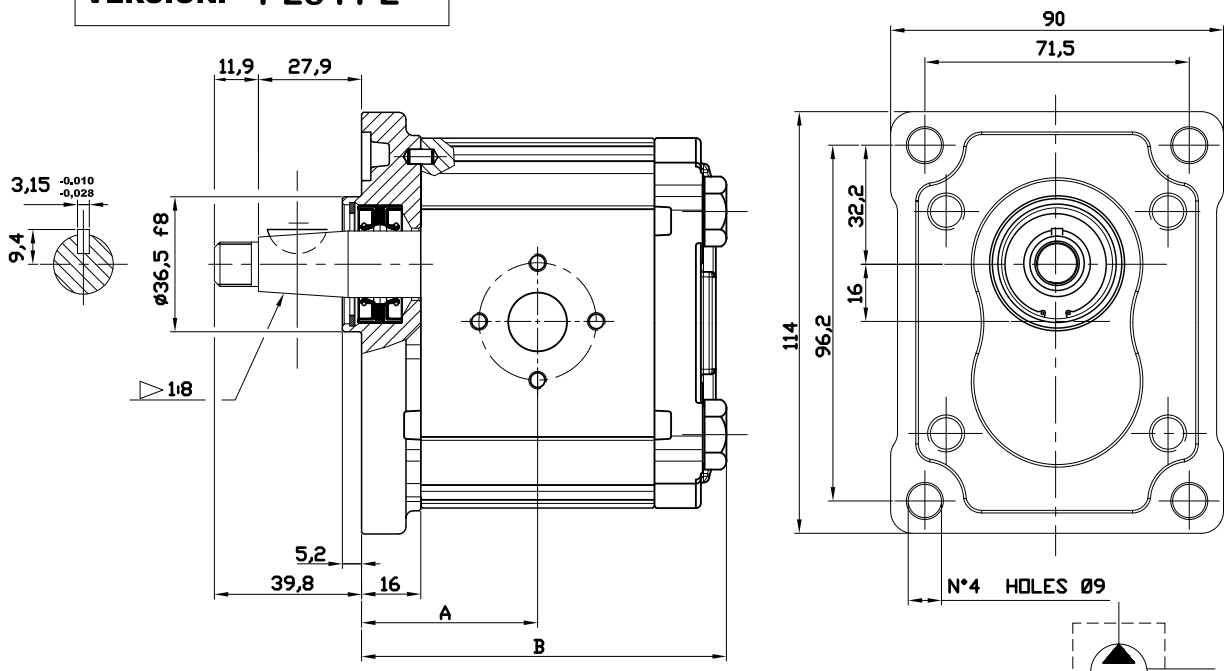


The SILENT PLUS gear pumps allow:

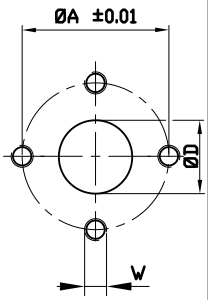
- very good volumetric and mechanical efficiencies.
- low noise level.
- reduction of inside pulsations.



VERSION: P28 I P2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	40,00	83,50	13	30	M6	13	30	M6
OT 200 P06	06,20	250	300	3500	41,50	86,50	13	30	M6	13	30	M6
OT 200 P08	08,20	250	300	3500	43,00	89,50	13	30	M6	13	30	M6
OT 200 P11	11,20	250	300	3500	45,15	93,80	13	30	M6	13	30	M6
OT 200 P14	14,00	240	300	3000	47,15	97,80	20	40	M8	13	30	M6
OT 200 P16	16,00	240	300	3000	48,60	100,7	20	40	M8	13	30	M6
OT 200 P20	20,00	200	240	3000	51,50	106,5	20	40	M8	13	30	M6
OT 200 P22	22,50	170	210	2500	57,35	118,2	20	40	M8	13	30	M6
OT 200 P25	25,10	170	210	2500	59,25	122,0	20	40	M8	13	30	M6
OT 200 P28	28,00	140	180	2500	61,35	126,2	20	40	M8	13	30	M6
OT 200 P30	30,00	130	170	2000	62,75	129,0	20	40	M8	13	30	M6

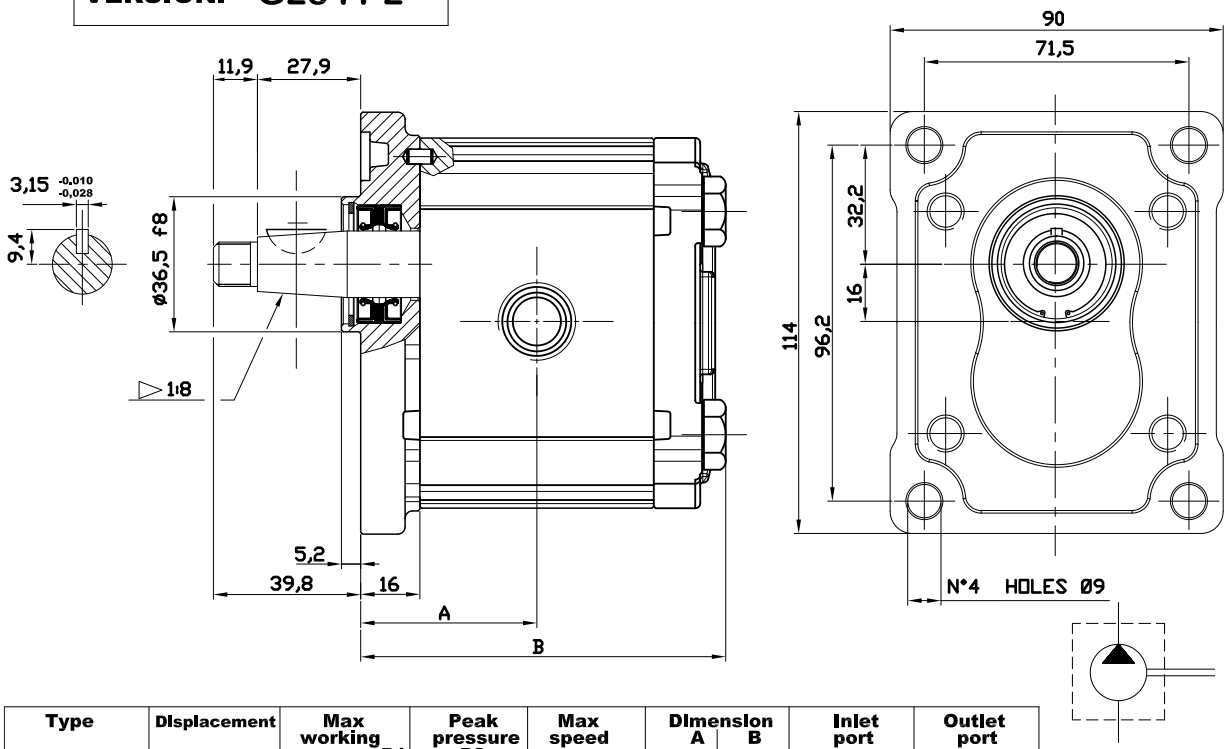


EXAMPLE OF ORDERING CODE

OT200 P 08 S / P 28 I P2

- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- P — Body for European flanges
- 28 — Taper shaft (1:8)
- I — SILENT PLUS
- P2 — European standard flange

VERSION: G28 I P2



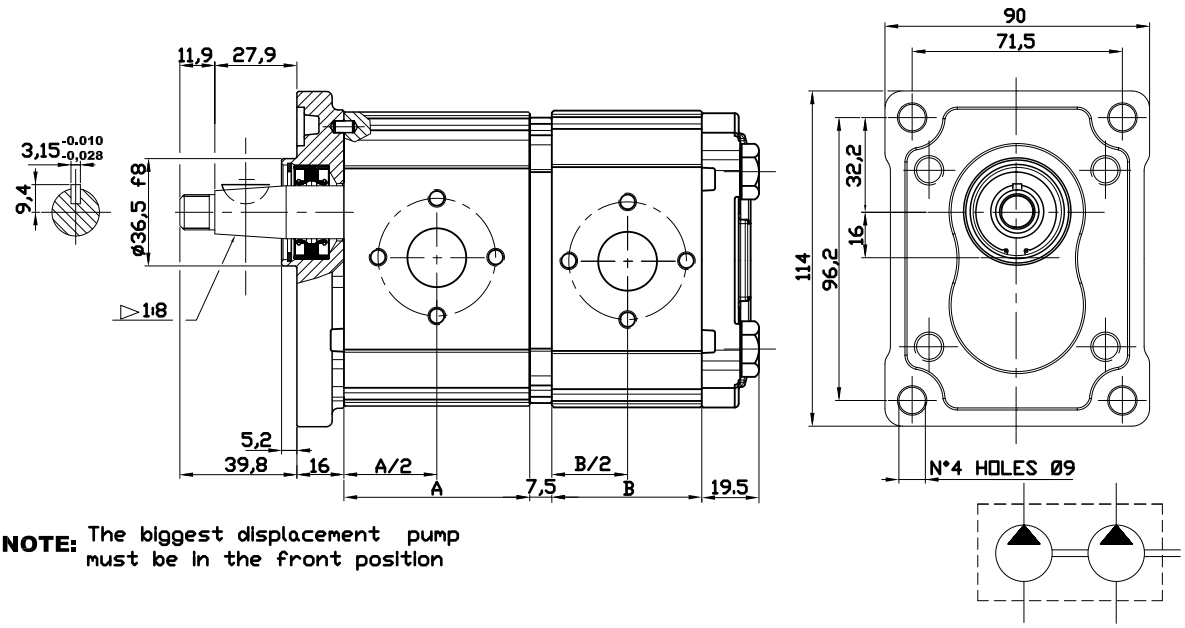
Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	250	300	4000	40,00	83,50	G1/2	14	G1/2	14
OT 200 P06	06,20	250	300	3500	41,50	86,50	G1/2	14	G1/2	14
OT 200 P08	08,20	250	300	3500	43,00	89,50	G1/2	14	G1/2	14
OT 200 P11	11,20	250	300	3500	45,15	93,80	G1/2	14	G1/2	14
OT 200 P14	14,00	240	300	3000	47,15	97,80	G3/4	16	G1/2	14
OT 200 P16	16,00	240	300	3000	48,60	100,7	G3/4	16	G1/2	14
OT 200 P20	20,00	200	240	3000	51,50	106,5	G3/4	16	G1/2	14
OT 200 P22	22,50	170	210	2500	57,35	118,2	G3/4	16	G1/2	14
OT 200 P25	25,10	170	210	2500	59,25	122,0	G3/4	16	G1/2	14
OT 200 P28	28,00	140	180	2500	61,35	126,2	G3/4	16	G1/2	14
OT 200 P30	30,00	130	170	2000	62,75	129,0	G3/4	16	G1/2	14

EXAMPLE OF ORDERING CODE

OT200 P 08 S / G 28 I P2

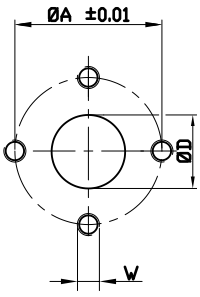
- OT200 — Series
- P — Pump
- 08 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- 28 — Taper shaft (1:8)
- I — SILENT PLUS
- P2 — European standard flange

VERSION: P28 I P2



NOTE: The biggest displacement pump must be in the front position

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	250	300	4000	48.00	48.00	13	30	M6	13	30	M6
OT 200 P06	06,20	250	300	3500	51.00	51.00	13	30	M6	13	30	M6
OT 200 P08	08,20	250	300	3500	54.00	54.00	13	30	M6	13	30	M6
OT 200 P11	11,20	250	300	3500	58.30	58.30	13	30	M6	13	30	M6
OT 200 P14	14,00	240	300	3000	62.30	62.30	20	40	M8	13	30	M6
OT 200 P16	16,00	240	300	3000	65.20	65.20	20	40	M8	13	30	M6
OT 200 P20	20,00	200	240	3000	71.00	71.00	20	40	M8	13	30	M6
OT 200 P22	22,50	170	210	2500	82.70	82.70	20	40	M8	13	30	M6
OT 200 P25	25,10	170	210	2500	86.50	86.50	20	40	M8	13	30	M6
OT 200 P28	28,00	140	180	2500	90.70	90.70	20	40	M8	13	30	M6
OT 200 P30	30,00	130	170	2000	93.50	93.50	20	40	M8	13	30	M6

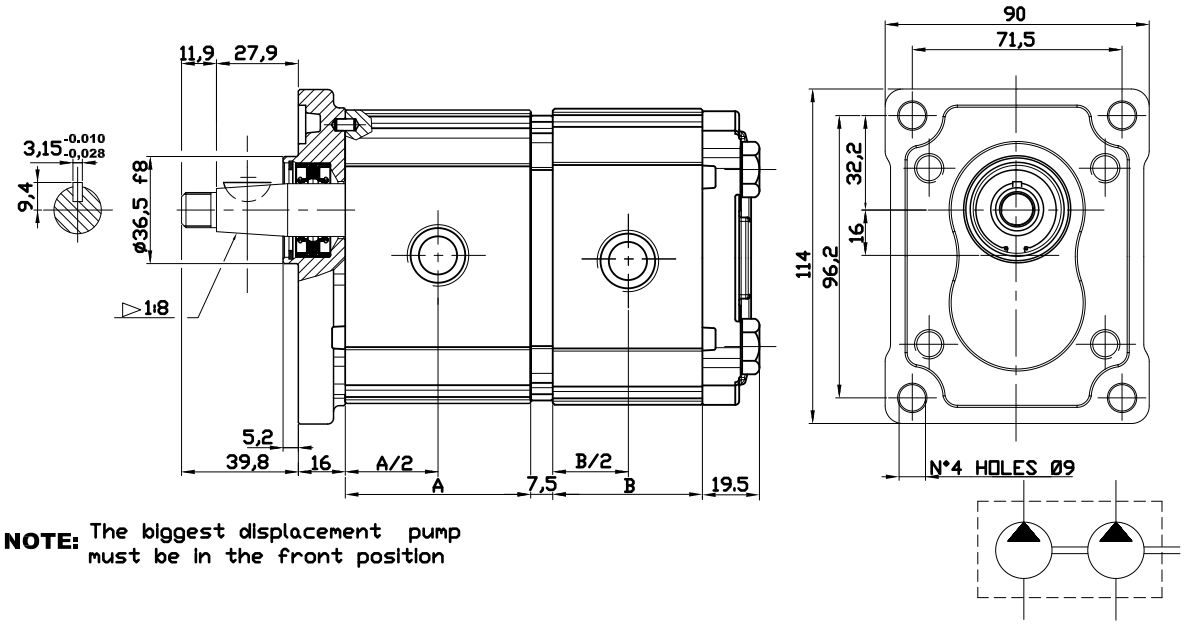


EXAMPLE OF ORDERING CODE

OT200 P 16 / 06 S / P 28 I P2 / 2

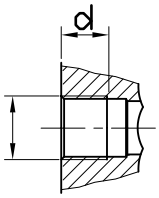
- OT200 — Series
- P — Pump
- 16 — Front pump displacement (see above table)
- 06 — Second pump displacement (see above table)
- S — Rotation: S = Anti-clockwise, D = Clockwise
- P — Body for European flanges
- 28 — Taper shaft (1:8)
- I — SILENT PLUS
- P2 — European standard flange
- 2 — 1 = One inlet port, 2 = Two inlet ports

VERSION: G28 I P2



NOTE: The biggest displacement pump must be in the front position

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	250	300	4000	48.00	48.00	G1/2	14	G1/2	14
OT 200 P06	06,20	250	300	3500	51.00	51.00	G1/2	14	G1/2	14
OT 200 P08	08,20	250	300	3500	54.00	54.00	G1/2	14	G1/2	14
OT 200 P11	11,20	250	300	3500	58.30	58.30	G1/2	14	G1/2	14
OT 200 P14	14,00	240	300	3000	62.30	62.30	G3/4	16	G1/2	14
OT 200 P16	16,00	240	300	3000	65.20	65.20	G3/4	16	G1/2	14
OT 200 P20	20,00	200	240	3000	71.00	71.00	G3/4	16	G1/2	14
OT 200 P22	22,50	170	210	2500	82.70	82.70	G3/4	16	G1/2	14
OT 200 P25	25,10	170	210	2500	86.50	86.50	G3/4	16	G1/2	14
OT 200 P28	28,00	140	180	2500	90.70	90.70	G3/4	16	G1/2	14
OT 200 P30	30,00	130	170	2000	93.50	93.50	G3/4	16	G1/2	14



EXAMPLE OF ORDERING CODE

OT200 P 16 / 06 S / G 28 I P2 / 2

- OT200 — Series
- P — Pump
- 16 / 06 — Front pump displacement (see above table) / Second pump displacement (see above table)
- S / G — Rotation

S	Anti-clockwise
D	Clockwise

- 28 — Taper shaft (1:8)
- I — SILENT PLUS
- P2 — European standard flange
- 2 — 1 = One inlet port, 2 = Two inlet ports
- G — Body with threated ports (BSP)

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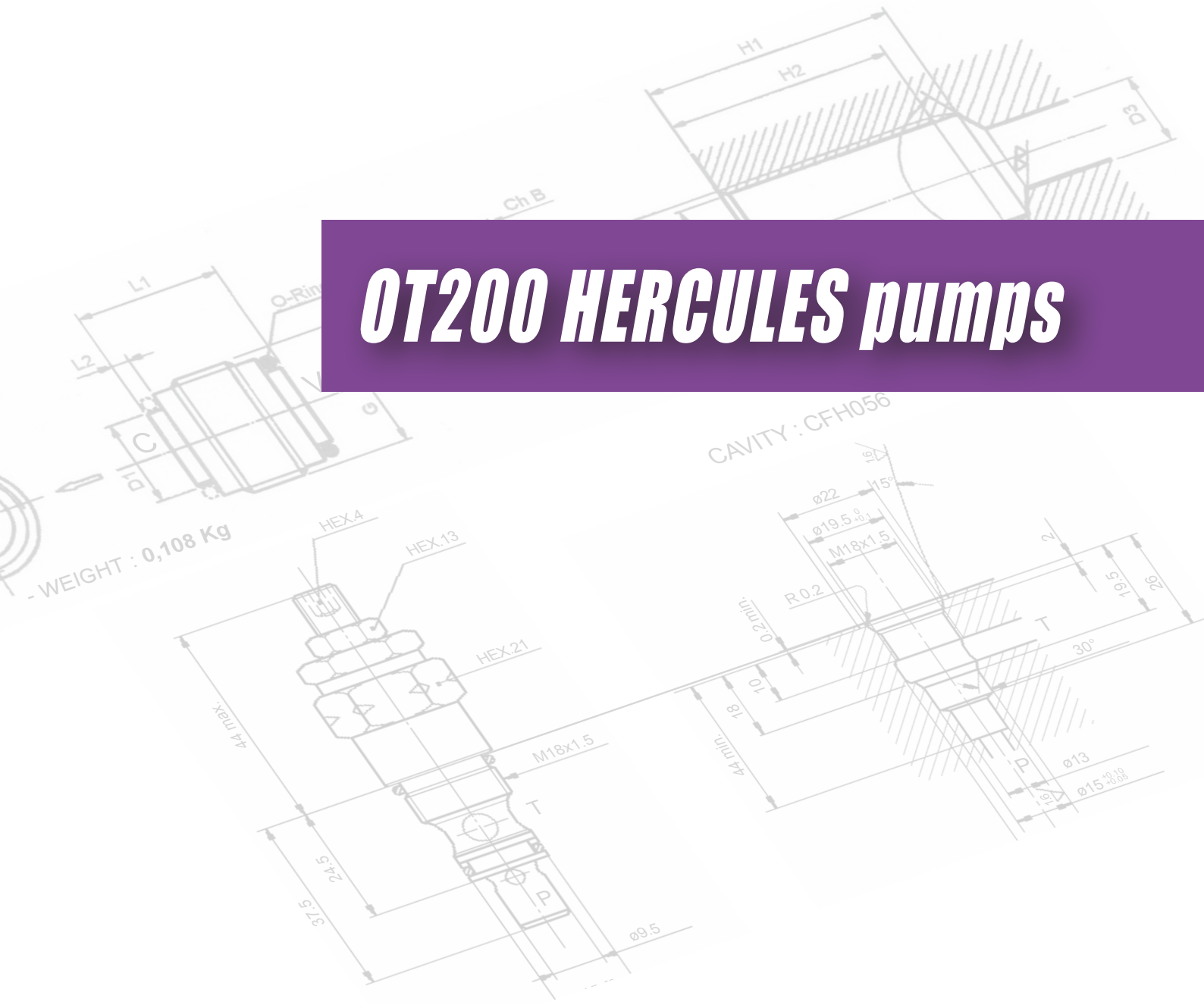
OT200 HERCULES pumps



GROUP 2 PUMPS - HERCULES SERIES

BEARINGS

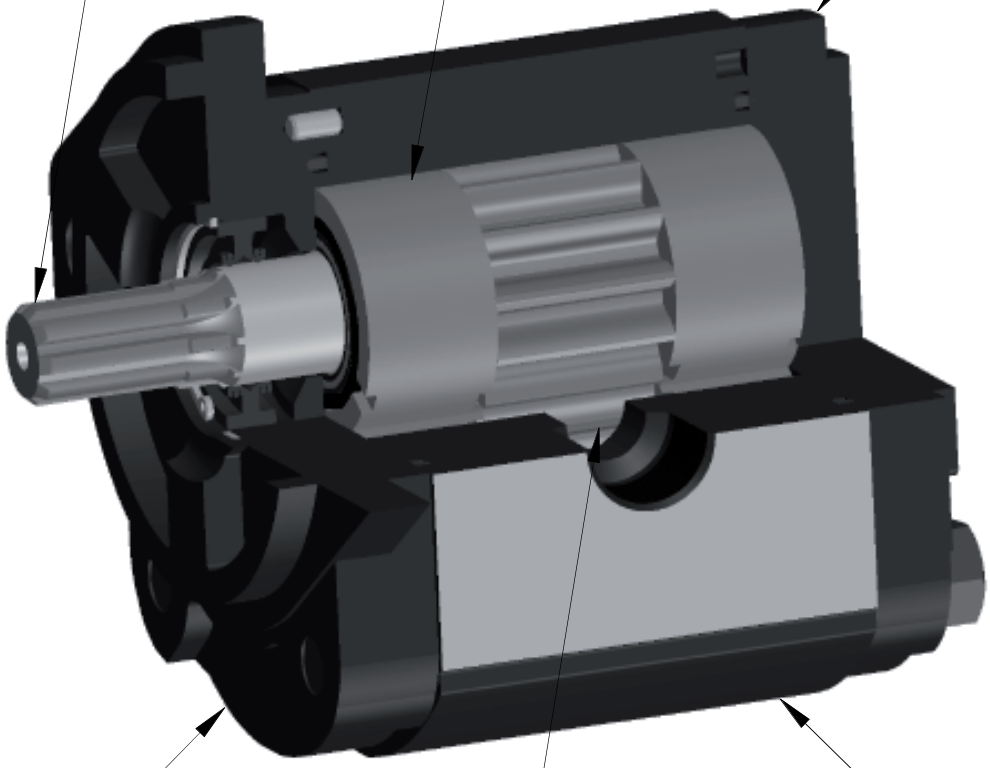
- Hi-resistant aluminium alloy with DU sleeve bearings to offer high performances.
- Available in bronze material

COVER

Made in cast iron material and available with suction port

DRIVE SHAFTS

Choice of several standard drive shafts



MOUNTING FLANGES

Choice of several mounting flanges in cast iron

GEAR HOUSING

Made in cast iron material G30

GEARS

Designed specifically to reduce the noise level and offer the best performance between flow pulsation and displacements

GROUP 2 PUMPS - HERCULES SERIES

CONSTRUCTIVE CHARACTERISTICS:

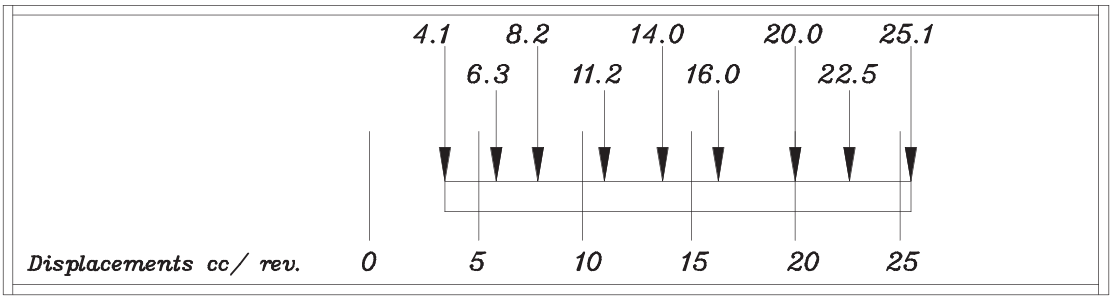
PART	MATERIAL	CHARACTERISTICS
GEARS	Hardened steel UNI 7846	Rs= 1250 N/mm^2 Rm= 1450 N/mm^2
FLANGE AND COVER	G25 / G30 cast iron	Rs= 300 N/mm^2 Rm= 450 N/mm^2
BEARINGS	Avional / Bronze Bearings with DU	Rs= 350 N/mm^2 Rm= 390 N/mm^2
BODY	G30 cast iron	Rs= 300 N/mm^2 Rm= 350 N/mm^2
O-RINGS	Buna N Viton	90 Shore, up to 90°C 80 Shore, for high temperature
ANTIEXTRUSION	Zitel	With glass fibres

Rs= Enervation load
Rm= Breaking load

GENERAL CHARACTERISTICS:

Maximum pressures up to 330 bar.
Maximum speed up to 4.000 rpm.
Type of shafts: Taper 1:8 and 1:5
Oldham
Slined DIN 5482 17x14.
SAE A splined-9 TEETH
SAE A cylindrical - Ø15.85 - SAE A 11 TEETH
Type of flanges: European standard
Bosch
SAE A standard.

Displacements from 4 cc/rev to 25 cc/rev.
The displacements are available according this table:



There is also available a special version with built-in support.

DRIVE:

The connection of the pump to the motor must be done preferably with the use of a flexible coupling to avoid any radial and/or axial force on the shaft, otherwise pump efficiency will dramatically drop due to early wear of inner moving parts.
In any applications where the motion is trasmitted through belts, it is necessary to use a support to avoid any radial or axial load to the pump shaft.
In any applications where are used splined shafts ot Oldham couplings, it is suggested to assure a costant lubrification through grease or similar products.

WORKING CONDITIONS- LIMIT PERFORMANCES

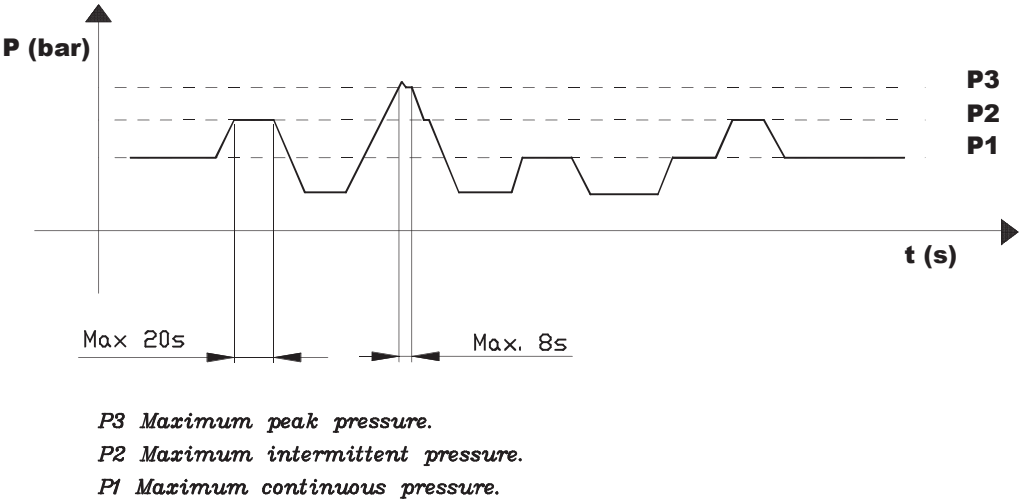
In normal working conditions there must be, in the suction pipe, a pressure lower than the atmospheric pressure.

The pressure range in suction must be:

Min. 0.75 bar (absolute)	MAX 2,0 bar (absolute)

The maximun pressure values "P1" are referred to a continuous working at 1500 rpm with standard hydraulic fluids with minimum viscosity of 10 cSt.
For heavier working conditions (viscosity or high temperature) it is necessary to reduce the "P1" values.

In the following table are described the admitted pressures:

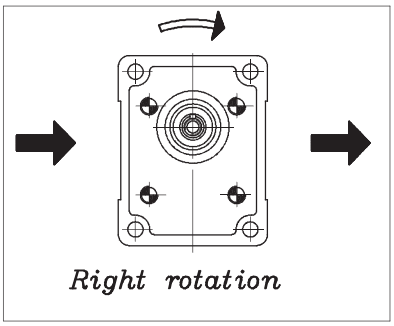


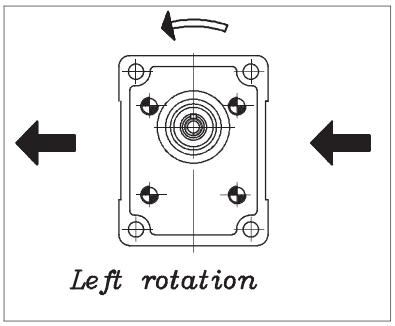
P3 Maximum peak pressure.
P2 Maximum intermittent pressure.
P1 Maximum continuous pressure.

The standard working speeds (minimum and maximum) are the following:

Min. = 400 rpm	Max = (See following table)

DIRECTION OF ROTATION LOOKING AT THE SHAFT:





GROUP 2 PUMPS - HERCULES SERIES

FLUID FILTRATION

It is known that in many cases the premature pump performances reduction is due to a non correct filtration in the circuit.
The presence of contamination particles in the fluid usually corresponds to an irreparable wear of the pump internal parts.
It is raccomanded to pay attention to the plant cleaning, mainly in the starting activity.
The starting fluid contamination it must be according to the Norms ISO 4406 and it should not exceed the Class 19/16 with a filter 3x75.

Here below the technical parameters to respect:

FILTRATION IN SUCTION LINE	**120 / 150 Nominal micron**
FILTRATION IN PRESSURE LINE	**10 / 25 absolute micron**
MAXIMUM SPEED IN SUCTION	**0.5 / 1.5 m/s**
MAXIMUM SPEED IN OUTPUT	**3.0 / 5.5 m/s**

Sometime (contaminated places) it is racommended to improve the filtration in pressure line and fit also an air filter.

HYDRAULIC FLUIDS

It is recommended the use of fluids made for hydraulic circuits.
Usually they are hydraulic oils with mineral basis HLP HV (DIN 51524).
Here below the technical parameters to respect:

MINIMUM VISCOSITY	**10 mm^2/s**
MAXIMUM VISCOSITY	**100 mm^2/s**
SUGGESTED VISCOSITY	**20 mm^2/s - 100 mm^2/s**
SUGGESTED TEMPERATURE	**30°C / 50°C**
WORKING TEMPERATURE	**-15°C / +80°C**

For applications with water-glycol (HF-C) it is racommended to consider the following limitations: 1500 rpm maximum speed and 200 bar maximum pressure.
For applications with phosphate ester fluids, please contact our Technical department.

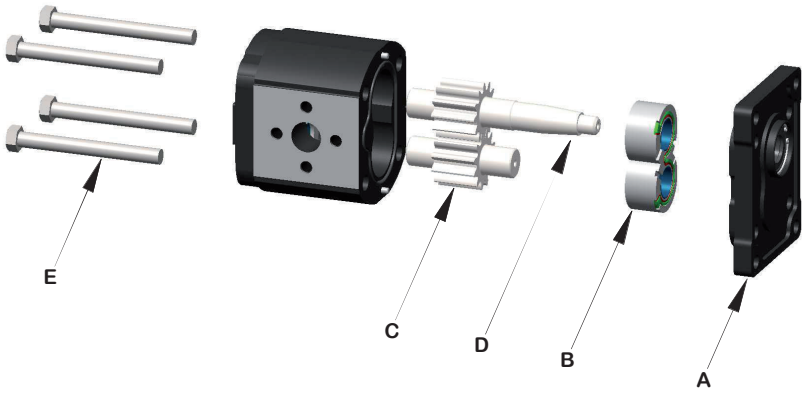
ISTALLATION INSTRUCTION

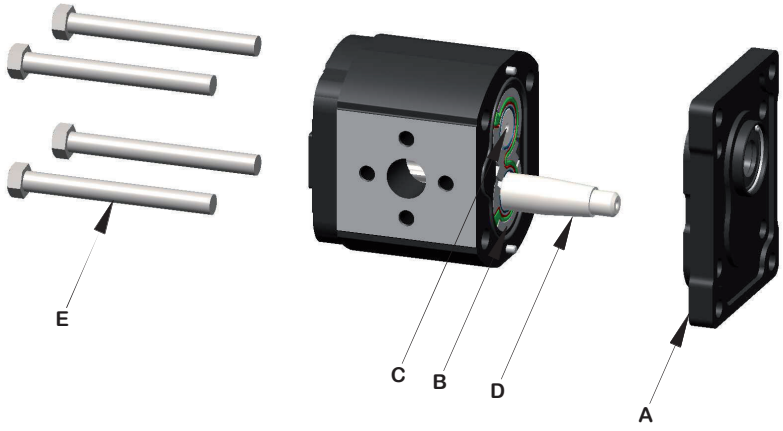
During the first starting it is racommended:
- to set the maximum pressure relief valves to a low value and gradually increase the pressure.
- to check, with single rotation pumps, that the rotation direction it is correct.
- to check that the connection betwen the motor and pump shaft is correct: without radial or axial load.
- to avoid starting under pressure in low temperature conditions or after long period of inactivity
- to check the fluid level in the tank
- to disconnect the return pipe and purge any air in the circuit
- to protect the pumpshaft seal when painting power pack
- to use suitable systems in the return lines to tank, to avoid turbulence in the circuit and ingress of air, water or contamination
- to check the torque that must be lower than the maximum torque admissible on the pump shaft
- to use new oil filters with absence of water or any other emulsifying substance
- to avoid starting with a air-oil solution
It is important to specify an oil tank at least twice the flow from the pump.

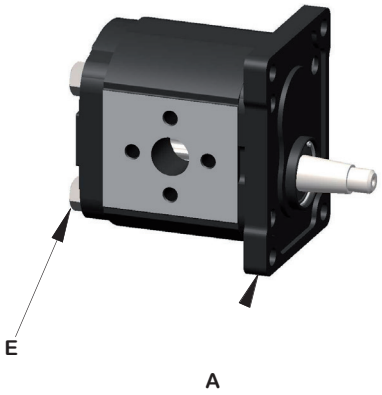
GROUP 2 PUMPS - HERCULES SERIES
CHANGING ROTATION

TO CHANGE ROTATION OF OT200 PUMP IT'S NECESSARY TO OPERATE IN THE FOLLOWING WAY:

1. Clean the pump externally with care.
2. Loosen, and remove, the clamp bolts (E).
3. Coat the sharp edges of the drive shaft (D) with adesive tape and smear a layer of clean grease on the shaft end extension to avoid damaging the lip of the shaft seal when removing the mounting flange.
4. Remove the mounting flange (A), taking care to keep the flange as straight as possible during removal. Ensure that while removing the front mounting flange, the drive shaft and other components ramain in position.
5. Ease the drive gear (D) up to facilitate removal of bearings (B), taking care that the precision ground surfaces do not become damaged, and removed the drive gear.
6. Remove the driven gear (D) without overturning. The rear flange has not to be removed.
7. Re-locate the driven gear (C) in the position previously occupied by the drive gear (D).
8. Re-locate the drive gear (D) in the position previously occupied by the driven gear (C).
9. Replace the front flange (A) in its original position.
10. Gently wipe the machined surface of the front flange (A) and the body with a canvas.
11. Refit the front mounting flange (A) turned by 180° from its original position.
12. Refit the clamp bolts (E).
    (SCREW TIGHTENING TORQUE = 48 Nm)
13. Check that the pump rotates freely when the drive shaft (D) is turned by hand. If not a pressure plate seal may be pinched.
14. The pump is ready for installation with the original rotation reversed.

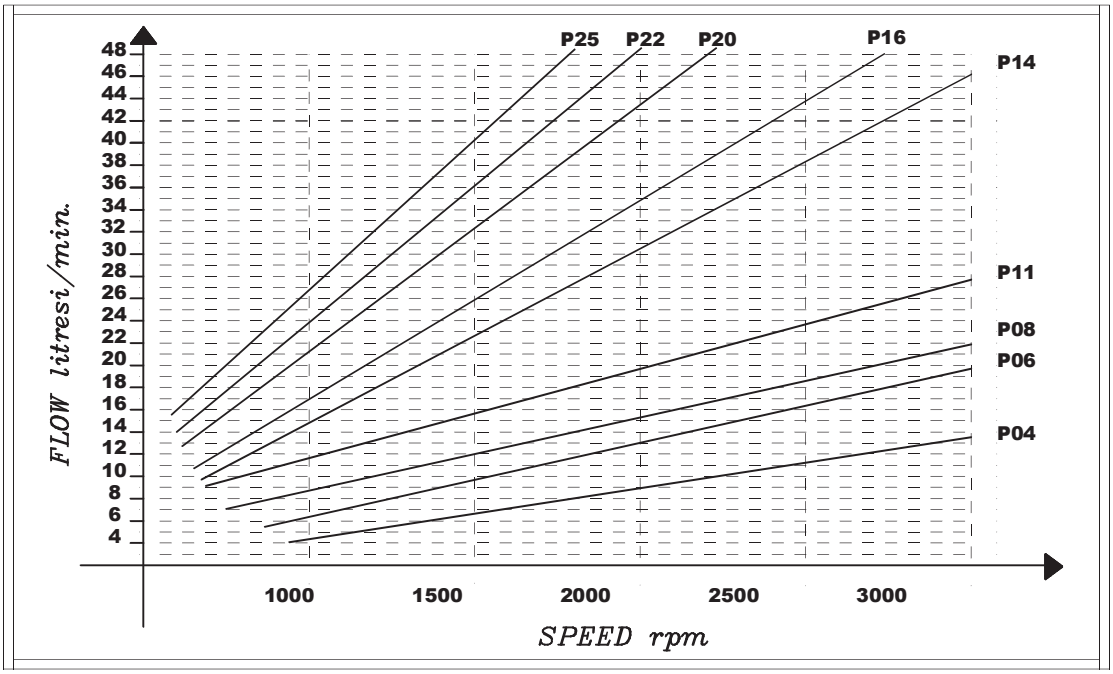




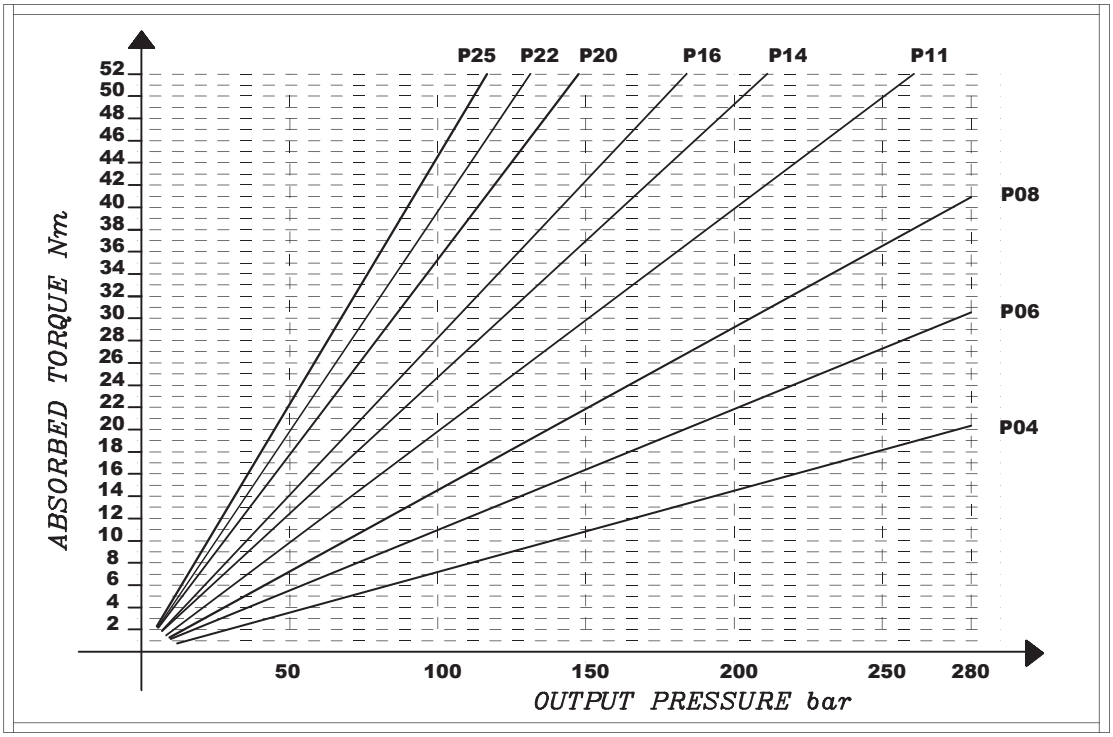


GROUP 2 PUMPS - HERCULES SERIES

FLOW CHARACTERISTICS CURVES



ABSORBED TORQUE



NOTE

Above flow characteristics curves have been made considering a volumetric efficiency of 95%

PUMP CALCULATION

V	**Displacement**	**cc / rev**
Q	**Flow**	**l/min**
P	**Power**	**kW**
C	**Torque**	**Nm**
N	**Speed**	**rpm**
ΔP	**Pressure**	**bar**
n_v	**Volumetric efficiency**	**0.85**
n_m	**Mechanical efficiency**	**0.9**
n_t	**Total efficiency**	**0.80**

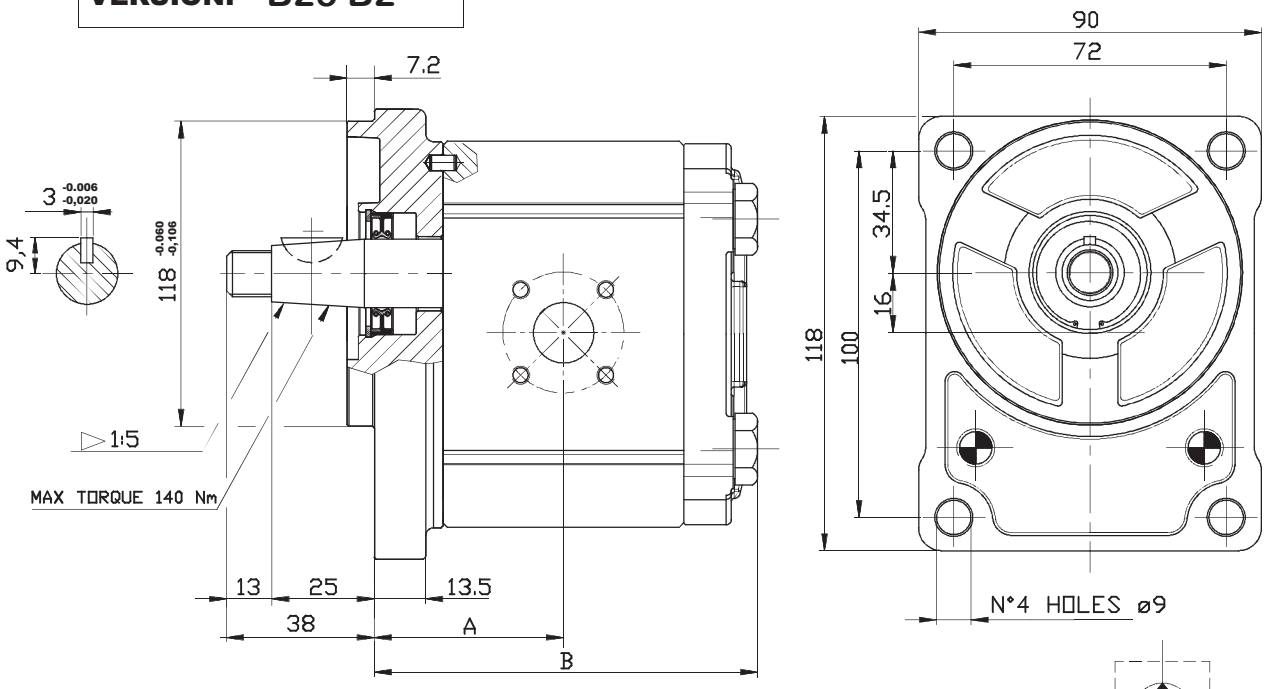
$$Q = V \cdot n_v \cdot N \cdot 10^{-3} \qquad l/min$$

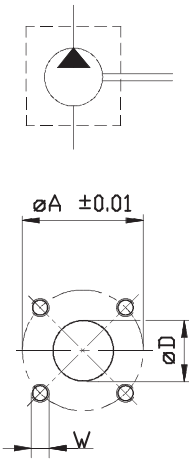
$$C = \frac{\Delta P \cdot V}{62.8 \cdot n_m} \qquad Nm$$

$$P = \frac{\Delta P \cdot V \quad N}{612000 \cdot n_t} \qquad kW$$

GROUP 2 PUMPS - HERCULES SERIES
GERMANN STANDARD

VERSION: B25 B2





Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	280	330	4000	42,00	85,50	20	40	M6	15	35	M6
OT 200 P06	06,20	280	330	3500	43,50	88,50	20	40	M6	15	35	M6
OT 200 P08	08,20	280	330	3500	45,00	91,50	20	40	M6	15	35	M6
OT 200 P11	11,20	280	330	3500	47,15	95,80	20	40	M6	15	35	M6
OT 200 P14	14,00	280	330	3000	49,15	99,80	20	40	M6	15	35	M6
OT 200 P16	16,00	270	330	3000	50,60	102,7	20	40	M6	15	35	M6
OT 200 P20	20,00	225	265	3000	53,50	108,5	20	40	M6	15	35	M6
OT 200 P22	22,50	190	230	2500	59,35	120,2	20	40	M6	15	35	M6
OT 200 P25	25,10	190	230	2500	61,25	124,0	20	40	M6	15	35	M6

EXAMPLE OF ORDERING CODE

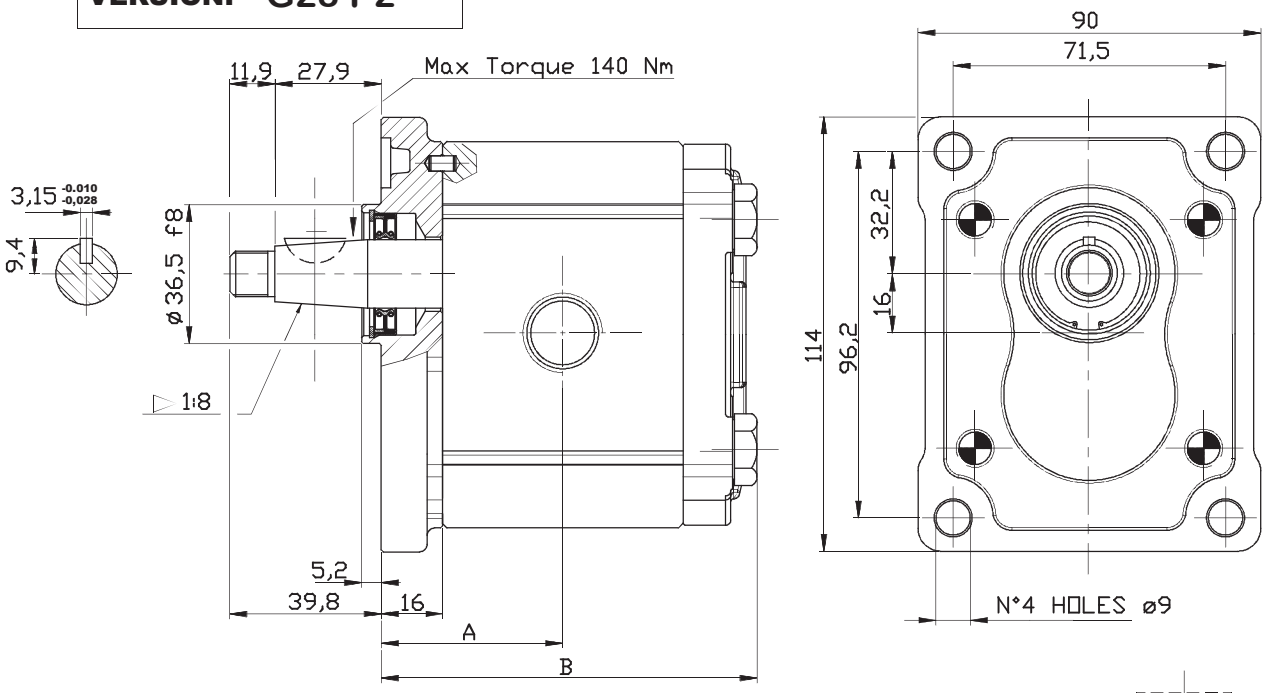
OT20H P 08 S / B 25 B2 - A

- Series
- Pumps
- Pump displacement
- Rotation: S Anti-clockwise; D Clockwise
- Body for German flanges
- Taper shaft (1:5)
- German standard flange
- Bushings: A Alluminium; B Bronze

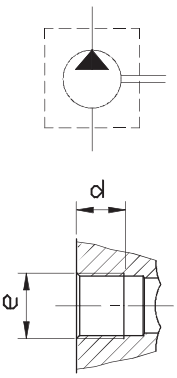
AVAILABLE FOR QUANTITIES

GROUP 2 PUMPS - HERCULES SERIES
EUROPEAN STANDARD

VERSION: G28 P2



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	280	330	4000	40,00	83,50	G1/2	14	G1/2	14
OT 200 P06	06,20	280	330	3500	41,50	86,50	G1/2	14	G1/2	14
OT 200 P08	08,20	280	330	3500	43,00	89,50	G1/2	14	G1/2	14
OT 200 P11	11,20	280	330	3500	45,15	93,80	G1/2	14	G1/2	14
OT 200 P14	14,00	280	330	3000	47,15	97,80	G3/4	16	G1/2	14
OT 200 P16	16,00	270	330	3000	48,60	100,7	G3/4	16	G1/2	14
OT 200 P20	20,00	225	265	3000	51,50	106,5	G3/4	16	G1/2	14
OT 200 P22	22,50	190	230	2500	57,35	118,2	G3/4	16	G1/2	14
OT 200 P25	25,10	190	230	2500	59,25	122,0	G3/4	16	G1/2	14



EXAMPLE OF ORDERING CODE

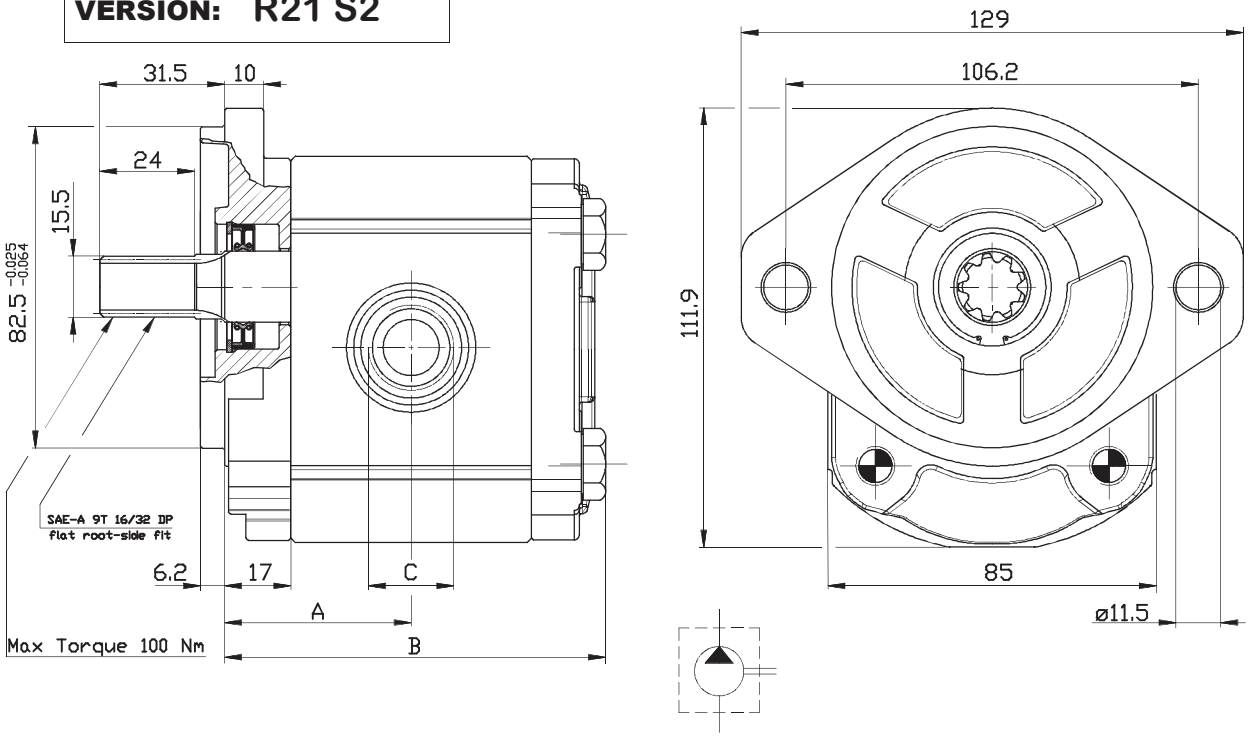
OT20H P 08 S / G 28 P2 - A

- Series
- Pumps
- Punp displacement
- Rotation: S Anti-clockwise; D Clockwise
- Bushings: A Alluminium; B Bronze
- European standard flange
- Taper shaft (1:8)
- Body with threated ports (BPS)

AVAILABLE FOR QUANTITIES

GROUP 2 PUMPS - HERCULES SERIES
SAE "A" STANDARD

VERSION: R21 S2



Type	Displacement	Max working pressure P1	Peak pressure P3	Max speed	Dimension A	Dimension B	Inlet port	Outlet port
	(cc/rev)	(bar)	(bar)	(r.p.m)	(mm)		C	C
OT 200 P04	04,10	280	330	4000	40,00	83,50	7/8-14UNF-2B	7/8-14UNF-2B
OT 200 P06	06,20	280	330	3500	41,50	86,50		
OT 200 P08	08,20	280	330	3500	43,00	89,50		
OT 200 P11	11,20	280	330	3500	45,15	93,80		
OT 200 P14	14,00	280	330	3000	47,15	97,80	1-1/16-12UNF-2B	
OT 200 P16	16,00	270	330	3000	48,60	100,7		
OT 200 P20	20,00	225	265	3000	51,50	106,5		
OT 200 P22	22,50	190	230	2500	57,35	118,2		
OT 200 P25	25,10	190	230	2500	59,25	122,0		

EXAMPLE OF ORDERING CODE

OT20H P 08 S / R 21 S2 - A

- Series
- Pumps
- Pump displacement
- Rotation

S	Anti-clockwise
D	Clockwise

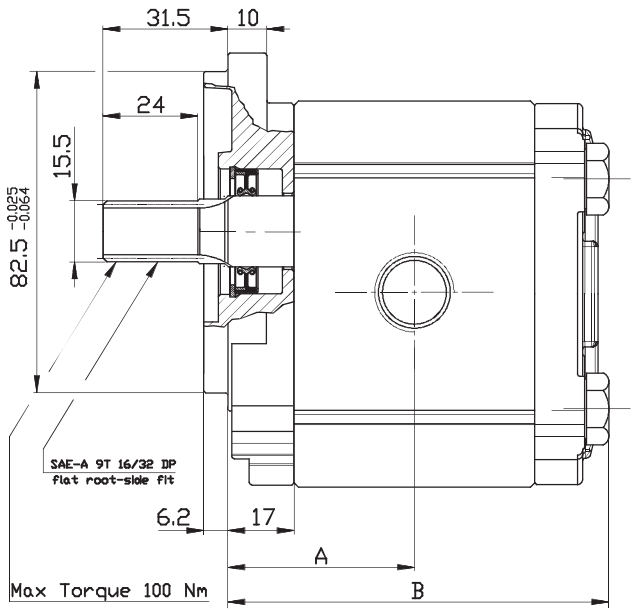
- Body with O-Ring Boss ports
- SAE A - 9T 16/32 DP shaft
- SAE A flange
- Bushings

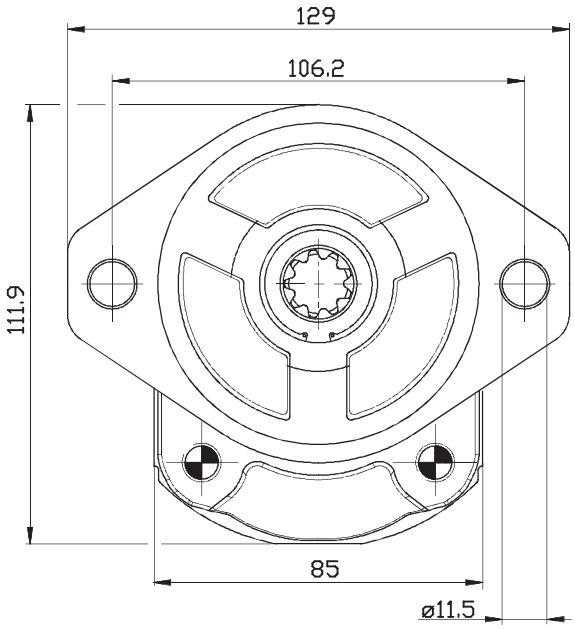
A	Alluminium
B	Bronze

AVAILABLE FOR QUANTITIES

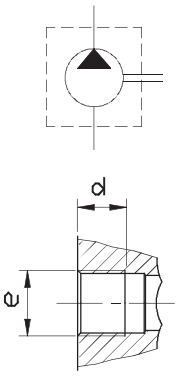
GROUP 2 PUMPS - HERCULES SERIES
SAE "A" STANDARD

VERSION: G21 S2





Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	280	330	4000	40,00	83,50	G1/2	14	G1/2	14
OT 200 P06	06,20	280	330	3500	41,50	86,50	G1/2	14	G1/2	14
OT 200 P08	08,20	280	330	3500	43,00	89,50	G1/2	14	G1/2	14
OT 200 P11	11,20	280	330	3500	45,15	93,80	G1/2	14	G1/2	14
OT 200 P14	14,00	280	330	3000	47,15	97,80	G3/4	16	G1/2	14
OT 200 P16	16,00	270	330	3000	48,60	100,7	G3/4	16	G1/2	14
OT 200 P20	20,00	225	265	3000	51,50	106,5	G3/4	16	G1/2	14
OT 200 P22	22,50	190	230	2500	57,35	118,2	G3/4	16	G1/2	14
OT 200 P25	25,10	190	230	2500	59,25	122,0	G3/4	16	G1/2	14



EXAMPLE OF ORDERING CODE

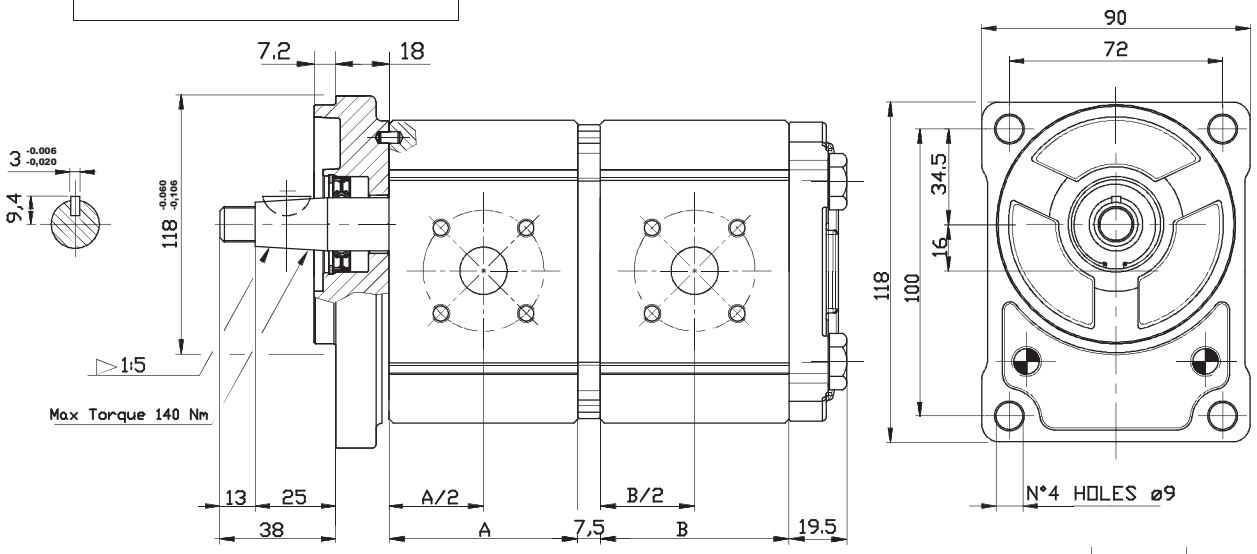
OT20H P 08 S / G 21 S2 - A

- Series
- Pumps
- Pump displacement
- Rotation
  - S Anti-clockwise
  - D Clockwise
- Body with threated ports (BSP)
- SAE A - 9T 16/32 DP shaft
- SAE A flange
- Bushings
  - A Alluminium
  - B Bronze

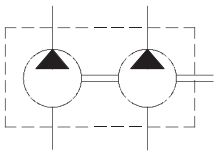
AVAILABLE FOR QUANTITIES

GROUP 2 PUMPS - HERCULES SERIES
TANDEM GERMAN STANDARD

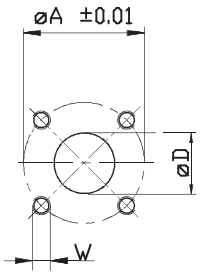
VERSION: B25 B2



NOTE: The biggest displacement pump must be in the front position



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	280	330	4000	48.00	48.00	20	40	M6	15	35	M6
OT 200 P06	06,20	280	330	3500	51.00	51.00	20	40	M6	15	35	M6
OT 200 P08	08,20	280	330	3500	54.00	54.00	20	40	M6	15	35	M6
OT 200 P11	11,20	280	330	3500	58.30	58.30	20	40	M6	15	35	M6
OT 200 P14	14,00	280	330	3000	62.30	62.30	20	40	M6	15	35	M6
OT 200 P16	16,00	270	330	3000	65.20	65.20	20	40	M6	15	35	M6
OT 200 P20	20,00	225	265	3000	71.00	71.00	20	40	M6	15	35	M6
OT 200 P22	22,50	190	230	2500	82.70	82.70	20	40	M6	15	35	M6
OT 200 P25	25,10	190	230	2500	86.50	86.50	20	40	M6	15	35	M6



EXAMPLE OF ORDERING CODE

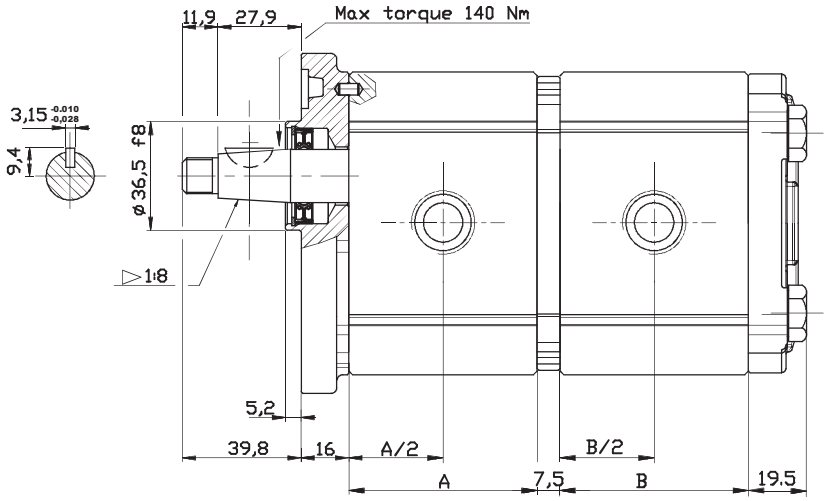
OT20H P 16 / 06 S / B 25 B2 / 2 - A

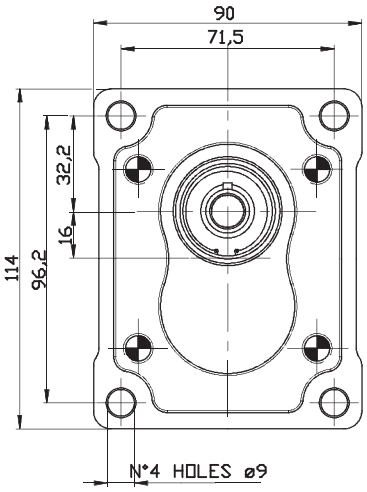
- Series
- Pump
- Front pump displacement (see above table)
- Second pump displacement (see above table)
- Rotation: S Anti-clockwise; D Clockwise
- Body for German Flanges
- Taper shaft (1:5)
- German standard flange
- 1 = One intel port; 2 = Two inlet port
- Bushings: A Alluminium; B Bronze

AVAILABLE FOR QUANTITIES

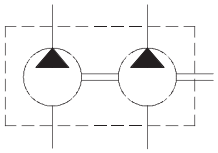
GROUP 2 PUMPS - HERCULES SERIES
TANDEM EUROPEAN STANDARD

VERSION: G28 P2

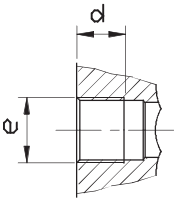




NOTE: The biggest displacement pump must be in the front position



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	280	330	4000	48.00	48.00	G1/2	14	G1/2	14
OT 200 P06	06,20	280	330	3500	51.00	51.00	G1/2	14	G1/2	14
OT 200 P08	08,20	280	330	3500	54.00	54.00	G1/2	14	G1/2	14
OT 200 P11	11,20	280	330	3500	58.30	58.30	G1/2	14	G1/2	14
OT 200 P14	14,00	280	330	3000	62.30	62.30	G3/4	16	G1/2	14
OT 200 P16	16,00	270	330	3000	65.20	65.20	G3/4	16	G1/2	14
OT 200 P20	20,00	225	265	3000	71.00	71.00	G3/4	16	G1/2	14
OT 200 P22	22,50	190	230	2500	82.70	82.70	G3/4	16	G1/2	14
OT 200 P25	25,10	190	230	2500	86.50	86.50	G3/4	16	G1/2	14



EXAMPLE OF ORDERING CODE

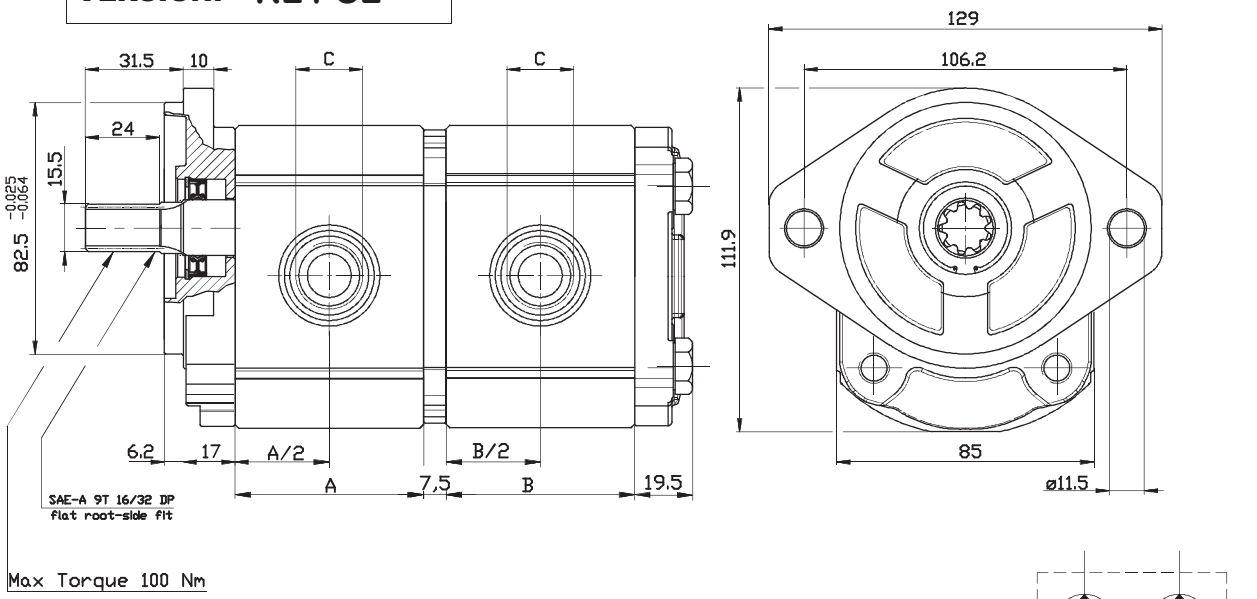
OT20H P 16 / 06 S / G 28 P2 / 2 - A

- OT20H — Series
- P — Pump
- 16 — Front pump displacement (see above table)
- 06 — Second pump displacement (see above table)
- S — Rotation: S = Anti-clockwise, D = Clockwise
- G — Body with threated ports (BSP)
- 28 — Taper shaft (1:8)
- P2 — European standard flange
- 2 — 1 = One intel port, 2 = Two inlet port
- A — Bushings: A = Alluminium, B = Bronze

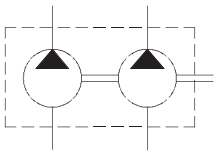
AVAILABLE FOR QUANTITIES

GROUP 2 PUMPS - HERCULES SERIES
TANDEM SAE "A" STANDARD

VERSION: R21 S2



Max Torque 100 Nm



NOTE: The biggest displacement pump must be in the front position

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port C	Outlet port C
OT 200 P04	04,10	280	330	4000	48.00	48.00	7/8-14UNF-2B	7/8-14UNF-2B
OT 200 P06	06,20	280	330	3500	51.00	51.00		
OT 200 P08	08,20	280	330	3500	54.00	54.00		
OT 200 P11	11,20	280	330	3500	58.30	58.30		
OT 200 P14	14,00	280	330	3000	62.30	62.30	1-1/16-12UNF-2B	
OT 200 P16	16,00	270	330	3000	65.20	65.20		
OT 200 P20	20,00	225	265	3000	71.00	71.00		
OT 200 P22	22,50	190	230	2500	82.70	82.70		
OT 200 P25	25,10	190	230	2500	86.50	86.50		

EXAMPLE OF ORDERING CODE

OT20H P 16 / 06 S / R 21 S2 / 2 - A

- Series
- Pump
- Front pump displacement (see above table)
- Second pump displacement (see above table)

Rotation	
S	Anti-clockwise
D	Clockwise

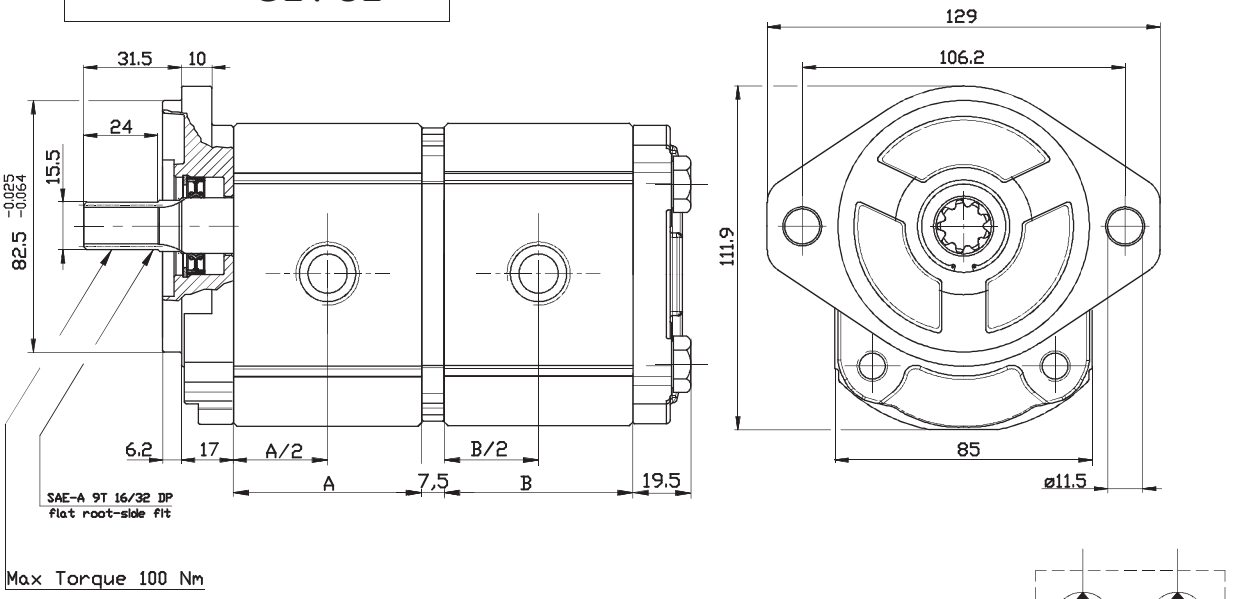
Bushings	
A	Alluminium
B	Bronze

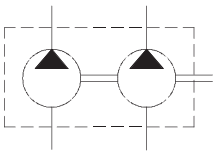
- 1 = One intel port
  2 = Two inlet port
- SAE A flange
- SAE A - 9T 16/32 DP shaft
- Body with O-Ring boss port

AVAILABLE FOR QUANTITIES

GROUP 2 PUMPS - HERCULES SERIES
TANDEM SAE "A" STANDARD

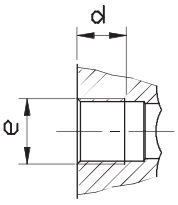
VERSION: G21 S2





NOTE: The biggest displacement pump must be in the front position

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	280	330	4000	48.00	48.00	G1/2	14	G1/2	14
OT 200 P06	06,20	280	330	3500	51.00	51.00	G1/2	14	G1/2	14
OT 200 P08	08,20	280	330	3500	54.00	54.00	G1/2	14	G1/2	14
OT 200 P11	11,20	280	330	3500	58.30	58.30	G1/2	14	G1/2	14
OT 200 P14	14,00	280	330	3000	62.30	62.30	G3/4	16	G1/2	14
OT 200 P16	16,00	270	330	3000	65.20	65.20	G3/4	16	G1/2	14
OT 200 P20	20,00	225	265	3000	71.00	71.00	G3/4	16	G1/2	14
OT 200 P22	22,50	190	230	2500	82.70	82.70	G3/4	16	G1/2	14
OT 200 P25	25,10	190	230	2500	86.50	86.50	G3/4	16	G1/2	14



EXAMPLE OF ORDERING CODE

OT20H P 16 / 06 S / G 21 S2 / 2 - A

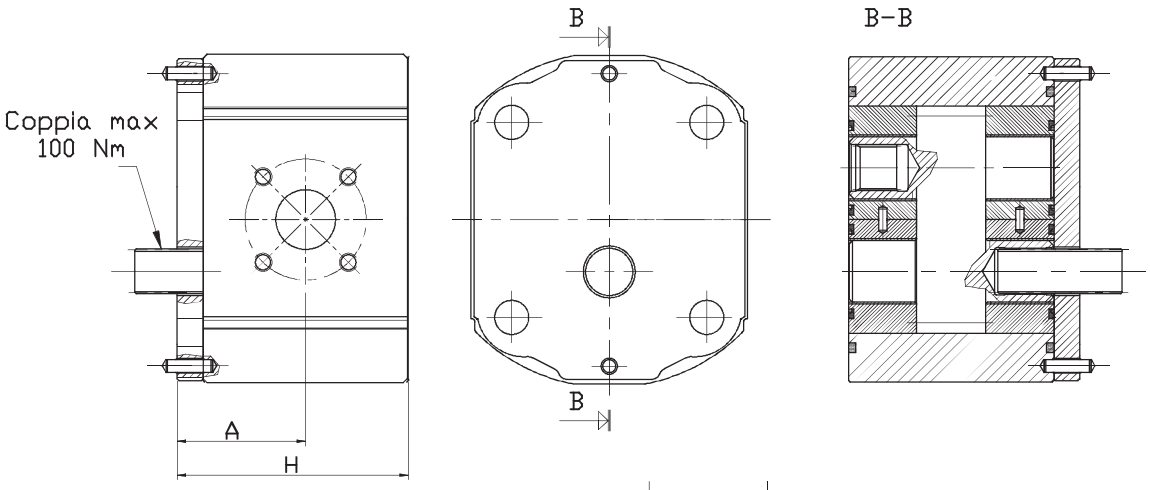
- OT20H — Series
- P — Pump
- 16 / 06 — Front pump displacement / Second pump displacement (see above table)
- S / G — Rotation: S = Anti-clockwise, D = Clockwise
- 21 — Body with threated ports (BSP)
- S2 — SAE A - 9T 16/32 DP shaft
- 2 — 1 = One intel port, 2 = Two inlet port
- A — Bushings: A = Alluminium, B = Bronze

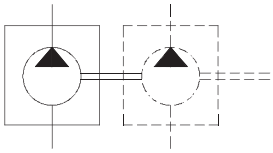
SAE A flange

AVAILABLE FOR QUANTITIES

GROUP 2 PUMPS - HERCULES SERIES
INTERMEDIATE FOR TANDEM

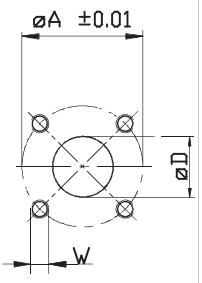
VERSION: B X X INTERMEDIATE





NOTE : Screw tightening torque 48 Nm

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 200 P04	04,10	280	330	4000	40,00	83,50						
OT 200 P06	06,20	280	330	3500	41,50	86,50	ØD	ØA	W	ØD	ØA	W
OT 200 P08	08,20	280	330	3500	43,00	89,50	20	40	M6	15	35	M6
OT 200 P11	11,20	280	330	3500	45,15	93,80	20	40	M6	15	35	M6
OT 200 P14	14,00	280	330	3000	47,15	97,80	20	40	M6	15	35	M6
OT 200 P16	16,00	270	330	3000	48,60	100,7	20	40	M6	15	35	M6
OT 200 P20	20,00	225	265	3000	51,50	106,5	20	40	M6	15	35	M6
OT 200 P22	22,50	190	230	2500	57,35	118,2	20	40	M6	15	35	M6
OT 200 P25	25,10	190	230	2500	59,25	122,0	20	40	M6	15	35	M6



EXAMPLE OF ORDERING CODE

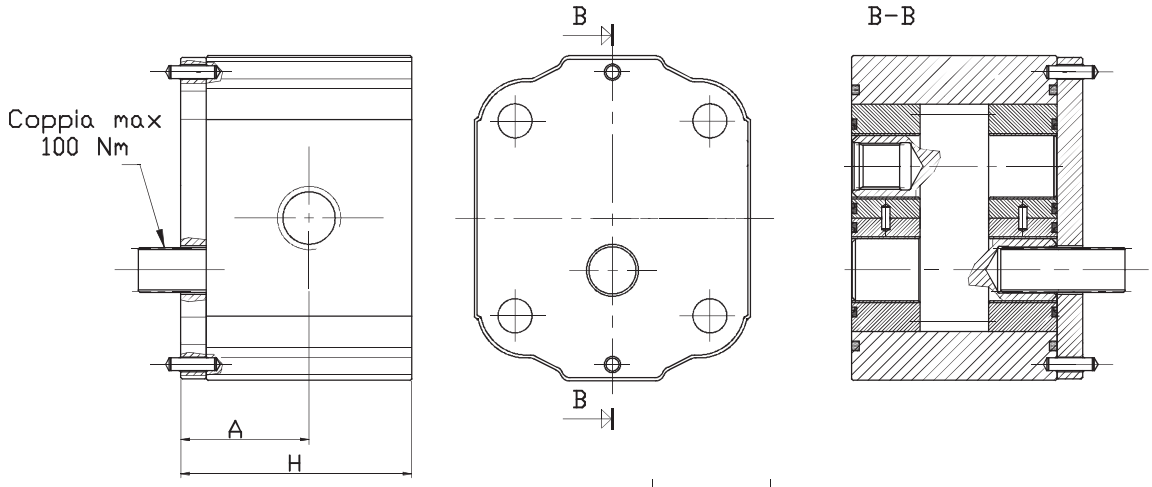
OT20H P 08 S / B X X - A / INTERMEDIATE

- Series
- Pump
- Displacement (see above table)
- S / B: Rotation — S: Anti-clockwise; D: Clockwise
- German standard flange
- A: Bushings — A: Alluminium; B: Bronze

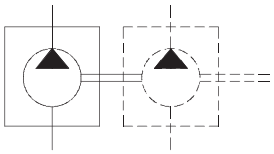
AVAILABLE FOR QUANTITIES

GROUP 2 PUMPS - HERCULES SERIES
INTERMEDIATE FOR TANDEM

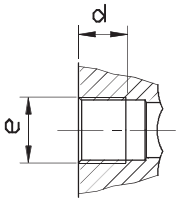
VERSION: G X X INTERMEDIATE



NOTE : Screw tightening torque 48 Nm



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	280	330	4000	40,00	83,50	G1/2	14	G1/2	14
OT 200 P06	06,20	280	330	3500	41,50	86,50	G1/2	14	G1/2	14
OT 200 P08	08,20	280	330	3500	43,00	89,50	G1/2	14	G1/2	14
OT 200 P11	11,20	280	330	3500	45,15	93,80	G1/2	14	G1/2	14
OT 200 P14	14,00	280	330	3000	47,15	97,80	G3/4	16	G1/2	14
OT 200 P16	16,00	270	330	3000	48,60	100,7	G3/4	16	G1/2	14
OT 200 P20	20,00	225	265	3000	51,50	106,5	G3/4	16	G1/2	14
OT 200 P22	22,50	190	230	2500	57,35	118,2	G3/4	16	G1/2	14
OT 200 P25	25,10	190	230	2500	59,25	122,0	G3/4	16	G1/2	14



EXAMPLE OF ORDERING CODE

OT20H P 08 S / G X X - A / INTERMEDIA

- Series
- Pump
- Displacement (see above table)
- Body with threated ports (BSP)

Bushings	
A	Alluminium
B	Bronze

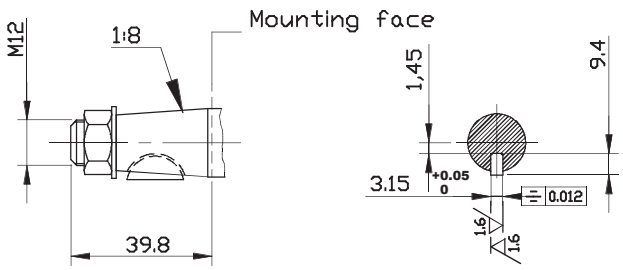
Rotation	
S	Anti-clockwise
D	Clockwise

AVAILABLE FOR QUANTITIES

DRIVE SHAFTS

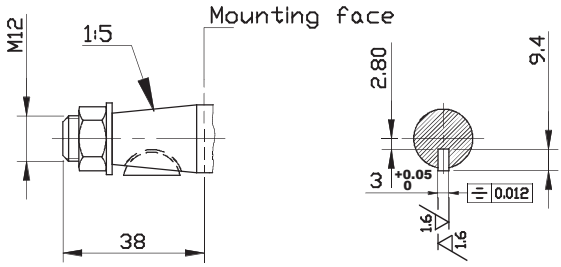
SHAFT CODE 28

Max torque 140 Nm



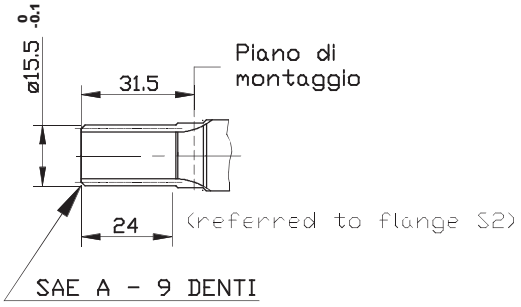
SHAFT CODE 25

Max torque 140 Nm



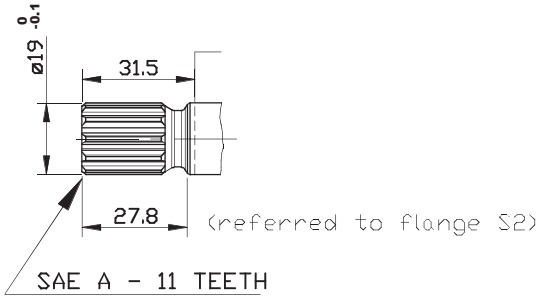
SHAFT CODE 21

Max torque 100 Nm



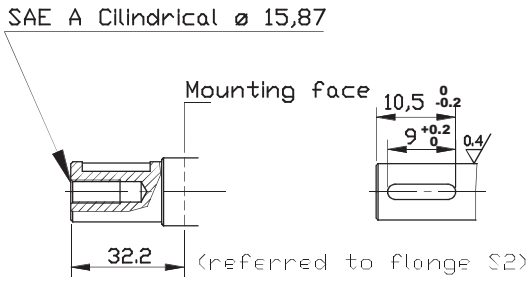
SHAFT CODE 20

Max torque 170 Nm



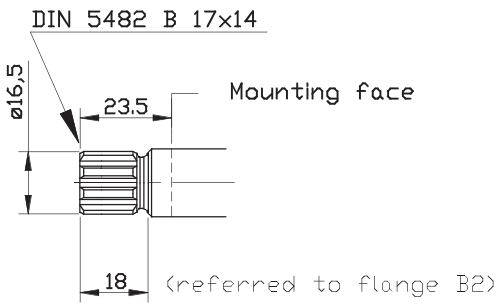
SHAFT CODE 31

Max torque 70 Nm



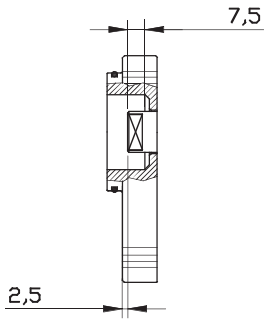
SHAFT CODE 23

Max Torque 110 Nm



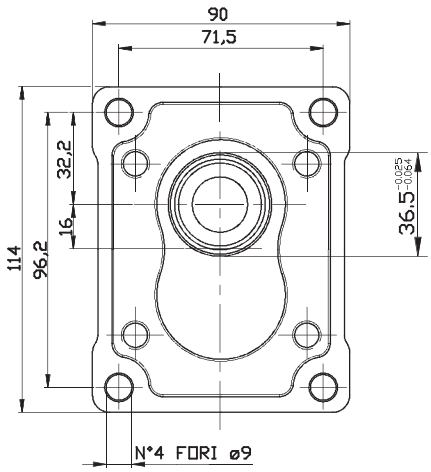
SHAFT CODE 24

Max torque 70 Nm

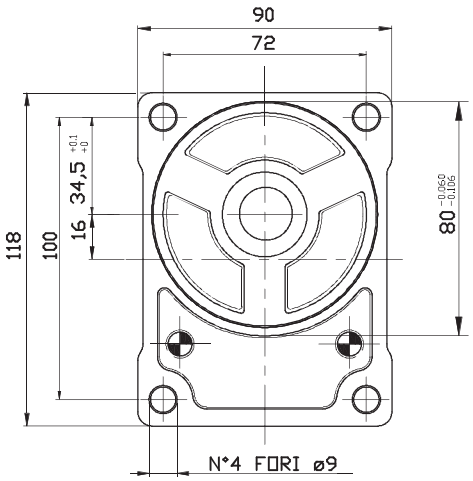


MOUNTING FLANGES

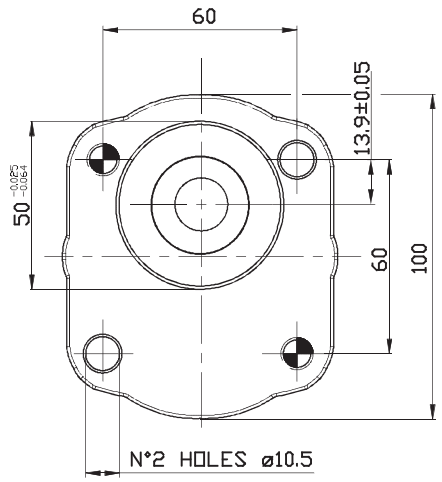
EUROPEAN STANDARD CODE P2



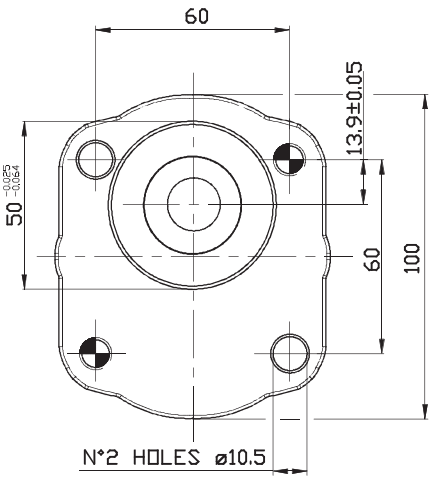
GERMAN STANDARD CODE B2



GERMAN STANDARD CODE B4

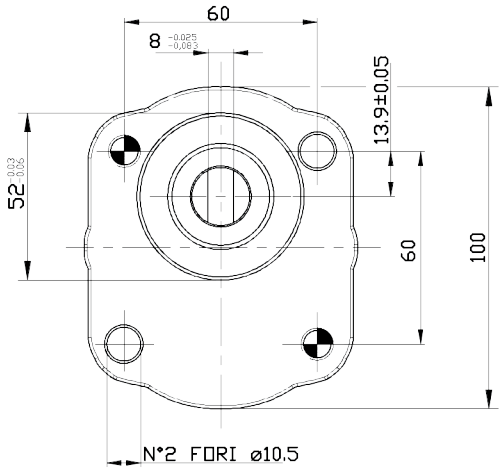


GERMAN STANDARD CODE B5

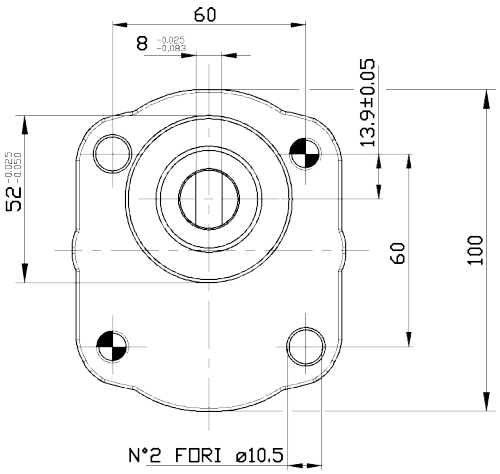


MOUNTING FLANGES

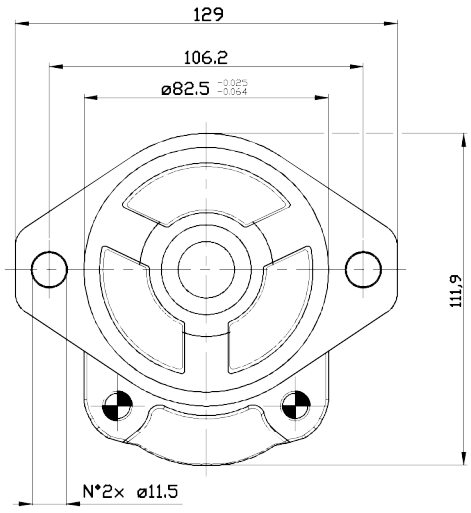
GERMAN STANDARD CODE B6



GERMAN STANDARD CODE B7

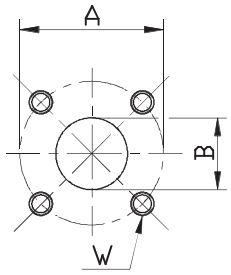


SAE A STANDARD CODE S2



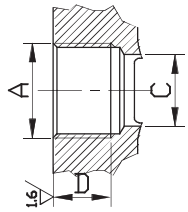
PORT SIZES

CODE B



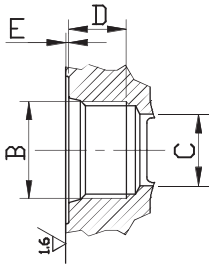
Quote	Inlet port	Outlet port
A	Ø40	Ø35
B	Ø20	Ø15
W	M6	M6

CODE G



Quote	Displacement from 04 to 11 (mm)		Displacement from 14 to 25 (mm)	
	Inlet	Outlet	Inlet	Outlet
A	1/2"	1/2"	3/4"	1/2"
C	Ø13	Ø13	Ø20	Ø13
D	14	14	16	14

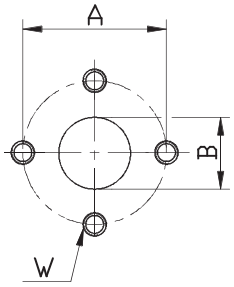
CODE R



Quote	Displacement from 04 to 11 (mm)		Displacement from 14 to 25 (mm)	
	Inlet	Outlet	Inlet	Outlet
B	7/8-14 UNF	7/8-14 UNF	1-1/16-12UN	7/8-14 UNF
C	Ø13	Ø13	Ø20	Ø13
D	14	14	16	14
E	0.8	0.8	0.5	0.8

CODE P

CONTACT OUR TECHNICAL DEPARMENT

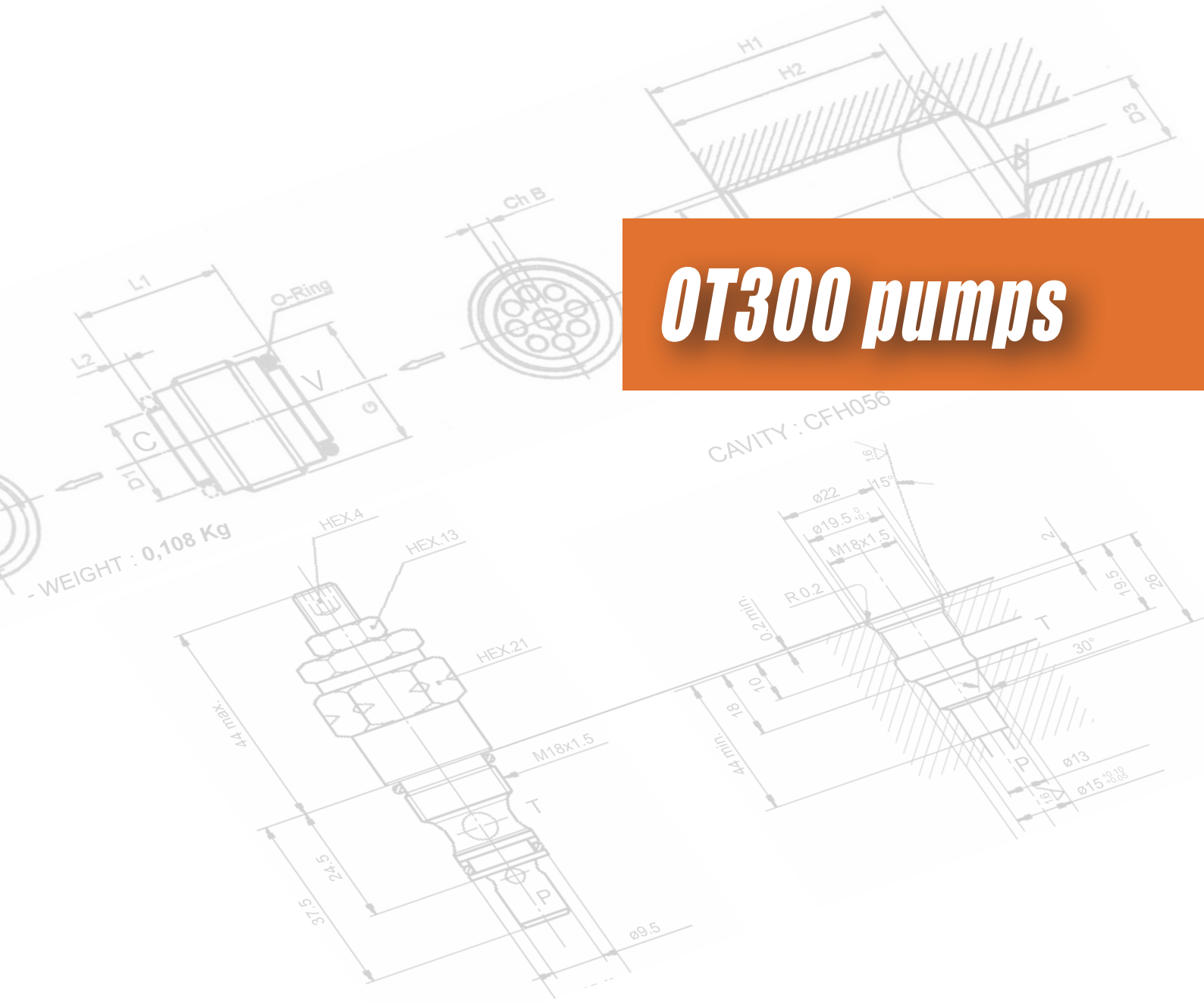


Quote	Displacement from 04 to 11 (mm)		Displacement from 14 to 25 (mm)	
	Inlet	Outlet	Inlet	Outlet
A	Ø30	Ø30	Ø40	Ø30
B	Ø13	Ø13	Ø20	Ø13
W	M6	M6	M8	M6

Ch A

FER HYDRAULIK
COMPONENTI OLEODINAMICI

OT300 pumps



GROUP 3 PUMPS

GEAR HOUSING

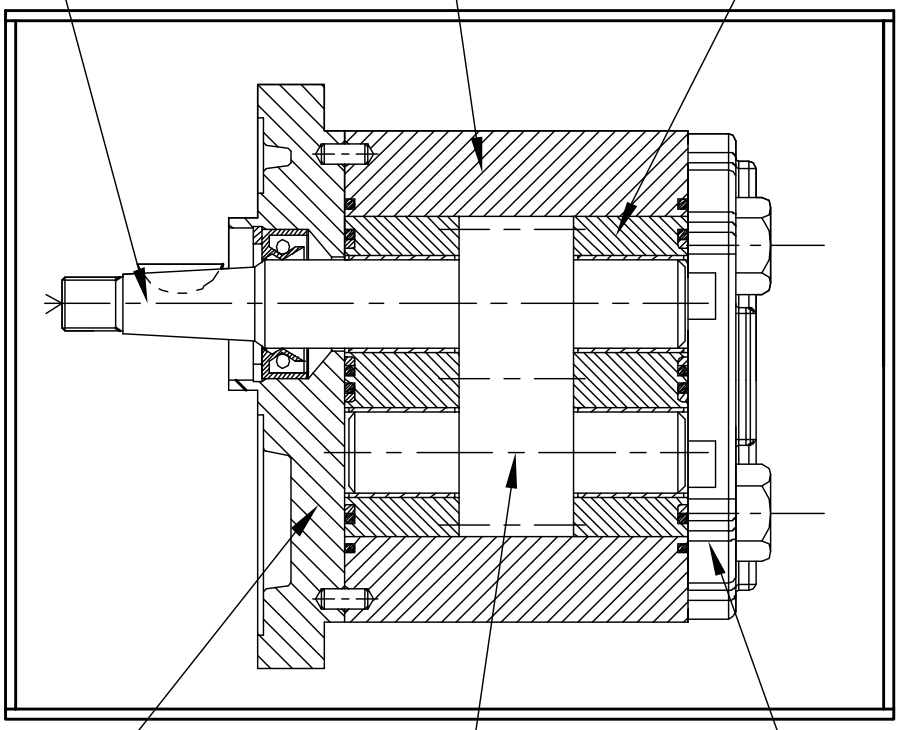
Extruded in aluminium alloy

DRIVE SHAFTS

Choice of several standard drive shafts

BEARINGS

Hi-resistant aluminium alloy with DU sleeve bearings to offer high performances.



MOUNTING FLANGES

Choice of several mounting flanges in cast iron

COVER

Made in cast iron material

GEARS

Designed specifically to reduce the noise level and offer the best performance between flow pulsation and displacements

CONSTRUCTIVE CHARACTERISTICS:

PART	MATERIAL	CHARACTERISTICS
GEARS	Hardened steel UNI 7846	Rs= 1250 N/mm^2 Rm= 1450 N/mm^2
FLANGE AND COVER	G25 / G30 cast iron	Rs= 300 N/mm^2 Rm= 450 N/mm^2
BEARINGS	Avional Bearings with DU	Rs= 350 N/mm^2 Rm= 390 N/mm^2
BODY	Etruded in aluminium alloy Series 7020	Rs= 350 N/mm^2 Rm= 390 N/mm^2
O-RINGS	Buna N Viton	90 Shore, up to 90°C 80 Shore, for high temperature
ANTIEXTRUSION	Zitel	With glass fibres

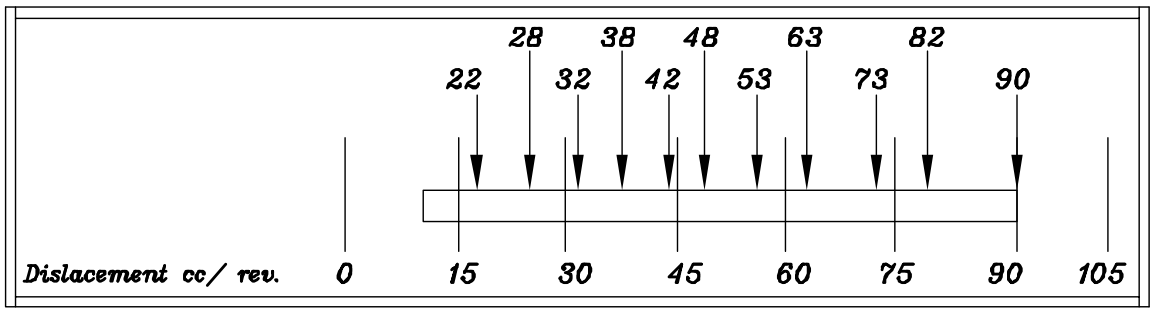
Rs= Enervation load
Rm= Breaking load

GENERAL CHARACTERISTICS:

Maximum pressures up to 300 bar.
Weight : from 8.2 Kg to 10.5 kg
Maximum speed up to 3.000 rpm.
Type of shafts: Taper 1:8
SAE B splined-13 teeth
SAE B cylindrical - Ø22.2

Type of flanges: European standard
SAE A standard.

Displacements from 22 cc/rev to 90 cc/rev.
The displacements are available according this table:



DRIVE:

The connection of the pump to the motor must be done preferably with the use of a flexible coupling to avoid any radial and/or axial force on the shaft, otherwise pump efficiency will dramatically drop due to early wear of inner moving parts.
In any applications where the motion is trasmitted through belts, it is necessary to use a support to avoid any radial or axial load to the pump shaft.

WORKING CONDITIONS- LIMIT PERFORMANCES

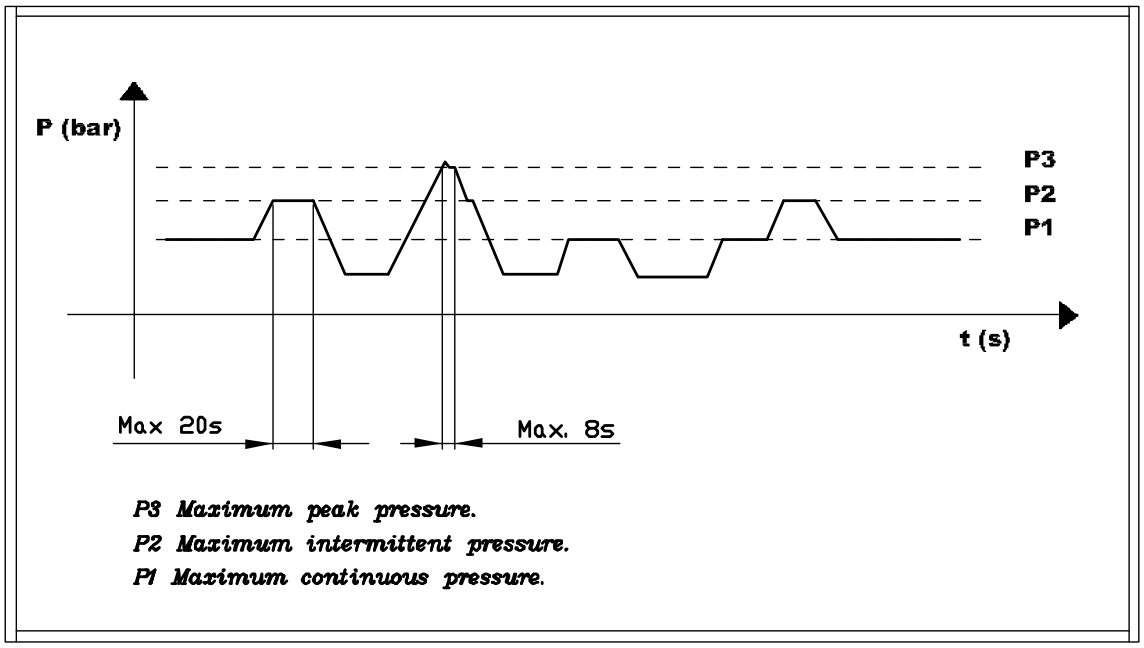
In normal working conditions there must be, in the suction pipe, a pressure lower than the atmospheric pressure.

The pressure range in suction must be:

Min. 0.75 bar (absolute)	MAX 2,0 bar (absolute)

The maximun pressure values "P1" are referred to a continuous working at 1500 rpm with standard hydraulic fluids with minimum viscosity of 10 cSt.
For heavier working conditions (viscosity or high temperature) it is necessary to reduce the "P1" values.

In the following table are described the admitted pressures:

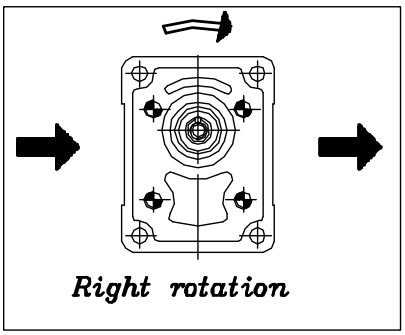


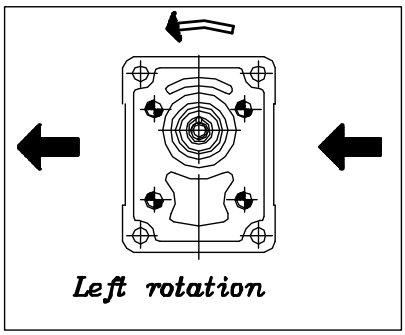
P3 Maximum peak pressure.
P2 Maximum intermittent pressure.
P1 Maximum continuous pressure.

The standard working speeds (minimum and maximum) are the following:

Min. = 400 rpm	Max = (See following table)

DIRECTION OF ROTATION LOOKING AT THE SHAFT:





FLUID FILTRATION

It is known that in many cases the premature pump performances reduction is due to a non correct filtration in the circuit.
The presence of contamination particles in the fluid usually corresponds to an irreparable wear of the pump internal parts.
It is raccomanded to pay attention to the plant cleaning, mainly in the starting activity.
The starting fluid contamination it must be according to the Norms ISO 4406 and it should not exceed the Class 19/16 with a filter 3x75.

Here below the technical parameters to respect:

FILTRATION IN SUCTION LINE	30 / 60 Nominal micron
FILTRATION IN PRESSURE LINE	10 / 25 absolute micron
MAXIMUM SPEED IN SUCTION	0.5 / 1.5 m/s
MAXIMUM SPEED IN OUTPUT	3.0 / 5.5 m/s

Sometime (contaminated places) it is racommended to improve the filtration in pressure line and fit also an air filter.

HYDRAULIC FLUIDS

It is recommended the use of fluids made for hydraulic circuits.
Usually they are hydraulic oils with mineral basis HLP HV (DIN 51524).
Here below the technical parameters to respect:

MINIMUM VISCOSITY	10 mm^2/s
MAXIMUM VISCOSITY	100 mm^2/s
SUGGESTED VISCOSITY	20 mm^2/s / 100 mm /s
SUGGESTED TEMPERATURE	30°C / 50°C
WORKING TEMPERATURE	-15°C / +80°C

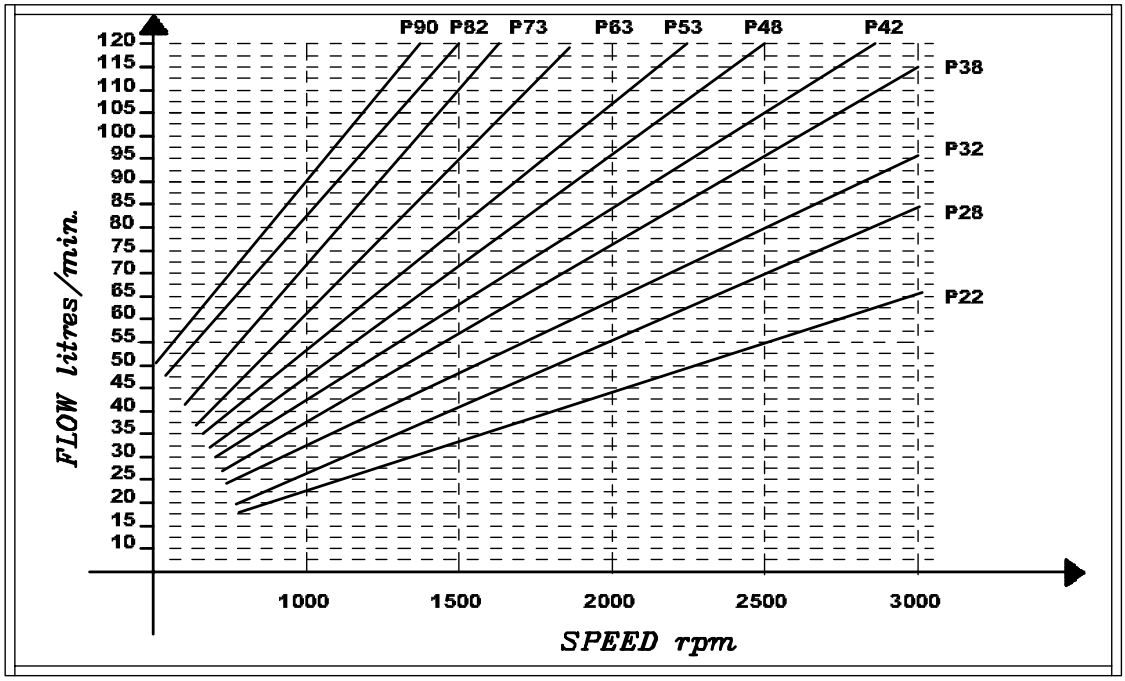
For applications with water-glycol (HF-C) it is racommended to consider the following limitations: 1500 rpm maximum speed and 200 bar maximum pressure.
For applications with phosphate ester fluids, please contact our Technical department.

ISTALLATION INSTRUCTION

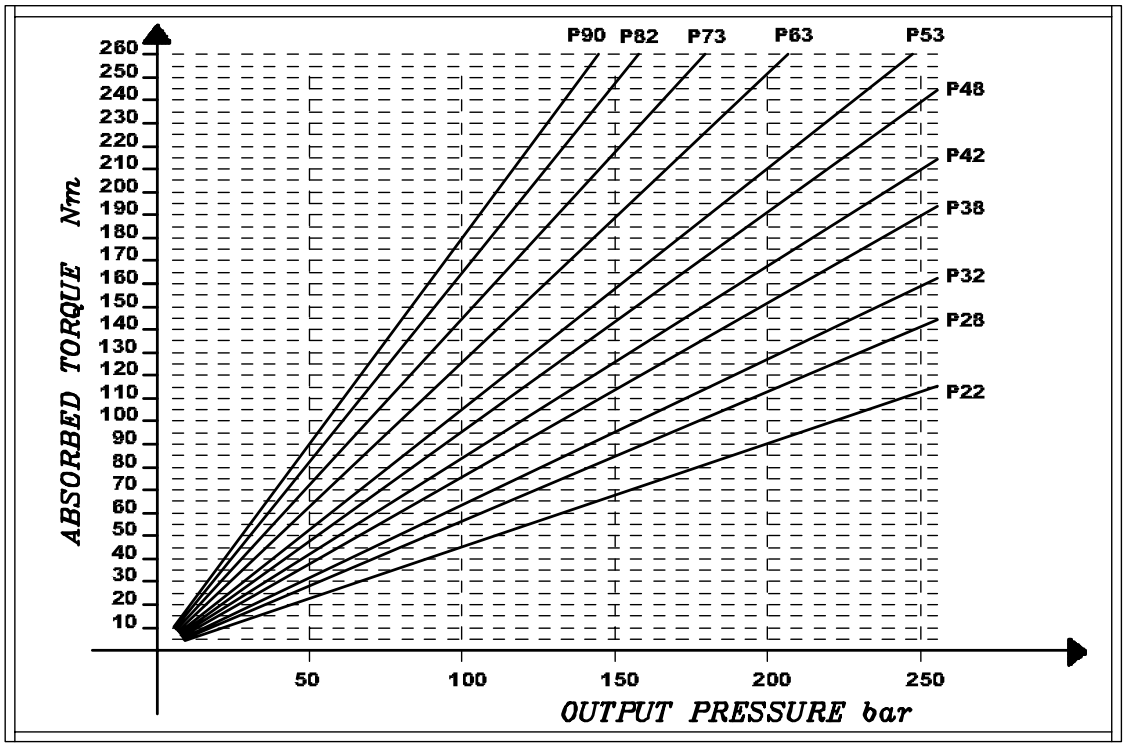
During the first starting it is racommended:
- to set the maximum pressure relief valves to a low value and gradually increase the pressure.
- to check, with single rotation pumps, that the rotation direction it is correct.
- to check that the connection betwen the motor and pump shaft is correct: without radial or axial load.
- to avoid starting under pressure in low temperature conditions or after long period of inactivity
- to check the fluid level in the tank
- to disconnect the return pipe and purge any air in the circuit
- to protect the pumpshaft seal when painting power pack
- to use suitable systems in the return lines to tank, to avoid turbulence in the circuit and ingress of air, water or contamination
- to check the torque that must be lower than the maximum torque admissible on the pump shaft
- to use new oil filters with absence of water or any other emulsifying substance
- to avoid starting with a air-oil solution

It is important to specify an oil tank at least twice the flow from the pump.

FLOW CHARACTERISTICS CURVES



ABSORBED TORQUE



NOTE

Above flow characteristics curves have been made considering a volumetric efficiency of 95%

PUMP CALCULATION

V	Displacement	CC / REV
Q	Flow	l/min
P	Power	kW
C	Torque	N · m
N	Speed	-15°C / +80°C
ΔP	Pressure	bar
n_v	Volumetric efficiency	0.95
n_m	Mechanical efficiency	0.9
n_t	Total efficiency	0.85

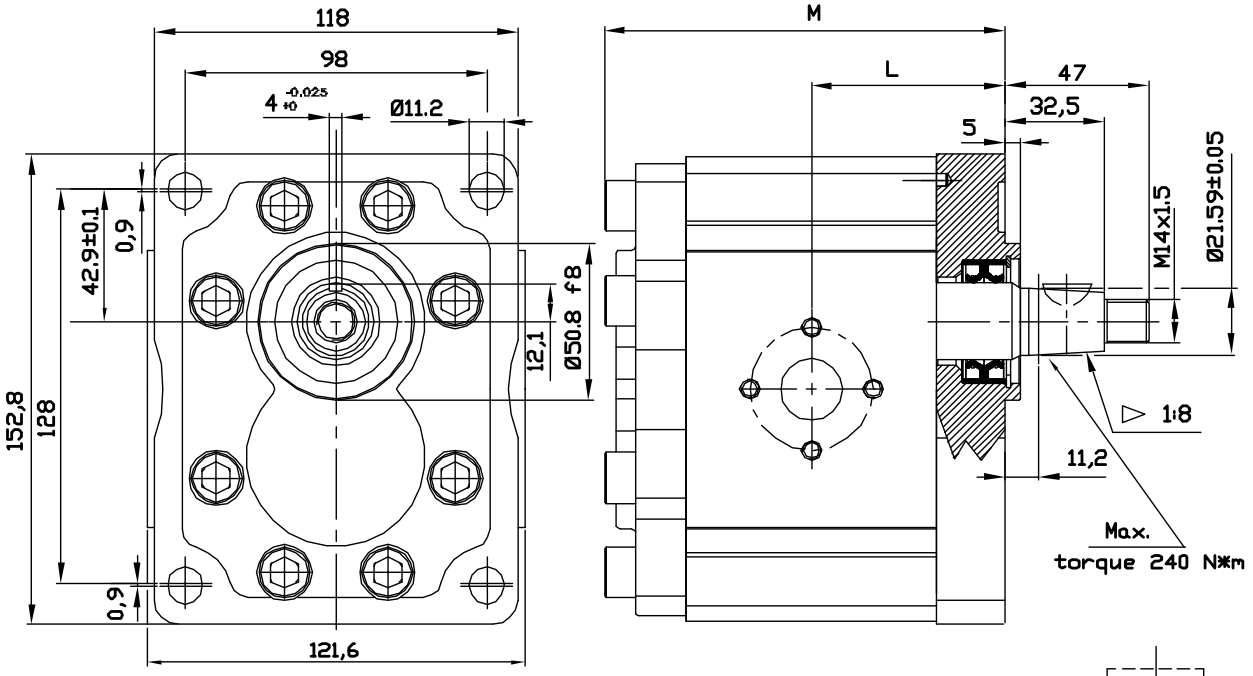
$$Q = V \cdot n_v \cdot N \cdot 10^{-3} \qquad l/min$$

$$C = \frac{\Delta P \cdot V}{62.8 \cdot n_m} \qquad N \cdot m$$

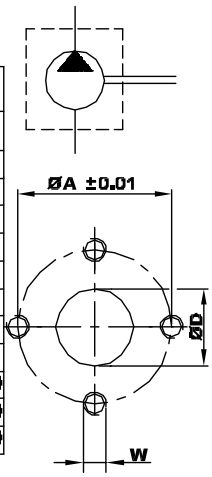
$$P = \frac{\Delta P \cdot V \quad N}{612000 \cdot n_t} \qquad kW$$

GROUP 3 PUMPS - EUROPEAN STANDARD

VERSION: P38 P3



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 300 P22	22	260	300	3000	57,4	119,3	27	51	M10	19	40	M8
OT 300 P28	28	260	300	3000	59,7	123,7	27	51	M10	19	40	M8
OT 300 P32	32	260	300	3000	61,2	126,9	27	51	M10	19	40	M8
OT 300 P38	38	240	280	3000	63,5	131,5	27	51	M10	19	40	M8
OT 300 P42	42	240	280	3000	65.0	134,5	27	51	M10	19	40	M8
OT 300 P48	48	240	280	3000	72,3	149,1	27	51	M10	19	40	M8
OT 300 P53	53	220	250	3000	74,2	152,9	27	51	M10	19	40	M8
OT 300 P63	63	200	240	2100	78,0	160,5	27	51	M10	19	40	M8
OT 300 P73	73	180	210	2100	81,9	168,2	36	62	M12	27	51	M10
OT 300 P82	82	170	200	2100	85,3	175,1	36	62	M12	27	51	M10
OT 300 P90	90	150	180	2100	88,3	181,1	36	62	M12	27	51	M10



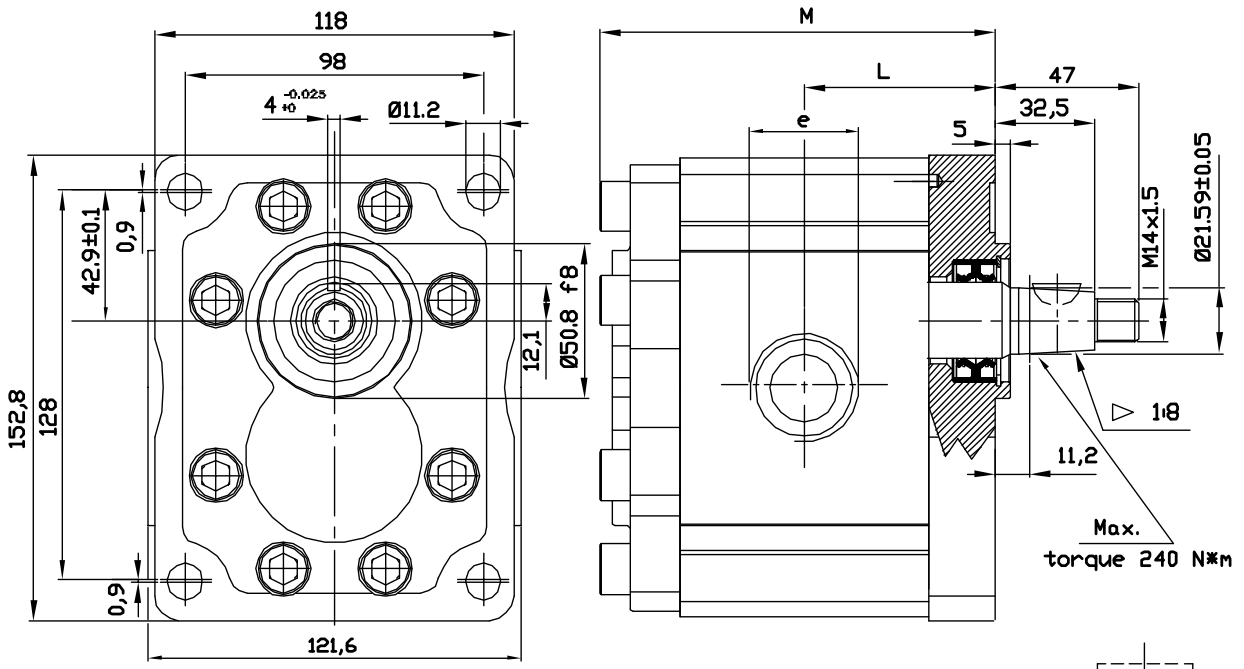
EXAMPLE OF ORDERING CODE

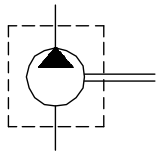
OT300 P 28 S / P 38 P3

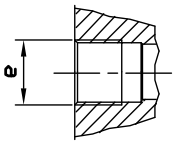
- OT300 — Series
- P — Pump
- 28 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- P — Body for European flanges
- 38 — Taper shaft (1:8)
- P3 — European standard flange

AVAILABLE FOR QUANTITIES

VERSION: G38 P3







Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port e	Outlet port e
OT 300 P22	22	260	300	3000	57,4	119,3	G 1	G 3/4
OT 300 P28	28	260	300	3000	59,7	123,7	G 1	G 3/4
OT 300 P32	32	260	300	3000	61,2	126,9	G 1	G 3/4
OT 300 P38	38	240	280	3000	63,5	131,5	G 1	G 3/4
OT 300 P42	42	240	280	3000	65.0	134,5	G 1	G 3/4
OT 300 P48	48	240	280	3000	72,3	149,1	G 1	G 3/4
OT 300 P53	53	220	250	3000	74,2	152,9	G 1	G 3/4
OT 300 P63	63	200	240	2100	78,0	160,5	G 1+1/4	G 3/4
OT 300 P73	73	180	210	2100	81,9	168,2	G 1+1/4	G 1
OT 300 P82	82	170	200	2100	85,3	175,1	G 1+1/4	G 1
OT 300 P90	90	150	180	2100	88,3	181,1	G 1+1/4	G 1

EXAMPLE OF ORDERING CODE

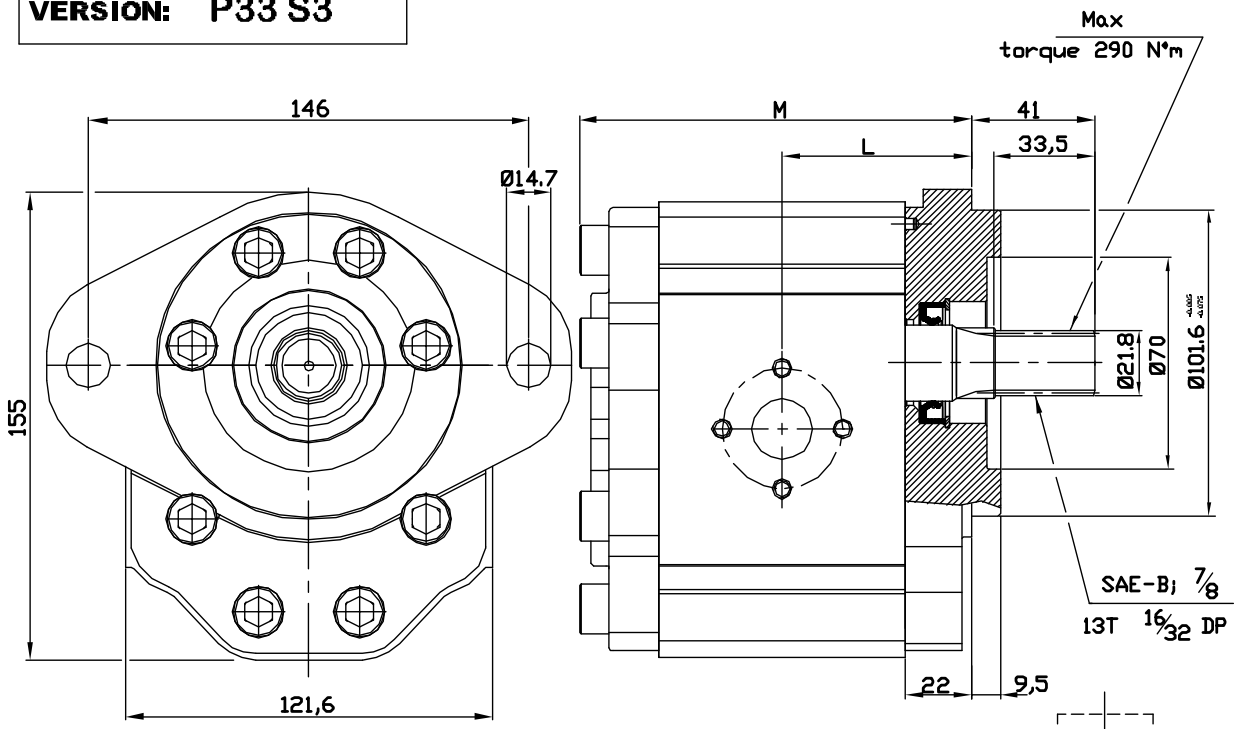
OT300 P 28 S / G 38 P3

- OT300 — Series
- P — Pump
- 28 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- 38 — Taper shaft (1:8)
- P3 — European standard flange

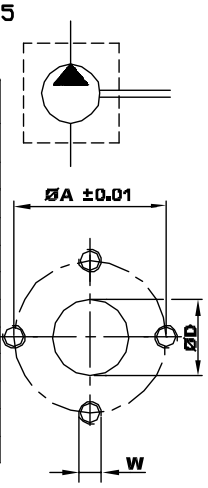
AVAILABLE FOR QUANTITIES

GROUP 3 PUMPS - STANDARD SAE "B"

VERSION: P33 S3



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 300 P22	22	260	300	3000	57,4	119,3	27	51	M10	19	40	M8
OT 300 P28	28	260	300	3000	59,7	123,7	27	51	M10	19	40	M8
OT 300 P32	32	260	300	3000	61,2	126,9	27	51	M10	19	40	M8
OT 300 P38	38	240	280	3000	63,5	131,5	27	51	M10	19	40	M8
OT 300 P42	42	240	280	3000	65.0	134,5	27	51	M10	19	40	M8
OT 300 P48	48	240	280	3000	72,3	149,1	27	51	M10	19	40	M8
OT 300 P53	53	220	250	3000	74,2	152,9	27	51	M10	19	40	M8
OT 300 P63	63	200	240	2100	78,0	160,5	27	51	M10	19	40	M8
OT 300 P73	73	180	210	2100	81,9	168,2	36	62	M12	27	51	M10
OT 300 P82	82	170	200	2100	85,3	175,1	36	62	M12	27	51	M10
OT 300 P90	90	150	180	2100	88,3	181,1	36	62	M12	27	51	M10



EXAMPLE OF ORDERING CODE

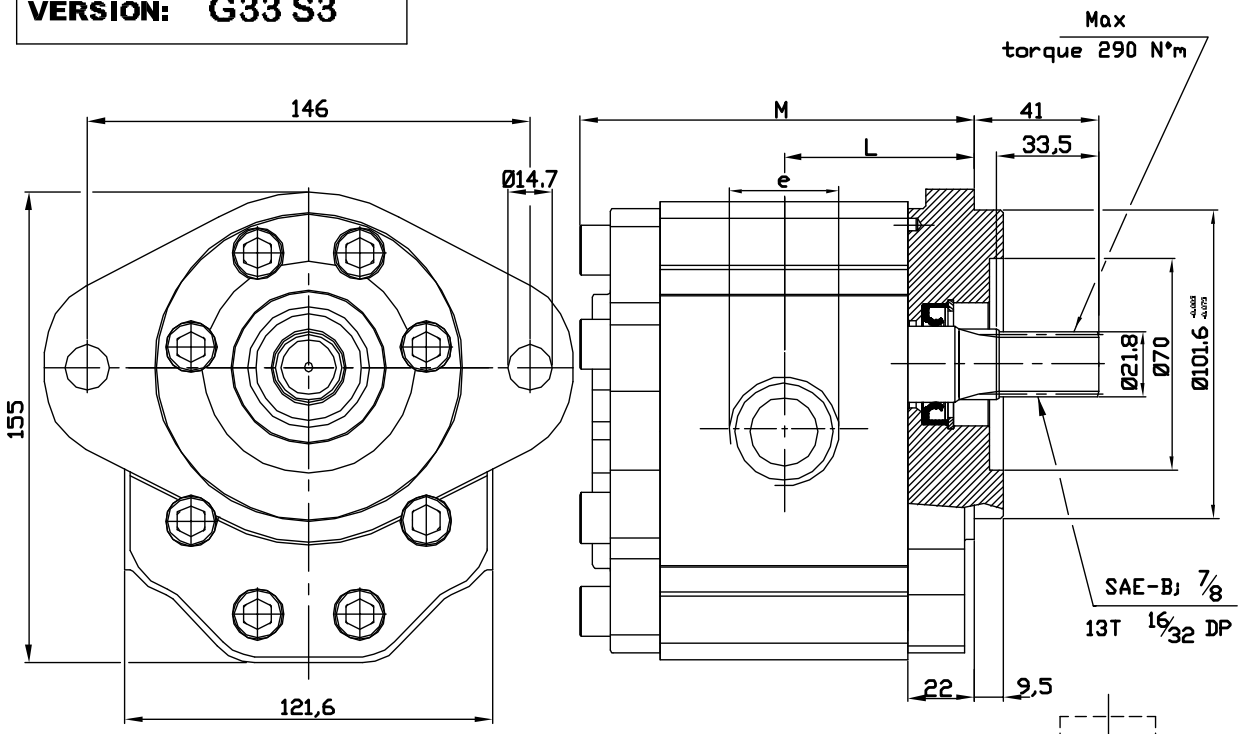
OT300 P 28 S / P 33 S3

- OT300 — Series
- P — Pump
- 28 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- P — Body for European flanges
- 33 — SAE B splined 13 Teeth-16/32 DP
- S3 — SAE B flange

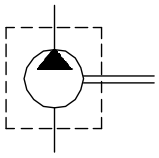
AVAILABLE FOR QUANTITIES

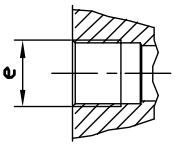
GROUP 3 PUMPS - STANDARD SAE "B"

VERSION: G33 S3



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port e	Outlet port e
OT 300 P22	22	260	300	3000	57,4	119,3	G 1	G 3/4
OT 300 P28	28	260	300	3000	59,7	123,7	G 1	G 3/4
OT 300 P32	32	260	300	3000	61,2	126,9	G 1	G 3/4
OT 300 P38	38	240	280	3000	63,5	131,5	G 1	G 3/4
OT 300 P42	42	240	280	3000	65.0	134,5	G 1	G 3/4
OT 300 P48	48	240	280	3000	72,3	149,1	G 1	G 3/4
OT 300 P53	53	220	250	3000	74,2	152,9	G 1	G 3/4
OT 300 P63	63	200	240	2100	78,0	160,5	G 1+1/4	G 3/4
OT 300 P73	73	180	210	2100	81,9	168,2	G 1+1/4	G 1
OT 300 P82	82	170	200	2100	85,3	175,1	G 1+1/4	G 1
OT 300 P90	90	150	180	2100	88,3	181,1	G 1+1/4	G 1





EXAMPLE OF ORDERING CODE

OT300 P 28 S / G 33 S3

- OT300 — Series
- P — Pump
- 28 — Displacement (see above table)
- S — Rotation

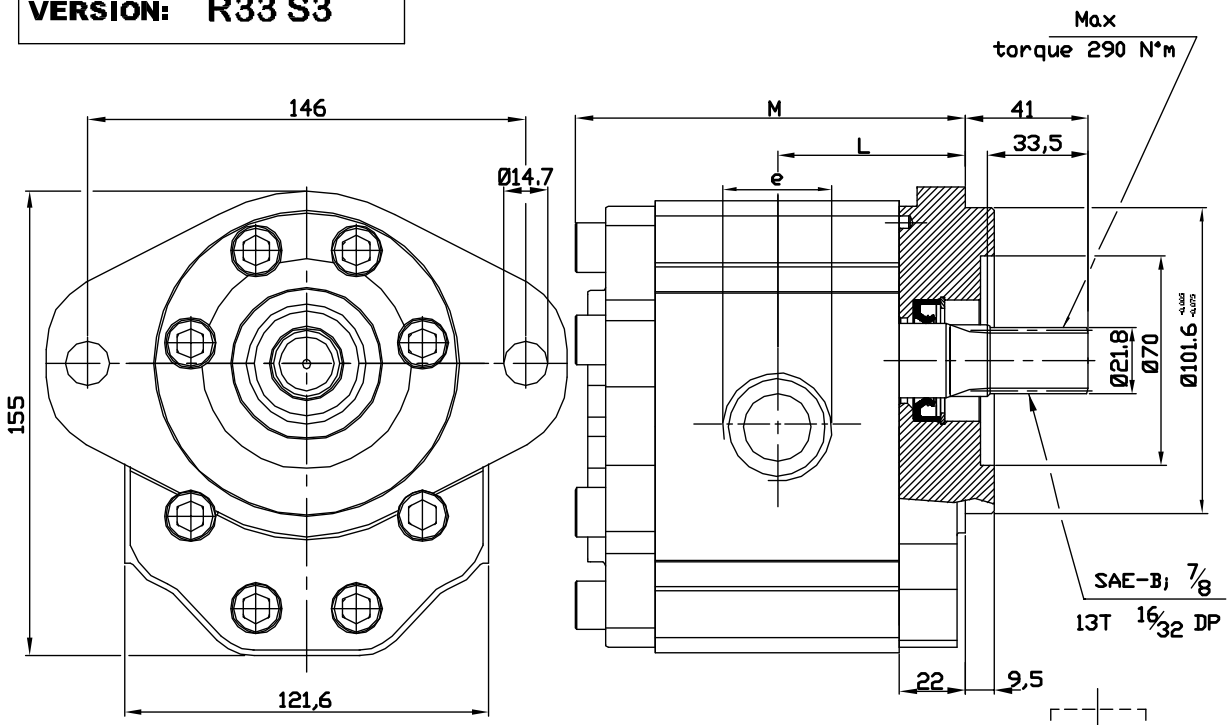
S	Anti-clockwise
D	Clockwise

- G — Body with threated ports (BSP)
- 33 — SAE B splined 13 Teeth-16/32 DP
- S3 — SAE B flange

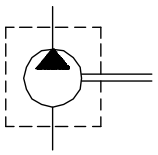
AVAILABLE FOR QUANTITIES

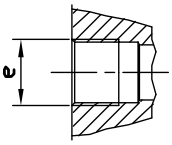
GROUP 3 PUMPS - STANDARD SAE "B"

VERSION: R33 S3



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port e	Outlet port e
OT 300 P22	22	260	300	3000	57,4	119,3	1-5/16" UNF	1-1/16" UNF
OT 300 P28	28	260	300	3000	59,7	123,7	1-5/16" UNF	1-1/16" UNF
OT 300 P32	32	260	300	3000	61,2	126,9	1-5/16" UNF	1-1/16" UNF
OT 300 P38	38	240	280	3000	63,5	131,5	1-5/8" UNF	1-5/16" UNF
OT 300 P42	42	240	280	3000	65.0	134,5	1-5/8" UNF	1-5/16" UNF
OT 300 P48	48	240	280	3000	72,3	149,1	1-5/8" UNF	1-5/16" UNF
OT 300 P53	53	220	250	3000	74,2	152,9	1-5/8" UNF	1-5/16" UNF
OT 300 P63	63	200	240	2100	78,0	160,5	1-5/8" UNF	1-5/16" UNF
OT 300 P73	73	180	210	2100	81,9	168,2	1-7/8" UNF	1-5/8" UNF
OT 300 P82	82	170	200	2100	85,3	175,1	1-7/8" UNF	1-5/8" UNF
OT 300 P90	90	150	180	2100	88,3	181,1	1-7/8" UNF	1-5/8" UNF





EXAMPLE OF ORDERING CODE

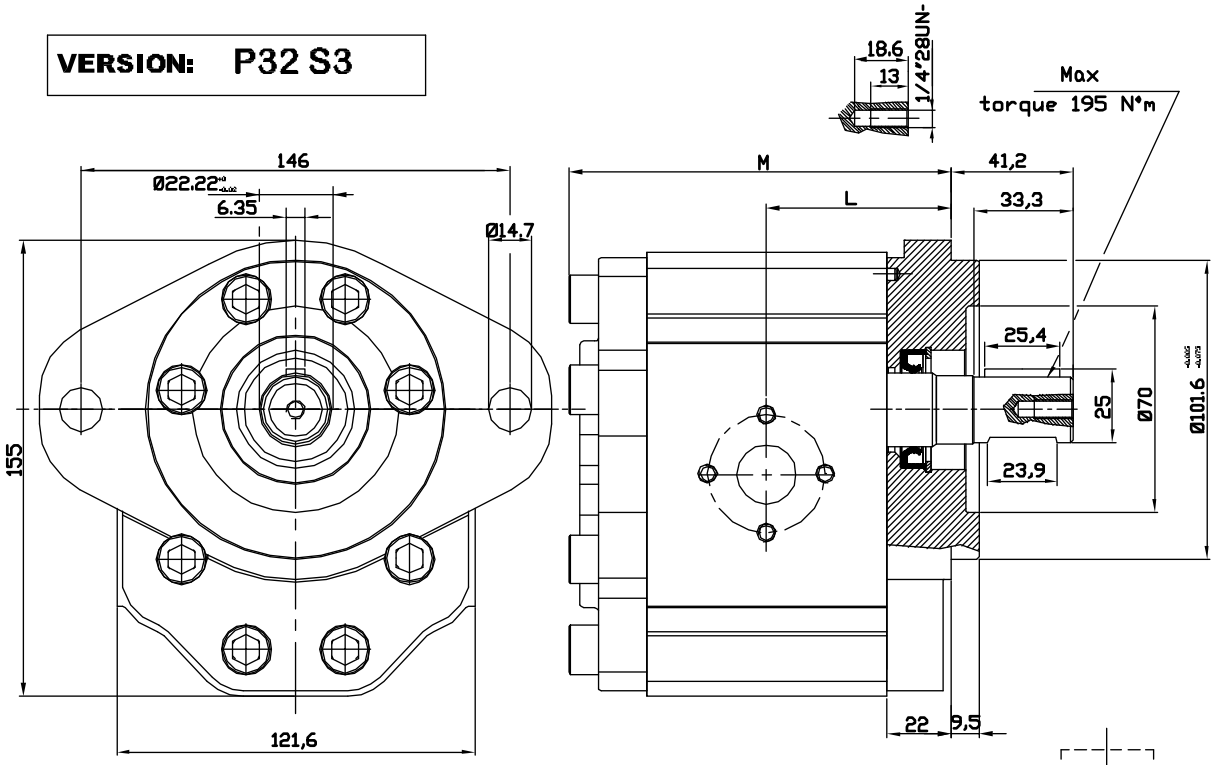
OT300 P 28 S / R 33 S3

- OT300 — Series
- P — Pump
- 28 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- R — Body with O-ring boss ports
- 33 — SAE B splined 13 Teeth-16/32 DP
- S3 — SAE B flange

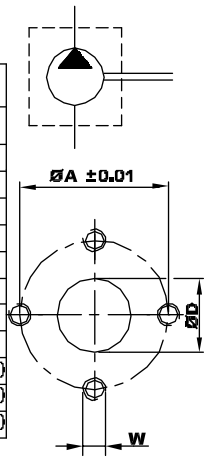
AVAILABLE FOR QUANTITIES

GROUP 3 PUMPS - STANDARD SAE "B"

VERSION: P32 S3



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 300 P22	22	260	300	3000	57,4	119,3	27	51	M10	19	40	M8
OT 300 P28	28	260	300	3000	59,7	123,7	27	51	M10	19	40	M8
OT 300 P32	32	260	300	3000	61,2	126,9	27	51	M10	19	40	M8
OT 300 P38	38	240	280	3000	63,5	131,5	27	51	M10	19	40	M8
OT 300 P42	42	240	280	3000	65.0	134,5	27	51	M10	19	40	M8
OT 300 P48	48	240	280	3000	72,3	149,1	27	51	M10	19	40	M8
OT 300 P53	53	220	250	3000	74,2	152,9	27	51	M10	19	40	M8
OT 300 P63	63	200	240	2100	78,0	160,5	27	51	M10	19	40	M8
OT 300 P73	73	180	210	2100	81,9	168,2	36	62	M12	27	51	M10
OT 300 P82	82	170	200	2100	85,3	175,1	36	62	M12	27	51	M10
OT 300 P90	90	150	180	2100	88,3	181,1	36	62	M12	27	51	M10



EXAMPLE OF ORDERING CODE

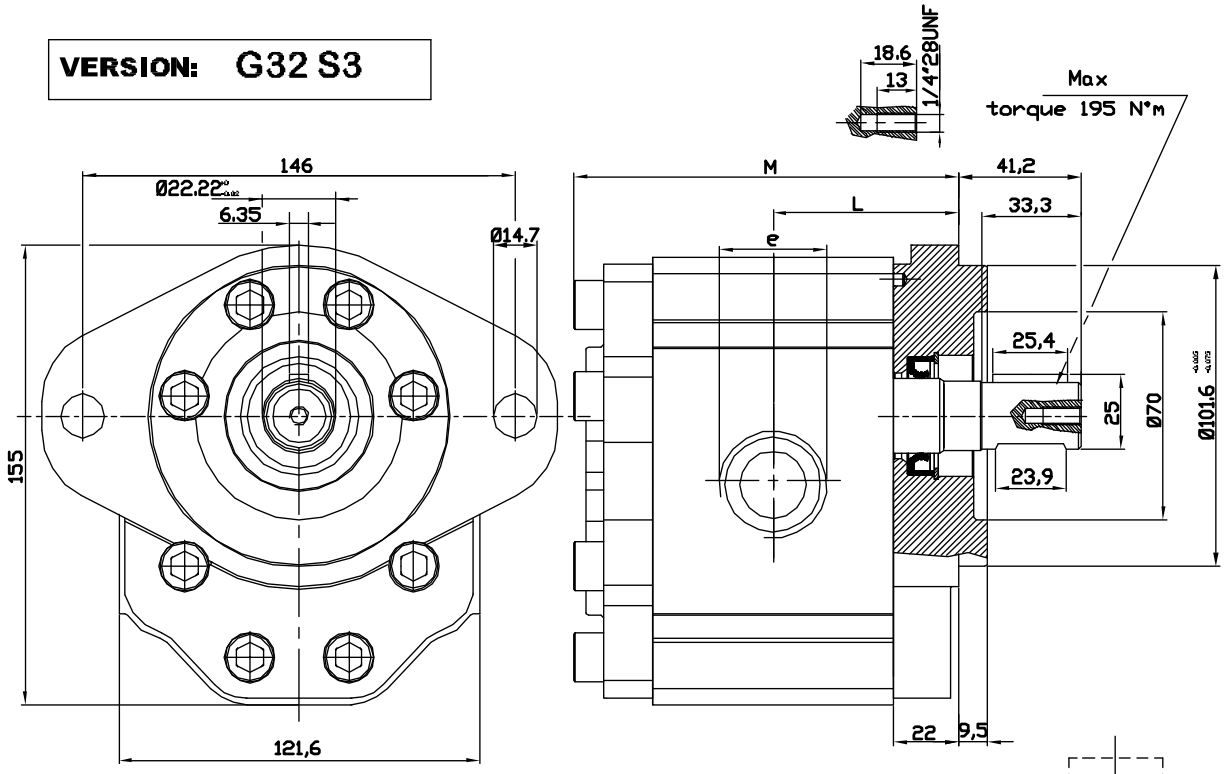
OT300 P 28 S / P 32 S3

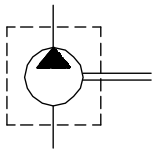
- OT300 — Series
- P — Pump
- 28 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- P — Body for European flanges
- 32 — SAE B cylindrical shaft Ø22.2
- S3 — SAE B flange

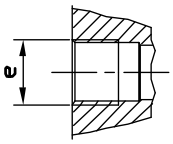
AVAILABLE FOR QUANTITIES

GROUP 3 PUMPS - STANDARD SAE "B"

VERSION: G32 S3







Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port e	Outlet port e
OT 300 P22	22	260	300	3000	57,4	119,3	G 1	G 3/4
OT 300 P28	28	260	300	3000	59,7	123,7	G 1	G 3/4
OT 300 P32	32	260	300	3000	61,2	126,9	G 1	G 3/4
OT 300 P38	38	240	280	3000	63,5	131,5	G 1	G 3/4
OT 300 P42	42	240	280	3000	65.0	134,5	G 1	G 3/4
OT 300 P48	48	240	280	3000	72,3	149,1	G 1	G 3/4
OT 300 P53	53	220	250	3000	74,2	152,9	G 1	G 3/4
OT 300 P63	63	200	240	2100	78,0	160,5	G 1+1/4	G 3/4
OT 300 P73	73	180	210	2100	81,9	168,2	G 1+1/4	G 1
OT 300 P82	82	170	200	2100	85,3	175,1	G 1+1/4	G 1
OT 300 P90	90	150	180	2100	88,3	181,1	G 1+1/4	G 1

EXAMPLE OF ORDERING CODE

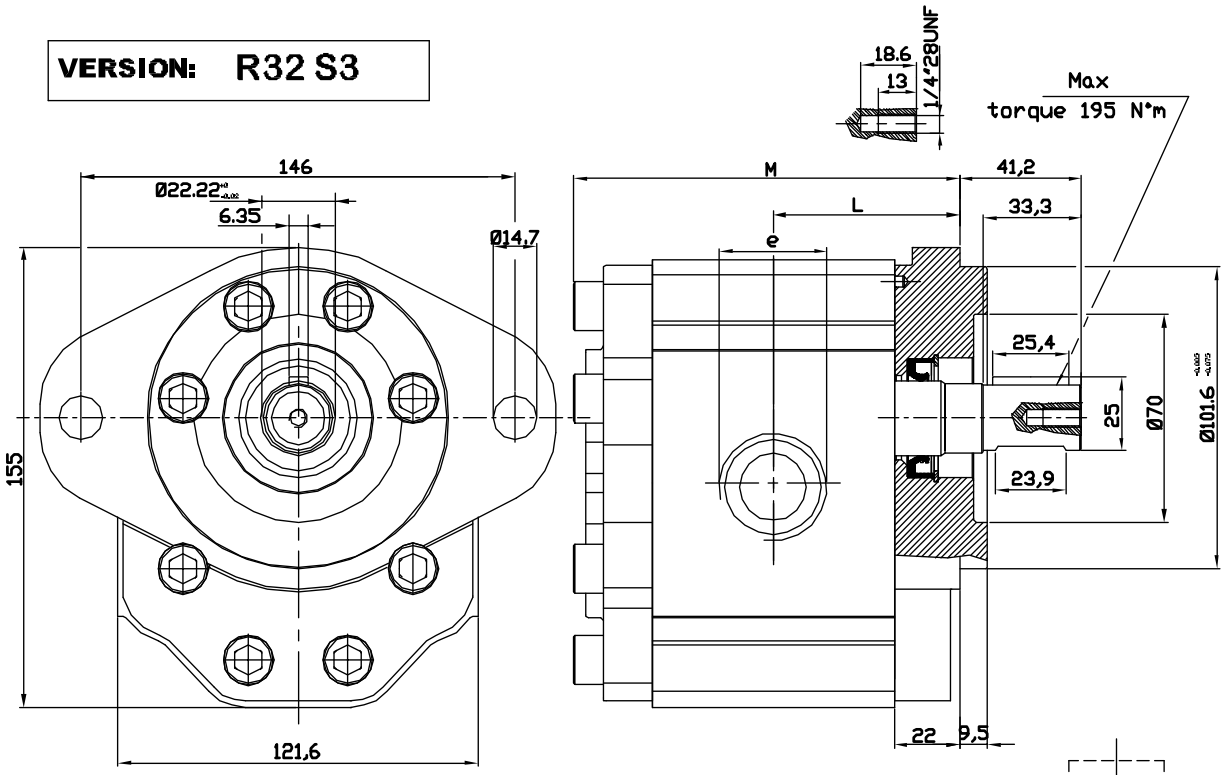
OT300 P 28 S / G 32 S3

- OT300 — Series
- P — Pump
- 28 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- 32 — SAE B cylindrical shaft Ø22.2
- S3 — SAE B flange

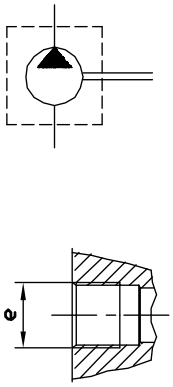
AVAILABLE FOR QUANTITIES

GROUP 3 PUMPS - STANDARD SAE "B"

VERSION: R32 S3



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port e	Outlet port e
OT 300 P22	22	260	300	3000	57,4	119,3	1-5/16" UNF	1-1/16" UNF
OT 300 P28	28	260	300	3000	59,7	123,7	1-5/16" UNF	1-1/16" UNF
OT 300 P32	32	260	300	3000	61,2	126,9	1-5/16" UNF	1-1/16" UNF
OT 300 P38	38	240	280	3000	63,5	131,5	1-5/8" UNF	1-5/16" UNF
OT 300 P42	42	240	280	3000	65.0	134,5	1-5/8" UNF	1-5/16" UNF
OT 300 P48	48	240	280	3000	72,3	149,1	1-5/8" UNF	1-5/16" UNF
OT 300 P53	53	220	250	3000	74,2	152,9	1-5/8" UNF	1-5/16" UNF
OT 300 P63	63	200	240	2100	78,0	160,5	1-5/8" UNF	1-5/16" UNF
OT 300 P73	73	180	210	2100	81,9	168,2	1-7/8" UNF	1-5/8" UNF
OT 300 P82	82	170	200	2100	85,3	175,1	1-7/8" UNF	1-5/8" UNF
OT 300 P90	90	150	180	2100	88,3	181,1	1-7/8" UNF	1-5/8" UNF



EXAMPLE OF ORDERING CODE

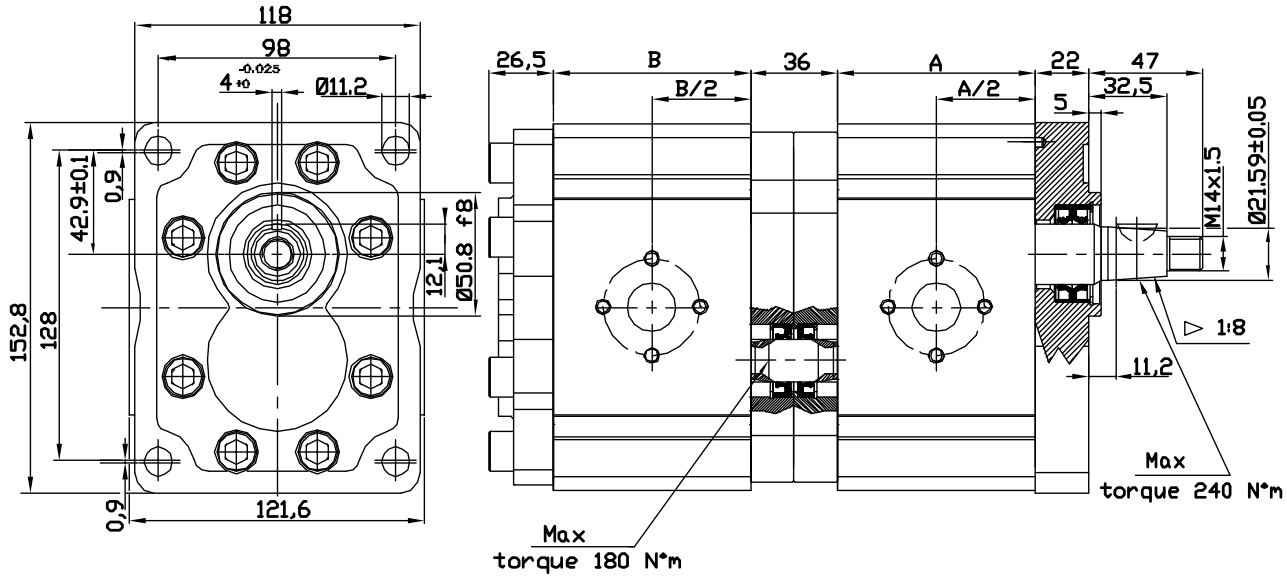
OT300 P 28 S / R 32 S3

- OT300 — Series
- P — Pump
- 28 — Displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- R — Body with O-ring boss ports
- 32 — SAE B cylindrical shaft Ø22.2
- S3 — SAE B flange

AVAILABLE FOR QUANTITIES

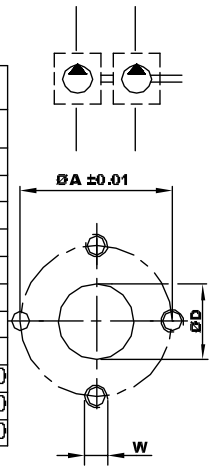
GROUP 3 PUMPS - TANDEM

VERSION: P38 P3



NOTE: The biggest displacement pump must be in the front position

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 300 P22	22	260	300	3000	70,8	70,8	27	51	M10	19	40	M8
OT 300 P28	28	260	300	3000	75,4	75,4	27	51	M10	19	40	M8
OT 300 P32	32	260	300	3000	78,4	78,4	27	51	M10	19	40	M8
OT 300 P38	38	240	280	3000	83,0	83,0	27	51	M10	19	40	M8
OT 300 P42	42	240	280	3000	86,0	86,0	27	51	M10	19	40	M8
OT 300 P48	48	240	280	3000	100,6	100,6	27	51	M10	19	40	M8
OT 300 P53	53	220	250	3000	104,4	104,4	27	51	M10	19	40	M8
OT 300 P63	63	200	240	2100	112,0	112,0	27	51	M10	19	40	M8
OT 300 P73	73	180	210	2100	119,7	119,7	36	62	M12	27	51	M10
OT 300 P82	82	170	200	2100	126,6	126,6	36	62	M12	27	51	M10
OT 300 P90	90	150	180	2100	132,6	132,6	36	62	M12	27	51	M10



EXAMPLE OF ORDERING CODE

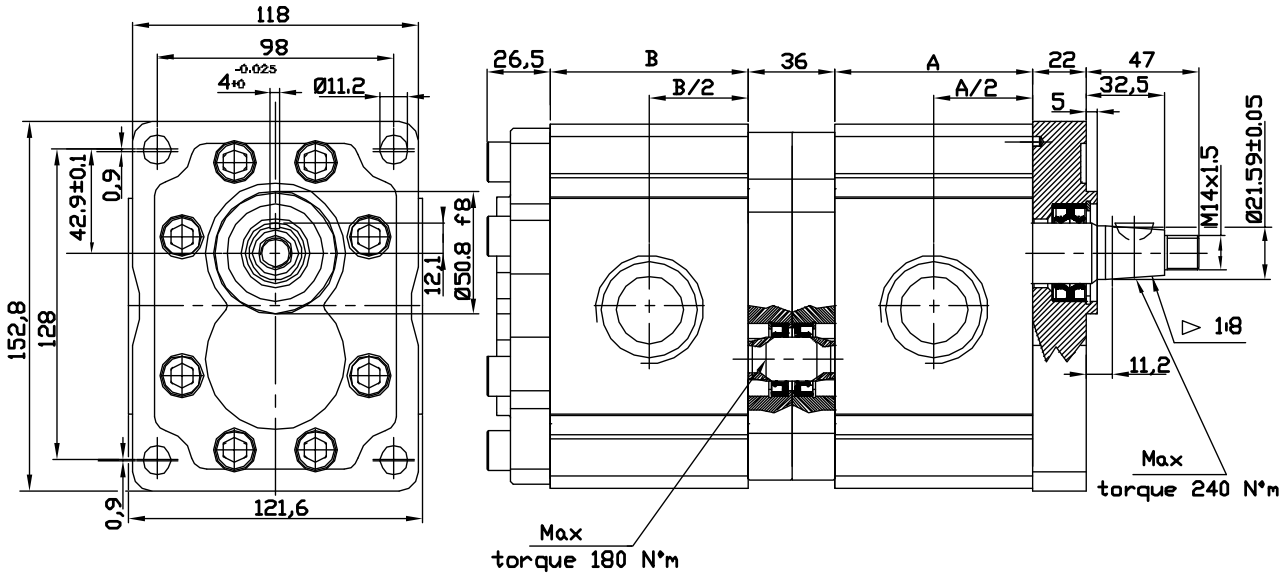
OT300 P 48 / 22 S / P 38 P3 / 2

- Series
- Pump
- Front pump displacement (see above table)
- Second pump displacement (see above table)
- Rotation: S Anti-clockwise; D Clockwise
- 1 = One inlet port; 2 = Two inlet ports
- European standard flange
- Taper shaft (1:8)
- Body for European flanges

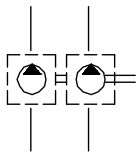
AVAILABLE FOR QUANTITIES

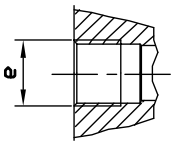
GROUP 3 PUMPS - TANDEM

VERSION: G38 P3



NOTE: The biggest displacement pump must be in the front position





Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port e	Outlet port e
OT 300 P22	22	260	300	3000	70,8	70,8	G 1	G 3/4
OT 300 P28	28	260	300	3000	75,4	75,4	G 1	G 3/4
OT 300 P32	32	260	300	3000	78,4	78,4	G 1	G 3/4
OT 300 P38	38	240	280	3000	83,0	83,0	G 1	G 3/4
OT 300 P42	42	240	280	3000	86,0	86,0	G 1	G 3/4
OT 300 P48	48	240	280	3000	100,6	100,6	G 1	G 3/4
OT 300 P53	53	220	250	3000	104,4	104,4	G 1	G 3/4
OT 300 P63	63	200	240	2100	112,0	112,0	G 1+1/4	G 3/4
OT 300 P73	73	180	210	2100	119,7	119,7	G 1+1/4	G 1
OT 300 P82	82	170	200	2100	126,6	126,6	G 1+1/4	G 1
OT 300 P90	90	150	180	2100	132,6	132,6	G 1+1/4	G 1

EXAMPLE OF ORDERING CODE

OT300 P 48 / 22 S / G 38 P3 / 2

- Series
- Pump
- Front pump displacement (see above table)
- Second pump displacement (see above table)

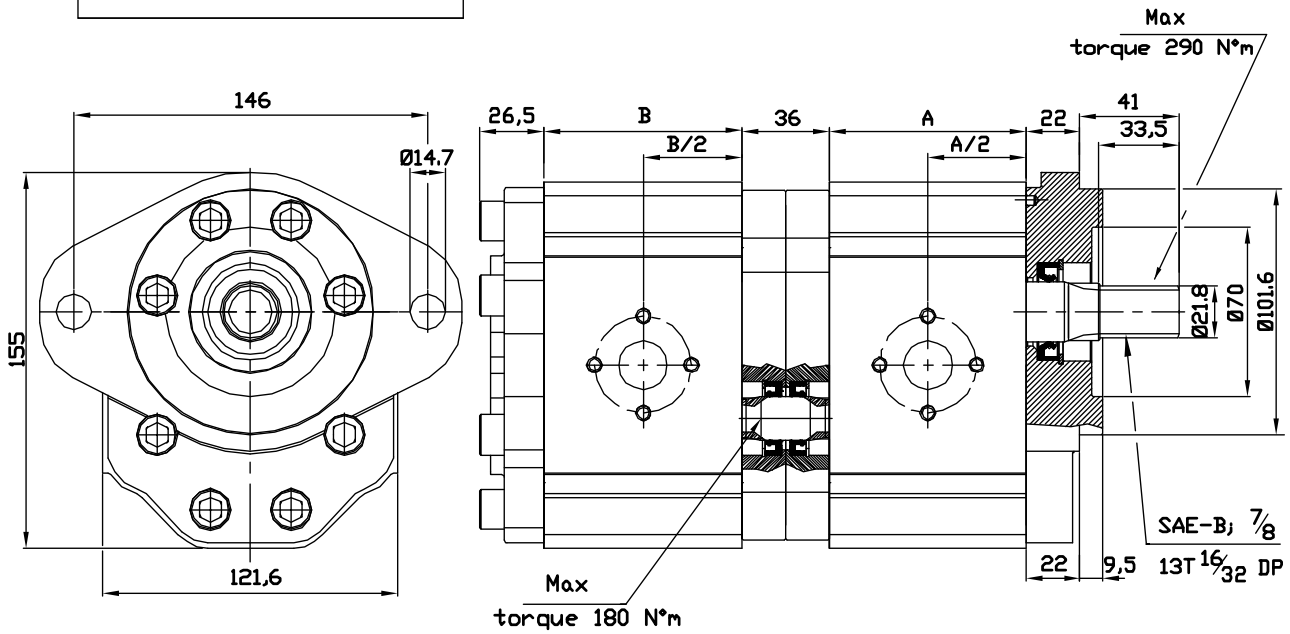
Rotation	
S	Anti-clockwise
D	Clockwise

- 1 = One inlet port
  2 = Two inlet ports
- European standard flange
- Taper shaft (1:8)
- Body with threated ports (BSP)

AVAILABLE FOR QUANTITIES

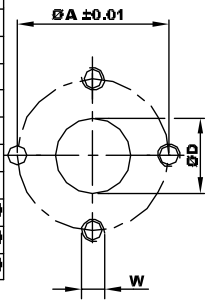
GROUP 3 PUMPS - TANDEM

VERSION: P33 S3



NOTE: The biggest displacement pump must be in the front position

Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 300 P22	22	260	300	3000	70,8	70,8	27	51	M10	19	40	M8
OT 300 P28	28	260	300	3000	75,4	75,4	27	51	M10	19	40	M8
OT 300 P32	32	260	300	3000	78,4	78,4	27	51	M10	19	40	M8
OT 300 P38	38	240	280	3000	83,0	83,0	27	51	M10	19	40	M8
OT 300 P42	42	240	280	3000	86,0	86,0	27	51	M10	19	40	M8
OT 300 P48	48	240	280	3000	100,6	100,6	27	51	M10	19	40	M8
OT 300 P53	53	220	250	3000	104,4	104,4	27	51	M10	19	40	M8
OT 300 P63	63	200	240	2100	112,0	112,0	27	51	M10	19	40	M8
OT 300 P73	73	180	210	2100	119,7	119,7	36	62	M12	27	51	M10
OT 300 P82	82	170	200	2100	126,6	126,6	36	62	M12	27	51	M10
OT 300 P90	90	150	180	2100	132,6	132,6	36	62	M12	27	51	M10



EXAMPLE OF ORDERING CODE

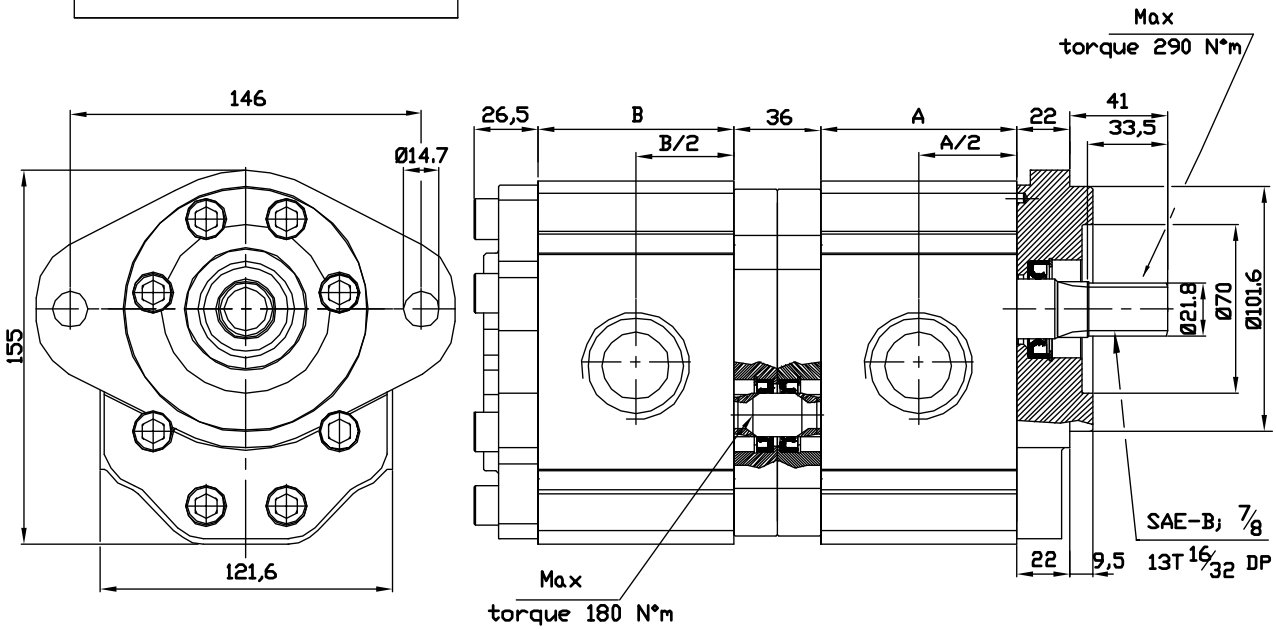
OT300 P 48 / 22 S / P 33 S3 / 2

- OT300 — Series
- P — Pump
- 48 — Front pump displacement (see above table)
- 22 — Second pump displacement (see above table)
- S — Rotation: S = Anti-clockwise, D = Clockwise
- P — Body for European flanges
- 33 — SAE B 13 Teeth -16/32 DP
- S3 — SAE B flange
- 2 — 1 = One inlet port, 2 = Two inlet ports

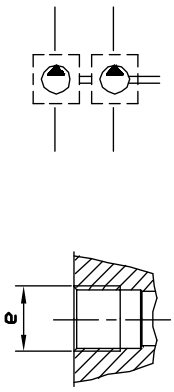
AVAILABLE FOR QUANTITIES

GROUP 3 PUMPS - TANDEM

VERSION: G33 S3



NOTE: The biggest displacement pump must be in the front position



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port e	Outlet port e
OT 300 P22	22	260	300	3000	70,8	70,8	G 1	G 3/4
OT 300 P28	28	260	300	3000	75,4	75,4	G 1	G 3/4
OT 300 P32	32	260	300	3000	78,4	78,4	G 1	G 3/4
OT 300 P38	38	240	280	3000	83,0	83,0	G 1	G 3/4
OT 300 P42	42	240	280	3000	86,0	86,0	G 1	G 3/4
OT 300 P48	48	240	280	3000	100,6	100,6	G 1	G 3/4
OT 300 P53	53	220	250	3000	104,4	104,4	G 1	G 3/4
OT 300 P63	63	200	240	2100	112,0	112,0	G 1+1/4	G 3/4
OT 300 P73	73	180	210	2100	119,7	119,7	G 1+1/4	G 1
OT 300 P82	82	170	200	2100	126,6	126,6	G 1+1/4	G 1
OT 300 P90	90	150	180	2100	132,6	132,6	G 1+1/4	G 1

EXAMPLE OF ORDERING CODE

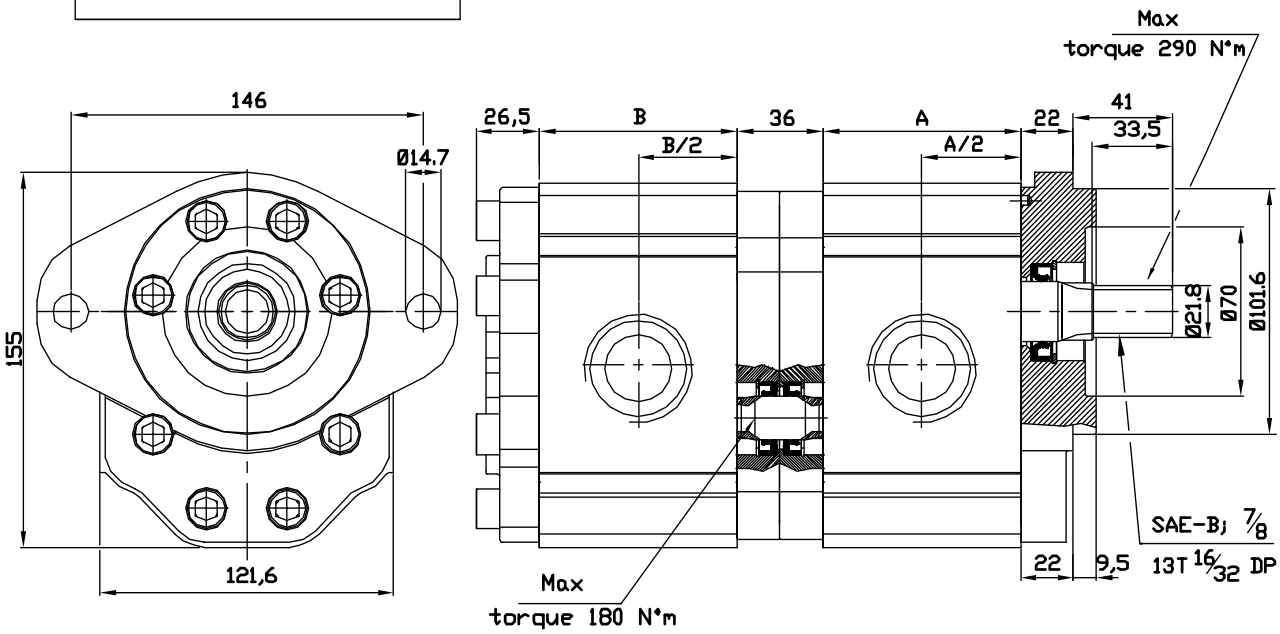
OT300 P 48 / 22 S / G 33 S3 / 2

- OT300 — Series
- P — Pump
- 48 — Front pump displacement (see above table)
- 22 — Second pump displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- 33 — SAE B 13 Teeth -16/32 DP
- S3 — SAE B flange
- 2 — 1 = One inlet port; 2 = Two inlet ports

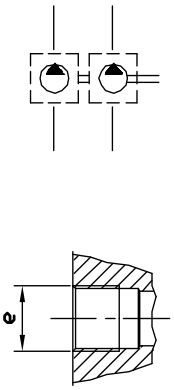
AVAILABLE FOR QUANTITIES

GROUP 3 PUMPS - TANDEM

VERSION: R33 S3



NOTE: The biggest displacement pump must be in the front position



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port e	Outlet port e
OT 300 P22	22	260	300	3000	70,8	70,8	1-5/16" UNF	1-1/16" UNF
OT 300 P28	28	260	300	3000	75,4	75,4	1-5/16" UNF	1-1/16" UNF
OT 300 P32	32	260	300	3000	78,4	78,4	1-5/16" UNF	1-1/16" UNF
OT 300 P38	38	240	280	3000	83,0	83,0	1-5/8" UNF	1-5/16" UNF
OT 300 P42	42	240	280	3000	86,0	86,0	1-5/8" UNF	1-5/16" UNF
OT 300 P48	48	240	280	3000	100,6	100,6	1-5/8" UNF	1-5/16" UNF
OT 300 P53	53	220	250	3000	104,4	104,4	1-5/8" UNF	1-5/16" UNF
OT 300 P63	63	200	240	2100	112,0	112,0	1-5/8" UNF	1-5/16" UNF
OT 300 P73	73	180	210	2100	119,7	119,7	1-7/8" UNF	1-5/8" UNF
OT 300 P82	82	170	200	2100	126,6	126,6	1-7/8" UNF	1-5/8" UNF
OT 300 P90	90	150	180	2100	132,6	132,6	1-7/8" UNF	1-5/8" UNF

EXAMPLE OF ORDERING CODE

OT300 P 48 / 22 S / R 33 S3 / 2

- OT300 — Series
- P — Pump
- 48 — Front pump displacement (see above table)
- 22 — Second pump displacement (see above table)
- S — Rotation: S Anti-clockwise; D Clockwise
- R — Body with O-ring boss ports
- 33 — SAE B 13 Teeth - 16/32 DP
- S3 — SAE B flange
- 2 — 1 = One inlet port; 2 = Two inlet ports

AVAILABLE FOR QUANTITIES

GROUP 3 PUMPS - OT300+OT200

VERSION: P38 P3

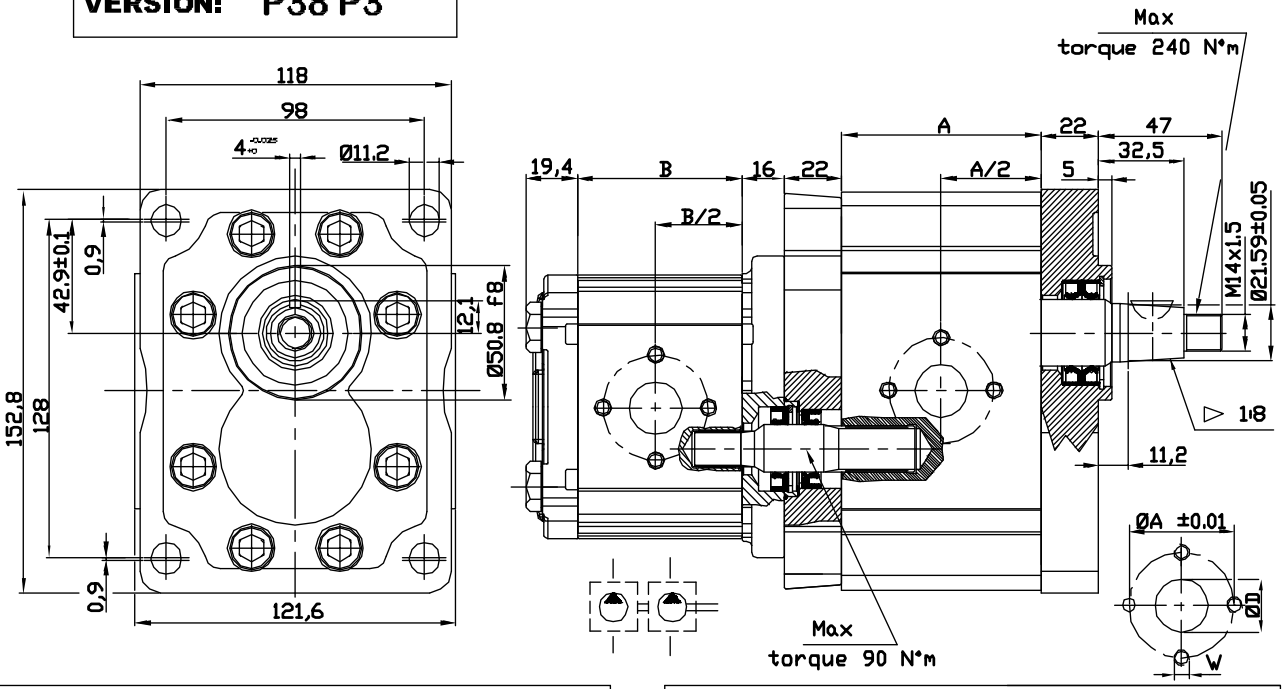


TABLE OT300

Type	Displacement (cc/rev)	Dim. A (mm)				Outlet port		
			ØD	ØA	W	ØD	ØA	W
OT 300 P22	22	70,8	27	51	M10	19	40	M8
OT 300 P28	28	75,4	27	51	M10	19	40	M8
OT 300 P32	32	78,4	27	51	M10	19	40	M8
OT 300 P38	38	83,0	27	51	M10	19	40	M8
OT 300 P42	42	86,0	27	51	M10	19	40	M8
OT 300 P48	48	100,6	27	51	M10	19	40	M8
OT 300 P53	53	104,4	27	51	M10	19	40	M8
OT 300 P63	63	112,0	27	51	M10	19	40	M8
OT 300 P73	73	119,7	36	62	M12	27	51	M10
OT 300 P82	82	126,6	36	62	M12	27	51	M10
OT 300 P90	90	132,6	36	62	M12	27	51	M10

TABLE OT200

Type	Displacement (cc/rev)	Dim. B (mm)	Inlet port			Outlet port		
			ØD	ØA	W	ØD	ØA	W
OT 200 P04	04,10	48.00	13	30	M6	13	30	M6
OT 200 P06	06,20	51.00	13	30	M6	13	30	M6
OT 200 P08	08,20	54.00	13	30	M6	13	30	M6
OT 200 P11	11,20	58.30	13	30	M6	13	30	M6
OT 200 P14	14,00	62.30	20	40	M8	13	30	M6
OT 200 P16	16,00	65.20	20	40	M8	13	30	M6
OT 200 P20	20,00	71.00	20	40	M8	13	30	M6
OT 200 P22	22,50	82.70	20	40	M8	13	30	M6
OT 200 P25	25,10	86.50	20	40	M8	13	30	M6
OT 200 P28	28,00	90.70	20	40	M8	13	30	M6
OT 200 P30	30,00	93.50	20	40	M8	13	30	M6

NOTE: **Define relative working and peak pressure consulting relative single pump table.**

EXAMPLE OF ORDERING CODE

OT300/200 P 38 / 16 S / P 38 P3 /2

- Series
- Pump
- Displacement front pump (See table - OT300)
- Displacement second pump (See table - OT200)

Rotation	
S	Anti-clockwise
D	Clockwise

- Two inlet ports
- European standard flange
- Taper shaft (1:8)
- Body for European flanges

AVAILABLE FOR QUANTITIES

GROUP 3 PUMPS - OT300+OT200

VERSION: G38 P3

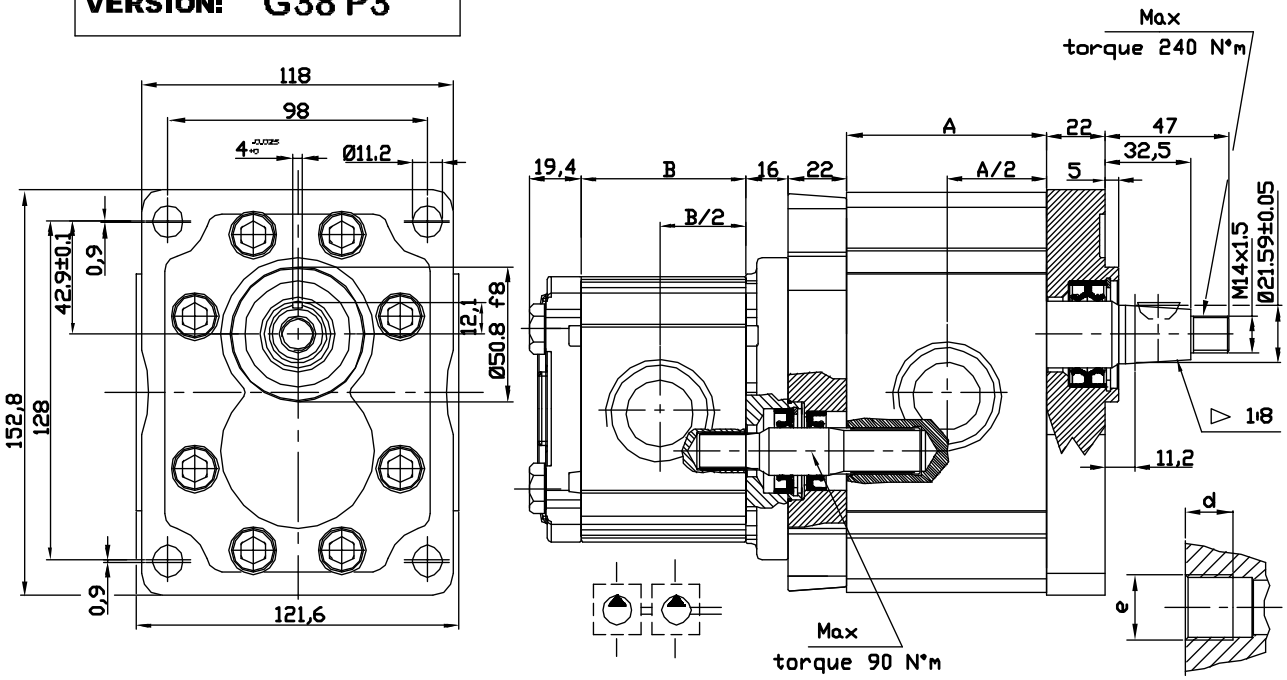


TABLE OT300

Type	Displacement (cc/rev)	Dim. A (mm)	Inlet port e	Outlet port e
OT 300 P22	22	70,8	G 1	G 3/4
OT 300 P28	28	75,4	G 1	G 3/4
OT 300 P32	32	78,4	G 1	G 3/4
OT 300 P38	38	83,0	G 1	G 3/4
OT 300 P42	42	86,0	G 1	G 3/4
OT 300 P48	48	100,6	G 1	G 3/4
OT 300 P53	53	104,4	G 1	G 3/4
OT 300 P63	63	112,0	G 1+1/4	G 3/4
OT 300 P73	73	119,7	G 1+1/4	G 1
OT 300 P82	82	126,6	G 1+1/4	G 1
OT 300 P90	90	132,6	G 1+1/4	G 1

TABLE OT200

Type	Displacement (cc/rev)	Dim. B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	48.00	G1/2	14	G1/2	14
OT 200 P06	06,20	51.00	G1/2	14	G1/2	14
OT 200 P08	08,20	54.00	G1/2	14	G1/2	14
OT 200 P11	11,20	58.30	G1/2	14	G1/2	14
OT 200 P14	14,00	62.30	G3/4	16	G1/2	14
OT 200 P16	16,00	65.20	G3/4	16	G1/2	14
OT 200 P20	20,00	71.00	G3/4	16	G1/2	14
OT 200 P22	22,50	82.70	G3/4	16	G1/2	14
OT 200 P25	25,10	86.50	G3/4	16	G1/2	14
OT 200 P28	28,00	90.70	G3/4	16	G1/2	14
OT 200 P30	30,00	93.50	G3/4	16	G1/2	14

NOTE: **Define relative working and peak pressure consulting relative single pump table.**

EXAMPLE OF ORDERING CODE

OT300/200 P 38 / 16 S / G 38 P3 /2

- Series
- Pump
- Displacement front pump (See table - OT300)
- Displacement second pump (See table - OT200)
- Rotation: S Anti-clockwise; D Clockwise
- Two inlet ports
- European standard flange
- Taper shaft (1:8)
- Body with threated ports (BSP)

AVAILABLE FOR QUANTITIES

GROUP 3 PUMPS - OT300+OT200

VERSION: P33 S3

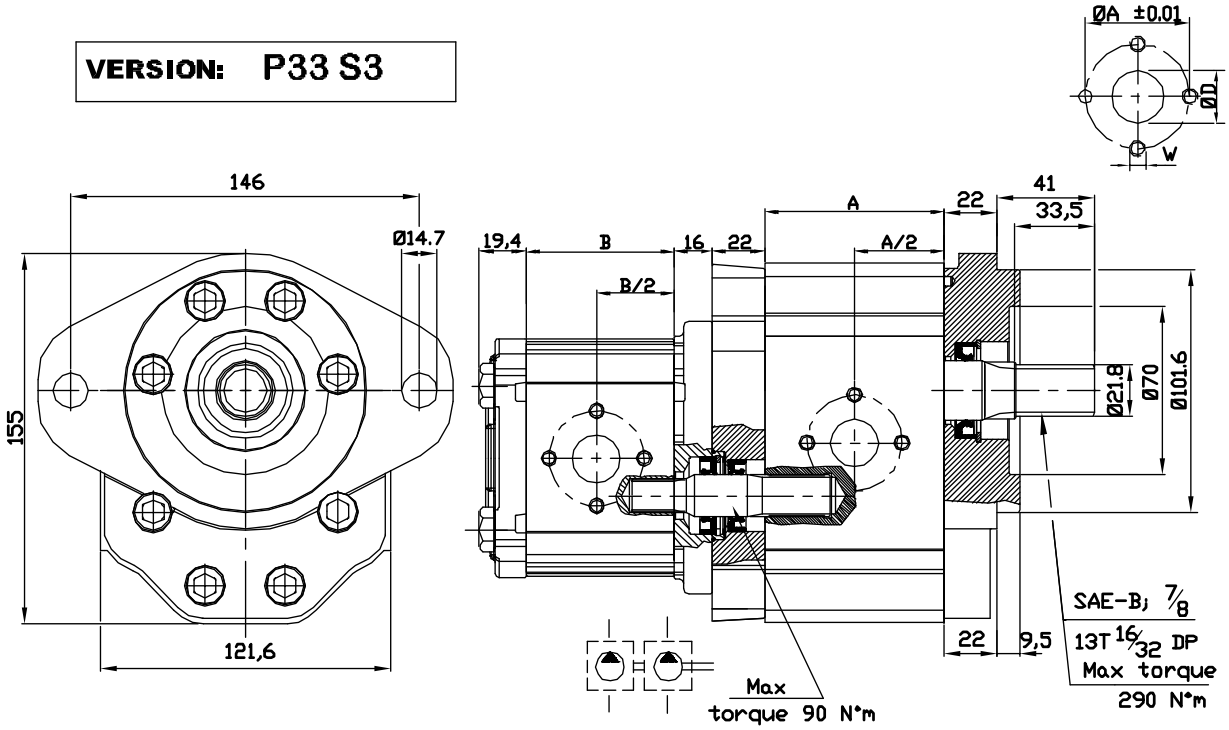


TABLE OT300									
Type	Displacement (cc/rev)	Dim. A (mm)				Outlet port		
			ØD	ØA	W	ØD	ØA	W
OT 300 P22	22	70,8	27	51	M10	19	40	M8
OT 300 P28	28	75,4	27	51	M10	19	40	M8
OT 300 P32	32	78,4	27	51	M10	19	40	M8
OT 300 P38	38	83,0	27	51	M10	19	40	M8
OT 300 P42	42	86,0	27	51	M10	19	40	M8
OT 300 P48	48	100,6	27	51	M10	19	40	M8
OT 300 P53	53	104,4	27	51	M10	19	40	M8
OT 300 P63	63	112,0	27	51	M10	19	40	M8
OT 300 P73	73	119,7	36	62	M12	27	51	M10
OT 300 P82	82	126,6	36	62	M12	27	51	M10
OT 300 P90	90	132,6	36	62	M12	27	51	M10

TABLE OT200								
Type	Displacement (cc/rev)	Dim. B (mm)	Inlet port			Outlet port		
			ØD	ØA	W	ØD	ØA	W
OT 200 P04	04,10	48.00	13	30	M6	13	30	M6
OT 200 P06	06,20	51.00	13	30	M6	13	30	M6
OT 200 P08	08,20	54.00	13	30	M6	13	30	M6
OT 200 P11	11,20	58.30	13	30	M6	13	30	M6
OT 200 P14	14,00	62.30	20	40	M8	13	30	M6
OT 200 P16	16,00	65.20	20	40	M8	13	30	M6
OT 200 P20	20,00	71.00	20	40	M8	13	30	M6
OT 200 P22	22,50	82.70	20	40	M8	13	30	M6
OT 200 P25	25,10	86.50	20	40	M8	13	30	M6
OT 200 P28	28,00	90.70	20	40	M8	13	30	M6
OT 200 P30	30,00	93.50	20	40	M8	13	30	M6

NOTE: **Define relative working and peak pressure consulting relative single pump table.**

EXAMPLE OF ORDERING CODE

OT300/200 P 38 / 16 S / P 33 S3 /2

- Series
- Pump
- Displacement front pump (See table - OT300)
- Displacement second pump (See table - OT200)
- Rotation

S	Anti-clockwise
D	Clockwise

- Two inlet ports
- SAE B flange
- SAE B 13 Teeth -16/32 DP
- Body for European flanges

AVAILABLE FOR QUANTITIES

GROUP 3 PUMPS - OT300+OT200

VERSION: G33 S3

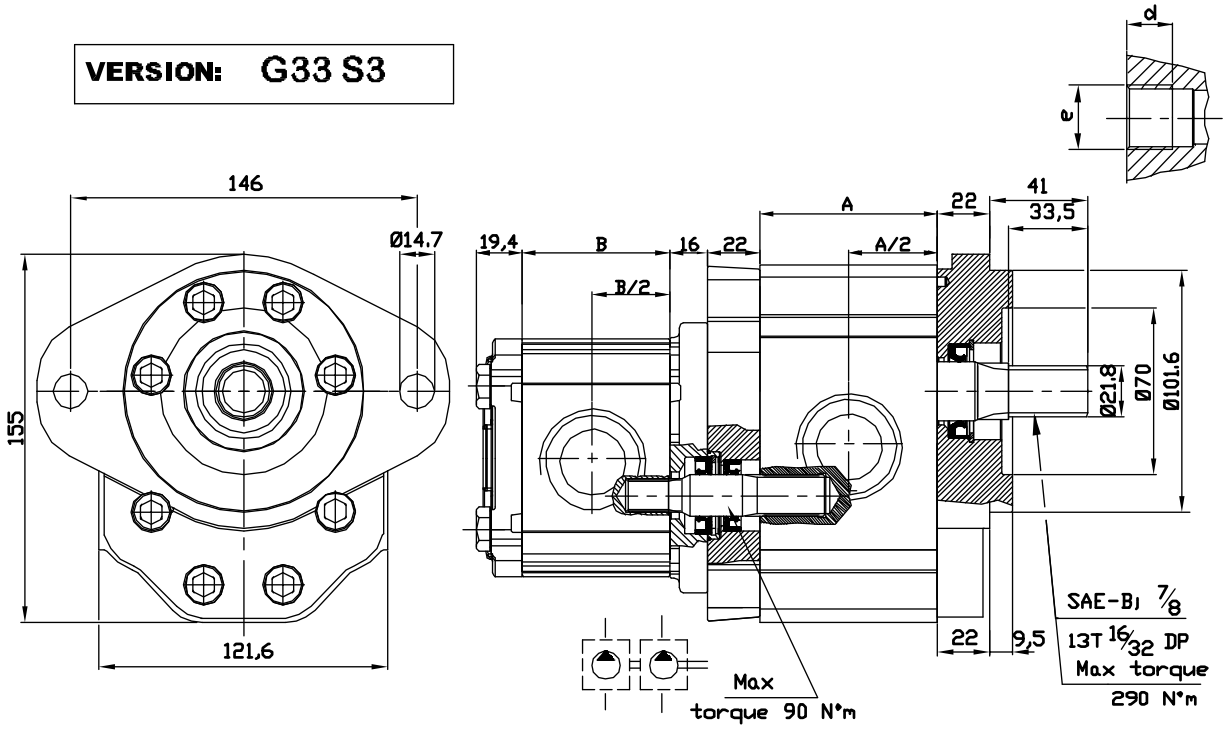


TABLE OT300

Type	Displacement (cc/rev)	Dim. A (mm)	Inlet port e	Outlet port e
OT 300 P22	22	70,8	G 1	G 3/4
OT 300 P28	28	75,4	G 1	G 3/4
OT 300 P32	32	78,4	G 1	G 3/4
OT 300 P38	38	83,0	G 1	G 3/4
OT 300 P42	42	86,0	G 1	G 3/4
OT 300 P48	48	100,6	G 1	G 3/4
OT 300 P53	53	104,4	G 1	G 3/4
OT 300 P63	63	112,0	G 1+1/4	G 3/4
OT 300 P73	73	119,7	G 1+1/4	G 1
OT 300 P82	82	126,6	G 1+1/4	G 1
OT 300 P90	90	132,6	G 1+1/4	G 1

TABLE OT200

Type	Displacement (cc/rev)	Dim. B (mm)	Inlet port e	Inlet port d	Outlet port e	Outlet port d
OT 200 P04	04,10	48.00	G1/2	14	G1/2	14
OT 200 P06	06,20	51.00	G1/2	14	G1/2	14
OT 200 P08	08,20	54.00	G1/2	14	G1/2	14
OT 200 P11	11,20	58.30	G1/2	14	G1/2	14
OT 200 P14	14,00	62.30	G3/4	16	G1/2	14
OT 200 P16	16,00	65.20	G3/4	16	G1/2	14
OT 200 P20	20,00	71.00	G3/4	16	G1/2	14
OT 200 P22	22,50	82.70	G3/4	16	G1/2	14
OT 200 P25	25,10	86.50	G3/4	16	G1/2	14
OT 200 P28	28,00	90.70	G3/4	16	G1/2	14
OT 200 P30	30,00	93.50	G3/4	16	G1/2	14

NOTE: **Define relative working and peak pressure consulting relative single pump table.**

EXAMPLE OF ORDERING CODE

OT300/200 P 38 / 16 S / G 33 S3 /2

- OT300/200 — Series
- P — Pump
- 38 — Displacement front pump (See table - OT300)
- 16 — Displacement second pump (See table - OT200)
- S — Rotation: S Anti-clockwise; D Clockwise
- G — Body with threated ports (BSP)
- 33 — SAE B 13 Teeth -16/32 DP
- S3 — SAE B flange
- /2 — Two inlet ports

AVAILABLE FOR QUANTITIES

GROUP 3 PUMPS - OT300+OT200

VERSION: R33 S3

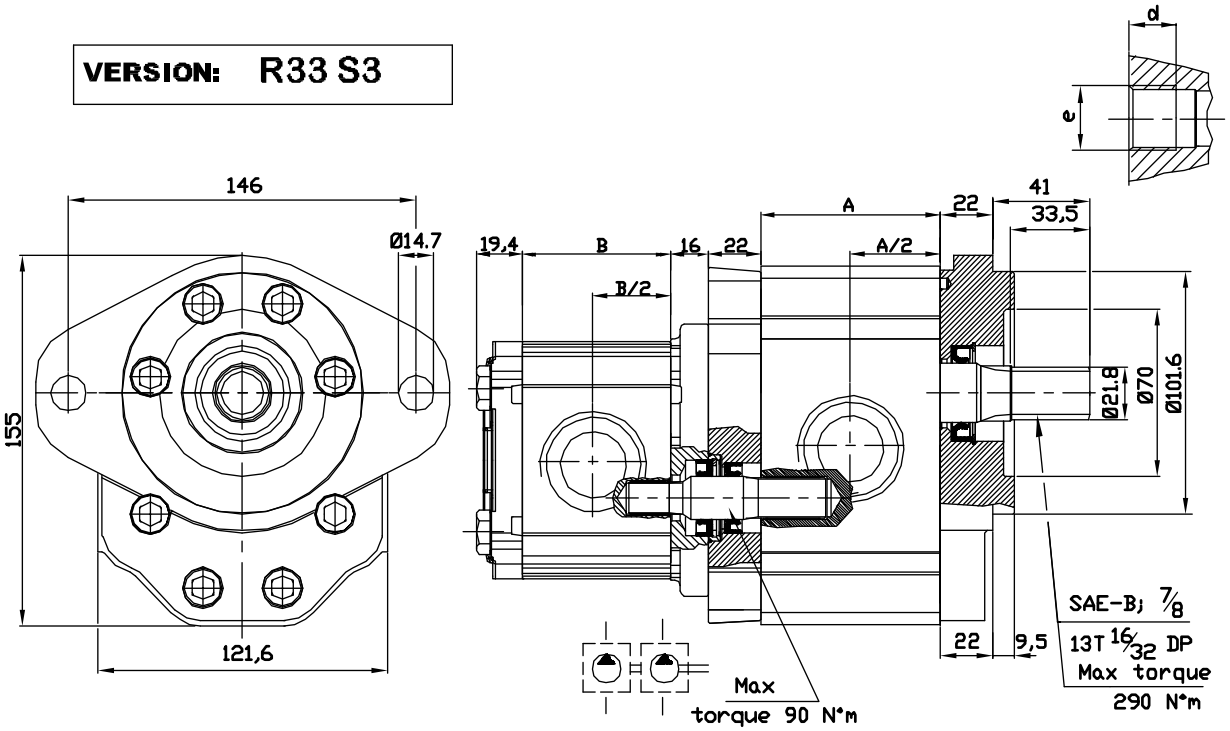


TABLE OT300

Type	Displacement (cc/rev)	Dim. A (mm)	Inlet port e	Outlet port e
OT 300 P22	22	70,8	1-5/16" UNF	1-1/16" UNF
OT 300 P28	28	75,4	1-5/16" UNF	1-1/16" UNF
OT 300 P32	32	78,4	1-5/16" UNF	1-1/16" UNF
OT 300 P38	38	83,0	1-5/8" UNF	1-5/16" UNF
OT 300 P42	42	86,0	1-5/8" UNF	1-5/16" UNF
OT 300 P48	48	100,6	1-5/8" UNF	1-5/16" UNF
OT 300 P53	53	104,4	1-5/8" UNF	1-5/16" UNF
OT 300 P63	63	112,0	1-5/8" UNF	1-5/16" UNF
OT 300 P73	73	119,7	1-7/8" UNF	1-5/8" UNF
OT 300 P82	82	126,6	1-7/8" UNF	1-5/8" UNF
OT 300 P90	90	132,6	1-7/8" UNF	1-5/8" UNF

TABLE OT200

Type	Displacement (cc/rev)	Dim. B (mm)	Inlet port e	Outlet port e
OT 200 P04	04,10	48.00	7/8-14UNF	7/8-14UNF
OT 200 P06	06,20	51.00	7/8-14UNF	7/8-14UNF
OT 200 P08	08,20	54.00	7/8-14UNF	7/8-14UNF
OT 200 P11	11,20	58.30	7/8-14UNF	7/8-14UNF
OT 200 P14	14,00	62.30	1-1/16" UNF	7/8-14UNF
OT 200 P16	16,00	65.20	1-1/16" UNF	7/8-14UNF
OT 200 P20	20,00	71.00	1-1/16" UNF	7/8-14UNF
OT 200 P22	22,50	82.70	1-1/16" UNF	7/8-14UNF
OT 200 P25	25,10	86.50	1-1/16" UNF	7/8-14UNF
OT 200 P28	28,00	90.70	1-1/16" UNF	7/8-14UNF
OT 200 P30	30,00	93.50	1-1/16" UNF	7/8-14UNF

NOTE: **Define relative working and peak pressure consulting relative single pump table.**

EXAMPLE OF ORDERING CODE

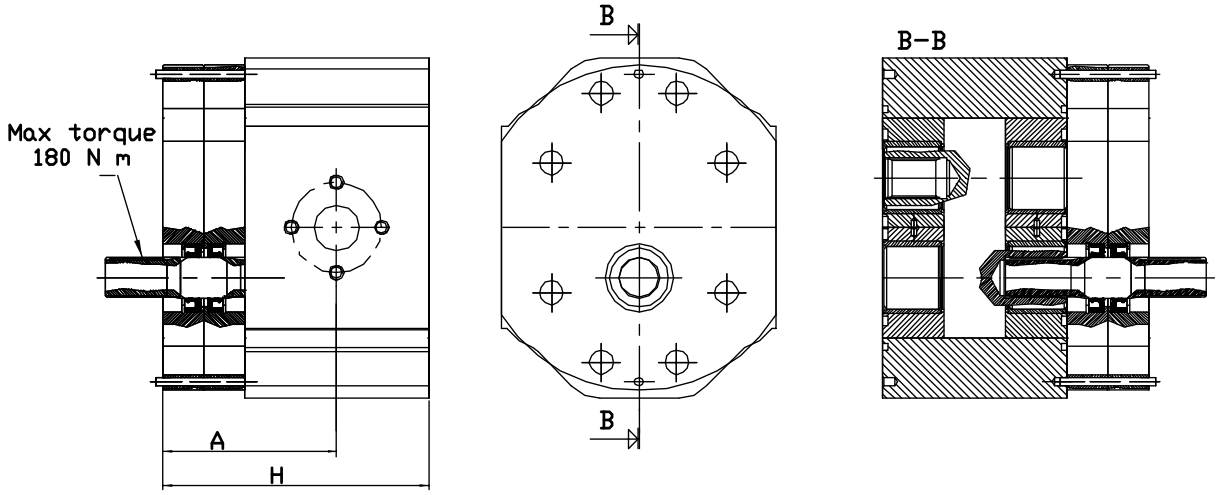
OT300/200 P 38 / 16 S / R 33 S3 /2

- Series
- Pump
- Displacement front punp (See table - OT300)
- Displacement second pump (See table - OT200)
- Rotation: S Anti-clockwise; D Clockwise
- Two inlet ports
- SAE B flange
- SAE B 13 Teeth -16/32 DP
- Body with O-ring boss ports

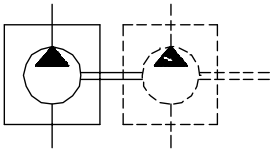
AVAILABLE FOR QUANTITIES

GROUP 3 PUMPS - INTERMEDIATE FOR TANDEM UNITS

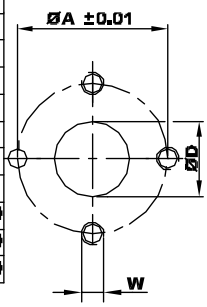
VERSION: P X X INTERMEDIATE



NOTE : Screw tightening torque 48 N·m



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension A (mm)	Dimension H (mm)	Inlet port			Outlet port		
								e			e	
OT 300 P22	22	260	300	3000	71.4	106.8	27	51	M10	19	40	M8
OT 300 P28	28	260	300	3000	73.7	111.4	27	51	M10	19	40	M8
OT 300 P32	32	260	300	3000	75.2	114.4	27	51	M10	19	40	M8
OT 300 P38	38	240	280	3000	77.5	119.0	27	51	M10	19	40	M8
OT 300 P42	42	240	280	3000	79.0	122.0	27	51	M10	19	40	M8
OT 300 P48	48	240	280	3000	86.3	136.6	27	51	M10	19	40	M8
OT 300 P53	53	220	250	3000	88.2	140.4	27	51	M10	19	40	M8
OT 300 P63	63	200	240	2100	92.0	148.0	27	51	M10	19	40	M8
OT 300 P73	73	180	210	2100	95.9	155.7	36	62	M12	27	51	M10
OT 300 P82	82	170	200	2100	99.3	162.6	36	62	M12	27	51	M10
OT 300 P90	90	150	180	2100	102.3	168.6	36	62	M12	27	51	M10



EXAMPLE OF ORDERING CODE

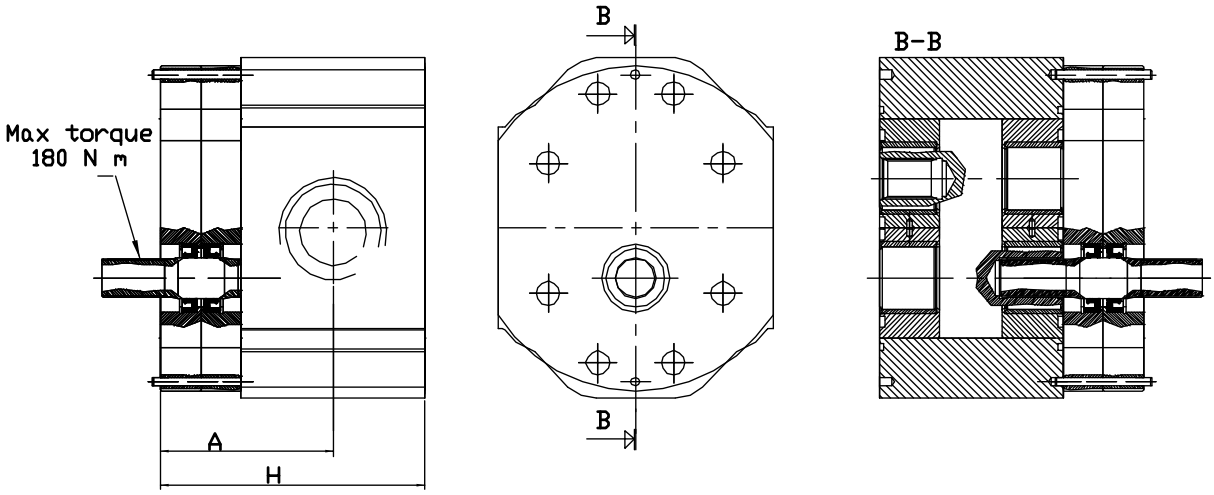
OT300 P 22 S / P X X INTERMEDIATE

- Series
- Pump
- Displacement (see above table)
- Rotation
  - S – Anti-clockwise
  - D – Clockwise
- Body for flanges

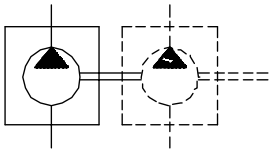
AVAILABLE FOR QUANTITIES

GROUP 3 PUMPS - INTERMEDIATE FOR TANDEM UNITS

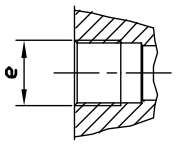
VERSION: G X X INTERMEDIA



NOTE : Screw tightening torque 48 N m



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port e	Outlet port e
OT 300 P22	22	260	300	3000	71.4	106.8	G 1	G 3/4
OT 300 P28	28	260	300	3000	73.7	111.4	G 1	G 3/4
OT 300 P32	32	260	300	3000	75.2	114.4	G 1	G 3/4
OT 300 P38	38	240	280	3000	77.5	119.0	G 1	G 3/4
OT 300 P42	42	240	280	3000	79.0	122.0	G 1	G 3/4
OT 300 P48	48	240	280	3000	86.3	136.6	G 1	G 3/4
OT 300 P53	53	220	250	3000	88.2	140.4	G 1	G 3/4
OT 300 P63	63	200	240	2100	92.0	148.0	G 1+1/4	G 3/4
OT 300 P73	73	180	210	2100	95.9	155.7	G 1+1/4	G 1
OT 300 P82	82	170	200	2100	99.3	162.6	G 1+1/4	G 1
OT 300 P90	90	150	180	2100	102.3	168.6	G 1+1/4	G 1



EXAMPLE OF ORDERING CODE

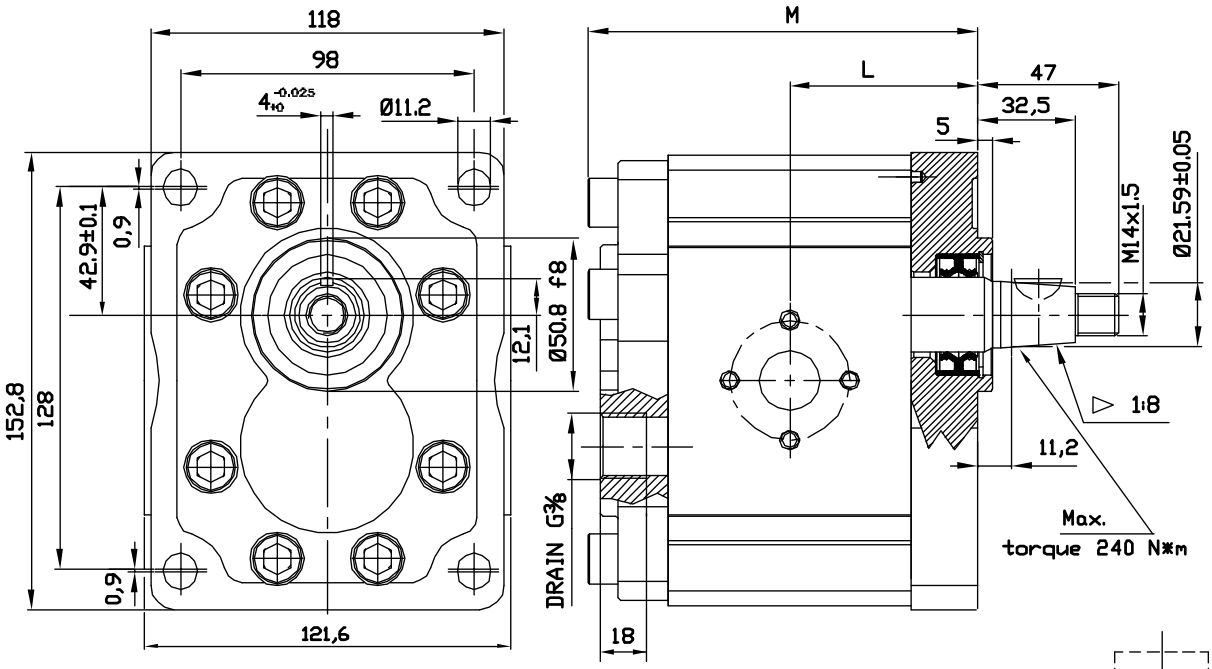
OT300 P 22 S / P X X INTERMEDIATE

- Series
- Pump
- Displacement (see above table)
- Rotation
  - S — Anti-clockwise
  - D — Clockwise
- Body with threated ports (BSP)

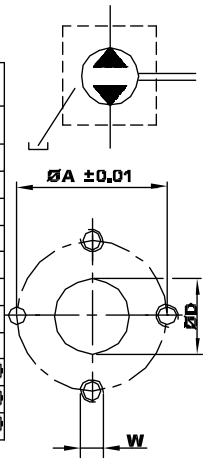
AVAILABLE FOR QUANTITIES

GROUP 3 REVERSIBLE PUMPS - EUROPEAN STANDARD

VERSION: P38 P3



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 300 P22	22	220	250	3000	57,4	119,3	27	51	M10	19	40	M8
OT 300 P28	28	220	250	3000	59,7	123,7	27	51	M10	19	40	M8
OT 300 P32	32	220	250	3000	61,2	126,9	27	51	M10	19	40	M8
OT 300 P38	38	200	230	3000	63,5	131,5	27	51	M10	19	40	M8
OT 300 P42	42	200	230	3000	65.0	134,5	27	51	M10	19	40	M8
OT 300 P48	48	200	230	3000	72,3	149,1	27	51	M10	19	40	M8
OT 300 P53	53	180	200	3000	74,2	152,9	27	51	M10	19	40	M8
OT 300 P63	63	180	200	2100	78,0	160,5	27	51	M10	19	40	M8
OT 300 P73	73	160	180	2100	81,9	168,2	36	62	M12	27	51	M10
OT 300 P82	82	160	180	2100	85,3	175,1	36	62	M12	27	51	M10
OT 300 P90	90	130	150	2100	88,3	181,1	36	62	M12	27	51	M10



EXAMPLE OF ORDERING CODE

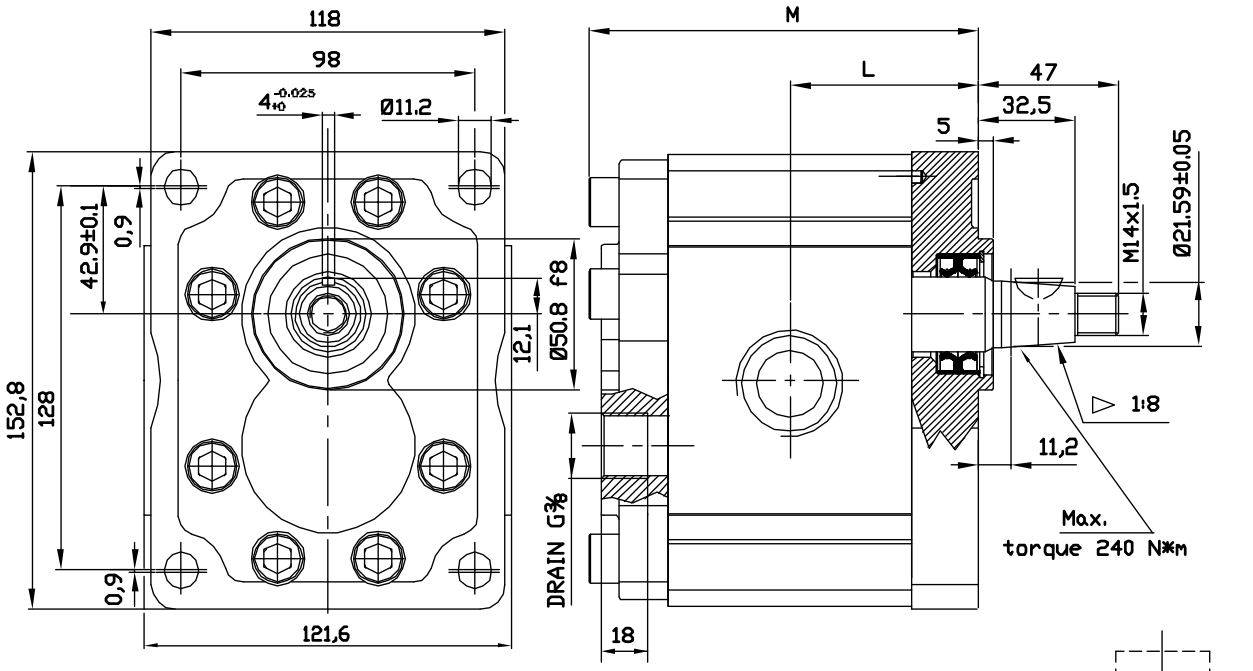
OT300 P 28 R / P 38 P3

- OT300 — Series
- P — Pump
- 28 — Displacement (see above table)
- R — Rotation: R Reversible
- P — Body for flanges
- 38 — Taper shaft (1:8)
- P3 — European standard flange

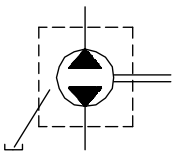
AVAILABLE FOR QUANTITIES

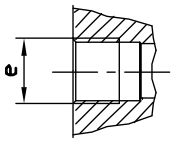
GROUP 3 REVERSIBLE PUMPS - EUROPEAN STANDARD

VERSION: G38 P3



OT 300 P22	22	220	250	3000	57,4	119,3	G 1	G 1
OT 300 P28	28	220	250	3000	59,7	123,7	G 1	G 1
OT 300 P32	32	220	250	3000	61,2	126,9	G 1	G 1
OT 300 P38	38	200	230	3000	63,5	131,5	G 1	G 1
OT 300 P42	42	200	230	3000	65.0	134,5	G 1	G 1
OT 300 P48	48	200	230	3000	72,3	149,1	G 1	G 1
OT 300 P53	53	180	200	3000	74,2	152,9	G 1	G 1
OT 300 P63	63	180	200	2100	78,0	160,5	G 1+1/4	G 1+1/4
OT 300 P73	73	160	180	2100	81,9	168,2	G 1+1/4	G 1+1/4
OT 300 P82	82	160	180	2100	85,3	175,1	G 1+1/4	G 1+1/4
OT 300 P90	90	130	150	2100	88,3	181,1	G 1+1/4	G 1+1/4





EXAMPLE OF ORDERING CODE

OT300 P 28 R / G 38 P3

- OT300 — Series
- P — Pump
- 28 — Displacement (see above table)
- R — Rotation: R = Reversible
- G — Body with threated ports (BSP)
- 38 — Taper shaft (1:8)
- P3 — European standard flange

AVAILABLE FOR QUANTITIES

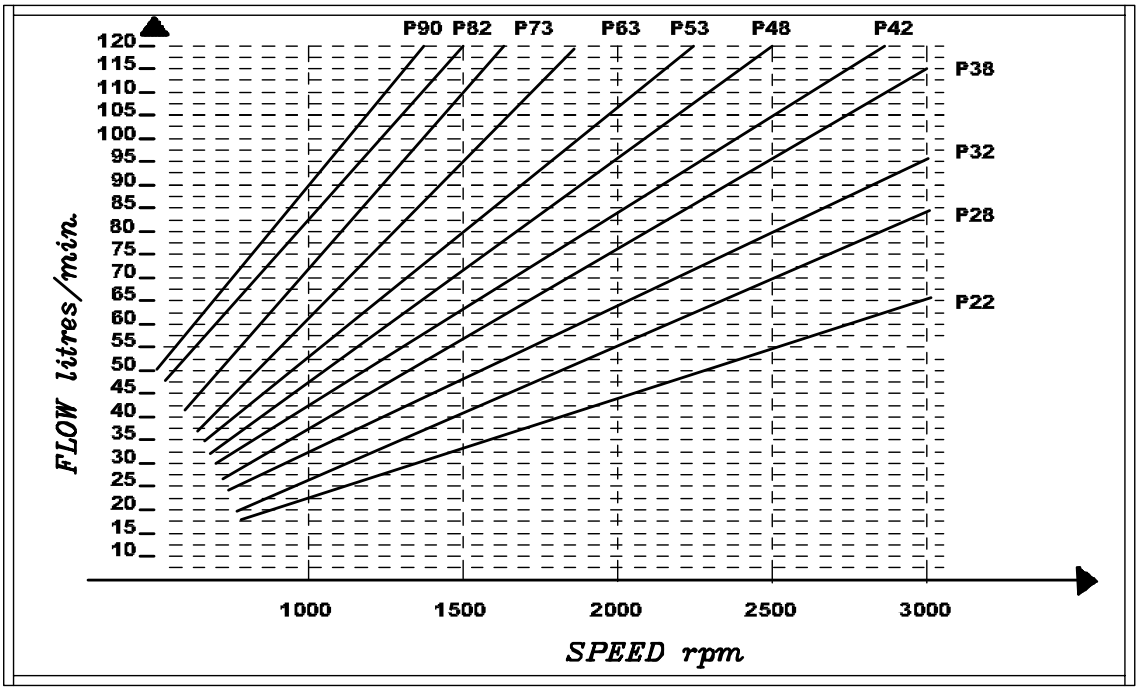
OT300 SINGLE ROTATION MOTORS GENERAL DATA

MOTOR TYPE	DISPLACEMENT	MAX. PRESSURE			MAX. SPEED	MIN. SPEED
		P1	P2	P3		
	cc^3/rev	bar			rev^{-1}	rev^{-1}
OT300 M22	22	250	280	300	4000	600
OT300 M28	28					
OT300 M32	32					
OT300 M38	38	240	260	280	3500	500
OT300 M42	42					
OT300 M48	48					
OT300 M53	53	190	210	250	3000	
OT300 M63	63	190	210	240	2500	
OT300 M73	73	160	180	210		
OT300 M82	82	150	170	200	2000	
OT300 M90	90	130	150	180		

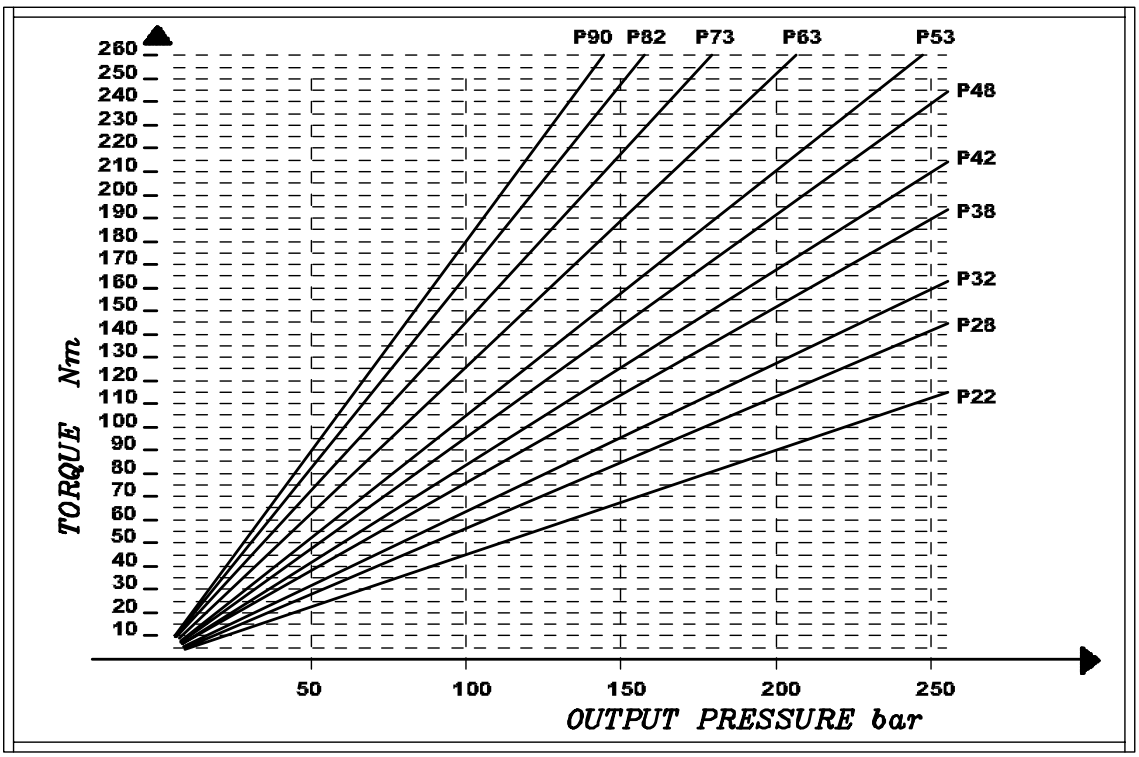
P1= Max. continuous pressure P2= Max. intermittent pressure P3= Max. peak pressure

FOR DIMENSION PLEASE CHECK
RELATIVE SINGLE PUMP TABLES

FLOW CHARACTERISTICS CURVES



ABSORBED TORQUE



NOTE

The flow characteristics curves have been made at P1 pressure.

MOTOR CALCULATION

V	Displacement	CC / REV
Q	Flow	l/min
P	Power	kW
C	Torque	N · m
N	Speed	-15°C / +80°C
ΔP	Pressure	bar
n_v	Volumetric efficiency	0.95
n_m	Mechanical efficiency	0.85
n_t	Total efficiency	0.81

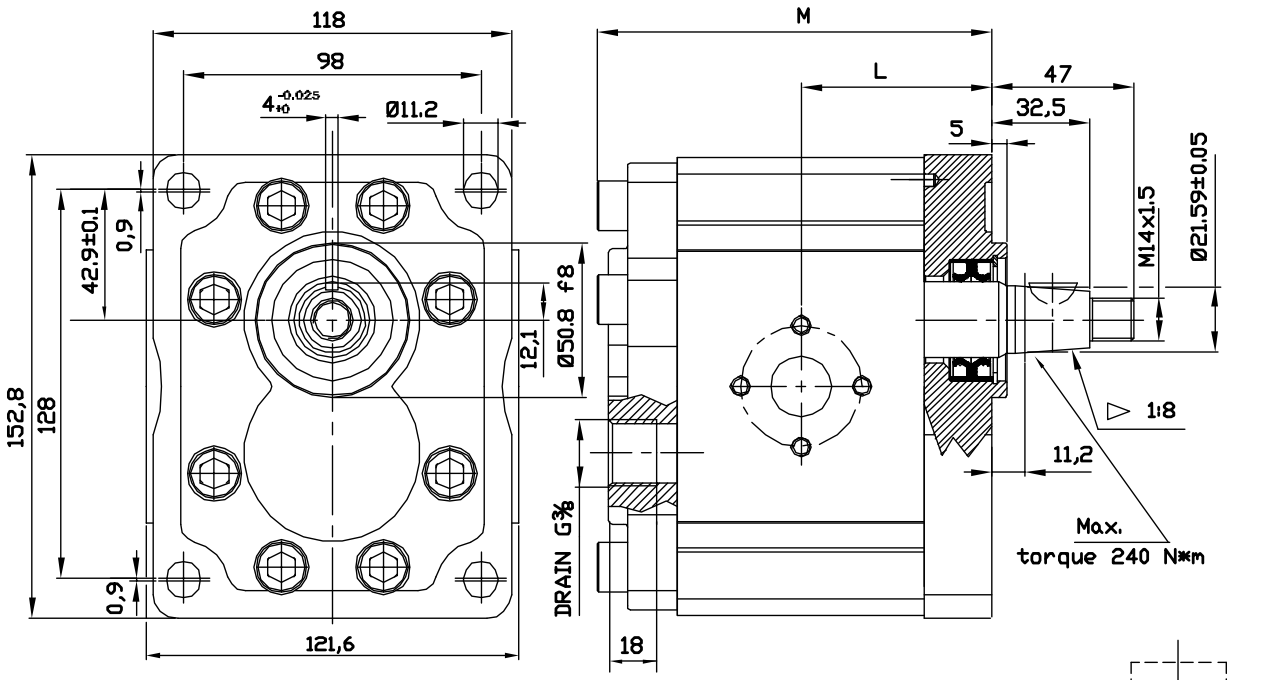
$$Q = \frac{V \cdot N}{n_v} \cdot 10^{-3} \qquad l/min$$

$$C = \frac{\Delta P \cdot V \cdot n_m}{62.8} \qquad N \cdot m$$

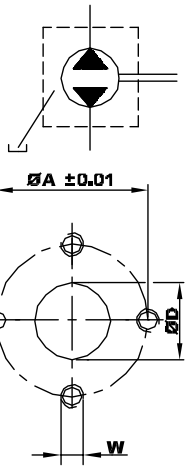
$$P = \frac{\Delta P \cdot V \quad N \cdot n_t}{612000} \qquad kW$$

GROUP 3 REVERSIBLE MOTORS - EUROPEAN STANDARD

VERSION: P38 P3



Type	Displacement (cc/rev)	Max working pressure P1 (bar)	Peak pressure P3 (bar)	Max speed (r.p.m)	Dimension L (mm)	Dimension M (mm)	Inlet port ØD	Inlet port ØA	Inlet port W	Outlet port ØD	Outlet port ØA	Outlet port W
OT 300 P22	22	220	250	3000	57,4	119,3	27	51	M10	19	40	M8
OT 300 P28	28	220	250	3000	59,7	123,7	27	51	M10	19	40	M8
OT 300 P32	32	220	250	3000	61,2	126,9	27	51	M10	19	40	M8
OT 300 P38	38	200	230	3000	63,5	131,5	27	51	M10	19	40	M8
OT 300 P42	42	200	230	3000	65.0	134,5	27	51	M10	19	40	M8
OT 300 P48	48	200	230	3000	72,3	149,1	27	51	M10	19	40	M8
OT 300 P53	53	180	200	3000	74,2	152,9	27	51	M10	19	40	M8
OT 300 P63	63	180	200	2100	78,0	160,5	27	51	M10	19	40	M8
OT 300 P73	73	160	180	2100	81,9	168,2	36	62	M12	27	51	M10
OT 300 P82	82	160	180	2100	85,3	175,1	36	62	M12	27	51	M10
OT 300 P90	90	130	150	2100	88,3	181,1	36	62	M12	27	51	M10



EXAMPLE OF ORDERING CODE

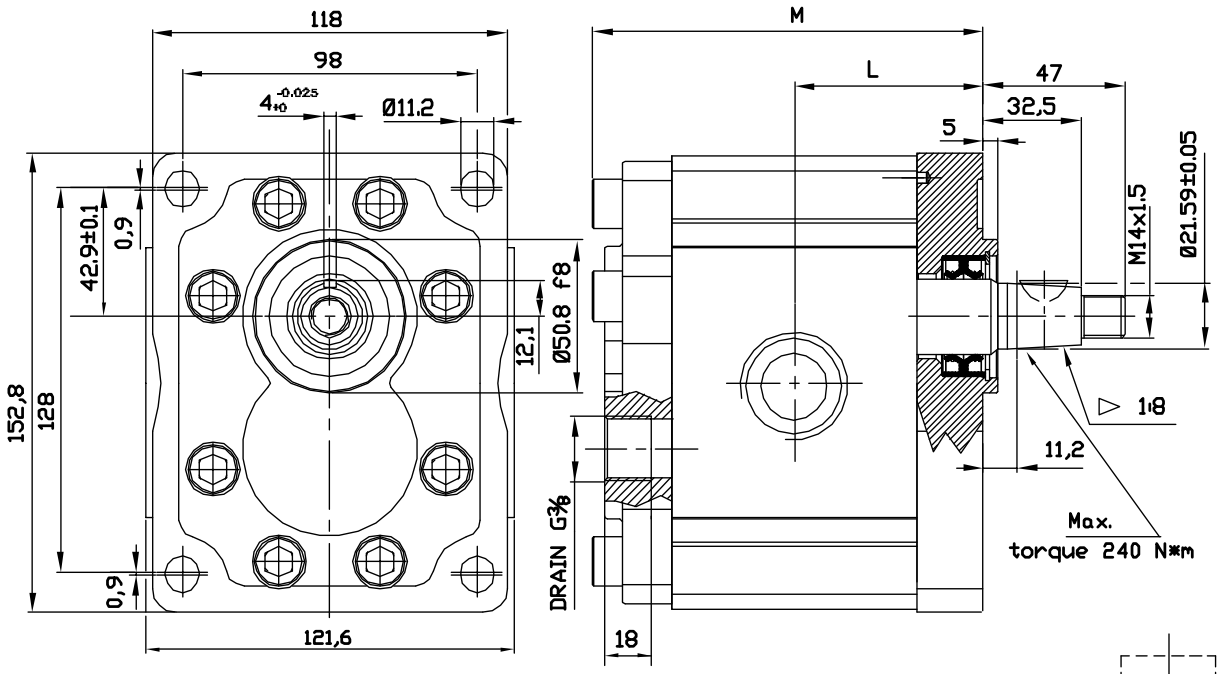
OT300 M 28 R / P 38 P3

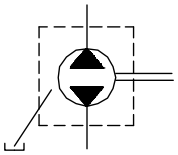
- OT300 — Series
- M — Motor
- 28 — Displacement (see above table)
- R — Rotation: R Reversible
- P — Body for European flanges
- 38 — Taper shaft (1:8)
- P3 — European standard flange

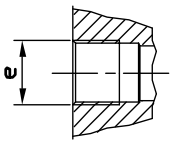
AVAILABLE FOR QUANTITIES

GROUP 3 REVERSIBLE MOTORS - EUROPEAN STANDARD

VERSION: G38 P3







OT 300 P22	22	220	250	3000	57,4	119,3	G 1	G 1
OT 300 P28	28	220	250	3000	59,7	123,7	G 1	G 1
OT 300 P32	32	220	250	3000	61,2	126,9	G 1	G 1
OT 300 P38	38	200	230	3000	63,5	131,5	G 1	G 1
OT 300 P42	42	200	230	3000	65.0	134,5	G 1	G 1
OT 300 P48	48	200	230	3000	72,3	149,1	G 1	G 1
OT 300 P53	53	180	200	3000	74,2	152,9	G 1	G 1
OT 300 P63	63	180	200	2100	78,0	160,5	G 1+1/4	G 1+1/4
OT 300 P73	73	160	180	2100	81,9	168,2	G 1+1/4	G 1+1/4
OT 300 P82	82	160	180	2100	85,3	175,1	G 1+1/4	G 1+1/4
OT 300 P90	90	130	150	2100	88,3	181,1	G 1+1/4	G 1+1/4

EXAMPLE OF ORDERING CODE

OT300 M 28 R / G 38 P3

- OT300 — Series
- M — Motor
- 28 — Displacement (see above table)
- R — Rotation: R Reversible
- G — Body with threated ports (BSP)
- 38 — Taper shaft (1:8)
- P3 — European standard flange

AVAILABLE FOR QUANTITIES

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