

BASIC DESCRIPTION

T3 line pumps with external gearing can be used - due to their simple construction, compact dimensions, and a wide range of types - in hydraulic systems, handling devices and mobile hydraulics.

The basic version consists of several parts. The pump body is made of a heavy duty aluminum alloy. The cover and the flange are made of grey iron or aluminum alloy. The flange types used as well as the form of the working liquid inlet and outlet (located laterally - in the body or axially - in the cover) meet all worldwide standards. The gear wheels with 12 teeth are optimized for low-noise applications. They are made of heavy duty steel. The axle pivots with high quality surface are supported in sliding sleeves, which are continuously lubricated and cooled by a stream of the working liquid.

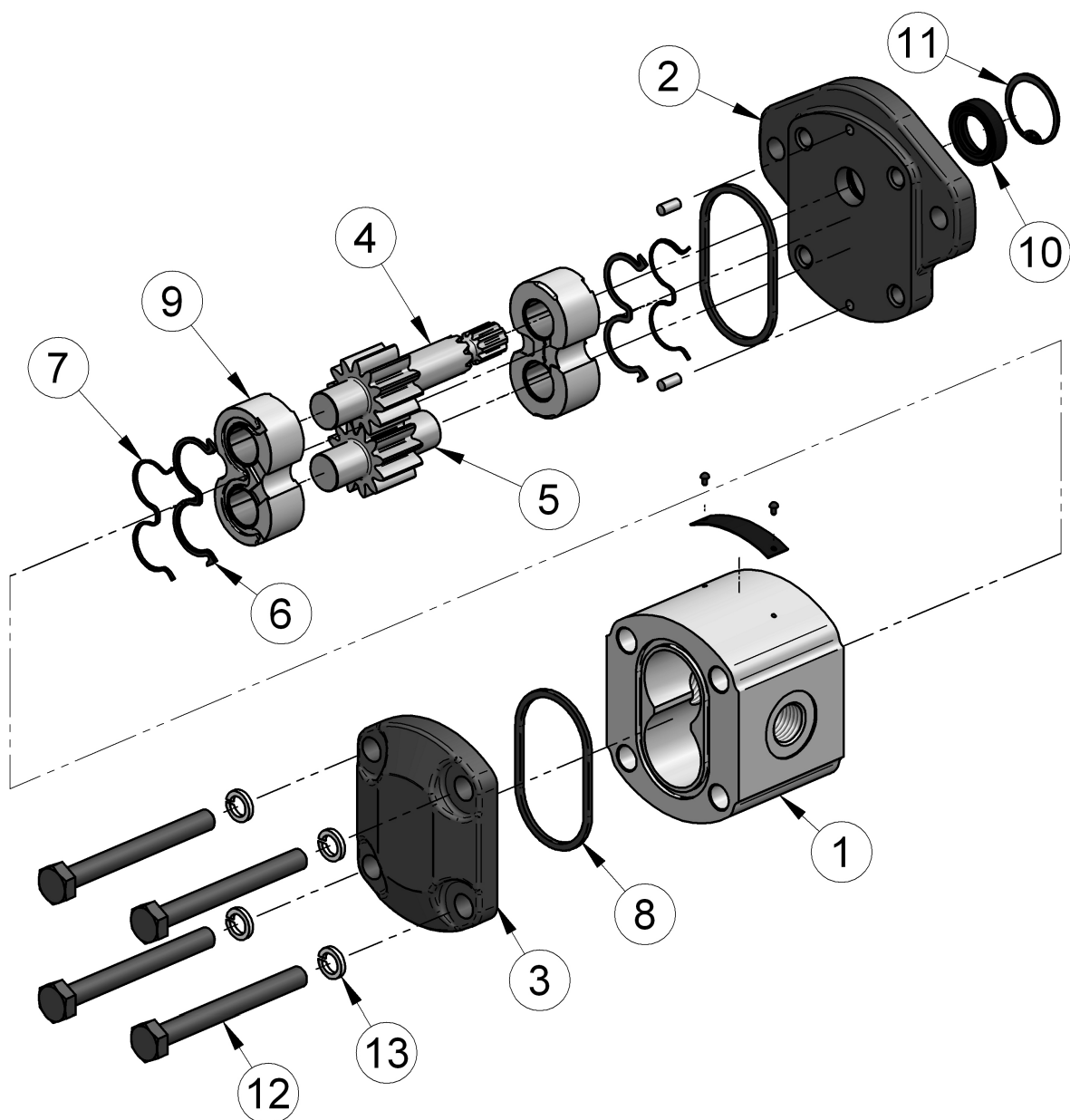
If low weight and small dimensions are required, you can use a special short version (to be used at lower working pressure) - code T3K.

The product range includes also a multiple version with separate inlet ports or one common inlet port.

PARAMETER TABLE

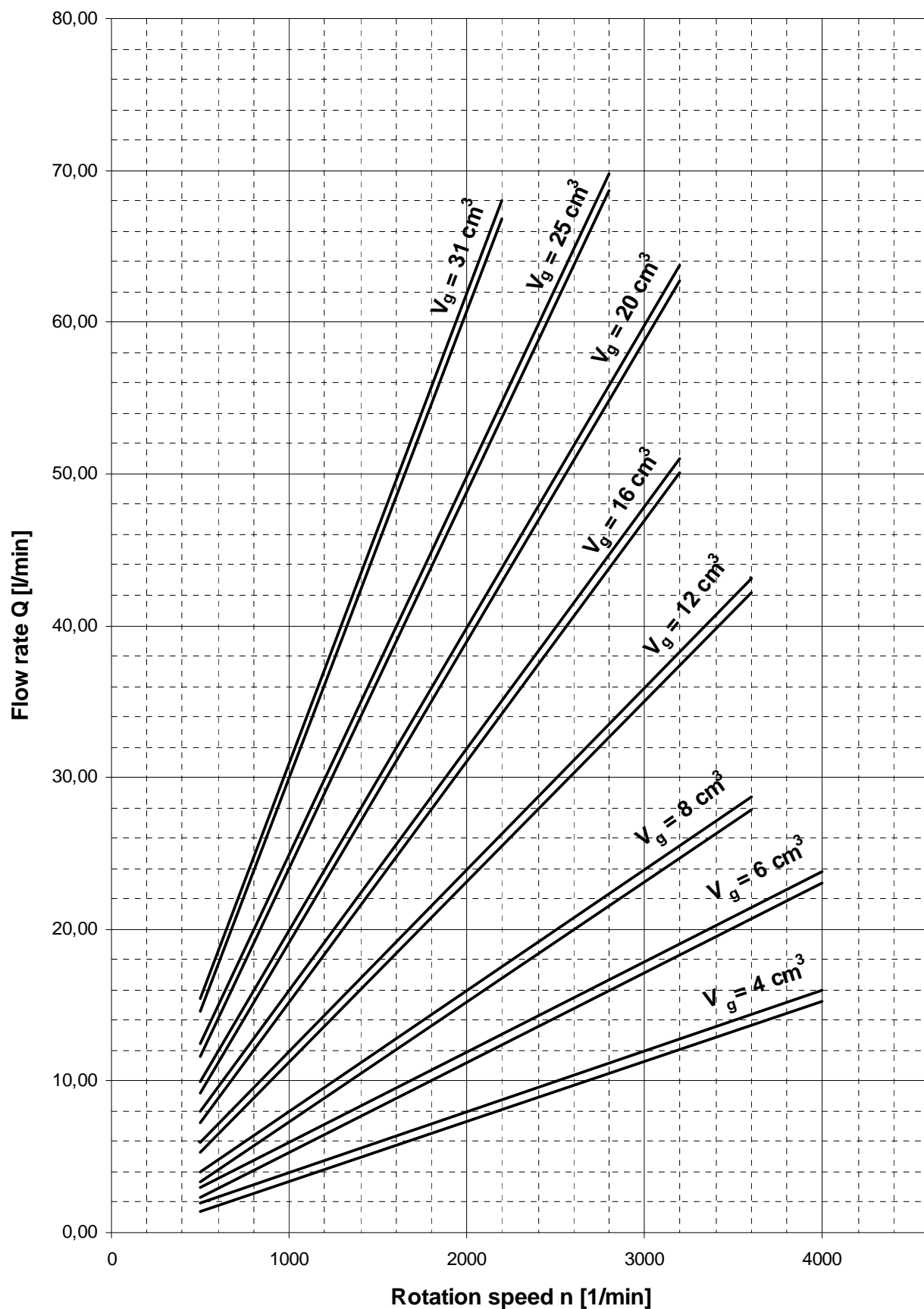
Nominal Size Parameters		Symb.	Unit	T3-4	T3-6	T3-8	T3-12	T3-16	T3-20	T3-25	T3-31
Nominal displacement		V_g	[cm ³]	4	6	8	12	16	20	25	31
Rotation speed	nominal	n_n	[min ⁻¹]	1500							
	min.	n_{min}	[min ⁻¹]	500							
	max.	n_{max}	[min ⁻¹]	4000	4000	3600	3600	3200	3200	2800	2200
Pressure at the inlet port	max.	p_{1min}	[bar]	0,50							
	min.	p_{1max}	[bar]	-0,30							
Pressure at the outlet port	max. continuous pressure	p_{2n}	[bar]	280	280	280	260	260	240	200	150
	max. pressure	p_{2max}	[bar]	290	290	290	280	280	250	220	170
	peak pressure	p_3	[bar]	310	310	310	300	300	270	240	190
Nominal flow rate (min.) at n_n and p_{2n}		Q_n	[dm ³ .min ⁻¹]	5,40	8,10	11,04	16,56	22,56	28,20	35,25	43,71
Maximum flow rate at n_{max} and p_{2max}		Q_{max}	[dm ³ .min ⁻¹]	15,68	23,52	28,22	42,34	50,18	62,72	68,60	66,84
Nominal input power (max.) at n_n and p_{2n}		P_n	[kW]	3,33	5,00	6,52	9,06	11,82	11,82	13,30	13,74
Max. input power at n_{max} and p_{2max}		P_{max}	[kW]	8,77	13,15	15,78	22,04	26,12	29,02	26,46	21,91
Weight		m	[kg]	2,6	2,65	2,75	2,95	3,1	3,35	3,5	3,8

BASIC PARTS

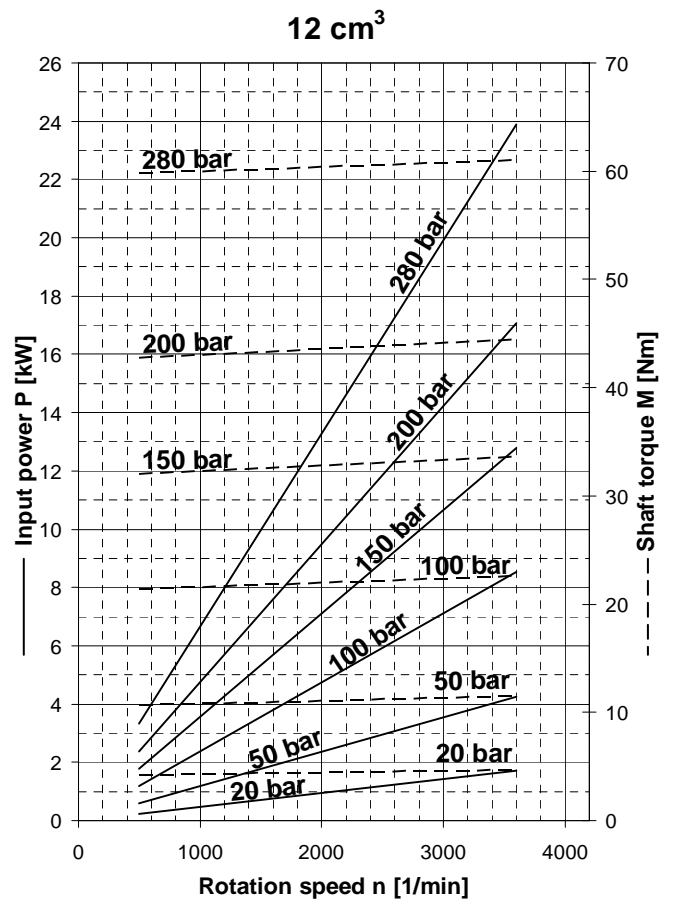
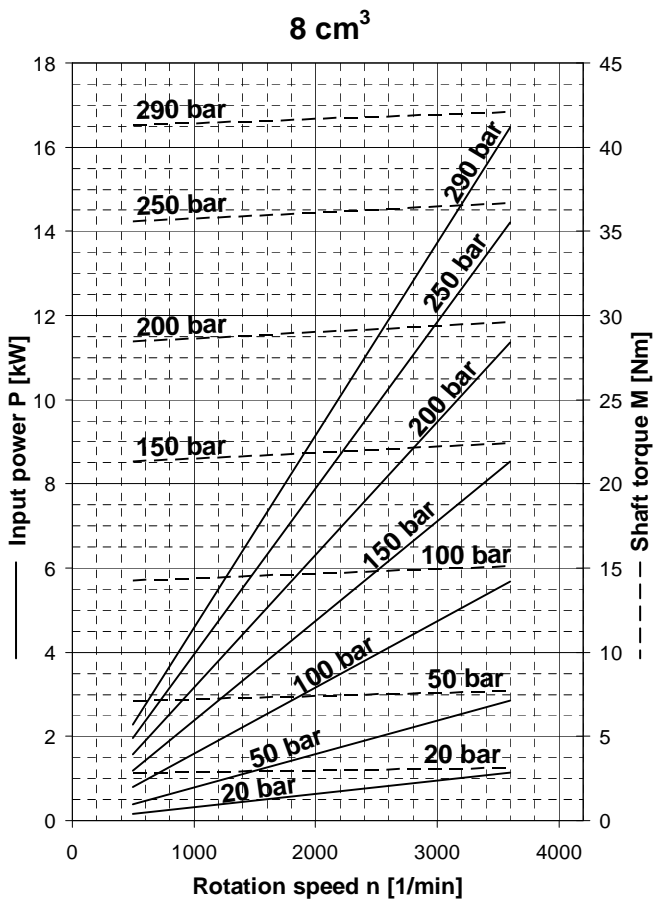
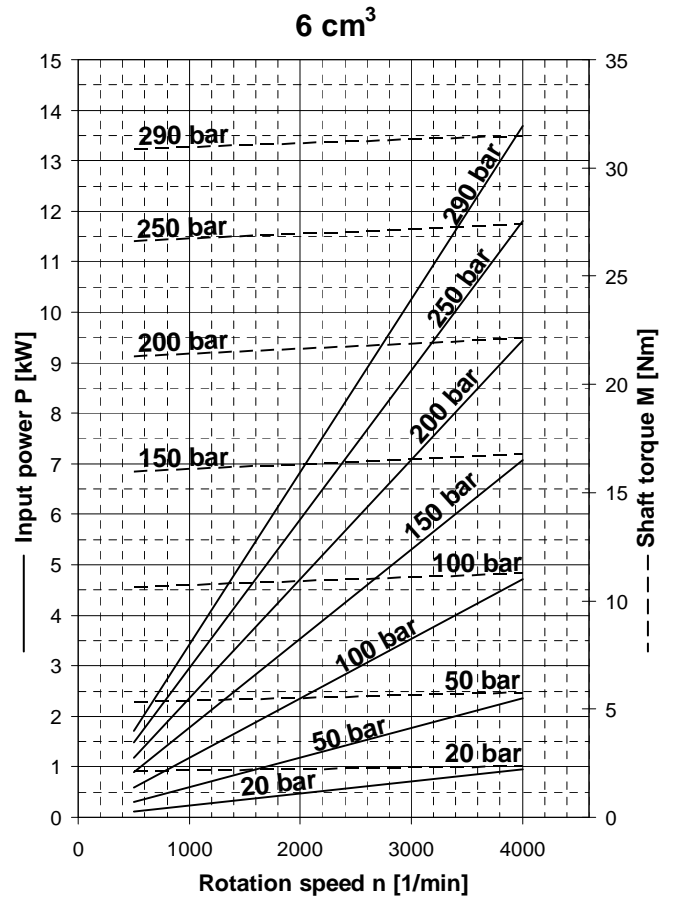
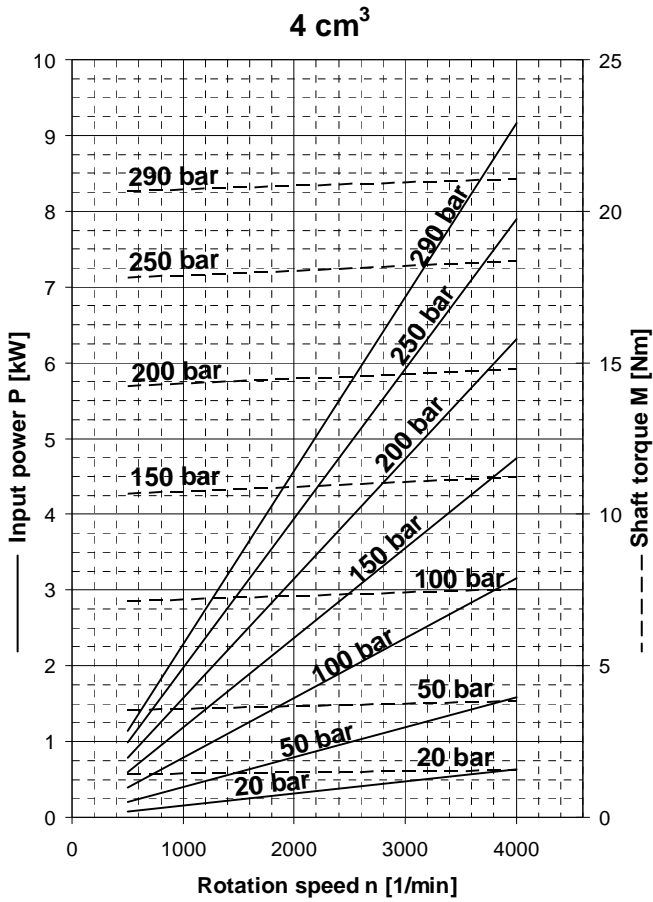


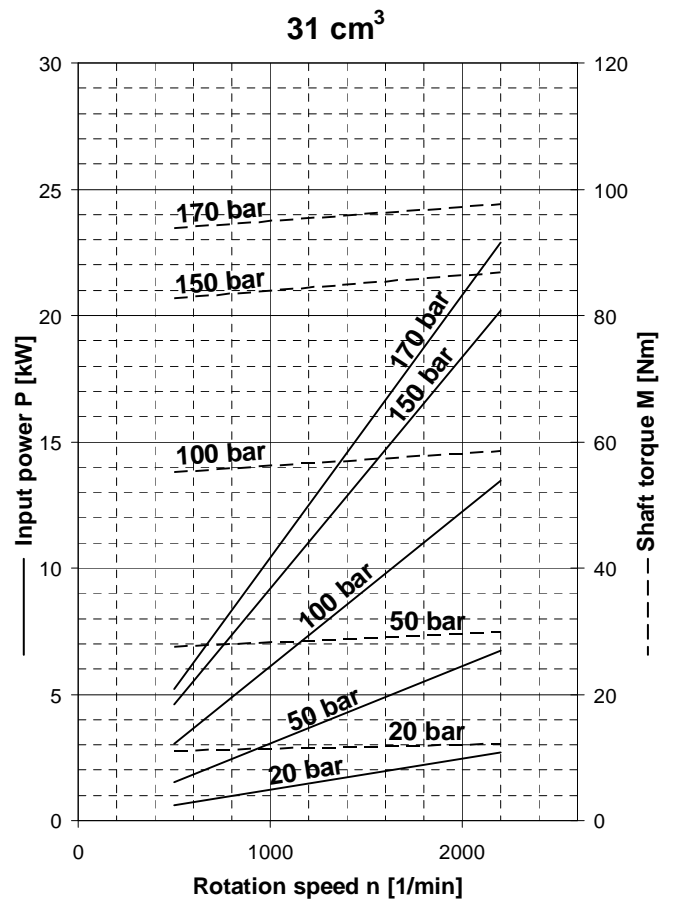
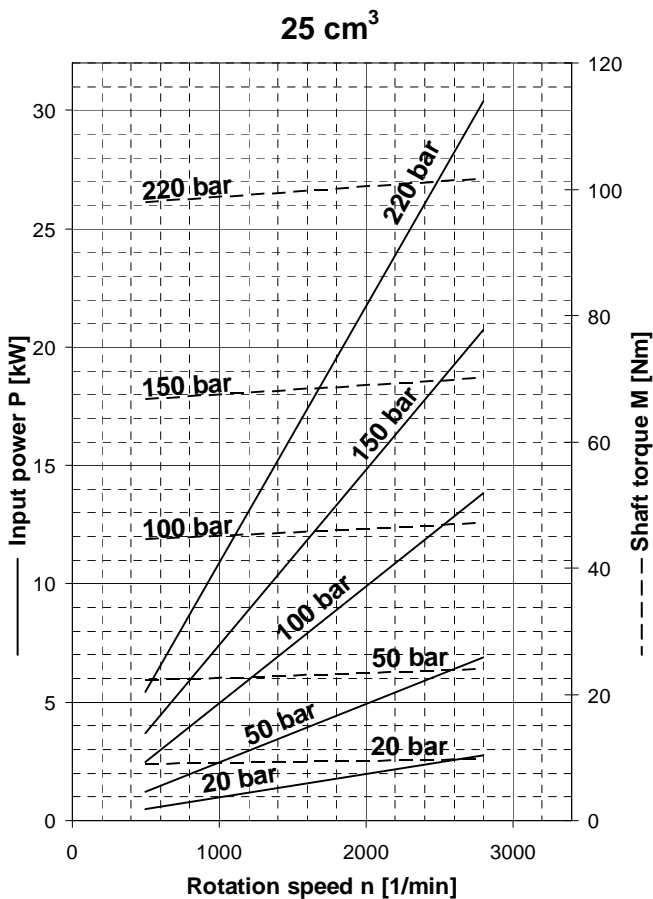
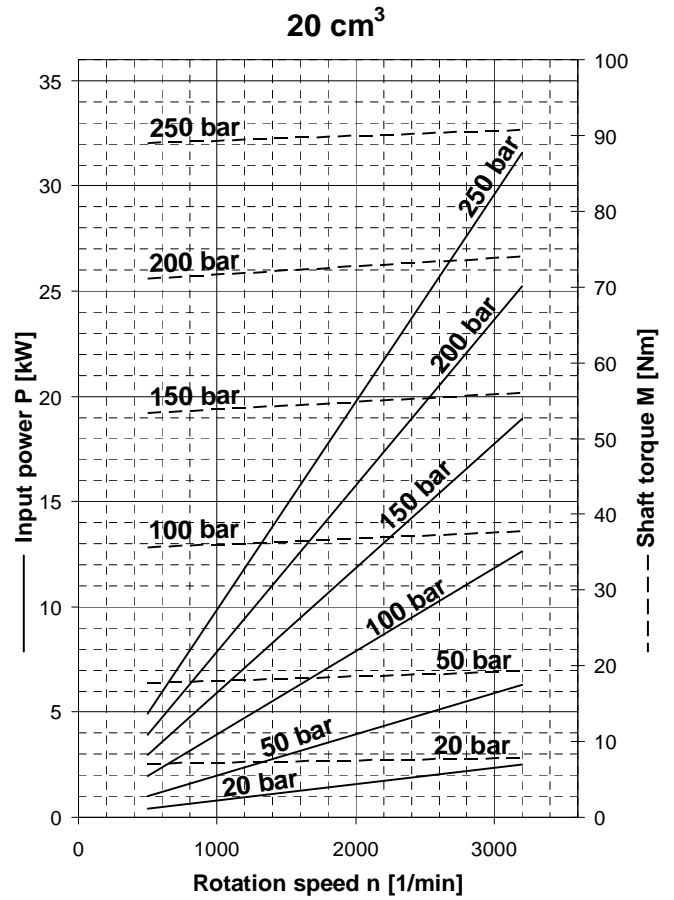
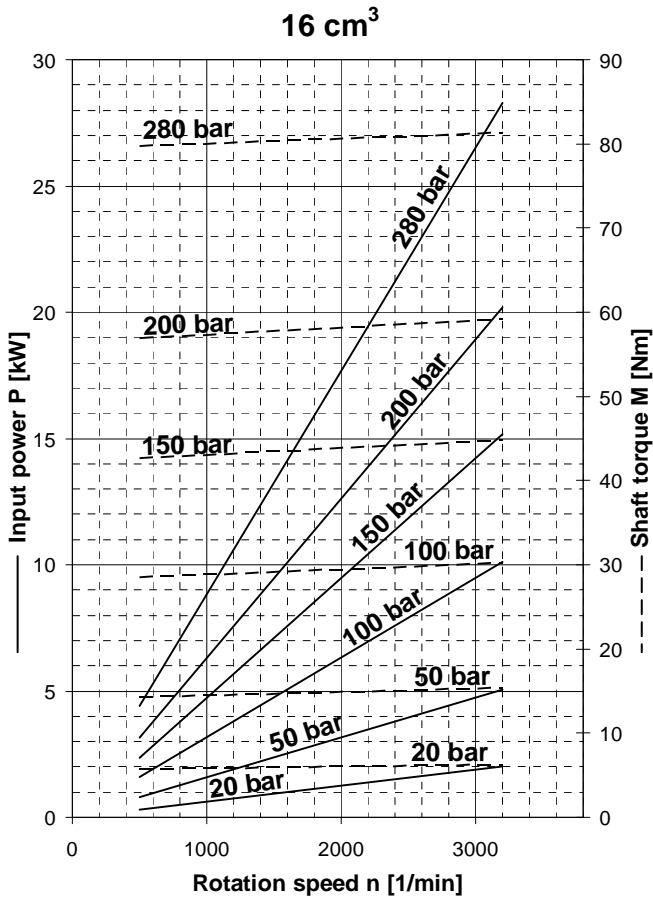
- | | |
|-----------------------------|-----------------------|
| 1. Body | 8. Peripheral sealing |
| 2. Flange | 9. Bearing |
| 3. Cover | 10. Shaft seal |
| 4. Driving gear | 11. Safety ring |
| 5. Driven gear | 12. Connection bolts |
| 6. Thrust pressure seal | 13. Lock washer |
| 7. Sealing protective plate | |

FLOW RATE AND INPUT POWER CURVES



The curves above are valid for the ISO Vg 46 oil at temperature $t = 45^\circ\text{C}$.





CALCULATION FORMULAS

Flow rate
$$Q = \frac{V_g \cdot n}{1000} \cdot \eta_v \quad [\text{dm}^3 \cdot \text{min}^{-1}]$$

V_g	[cm ³]	geometric pump volume
n	[min ⁻¹]	rotation speed
η_v	[-]	volumetric efficiency

Displacement
$$V_g = \frac{Q \cdot 1000}{n \cdot \eta_v} \quad [\text{cm}^3]$$

Shaft torque
$$M_k = \frac{V_g \cdot p}{20 \cdot \pi \cdot \eta_m} \quad [\text{N.m}]$$

p	[bar]	required pressure at the outlet port
η_m	[-]	mechanic efficiency

Input power
$$P = \frac{V_g \cdot n \cdot p}{600 \cdot 1000 \cdot \eta_t} \quad [\text{kW}]$$

η_t	[-]	total efficiency
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PUMP EFFICIENCY

Volumetric efficiency η_v

Volumetric efficiency determines the amount of flow losses. Its value varies: $\eta_v = 0,92 \div 0,98$ (depending on the speed and the pressure at the pressure port). Volumetric efficiency can be expressed as follows:

$$\eta_v = \frac{Q_{skut}}{Q_{teor}} \quad [-]$$

Q_{skut}	[dm ³ .min ⁻¹]	actual flow rate
Q_{teor}	[dm ³ .min ⁻¹]	theoretical flow rate

Mechanical efficiency η_m

Mechanical efficiency determines the hydraulic-mechanical losses. Its value varies at about $\eta_m = 0,85$. Mechanical efficiency can be expressed as follows:

$$\eta_m = \frac{M_{teor}}{M_{skut}} \quad [-]$$

M_{skut}	[N.m]	actual shaft torque
M_{teor}	[N.m]	theoretical shaft torque

Total efficiency η_t

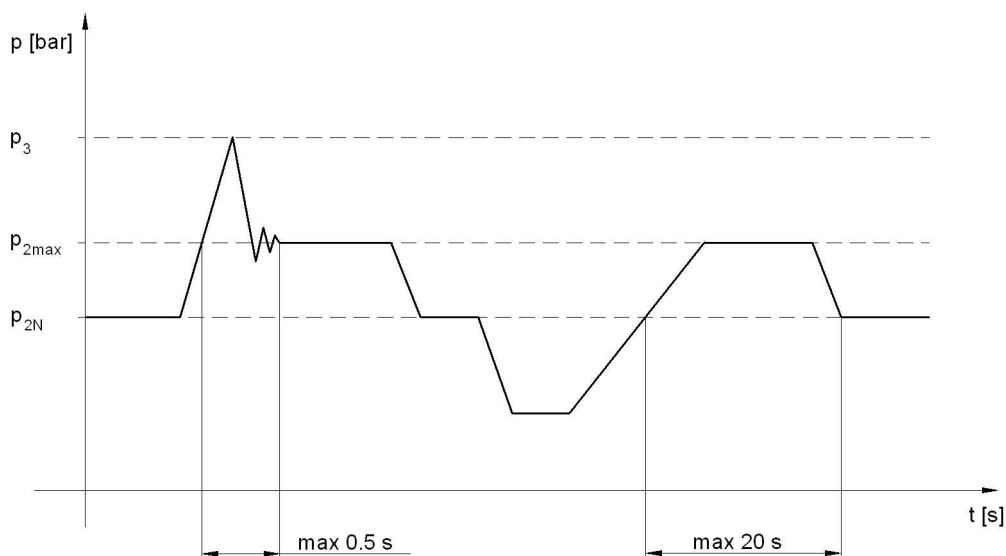
Total efficiency is defined as the arithmetic product of η_v and η_m and expresses the difference between the theoretical and the required actual input power:

$$\eta_t = \eta_v \cdot \eta_m = \frac{P_{teor}}{P_{skut}} \quad [-]$$

P_{skut}	[kW]	actual input power
P_{teor}	[kW]	theoretical input power

PRESSURE LOAD

p_{2N}	max. continuous pressure	maximum working pressure at which the pump can be operated without time-limitation
p_{2max}	maximum pressure	maximum short-term (max. 20s) allowable pressure
p₃	peak pressure	short-term pressure (split second) arising in case of a sudden change of the operating mode; any excess of this pressure during operation is inadmissible.



WORKING LIQUID

- Mineral oils for hydraulic drives
- Hydraulic liquids based on vegetable oils, suitable for hydrostatic drives

Liquid temperature

$t = -20 \div +80$ [°C] when used with a FKM seal (Viton) up to 120 [°C]

Cinematic viscosity

during continuous operation:	$v = 20 \div 80$ [mm ² · s ⁻¹]
max.:	$v = 1200$ [mm ² · s ⁻¹]
min.:	$v = 10$ [mm ² · s ⁻¹]

Filtration coefficient β_{α}

$\beta_{25} 75 \geq$ (for pressure $p_2 < 200$ bar)
 $\beta_{10} 75 \geq$ (for pressure $p_2 > 200$ bar)

Contamination class ISO 4406

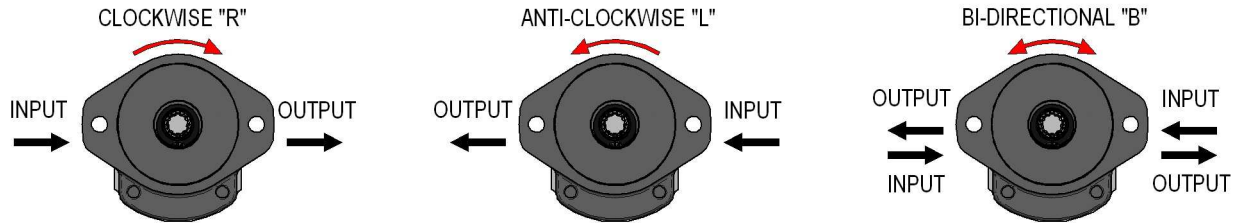
19/16 (for pressure $p_2 < 200$ bar)
 17/14 (for pressure $p_2 > 200$ bar)

Contamination class NAS 1638

10 (for pressure $p_2 < 200$ bar)
 8 (for pressure $p_2 > 200$ bar)

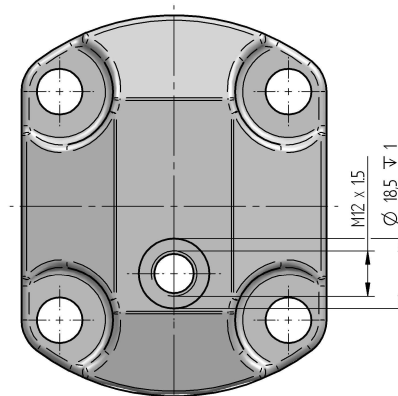
DIRECTION OF ROTATION

When determining the direction of rotation, always look at the drive shaft. The pump is allowed to be operated in the defined direction of rotation only.



BI-DIRECTIONAL VERSION

Pumps, which can optionally rotate clockwise or anti-clockwise, have a different internal arrangement requiring drainage. There are two types of drainage - internal drainage and external drainage. The internal drainage is always connected with the discharge port by means of valves. The external drainage is solved by means of an orifice located in the cover opposite the driven gear (see image below).











ORDER KEY – SIMPLE VERSION




T3 - 16 R - S1 D1 - S G04 G03 - V . 001








Code	Displacement [cm ³]
4	4,03
6	6,02
8	8,05
12	12,08
16	16,10
20	20,12
25	25,16
31	31,21
XX	Other displacements on request

Code	Rotation
R	Clockwise rotation
L	Anti-clockwise rotation
B	Bi-directional rotation




Code	Type
T3	T3 Series Gear Pump
T3K	T3 Series Gear Pump, short version






Code	Flange design	
R1		Rectangular flange, centre ring Ø 36,5
R2		Rectangular flange, centre ring Ø 80
S1		SAE A
S2		SAE B
A1		Flange with trough-bolts, centre ring Ø 50
A2		Flange with trough-bolts, centre ring Ø 50
A3		Flange with trough-bolts, centre ring Ø 52 with O-ring
A4		Flange with trough-bolts, centre ring Ø 52 with O-ring
Z		Special design

Code	Location of suction and pressure port	
S		Side (in the body)
R		Rear (in the cover)
C		Combination

Code	Drive shaft design	
C1		Taper 1:8 Key width 3
C2		Taper 1:8 Key width 3,2
C3		Taper 1:8 Key width 4
C4		Taper 1:5 Key width 3
D1		Spline SAE 9T 16/32 DP
D3		Spline SAE 11T I = 32, 16/32 DP
D4		Spline SAE 11T I = 38, 16/32 DP
D5		Spline CSN 17x1,25
D6		Spline DIN 5482 B17x14
K1		Cross coupling
V1		Cylindric Ø15, Key 4x4
V2		Cylindric Ø5/8", Key 4x4
V3		Cylindric Ø3/4", Key 4,8x4,8
Z		Special design

Code	Special arrangements
-	No special arrangements
001	With front end bearing
004	Without shaft seal

Code	Sealing material	
N		NBR
V		FKM
H		HNBR

Code	Design of suction and pressure port	
M02		Thread M12x1,5
M04		Thread M16x1,5
M05		Thread M18x1,5
M06		Thread M20x1,5
M09		Thread M27x2
G01		Thread BSP G1/4
G02		Thread BSP G3/8
G03		Thread BSP G1/2
G04		Thread BSP G3/4
G05		Thread BSP G1"
U01		Thread 7/16–20 UNF–2B
U02		Thread 9/16–18 UNF–2B
U03		Thread 3/4–16 UNF–2B
U04		Thread 7/8–14 UNF–2B
U05		Thread 1–1/16–12 UN–2B
H05		Flanged fitting Ø15 Square 4xM6 Ø35
H06		Flanged fitting Ø20 Square 4xM6 Ø40
H10		Flanged fitting Ø26 Square 4xM8 Ø55
H07		Flanged fitting Ø13,5 Square 4xM6 Ø30
H08		Flanged fitting Ø20 Square 4xM8 Ø40
K01		Flanged fitting Ø13,5 Cross 4xM6 Ø30
K02		Flanged fitting Ø20 Cross 4xM8 Ø40
Z		Special design

Example: Description of a T3 pump: Direction of rotation: anti-clockwise; geometric volume 8cm³; SAE A flange; SAE 9T grooving; BSP inlet orifices in the cover; and NBR standard sealing, no elevation: **T3-8L-S1D1-RG03G03-N**









ORDER KEY – MULTIPLE VERSION



T3 - 16 / 8 / 8 R - S1 D1 - S G04 G03 / G03 G03 / G03 G03 - V . 001

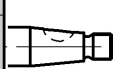


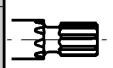



Code	Displacement 1 st / 2 nd / 3 rd section [cm ³]
4	4,03
6	6,02
8	8,05
12	12,08
16	16,10
20	20,12
25	25,16
31	31,21
XX	Other displacements on request

Code	Rotation
R	Clockwise rotation
L	Anti-clockwise rotation




Code	Type
T3	T3 Series Gear Pump
T3K	T3 Series Gear Pump, short version






Code	Flange design	
R1		Rectangular flange, centre ring Ø 36,5
R2		Rectangular flange, centre ring Ø 80
S1		SAE A
S2		SAE B
A1		Flange with trough-bolts, centre ring Ø 50
A2		Flange with trough-bolts, centre ring Ø 50
A3		Flange with trough-bolts, centre ring Ø 52 with O-ring
A4		Flange with trough-bolts, centre ring Ø 52 with O-ring
Z		Special design

Code	Location of suction and pressure port	
S		Side (in the body)
C		Combination

Code	Drive shaft design	
C1		Taper 1:8 Key width 3
C2		Taper 1:8 Key width 3,2
C3		Taper 1:8 Key width 4
C4		Taper 1:5 Key width 3
D1		Spline SAE 9T 16/32 DP
D3		Spline SAE 11T I = 32, 16/32 DP
D4		Spline SAE 11T I = 38, 16/32 DP
D5		Spline CSN 17x1,25
D6		Spline DIN 5482 B17x14
K1		Cross coupling
V1		Cylindric Ø15, Key 4x4
V2		Cylindric Ø5/8'' Key 4x4
V3		Cylindric Ø3/4'' Key 4,8x4,8
Z		Special design

Code	Special arrangements
-	No special arrangements
001	With front end bearing
004	Without shaft seal

Code	Sealing material	
N		NBR
V		FKM
H		HNBR

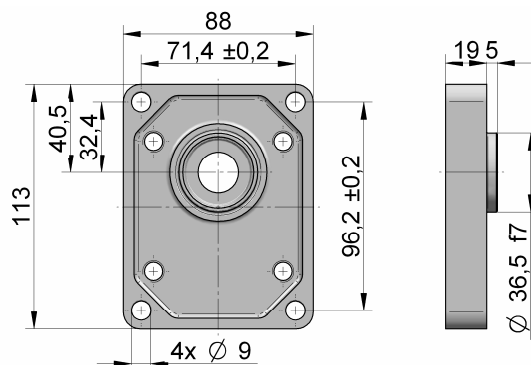
Code	Design of suction and pressure port 1 st section / 2 nd section / 3 rd section	
M02		Thread M12x1,5
M04		Thread M16x1,5
M05		Thread M18x1,5
M06		Thread M20x1,5
M09		Thread M27x2
G01		Thread BSP G1/4
G02		Thread BSP G3/8
G03		Thread BSP G1/2
G04		Thread BSP G3/4
G05		Thread BSP G1''
U01		Thread 7/16-20 UNF-2B
U02		Thread 9/16-18 UNF-2B
U03		Thread 3/4-16 UNF-2B
U04		Thread 7/8-14 UNF-2B
U05		Thread 1-1/16-12 UN-2B
H05		Flanged fitting Ø15 Square 4xM6 Ø35
H06		Flanged fitting Ø20 Square 4xM6 Ø40
H10		Flanged fitting Ø26 Square 4xM8 Ø55
H07		Flanged fitting Ø13,5 Square 4xM6 Ø30
H08		Flanged fitting Ø20 Square 4xM8 Ø40
K01		Flanged fitting Ø13,5 Cross 4xM6 Ø30
K02		Flanged fitting Ø20 Cross 4xM8 Ø40
Z		Special design
N		Without suction port

Example: Description of a T3 pump: Direction of rotation: clockwise; three sections with geometric volumes 12, 8 and 6 cm³; rectangular flange with center ring Ø 36,5; cone 1:8; common inlet port, and three outlet ports with metric thread and FKM sealing; no special arrangement: **T3-12/8/6R-R1C1-SNM05/M09M05/NM05-V**

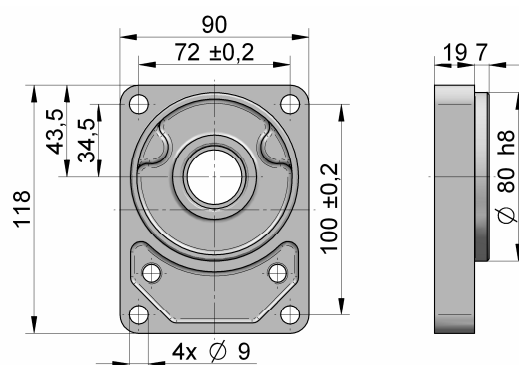
DESIGN OF FLANGES, DRIVE SHAFTS AND INLET PORTS

Flanges

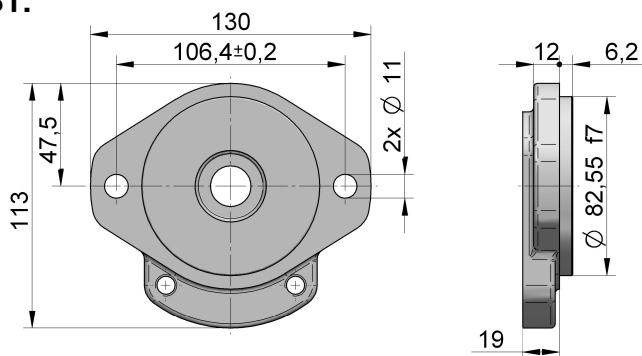
R1:



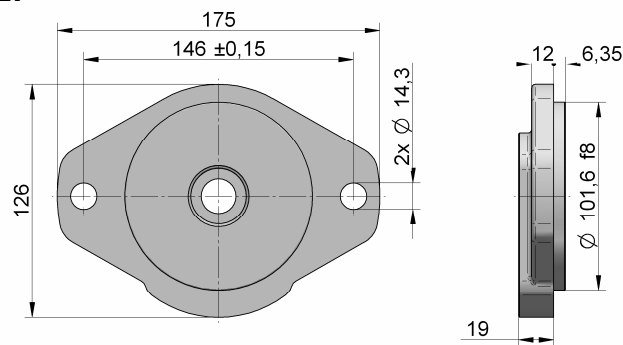
R2:



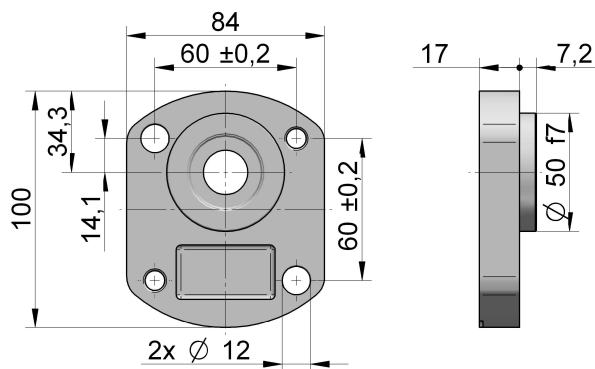
S1:



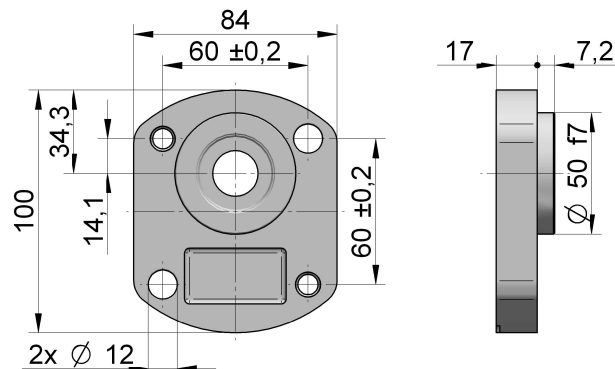
S2:



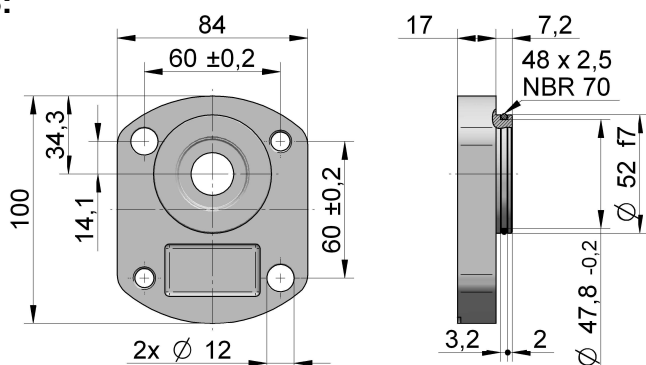
A1:



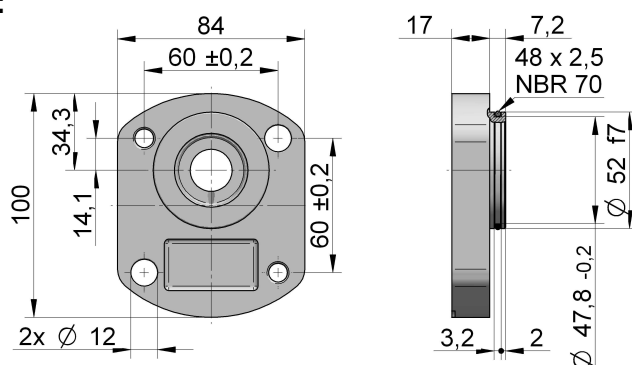
A2:



A3:

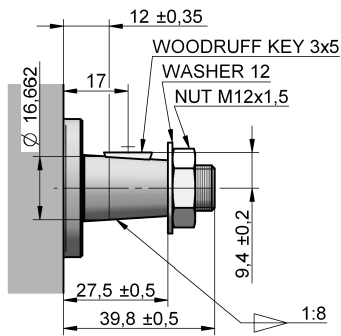


A4:

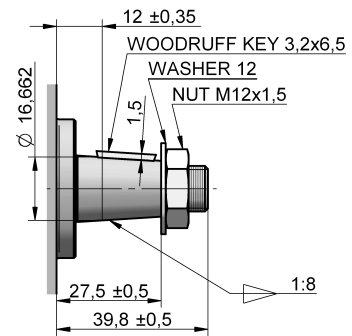


Drive shafts:

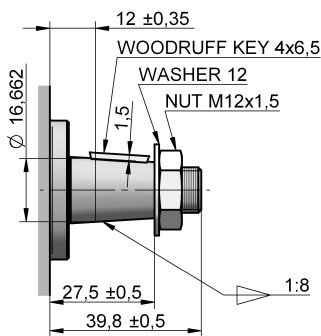
C1:



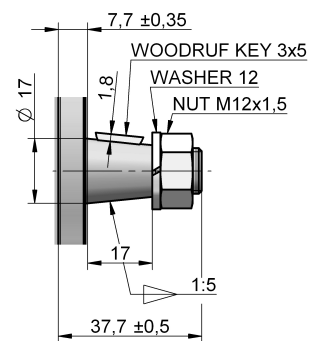
C2:



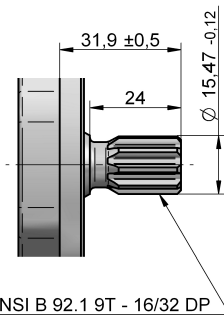
C3:



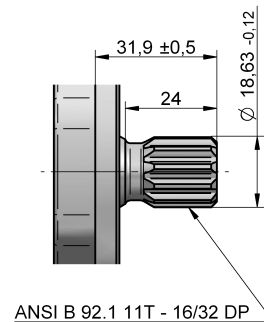
C4:



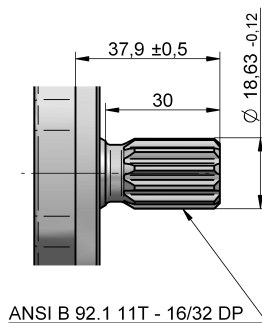
D1:



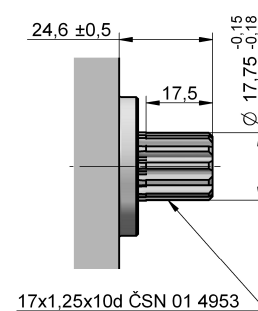
D3:



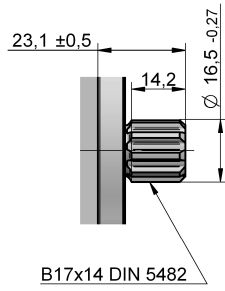
D4:



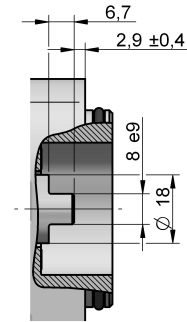
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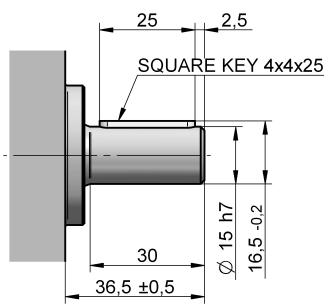
D6:



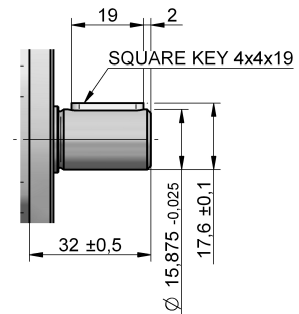
K1:



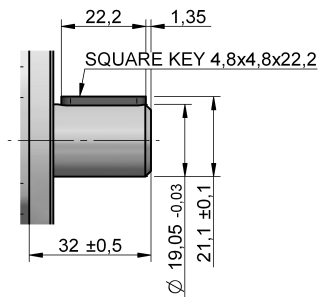
V1:



V2:

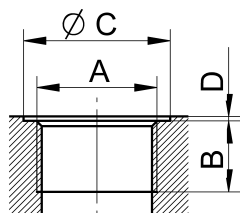


V3:



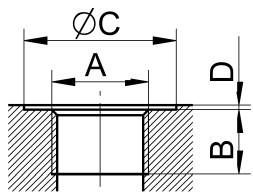
INLET AND OUTLET PORTS

Metric thread ISO 6149



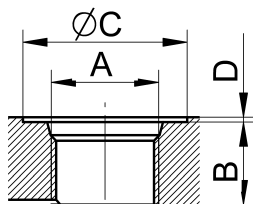
Code	A	B	C	D
M02	M 12x1,5	12	20	1
M04	M 16x1,5	13	22	1
M05	M 18x1,5	14	24	1
M06	M 20x1,5	14	26	1
M09	M 27x2	16	33	1

BSP pipe thread ISO 228 - 1



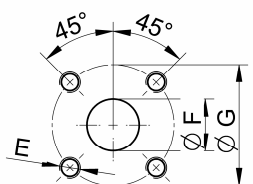
Code	A	B	C	D
G01	G 1/4	12	18	1
G02	G 3/8	13	24	1
G03	G 1/2	14	33	1
G04	G 3/4	16	39	1
G05	G 1"	18	45	1

UNF thread SAE



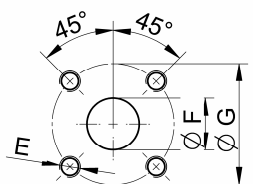
Code	A	B	C	D
U01	7/16-20 UNF -2B	13	21	1
U02	9/16-18 UNF -2B	14	25	1
U03	3/4-16 UNF -2B	15	30	1
U04	7/8-14 UNF -2B	17	34	1
U05	1-1/16-12 UN -2B	19	41	1

Flanged fittings DIN 8901/8902



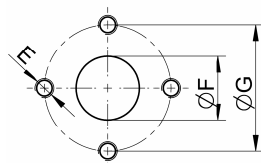
Code	E	F	G
H05	M6, depth 13	15	35
H06	M6, depth 13	20	40
H10	M8, depth 13	25	55

Flanged fittings ISO 6163, „square“

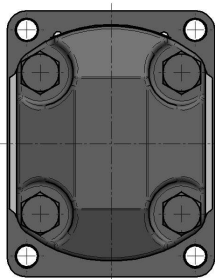
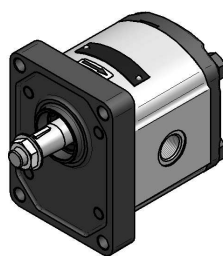
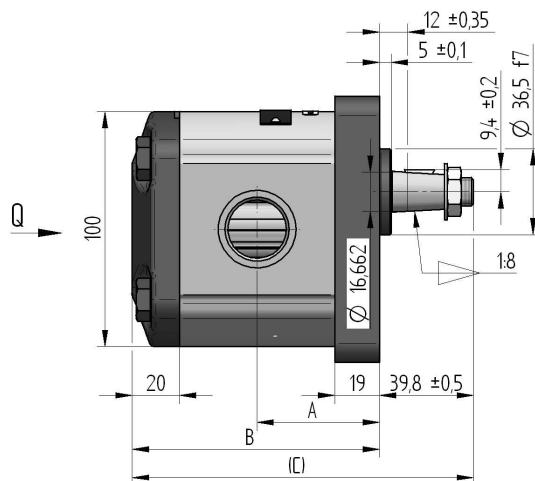
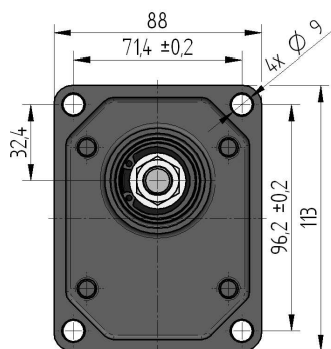


Kód	E	F	G
H07	M6, depth 13	13,5	30
H08	M8, depth 13	20	40

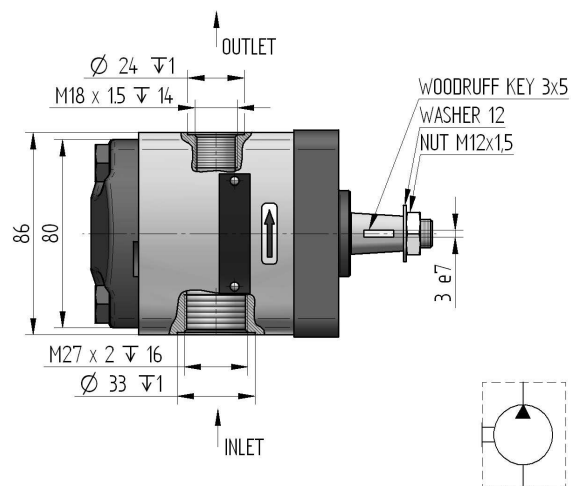
Flanged fittings ISO 6163, „cross“



Kód	E	F	G
K01	M6, depth 13	13,5	30
K02	M8, depth 13	20	40

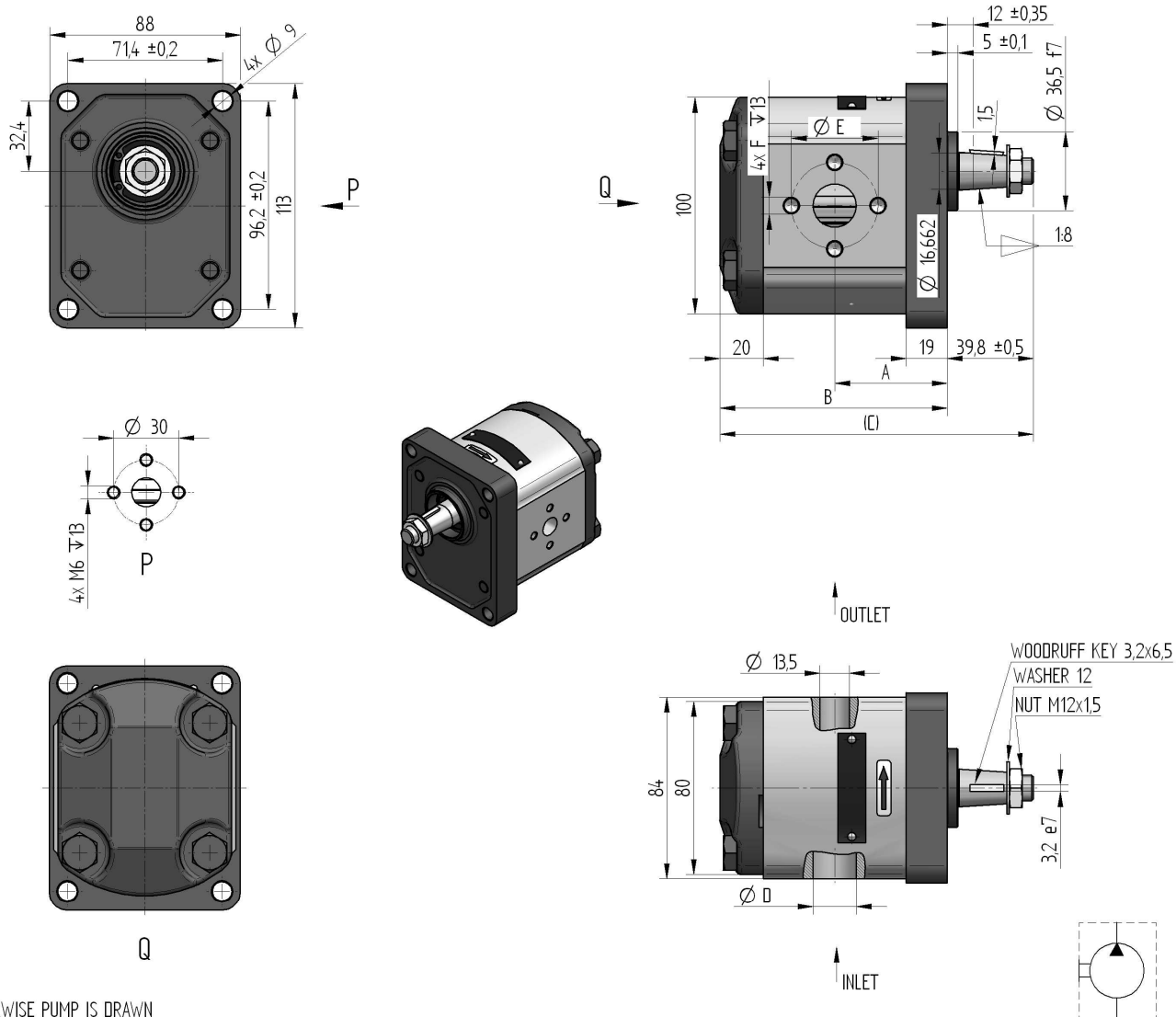


Q



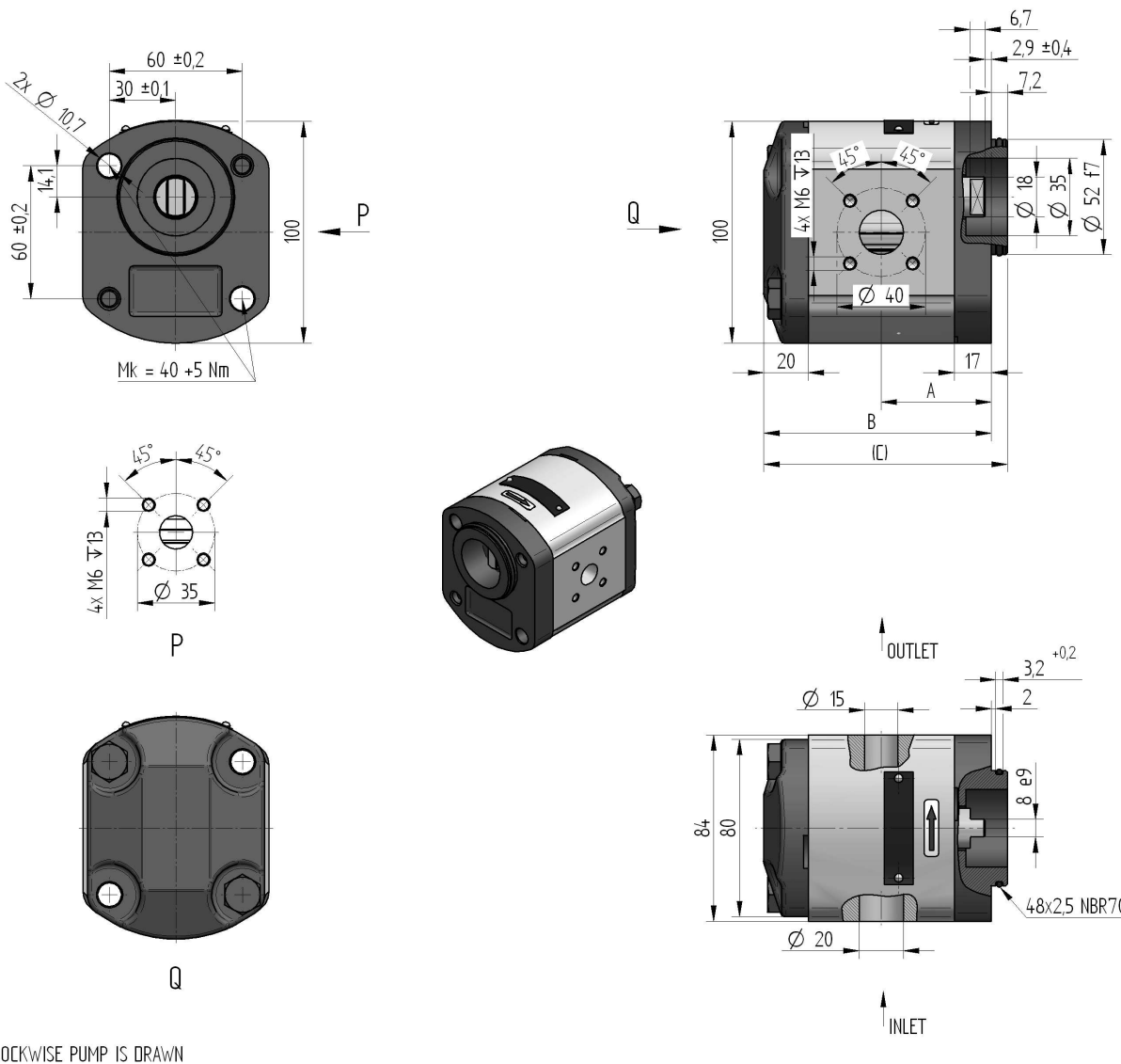
THE CLOCKWISE PUMP IS DRAWN

T3-31R-R1C1-SM09M05-N	184 9257	R	31	150	500	2 200	63,7	128,5	168,3				
T3-31L-R1C1-SM09M05-N		L											
T3-25R-R1C1-SM09M05-N	184 9256	R	25	200	500	2 800	59,0	119,1	158,9				
T3-25L-R1C1-SM09M05-N		L											
T3-20R-R1C1-SM09M05-N	184 9255	R	20	240	500	3 200	55,0	111,2	151,0				
T3-20L-R1C1-SM09M05-N		L											
T3-16R-R1C1-SM09M05-N	184 9254	R	16	260	500	3 200	51,9	104,9	144,7				
T3-16L-R1C1-SM09M05-N		L											
T3-12R-R1C1-SM09M05-N	184 9253	R	12	260	500	3 600	48,8	98,6	138,4				
T3-12L-R1C1-SM09M05-N		L											
T3-8R-R1C1-SM09M05-N	184 9252	R	8	280	500	3 600	45,6	92,3	132,1				
T3-8L-R1C1-SM09M05-N		L											
T3-6R-R1C1-SM09M05-N	184 9251	R	6	280	500	4 000	44,0	89,2	129,0				
T3-6L-R1C1-SM09M05-N		L											
T3-4R-R1C1-SM09M05-N	184 9250	R	4	280	500	4 000	42,5	86,0	125,8				
T3-4L-R1C1-SM09M05-N		L											
ORDER KEY	PURCH. CODE	DIRECT. OF ROT.	DISPLACEMENT [cm ³ /1]	CONT. PRESS. [bar]	MIN. SPEED [min ⁻¹]	MAX. SPEED [min ⁻¹]	A	B	C	DIMENSION [mm]			



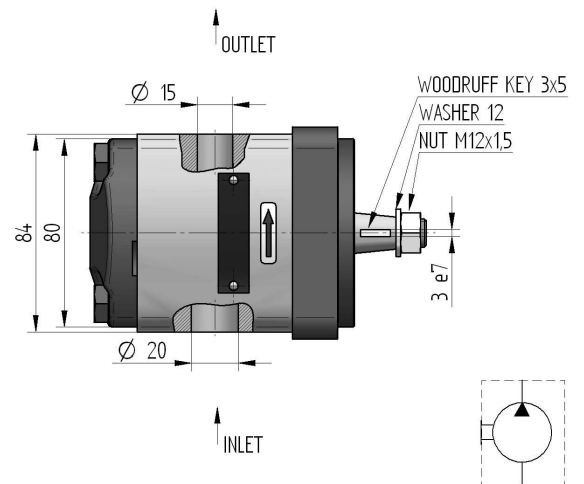
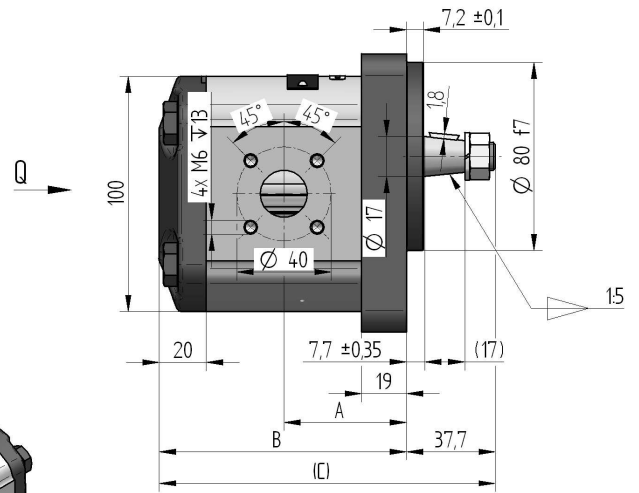
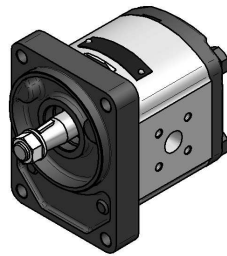
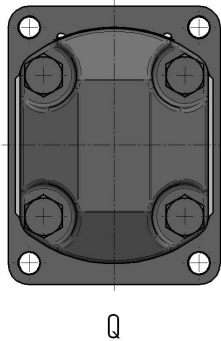
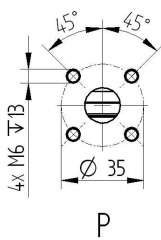
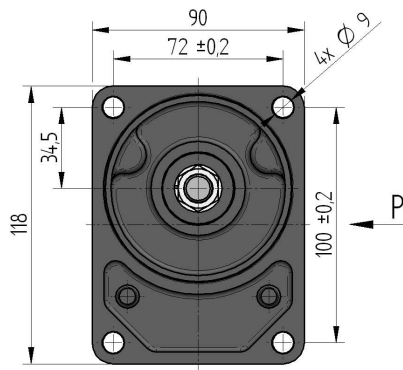
THE CLOCKWISE PUMP IS DRAWN

T3-31R-R1C2-SK02K01-N	184 9265	R	31	150	500	2 200	63,7	128,5	168,3	Ø 20	Ø 40	M8	
T3-31L-R1C2-SK02K01-N		L											
T3-25R-R1C2-SK02K01-N	180 9264	R	25	200	500	2 800	59,0	119,1	158,9	Ø 20	Ø 40	M8	
T3-25L-R1C2-SK02K01-N		L											
T3-20R-R1C2-SK02K01-N	184 9263	R	20	240	500	3 200	55,0	111,2	151,0	Ø 20	Ø 40	M8	
T3-20L-R1C2-SK02K01-N		L											
T3-16R-R1C2-SK02K01-N	184 9262	R	16	260	500	3 200	51,9	104,9	144,7	Ø 20	Ø 40	M8	
T3-16L-R1C2-SK02K01-N		L											
T3-12R-R1C2-SK02K01-N	184 9261	R	12	260	500	3 600	48,8	98,6	138,4	Ø 20	Ø 40	M8	
T3-12L-R1C2-SK02K01-N		L											
T3-8R-R1C2-SK01K01-N	184 9260	R	8	280	500	3 600	45,6	92,3	132,1	Ø 13,5	Ø 30	M6	
T3-8L-R1C2-SK01K01-N		L											
T3-6R-R1C2-SK01K01-N	184 9259	R	6	280	500	4 000	44,0	89,2	129,0	Ø 13,5	Ø 30	M6	
T3-6L-R1C2-SK01K01-N		L											
T3-4R-R1C2-SK01K01-N	184 9258	R	4	280	500	4 000	42,5	86,0	125,8	Ø 13,5	Ø 30	M6	
T3-4L-R1C2-SK01K01-N		L											
ORDER KEY	PURCH. CODE	DIRECT. OF ROT.	DISPLACEMENT [cm ³ /1]	CONT. PRESS. [bar]	MIN. SPEED [min ⁻¹]	MAX. SPEED [min ⁻¹]	A	B	C	DIMENSION [mm]			



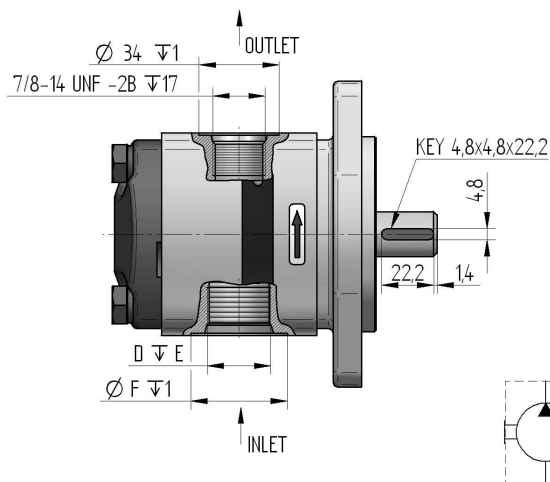
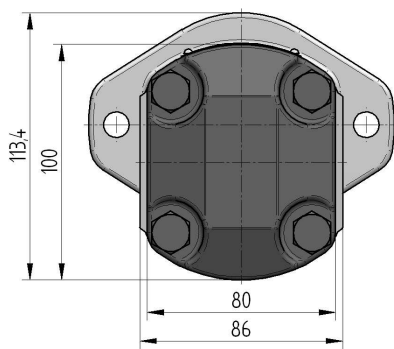
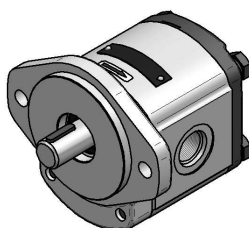
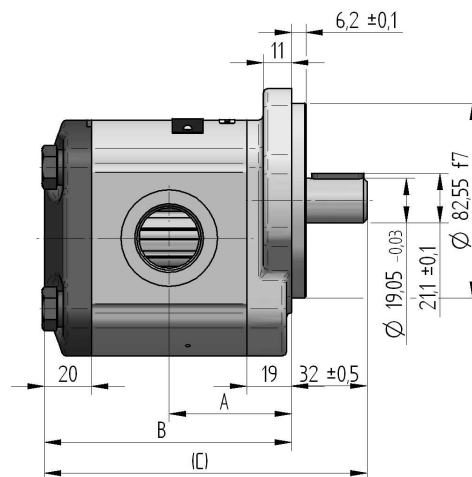
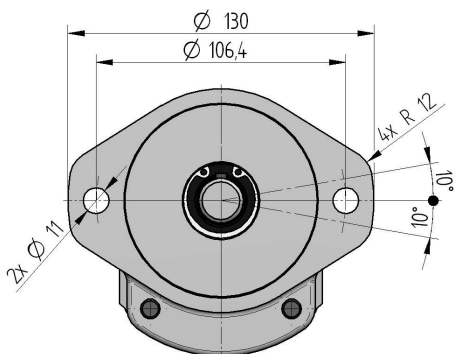
THE CLOCKWISE PUMP IS DRAWN

T3-31R-A3K1-SH06H05-N.004	184 9281	R											
T3-31L-A3K1-SH06H05-N.004		L	31	150	500	2 200	61,7	126,5	133,7				
T3-25R-A3K1-SH06H05-N.004	184 9280	R											
T3-25L-A3K1-SH06H05-N.004		L	25	200	500	2 800	57,0	117,1	124,3				
T3-20R-A3K1-SH06H05-N.004	184 9279	R											
T3-20L-A3K1-SH06H05-N.004		L	20	240	500	3 200	53,0	109,2	116,4				
T3-16R-A3K1-SH06H05-N.004	184 9278	R											
T3-16L-A3K1-SH06H05-N.004		L	16	260	500	3 200	49,9	102,9	110,1				
T3-12R-A3K1-SH06H05-N.004	184 9277	R											
T3-12L-A3K1-SH06H05-N.004		L	12	260	500	3 600	46,8	96,6	103,8				
T3-8R-A3K1-SH06H05-N.004	184 9276	R											
T3-8L-A3K1-SH06H05-N.004		L	8	280	500	3 600	43,6	90,3	97,5				
T3-6R-A3K1-SH06H05-N.004	184 9275	R											
T3-6L-A3K1-SH06H05-N.004		L	6	280	500	4 000	42,0	87,2	94,4				
T3-4R-A3K1-SH06H05-N.004	184 9274	R											
T3-4L-A3K1-SH06H05-N.004		L	4	280	500	4 000	40,5	84,0	91,2				
ORDER KEY	PURCH. CODE	DIRECT. OF ROT.	DISPLACEMENT [cm ³ /1]	CONT. PRESS. [bar]	MIN. SPEED [min ⁻¹]	MAX. SPEED [min ⁻¹]	A	B	C	DIMENSION [mm]			



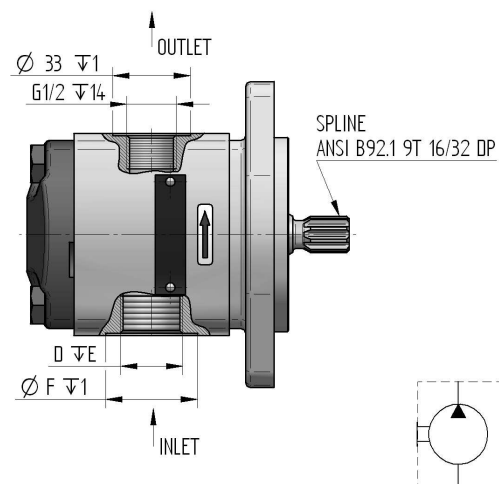
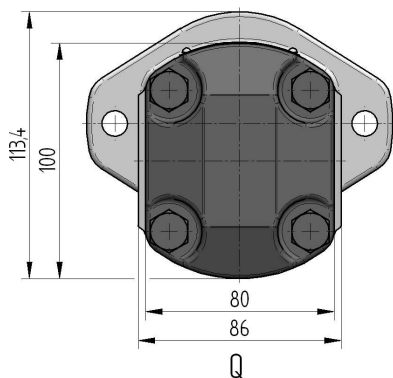
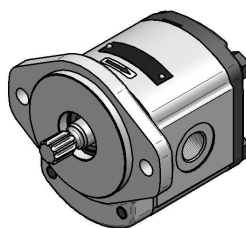
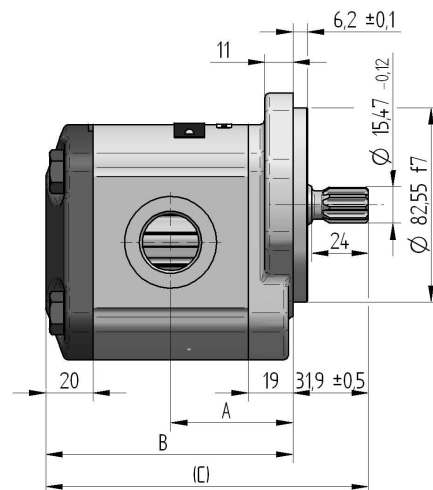
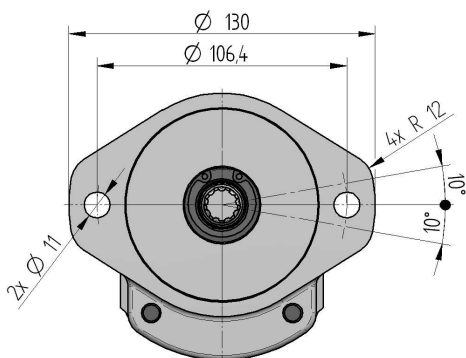
THE CLOCKWISE PUMP IS DRAWN

T3-31R-R2C4-SH06H05-N	184 9573	R	31	150	500	2 200	63,7	128,5	168,3				
T3-31L-R2C4-SH06H05-N		L											
T3-25R-R2C4-SH06H05-N	184 9572	R	25	200	500	2 800	59,0	119,1	158,9				
T3-25L-R2C4-SH06H05-N		L											
T3-20R-R2C4-SH06H05-N	184 9571	R	20	240	500	3 200	55,0	111,2	151,0				
T3-20L-R2C4-SH06H05-N		L											
T3-16R-R2C4-SH06H05-N	184 9570	R	16	260	500	3 200	51,9	104,9	144,7				
T3-16L-R2C4-SH06H05-N		L											
T3-12R-R2C4-SH06H05-N	184 9569	R	12	260	500	3 600	48,8	98,6	138,4				
T3-12L-R2C4-SH06H05-N		L											
T3-8R-R2C4-SH06H05-N	184 9568	R	8	280	500	3 600	45,6	92,3	132,1				
T3-8L-R2C4-SH06H05-N		L											
T3-6R-R2C4-SH06H05-N	184 9567	R	6	280	500	4 000	44,0	89,2	129,0				
T3-6L-R2C4-SH06H05-N		L											
T3-4R-R2C4-SH06H05-N	184 9566	R	4	280	500	4 000	42,5	86,0	125,8				
T3-4L-R2C4-SH06H05-N		L											
ORDER KEY	PURCH. CODE	DIRECT. OF ROT.	DISPLACEMENT [cm ³ /1]	CONT. PRESS. [bar]	MIN. SPEED [min ⁻¹]	MAX. SPEED [min ⁻¹]	A	B	C	DIMENSION [mm]			



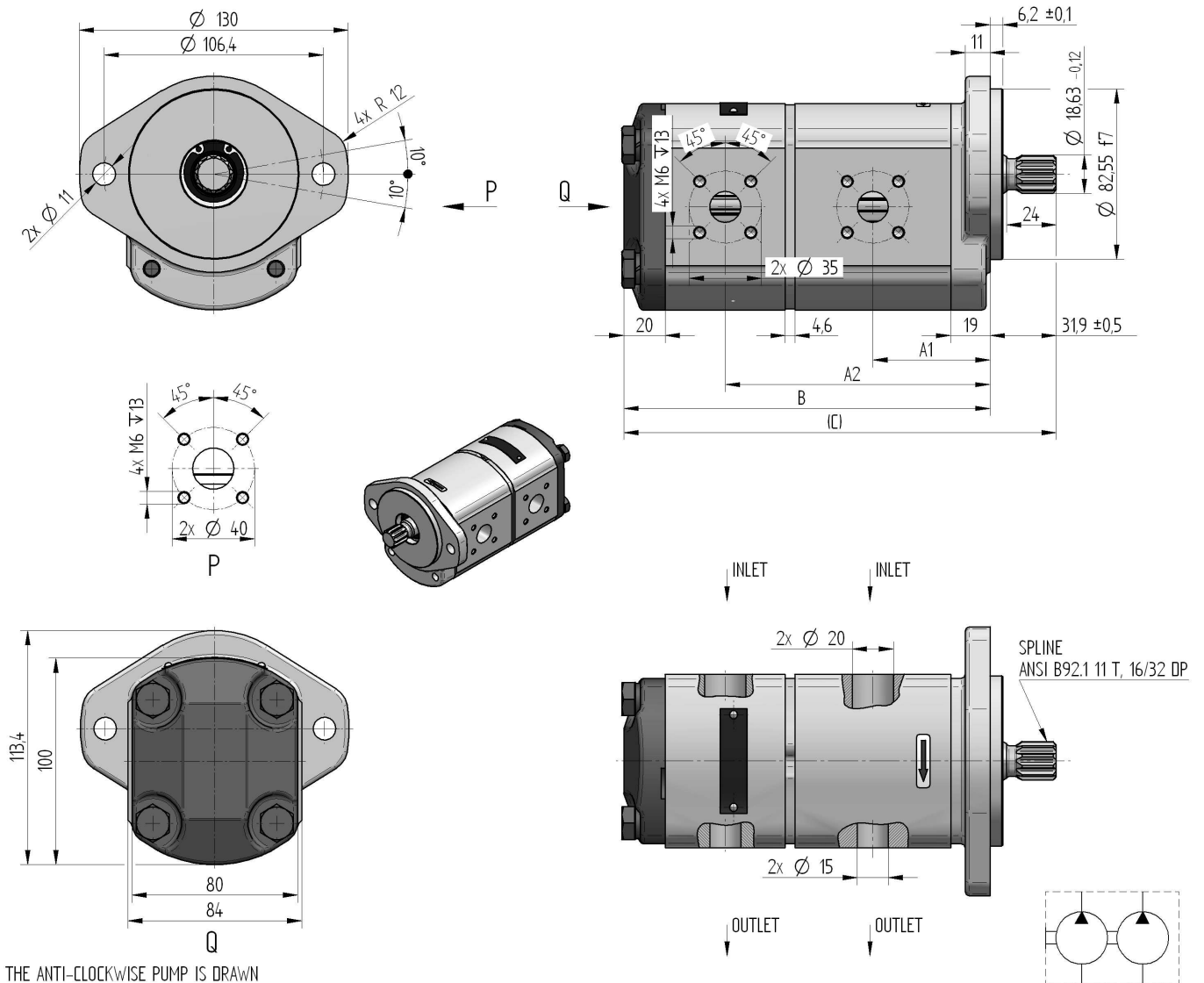
THE CLOCKWISE PUMP IS DRAWN

T3-31R-S1V3-SU05U04-N		R											
T3-31L-S1V3-SU05U04-N		L	31	150	500	2 200	63,7	128,5	160,5	1-1/16-12 UN-2B	19	41	
T3-25R-S1V3-SU05U04-N		R											
T3-25L-S1V3-SU05U04-N		L	25	200	500	2 800	59,0	119,1	151,1	1-1/16-12 UN-2B	19	41	
T3-20R-S1V3-SU05U04-N		R											
T3-20L-S1V3-SU05U04-N		L	20	240	500	3 200	55,0	111,2	143,2	1-1/16-12 UN-2B	19	41	
T3-16R-S1V3-SU05U04-N	184 9201	R											
T3-16L-S1V3-SU05U04-N		L	16	260	500	3 200	51,9	104,9	136,9	1-1/16-12 UN-2B	19	41	
T3-12R-S1V3-SU05U04-N		R											
T3-12L-S1V3-SU05U04-N		L	12	260	500	3 600	48,8	98,6	130,6	1-1/16-12 UN-2B	19	41	
T3-8R-S1V3-SU04U04-N		R											
T3-8L-S1V3-SU04U04-N		L	8	280	500	3 600	45,6	92,3	124,3	7/8-14 UNF-2B	17	34	
T3-6R-S1V3-SU04U04-N		R											
T3-6L-S1V3-SU04U04-N		L	6	280	500	4 000	44,0	89,2	121,2	7/8-14 UNF-2B	17	34	
T3-4R-S1V3-SU04U04-N		R											
T3-4L-S1V3-SU04U04-N		L	4	280	500	4 000	42,5	86,0	118,0	7/8-14 UNF-2B	17	34	
ORDER KEY	PURCH. CODE	DIRECT. OF ROT.	DISPLACEMENT [cm ³ /1]	CONT. PRESS. [bar]	MIN. SPEED [min ⁻¹]	MAX. SPEED [min ⁻¹]	A	B	C	DIMENSION [mm]			



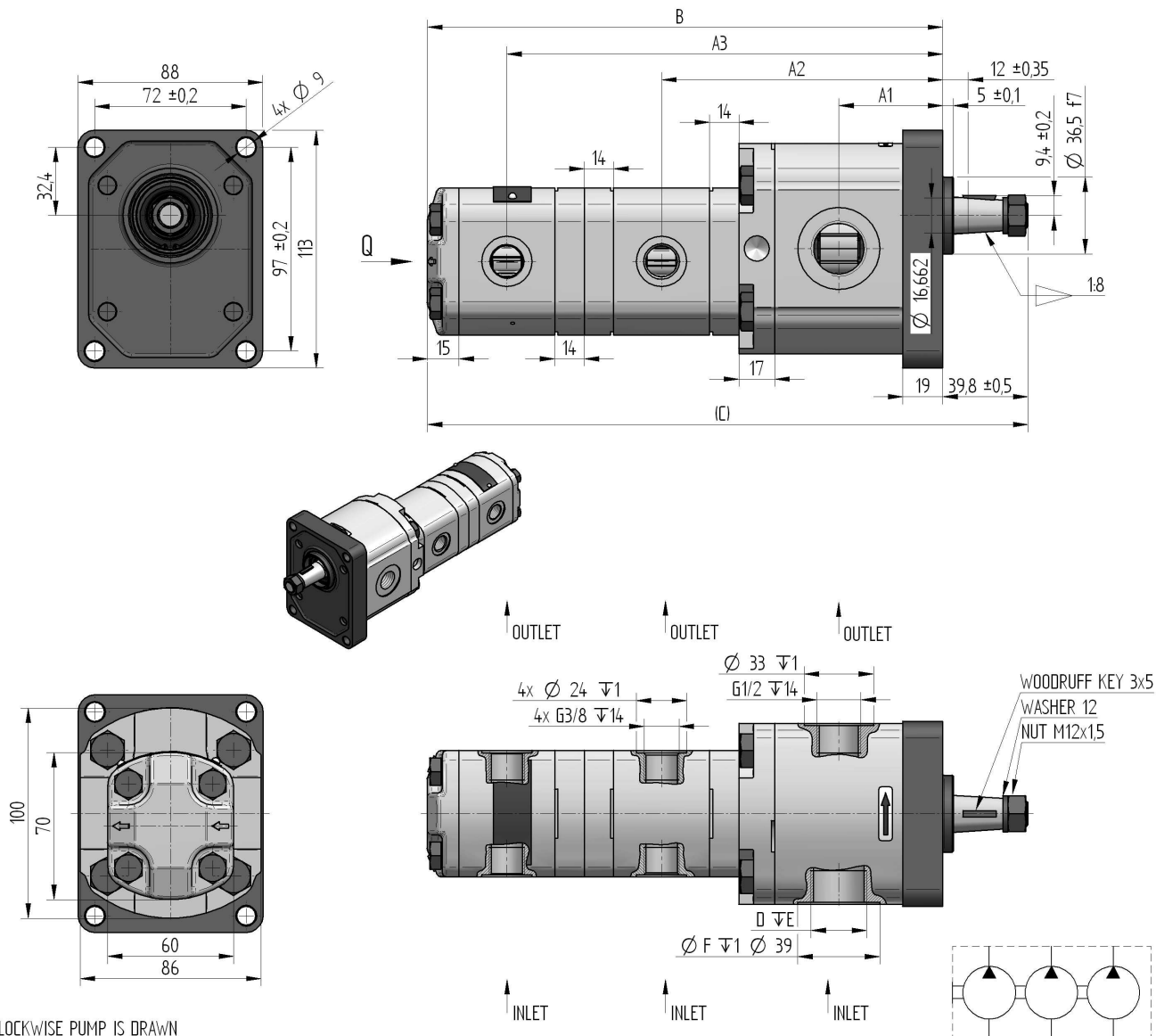
THE CLOCKWISE PUMP IS DRAWN

T3-31R-S1D1-SG04G03-N	184 9289	R	31	150	500	2 200	63,7	128,5	160,6	G 3/4	16	39	
T3-31L-S1D1-SG04G03-N		L											
T3-25R-S1D1-SG04G03-N	184 9288	R	25	200	500	2 800	59,0	119,1	151,2	G 3/4	16	39	
T3-25L-S1D1-SG04G03-N		L											
T3-20R-S1D1-SG04G03-N	184 9287	R	20	240	500	3 200	55,0	111,2	143,3	G 3/4	16	39	
T3-20L-S1D1-SG04G03-N		L											
T3-16R-S1D1-SG04G03-N	184 9286	R	16	260	500	3 200	51,9	104,9	137,0	G 3/4	16	39	
T3-16L-S1D1-SG04G03-N		L											
T3-12R-S1D1-SG04G03-N	184 9285	R	12	260	500	3 600	48,8	98,6	130,7	G 3/4	16	39	
T3-12L-S1D1-SG04G03-N		L											
T3-8R-S1D1-SG03G03-N	184 9284	R	8	280	500	3 600	45,6	92,3	124,4	G 1/2	14	33	
T3-8L-S1D1-SG03G03-N		L											
T3-6R-S1D1-SG03G03-N	1849283	R	6	280	500	4 000	44,0	89,2	121,3	G 1/2	14	33	
T3-6L-S1D1-SG03G03-N		L											
T3-4R-S1D1-SG03G03-N	184 9282	R	4	280	500	4 000	42,5	86,0	118,1	G 1/2	14	33	
T3-4L-S1D1-SG03G03-N		L											
ORDER KEY	PURCH. CODE	DIRECT. OF ROT.	DISPLACEMENT [cm ³ /1]	CONT. PRESS. [bar]	MIN. SPEED [min ⁻¹]	MAX. SPEED [min ⁻¹]	A	B	C	DIMENSION [mm]			



Other combinations of the pumps are available after consultation

ORDER KEY	PURCH. CODE	DIRECT. OF ROT.	DISPLACEMENT [cm ³ /1]	CONT. PRESS. [bar]	MIN. SPEED [min ⁻¹]	MAX. SPEED [min ⁻¹]	A1	A2	B	C	DIMENSION [mm]
T3-20/6R-S1D3-SH06H05/H06H05-N	R	20/6	240/280	500	3 200	55,0	120,8	165,9	197,8		
T3-20/6L-S1D3-SH06H05/H06H05-N	L										
T3-16/4R-S1D3-SH06H05/H06H05-N	R	16/4	260/280	500	3 200	51,9	113,0	156,5	188,4		
T3-16/4L-S1D3-SH06H05/H06H05-N	L										
T3-12/6R-S1D3-SH06H05/H06H05-N	R	12/6	260/280	500	3 600	48,8	108,2	153,3	185,2		
T3-12/6L-S1D3-SH06H05/H06H05-N	L										
T3-8/8R-S1D3-SH06H05/H06H05-N	R	8/8	280	500	4 000	45,6	103,5	150,2	182,1		
T3-8/8L-S1D3-SH06H05/H06H05-N	L										
T3-6/6R-S1D3-SH06H05/H06H05-N	R	6/6	280	500	4 000	44,0	98,8	143,9	175,8		
T3-6/6L-S1D3-SH06H05/H06H05-N	L										



More details about P23 pumps - see the relevant catalogue

ORDER KEY	PURCH. CODE	DIRECT. OF ROT.	DISPLACEMENT [cm ³ /1]	CONT. PRESS. [bar]	MIN. SPEED [min ⁻¹]	MAX. SPEED [min ⁻¹]	A1	A2	A3	B	C	D	E	F
T3-16/P23-2,5/2,5R-R1C1-SG04G03/G02G02/G02G02-N		R	16/2,5/2,5	280	500	3 200	51,9	136,6	206,1	241,9	281,7	G 3/4	16	39
T3-12/P23-2,5/2,5L-R1C1-SG04G03/G02G02/G02G02-N	184 9290	R	12/2,5/2,5	280	500	3 600	48,8	130,3	199,8	235,6	275,4	G 3/4	16	39
T3-12/P23-2,5/2,5L-R1C1-SG04G03/G02G02/G02G02-N		L	12/2,5/2,5	280	500	3 600	48,8	130,3	199,8	235,6	275,4	G 3/4	16	39