

G2M

Bent Axis Piston Motor - ISO



G2M Motors have the following advantages ;

- Compact Design,
- Economical Conception,
- High Power Density,
- High Efficiency,
- High Rotating Speeds,
- From 10cc to 108cc,
- High Pressure,
- Good Starting Characteristics,
- Optimized Weight and Size,
- For Use Mobile and Stationary Applications,

Other Advantages of G2M

Interchangeable and Compatible with other ISO Bent Axis Motors,
Special Designed Pistons,
One-Piece Piston with Piston Rings,
Compact motor design and extra durable parts,
High Operational Reliability and High Starting Torque
Extra Warranty with Wide Service

40° bent axis design giving high power, small overall dimensions, optimum efficiency and economic design. Flange and shaft designed for direct mounting on the equipments. The fixed displacement bent axis motors generates a hydraulic fluid flow. It is designed for use in trucks, commercial vehicles, construction type equipments and all stationary hydraulic applications. The G2M is a motor with rotary group in bent-axis design. Flow is proportional to drive speed and displacement.

For axial piston units with bent-axis design, the Pistons are arranged diagonally with respect to the drive shaft. The motor covers the whole displacement range 10 to 108 cm³/rev. The motor has been developed with modern styling and design to satisfy market demand as to designed new generation plate, extra parts and pistons with give high flow performance, high pressures with high efficiency and very small dimensions.

The motor is available both to DIN and SAE world standards and can be mounted either directly at the gear box or via a drive shaft. Other brand bent axis motors compatible and interchangeable with G2M bent axis motors. Refer to the data sheet and order confirmation for the technical data, operating conditions and operating limits of the bent axis piston motors.

Contents

Ordering Code of G2M Motors	4
Technical Data	5
Performance	6
Dimensions Size;	
G2M 10 cc	7-8
G2M 12 cc	9-10
G2M 18 cc	11-12
G2M 25 cc	13-14
G2M 32 cc	15-16-17
G2M 40 cc	18-19-20
G2M 50 cc	21-22-23
G2M 56 cc	24-25-26
G2M 63 cc	27-28-29
G2M 80 cc	30-31-32
G2M 108 cc	33-34-35
Special Shaft Drive	36
Direction of Rotation	37
Installation	38
Complete Product Range	39
Production, Contact	40

Motor Code

G2M

Displacement (cm³)

108

Drive Shafts

K2

Inlet Ports A - B

R1

Mounting Flange

A

Sealing

N Nitrile

V Viton

A

ISO 3019-2 , 4 BOLT

		10	12	18	25	32	40	50	56	63	80	108
SAE Flange Ports	B1	Bottom	—	—	—	—	●	●	●	●	●	●
	R1	Rear	—	—	—	●	●	●	●	●	●	●
	D1	Side	—	—	—	●	●	●	●	●	●	●
	D2		—	—	—	●	●	●	●	●	●	●
Threaded	D3	Side	●	●	●	●	●	●	●	●	●	●
	D4		—	—	—	●	●	●	●	●	●	●
	R2	Rear	●	●	●	●	●	●	●	●	●	●

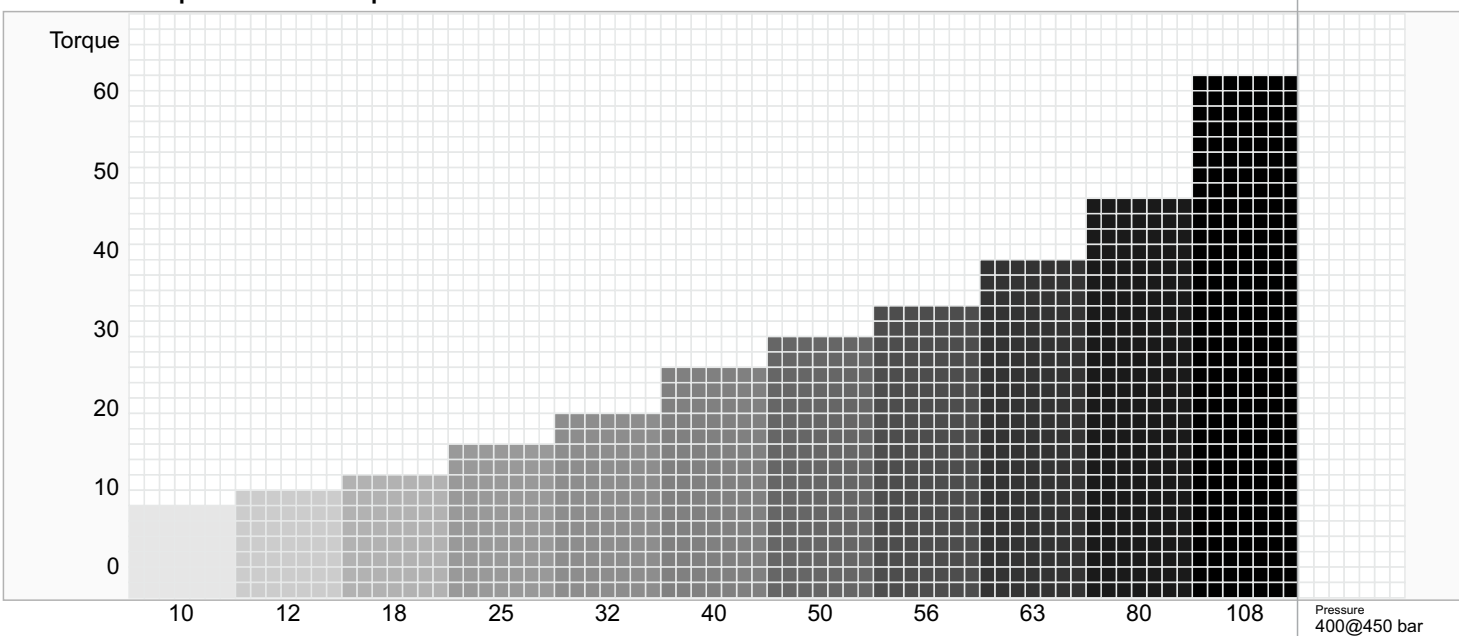
		10	12	18	25	32	40	50	56	63	80	108
DIN 5480 SPLINED	S1	●	●	●	●	●	●	●	●	●	●	●
	S2	—	—	—	●	●	●	●	●	●	●	●
DIN 6885 PARALLEL	K1	●	●	●	●	●	●	●	●	●	●	●
	K2	●	●	—	●	●	●	●	●	●	●	●

10	12	18	25	32	40	50	56	63	80	108
----	----	----	----	----	----	----	----	----	----	-----

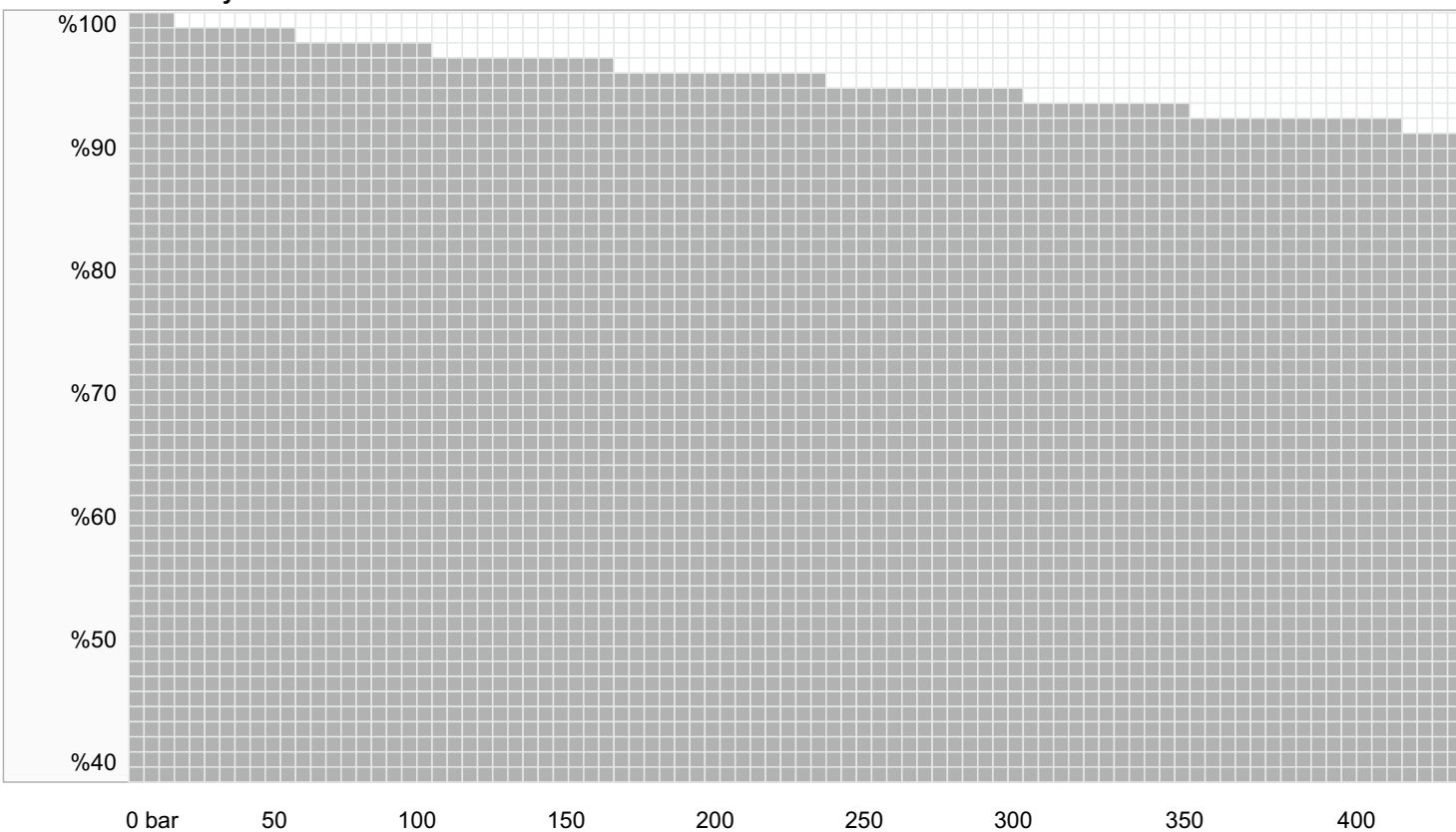
G2M Bent Axis Piston Motor - ISO, Fixed Displacement.

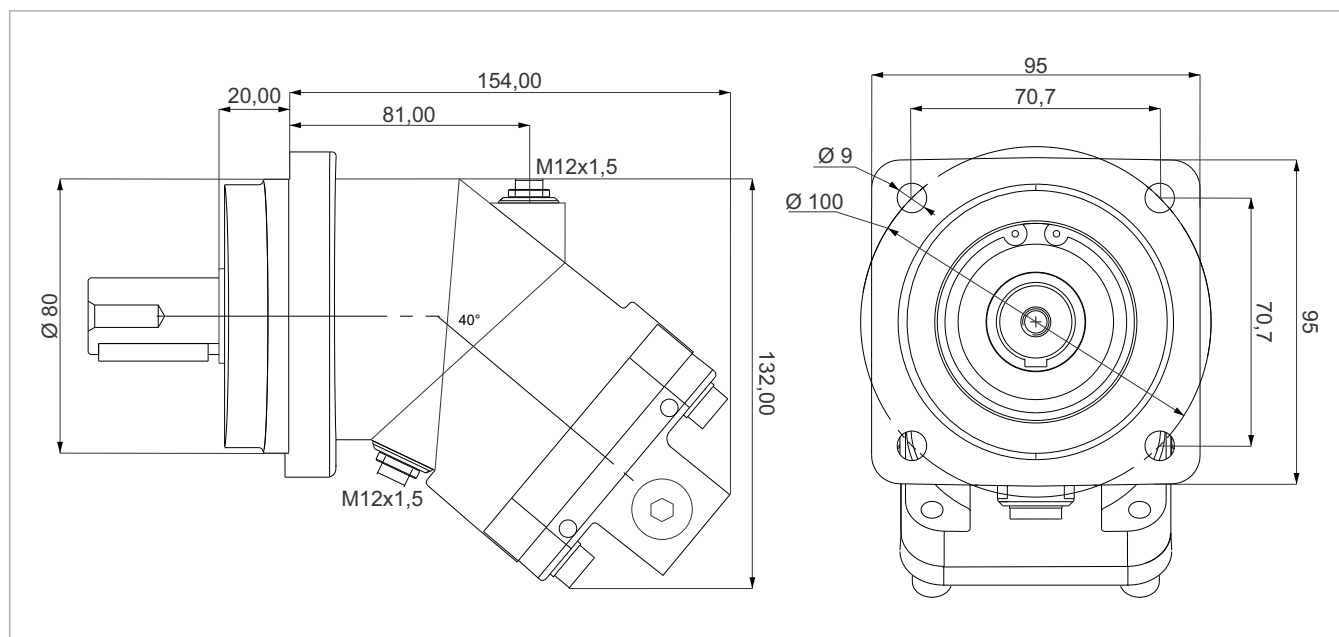
[illegible]

Compare Table of Torque



Efficiency of G2M Motors

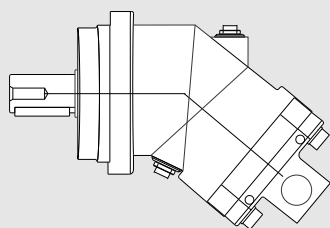
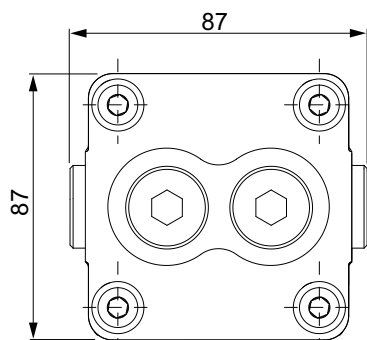




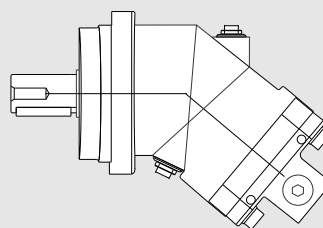
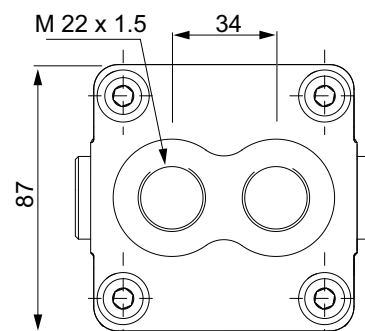
x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
10,00 cc	15,00 cc	8000 rpm	8800 rpm	400 bar	450 bar	0.17 m.N/bar	64 m.N	80	6,00 kg	6,20 kg	-25°	110°

D3

Side threaded ports A and B

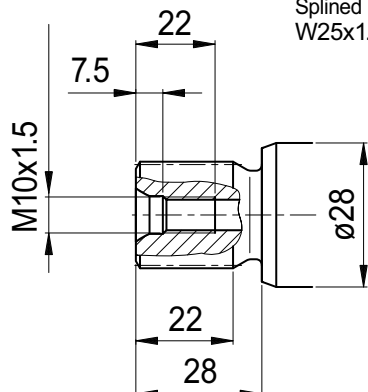
**R2**

Rear threaded ports A and B



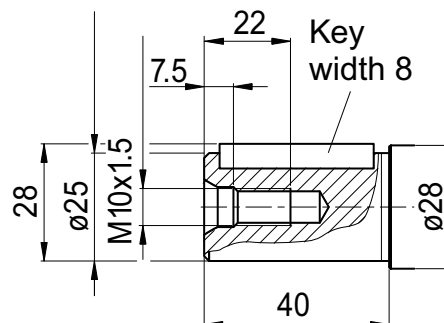
S1

Splined shaft DIN 5480
W25x1.25x18x9g



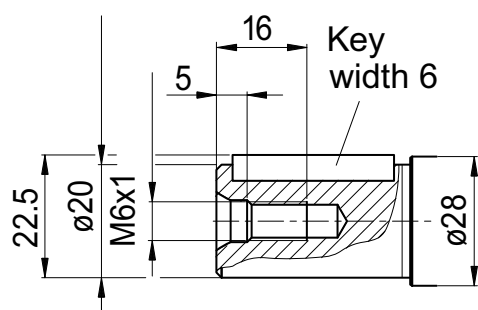
K1

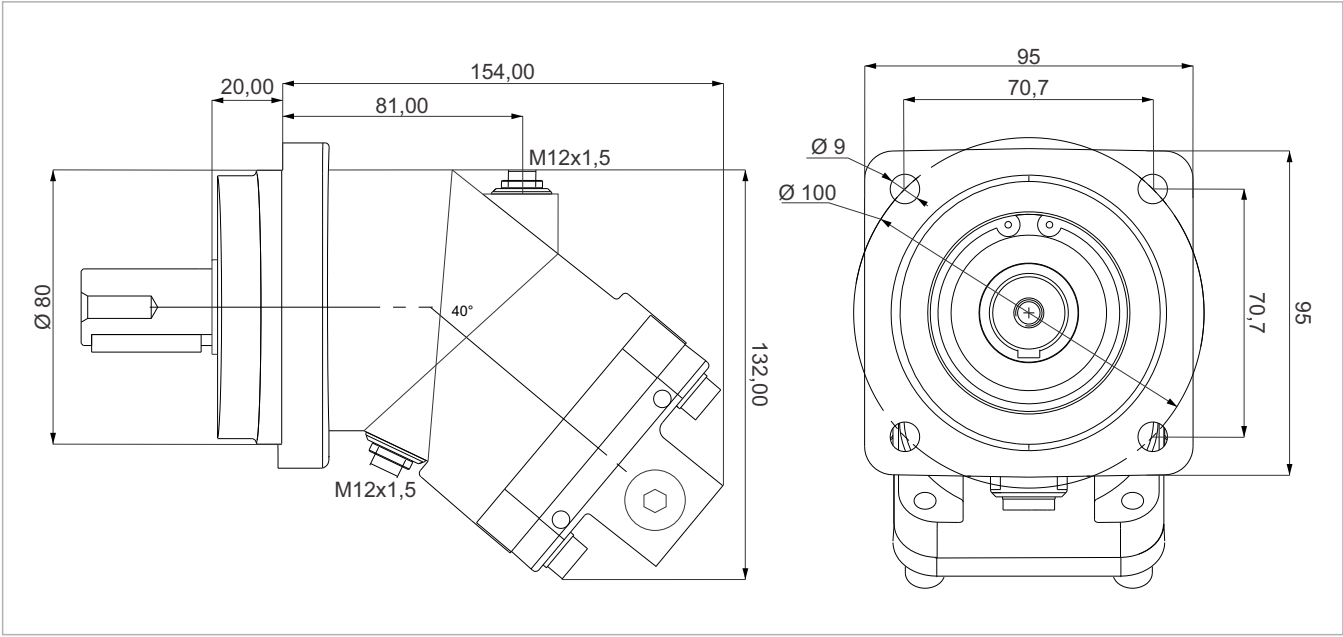
Parallel keyed shaft
DIN 6885, AS8x7x32



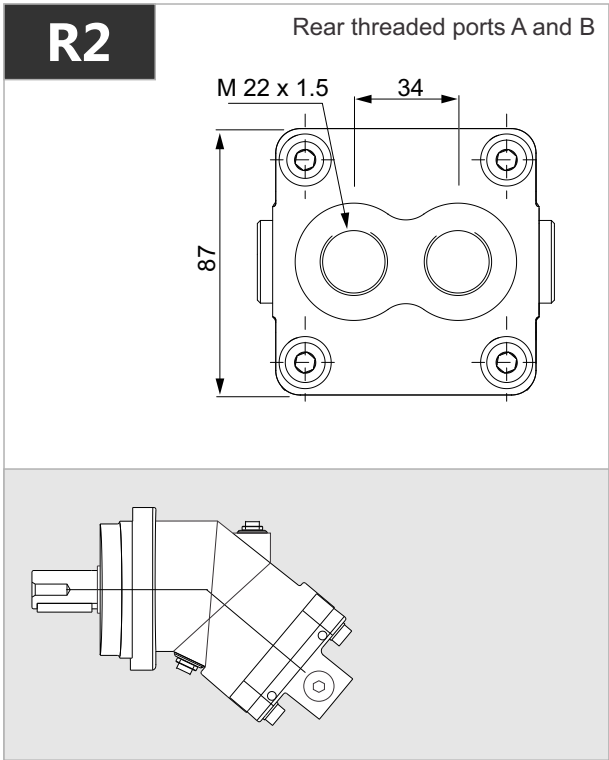
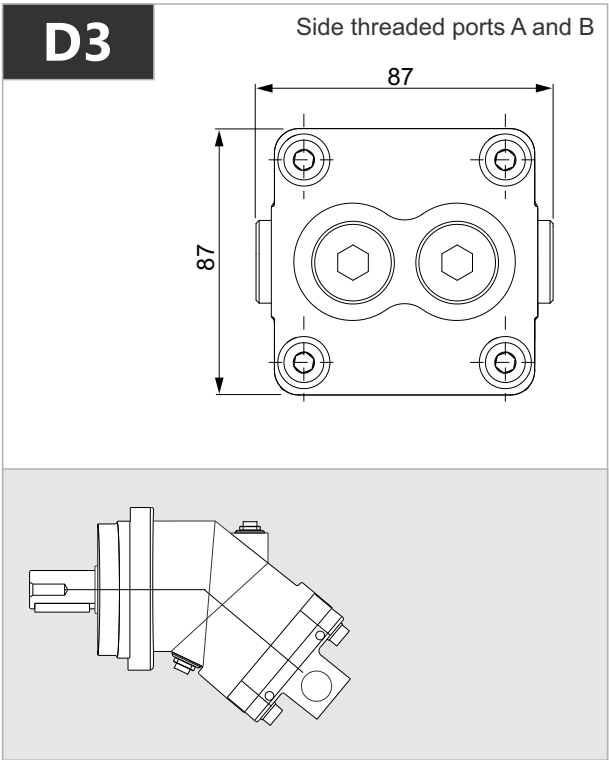
K2

Parallel keyed shaft
DIN 6885, AS6x6x32



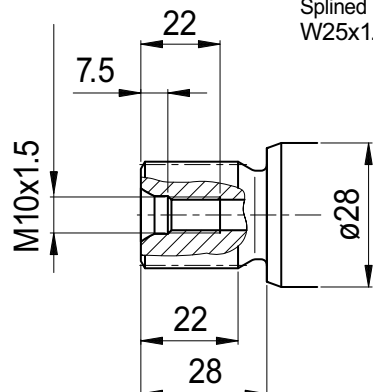


x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermitt. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
12,00 cc	18,00 cc	8000 rpm	8800 rpm	400 bar	450 bar	0.18 m.N/bar	66 m.N	96	6,00 kg	6,20 kg	-25°	110°



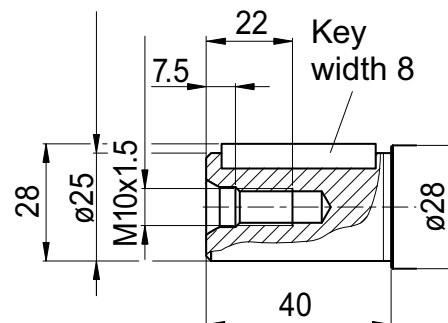
S1

Splined shaft DIN 5480
W25x1.25x18x9g



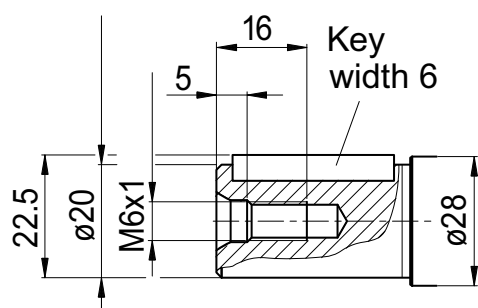
K1

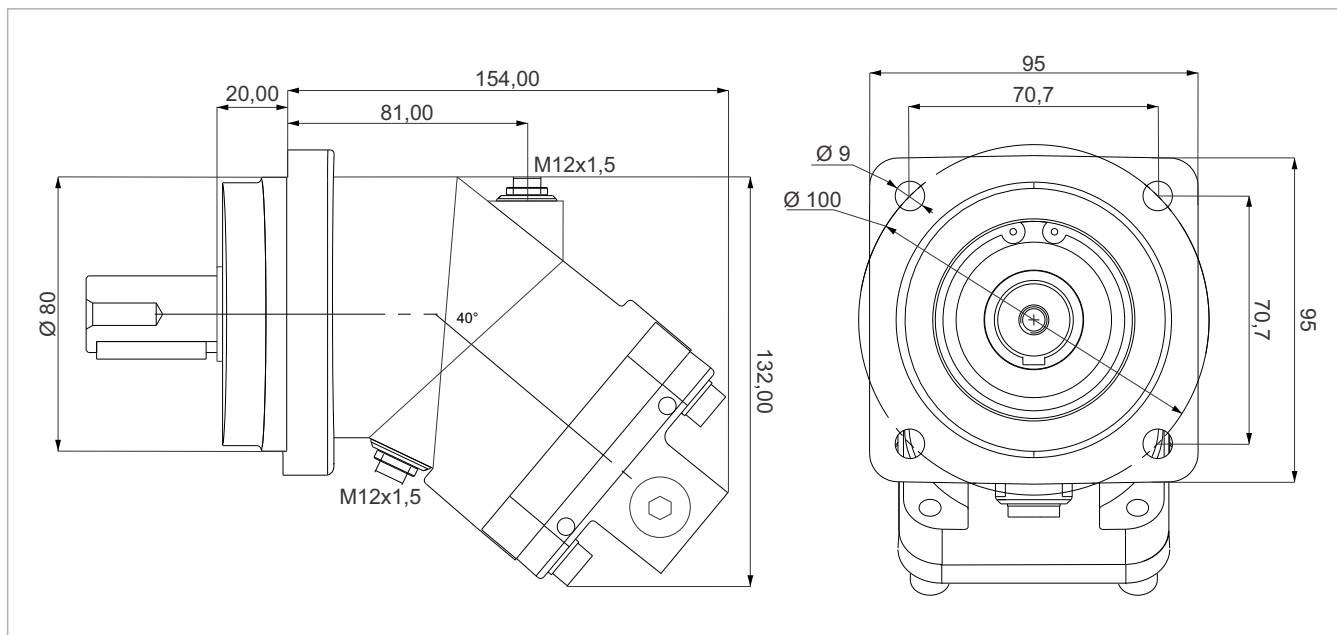
Parallel keyed shaft
DIN 6885, AS8x7x32



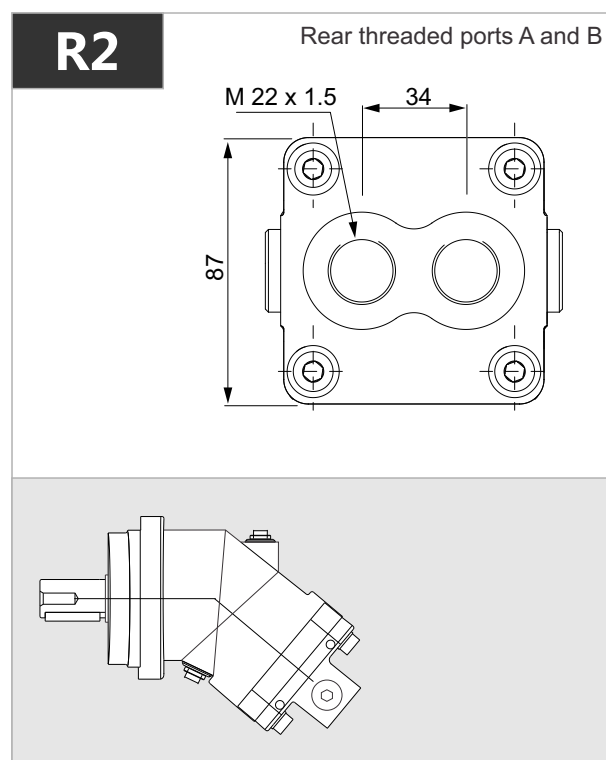
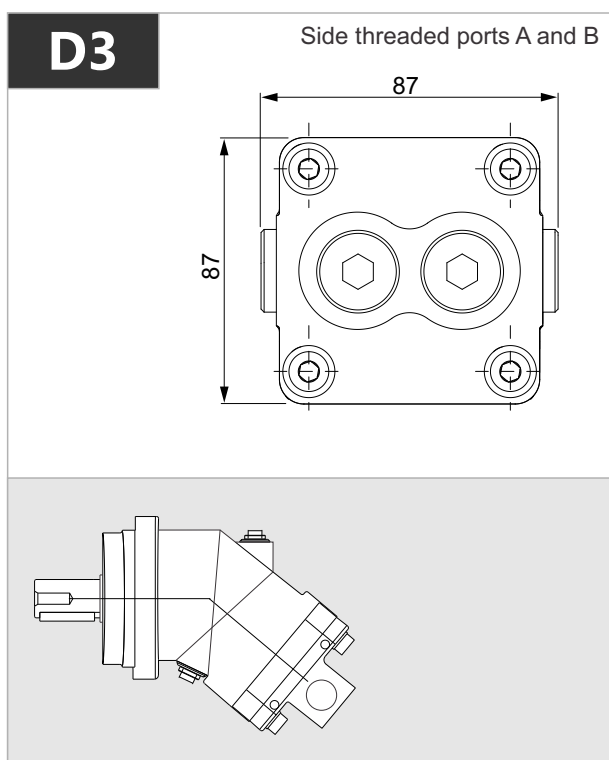
K2

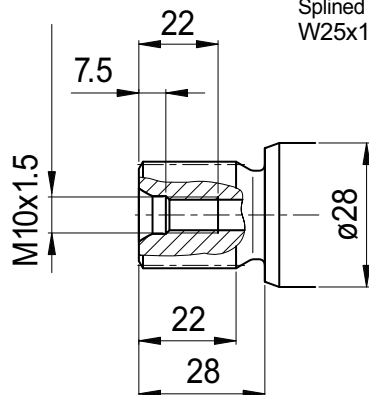
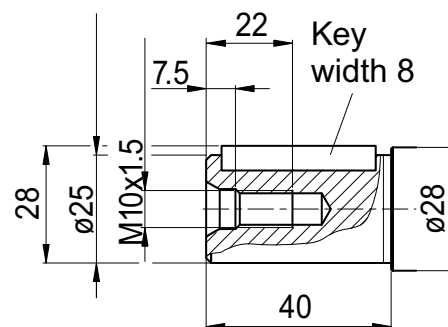
Parallel keyed shaft
DIN 6885, AS6x6x32

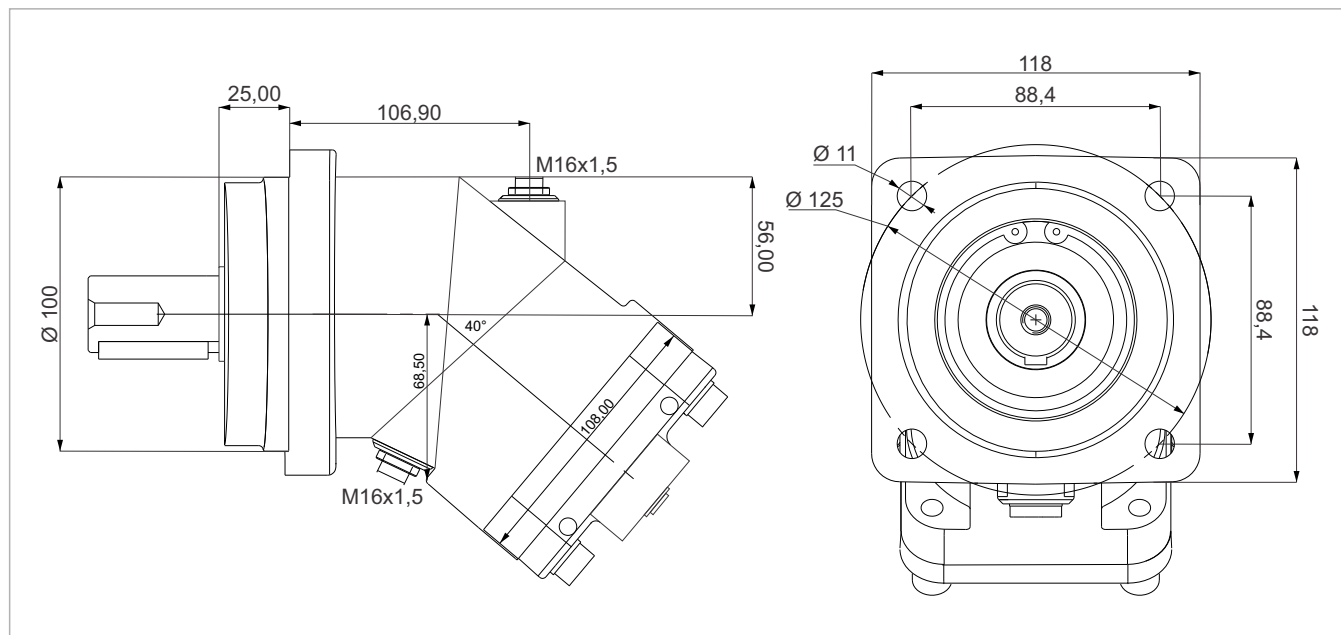




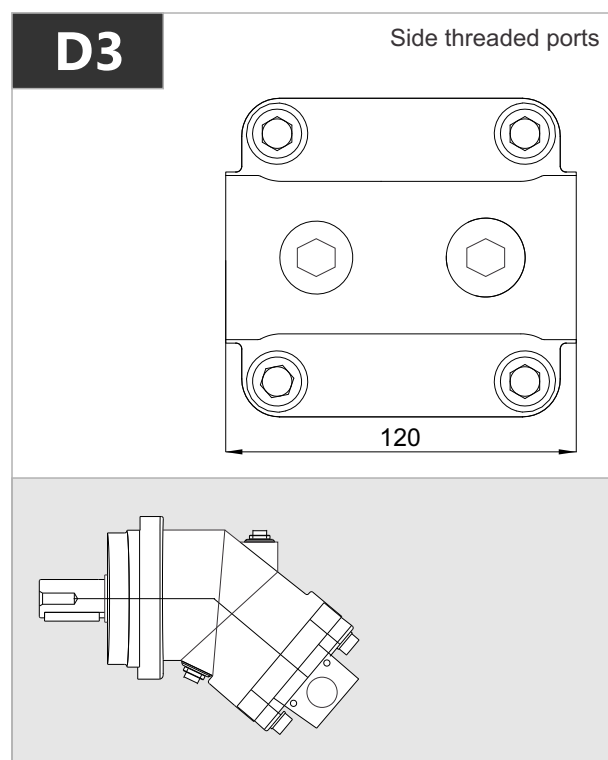
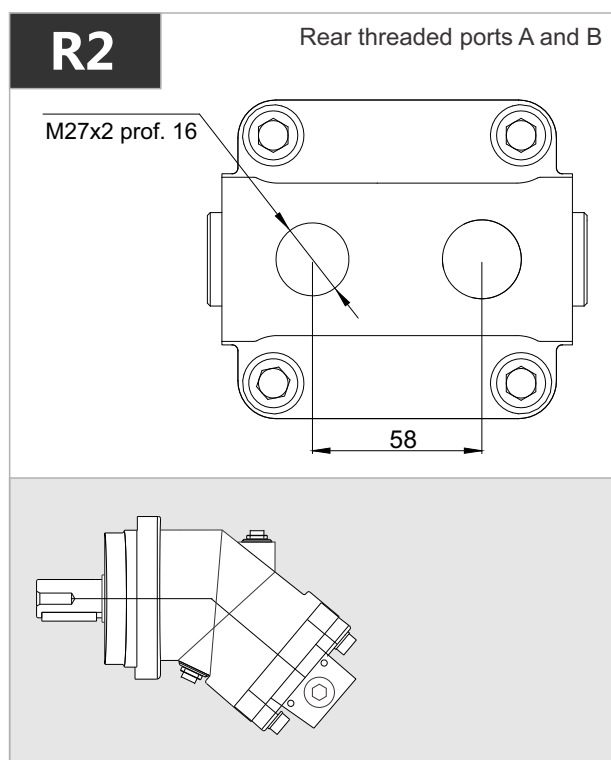
x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
18,00 cc	27,00 cc	8000 rpm	8800 rpm	400 bar	450 bar	0.28 m.N/bar	98 m.N	144	6,00 kg	6,20 kg	-25°	110°

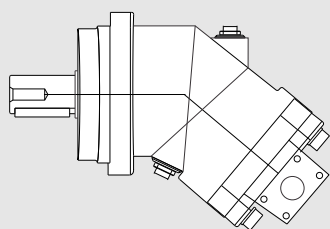
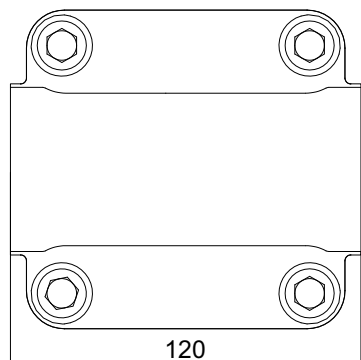
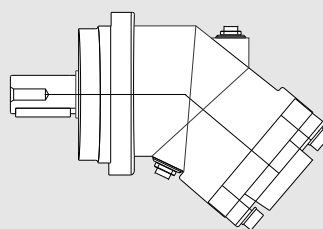
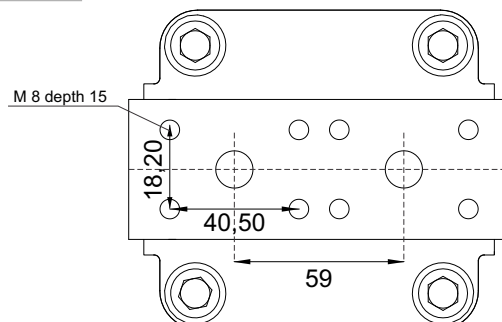
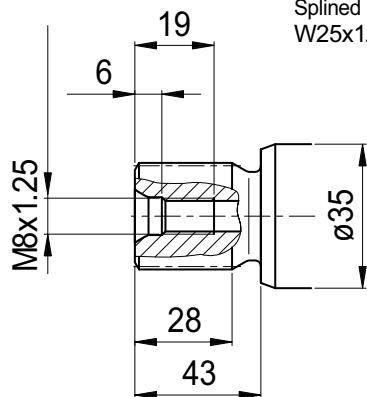
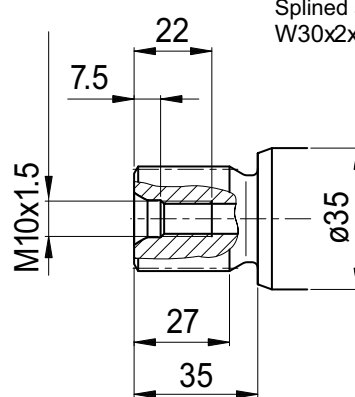
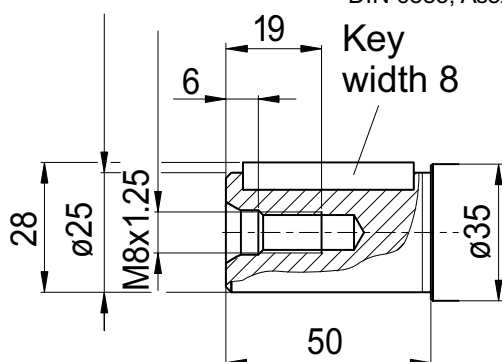
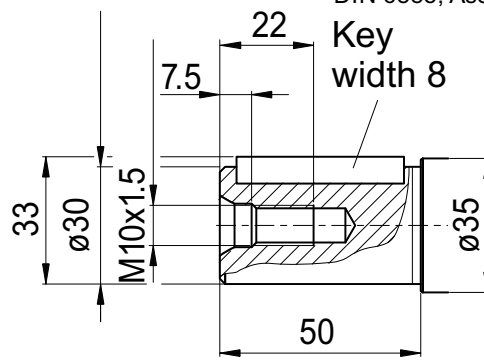


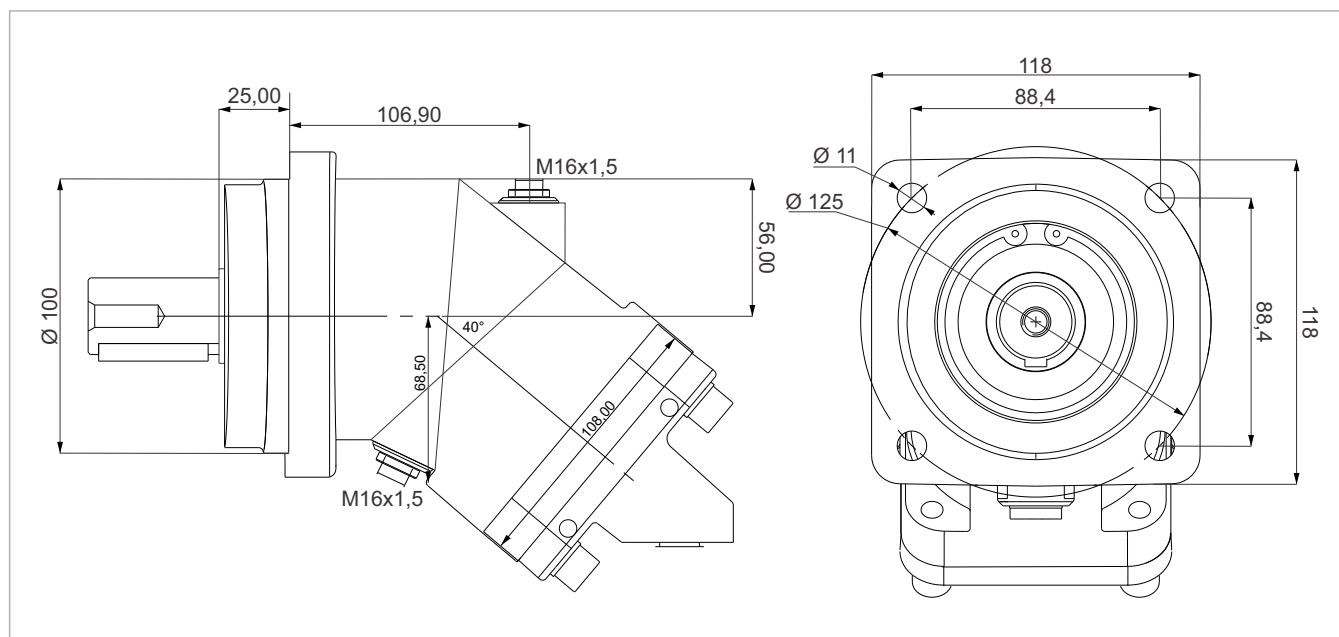
S1Splined shaft DIN 5480
W25x1.25x18x9g**K1**Parallel keyed shaft
DIN 6885, AS8x7x32



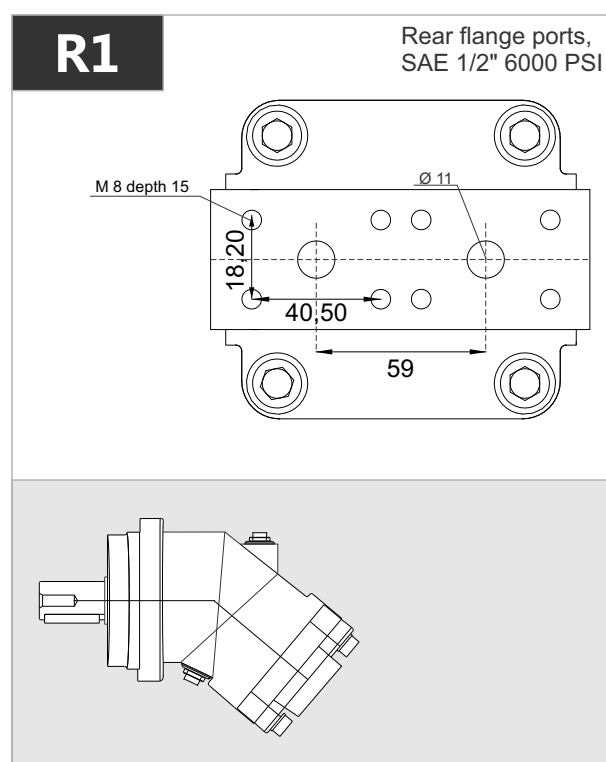
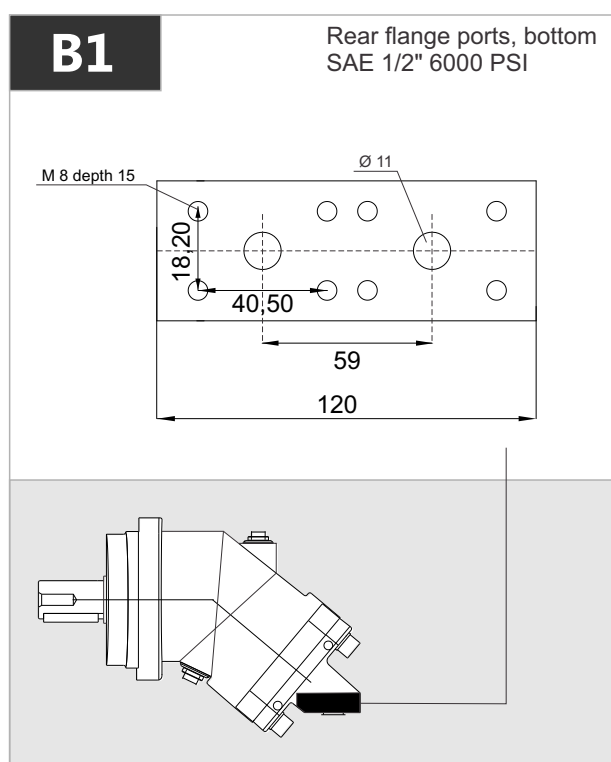
x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
25,00 cc	37,50 cc	6250 rpm	6800 rpm	400 bar	450 bar	0.40 m.N/bar	140 m.N	156	11,50 kg	11,80 kg	-25°	110°



D1-D2Side flange ports A and B
SAE 1/2" 6000 PSI**R1**Rear flange ports A and B
SAE 1/2" 6000 PSI**S1**Splined shaft DIN 5480
W25x1.25x18x9g**S2**Splined shaft DIN 5480
W30x2x14x9g**K1**Parallel keyed shaft
DIN 6885, As8x7x40**K2**Parallel keyed shaft
DIN 6885, As8x7x40

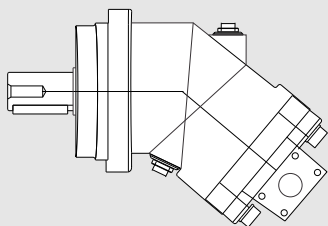
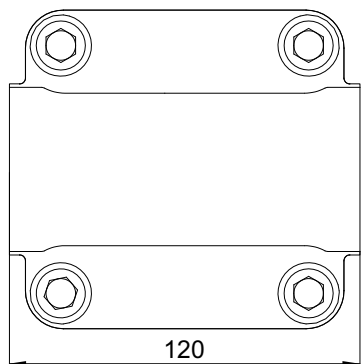


x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
32,00 cc	48,00 cc	6250 rpm	6800 rpm	400 bar	450 bar	0.51 m.N/bar	174 m.N	200	11,50 kg	11,90 kg	-25°	110°



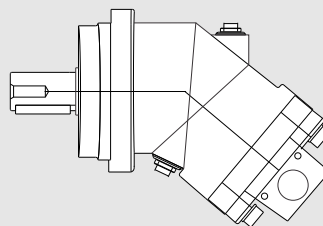
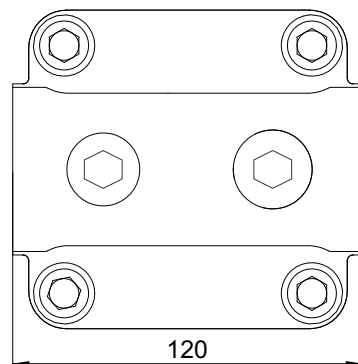
D1-D2

Side flange ports A and B
SAE 1/2" 6000 PSI



D3

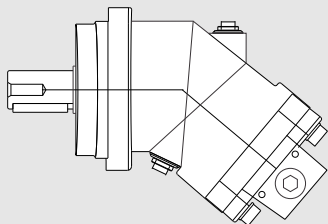
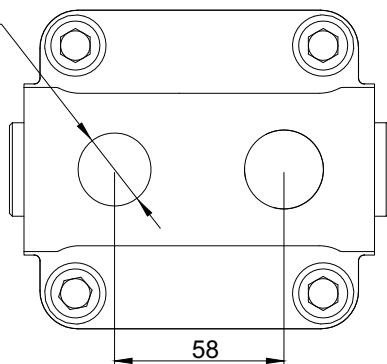
Side threaded ports A and B



R2

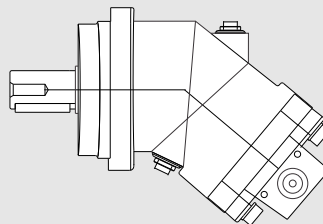
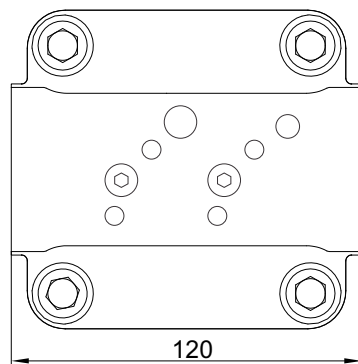
Rear threaded ports

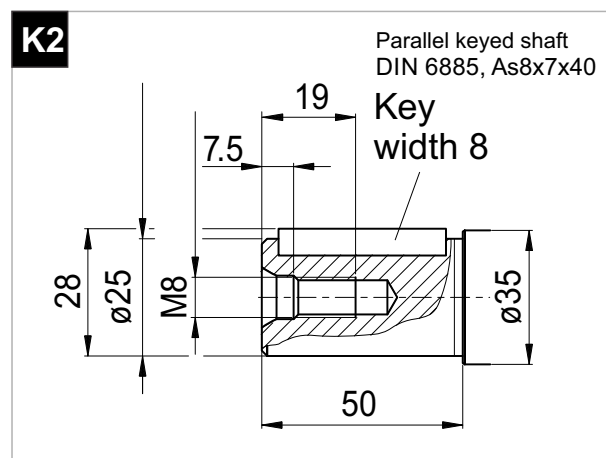
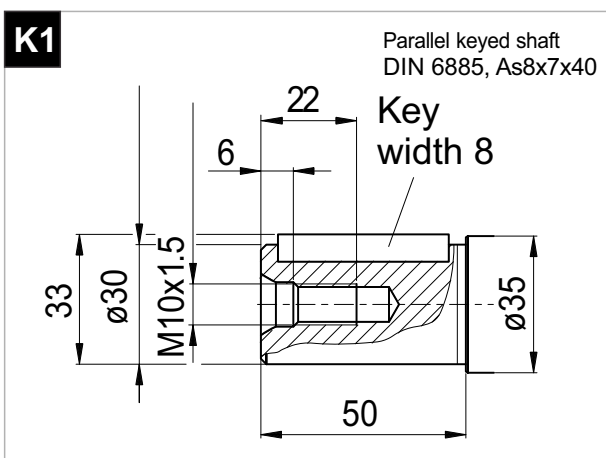
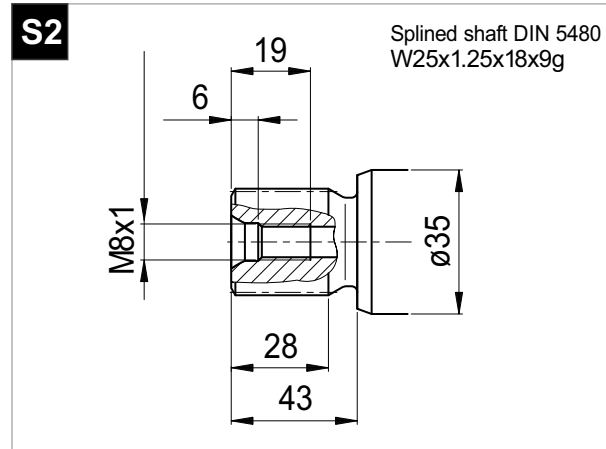
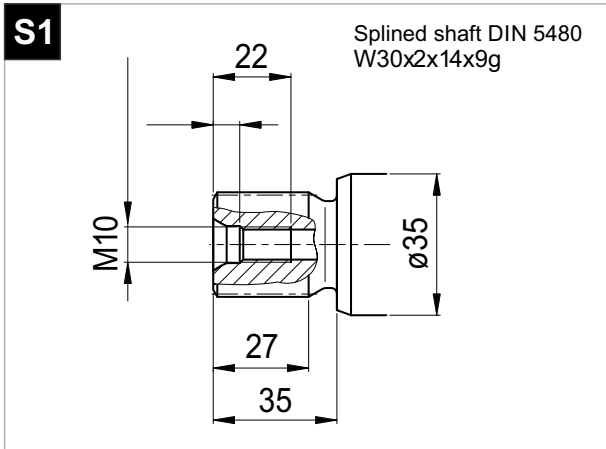
M27x2 prof. 16

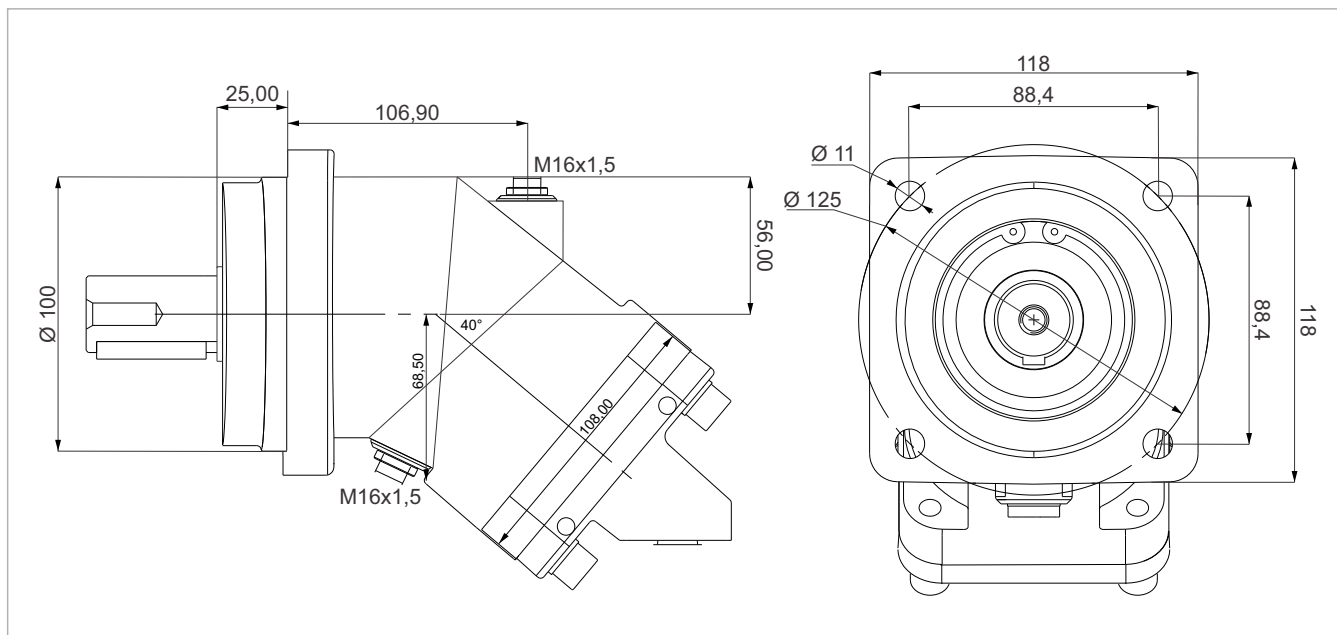


D4

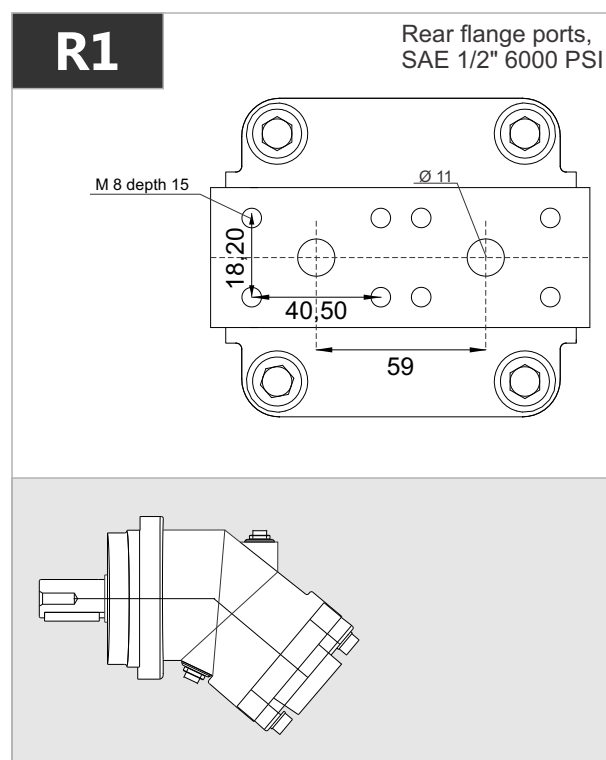
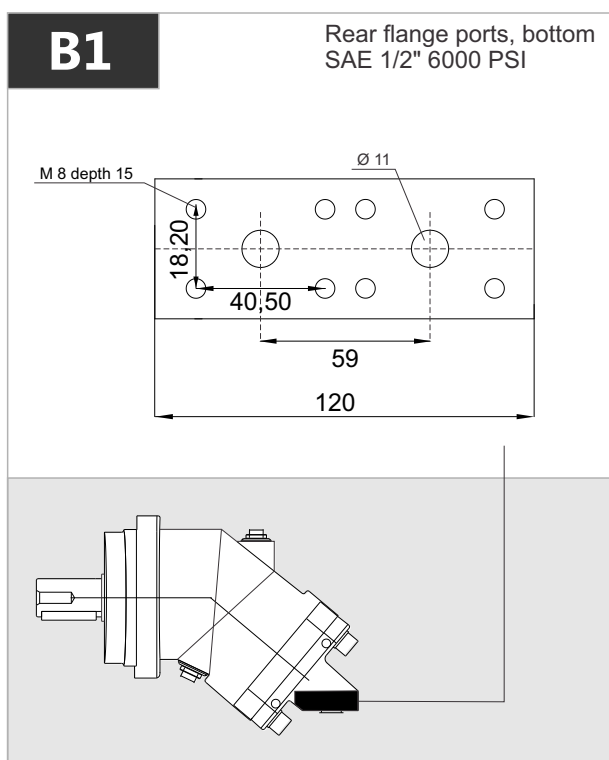
Side threaded ports A and B





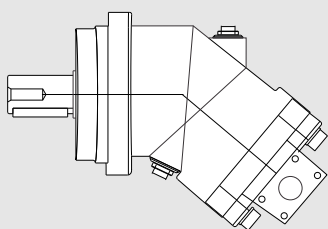
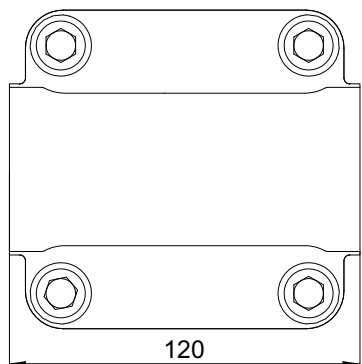


x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermitt. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
40,20 cc	60,30 cc	5600 rpm	6300 rpm	400 bar	450 bar	0.68 m.N/bar	228 m.N	225	11,50 kg	11,90 kg	-25°	110°



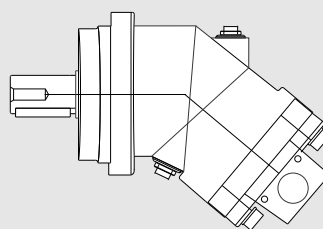
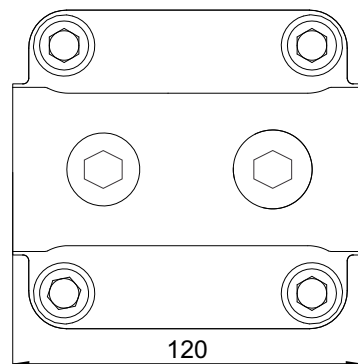
D1-D2

Side flange ports A and B
SAE 1/2" 6000 PSI



D3

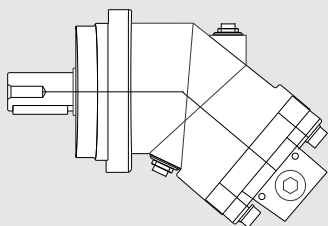
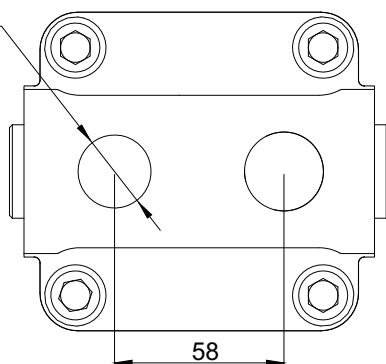
Side threaded ports A and B



R2

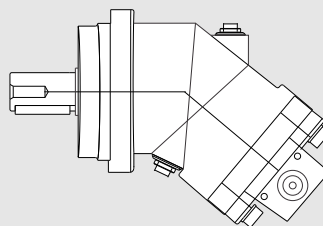
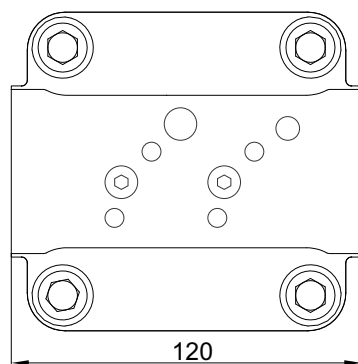
Rear threaded ports

M27x2 prof. 16



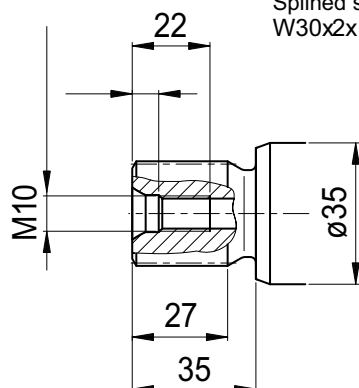
D4

Side threaded ports A and B



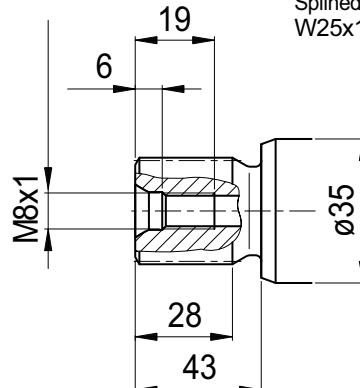
S1

Splined shaft DIN 5480
W30x2x14x9g



S2

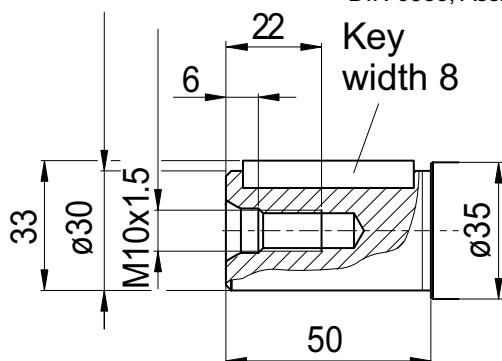
Splined shaft DIN 5480
W25x1.25x18x9g



K1

Parallel keyed shaft
DIN 6885, As8x7x40

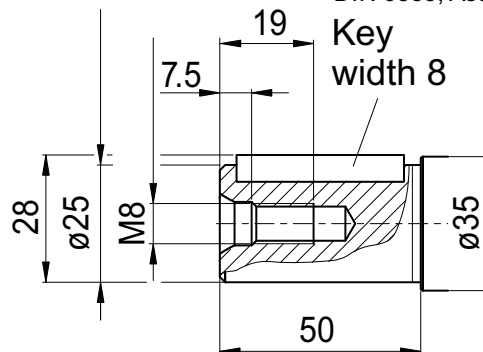
Key
width 8

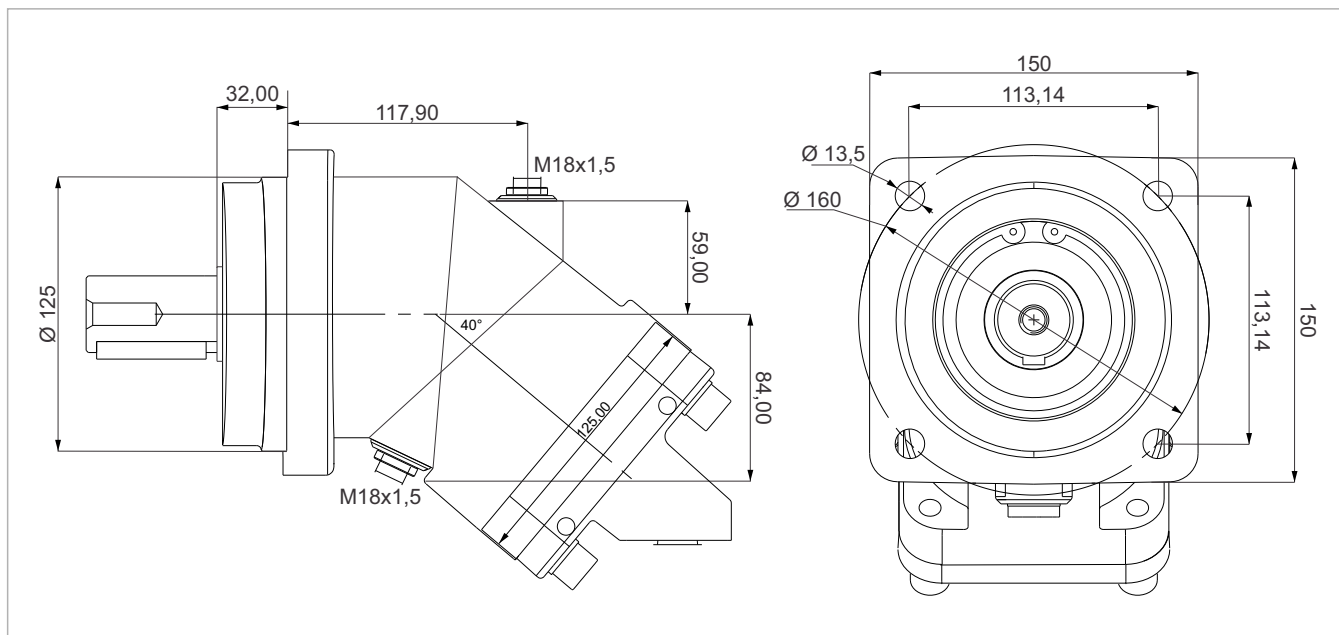


K2

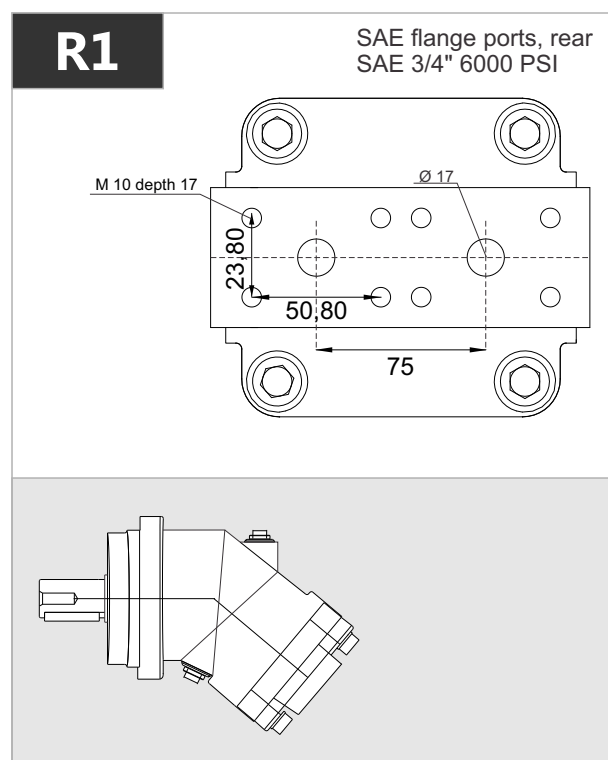
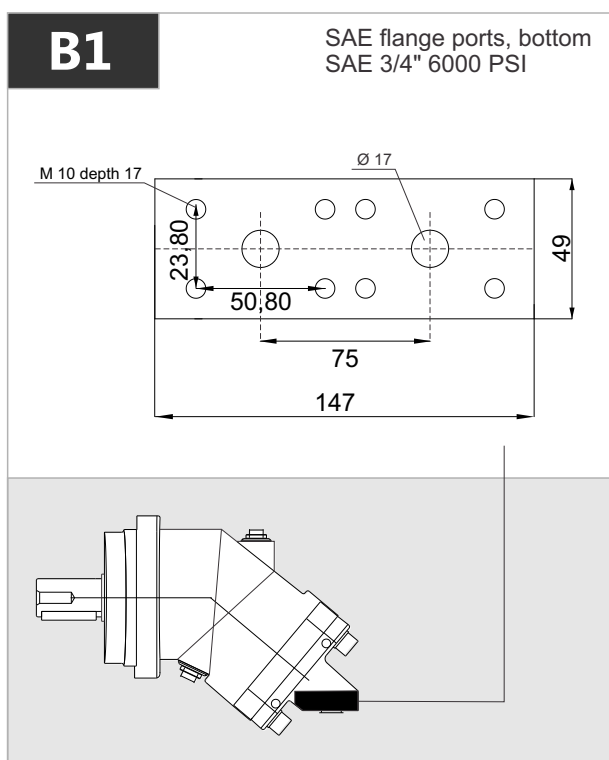
Parallel keyed shaft
DIN 6885, As8x7x40

Key
width 8



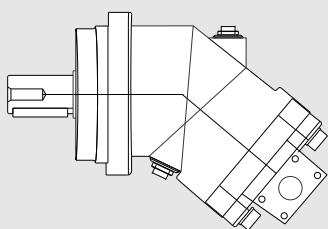
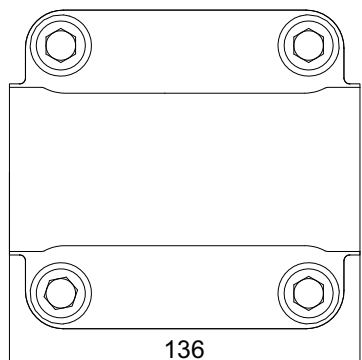


x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
50,00 cc	75,00 cc	5000 rpm	5500 rpm	400 bar	450 bar	0.80 m.N/bar	280 m.N	250	17,50 kg	18,00 kg	-25°	110°



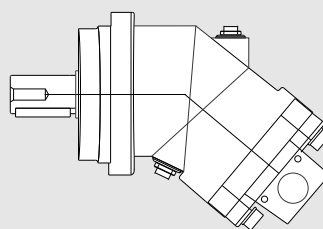
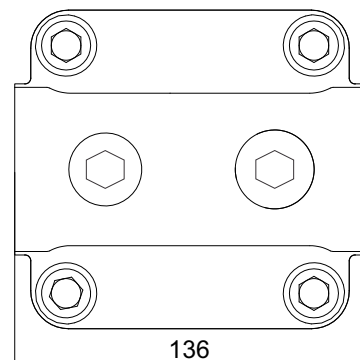
D1-D2

SAE flange ports, side A and B
SAE 3/4" 6000 PSI



D3

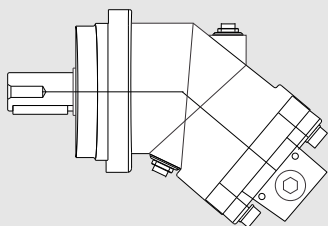
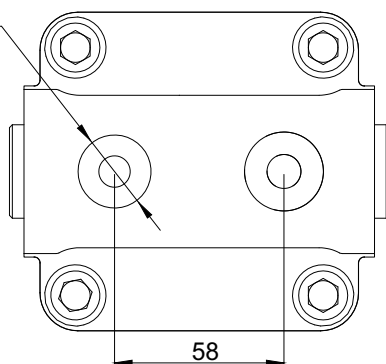
Side threaded ports A and B



R2

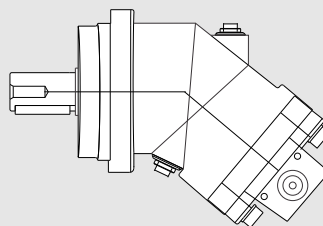
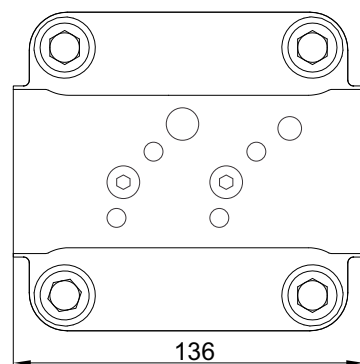
Rear threaded ports

M33x2 prof. 18



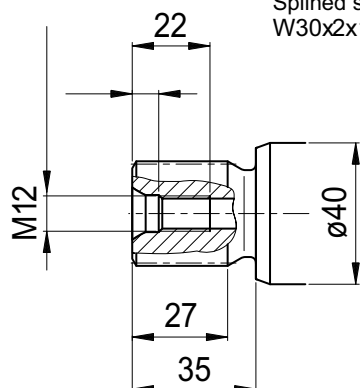
D4

Side threaded ports A and B



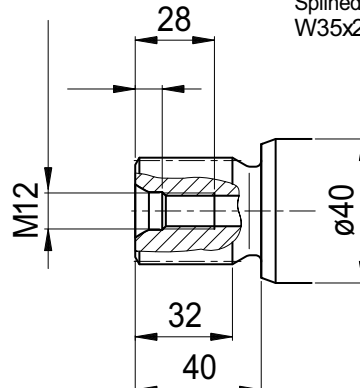
S1

Splined shaft DIN 5480
W30x2x14x9g



S2

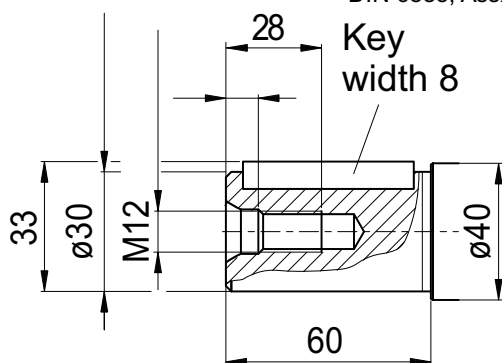
Splined shaft DIN 5480
W35x2x16x9g



K1

Parallel keyed shaft
DIN 6885, As8x7x50

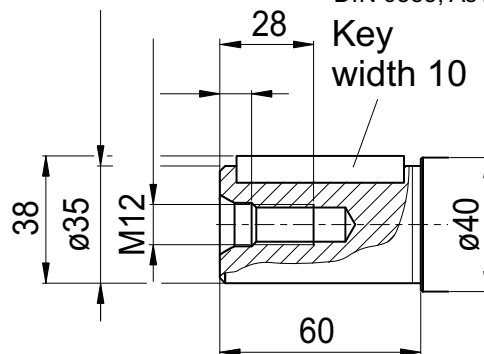
Key
width 8

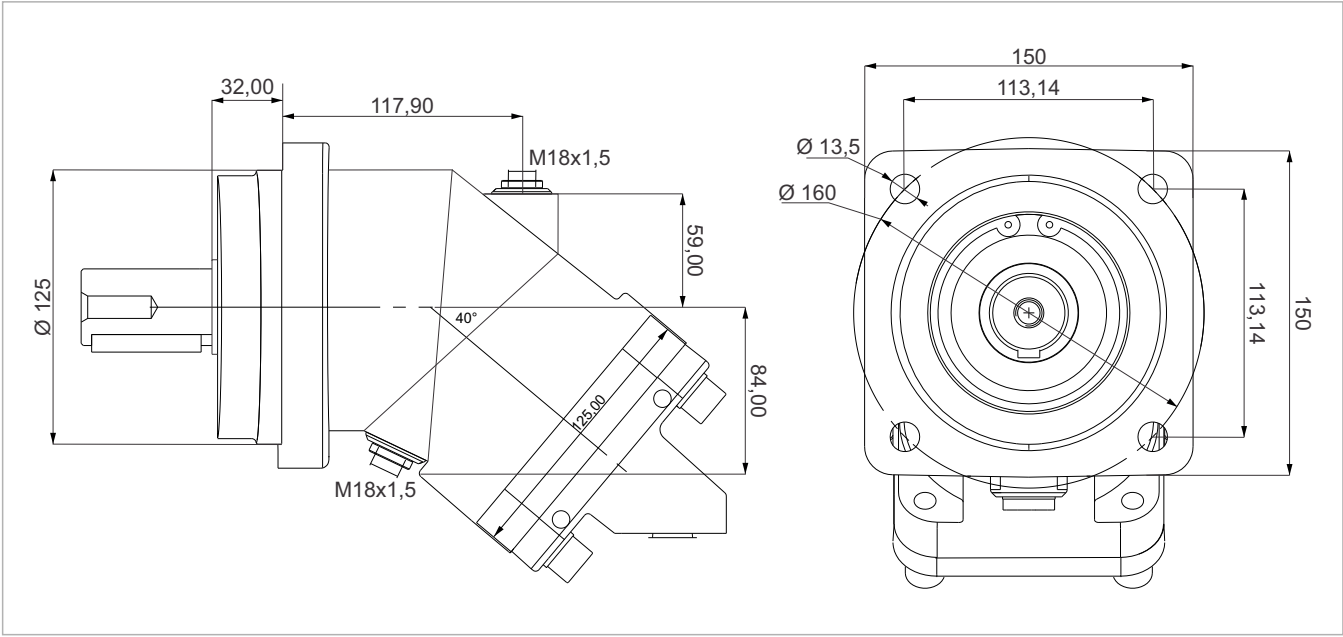


K2

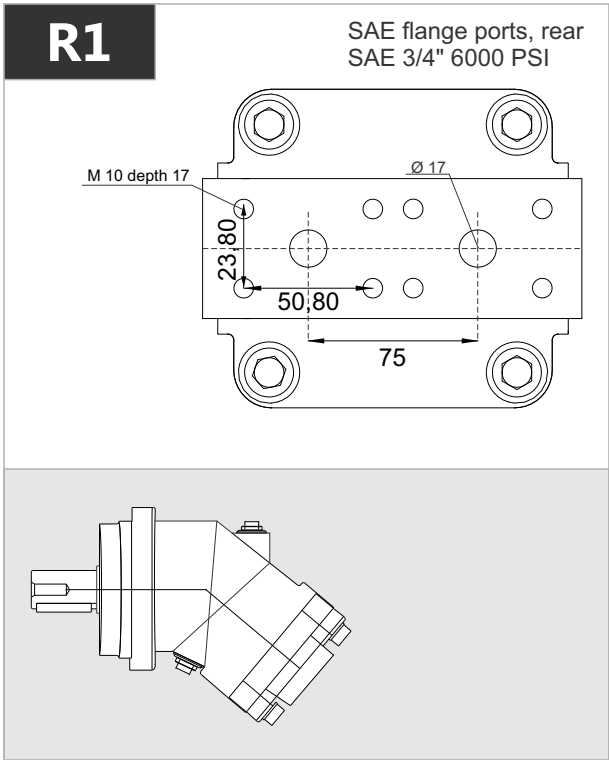
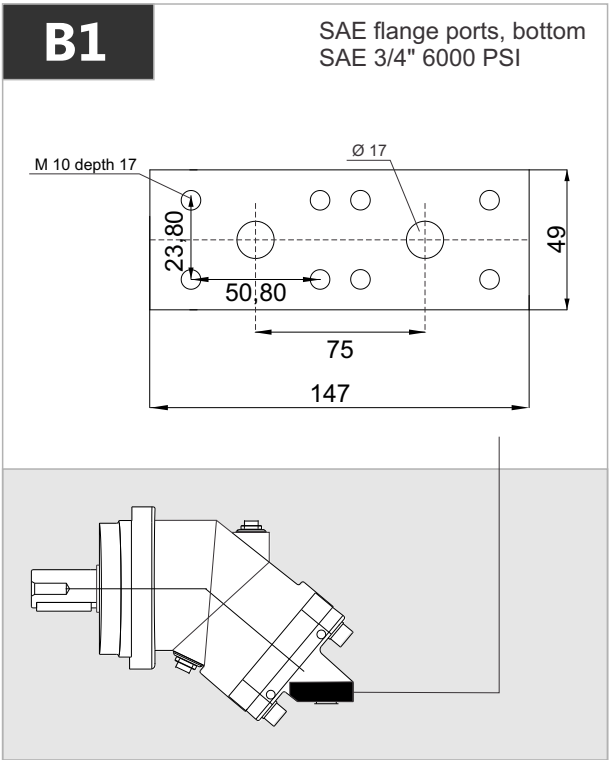
Parallel keyed shaft
DIN 6885, As10x8x50

Key
width 10



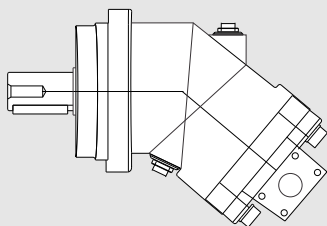
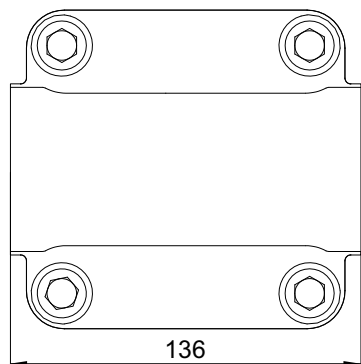


x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
56,40 cc	84,60 cc	5000 rpm	5500 rpm	400 bar	450 bar	0.92 m.N/bar	320 m.N	282	18,00 kg	18,50 kg	-25°	110°



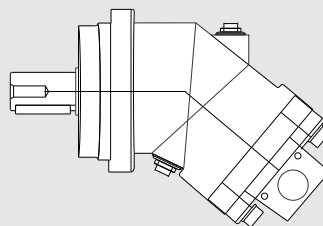
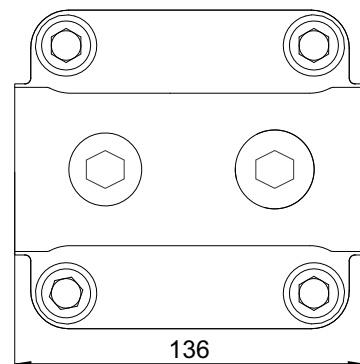
D1-D2

SAE flange ports, side A and B
SAE 3/4" 6000 PSI



D3

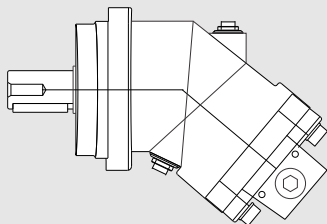
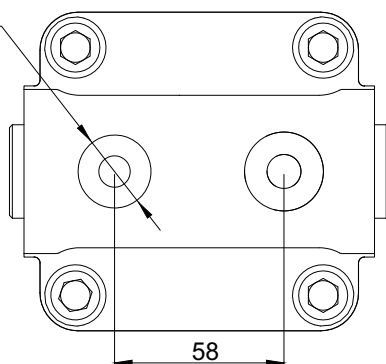
Side threaded ports A and B



R2

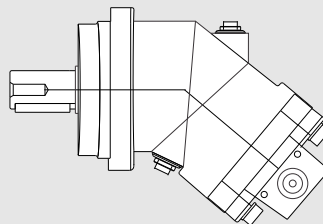
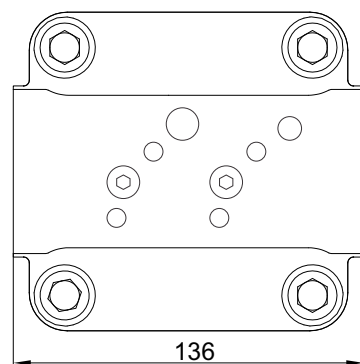
Rear threaded ports

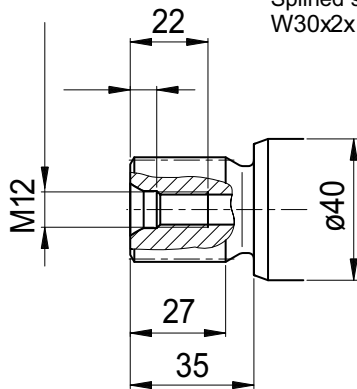
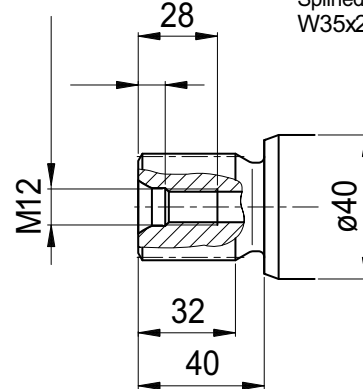
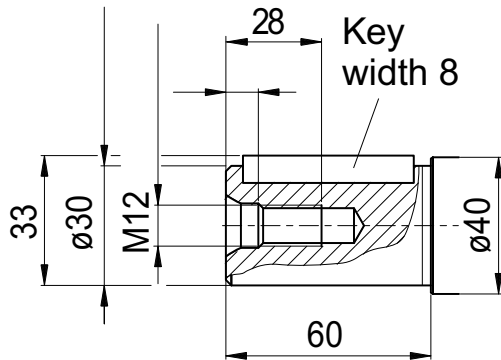
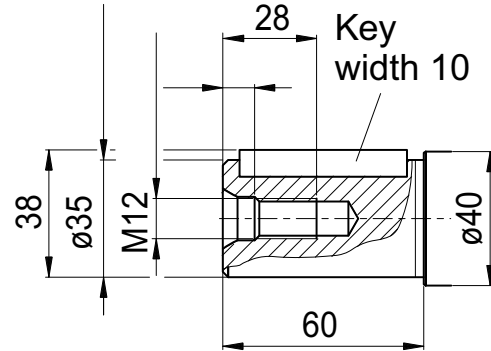
M33x2 prof. 18

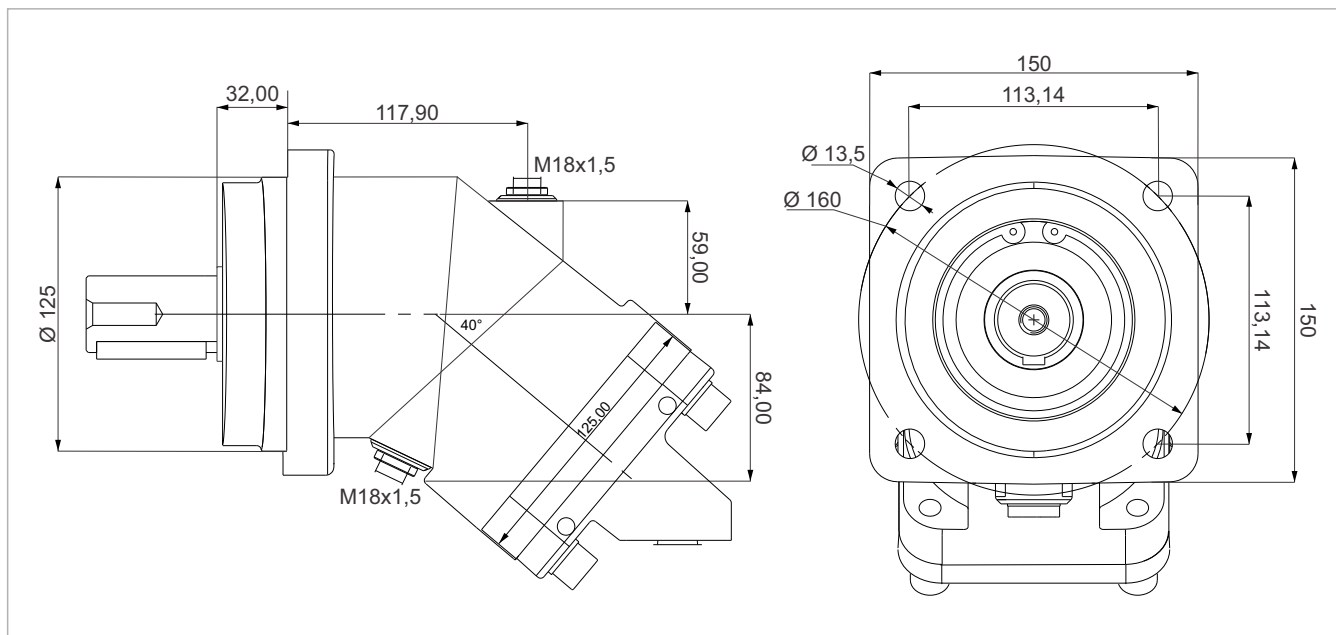


D4

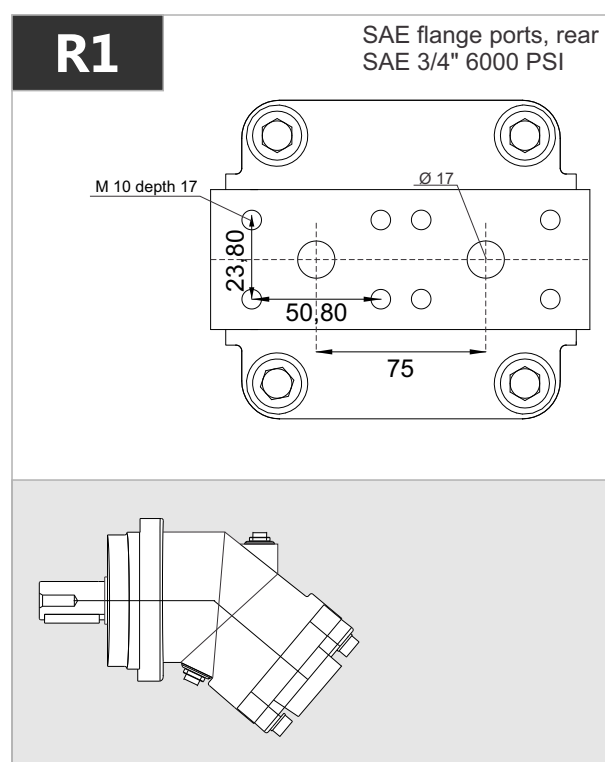
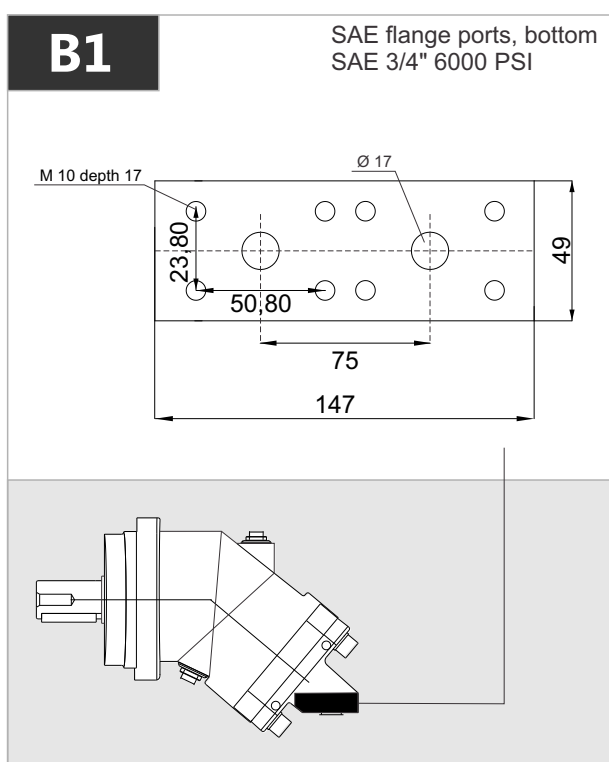
Side threaded ports A and B



S1Splined shaft DIN 5480
W30x2x14x9g**S2**Splined shaft DIN 5480
W35x2x16x9g**K1**Parallel keyed shaft
DIN 6885, As8x7x50Key
width 8**K2**Parallel keyed shaft
DIN 6885, As10x8x50Key
width 10

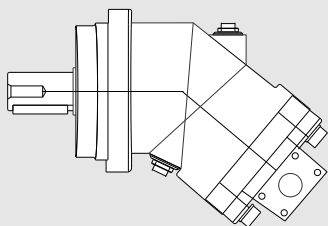
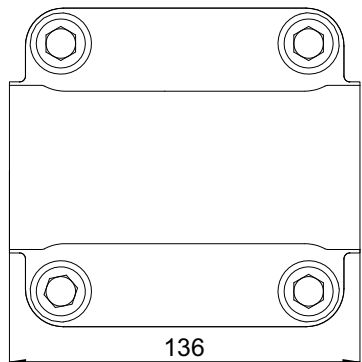


x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
63,00 cc	94,50 cc	5000 rpm	5500 rpm	400 bar	450 bar	1.00 m.N/bar	350 m.N	315	18,00 kg	18,50 kg	-25°	110°



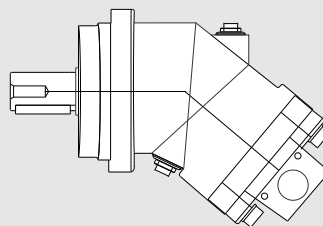
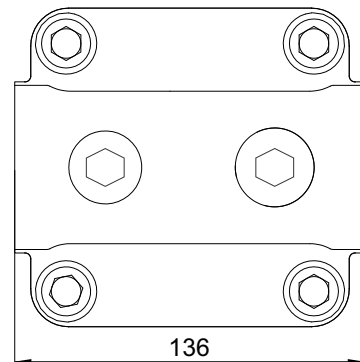
D1-D2

SAE flange ports, side A and B
SAE 3/4" 6000 PSI



D3

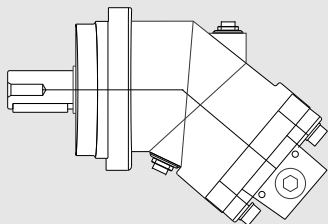
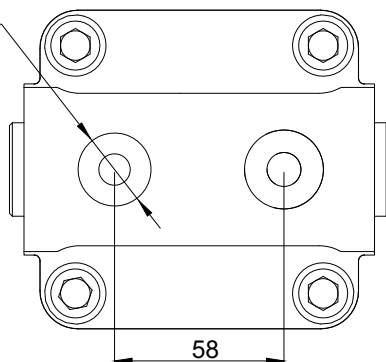
Side threaded ports A and B



R2

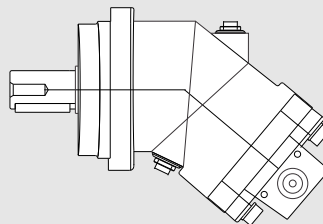
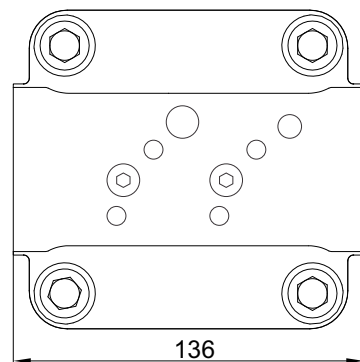
Rear threaded ports

M33x2 prof. 18



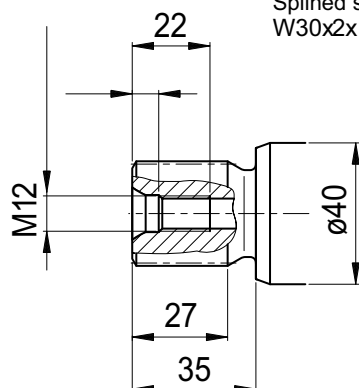
D4

Side threaded ports A and B



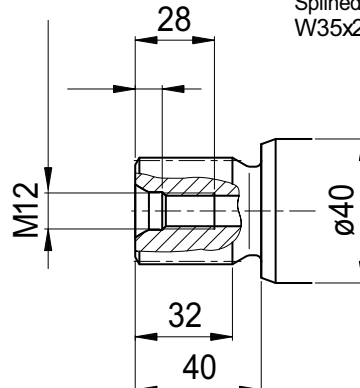
S1

Splined shaft DIN 5480
W30x2x14x9g



S2

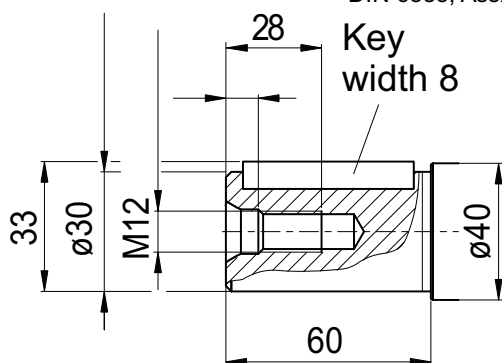
Splined shaft DIN 5480
W35x2x16x9g



K1

Parallel keyed shaft
DIN 6885, As8x7x50

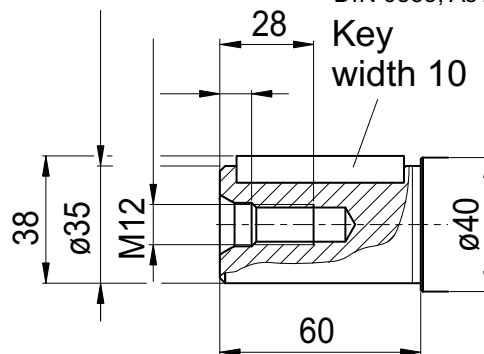
Key
width 8

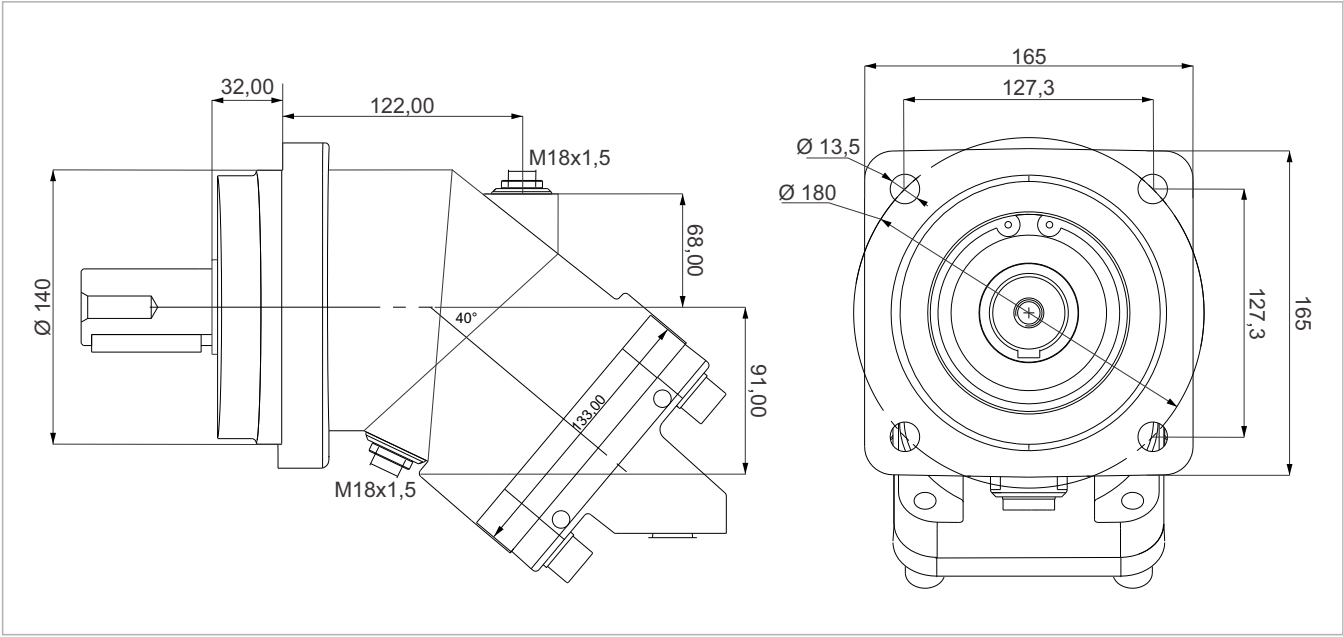


K2

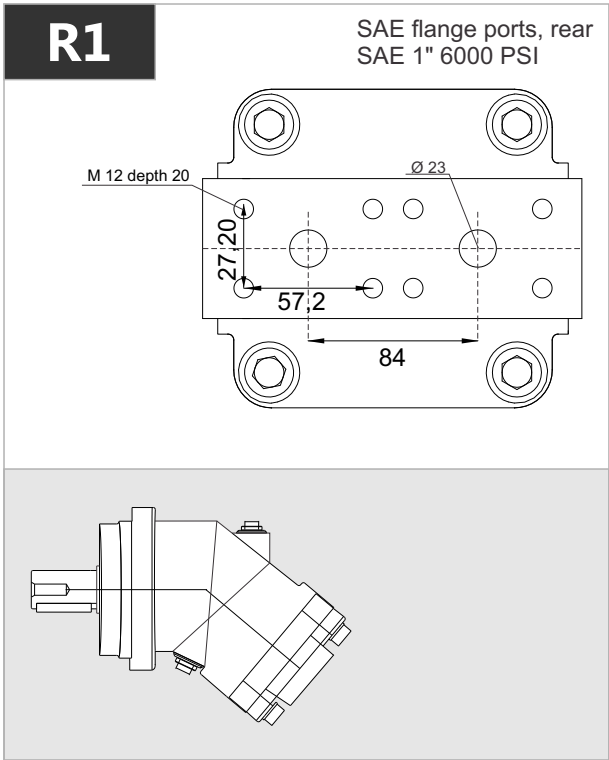
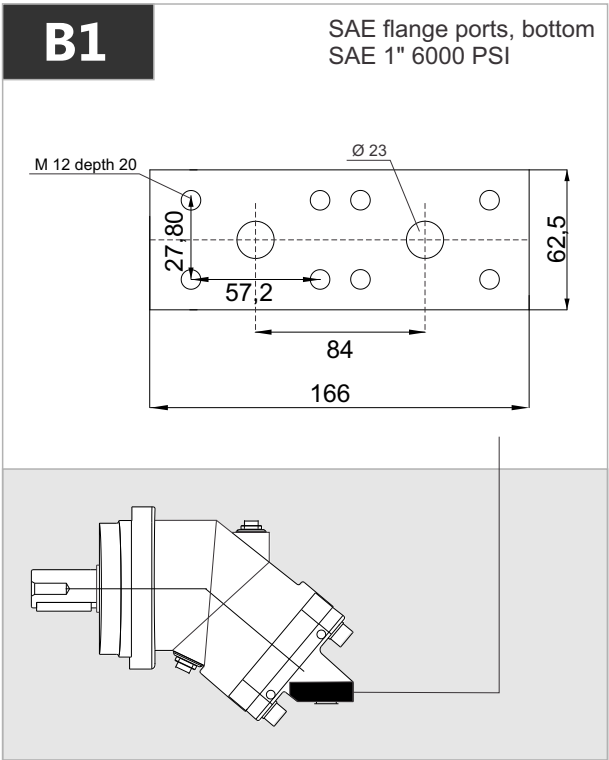
Parallel keyed shaft
DIN 6885, As10x8x50

Key
width 10



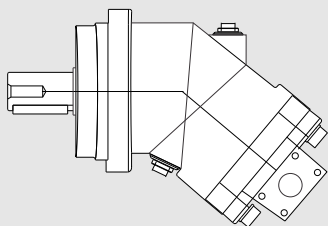
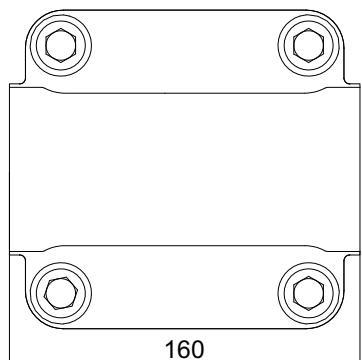


x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
80,00 cc	120,00 cc	4400 rpm	4900 rpm	400 bar	450 bar	1.28 m.N/bar	440 m.N	352	22,00 kg	22,50 kg	-25°	110°



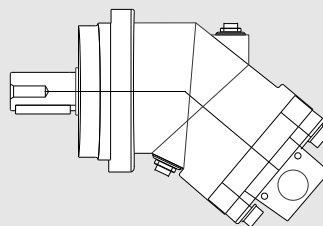
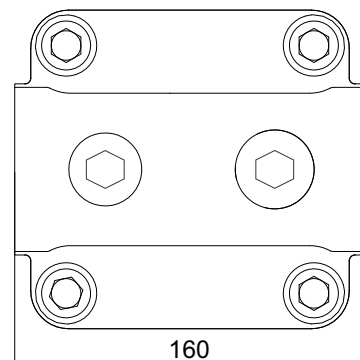
D1-D2

SAE flange ports, side
SAE 1" 6000 PSI



D3

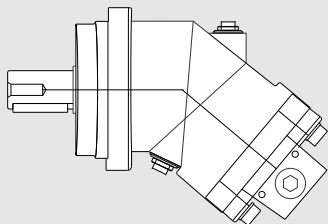
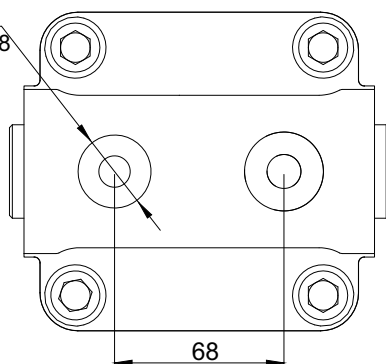
Side threaded ports



R2

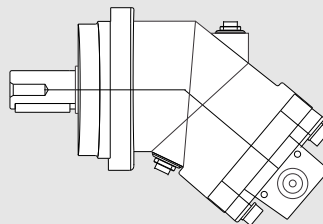
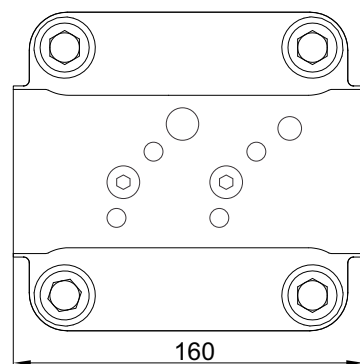
Rear threaded ports

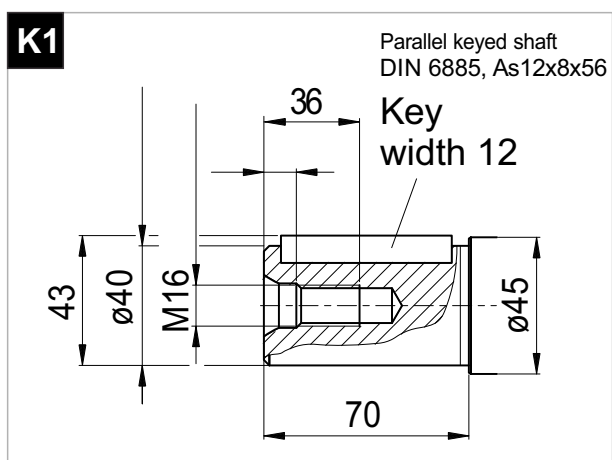
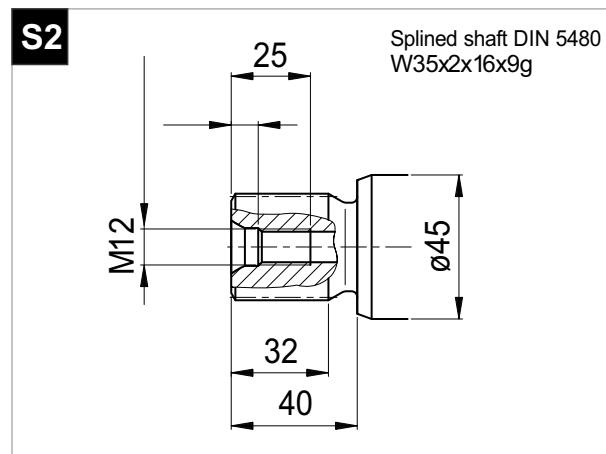
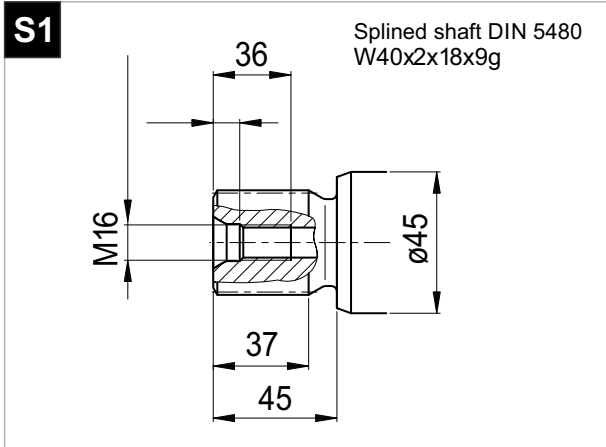
M33x2 depth 18

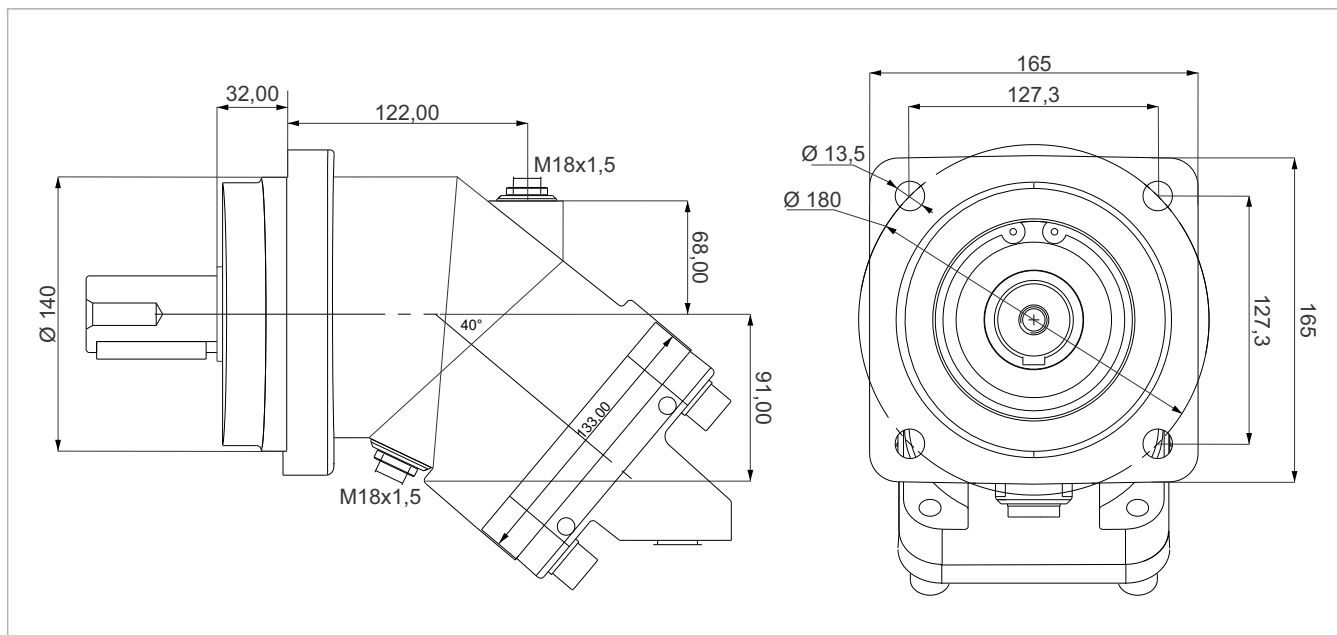


D4

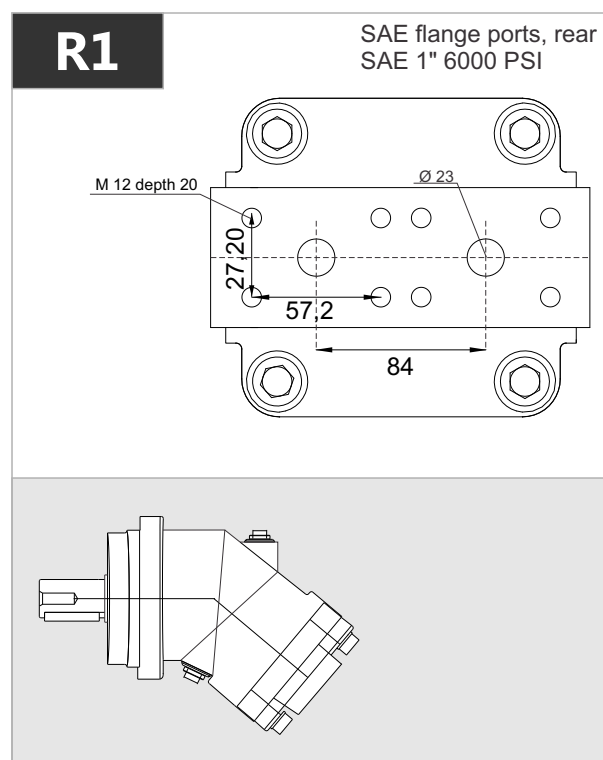
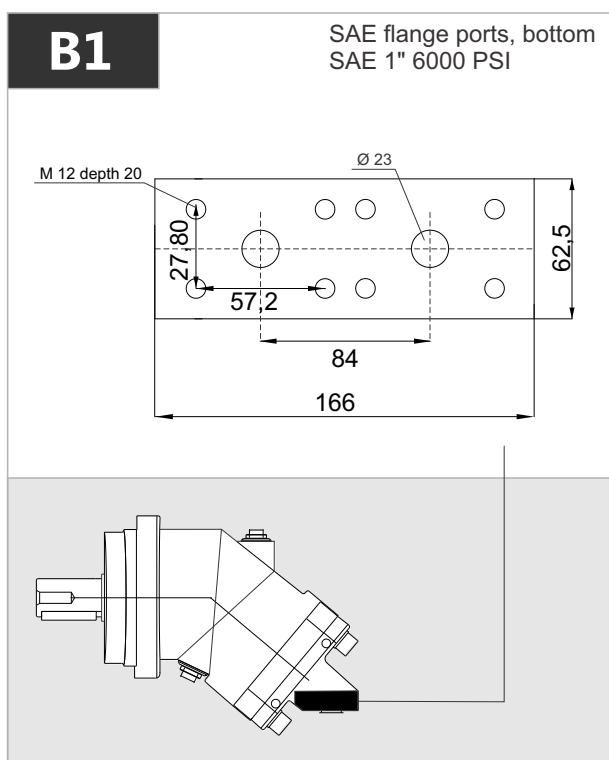
Side threaded ports





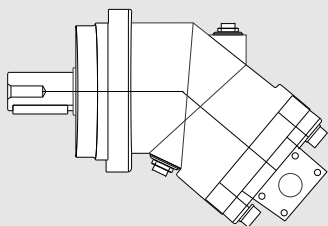
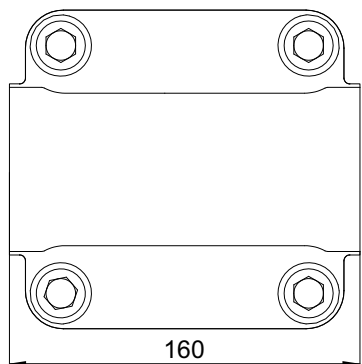


<i>x 1000 rpm</i>	<i>x 1500 rpm</i>	<i>Max. Contin. Pump Speed</i>	<i>Max. Intermit. Pump Speed</i>	<i>Max. Contin. Pressure</i>	<i>Max. Peak Pressure</i>	<i>Torque bar</i>	<i>Torque at 350 bar</i>	<i>Max. Flow</i>	<i>Weight without accessor.</i>	<i>Weight with accessor.</i>	<i>Max. Motor Temp.</i>	<i>Min. Motor Temp.</i>
108,4 cc	162,6 cc	4000 rpm	4400 rpm	400 bar	450 bar	1.69 m.N/bar	600 m.N	433	22,50 kg	23,00 kg	-25°	110°



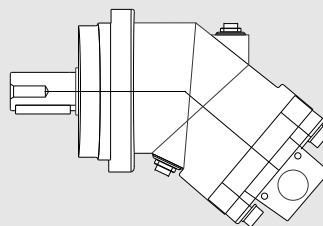
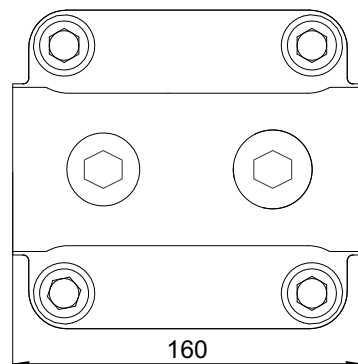
D1-D2

SAE flange ports, side
SAE 1" 6000 PSI



D3

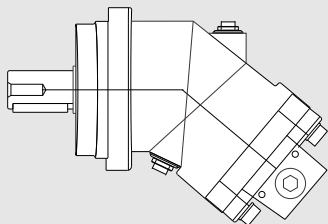
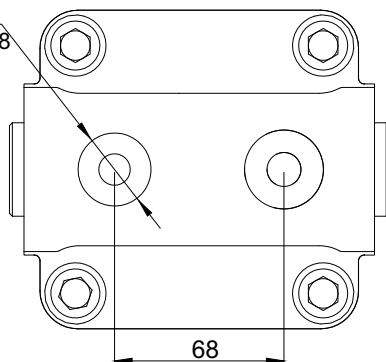
Side threaded ports



R2

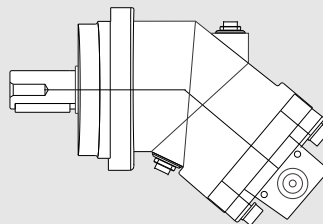
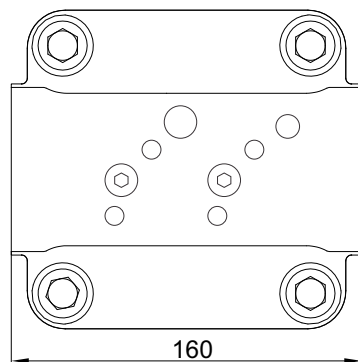
Rear threaded ports

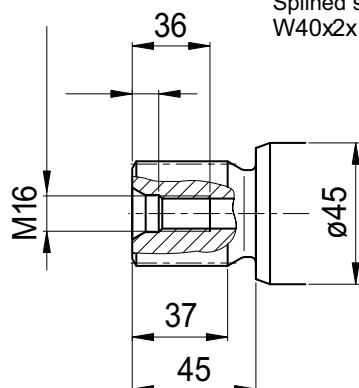
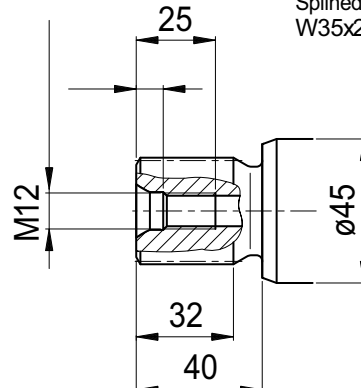
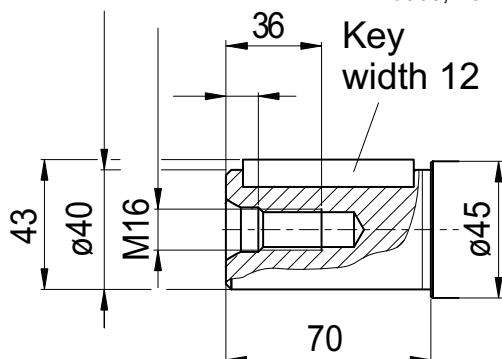
M33x2 depth 18



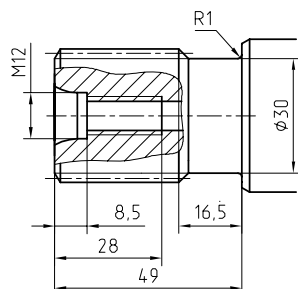
D4

Side threaded ports

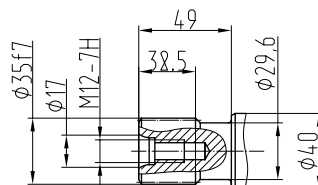


S1Splined shaft DIN 5480
W40x2x18x9g**S2**Splined shaft DIN 5480
W35x2x16x9g**K1**Parallel keyed shaft
DIN 6885, As12x8x56Key
width 12

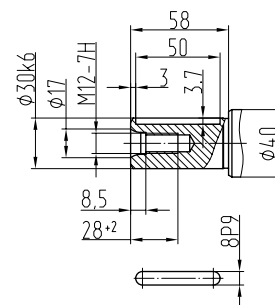
Splined shaft
35xf7x2x9g GOST 6033-80



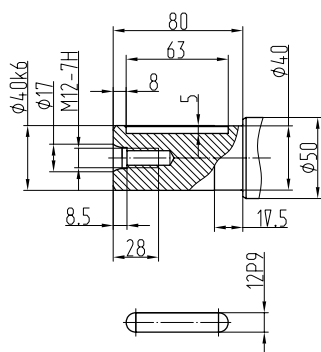
35xf7x2x9g ГOCT6033



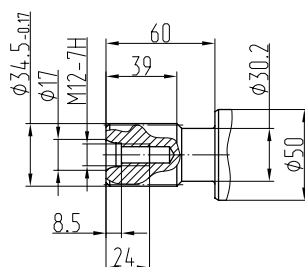
Parallel keyed shafts



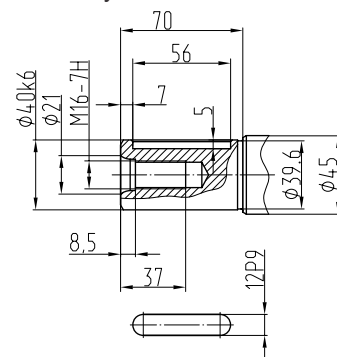
Parallel keyed shafts



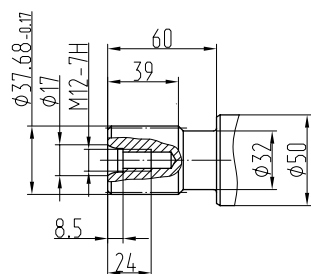
1 3/8" 21T 16/32DP ANSI B92



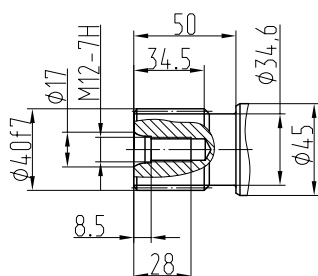
Parallel keyed shafts



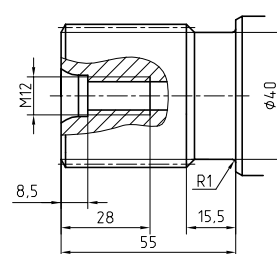
1 1/2" 23T 16/32DP ANSI B92

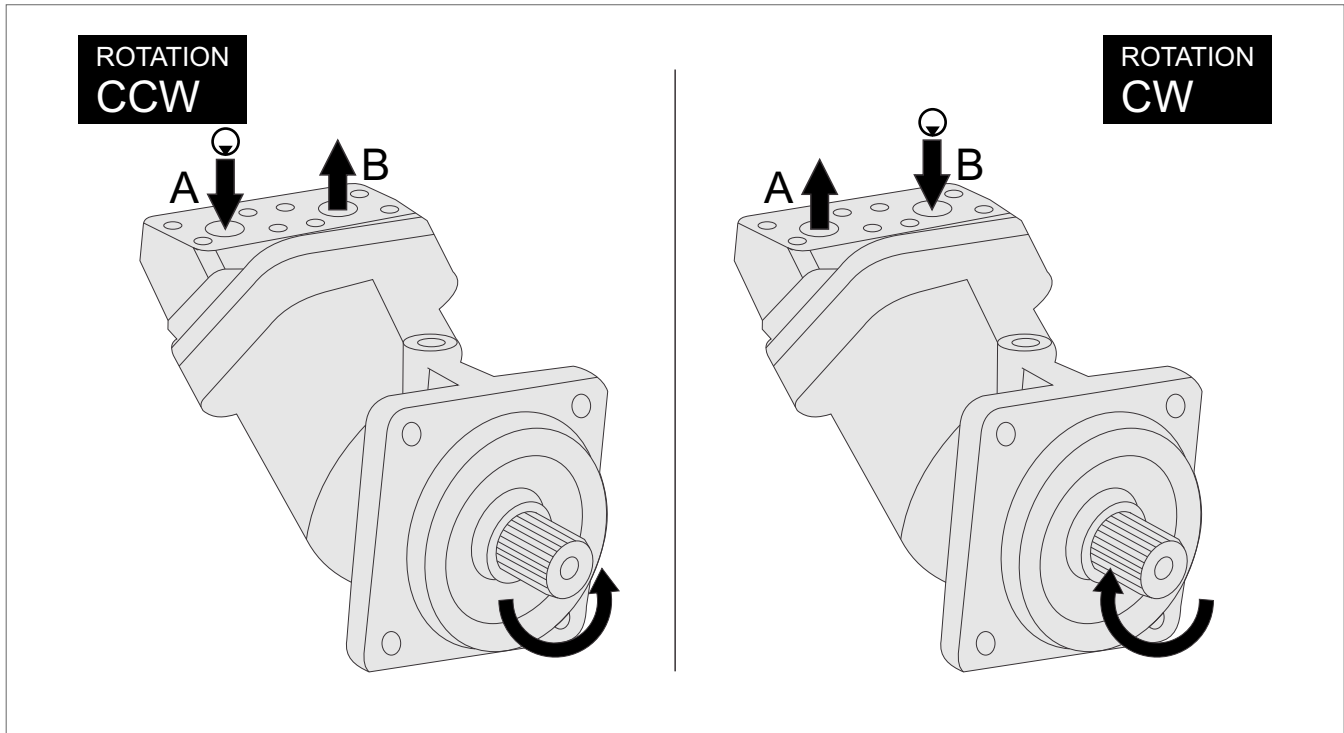


40xf7x2x9g GOST6033



45xh8x2x9g GOST 6033-80





Quick Calculation

Flow rate

$$Q = \frac{V_s \cdot n}{1000 \eta_v} \text{ (lpm)}$$

Torque

$$M = \frac{V_s \cdot \Delta p \cdot \eta_{mh}}{63} \text{ (Nm)}$$

Power

$$P = \frac{2\pi \cdot M \cdot n}{60000} = \frac{M \cdot n}{9549} = \frac{Q \cdot \Delta p \cdot \eta_t}{600} \text{ (kw)}$$

Speed

$$n = \frac{1000 \cdot Q \cdot \eta_v}{V_s} \text{ (rpm)}$$

- V_s = Displacement (ccm/rev.)
 Δp = Diff. pressure (bar)
 n = Speed (rpm)
 Q = Flow (lpm)
 η_v = Volumetric efficiency
 η_{mh} = Mechanical-hydraulic efficiency
 η_t = Total efficiency ($\eta_t = \eta_v \times \eta_{mh}$)

HYDROLINA HYDRAULICS, LTD.

Address all questions regarding spare parts to your responsible Our Service Partner or the technical service department of the manufacture's plant / factory for the G2M Bent Axis Motors.

Fevziçakmak mh. 10505 Sk.
No: 23/1 Karatay / KONYA

Phone : **+90 (551) 148 26 88**

Fax : +90 (551) 148 26 88

mail@hydrolina.com
order@hydrolina.com

POSITION

G2M Motors can be operate any position.

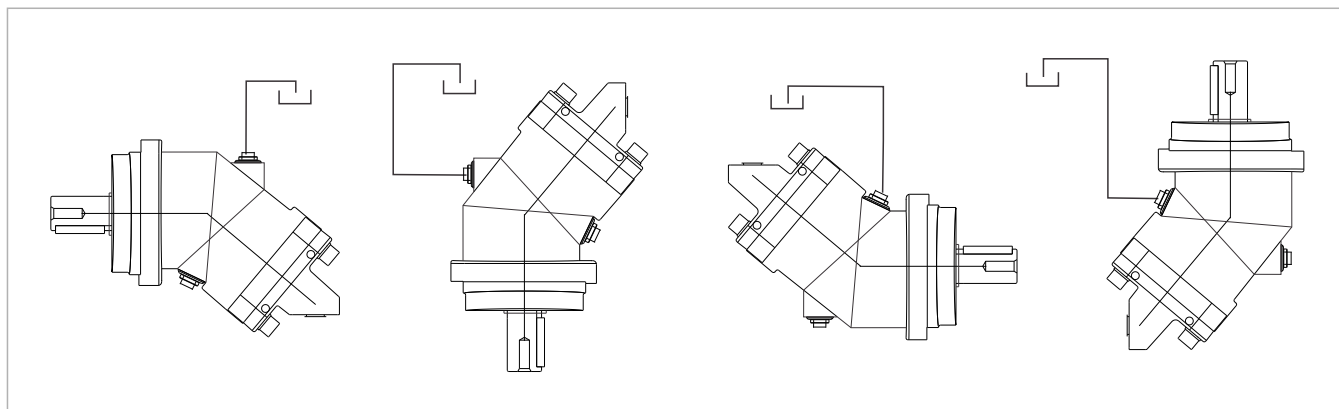
DIRECTION OF ROTATION

G2M Motors can be operate in both directions of rotation.

Before of Installation operation, the motor must be filled with hydraulic fluid and air bled.

INSTALLATION POSITION

See following examples.

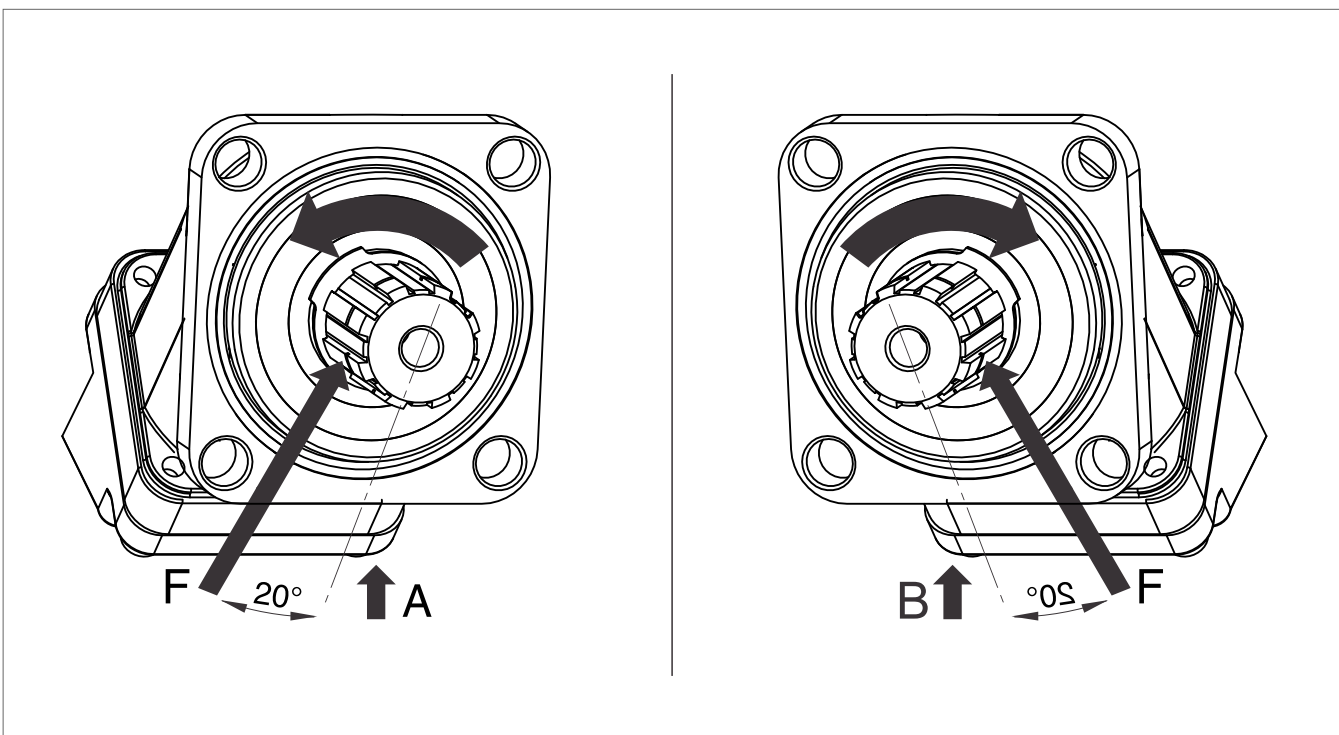


HYDRAULIC FLUID

Recommended ;

Generally : between 15 and 200 cSt.

Maximum : between 5 and 1600 cSt.



FOR USE;

Available via e-mail on request or each motor is supplied via Starting datasheet.

For detailed information about G2M Bent Axis Motors, please contact with Technical Department !!!

DIN

DIN 5462 / ISO 14
8x32x35
8x32x36
DIN 6885



G2PA



G1PA



G2PM

ISO

ISO 3019-2 (4 BOLTS)
DIN 5480 -W25,30,35,40,45
DIN 6885 -Ø20,25,30,35,40,45



G2P



G2M

SAE

SAE B2 C4 - SAE D
SAE J498b
SAE J 744



G2SE



G2EM

M2

Fixed Plug-in

DIN 5480 / ISO 3019-2
W30 - W35 - W40
M21 - M22 - M23



G2MS

DIN ISO 14
8x32x36



GPA

P2 Connection M8x125
Woodruff key 3x6,5 NF E
27-653 NF R 124-04
(2 BOLTS)



GPH

Piston Pumps

Piston Motors

HYDROLINA HYDRAULICS, LTD.

Fevziçakmak mh. 10505 Sk.
No: 23/1 Karatay / KONYA

Phone : **+90 (551) 148 26 88**

Fax : +90 (551) 148 26 88

mail@hydrolina.com
order@hydrolina.com

G2M

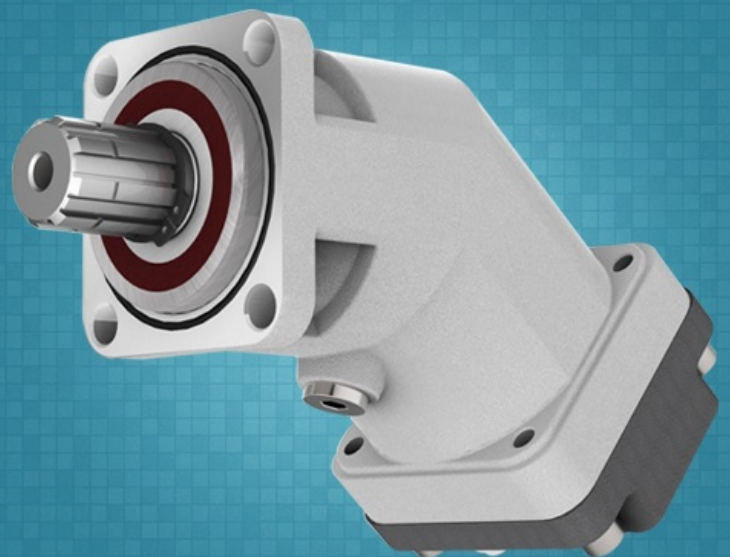


HOME CORPORATE PRODUCT LINE PUMPS MOTORS INDUSTRIAL & MOBILE HYDRAULIC LOCATIONS ENVIRONMENT CATALOGS WorldWide

G2PA

Bent Axis Piston Pumps

- Compact Design,
- Economical Conception,
- High Rotating Speeds,
- High Output Pressure.



hydrolina.com