



A9MO

Bent Axis Piston Motor - ISO



A9MO Motors have the following advantages ;

- Compact Design,
- Economical Conception,
- High Power Density,
- High Efficiency,
- High Rotating Speeds,
- From 5cc to 130cc,
- High Pressure,
- Good Starting Characteristics,
- Optimized Weight and Size,
- For Use Mobile and Stationary Applications,

Other Advantages of A9MO

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

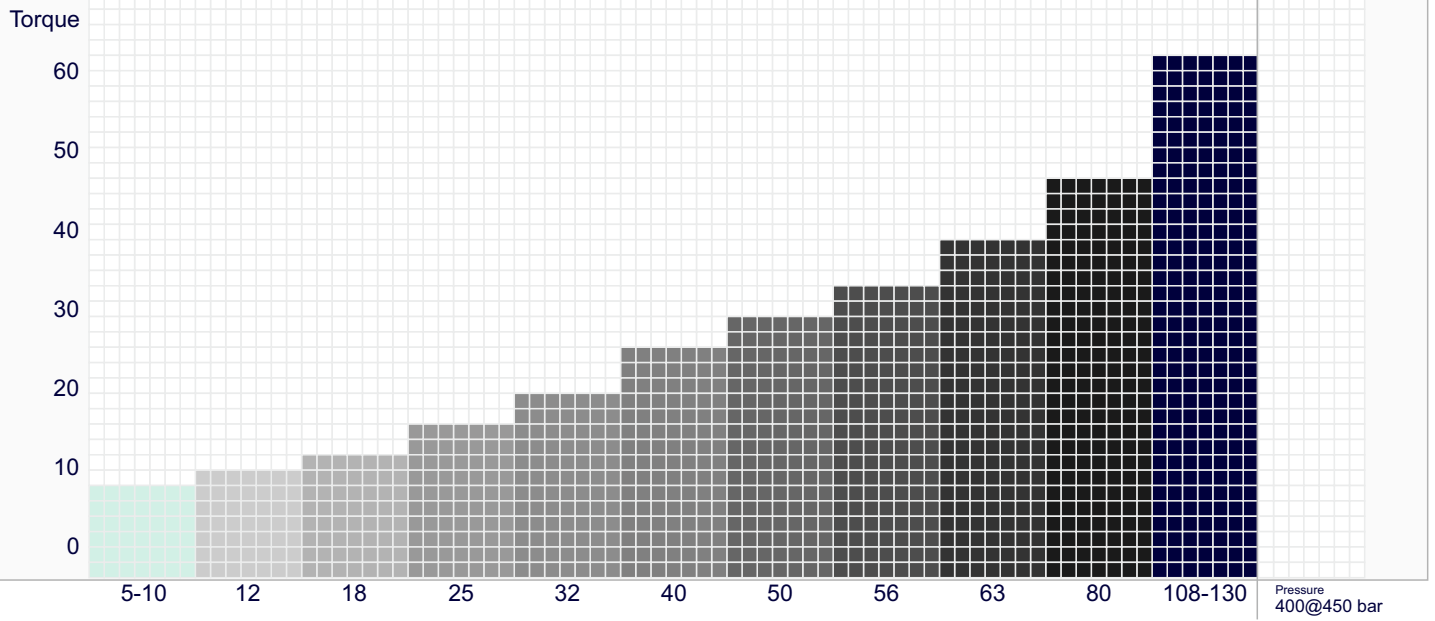
40° bent axis design giving high power, small overall dimensions, optimum efficiency and economic design. Flange and shaft designed for direct mounting on the equipments. The fixed displacement bent axis motors generates a hydraulic fluid flow. It is designed for use in trucks, commercial vehicles, construction type equipments and all stationary hydraulic applications. The A9MO 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 5 to 130 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.

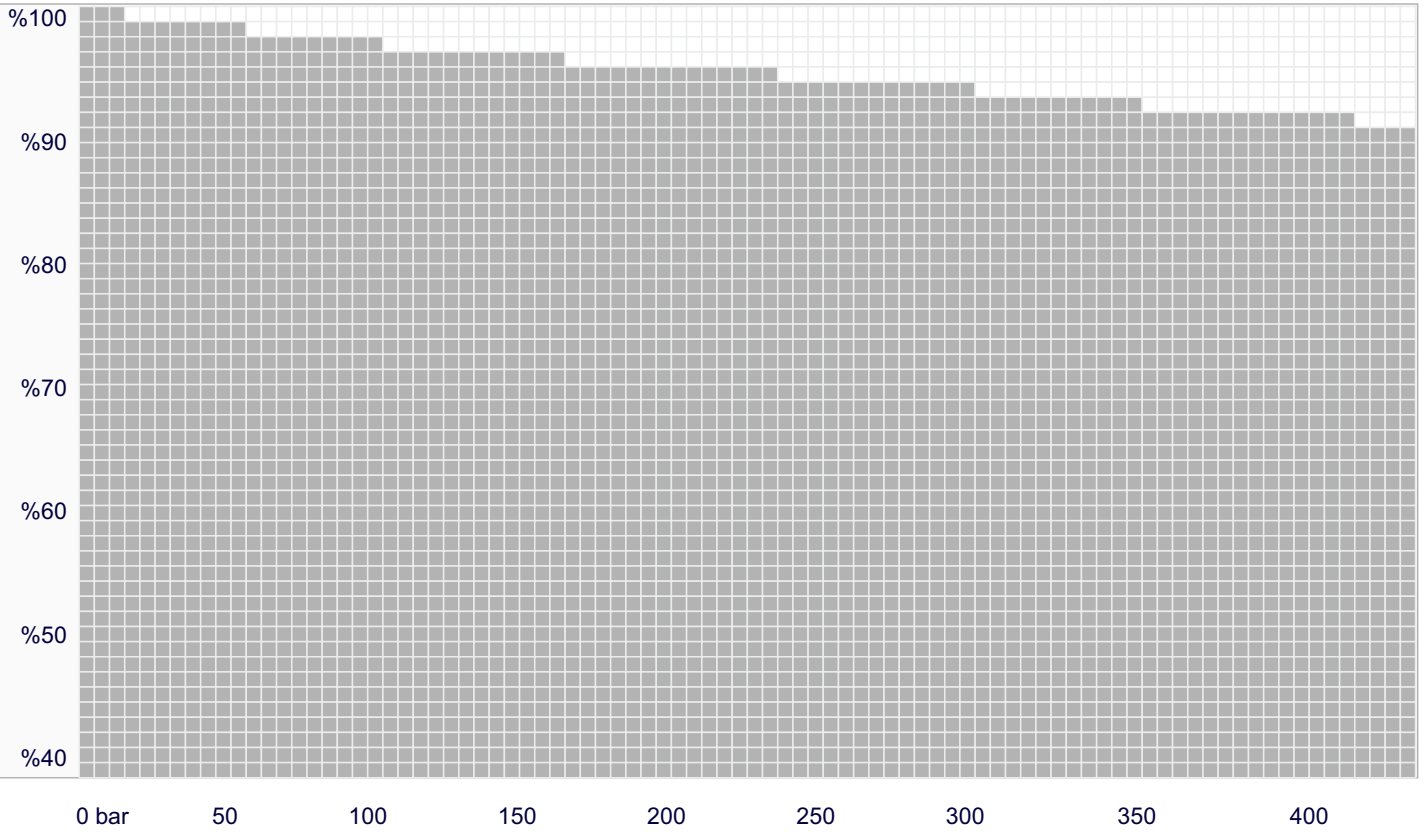
The motor is available both to DIN and SAE world standards and can be mounted either directly at the gear box or via a drive shaft. Other brand bent axis motors compatible and interchangeable with A9MO bent axis motors. Refer to the data sheet and order confirmation for the technical data, operating conditions and operating limits of the bent axis piston motors.

Performance

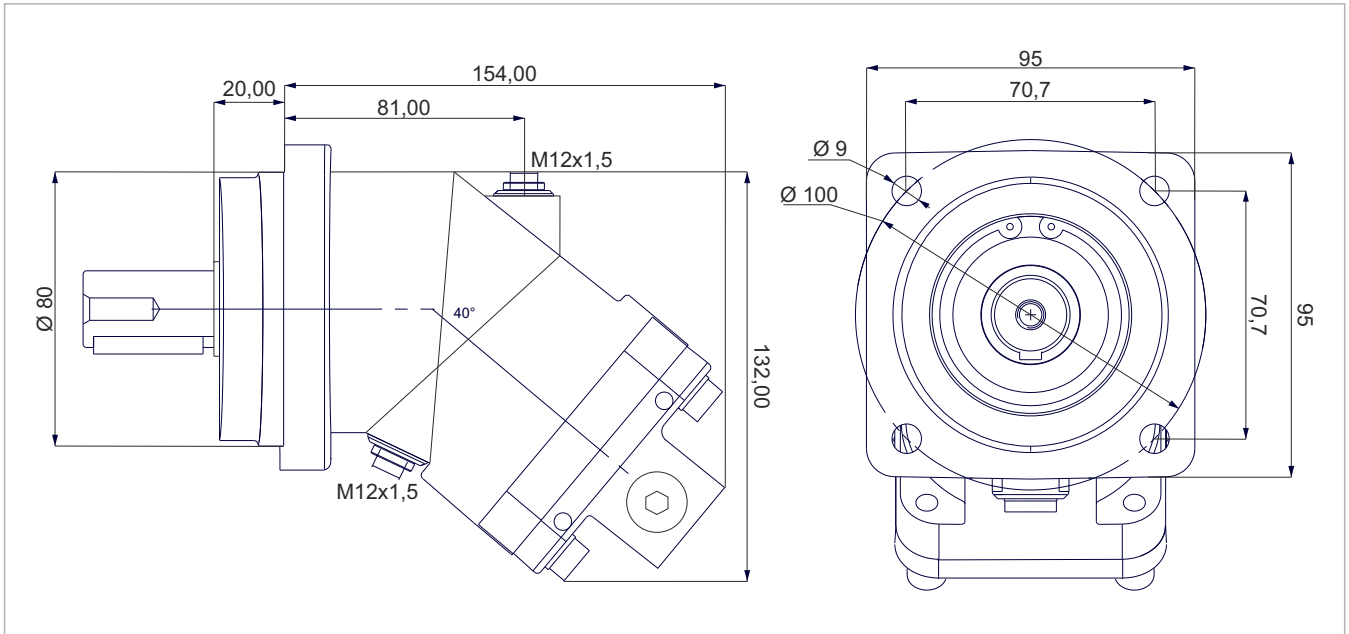
Compare Table of Torque



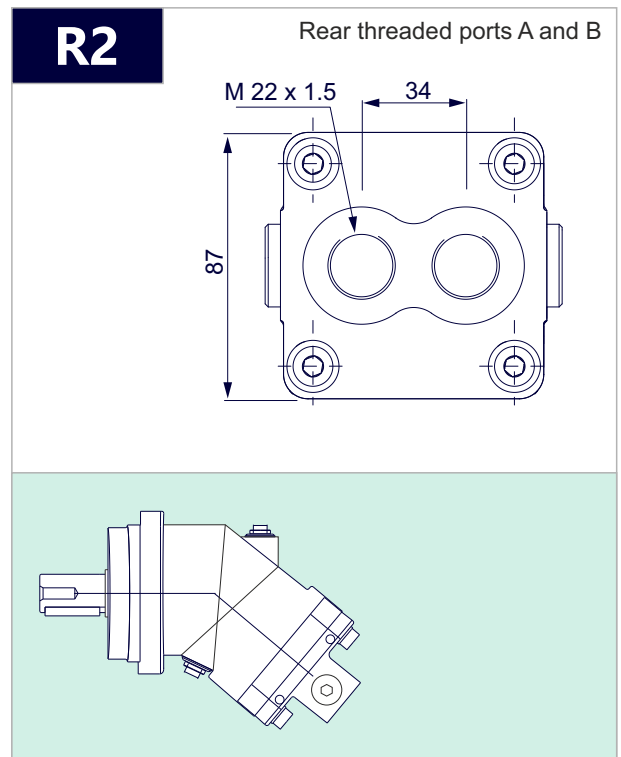
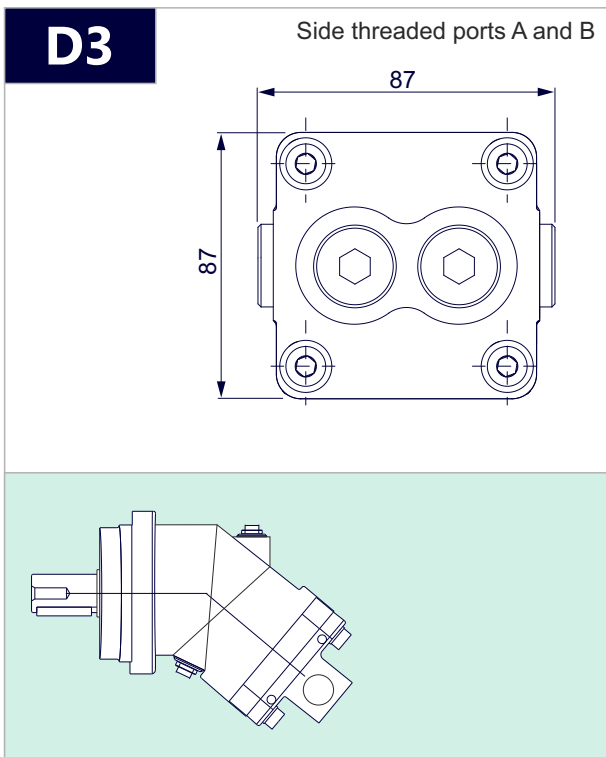
Efficiency of A9MO Motors



A9MO 5

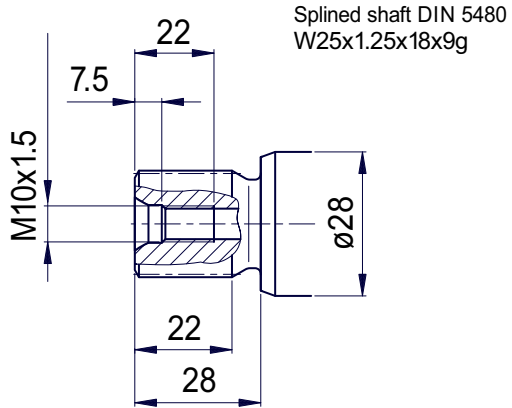


x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
5,00 cc	7,50 cc	8800 rpm	9400 rpm	400 bar	450 bar	0.17 m.N/bar	62 m.N	44	6,00 kg	6,20 kg	-25°	110°

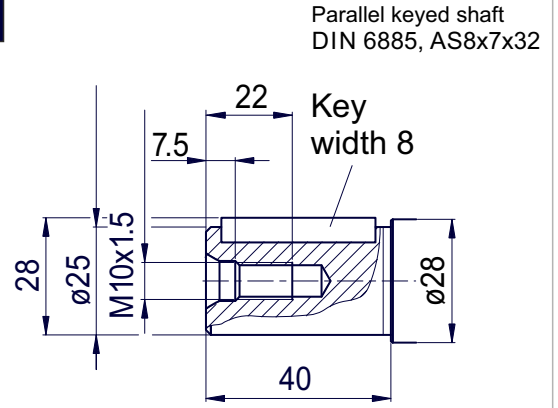


A9MO 5

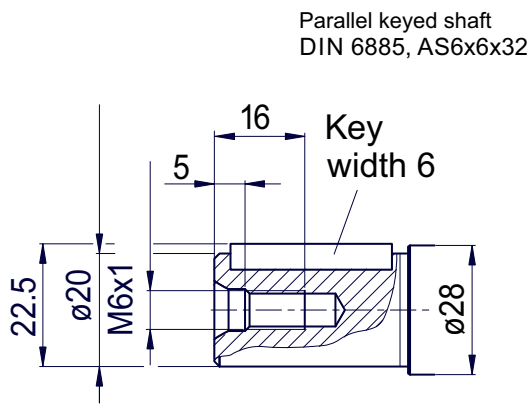
S1



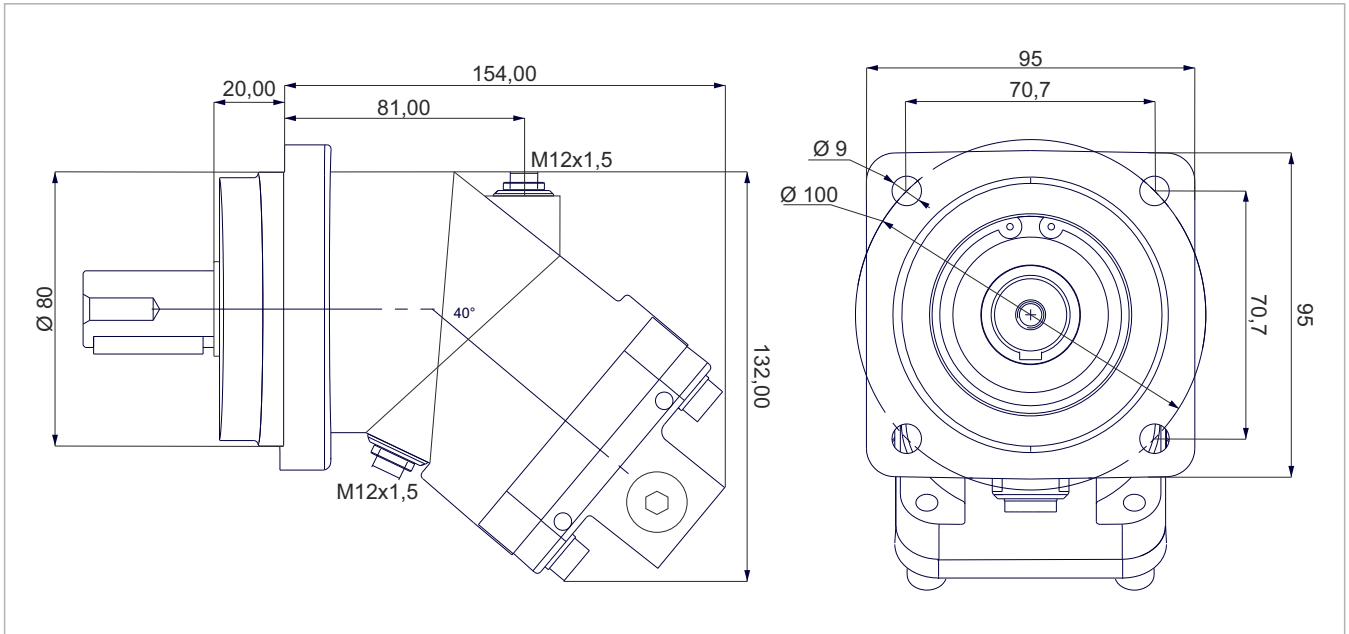
K1



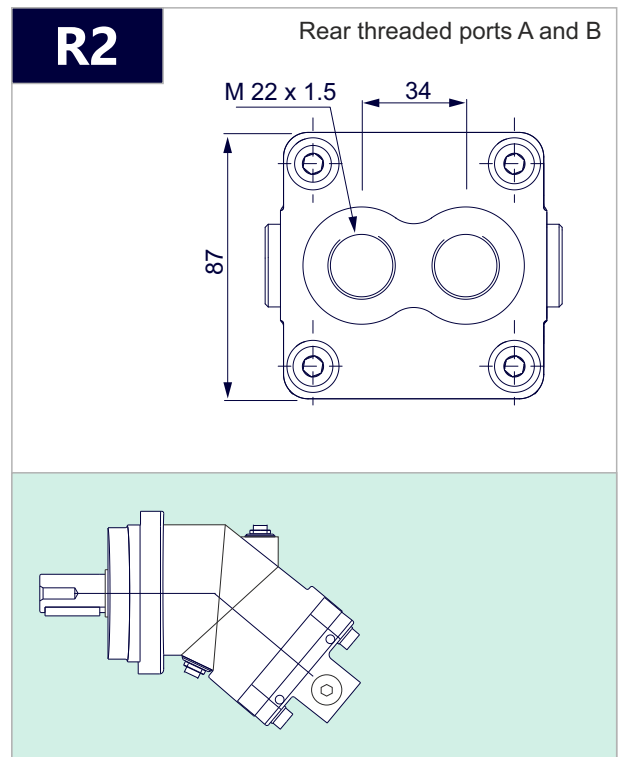
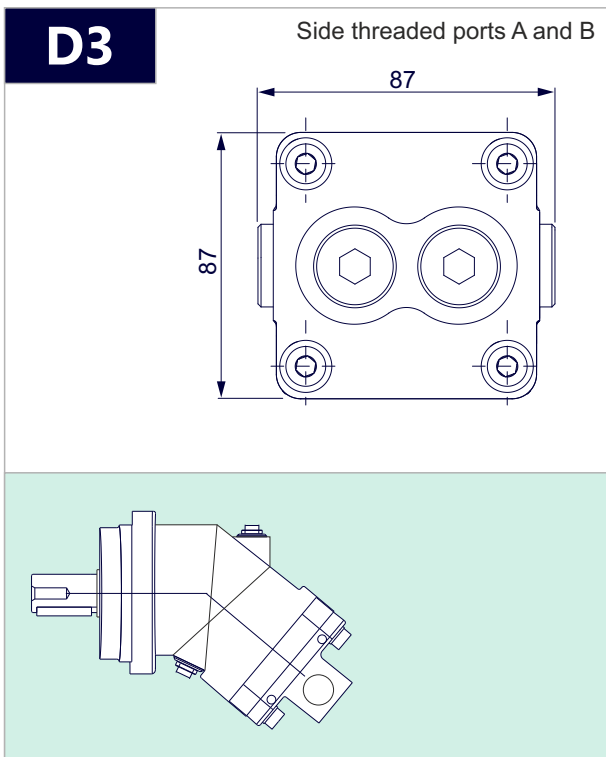
K2



A9MO 10



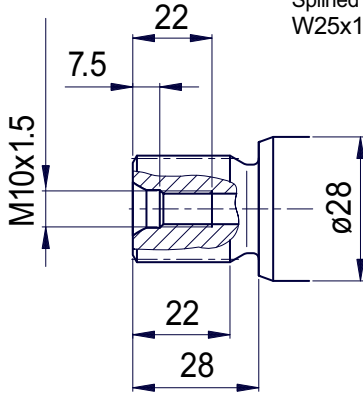
x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
10,00 cc	15,00 cc	8000 rpm	8800 rpm	400 bar	450 bar	0.17 m.N/bar	64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



A9MO 10

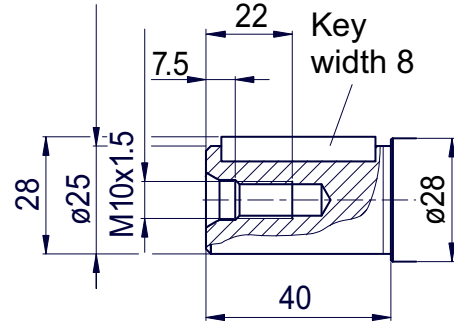
S1

Splined shaft DIN 5480
W25x1.25x18x9g



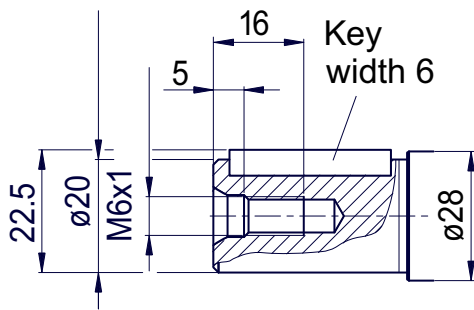
K1

Parallel keyed shaft
DIN 6885, AS8x7x32

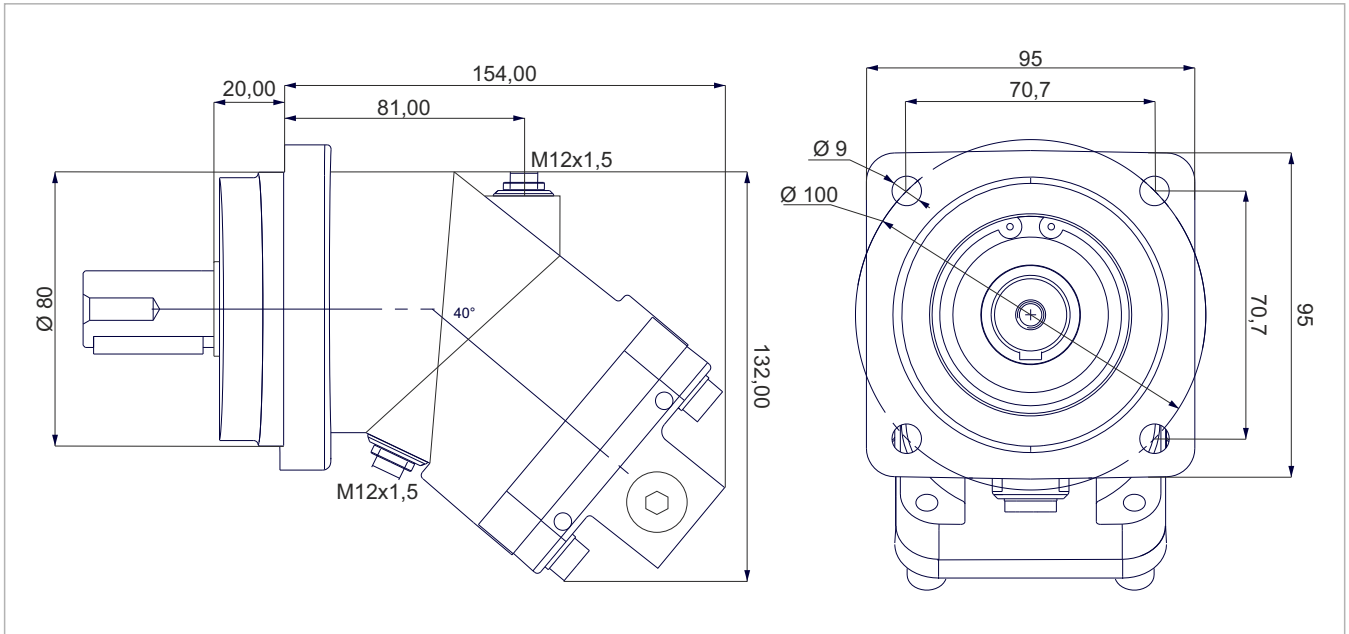


K2

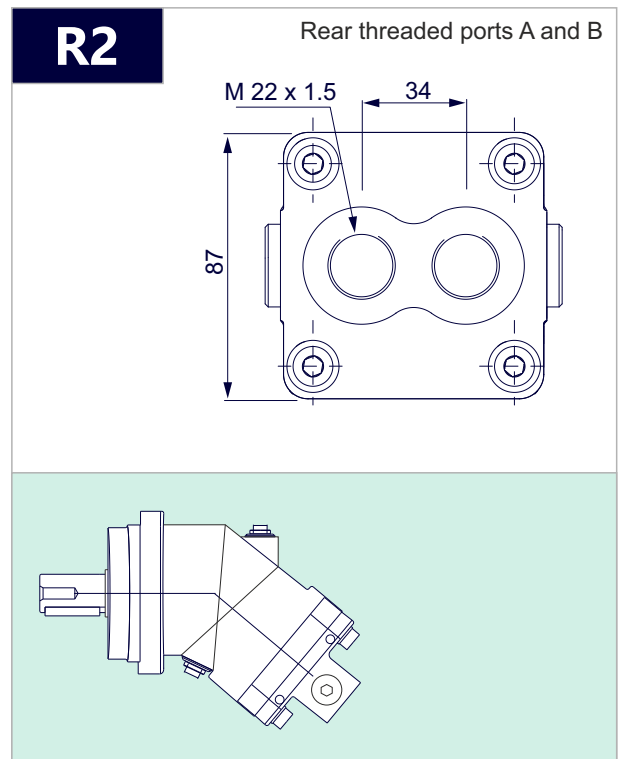
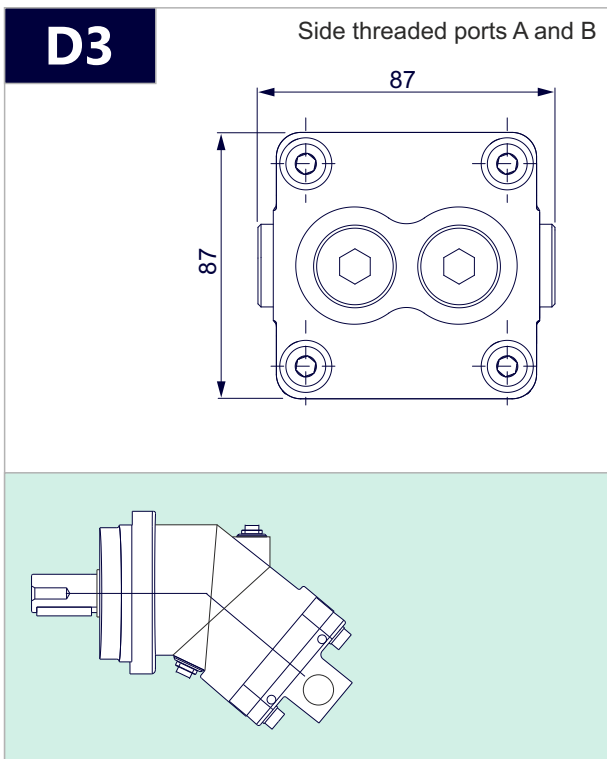
Parallel keyed shaft
DIN 6885, AS6x6x32



A9MO 12



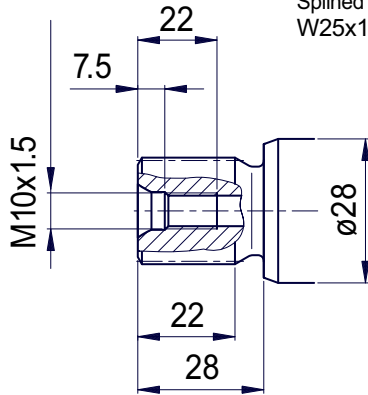
x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
12,00 cc	18,00 cc	8000 rpm	8800 rpm	400 bar	450 bar	0.18 m.N/bar	66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



A9MO 12

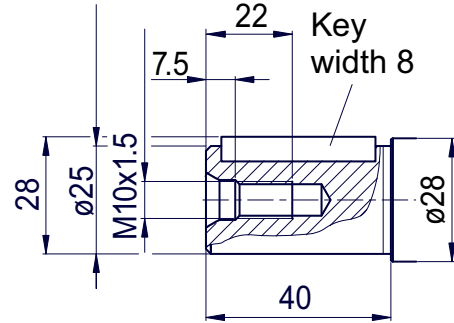
S1

Splined shaft DIN 5480
W25x1.25x18x9g



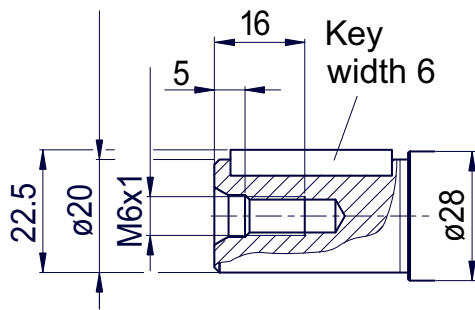
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Parallel keyed shaft
DIN 6885, AS8x7x32

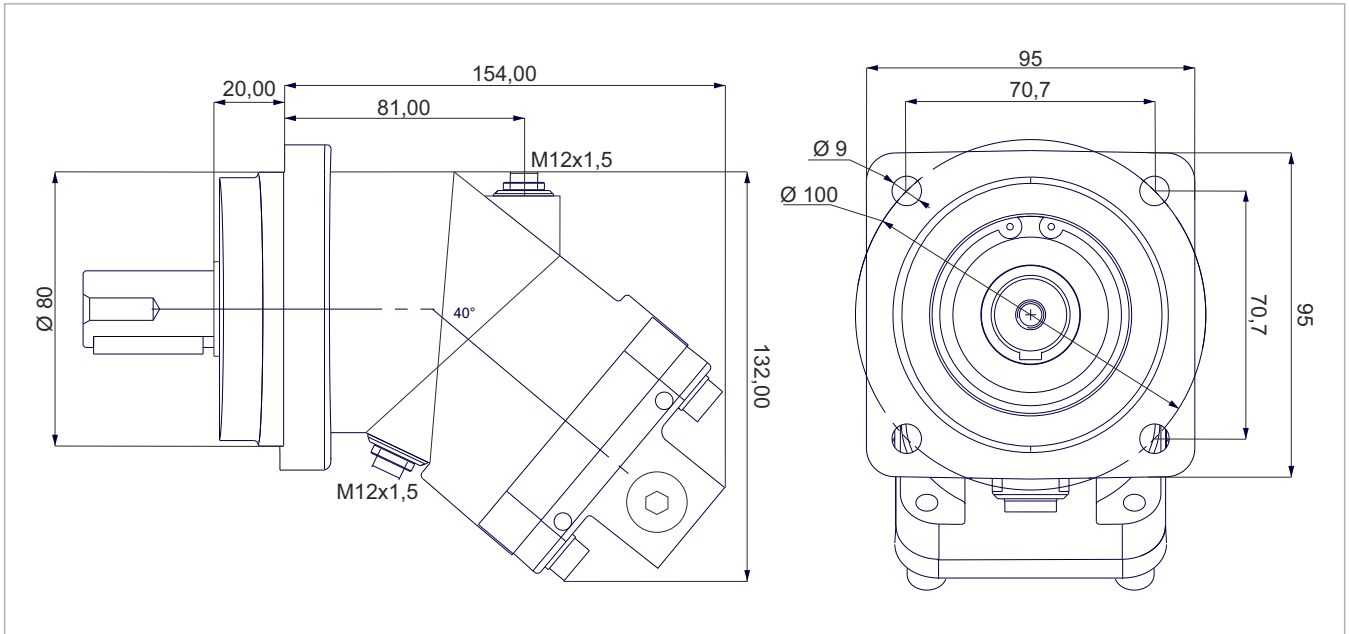


K2

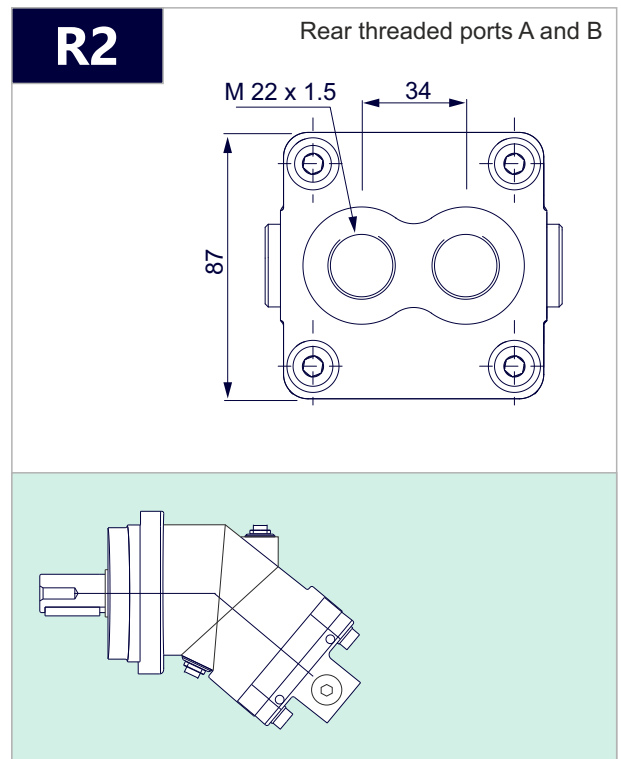
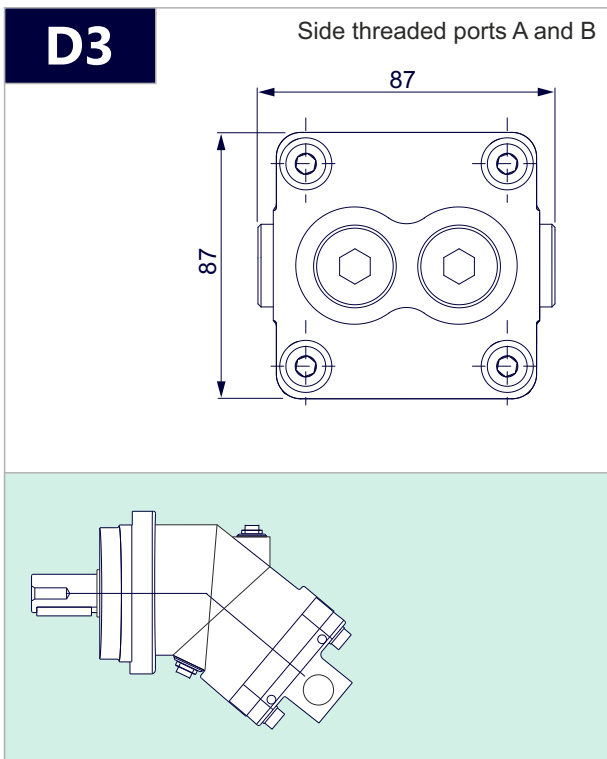
Parallel keyed shaft
DIN 6885, AS6x6x32



A9MO 18



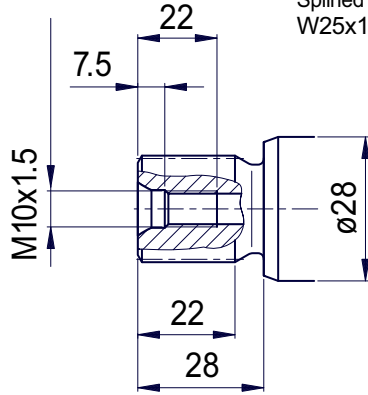
x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
18,00 cc	27,00 cc	8000 rpm	8800 rpm	400 bar	450 bar	0.28 m.N/bar	98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



A9MO 18

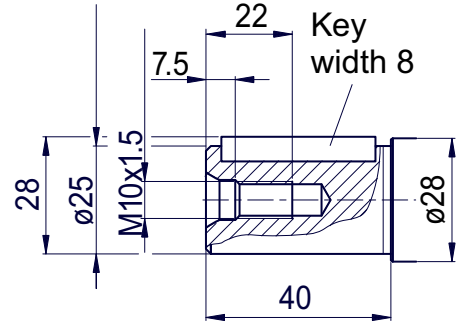
S1

Splined shaft DIN 5480
W25x1.25x18x9g

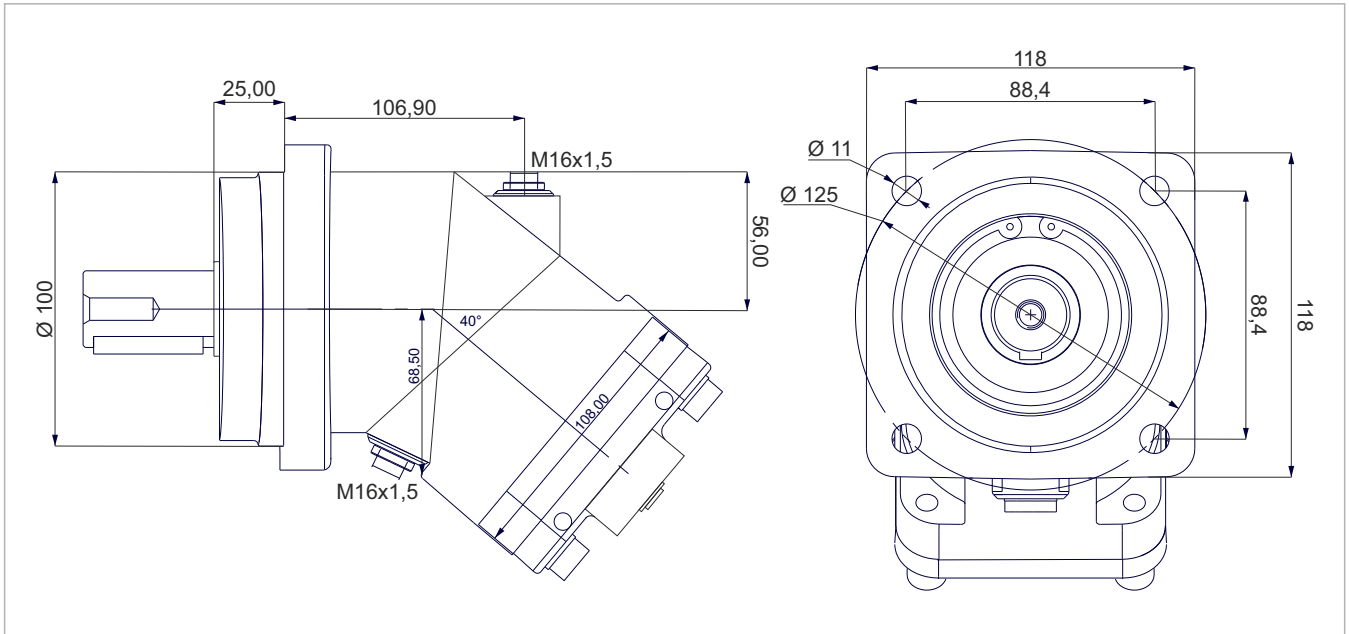


K1

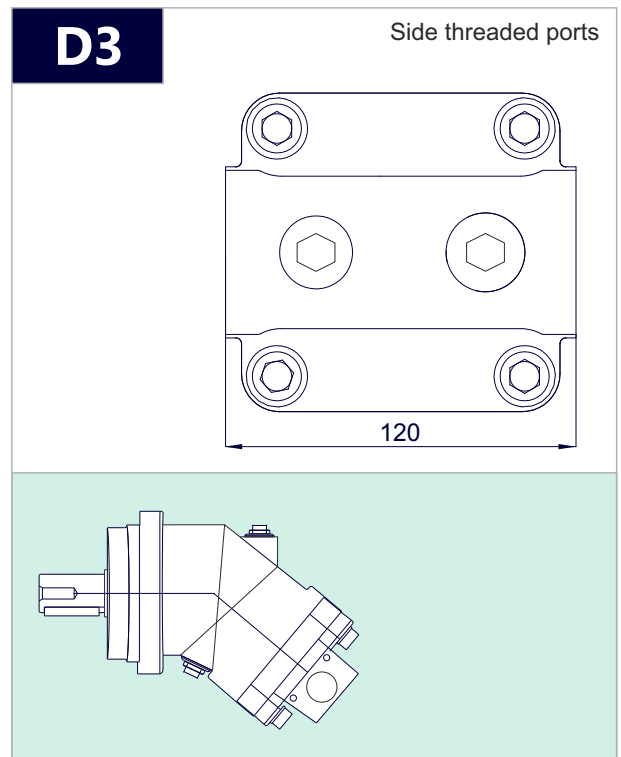
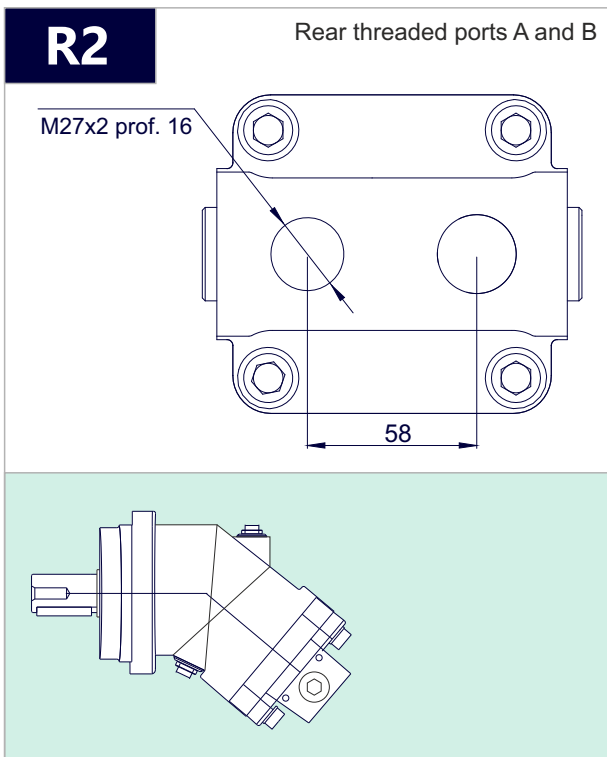
Parallel keyed shaft
DIN 6885, AS8x7x32



A9MO 25



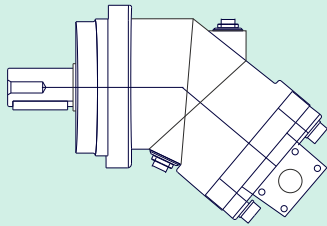
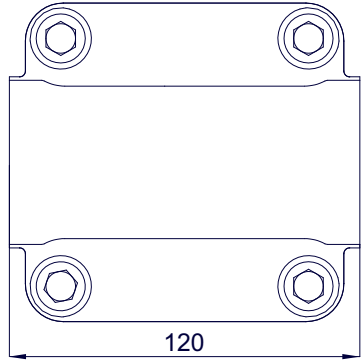
x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
25,00 cc	37,50 cc	6250 rpm	6800 rpm	400 bar	450 bar	0.40 m.N/bar	140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



A9MO 25

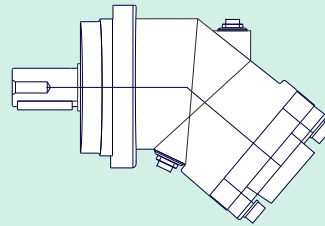
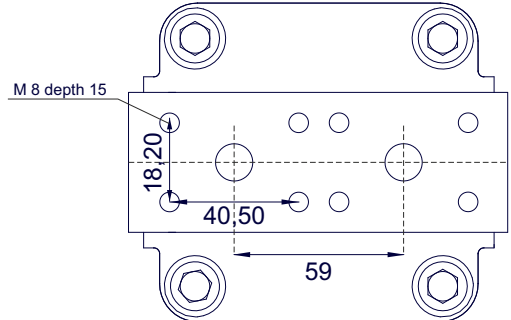
D1-D2

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



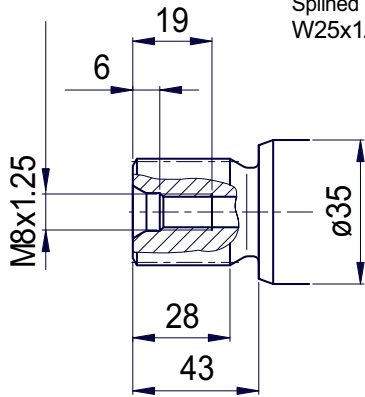
R1

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



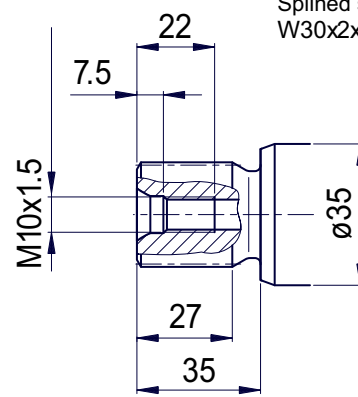
S1

Splined shaft DIN 5480
W25x1.25x18x9g



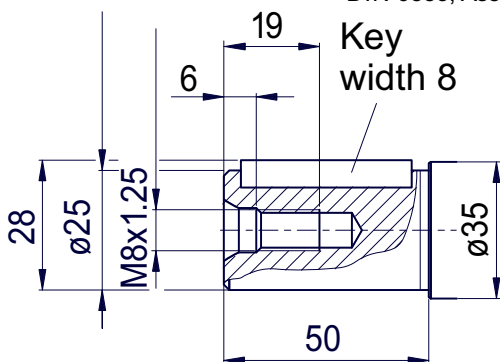
S2

Splined shaft DIN 5480
W30x2x14x9g



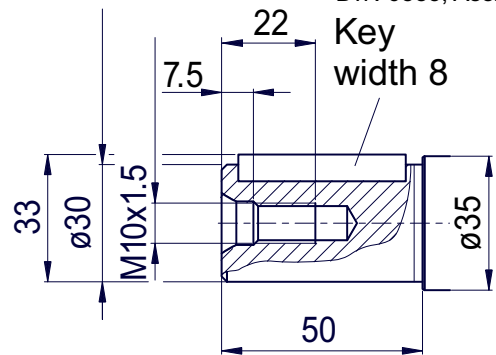
K1

Parallel keyed shaft
DIN 6885, As8x7x40

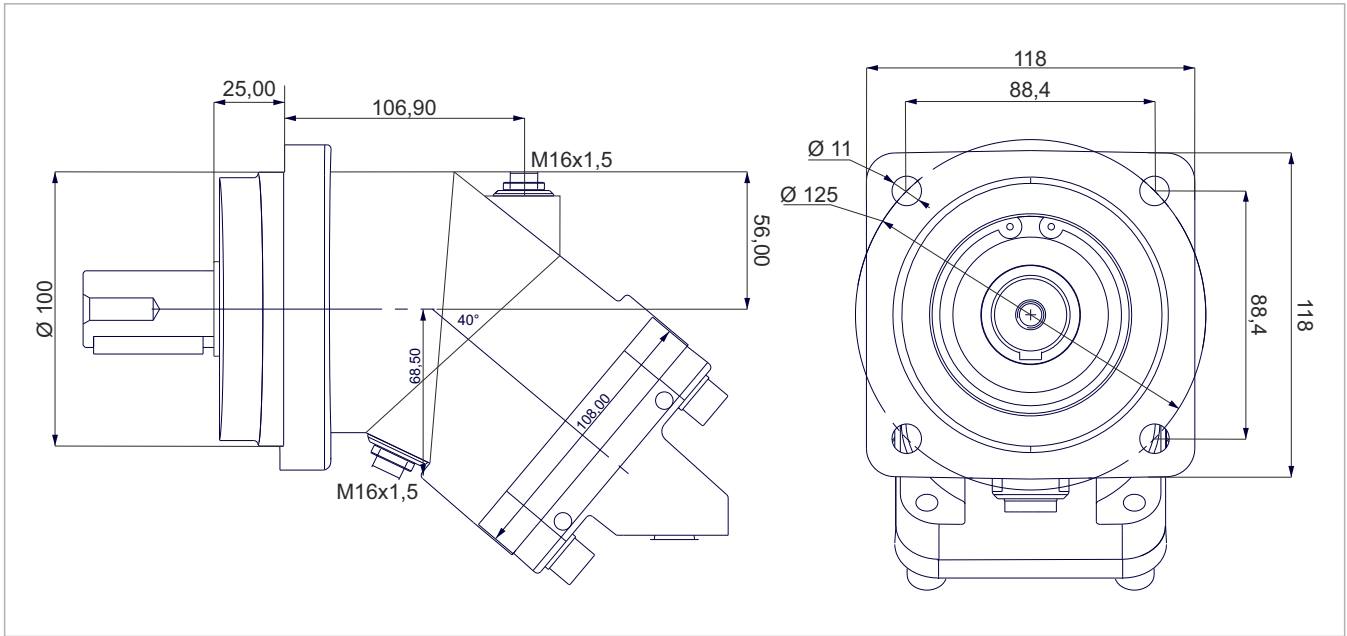


K2

Parallel keyed shaft
DIN 6885, As8x7x40



A9MO 32



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°

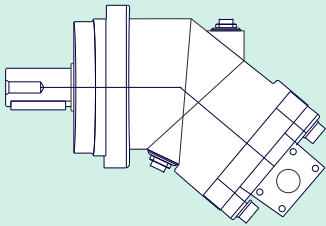
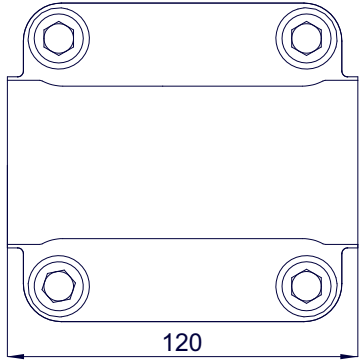
B1 Rear flange ports, bottom SAE 1/2" 6000 PSI

R1 Rear flange ports, SAE 1/2" 6000 PSI

A9MO 32

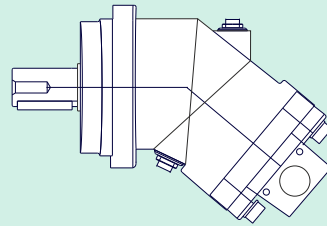
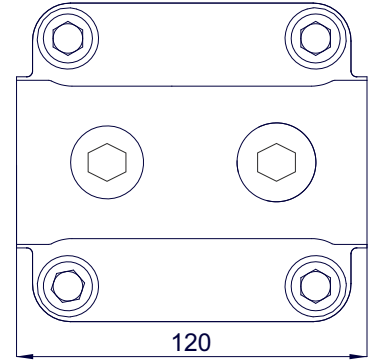
D1-D2

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



D3

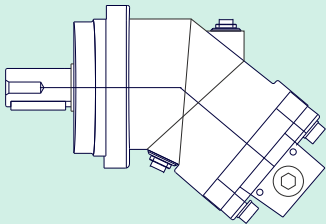
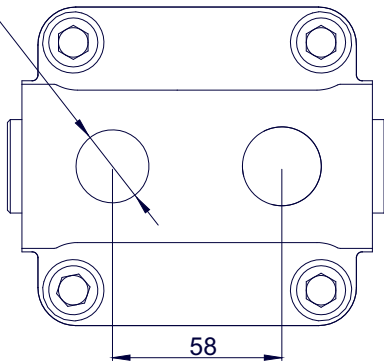
Side threaded ports A and B



R2

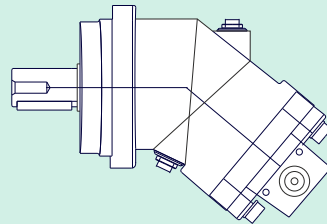
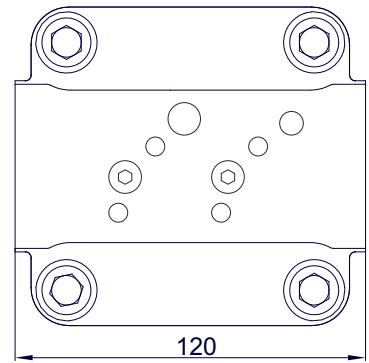
Rear threaded ports

M27x2 prof. 16



D4

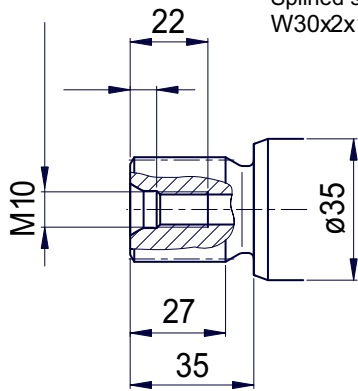
Side threaded ports A and B



A9MO 32

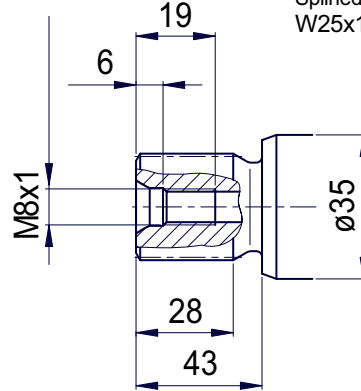
S1

Splined shaft DIN 5480
W30x2x14x9g



S2

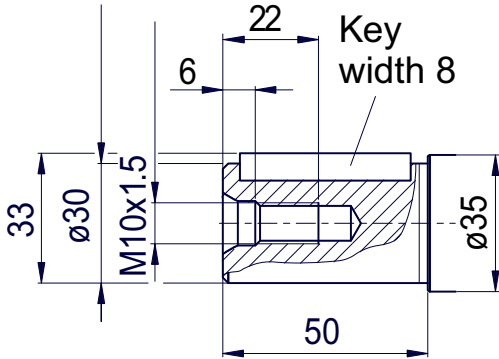
Splined shaft DIN 5480
W25x1.25x18x9g



K1

Parallel keyed shaft
DIN 6885, As8x7x40

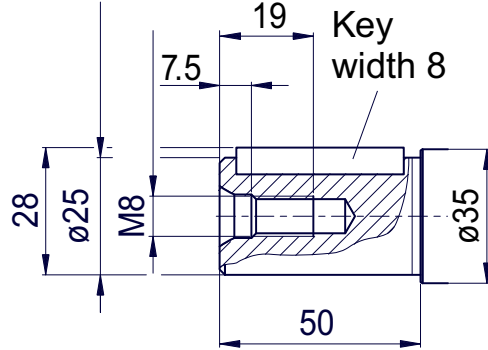
Key
width 8



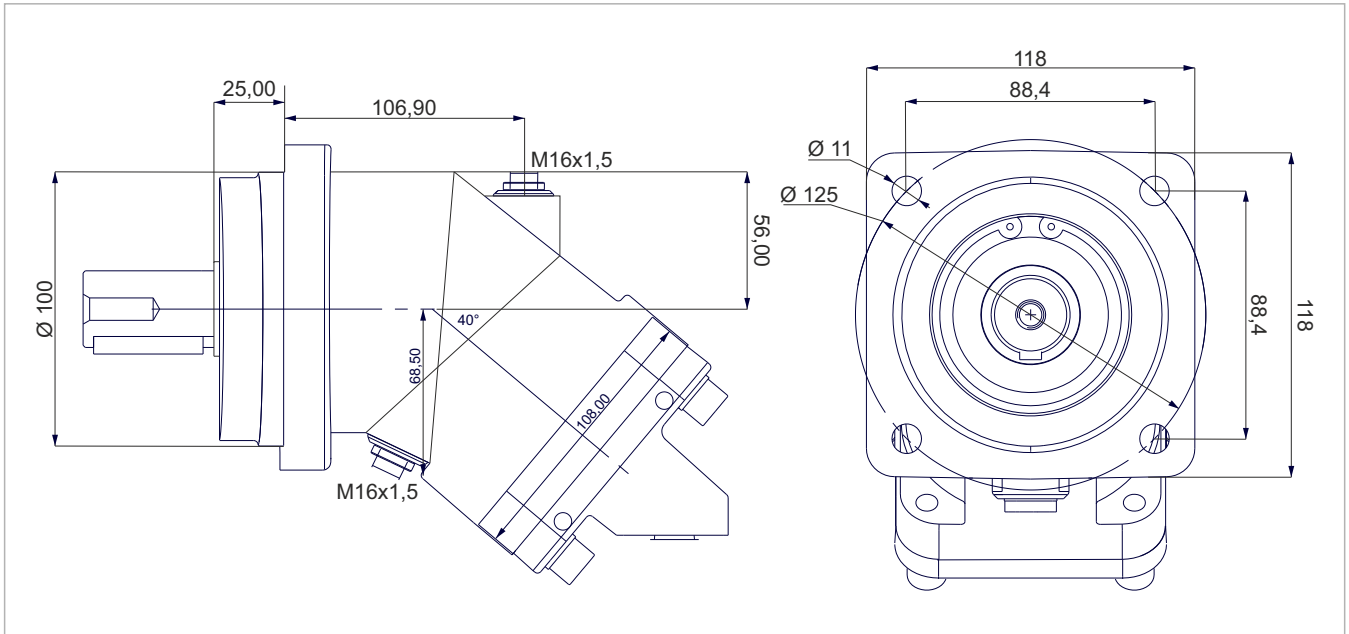
K2

Parallel keyed shaft
DIN 6885, As8x7x40

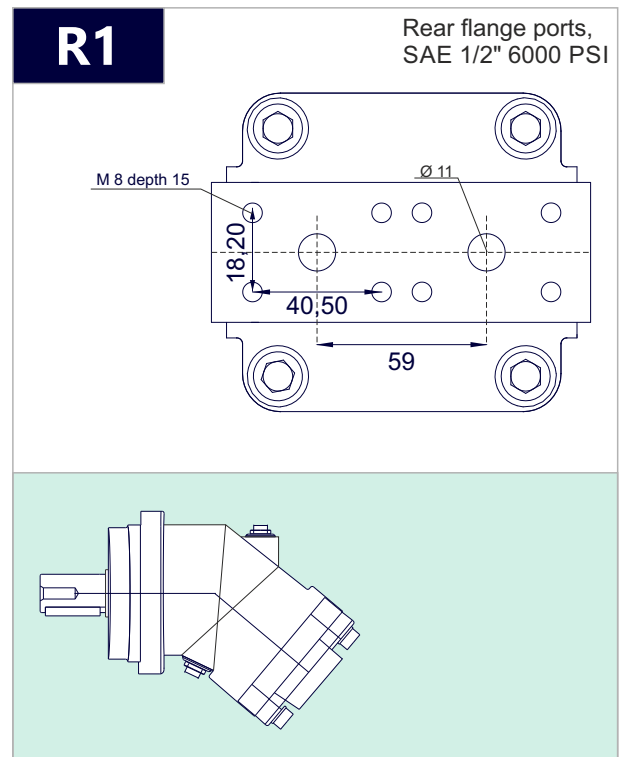
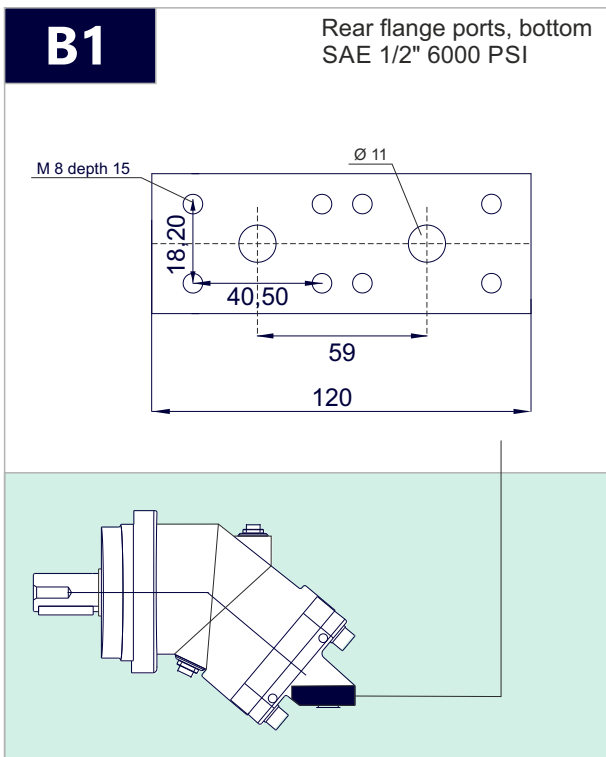
Key
width 8



A9MO 40



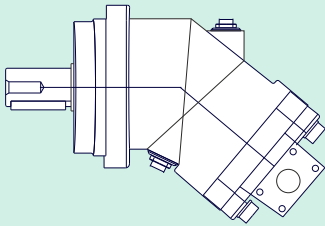
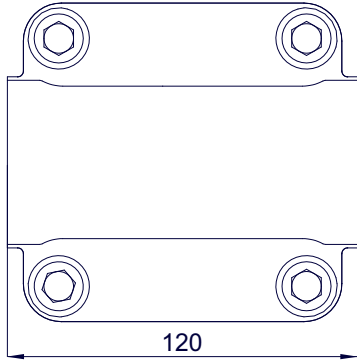
x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
40,20 cc	60,30 cc	5600 rpm	6300 rpm	400 bar	450 bar	0.68 m.N/bar	228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



A9MO 40

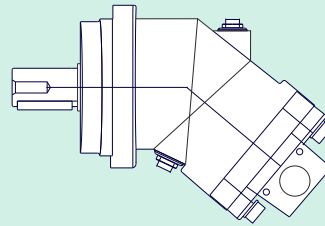
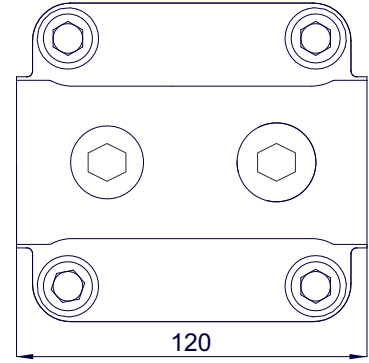
D1-D2

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



D3

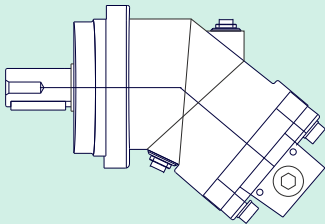
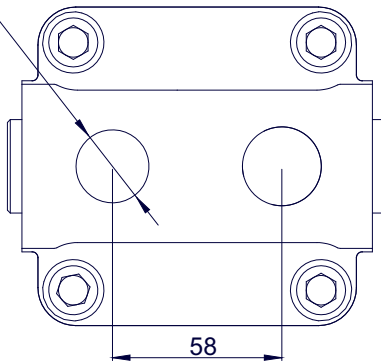
Side threaded ports A and B



R2

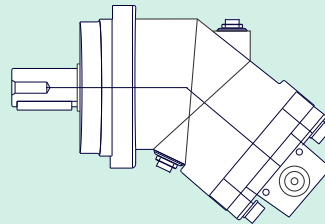
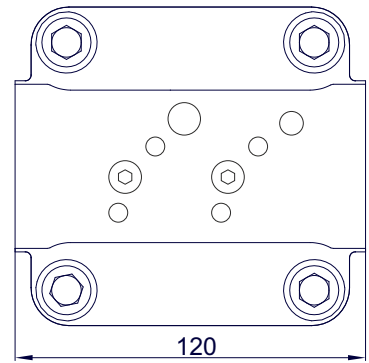
Rear threaded ports

M27x2 prof. 16



D4

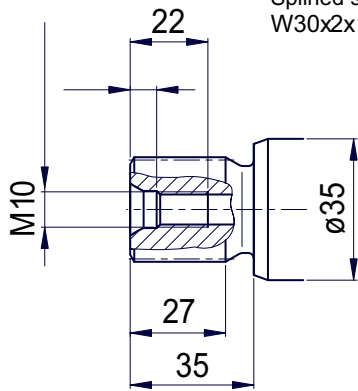
Side threaded ports A and B



A9MO 40

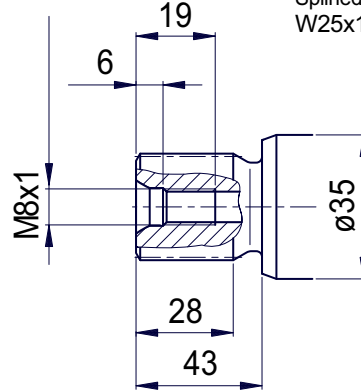
S1

Splined shaft DIN 5480
W30x2x14x9g



S2

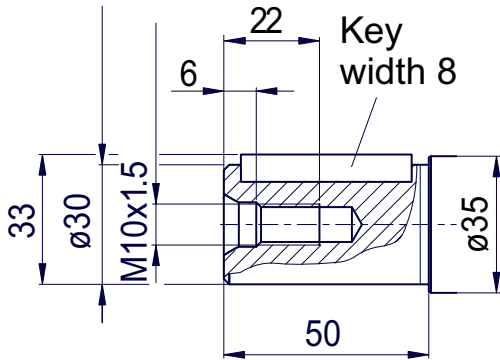
Splined shaft DIN 5480
W25x1.25x18x9g



K1

Parallel keyed shaft
DIN 6885, As8x7x40

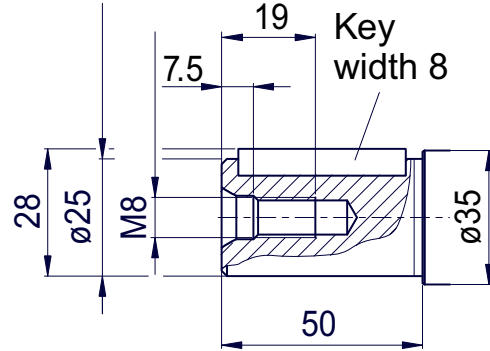
Key
width 8



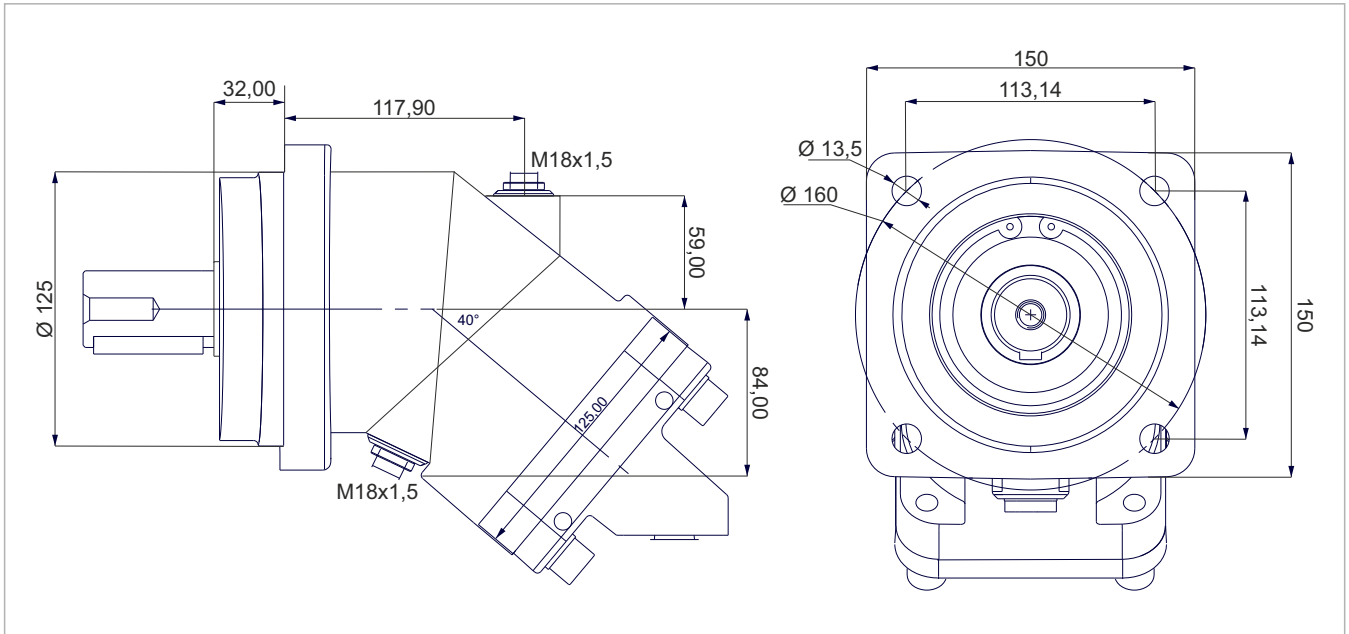
K2

Parallel keyed shaft
DIN 6885, As8x7x40

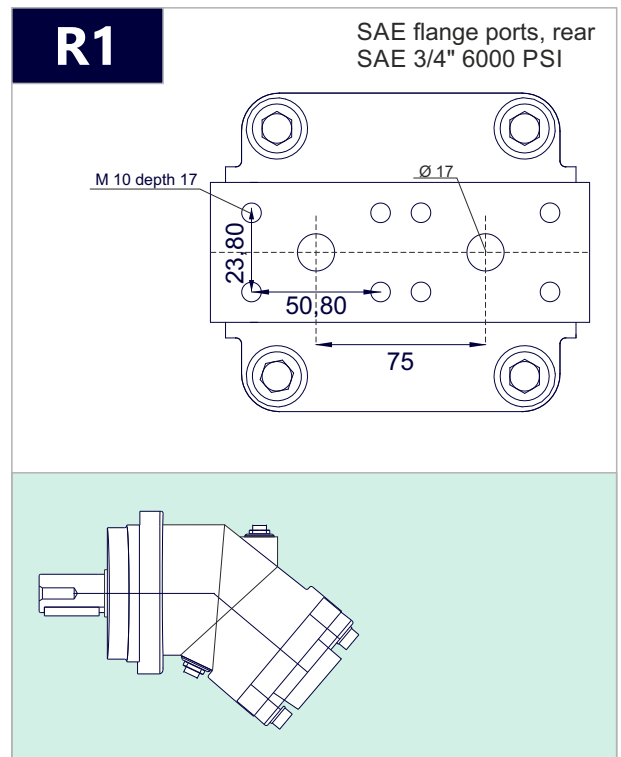
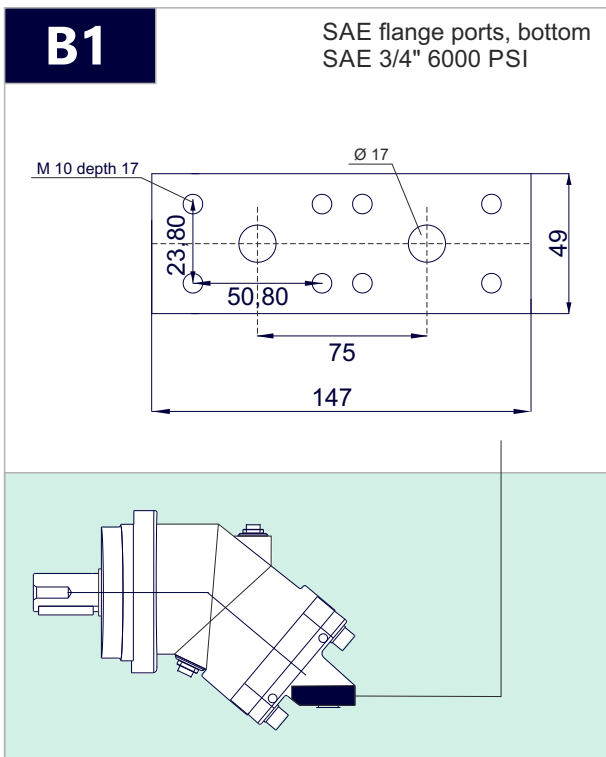
Key
width 8



A9MO 50



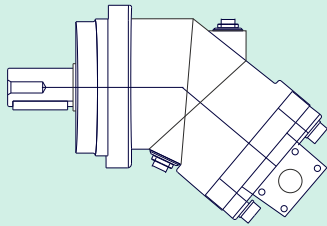
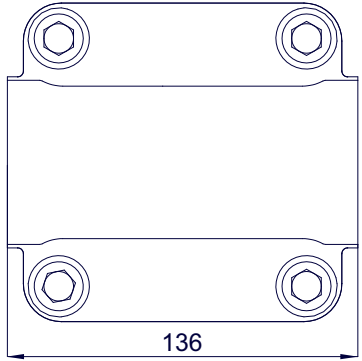
x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
50,00 cc	75,00 cc	5000 rpm	5500 rpm	400 bar	450 bar	0.80 m.N/bar	280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



A9MO 50

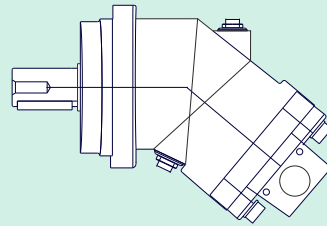
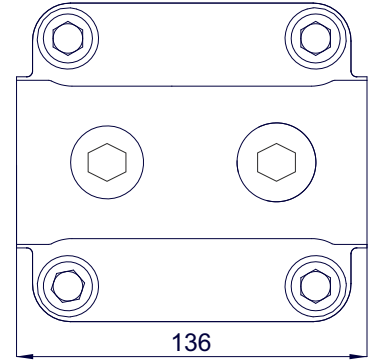
D1-D2

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



D3

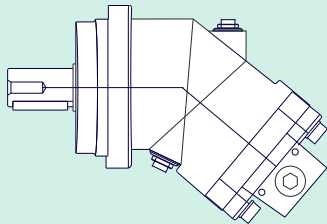
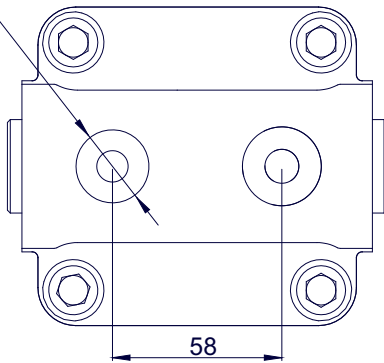
Side threaded ports A and B



R2

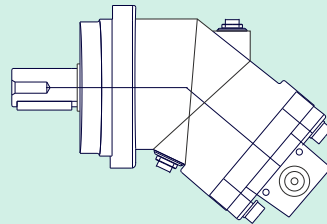
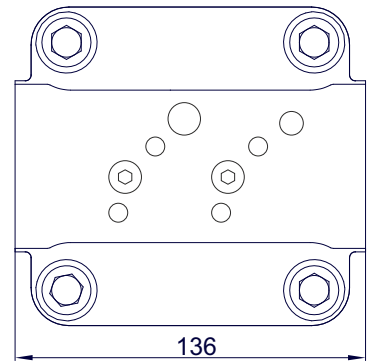
Rear threaded ports

M33x2 prof. 18



D4

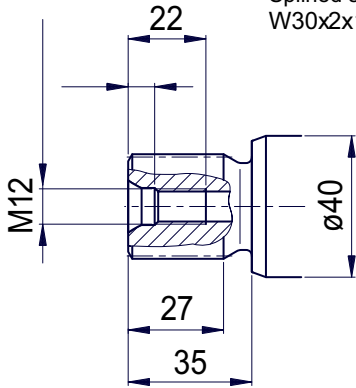
Side threaded ports A and B



A9MO 50

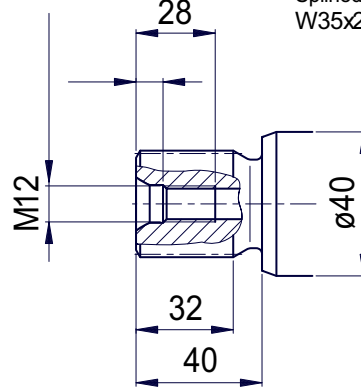
S1

Splined shaft DIN 5480
W30x2x14x9g



S2

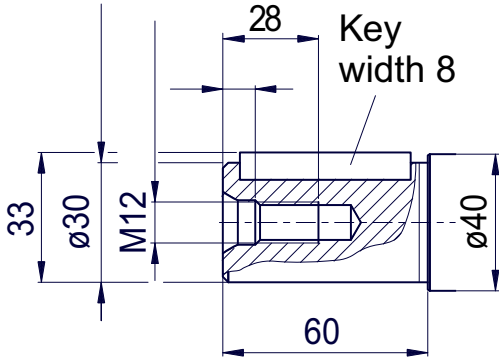
Splined shaft DIN 5480
W35x2x16x9g



K1

Parallel keyed shaft
DIN 6885, As8x7x50

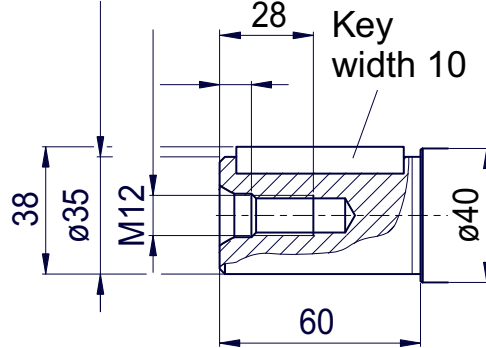
Key
width 8



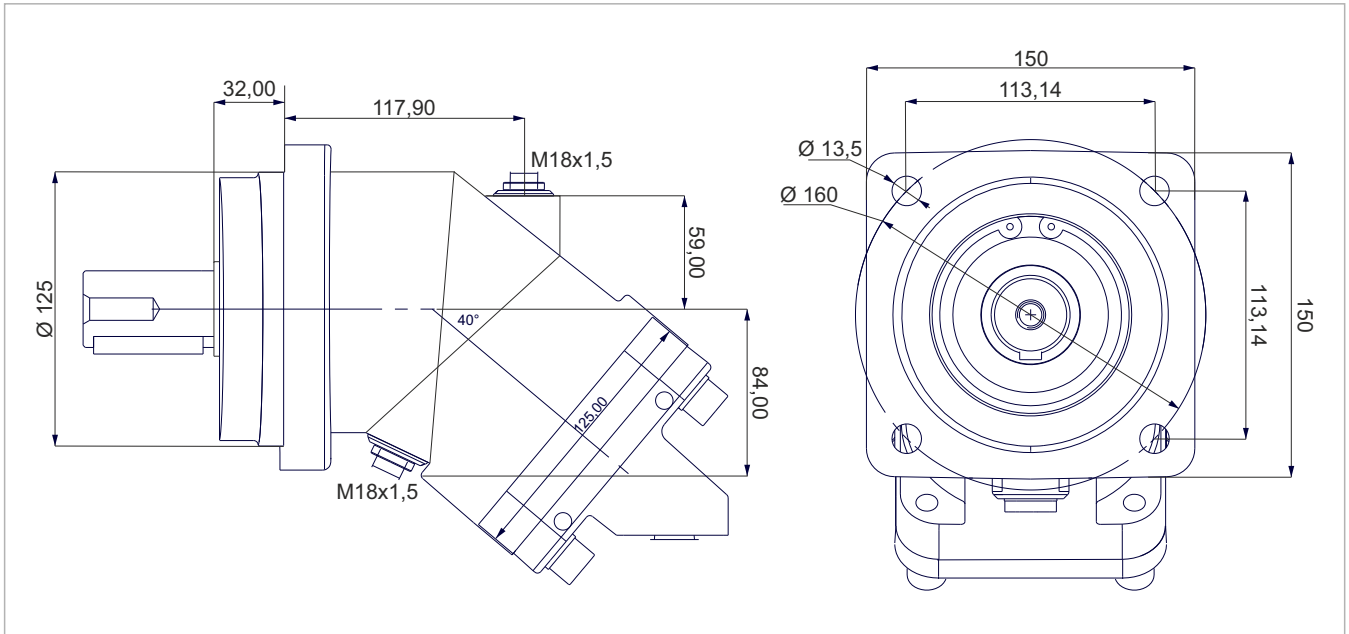
K2

Parallel keyed shaft
DIN 6885, As10x8x50

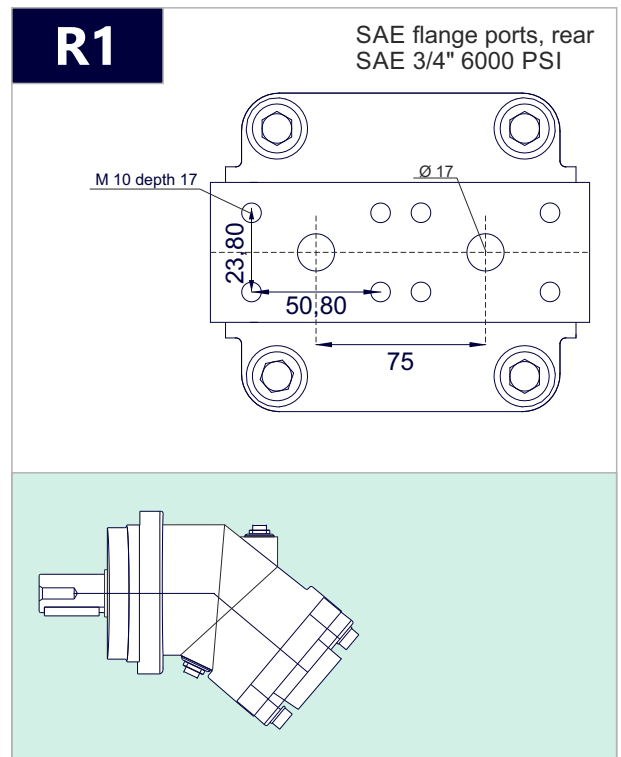
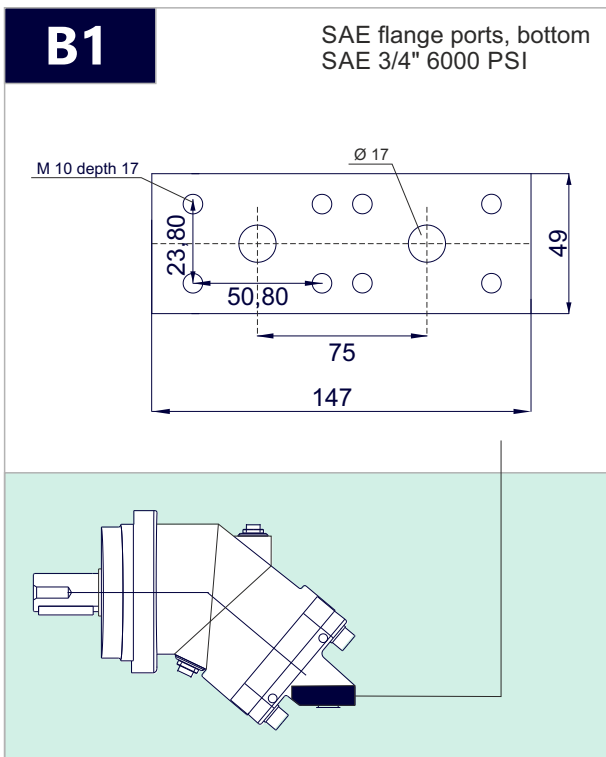
Key
width 10



A9MO 56



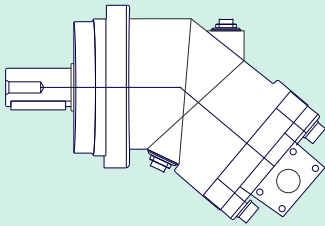
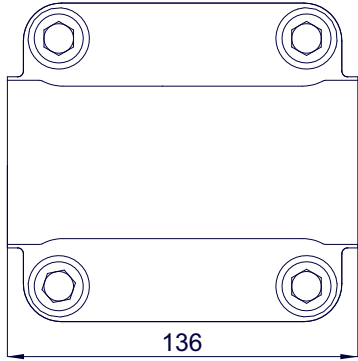
x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
56,40 cc	84,60 cc	5000 rpm	5500 rpm	400 bar	450 bar	0.92 m.N/bar	320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



A9MO 56

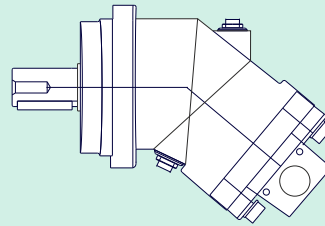
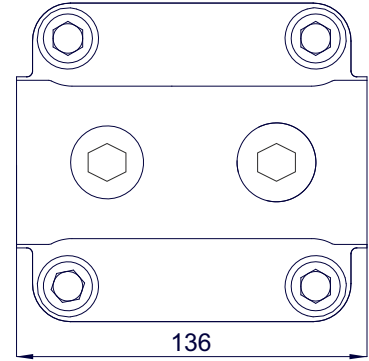
D1-D2

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



D3

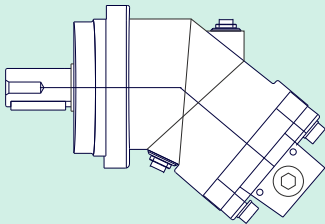
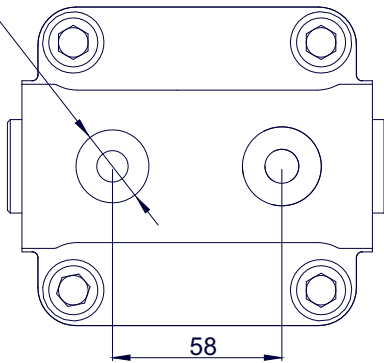
Side threaded ports A and B



R2

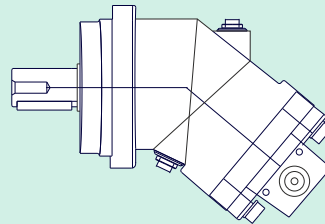
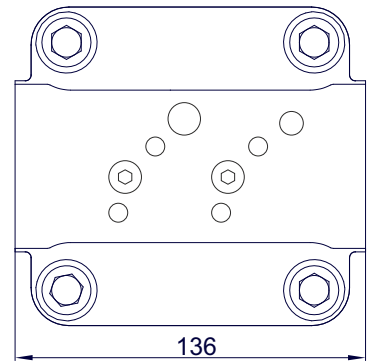
Rear threaded ports

M33x2 prof. 18



D4

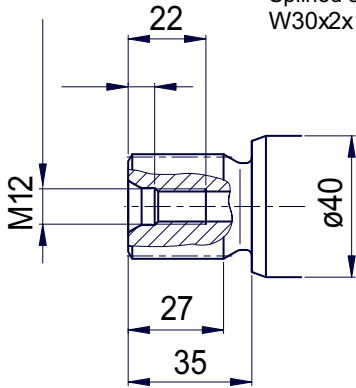
Side threaded ports A and B



A9MO 56

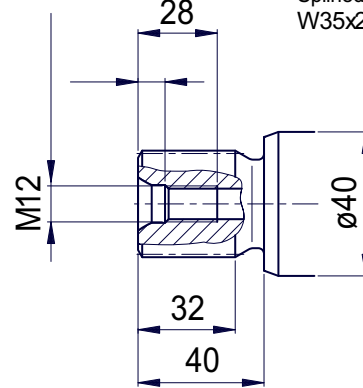
S1

Splined shaft DIN 5480
W30x2x14x9g



S2

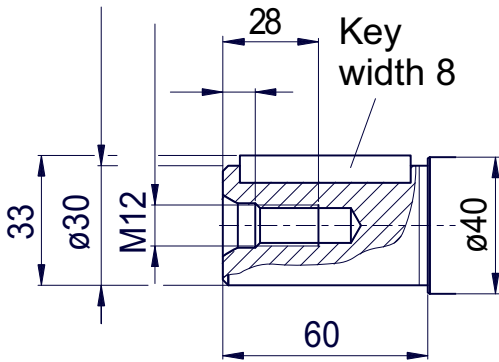
Splined shaft DIN 5480
W35x2x16x9g



K1

Parallel keyed shaft
DIN 6885, As8x7x50

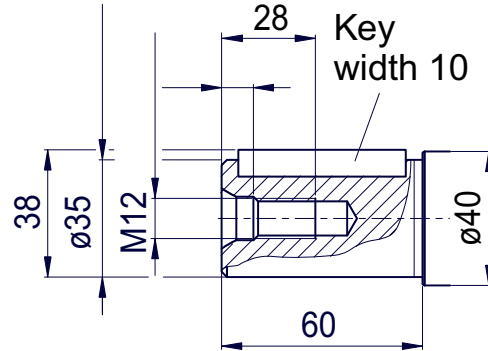
Key
width 8



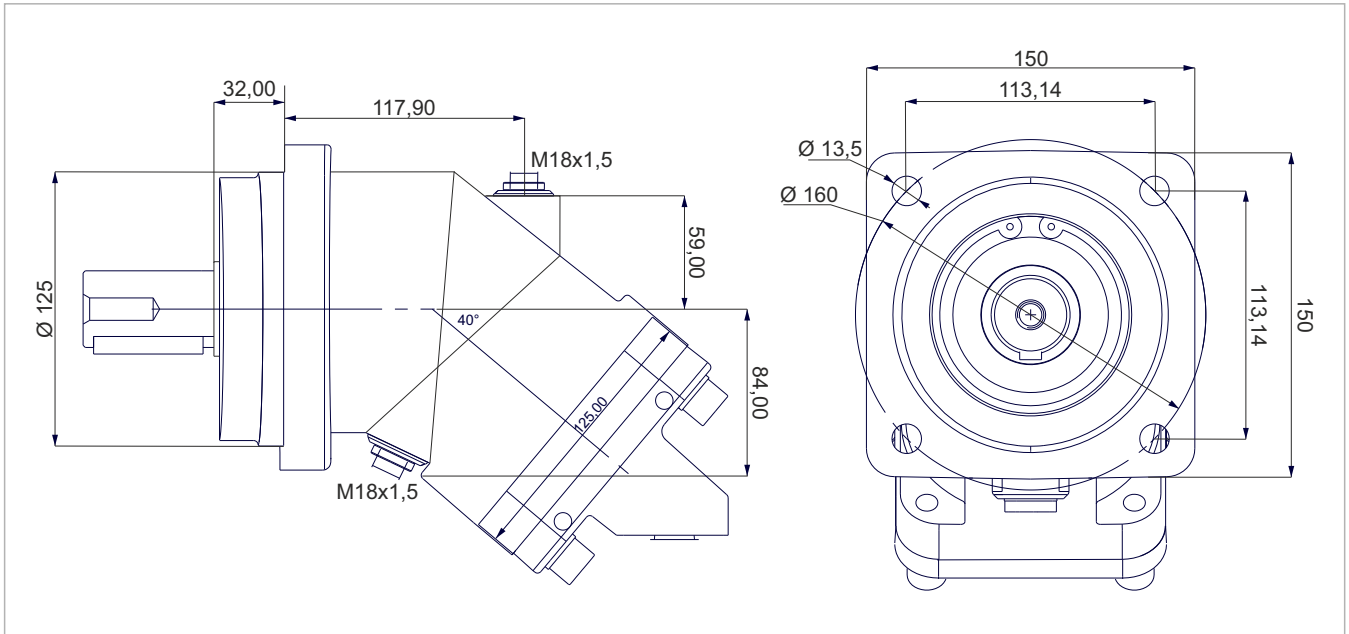
K2

Parallel keyed shaft
DIN 6885, As10x8x50

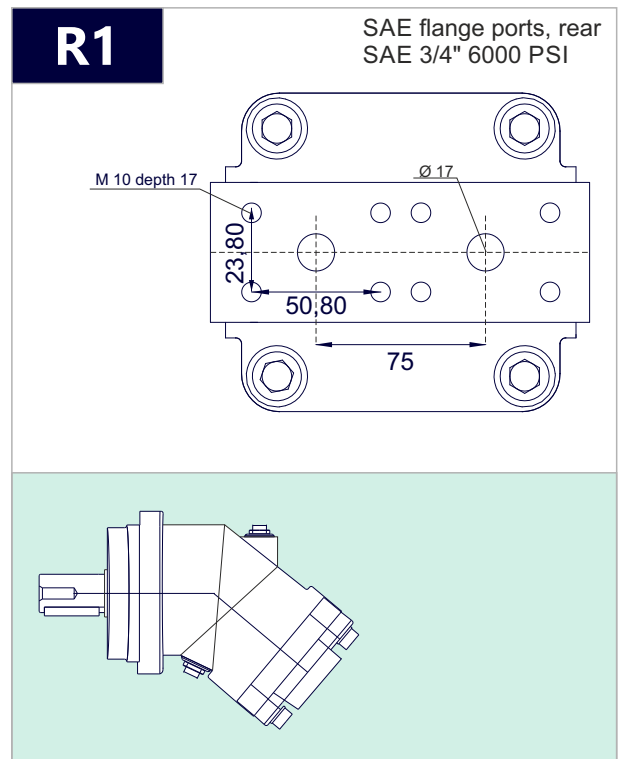
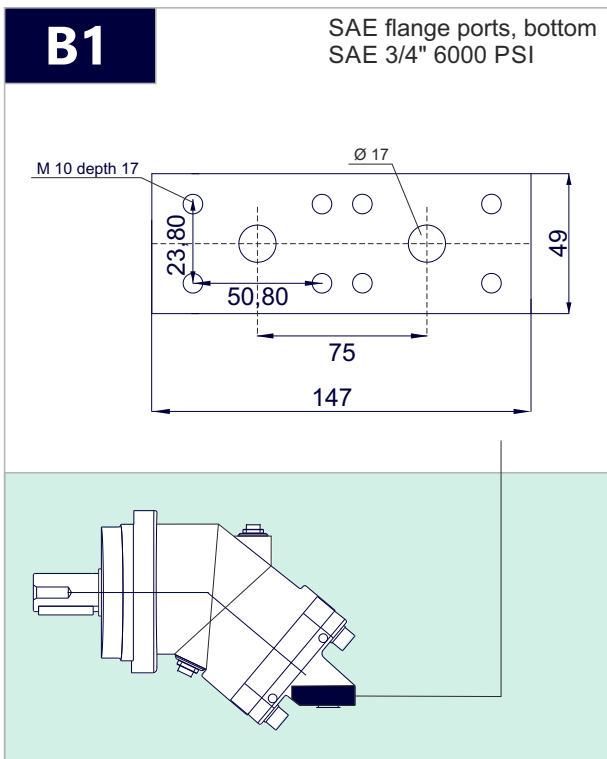
Key
width 10



A9MO 63



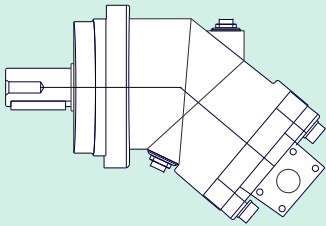
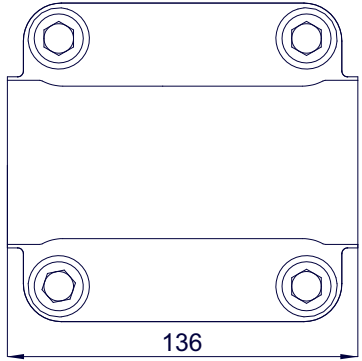
x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
63,00 cc	94,50 cc	5000 rpm	5500 rpm	400 bar	450 bar	1.00 m.N/bar	350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



A9MO 63

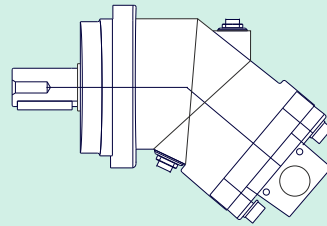
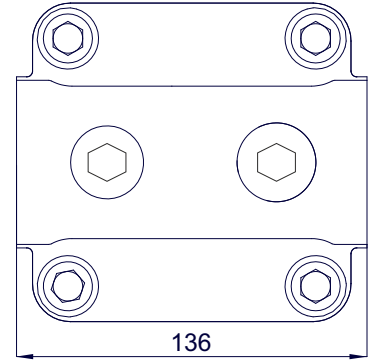
D1-D2

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



D3

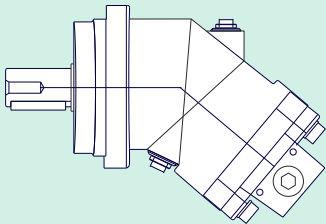
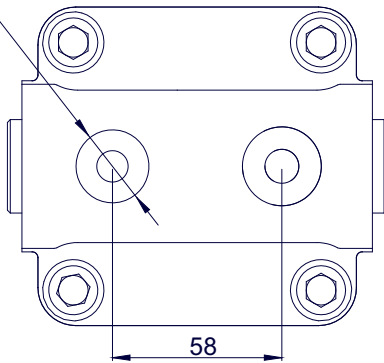
Side threaded ports A and B



R2

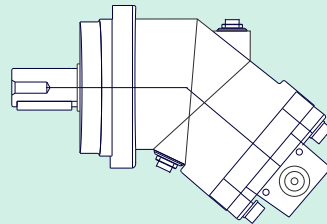
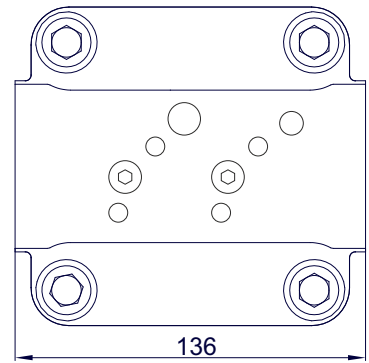
Rear threaded ports

M33x2 prof. 18



D4

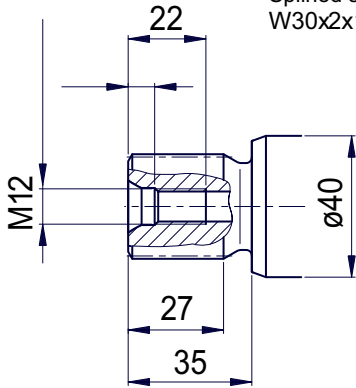
Side threaded ports A and B



A9MO 63

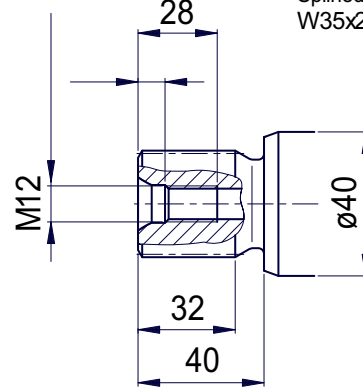
S1

Splined shaft DIN 5480
W30x2x14x9g



S2

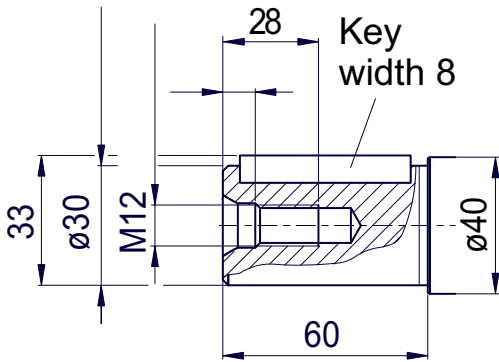
Splined shaft DIN 5480
W35x2x16x9g



K1

Parallel keyed shaft
DIN 6885, As8x7x50

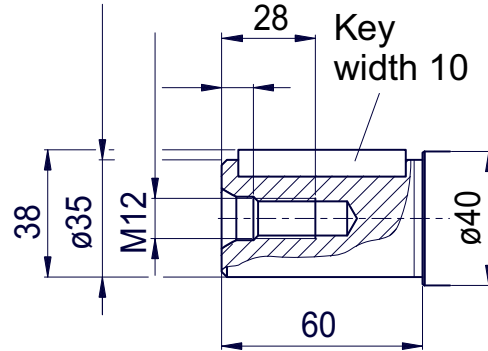
Key
width 8



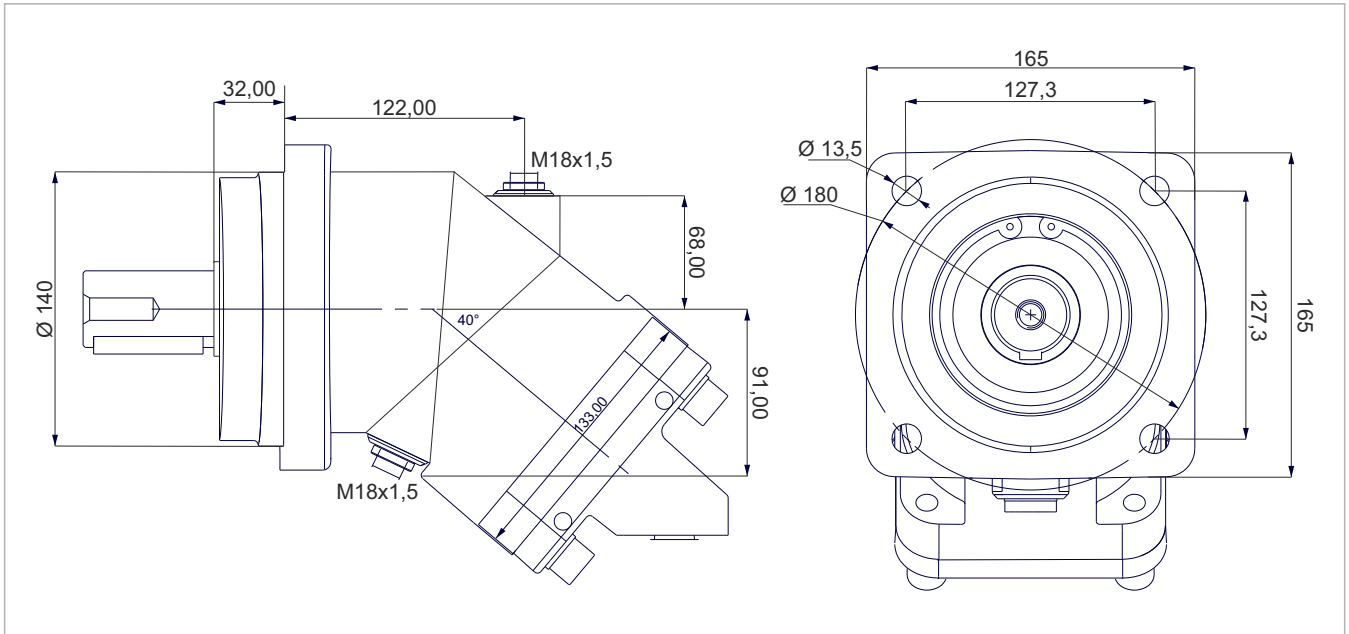
K2

Parallel keyed shaft
DIN 6885, As10x8x50

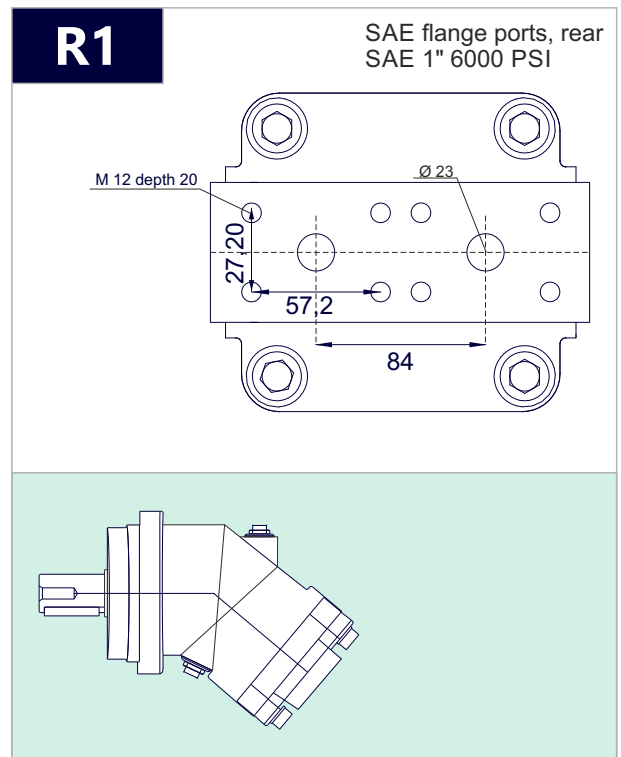
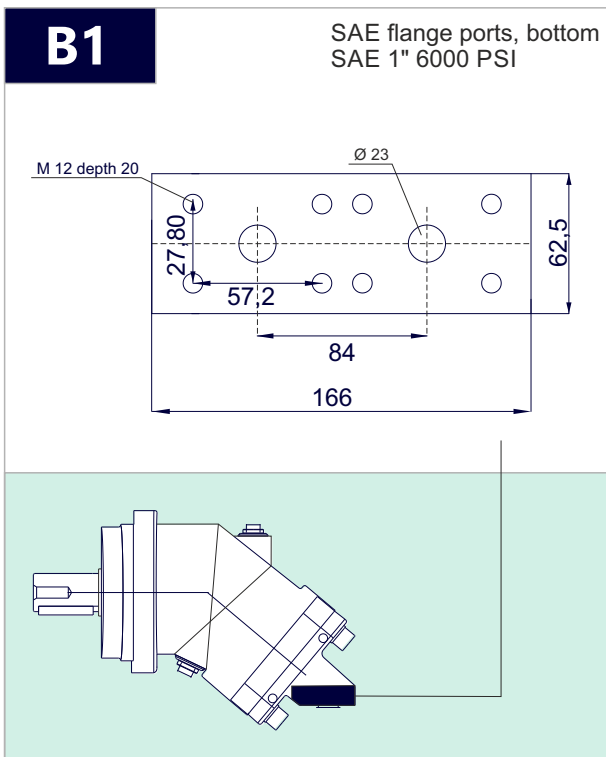
Key
width 10



A9MO 80



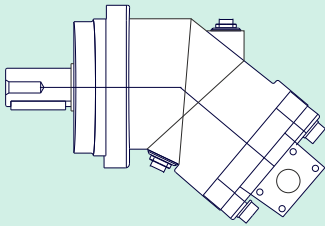
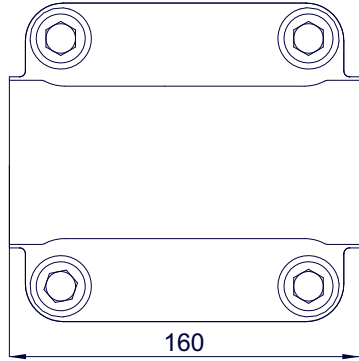
x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
80,00 cc	120,00 cc	4400 rpm	4900 rpm	400 bar	450 bar	1.28 m.N/bar	440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



A9MO 80

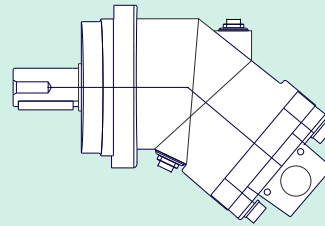
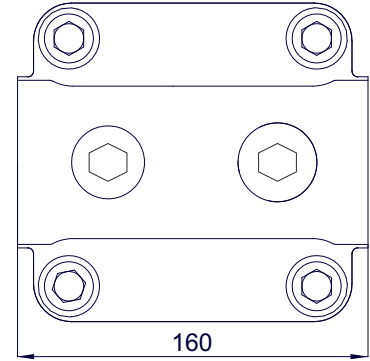
D1-D2

SAE flange ports, side
SAE 1" 6000 PSI



D3

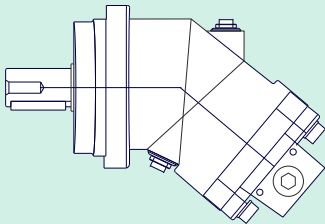
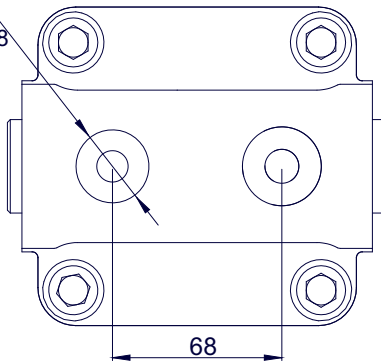
Side threaded ports



R2

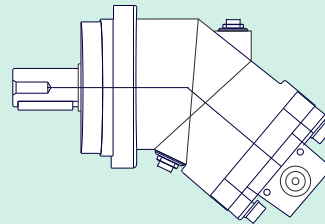
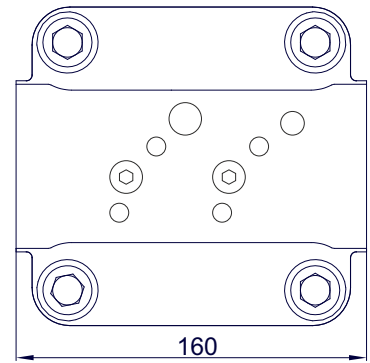
Rear threaded ports

M33x2 depth 18



D4

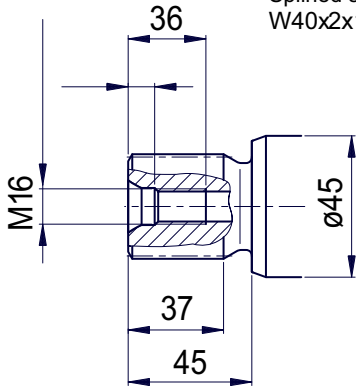
Side threaded ports



A9MO 80

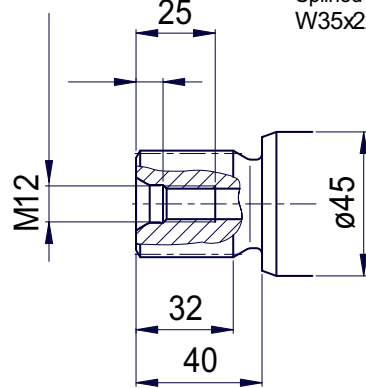
S1

Splined shaft DIN 5480
W40x2x18x9g



S2

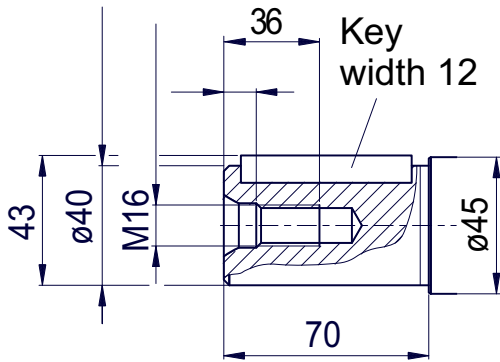
Splined shaft DIN 5480
W35x2x16x9g



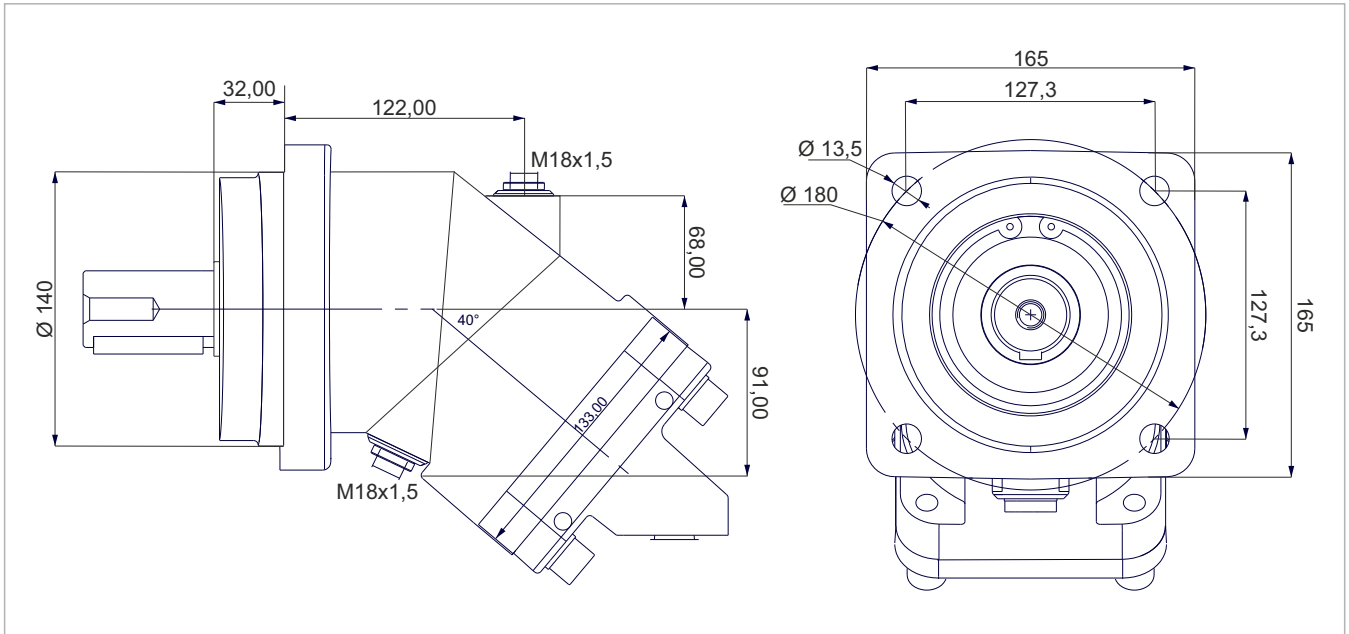
K1

Parallel keyed shaft
DIN 6885, As12x8x56

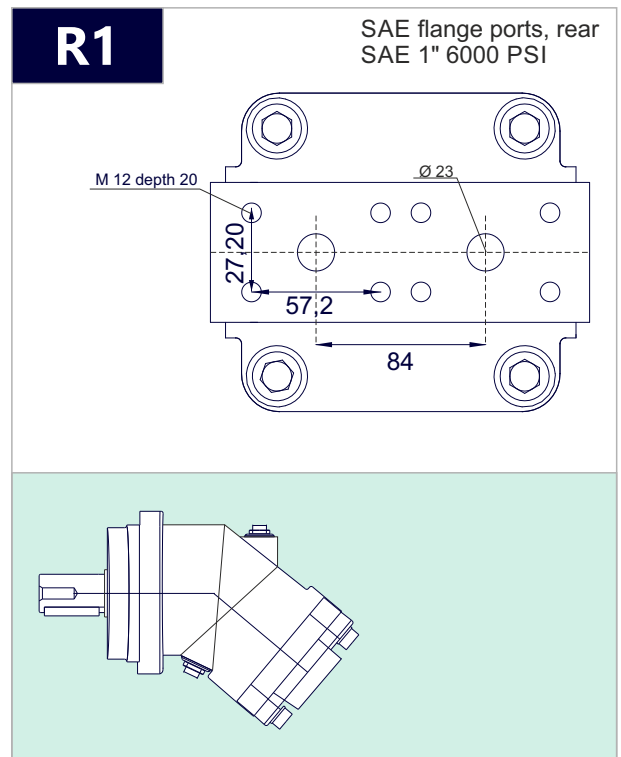
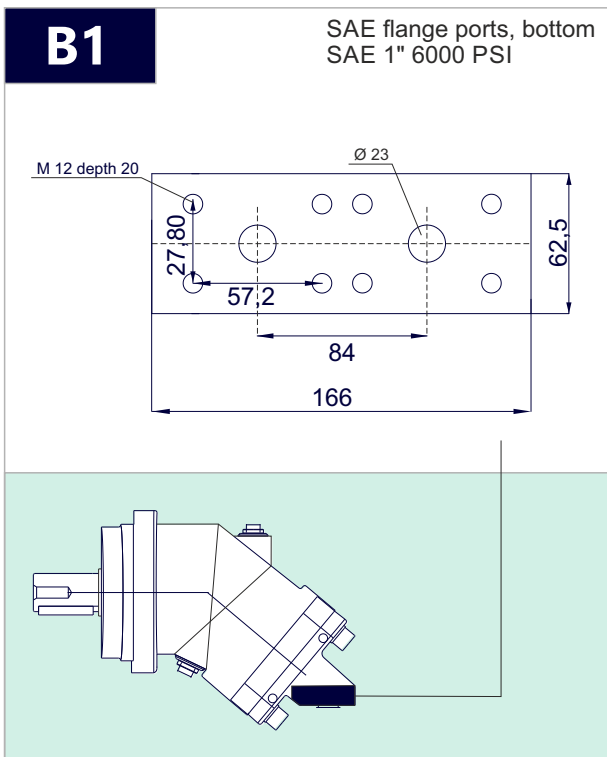
Key
width 12



A9MO 108



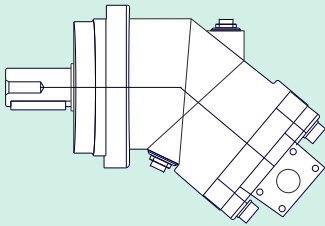
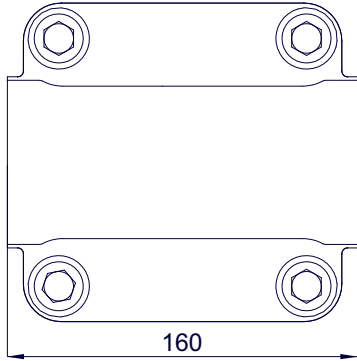
x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
108,4 cc	162,6 cc	4000 rpm	4400 rpm	400 bar	450 bar	1.69 m.N/bar	600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



A9MO 108

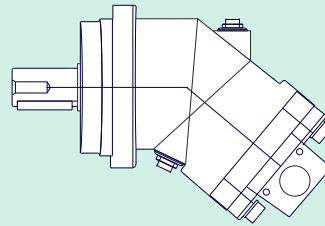
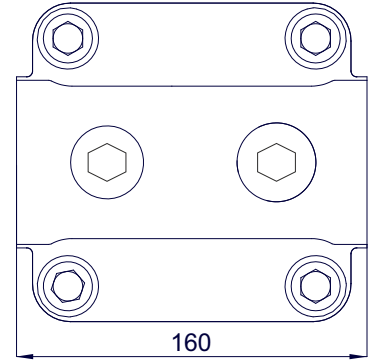
D1-D2

SAE flange ports, side
SAE 1" 6000 PSI



D3

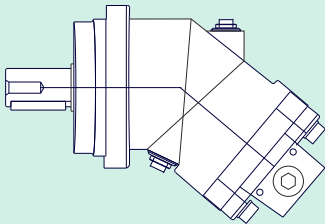
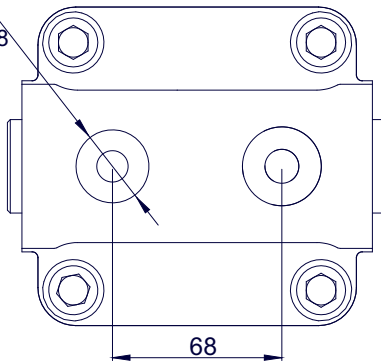
Side threaded ports



R2

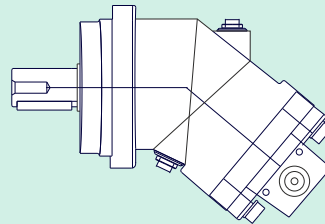
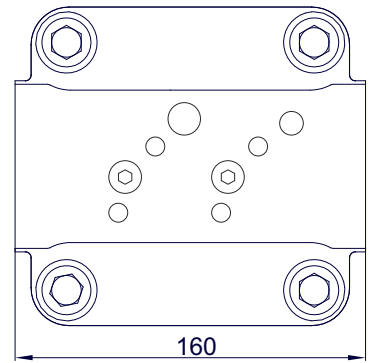
Rear threaded ports

M33x2 depth 18



D4

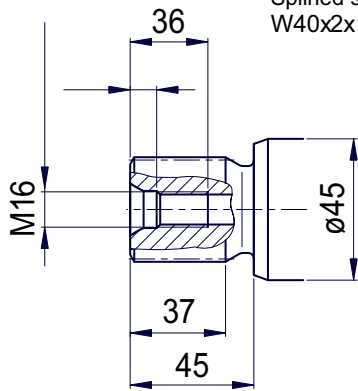
Side threaded ports



A9MO 108

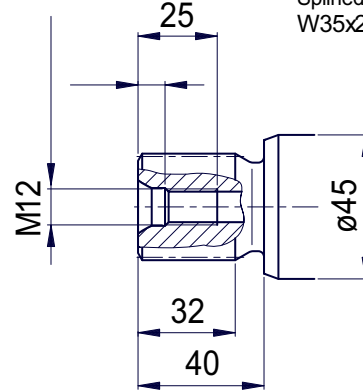
S1

Splined shaft DIN 5480
W40x2x18x9g



S2

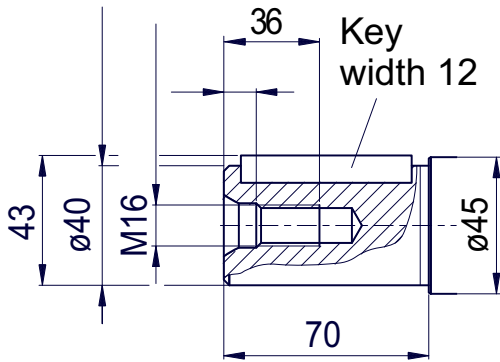
Splined shaft DIN 5480
W35x2x16x9g



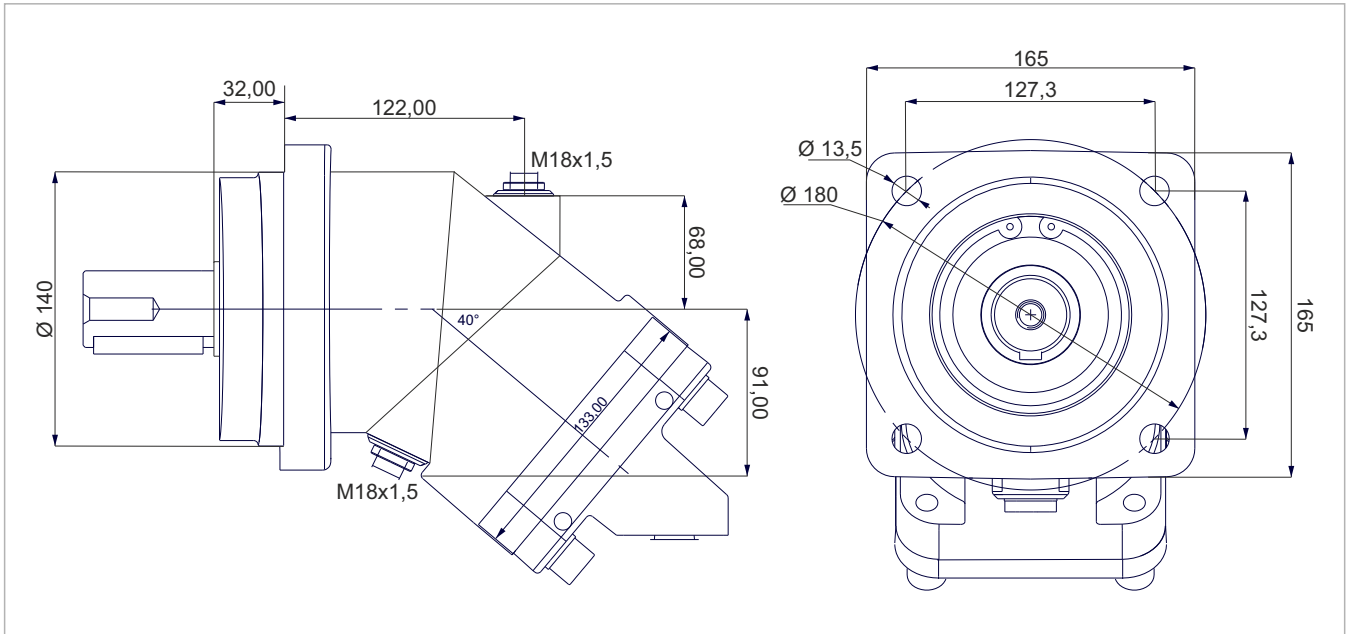
K1

Parallel keyed shaft
DIN 6885, As12x8x56

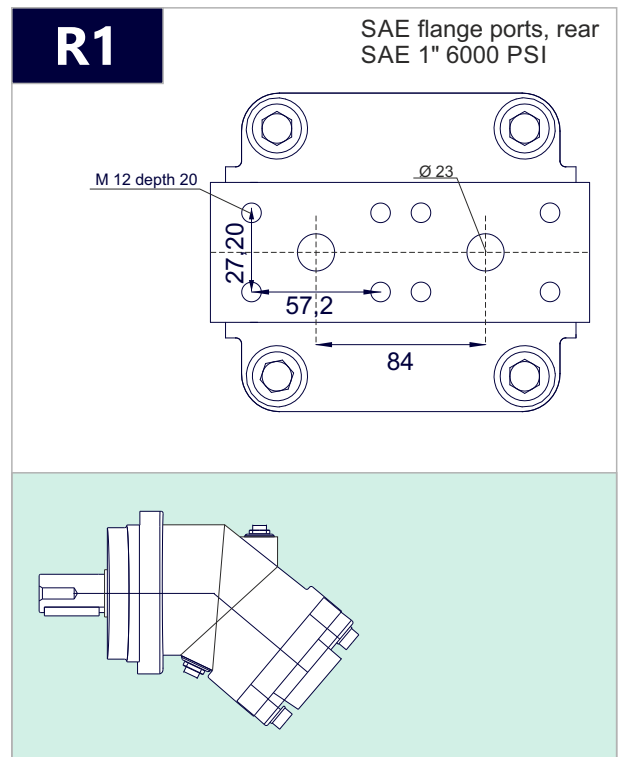
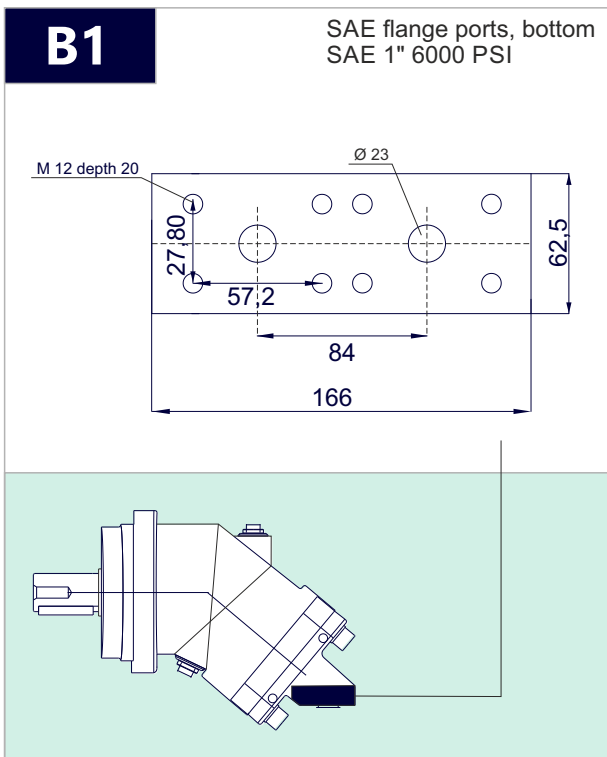
Key
width 12



A9MO 130



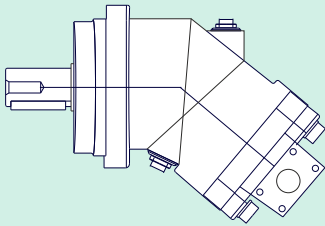
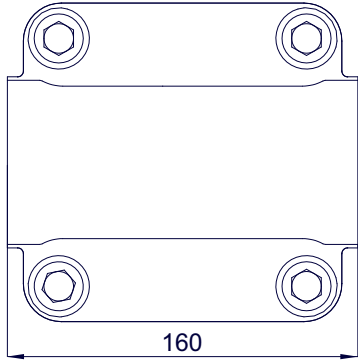
x 1000 rpm	x 1500 rpm	Max. Contin. Pump Speed	Max. Intermit. Pump Speed	Max. Contin. Pressure	Max. Peak Pressure	Torque bar	Torque at 350 bar	Max. Flow	Weight without accessor.	Weight with accessor.	Max. Motor Temp.	Min. Motor Temp.
130,0 cc	195,0 cc	3400 rpm	4400 rpm	400 bar	450 bar	2.10 m.N/bar	710 m.N	442	35,00 kg	35,50 kg	-25°	110°



A9MO 130

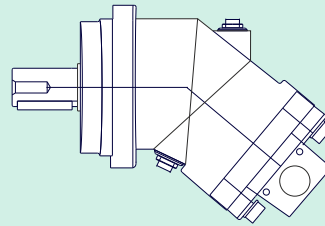
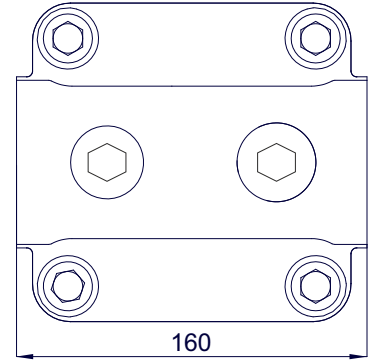
D1-D2

SAE flange ports, side
SAE 1" 6000 PSI



D3

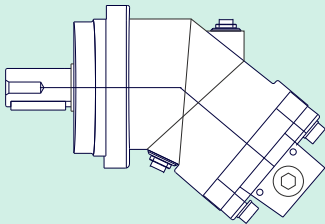
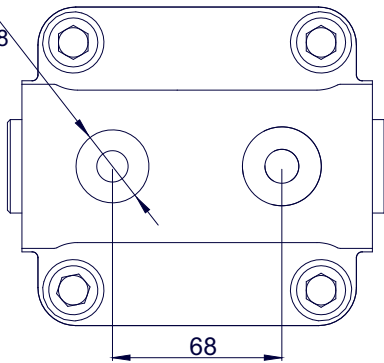
Side threaded ports



R2

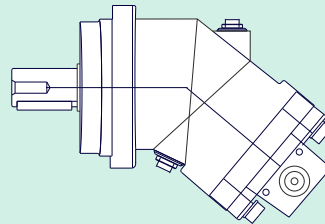
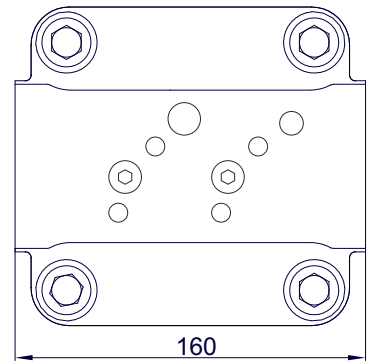
Rear threaded ports

M33x2 depth 18



D4

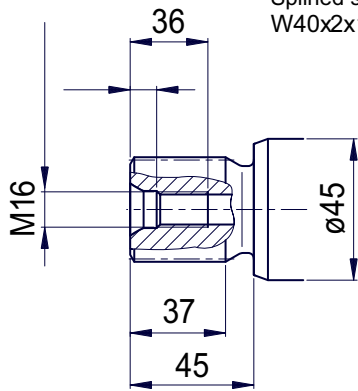
Side threaded ports



A9MO 130

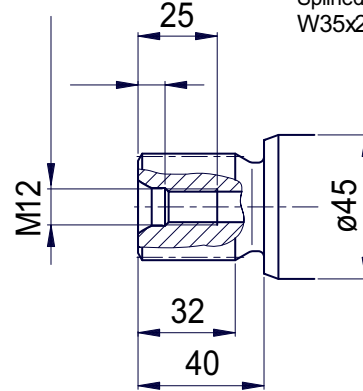
S1

Splined shaft DIN 5480
W40x2x18x9g



S2

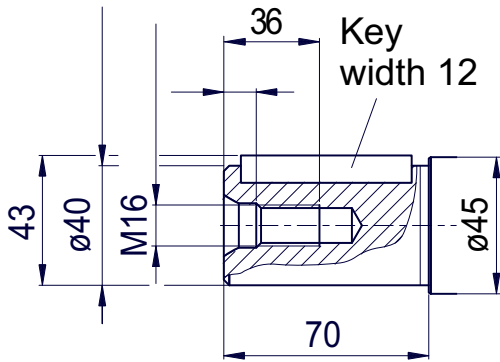
Splined shaft DIN 5480
W35x2x16x9g



K1

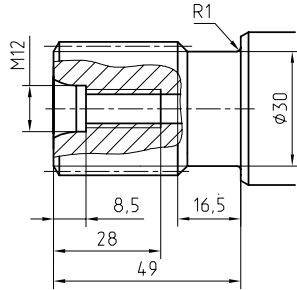
Parallel keyed shaft
DIN 6885, As12x8x56

Key
width 12

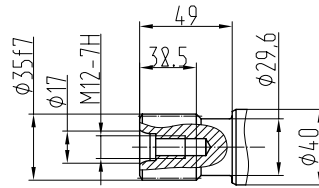


Special Shaft Drive

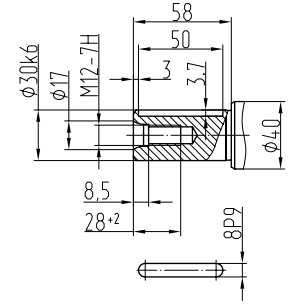
Splined shaft
35xf7x2x9g GOST 6033-80



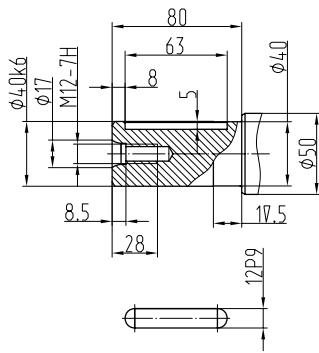
35xf7x2x9g ГOCT6033



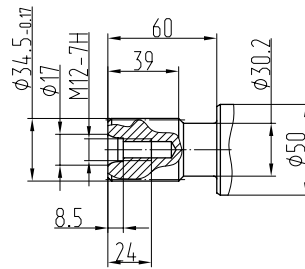
Parallel keyed shafts



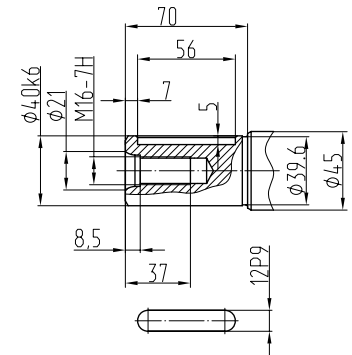
Parallel keyed shafts



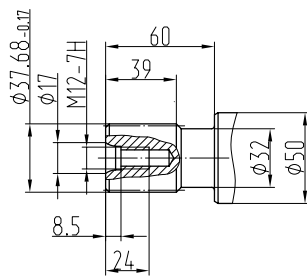
1 3/8' 21T 16/32DP ANSI B92



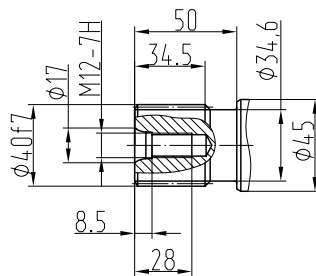
Parallel keyed shafts



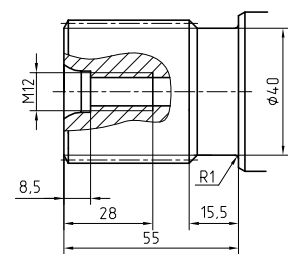
1 1/2' 23T 16/32DP ANSI B92



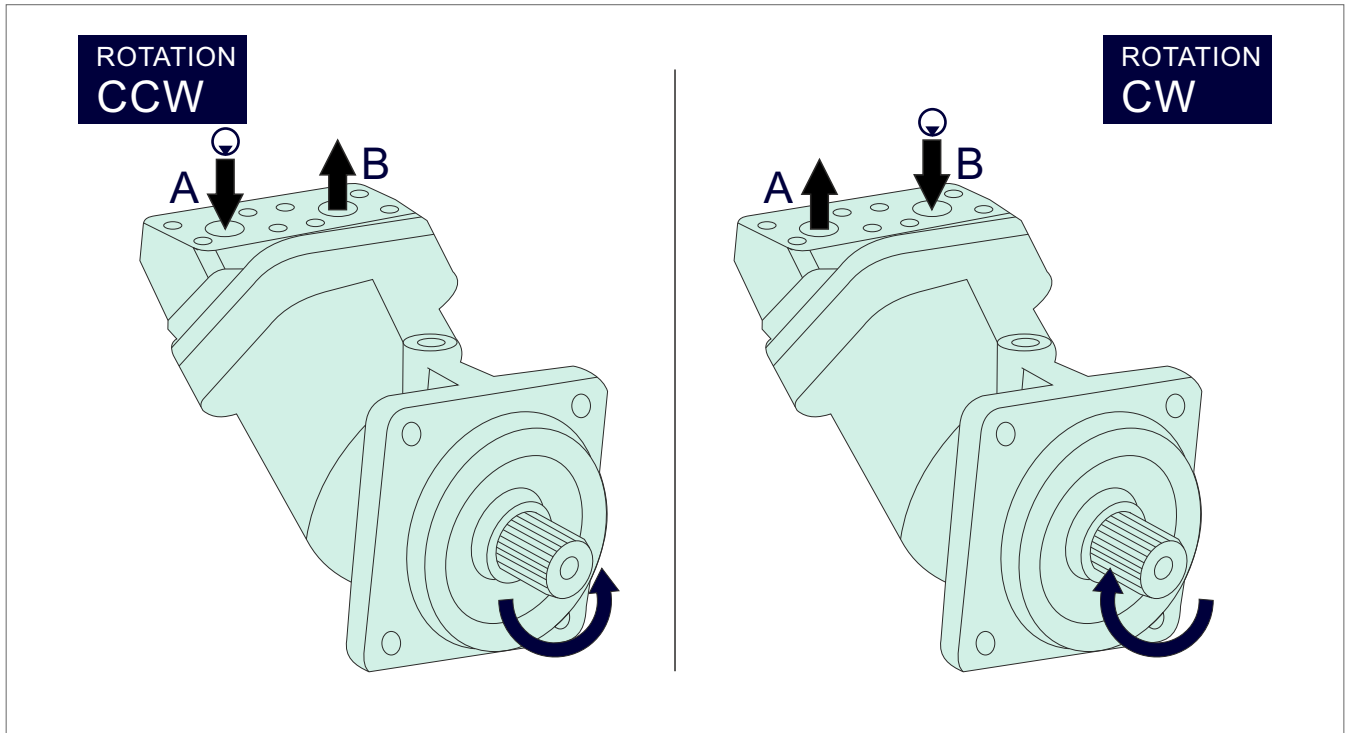
40xf7x2x9g GOST6033



45xh8x2x9g GOST 6033-80



Direction of Rotation



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 ($\eta_t = \eta_v \times \eta_{mh}$)

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 A9MO Bent Axis Motors.

Installation

POSITION

A9MO Motors can be operate any position.

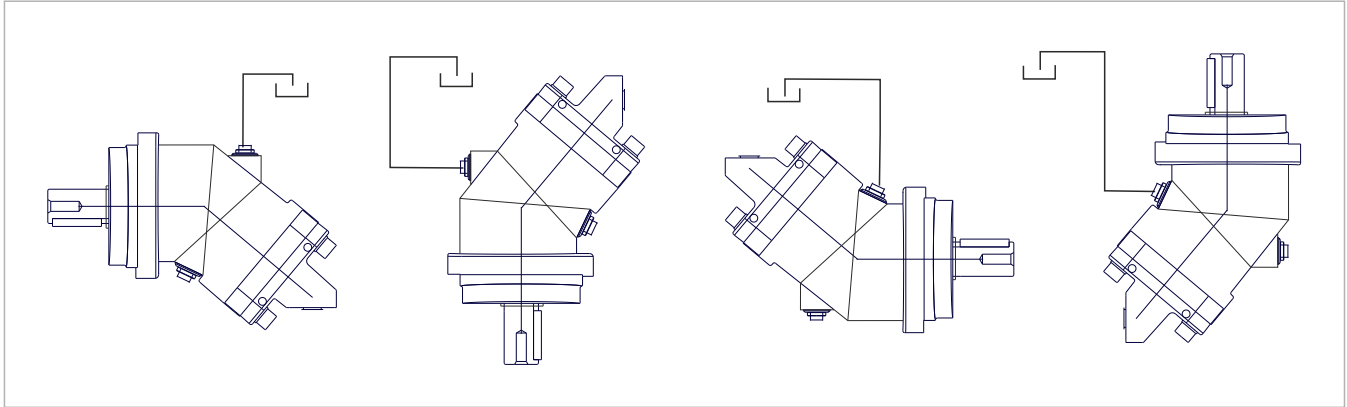
DIRECTION OF ROTATION

A9MO 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.

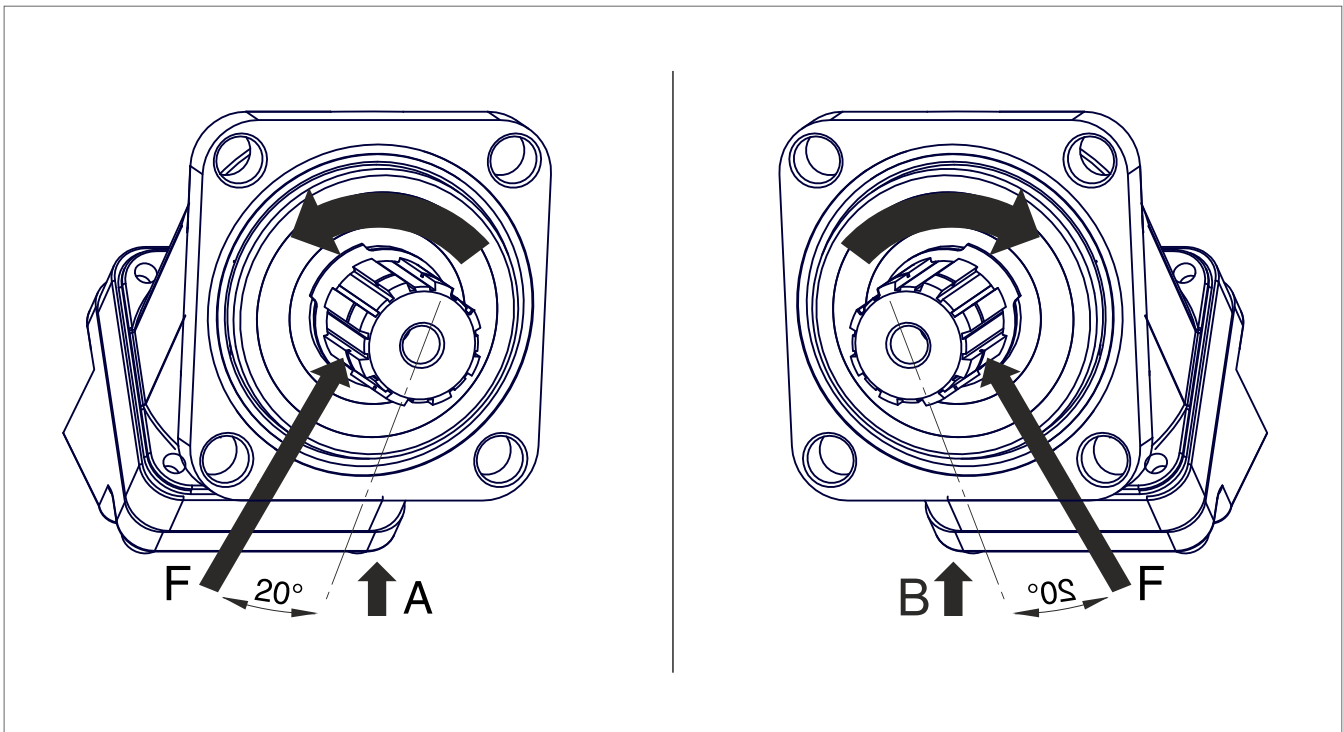


HYDRAULIC FLUID

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 A9MO Bent Axis Motors, please contact with Technical Department !!!

Complete Product Range

Piston Pumps

Piston Motors

DIN

DIN 5462 / ISO 14
8x32x35
8x32x36
DIN 6885



A8PD



A9MD

ISO

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



A8PO



A9MO

SAE

SAE B2 C4 - SAE D
SAE J498b
SAE J 744



A8PS



A9MS

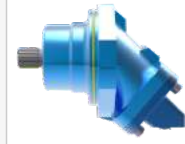
M2

Fixed Plug-in

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



A8PL - Dual Flow



A9MF - Semi integrated

A4

DIN ISO 14
8x32x36



A4PP Single Flow



A4PL Dual Flow

A6

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



A6HP - High Pressure



**A7GP - Gear Pump
A7GM - Gear Motor**

Contact



Gold Hydraulics, Ltd.

2019® Catalogue

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www.goldhydraulics.com

For more details and other catalogs,
please send email to our team.

Hydraulic Bent Axis Piston Pumps
Bent Axis Motors
Dual Flow Piston Pumps and Gear Pumps...

Sales Team

info@goldhydraulics.com

Order

order@goldhydraulics.com

Management

mail@goldhydraulics.com



www.goldhydraulics.com