

2PBM Series

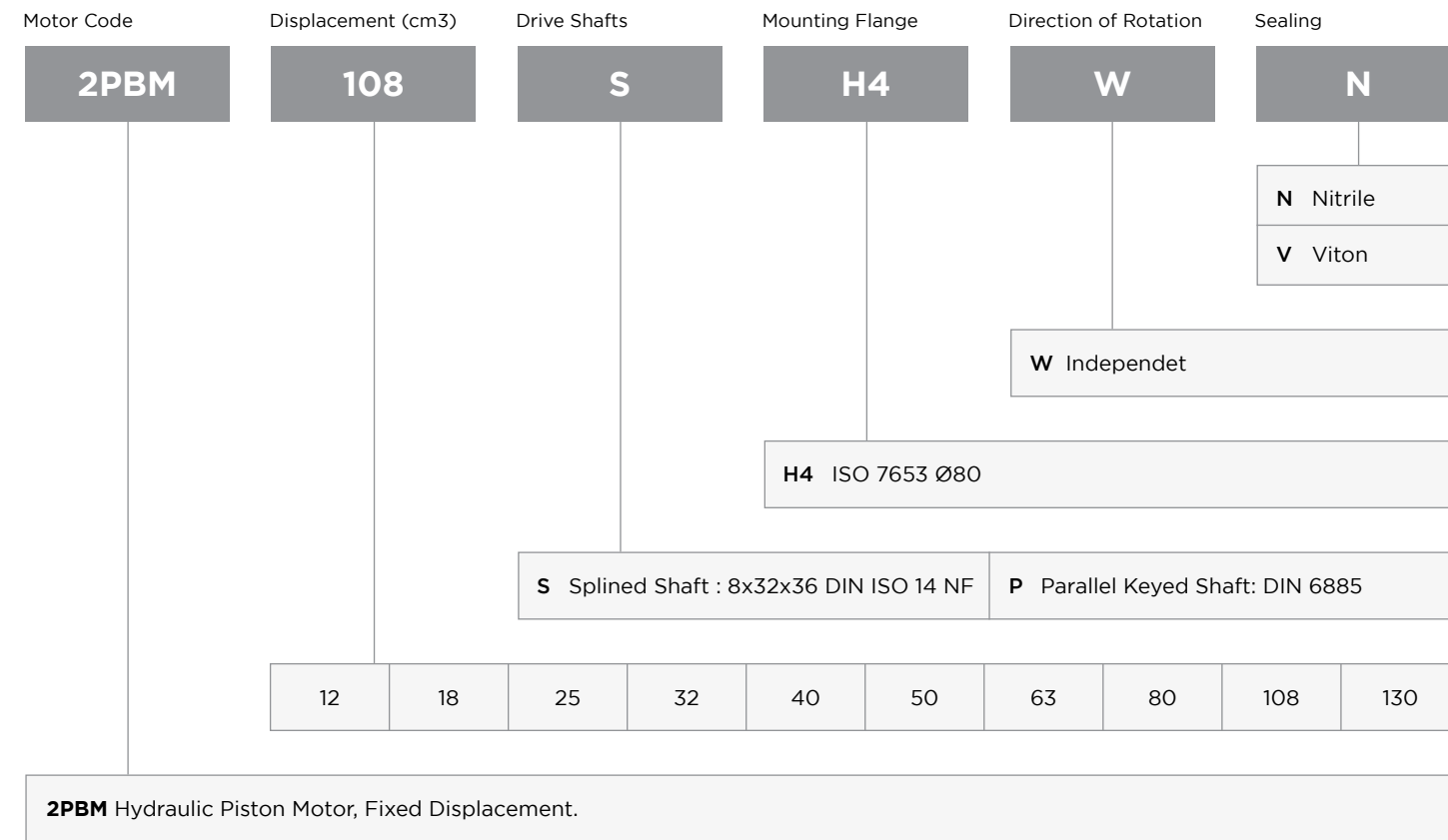
Hydraulic Piston Motor



2PBM Hydraulic Piston Motor have the following advantages;

- Compact Design,
- Economical Conception,
- High Power Density,
- High Efficiency,
- High Rotating Speeds,
- From 12cc to 130cc,
- High Pressure,
- Good Starting Characteristics,
- Optimized Weight and Size,

Ordering Code of 2PBM Hydraulic Piston Motor



Technical Data I

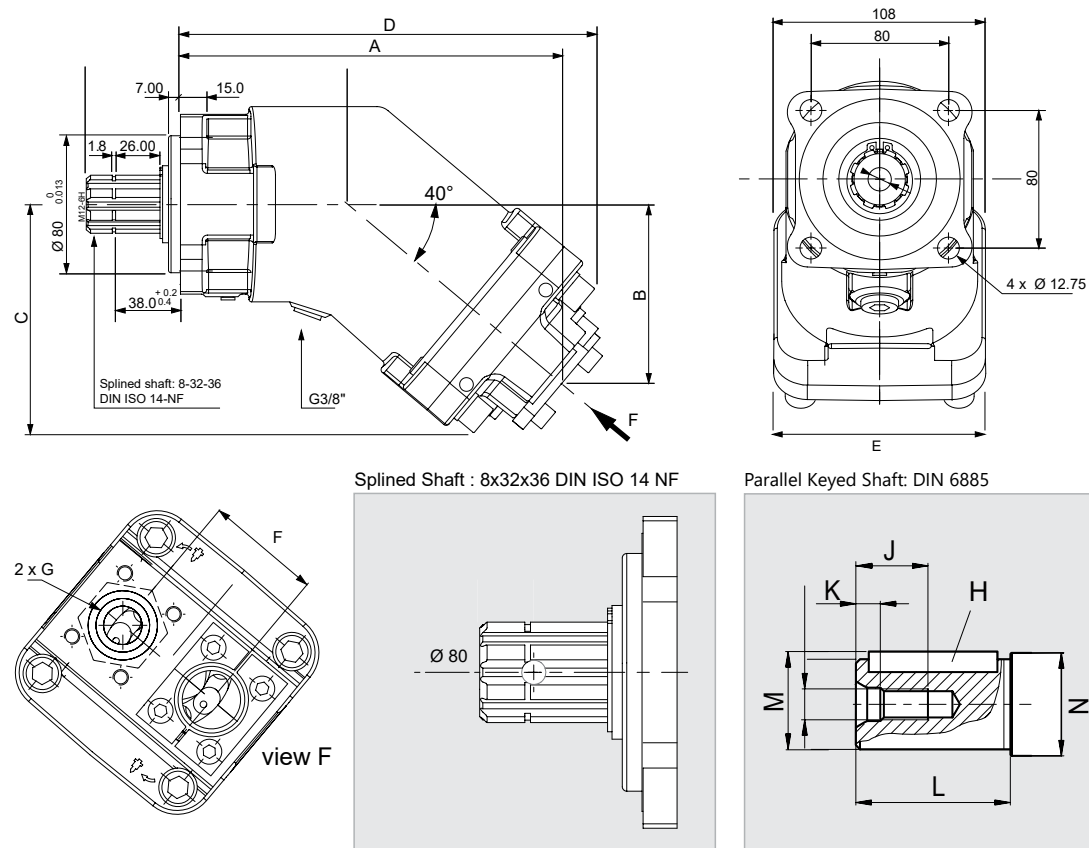
		12	18	25	32	40	50	63	80	108	130
Displacement	cc	12,00	18,00	25,00	32,00	40,20	50,00	63,00	80,00	108,4	130,0
Theoretical oil flow l/min at pump speed	1000 rpm	12,00	18,00	25,00	32,00	40,20	50,00	63,00	80,00	108,4	130,0
	1500 rpm	18,00	27,00	37,50	48,00	60,30	75,00	94,50	120,0	162,6	195,0

Maximum Speed											
- Continuous	rpm	8000	8000	6250	6250	5600	5000	5000	4400	4000	3400
- Limited	rpm	8800	8800	6800	6800	6300	5500	5500	4900	4400	4400
Max. Continuous Pressure	bar	400	400	400	400	400	400	400	400	400	400
Max. Peak Pressure	bar	450	450	450	450	450	450	450	450	450	450
Torque bar	m.N/bar	0.18	0.28	0.40	0.51	0.65	0.80	1.00	1.28	1.69	2.10
Torque at 350 bar	m.N	66	98	140	174	228	280	350	440	600	710

Weight											
- Without accessories	kg	9,00	10,00	10,00	11,00	11,00	11,00	12,00	15,00	16,00	16,50
- With accessories	kg	9,50	10,50	10,50	11,50	11,50	11,50	12,50	15,50	16,50	17,00

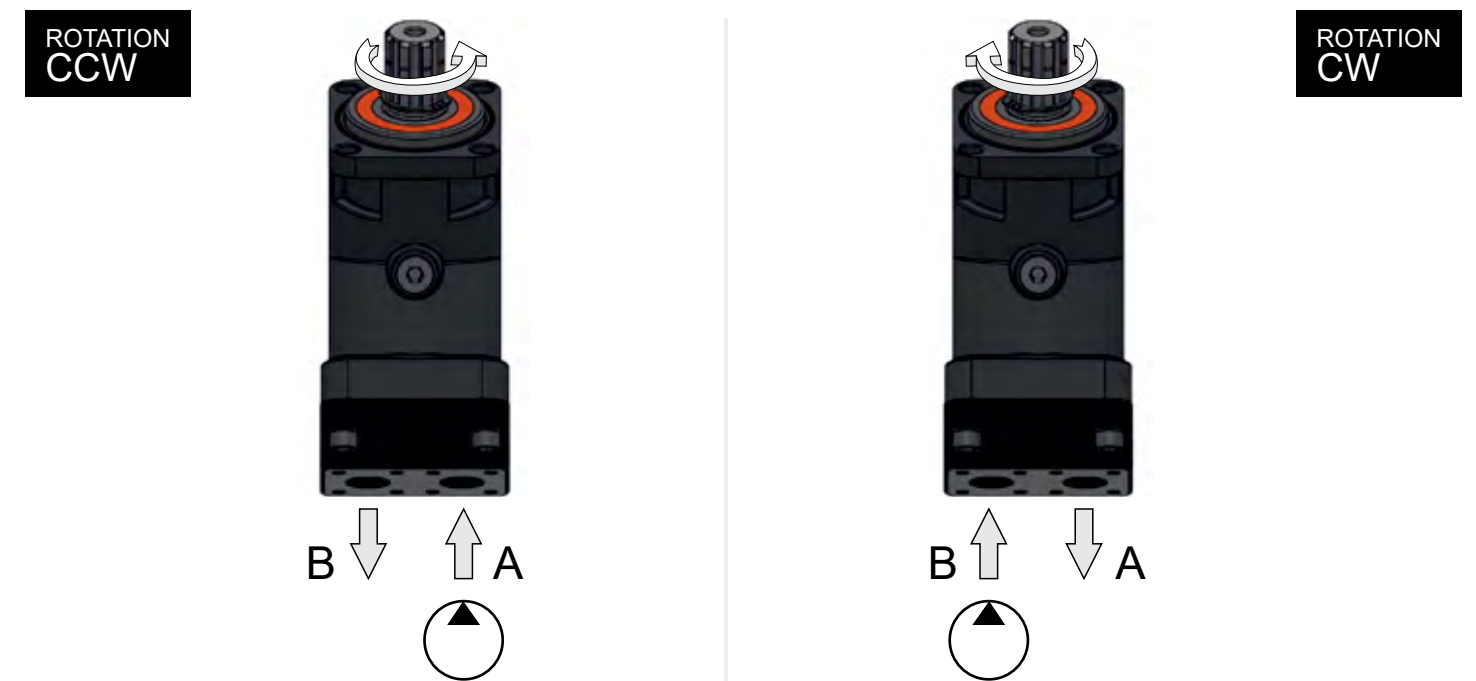
Motor Temperature											
- Minimum	°C	-25	-25	-25	-25	-25	-25	-25	-25	-25	-25
- Maximum	°C	110	110	110	110	110	110	110	110	110	110

Technical Data II



	12	18	25	32	40	50	63	80	108	130
cc	12,00	18,00	25,00	32,00	40,20	50,00	63,00	80,00	108,4	130,0
A	170,0	170,0	170,0	177,0	177,0	188,0	188,0	215,0	215,0	215,0
B	71,0	71,0	71,0	76,0	76,0	86,0	86,0	98,0	98,0	98,0
C	103,0	103,0	103,0	108,0	108,0	118,0	118,0	132,0	132,0	132,0
D	197,0	197,0	197,0	202,0	202,0	214,0	214,0	240,0	240,0	240,0
E	107,5	107,5	107,5	107,5	107,5	107,5	107,5	122,5	122,5	122,5
F	54,0	54,0	54,0	54,0	54,0	54,0	54,0	60,0	60,0	60,0
G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	1"
H	6	8	8	10	10	10	10	12	12	12
J	16	22	22	28	28	28	28	28	28	28
K	5	7,5	7,5	9,5	9,5	9,5	9,5	9,5	9,5	9,5
L	40	50	50	60	60	60	60	70	80	70
M	22,5	33	33	38	38	38	38	38	43	38
N	Ø 28	Ø 35	Ø 35	Ø 35	Ø 35	Ø 40	Ø 40	Ø 45	Ø 50	Ø 45

Direction of Rotation



Quick Calculation

<p>Flow rate</p> $Q = \frac{s \cdot nV}{1000 \cdot \eta_v} \text{ (lpm)}$	<p>TorquePowerSpeed</p> $M = \frac{s \cdot \Delta \times pV \cdot \eta_{mh}}{63} \text{ (Nm)}$	$P = \frac{\pi \times \pi \cdot nM^2}{6000} \times \frac{nM}{9549} = \frac{pQ \times \eta \times \Delta}{600} \text{ (kw)}$	$n = \frac{1000 Q \cdot \eta_v \times \times}{V_s} \text{ (lpm)}$
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- VS = Displacement (ccm/rev.)
- lp = 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 2PBM Hydraulic Piston Motor.

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 Phone : +90 (332) 345 13 70 - +90 (332) 345 13 71
 hidrocel@hidrocel.com.tr

2PBM Series Hydraulic Piston Motor

www.hidrocel.com.tr

Installation

POSITION

2PBM Motors can be operate any position.

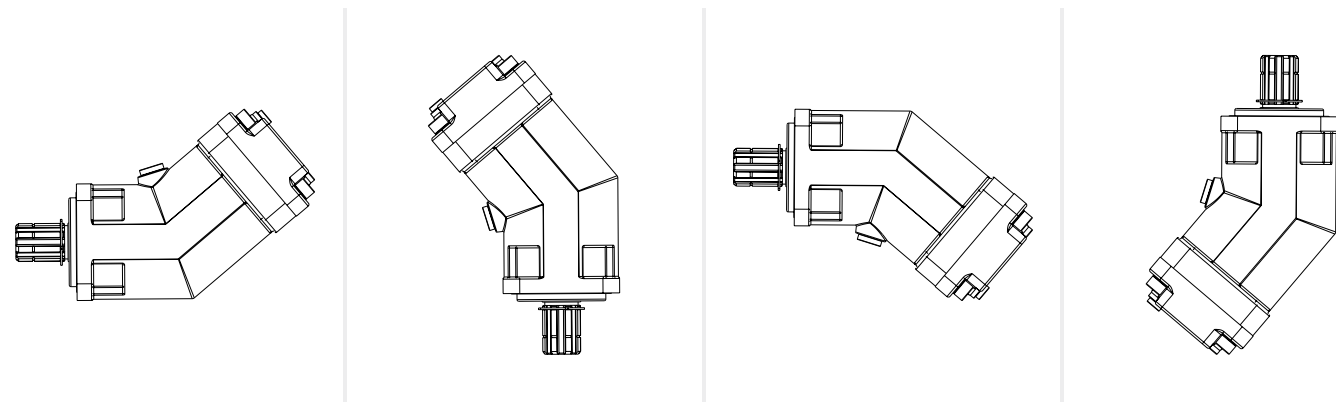
DIRECTION OF ROTATION

2PBM Motors can be operate in both directions of rotation.

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

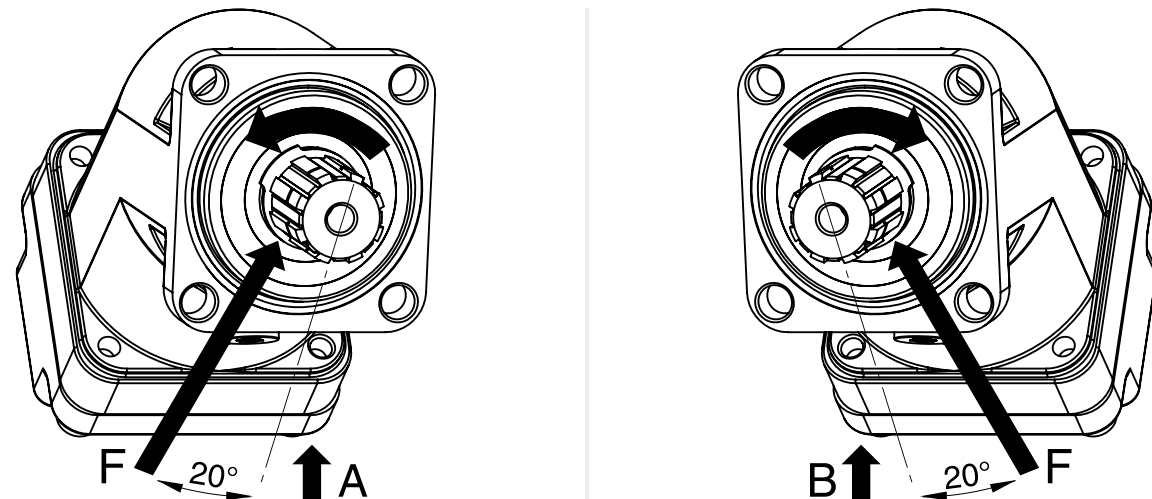
INSTALLATION POSITION

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 2PBM Hydraulic Piston Motor, please contact with Technical Department !!!

2PEM Series

Hydraulic Piston Motor SAE

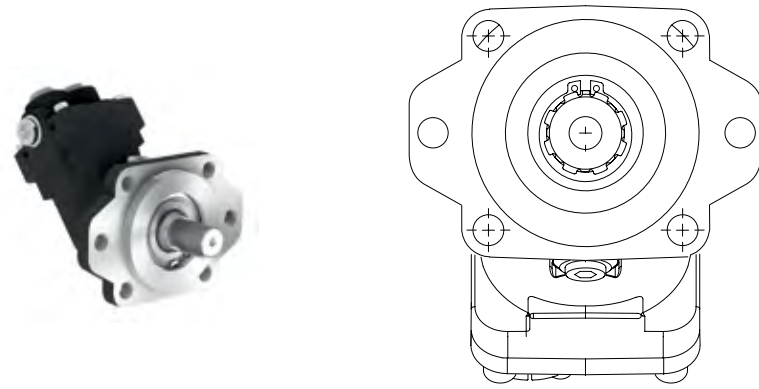


2PEM Hydraulic Piston Motor have the following advantages;

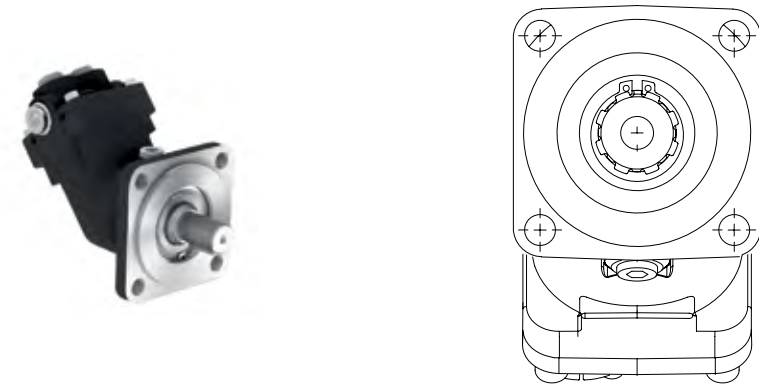
- Compact Design,
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- High Power Density,
- High Efficiency,
- High Rotating Speeds,
- From 12cc to 130cc,
- High Pressure,
- Good Starting Characteristics,
- Optimized Weight and Size,
- For Use Mobile and Stationary Applications,

Special Mounting Flanges

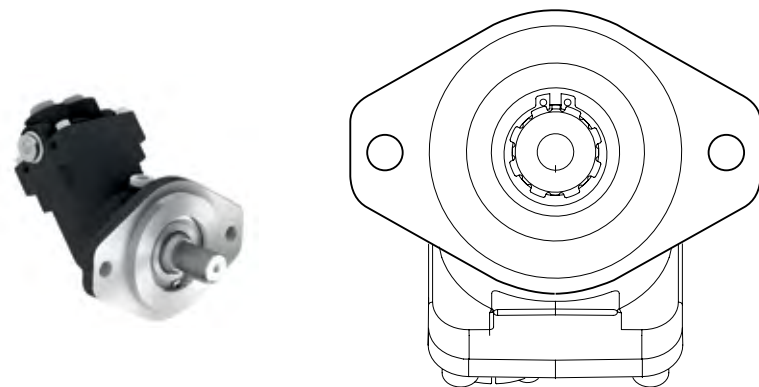
SAE B-6 BOLT Mounting Flange



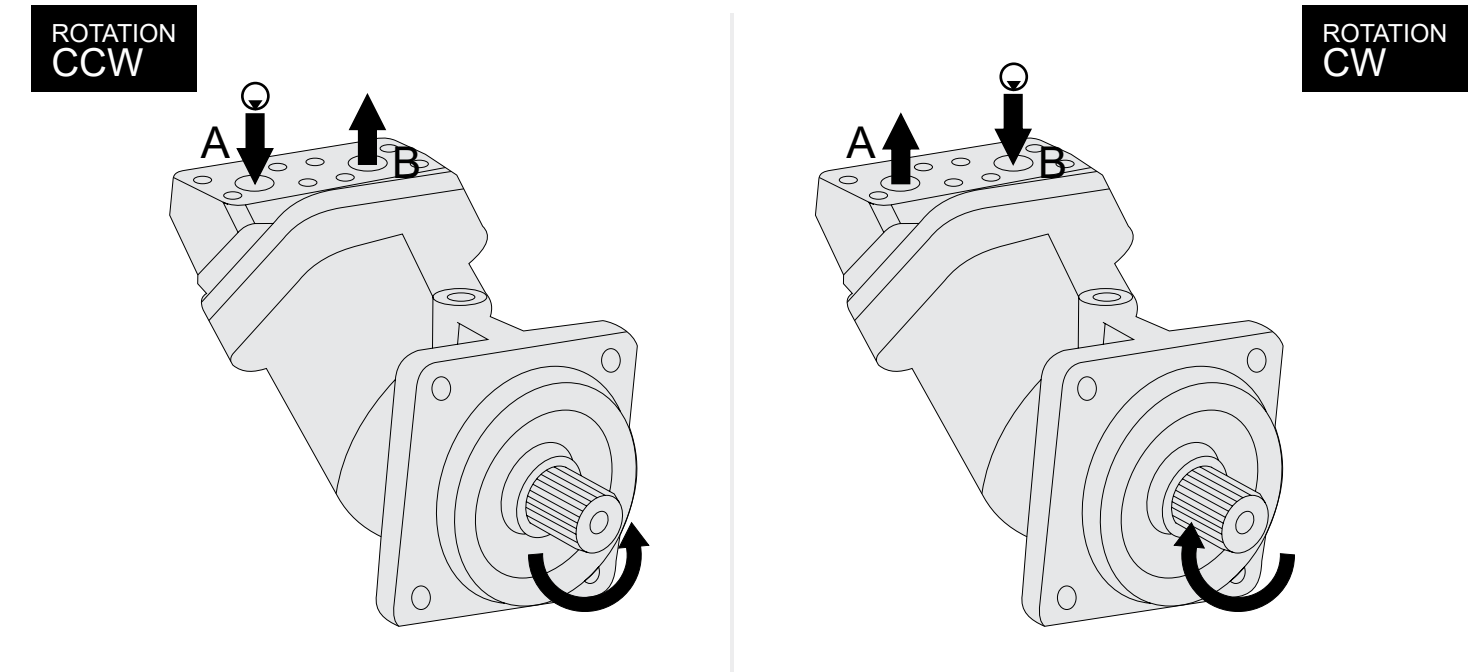
SAE C-4 BOLT



SAE B-2 BOLT



Direction of Rotation



Quick Calculation

<p>Flow rate</p> $Q = \frac{s \cdot nV}{1000 \cdot \eta_v} \text{ (lpm)}$	<p>TorquePowerSpeed</p> $M = \frac{s \cdot \Delta \times pV \cdot \eta_{mh}}{63} \text{ (Nm)}$	$P = \frac{\pi \times \pi \cdot nM^2}{6000} \times \frac{nM}{9549} = \frac{pQ \times \eta \times \Delta}{600} \text{ (kw)}$	$n = \frac{1000 Q \cdot \eta_v \times \times}{V_s} \text{ (lpm)}$
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Installation

POSITION

2PEM Motors can be operate any position.

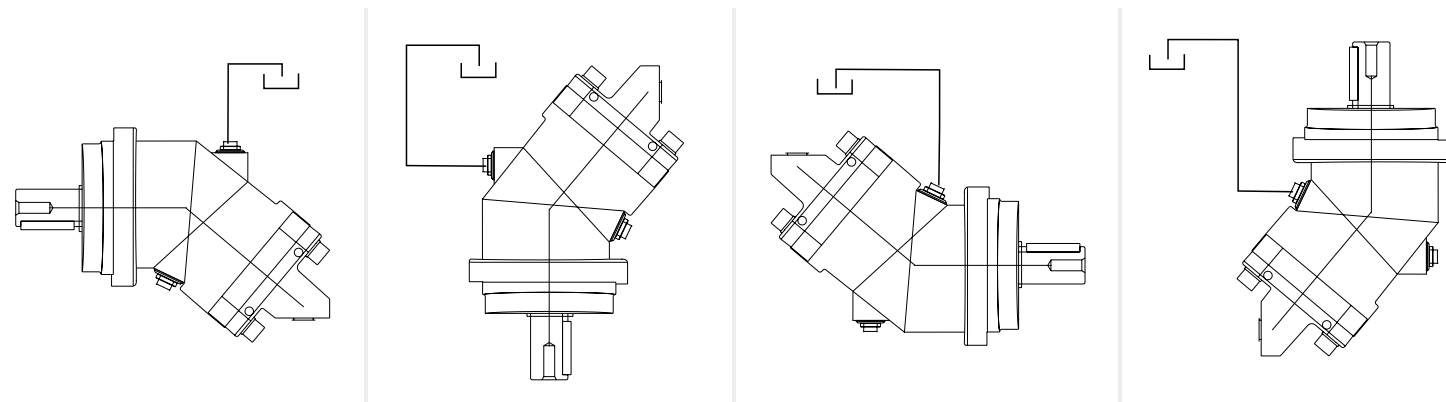
DIRECTION OF ROTATION

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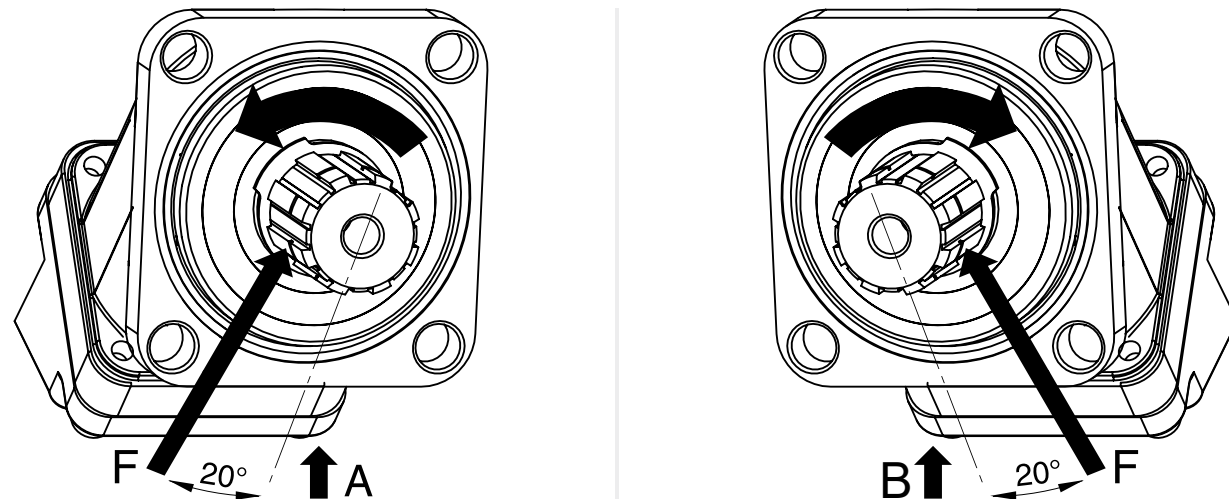
INSTALLATION POSITION

See following examples.



HYDRAULIC FLUID

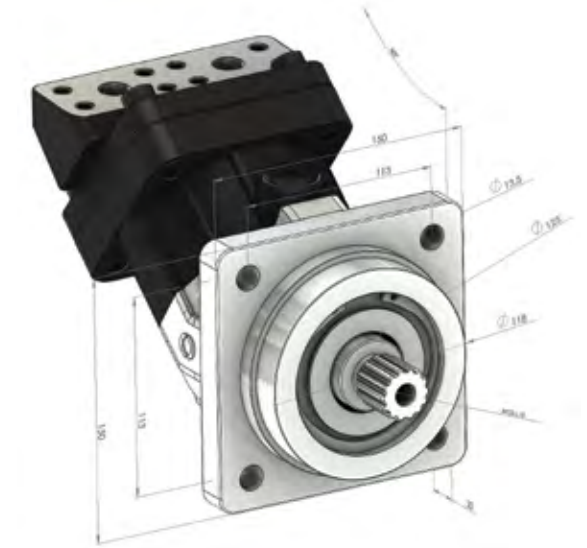
Recommended ;
Generally : between 15 and 200 cSt.
Maximum : between 5 and 1600 cSt.



FOR USE;

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

For detailed information about 2PEM Hydraulic Piston Motor, please contact with Technical Department !!!



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- High Rotating Speeds,
- From 12cc to 130cc,
- High Pressure,
- Good Starting Characteristics,
- Optimized Weight and Size,
- For Use Mobile and Stationary Applications,

Ordering Code of 2PM Hydraulic Piston Motor

Motor Code	Displacement (cm ³)	Drive Shafts	Inlet Ports A-B	Mounting Flange	Sealing
2PM	108	K2	R1	A	N
				A ISO 3019-2, 4 BOLT	N Nitrile V Viton
			12 18 25 32 40 50 63 80 108 130		
			SAE Flange Ports		
			B1 Bottom		
			R1 Rear		
			D1 Side		
			D2 Side		
			D3 Side		
			D4 Side		
			R2 Rear		
			12 18 25 32 40 50 63 80 108 130		
		DIN 5480 SPLINED	S1		
		DIN 5480 SPLINED	S2		
		DIN 6885 PARALLEL	K1		
		DIN 6885 PARALLEL	K2		
	12 18 25 32 40 50 63 80 108 130				

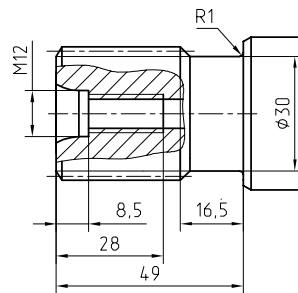
2PM Hydraulic Piston Motor - ISO, Fixed Displacement.

Technical Data

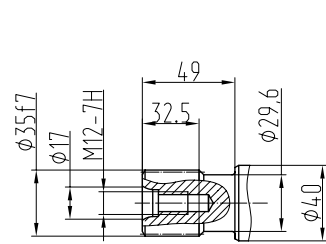
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Theoretical oil flow l/min at pump speed	1000 rpm	12,00	18,00	25,00	32,00	40,20	50,00	63,00	80,00	108,4	130,0
	1500 rpm	18,00	27,00	37,50	48,00	60,30	75,00	94,50	120,0	162,6	195,0
Maximum Speed											
- Continuous	rpm	8000	8000	6250	6250	5600	5000	5000	4400	4000	3400
- Intermittent	rpm	8800	8800	6800	6800	6300	5500	5500	4900	4400	4400
Max. Continuous Pressure	bar	400	400	400	400	400	400	400	400	400	400
Max. Peak Pressure	bar	450	450	450	450	450	450	450	450	450	450
Torque bar	m.N/bar	0.18	0.28	0.40	0.51	0.65	0.80	1.00	1.28	1.69	2.10
Torque at 350 bar	m.N	66	98	140	174	228	280	350	440	600	710
Max. Flow	l/mn.	96	144	156	200	225	250	315	352	433	442
Weight											
- Without accessories	kg	6,00	6,00	11,50	11,50	11,50	17,50	18,00	22,00	22,50	35,00
- With accessories	kg	6,20	6,20	11,80	11,90	11,90	18,00	18,50	22,50	23,00	35,50
Motor Temperature											
- Minimum	°C	-25	-25	-25	-25	-25	-25	-25	-25	-25	-25
- Maximum	°C	110	110	110	110	110	110	110	110	110	110

Special Shaft Drive

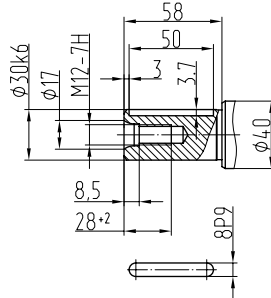
Splined shaft
35xf7x2x9g GOST 6033-80



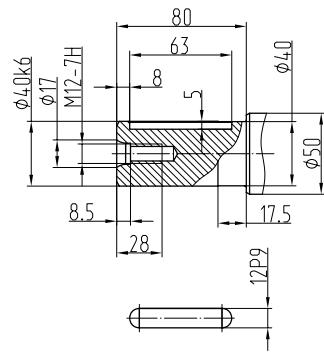
35xf7x2x9g GOCT6033



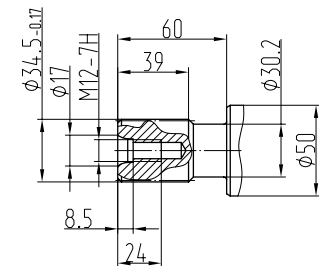
Parallel keyed shafts



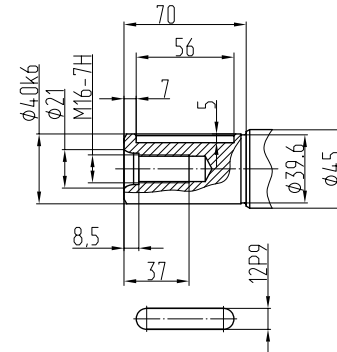
Parallel keyed shafts



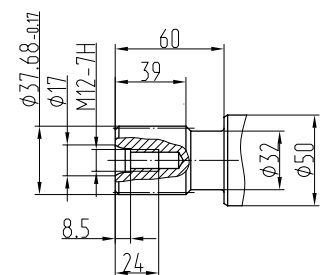
1 3/8' 21T 16/32DP ANSI B92



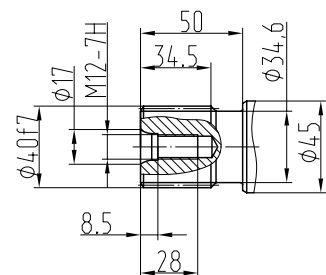
Parallel keyed shafts



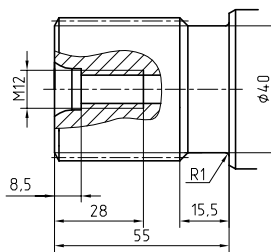
1 1/2' 23T 16/32DP ANSI B92



40xf7x2x9g GOST6033

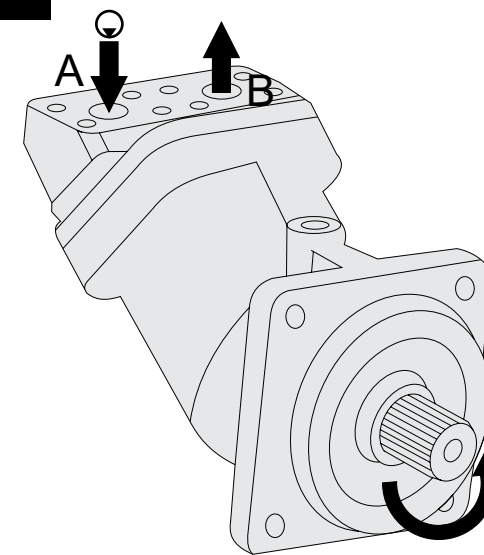


45xh8x2x9g GOST 6033-80

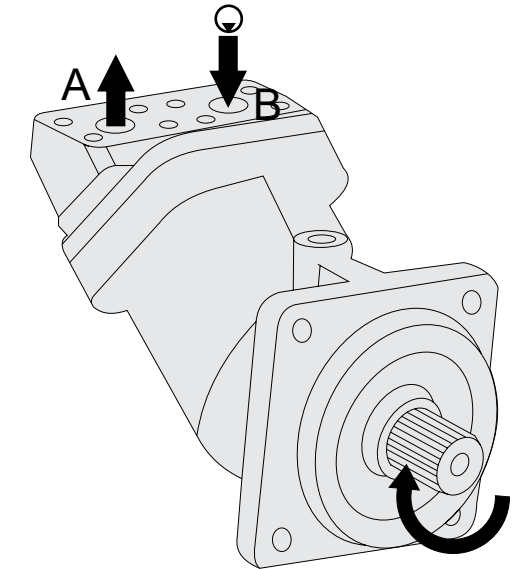


Direction of Rotation

ROTATION
CCW



ROTATION
CW



Quick Calculation

Flow rate

$$Q = \frac{s \cdot nV}{1000 \cdot \eta_v} \text{ (lpm)}$$

TorquePowerSpeed

$$M = \frac{s \cdot \Delta \times pV \cdot \eta_{mh}}{63} \text{ (Nm)}$$

$$P = \frac{\times \times \pi \cdot nM^2}{6000} = \frac{\times nM \cdot pQ \times \eta \times \Delta}{9549 \cdot 600} \text{ (kw)}$$

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

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Installation

POSITION

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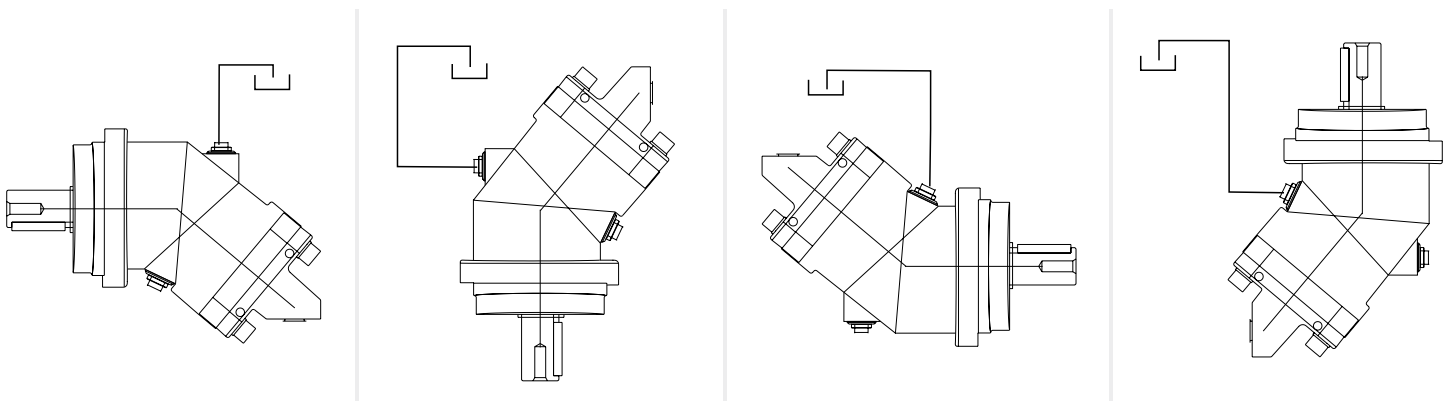
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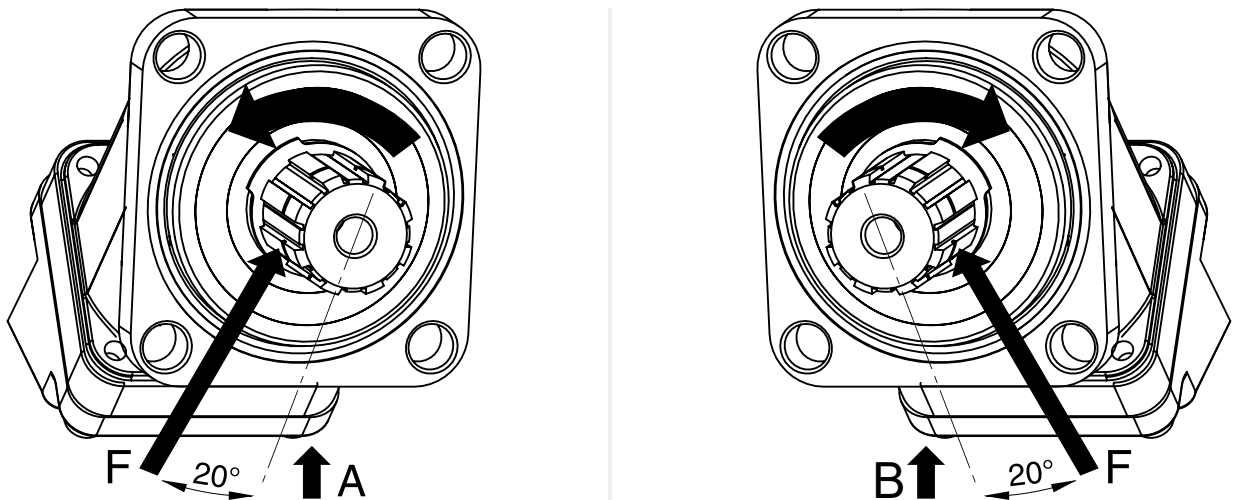
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