



2PBM Series

Hydraulic Piston Motor

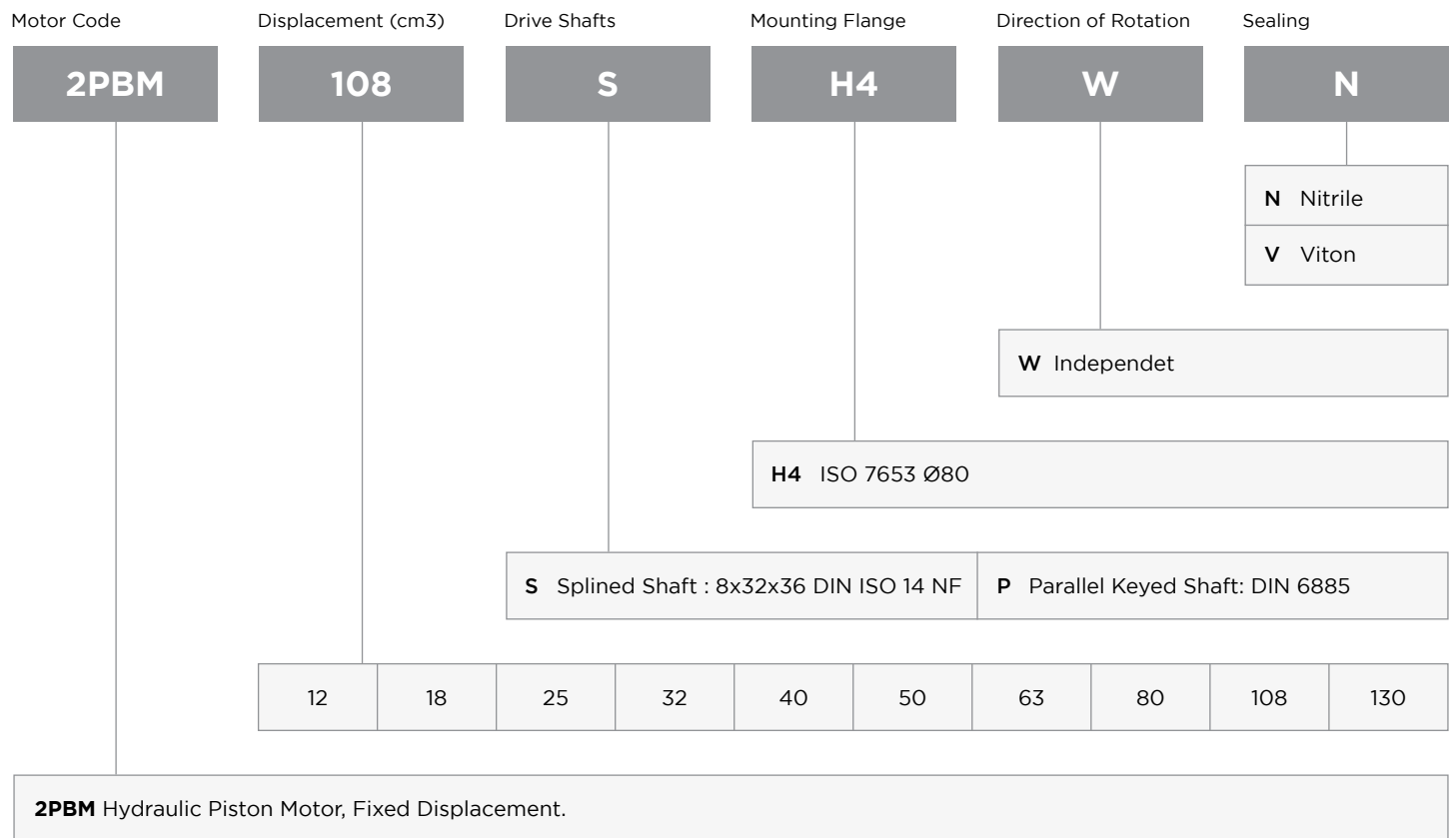


2PBM Hydraulic Piston Motor have the following advantages;

- 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,

  ISO 9001:2015 - ISO 14001:2015

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

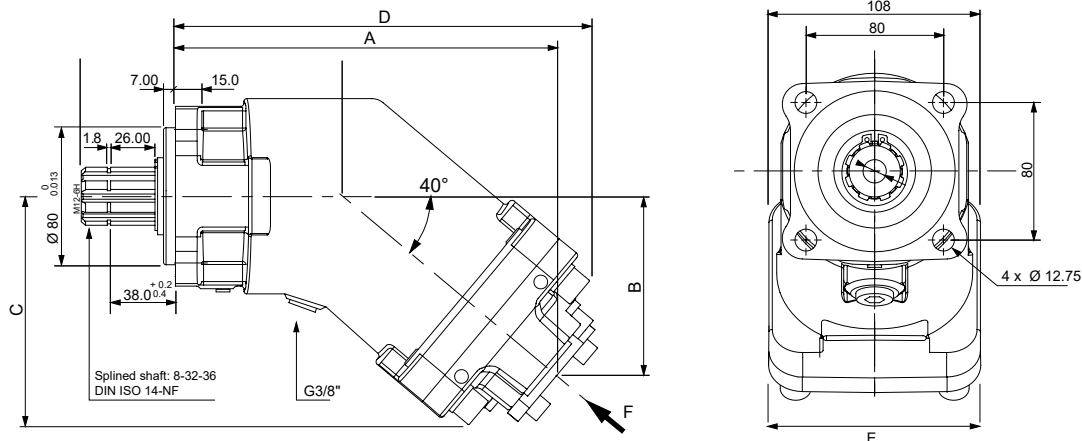
Weight											
- Without accessories	kg	9,00	10,00	10,00	11,00	11,00	11,00	12,00	15,00	16,00	16,50
- With accessories	kg	9,50	10,50	10,50	11,50	11,50	11,50	12,50	15,50	16,50	17,00

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

2PBM Series Hydraulic Piston Motor

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Technical Data II

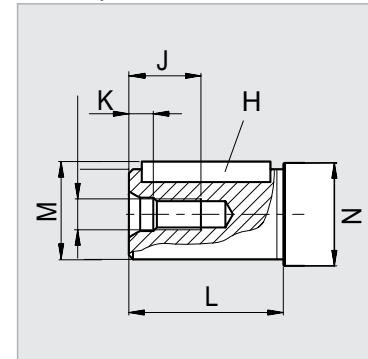
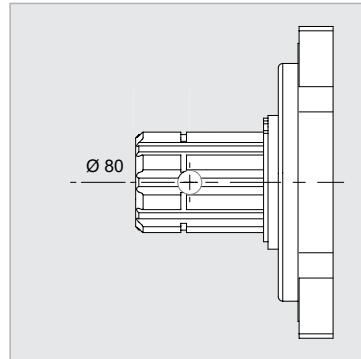
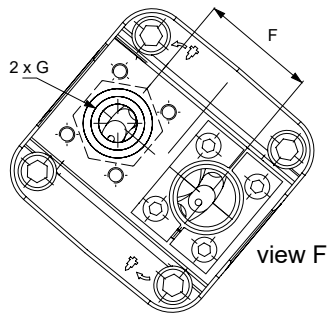


Splined shaft: 8-32-36
DIN ISO 14-NF

G3/8"

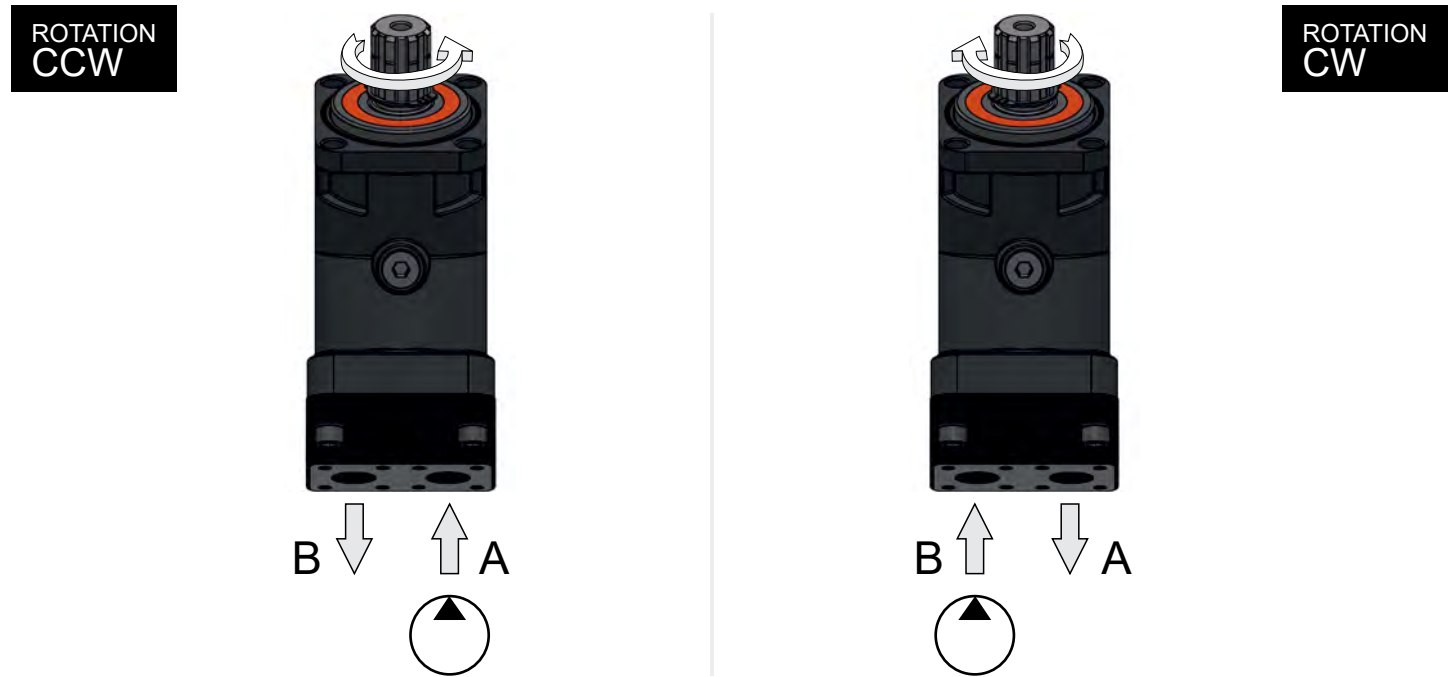
Splined Shaft : 8x32x36 DIN ISO 14 NF

Parallel Keyed Shaft: DIN 6885



	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 style="text-align: center; margin: 0;">Flow rate</p> $Q = \frac{s \times nV}{1000 \eta_v} \text{ (lpm)}$	<p style="text-align: center; margin: 0;">TorquePowerSpeed</p> $M = \frac{s \Delta \times pV \eta_{mh}}{63} \text{ (Nm)}$	$P = \frac{\times \times \pi \text{ nM}^2}{6000} = \frac{\times \text{ nM}}{9549} = \frac{pQ \times \eta \times \Delta}{600} \text{ (kw)}$	$n = \frac{1000 Q \eta_v \times \times}{V_s} \text{ (lpm)}$
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- VS = Displacement (ccm/rev.)
- |p = 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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2PBM Series Hydraulic Piston Motor

Installation

POSITION

2PBM Motors can be operate any position.

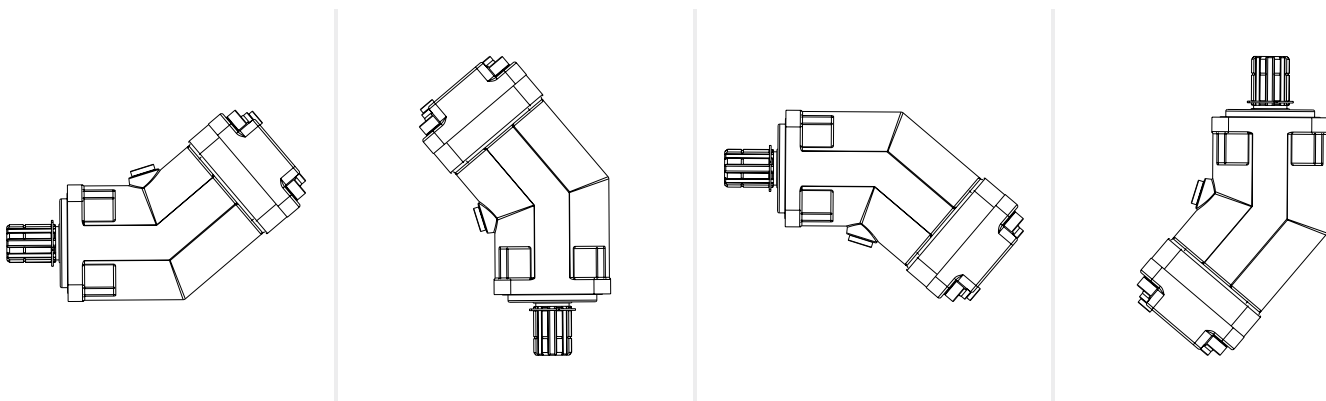
DIRECTION OF ROTATION

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.

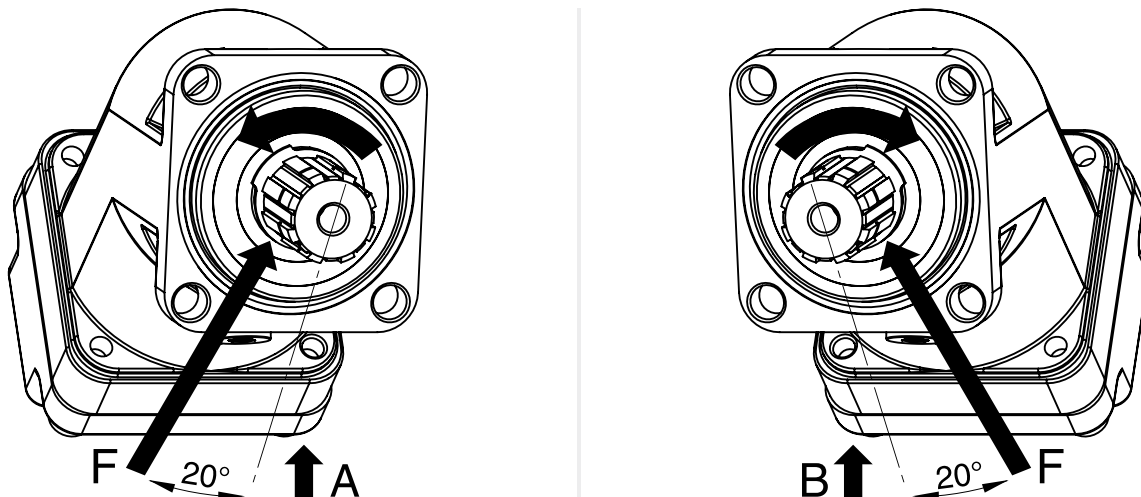
INSTALLATION POSITION

See following examples.



HYDRAULIC FLUID

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



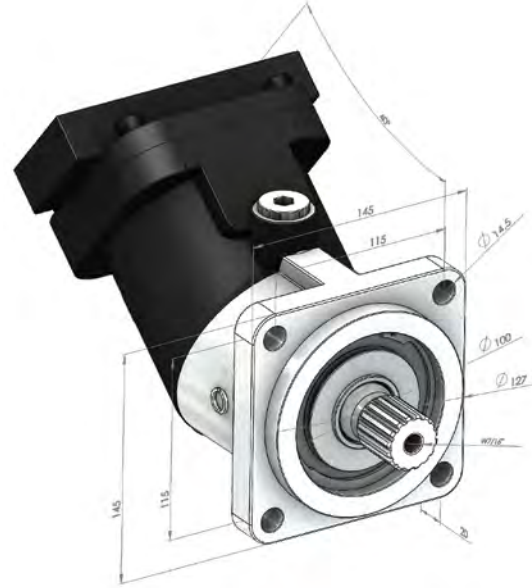
FOR USE;

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,
- Economical Conception,
- 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,

  ISO 9001:2015 - ISO 14001:2015

Technical Data

		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

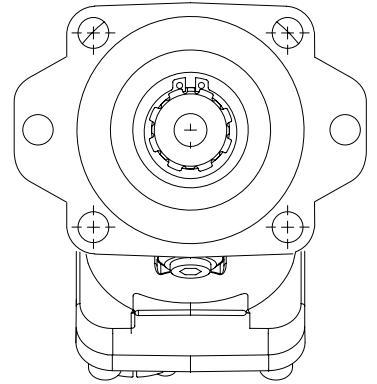
Maximum Speed											
- Continuous	rpm	8000	8000	6250	6250	5600	5000	5000	4400	4000	3400
- Intermittent	rpm	8800	8800	6800	6800	6300	5500	5500	4900	4400	4400
Max. Continuous Pressure	bar	400	400	400	400	400	400	400	400	400	400
Max. Peak Pressure	bar	450	450	450	450	450	450	450	450	450	450
Torque bar	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	6,50	6,50	11,50	11,50	11,50	17,50	18,00	22,00	22,50	30,50
- With accessories	kg	7,00	7,00	11,80	11,90	11,90	18,00	18,50	22,50	23,00	30,90

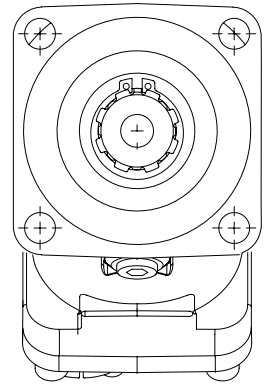
Motor Temperature											
- Minimum	°C	-25	-25	-25	-25	-25	-25	-25	-25	-25	-25
- Maximum	°C	110	110	110	110	110	110	110	110	110	110

Special Mounting Flanges

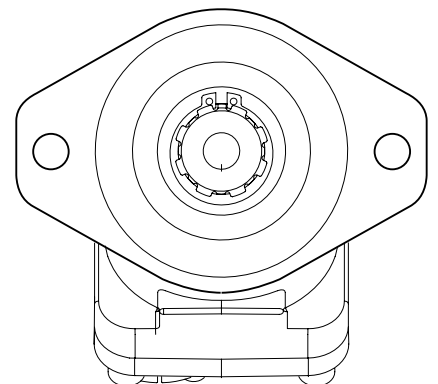
**SAE B-6 BOLT
Mounting Flange**



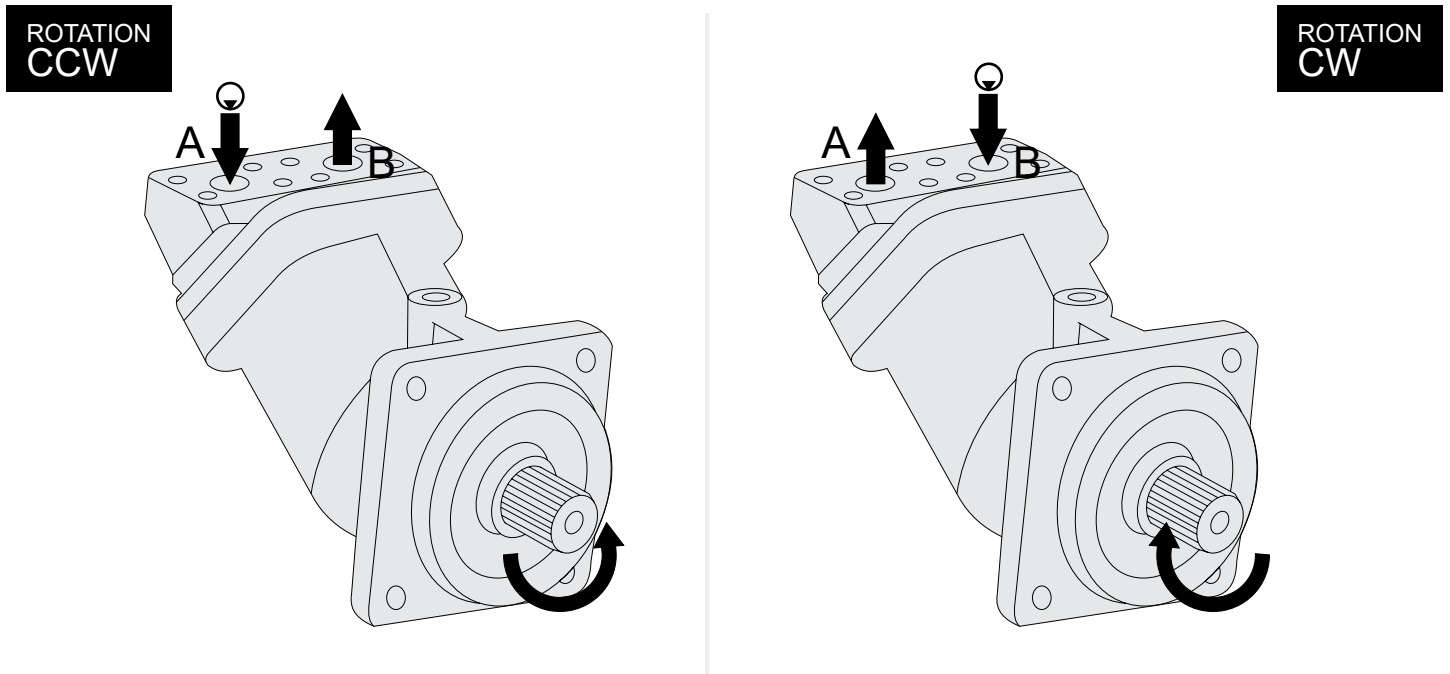
**SAE C-4
BOLT**



**SAE B-2
BOLT**



Direction of Rotation



Quick Calculation

<p>Flow rate</p> $Q = \frac{s \times nV}{1000 \eta_v} \text{ (lpm)}$	<p>TorquePowerSpeed</p> $M = \frac{s \Delta \times pV \eta_{mh}}{63} \text{ (Nm)}$	$P = \frac{\times \times \pi \text{ nM}^2}{6000} = \frac{\times \text{ nM}}{9549} = \frac{pQ \times \eta \times \Delta}{600} \text{ (kw)}$	$n = \frac{1000 Q}{V_s} \frac{\eta_v \times \times}{\times} \text{ (lpm)}$
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- VS = Displacement (ccm/rev.)
- |p = Diff. pressure (bar)
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 hidrocel@hidrocel.com.tr

2PEM Series Hydraulic Piston Motor

Installation

POSITION

2PEM Motors can be operate any position.

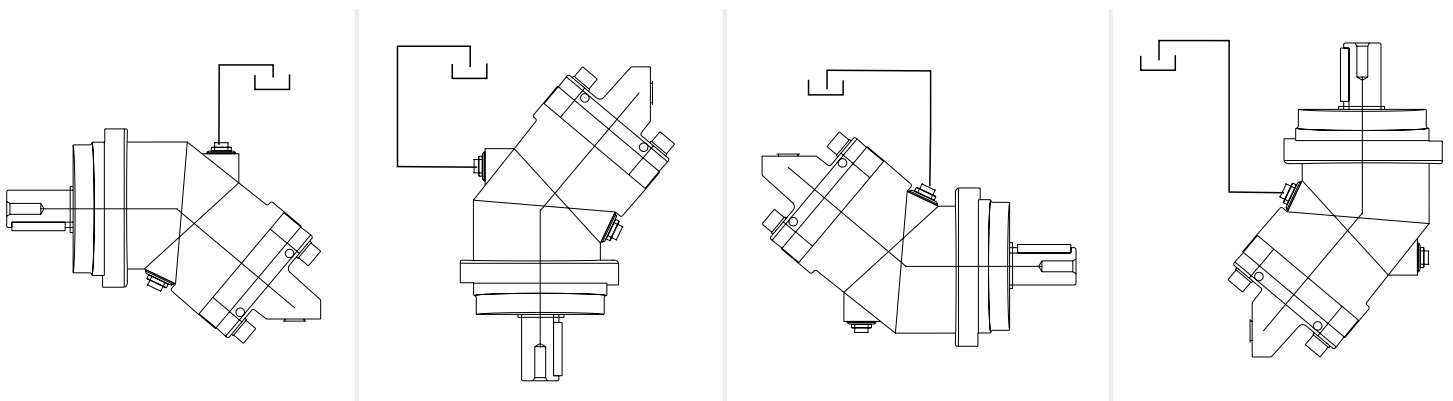
DIRECTION OF ROTATION

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

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

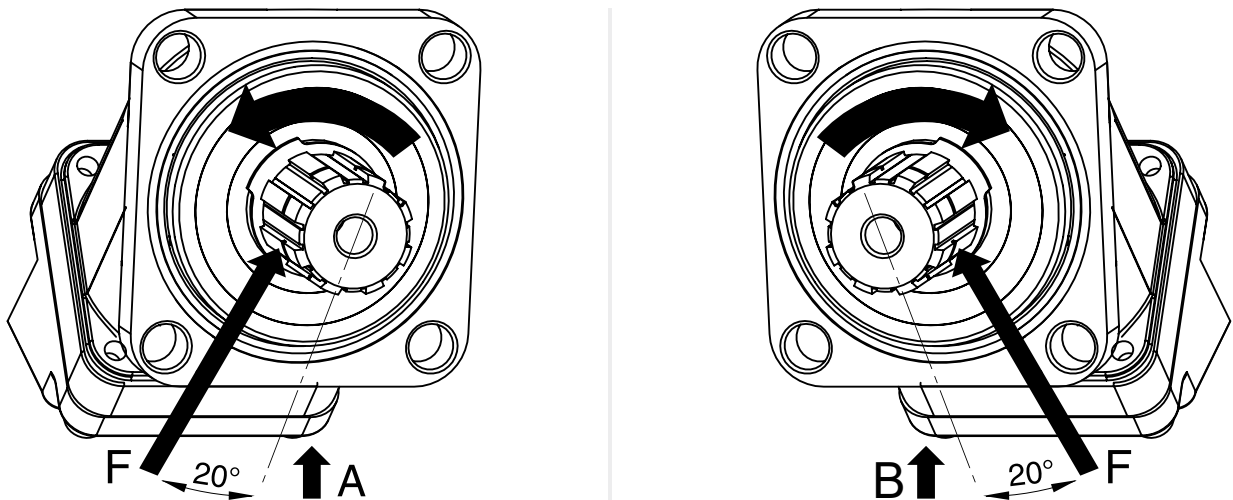
INSTALLATION POSITION

See following examples.



HYDRAULIC FLUID

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



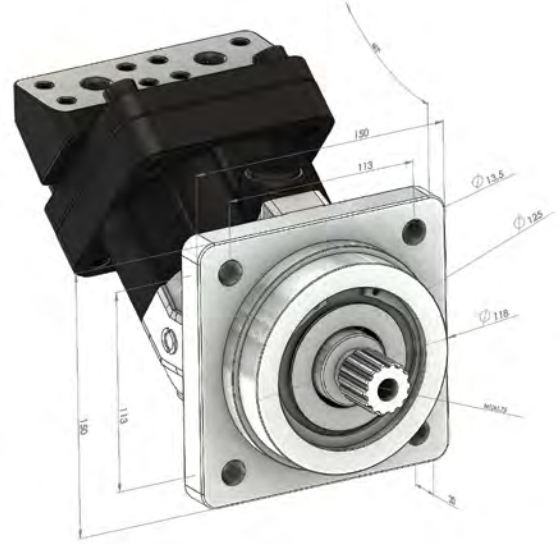
FOR USE;

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

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2PM Series

Hydraulic Piston Motor ISO



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

CE  ISO 9001:2015 - ISO 14001:2015

Technical Data

		12	18	25	32	40	50	63	80	108	130
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	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

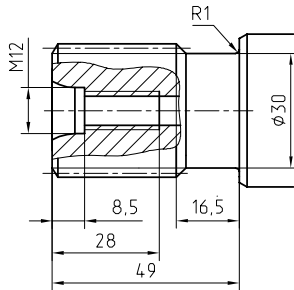
Motor Temperature											
- Minimum	°C	-25	-25	-25	-25	-25	-25	-25	-25	-25	-25
- Maximum	°C	110	110	110	110	110	110	110	110	110	110

2PM Series Hydraulic Piston Motor

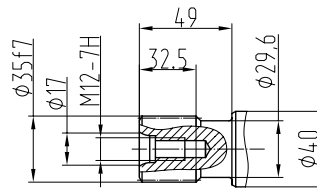
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Special Shaft Drive

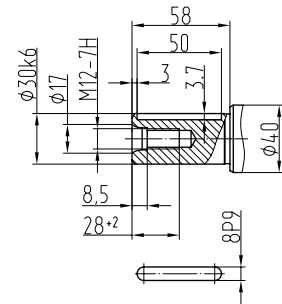
Splined shaft
35xf7x2x9g GOST 6033-80



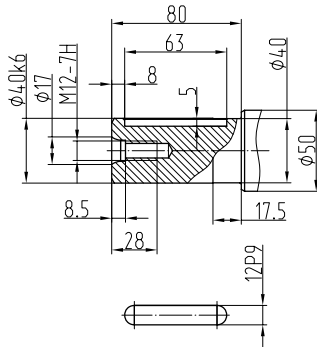
35xf7x2x9g GOST6033



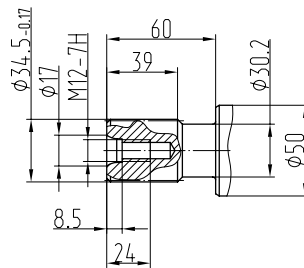
Parallel keyed shafts



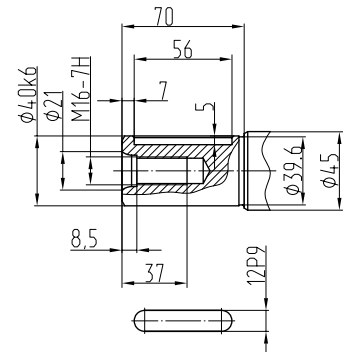
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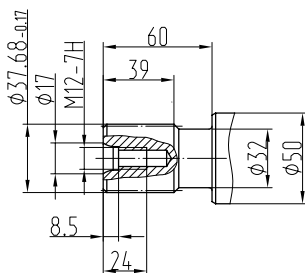
1 3/8' 21T 16/32DP ANSI B92



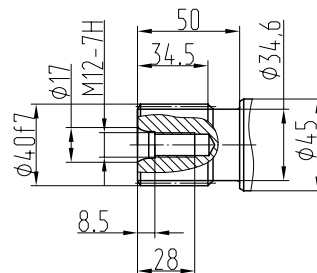
Parallel keyed shafts



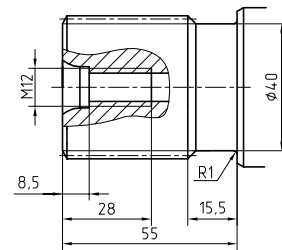
1 1/2' 23T 16/32DP ANSI B92



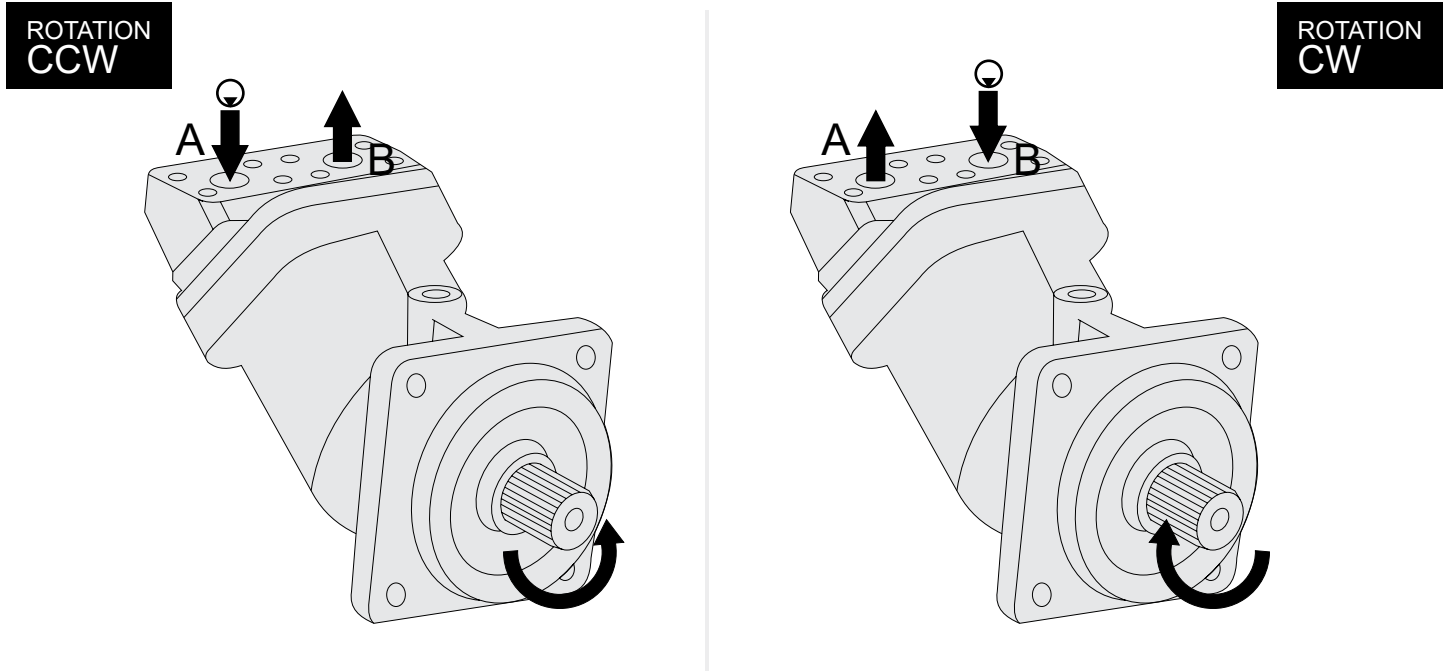
40xf7x2x9g GOST6033



45xh8x2x9g GOST 6033-80



Direction of Rotation



Quick Calculation

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

Installation

POSITION

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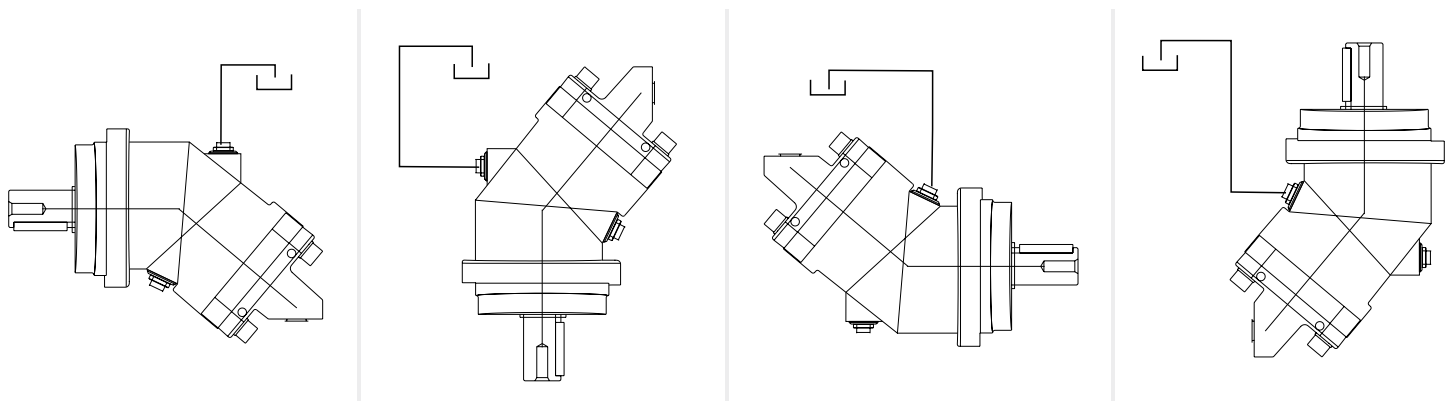
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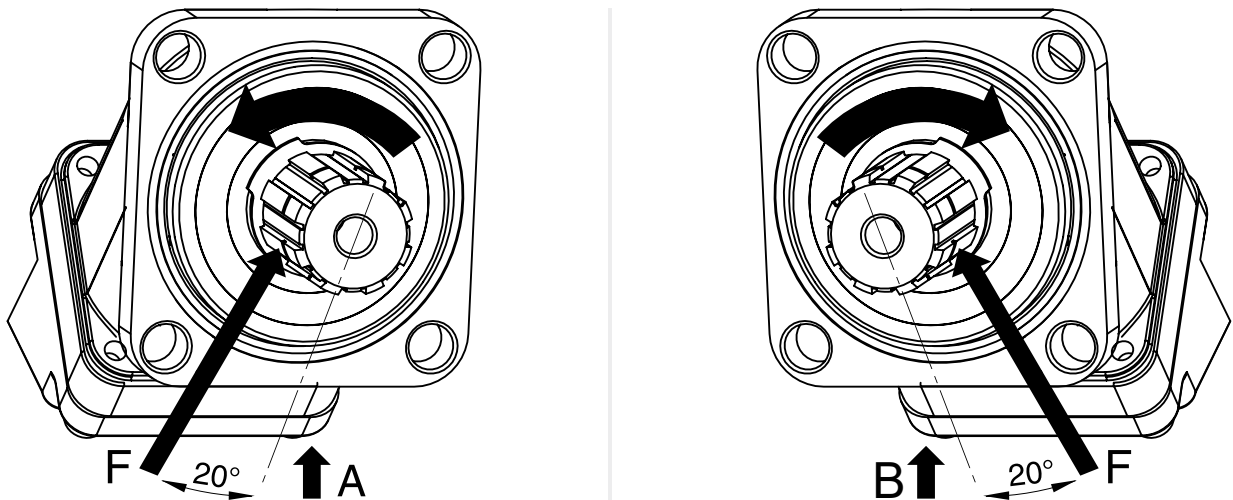
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