hidrocel®
HİDROLİK PİSTONLU POMPA & MOTOR

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,

CE TSEK ISO 9001:2015 - ISO 14001:2015

Ordering Code of 2PBM Hydraulic Piston Motor

Motor Code	Displacement (cm3)	Drive Shafts	Mounting Flange	Direction of Rotation	Sealing
2PBM	108	S	H4	W	N

- **N** Nitrile
- **V** Viton

- **W** Independet

- **H4** ISO 7653 Ø80

- **S** Splined Shaft : 8x32x36 DIN ISO 14 NF
- **P** Parallel Keyed Shaft: DIN 6885

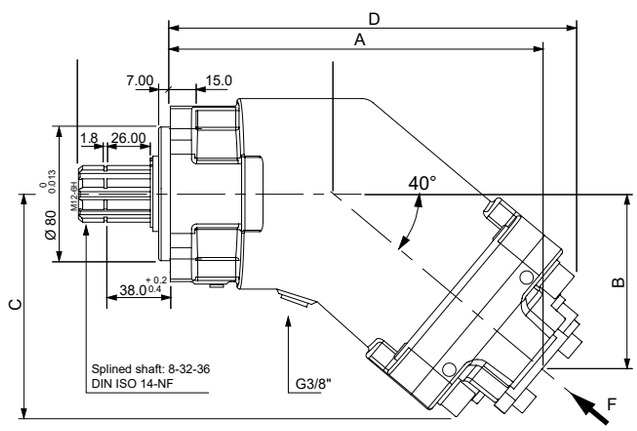
12	18	25	32	40	50	63	80	108	130

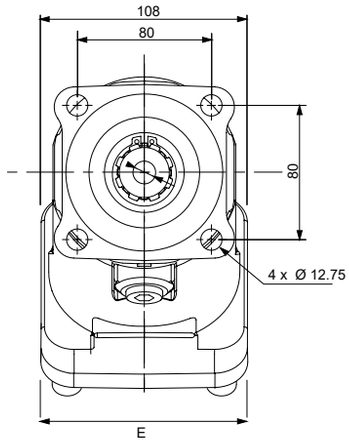
2PBM Hydraulic Piston Motor, Fixed Displacement.

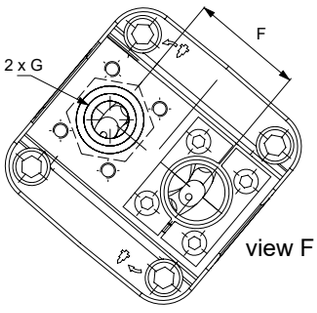
Technical Data I

		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

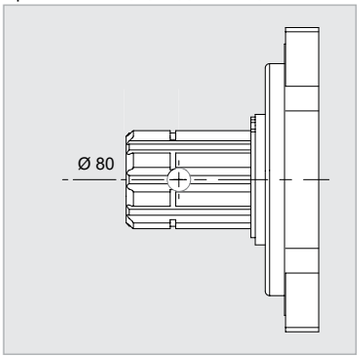
Technical Data II



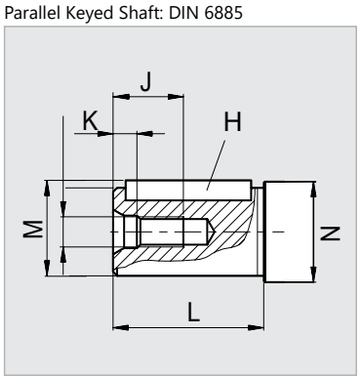




Splined Shaft : 8x32x36 DIN ISO 14 NF



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

ROTATION CCW

ROTATION CW

Quick Calculation

Flow rate

$$Q = \frac{s \; xnV}{1000 \; \eta_v} \text{ (lpm)}$$

TorquePowerSpeed

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

$$P = \frac{\times\times\pi \; nM2}{6000} = \frac{\times}{9549} = \frac{nM}{} = \frac{pQ \; \times\eta\times\Delta}{600} \text{ (kw)}$$

$$n = \frac{1000 \; Q \quad \eta_v \times\times}{V_S} \text{ (lpm)}$$

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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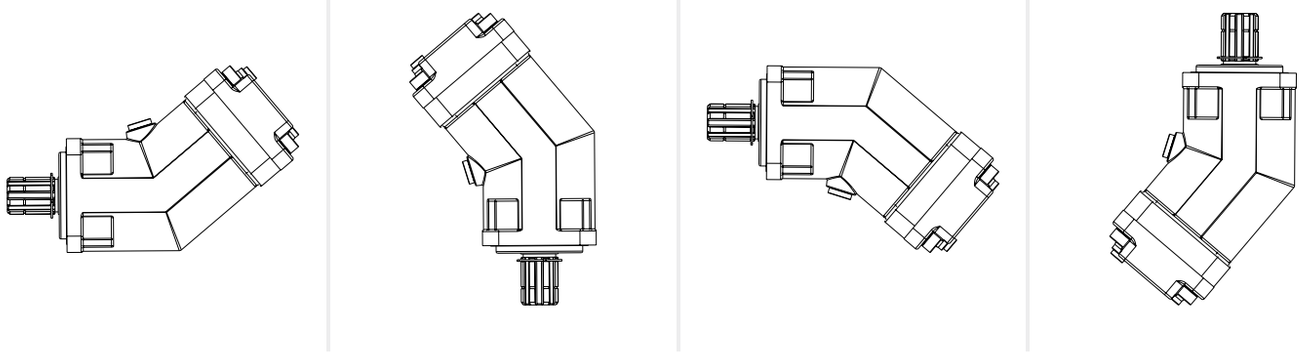
Installation

POSITION
2PBM Motors can be operate any position.

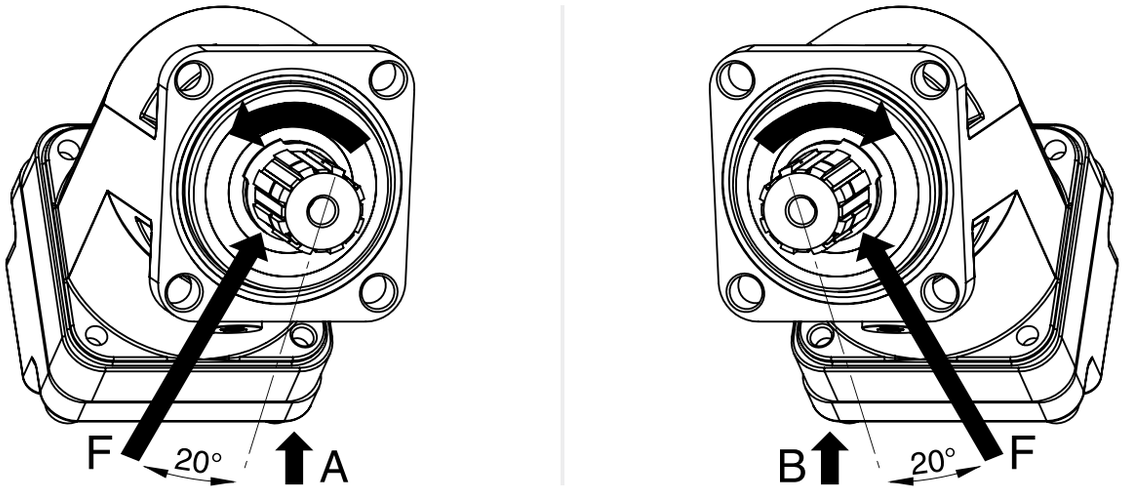
DIRECTION OF ROTATION
2PBM Motors can be operate in both directions of rotation.

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 !!!