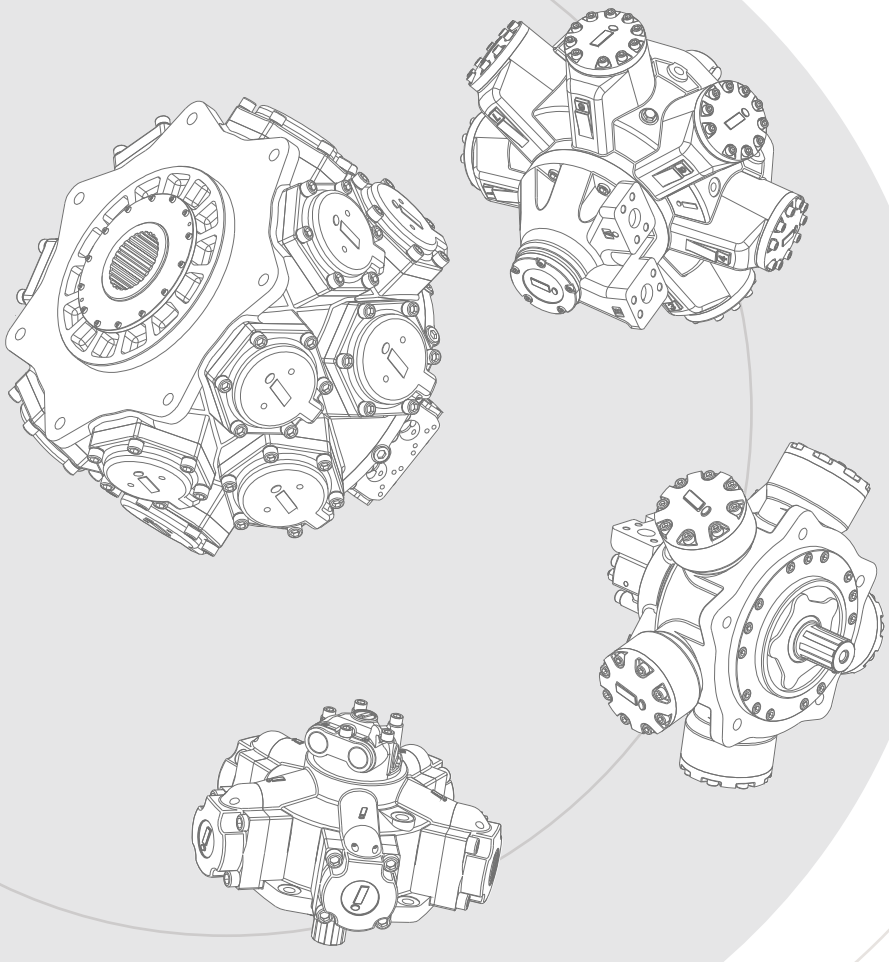
intermot®
NHM®
英特姆®

afaq
TAF
Management System Certification MS012
中意合资
Sino-Italian JV

CATALOGUE
HYDRAULIC MOTORS



NINGBO OIL CONTROL HYDRAULIC CO., LTD.
NINGBO INTERMOT HYDRAULIC MOTOR CO., LTD.

intermot

ABOUT US

NINGBO OIL CONTROL HYDRAULIC CO., LTD. is originated from NINGBO INTERMOT HYDRAULIC MOTOR CO., LTD., a Sino-Italian Joint venture established in 1992, by the Chinese partner, INTERMOT S.r.l. (Italy), R&D S.r.l. (Italy) and SAI S.p.a. (Italy). NINGBO OIL CONTROL has been specializing in the development and manufacture of hydraulic motors, inheriting the European classics while focusing on quality development.Relying on the advanced hydraulic technologies and rigorous manufacturing expertise from Italy, the company is committed to creating value for customers. We persist in developing modern corporate cultures whereas continuous innovation remains the constant pursuit of the company. Our product range covers a vast variety of applications throughout the world and the brand ' intermot 'is renowned for its outstanding price for value within the industry.

In the past 30 years, the strong technical genes and blood has been driving us to become a competitive professional hydraulic motor manufacturer with the most comprehensive varieties of product portfolio to fulfill customer demands. As the high market shareholder, Ningbo Oil Control has been qualified as the National High-tech Innovation enterprise for 20+ consecutive years and possesses more than 60 intellectual patents including inventions and utility models, and we are the <Low Speed High Torque Hydraulic Motor> National Industry Standard Drafting Entity. Moreover, as the S.R.D.I. innovative enterprise of Zhejiang province, we have a provincial level high-tech R&D center namely - Transmission and Control Engineering R&D Center. As a long-term strategic partner with many first-tier international brands, Ningbo Oil Control always maintains an in-depth cooperative relationship with Zhejiang University and other competitive institutes, our R&D personnel accounts for about 40% of the total staff headcount, over 50% of the employees have 10+ years of professional service experience with the company, the strong R&D team with the stable staff team sets the technology and quality of the enterprise.

In 2022, we successfully integrated MES, ERP, PLM management systems, and introduced WMS intelligent storage and other digital production system to build up a new 5G+ industrial Internet digital green factory, which contributes significantly to the improvement of production efficiency and consistency. At the present, Oil control has a modern production workshop of over 20,000 square meters，and owns many high-quality equipments imported from Japan and Europe such as fully automatic comprehensive machining centers and CNC machine tools, i.e. DMG MORI flexible machining system, Yamazaki Mazak, Doosan, etc. The company has passed the ISO9001:2015 quality system certification and product inspection certification of CCS, BV, NK, Lloyds ,ABS, DNV, international Classification Societies. By providing high-quality and cost-effective products of domestic alternatives to help customers reduce costs.

Our main product range includes: NHM series, GHM series, CM series, FMB (fixed disp.) / FMC(dual-disp.) series of low- speed high-torque hydraulic motor, RM (Swivel cylinder crankshaft) series, PMS (Radial Cam-ring) series LSHT hydraulic motor, OILW travel gearbox, OILP planetary gearbox, OILH hydraulic winch, and EPMZ orbit hydraulic motor. Meanwhile, we are also the distributor of the hydraulic products such as 'M+S' orbit motor of Bulgaria and orbit motor of Eaton Jining. Our products application field covers engineering, hoisting and transportation，metallurgic and heavy duty machinery, oil extraction, coal mining, marine applications, machine tools, plastic molding machines, geological prospecting and other hydraulic transmission systems. Our products are particularly suitable for driving injection moulding machine, lifting screw drives, driving winch and various rolling drums, as well as other transmission mechanics like track and wheel machines.

Confronting with the challenge of the demanding market, we adhere to the corporate creed of 'Take responsibility for our products and services, while fulfilling the actual demands of our customers'. Ningbo Oil Control seeks sustainable development through continuous internal reforms, with the application of intelligent manufacturing technologies, to keep abreast of the development of leading enterprises in injection molding machinery and the marine industries. To embrace the future, Oil Control is playing an active role in the industrial electrification transformation, and is committed to converting tangible products into intangible power. Our vision is not simply to be the Pioneer of Hydraulic Motor industry, but also to create a brilliant future of Hydraulic Motors and to be the most competitive hydraulic motor manufacturer in China.

CONTENTS

EPMZ Series Technical Catalogue

Hydraulic Orbit Motor

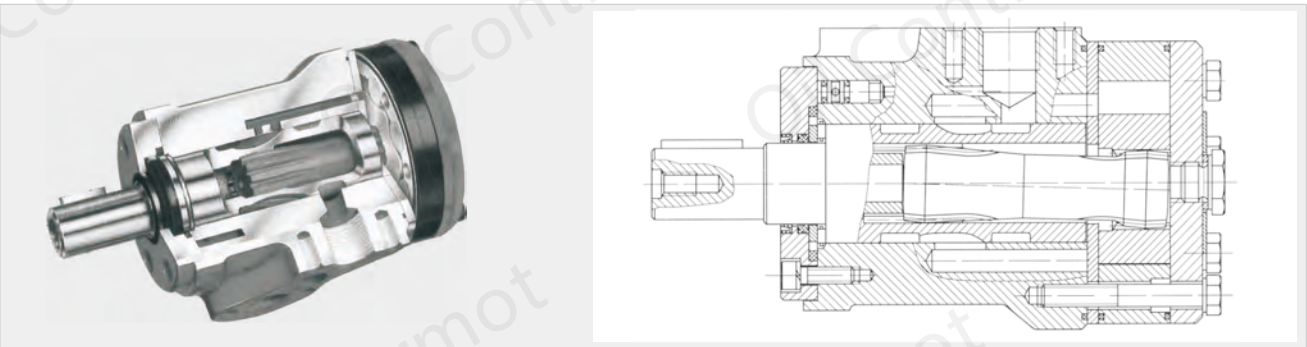
EPMZ SERIES ORBIT HYDRAULIC MOTOR

PRODUCT FEATURE

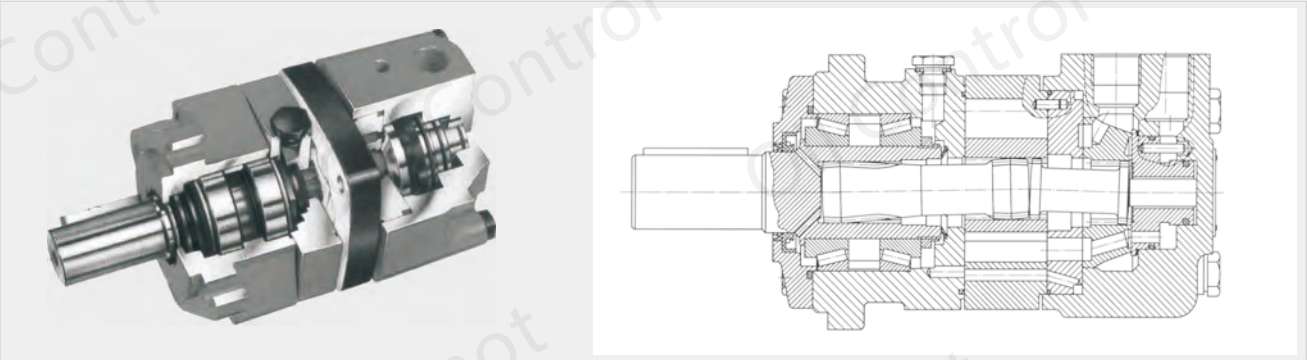
The INTERMOT EPMZ Category is a type of Low Speed High Torque (LSHT) Hydraulic Motor developed based on the orbit principle and planetary cycloid transmission mechanism, where an internal gear is engaged with a fixed planetary gear. The EPMZ design is known for its high power efficiency, low-speed reliability and economic performance. EPMZ array of products feature both axial distribution and disc distribution, to fulfill the customers' needs in various applications in plastic injection mould adjusting, grinders, sprayers, augers and other construction machinery, agricultural equipments, hoisting equipments etc.,

Within the EPMZ category, there are EPMZM, EPMZ, EPMZR, EPMZ1, EPMZH, EPMZ2, EPMZ3, EPMZSY, EPMZT & EPMZV series of motors, with diversified structure and technical features to fulfill the specific application requirements of the customers.

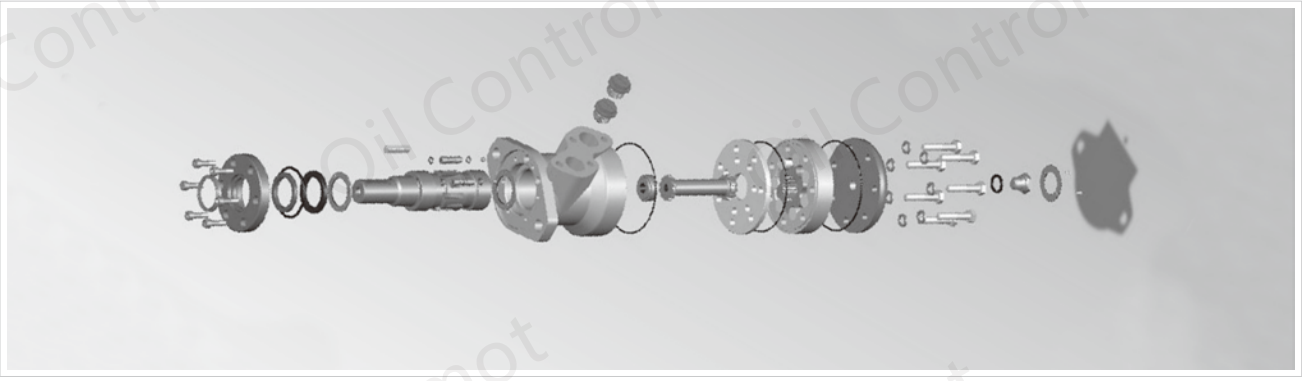
INTRODUCTION OF THE STRUCTURE



(1)EPMZM、EPMZ、EPMZR、EPMZ1、EPMZH、EPMZ2 & EPMZ3 series with axial oil distribution structure.



(2)EPMZSY、EPMZT & EPMZV series with Disc oil distribution structure.



(3)Exploded-View Drawing of EPMZ series

INSTRUCTIONS & ADVICES

To ensure optimal operation of the motor, please strictly follow the guidance below:

1.Oil temperature: normal condition 20℃~60℃, maximum temperature: 90℃ (for no more than 1 hour).

2.Filtering and oil cleanliness: a filter should be installed in the oil circuit (backflow) with the filtration precision level of 10~30μm. A magnetic equipment should be installed at the bottom of the oil tank to prevent any grits, waste or solid particles from entering the oil circuit. The maximum oil contamination level by solid particles is no more than 19/16.

3.Hydraulic Oil Viscosity: 42~74 mm2/s at 40℃ of oil temperature. Appropriate type of hydraulic oil should be applied according to the actual working conditions of the system.

4.The motors can operate in parallel or in series connection. When the back pressure exceeds 10MPa (or rotation speed exceeds 200rpm), an external drain pipe must be connected between the oil drain port and the tank for pressure relief.

5.For EPMZ and EPMZR series motors, customers may choose the type of output shaft according to their application requirements as follows:

5.1 The output shaft with radial bearings that is able work with a certain level of radial force.

5.2 The output shaft without radial bearings which is unable to work with radial force.

In case that radial force exists, radial work load on the output shaft, must be discharged.

6.For EPMZ1, EPMZ2, and EPMZ3 series, the output shaft is radial force tolerant, but is unable to bear considerable level of axial work load.

7.For EPMZSY, EPMZT and EPMZV Types, the output shaft is able to work with considerable amount of work load from both axial and radial directions.

8.The optimal work conditions should be maintained at 1/3~2/3 of the rated work conditions.

9.To obtain a longer service life of the motor, a run-in period of no less than one hour should be in place under 30% of the rated pressure before putting the motor under actual workload.

10.The motor must be filled up with sufficient oil in the casing for the lubrication of the dynamic components before running with load.

TECHNICAL PERFORMANCE PARAMETERS

Distribution Type	Serial Code	Displacement (ml/r)	Max. Pressure (MPa)	Speed Range (rpm)	Max. Output Power (kW)
Axial Distribution	EPMZM	8-50	14	40-1950	3.2
	EPMZ	36-500	17.5	30-1500	13
	EPMZR	36-375	20	30-1250	15
	EPMZH	200-500	20	30-366	18.5
	EPMZ1	50-400	16.5	30-879	11.9
	EPMZ2	125-400	20	30-500	11
	EPMZ3	500-630	20	20-200	17
	EPMZR-BK**	50-375	20	30-509	15
Disc Distribution	EPMZSY	80-475	22.5	8-800	25
	EPMZT	160-800	24	30-625	40
	EPMZV	315-1000	24	10-510	56

EPMZM SERIES ORBIT HYDRAULIC MOTOR

EPMZM SERIES Motor is a low volumn, economical and compact design of Orbit Motor. .
The design adapts the Gerotor gear set structure that features compact size, high power density and light weight.

FEATURES

- Advanced processing and treatments of the Gerotor gear sets, which provides compact size, high efficiency and long service life of the motor.
- Shaft seal of high pressure tolerance applied to enable the use in parallel or in series.
- Advanced structure design, with improved power density charateristics

TECHNICAL PERFORMANCE PARAMETERS

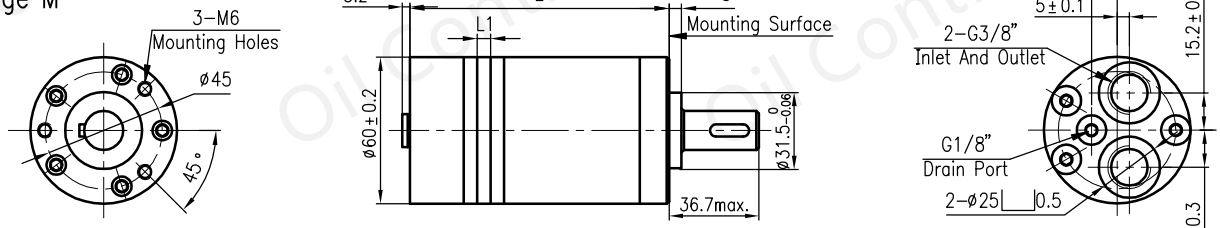
Type		EPMZM8	EPMZM12.5	EPMZM20	EPMZM32	EPMZM40	EPMZM50
Displacement(ml/r)		8.2	12.9	19.9	31.6	39.8	50.3
Speed (rpm)	Rated	1537	1256	814	513	452	358
	CONT	1950	1550	1000	630	500	400
	INR	2450	1940	1250	800	630	500
Torque (N.m)	Rated	8	13	19	31	37	33
	CONT	11	16	25	40	45	46
	INR	15	23	35	57	70	88
	Peak	21	33	51	64	82	100
Output Power (kW)	Rated	1.3	1.7	1.7	1.7	1.7	1.2
	CONT	1.8	2.4	2.4	2.4	2.2	1.8
	INR	2.6	3.2	3.2	3.2	3.2	3.2
Pressure Drop (MPa)	Rated	9	9	9	9	8.5	6
	CONT	10	10	10	10	9	7
	INR	14	14	14	14	14	14
	Peak	20	20	20	16	16	16
Flow (L/min)	Rated	14	18	18	18	20	20
	CONT	16	20	20	20	20	20
	INR	20	25	25	25	25	25
Weight(kg)		1.9	2	2.1	2.2	2.3	2.4

Type		Max.inlet Pressure (MPa)
EPMZM8~50	Rated	14
	CONT	17.5
	INR	22.5

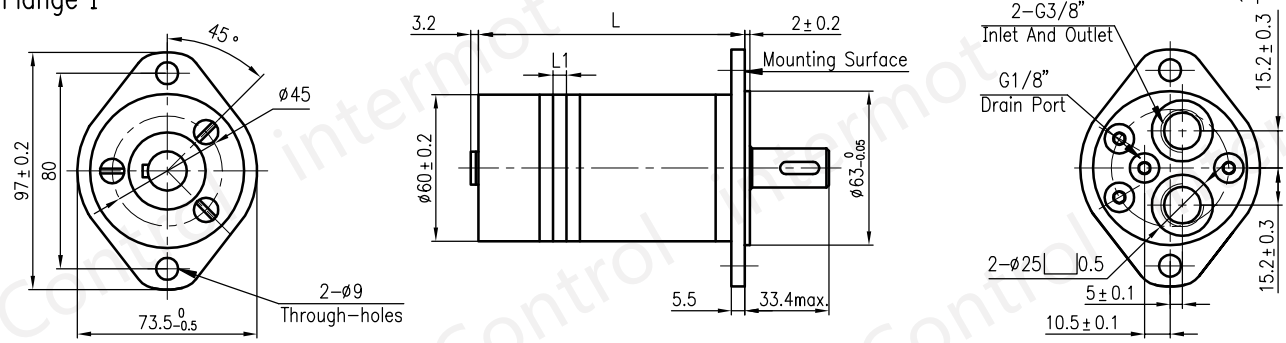
◎ Rated Speed / Rated Torque: Speed / Torque value of the operating motor under rated flow and pressure
◎ Continuous value: Max. value of the operating motor in continuous working condition..
◎ Intermittent value: Max. value of the motor when working 6 seconds per minute.
◎ Peak value: Max. value of the motor when working for 0.6 second per minute.

EPMZMh END PORTS INSTALLATION DIMENSIONS

Flange M

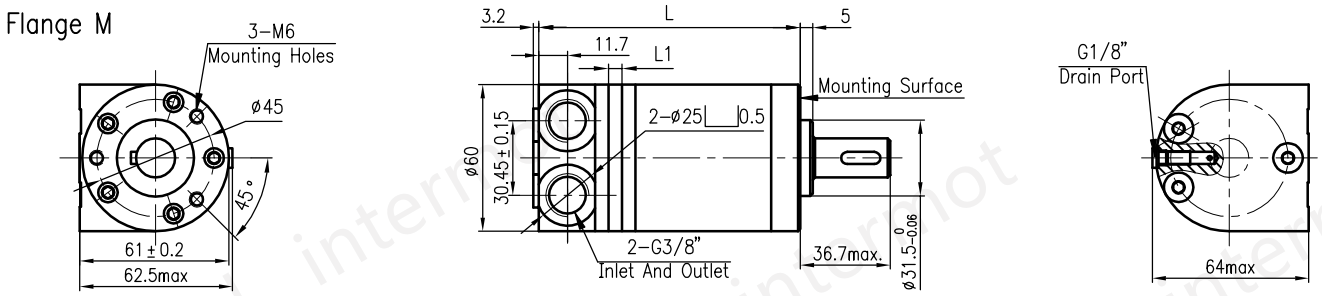


Flange I

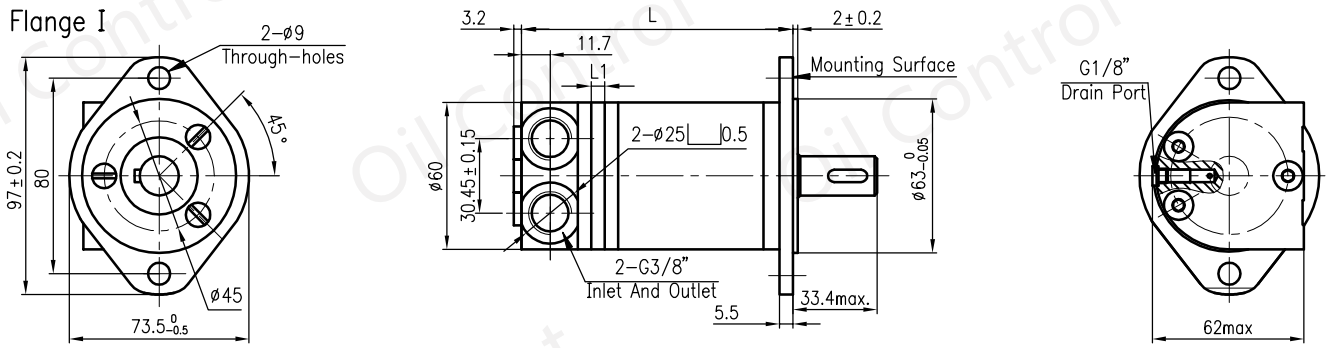


EPMZMc SIDE PORTS INSTALLATION DIMENSIONS

Flange M

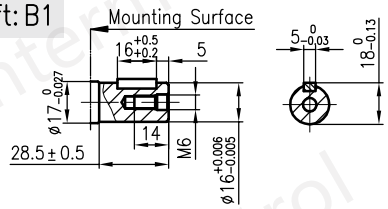


Flange I



Standard Parallel Key Shaft: B1

Parallel Key : 5X5X16



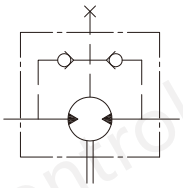
EPMZMh END PORTS INSTALLATION DIMENSIONS

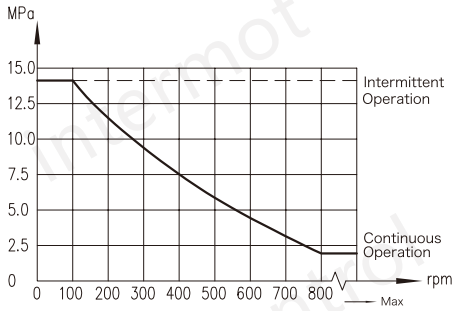
型号	M法兰		I法兰	
	L	L1	L	L1
EPMZMh8	104	3.5	107.5	3.5
EPMZMh12.5	106	5.5	109.5	5.5
EPMZMh20	109	8.5	112.5	8.5
EPMZMh32	114	13.5	117.5	13.5
EPMZMh40	117.5	17	121	17
EPMZMh50	122	21.5	125.5	21.5

EPMZMc SIDE PORTS INSTALLATION DIMENSIONS

型号	M法兰		I法兰	
	L	L1	L	L1
EPMZMc8	105	3.5	108.5	3.5
EPMZMc12.5	107	5.5	110.5	5.5
EPMZMc20	110	8.5	113.5	8.5
EPMZMc32	115	13.5	118.5	13.5
EPMZMc40	118.5	17	122	17
EPMZMc50	123	21.5	126.5	21.5

PERMISSABLE PRESSURE LIMIT OF OUTPUT SHAFT SEAL



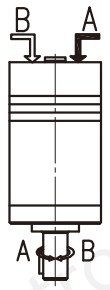


In applications without drain-line, pressure on output shaft seal is slightly higher than in the back-flow drain.

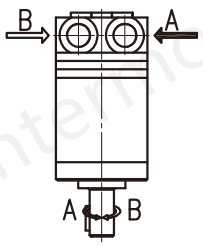
In applictions with drain-line, pressure on output shaft seal is the same with the pressure in the drain-line.

DIRECTION OF SHAFT ROTATION:STANDARD

When facing shaft end of motor,shaft to rotate:Clockwise when port "A" is pressurized.Counter- clockwise when port "B" is pressurized.



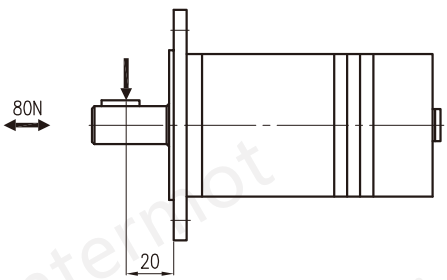
EPMZMh End Port



EPMZMc Side Port

STATUS OF THE SHAFT'S RADIAL FORCE

$$Fr = \frac{130400}{61.5+L} N$$



Fr=Radial Force (N)
L=Distance (mm)
n=Speed (rpm)
Max.Force Load
Rhomb-flange L=15mm
Circle-flange L=20mm

ORDER CODES

	1		2		3		4		5		6
EPMZM		—		—		—		—		—	

Pos.1		2	3		4		5		6	
Structure Code		Displacement	Flange & Mounting		Output Shaft		Oil Ports & Drain Port		Rotation Direction	
h	End Port	8	M	3-M6Circle-flange, Mounting⌀31.5X5	B1	Parallel Key5X5X16 Shaft⌀25	TA9O9	G3/8,G1/8	Omit	Standard
c	Side Port	12.5	I	2-⌀9Romb-flange, Mounting⌀63X2					F	Opposite
		20								
		32								
		40								
		50								

EPMZ SERIES ORBIT HYDRAULIC MOTOR

EPMZ SERIES Motor is a low volumn, economical and compact design of Orbit Motor with axial oil distribution.
The design adapts the Gerolor gear set structure that features compact size, high power density and light weight.

FEATURES

- Advanced processing and treatments of the Gerotor gear sets, which provides compact size, high efficiency and long service life of the motor.
- Shaft seal of high pressure tolerance applied to enable the use in parallel or in series.
- Advanced structure design, with improved power density charateristics

TECHNICAL PERFORMANCE PARAMETERS

Type		EPMZ 36	EPMZ 50	EPMZ 80	EPMZ 100	EPMZ 125	EPMZ 160	EPMZ 200	EPMZ 250	EPMZ 315	EPMZ 400	EPMZ 500	EPMZ 250	EPMZ 315	EPMZ 400	EPMZ 500
Displacement(ml/r)		36	51.7	77.7	96.2	120.2	157.2	194.5	240.3	314.5	389.5	486.5	240.3	315	389.5	486.5
Speed (rpm)	Rated	1050	850	650	520	390	310	260	200	156	130	110	200	156	130	110
	CONT	1500	1150	770	615	490	383	310	250	192	155	120	250	192	155	120
	INR	1650	1450	960	770	615	475	385	310	240	190	150	310	240	190	150
Torque (N.m)	Rated	55	81	129	161	202	204	259	325	375	360	385	325	375	360	430
	CONT	55	100	146	182	236	302	360	380	375	360	385	460	475	490	430
	INR	76	128	186	227	290	370	440	460	555	525	560	570	555	580	560
	Peak	96	148	218	264	360	434	540	550	650	680	680	670	840	840	780
Output Power (kW)	CONT	8	10	10	11	10	10	10	8.5	7	6	5	8.5	7	6	6
	INR	11.5	12	12	13	12	12	12	10.5	8.5	7	6	10.5	8.5	7	7
Pressure Drop (MPa)	Rated	12.5	12.5	12.5	12.5	12.5	10	10	10	9	7	6	10	9	7	7
	CONT	12.5	14	14	14	14	14	14	11	9	7	6	14	12	9.5	7
	INR	16.5	17.5	17.5	17.5	17.5	17.5	17.5	14	14	10.5	9	17.5	14	11.5	9
	Peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	18	16	14	12	22.5	22.5	18	13
Flow (L/min)	Rated	40	45	55	55	55	55	55	55	55	55	55	55	55	55	55
	CONT	55	60	60	60	60	60	60	60	60	60	60	60	60	60	60
	INR	60	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Weight(kg)		5.6	5.6	5.7	5.9	6	6.2	6.4	6.7	6.9	7.4	8	6.7	6.9	7.4	8
Diameter Of Coupling Shaft(mm)		Φ25 Φ25.4 Φ31.75 Φ32							Φ25 Φ25.4				Φ31.75 Φ32			

Please refer to the above datasheet based on the size of coupling shaft

◎ Rated Speed / Rated Torque: Speed / Torque value of the operating motor under rated flow and pressure
◎ Continuous value: Max. value of the operating motor in continuous working condition..
◎ Intermittent value: Max. value of the motor when working 6 seconds per minute.
◎ Peak value: Max. value of the motor when working for 0.6 second per minute.

For dimensions refer to page F10

EPMZR SERIES ORBIT HYDRAULIC MOTOR

EPMZR SERIES Motor is design of Orbit Motor with axial oil distribution.
The design adapts the advanced Gerolor gear set structure that realizes automatic compensation in operating under high pressure and features reliable and smooth operation, high efficiency and long service life.

FEATURES

- Application of advanced gerolor gear set design that features start-up under low pressure, smooth running and high efficiency.
- Shaft seal of high pressure tolerance applied to enable the use in parallel or in series.
- Special design in the coupling shaft system to realize the long service life.
- Special design and setting of the oil distribution system to reduce the noise level.
- Compact-size with easy installation.

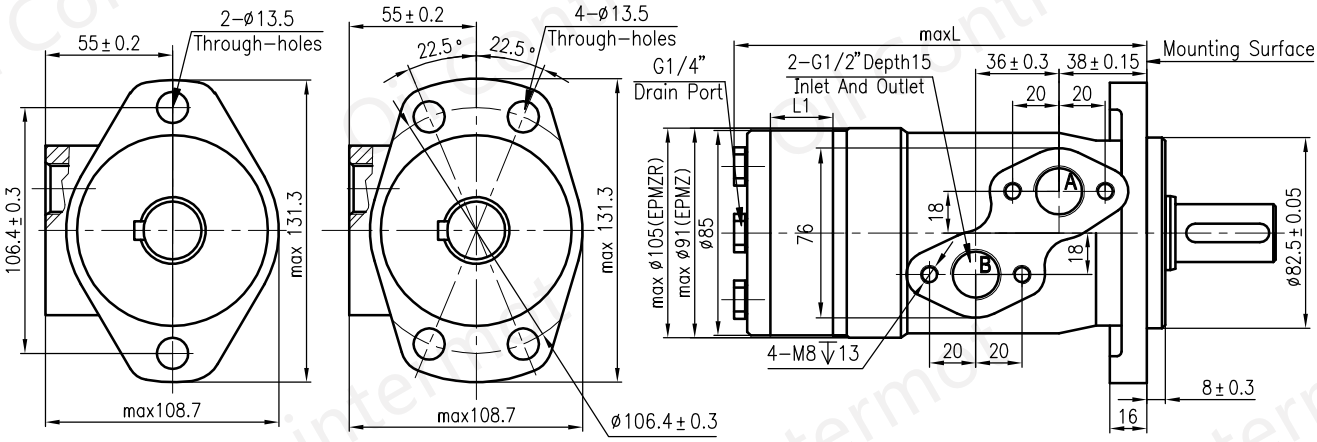
TECHNICAL PERFORMANCE PARAMETERS

Type		EPMZR 36	EPMZR 50	EPMZR 80	EPMZR 100	EPMZR 125	EPMZR 160	EPMZR 200	EPMZR 250	EPMZR 315	EPMZR 375	EPMZR 160	EPMZR 200	EPMZR 250	EPMZR 315	EPMZR 375
Displacement(ml/r)		36	51.7	81.5	102	127.2	157.2	194.5	253.5	317.5	381.4	157.2	194.5	253.5	317.5	381.4
Speed (rpm)	Rated	1055	750	650	520	420	330	265	200	165	135	330	265	200	165	135
	CONT	1250	960	750	600	475	378	310	240	190	155	378	310	240	190	155
	INR	1520	1150	940	750	600	475	385	300	240	190	475	385	300	240	190
Torque (N.m)	Rated	69	100	160	200	250	320	330	352	360	365	320	330	352	360	420
	CONT	72	100	195	240	300	360	360	390	390	365	380	450	540	550	580
	INR	83	126	220	280	340	430	440	490	535	495	430	500	610	690	690
	Peak	105	165	270	320	370	460	560	640	650	680	460	560	710	840	830
Output Power (kW)	CONT	8.5	9.5	12.5	13	125	12.5	10	7	6	5	12.5	11	10	9	7.5
	INR	9.8	11.2	15	15	14.5	14	13	9.5	9	8	14	13	12	10	9
Pressure Drop (MPa)	Rated	14	14	14	14	14	14	12	11	8.5	7	14	12	11	8.5	8.5
	CONT	14	14	17.5	17.5	17.5	16.5	13	11	9	7	17.5	17.5	17.5	13.5	11.5
	INR	16.5	17.5	20	20	20	20	17.5	15	13	10	20	20	20	17.5	15
	Peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	20	17.5	15	22.5	22.5	22.5	21	17.5
Flow (L/min)	Rated	40	40	55	55	55	55	55	55	55	55	55	55	55	55	55
	CONT	45	50	60	60	60	60	60	60	60	60	60	60	60	60	60
	INR	55	60	75	75	75	75	75	75	75	75	75	75	75	75	75
Weight (kg)		6.5	6.7	6.9	7	7.3	7.6	8	8.5	9	9.5	7.6	8	8.5	9	9.5
Diameter Of Coupling		Φ25 Φ25.4 Φ31.75 Φ32					Φ25 Φ25.4					Φ31.75 Φ32				

Please refer to the above datasheet based on the size of coupling shaft

◎ Rated Speed / Rated Torque: Speed / Torque value of the operating motor under rated flow and pressure
◎ Continuous value: Max. value of the operating motor in continuous working condition..
◎ Intermittent value: Max. value of the motor when working 6 seconds per minute.
◎ Peak value: Max. value of the motor when working for 0.6 second per minute.

EPMZ&EPMZR INSTALLATION DIMENSIONS



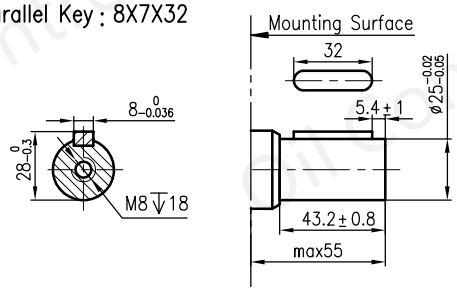
I: Two Hole Rhomb-flange II4: Four Hole Rhomb-flange

Type	L	L1
EPMZ36	137	7
EPMZ50	137	7
EPMZ80	140.5	10.5
EPMZ100	143	13
EPMZ125	146	16
EPMZ160	151	21
EPMZ200	157	26
EPMZ250	162	32
EPMZ315	172	42
EPMZ400	182	52
EPMZ500	195	65

Type	L	L1
EPMZR36	137	7
EPMZR50	140	10
EPMZR80	146	16
EPMZR100	150	20
EPMZR125	155	25
EPMZR160	161.5	30.5
EPMZR200	168	38.1
EPMZR250	180	50
EPMZR315	192	62
EPMZR375	204	74

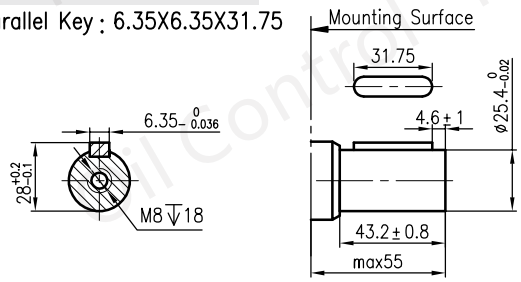
Standard Parallel Key Shaft: B1

Parallel Key : 8X7X32



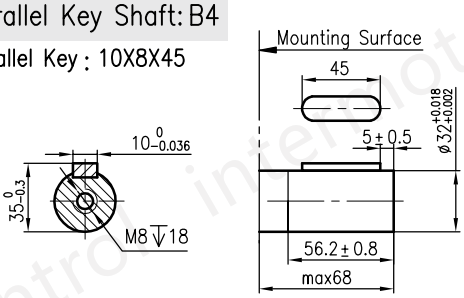
Parallel Key Shaft: B2

Parallel Key : 6.35X6.35X31.75

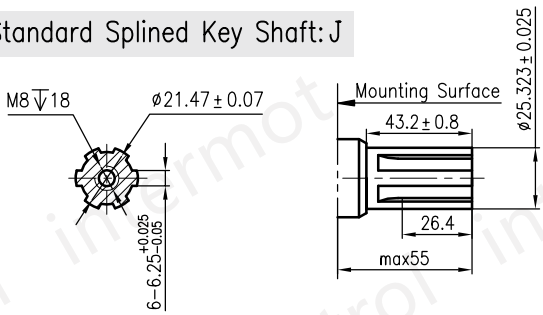


Parallel Key Shaft: B4

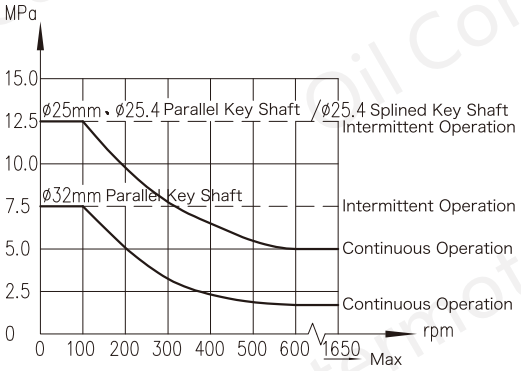
Parallel Key : 10X8X45



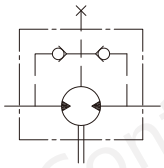
Standard Splined Key Shaft: J



PERMISSABLE PRESSURE LIMIT OF OUTPUT SHAFT SEAL

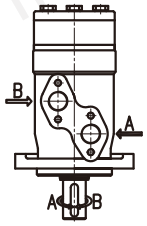


In applications without drain-line, pressure on output shaft seal is slightly higher than in the back-flow drain.In applictions with drain-line, pressure on output shaft seal is the same with the pressure in the drain-line.



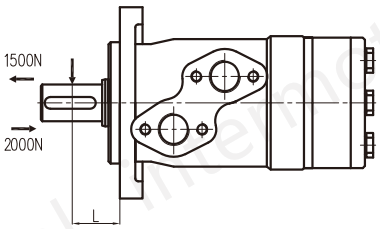
DIRECTION OF SHAFT ROTATION:STANDARD

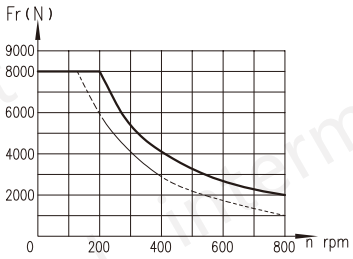
When facing shaft end of motor,shaft to rotate:Clockwise when port “A” is pressurized.Counter- clockwise when port “B” is pressurized.



STATUS OF THE SHAFT’S RADIAL FORCE

$$Fr = \frac{800}{n} \cdot \frac{250000}{95+L} N$$





Fr=Radial Force (N)
L=Distance (mm)
n=Speed (rpm)
Max.Force Load
Rhomb-flange L=30mm
Square-flange L=24mm

——— Diameter Of Coupling Shaft Φ25和Φ25.4

--------- Diameter Of Coupling Shaft Φ32

ORDER CODES

	1		2		3		4		5		6
EPMZ		—		—		—		—		—	

Pos.1	2	3		4		5		6	
Structure Code	Displacement	Flange & Mounting		Output Shaft		Oil Ports & Drain Port		Rotation Direction	
Omit	36 50 80 100 125 160 200 250 315 400 500	I	2-Φ13.5Rhomb-flange, MountingΦ82.5X8	BI	Φ25Shaft, Parallel Key8X7X32	TA101	G1/2Manifold4XM8, G1/4	Omit	Standard
		Ⅱ4	4-Φ13.5Rhomb-flange, MountingΦ82.5X8	B2	Φ25.4Shaft, Parallel Key6.35X6.35X31.75	TA202	M22X1.5Manifold4XM8, M14X1.5	F	Opposite
				B4	Φ32Shaft, Parallel Key10X8X45	TA805	7/8-140-ringManifold 4X5/16-18UNC, 7/16-20UNF		
				J	Φ25.4Shaft, Splined KeySAE 6B				
R	36 50 80 100 125 160 200 250 315 375	I	2-Φ13.5Rhomb-flange, MountingΦ82.5X8	BI	Φ25Shaft, Parallel Key8X7X32	TA101	G1/2Manifold4XM8, G1/4	Omit	Standard
		Ⅱ4	4-Φ13.5Rhomb-flange, MountingΦ82.5X8	B2	Φ25.4Shaft, Parallel Key6.35X6.35X31.75	TA202	M22X1.5Manifold4XM8, M14X1.5	F	Opposite
				B4	Φ32Shaft, Parallel Key10X8X45	TA805	7/8-140-ringManifold 4X5/16-18UNC, 7/16-20UNF		
				J	Φ25.4Shaft, Splined KeySAE 6B				

EPMZH SERIES ORBIT HYDRAULIC MOTOR

EPMZH SERIES Motor is design of Orbit Motor with axial oil distribution.
The design adapts the advanced Gerolor gear set structure that realizes automatic compensation in operating under high pressure and features reliable and smooth operation, high efficiency and long service life.

FEATURES

- Application of advanced gerolor gear set design that features start-up under low pressure, smooth running and high efficiency.
- Shaft seal of high pressure tolerance applied to enable the use in parallel or in series.
- Special design in the coupling shaft system to realize the long service life.
- Special design and setting of the oil distribution system to reduce the noise level.
- Compact-size with easy installation.

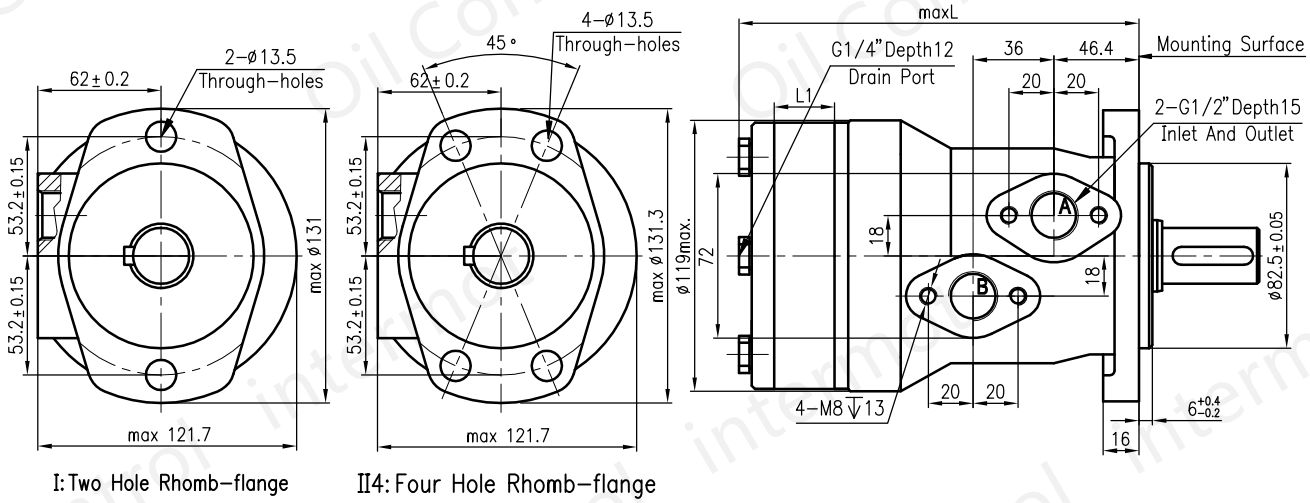
TECHNICAL PERFORMANCE PARAMETERS

Type		EPMZH 200	EPMZH 250	EPMZH 315	EPMZH 400	EPMZH 500
Displacement(ml/r)		203.2	255.9	316.1	406.4	489.2
Speed (rpm)	Rated	290	230	180	145	120
	CONT	366	290	236	183	155
	INR	439	348	282	220	184
Torque (N.m)	Rated	400	500	600	705	670
	CONT	510	621	740	850	830
	INR	579	702	827	990	1040
	Peak	651	790	980	1092	1170
Output Power (kW)	CONT	16	16	14	12.5	11
	INR	18.5	18.5	15.5	15	14
Pressure Drop (MPa)	Rated	14	14	14	12.5	10
	CONT	17.5	17.5	17.5	15.5	12.5
	INR	20	20	20	19	16
	Peak	22.5	22.5	22.5	21	18
Flow (L/min)	Rated	60	60	60	60	60
	CONT	75	75	75	75	75
	INR	90	90	90	90	90
Weight(kg)		10.5	11	11.5	12.3	13

Type		Max.inlet Pressure (MPa)
EPMZH 200-500	CONT	20
	INR	22.5
	Peak	25

◎ Rated Speed / Rated Torque: Speed / Torque value of the operating motor under rated flow and pressure
◎ Continuous value: Max. value of the operating motor in continuous working condition..
◎ Intermittent value: Max. value of the motor when working 6 seconds per minute.
◎ Peak value: Max. value of the motor when working for 0.6 second per minute.

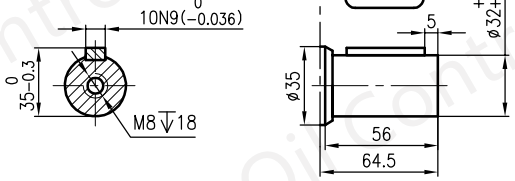
EPMZH INSTALLATION DIMENSIONS



Type	L	L1
EPMZH200	168	27
EPMZH250	175	34
EPMZH315	184	42
EPMZH400	195	54
EPMZH500	206	65

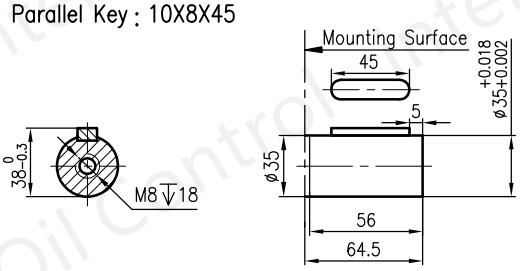
Standard Parallel Key Shaft: B1

Parallel Key : 10X8X45



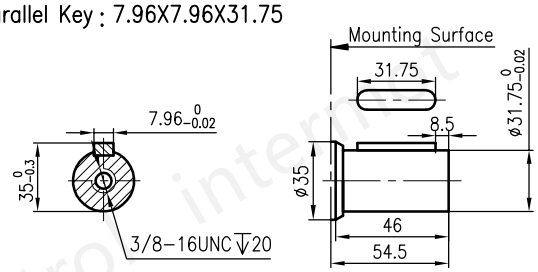
Parallel Key Shaft: B2

Parallel Key : 10X8X45

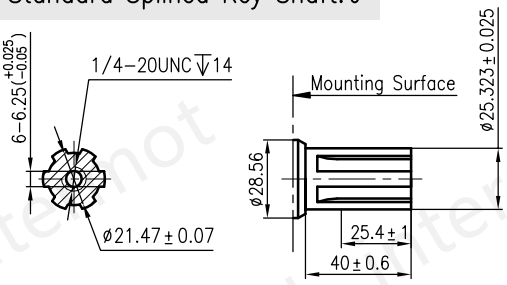


Parallel Key Shaft: B5

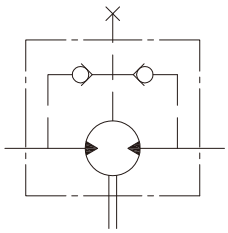
Parallel Key : 7.96X7.96X31.75

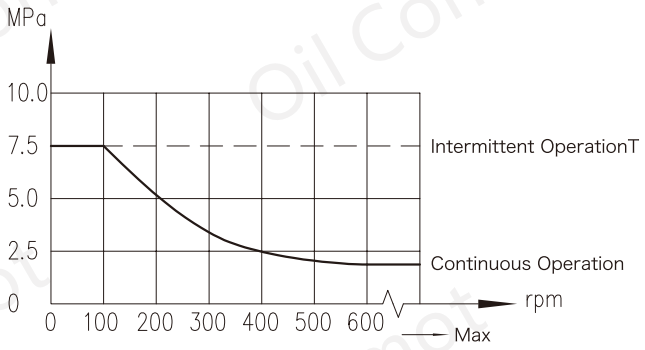


Standard Splined Key Shaft: J



PERMISSABLE PRESSURE LIMIT OF OUTPUT SHAFT SEAL

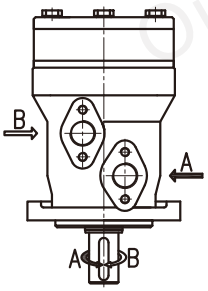




In applications without drain-line, pressure on output shaft seal is slightly higher than in the back-flow drain.In applictions with drain-line, pressure on output shaft seal is the same with the pressure in the drain-line.

DIRECTION OF SHAFTROTATION:STANDARD

When facing shaft end of motor,shaft to rotate:Clockwise when port "A" is pressurized.Counter- clockwise when port "B" is pressurized.



ORDER CODES

1		2		3		4		5		6
EPMZH	—		—		—		—		—	

Pos.1	2	3		4		5		6	
Structure Code	Displacement	Flange & Mounting		Output Shaft		Oil Ports & Drain Port		Rotation Direction	
EPMZH	200 250 315 400 500	I II 4	2-Φ13.5Rhomb-flange, MountingΦ82.5X6 4-Φ13.5Rhomb-flange, MountingΦ82.5X6	BI B2 B5 J	ShaftΦ32, Parallel Key10X8X45 ShaftΦ35, Parallel Key10X8X45 ShaftΦ31.75, Parallel Key7.96X7.96X31.75 ShaftΦ25.4, Splined KeySAE 6B	TA101 TA202 TA805	G1/2Manifold, 4-M8, G1/4 M22X1.5Manifold, 4-M8, M14X1.5 7/8-140-O-ringManifold 4-48, 7/16-20UNF	Omit F	Standard Opposite

EPMZ1 SERIES ORBIT HYDRAULIC MOTOR

EPMZ1 SERIES Motor is a low volumn, economical and compact design of Orbit Motor with axial oil distribution. The design adapts the Gerolor gear set structure that features compact size, high power density and light weight.

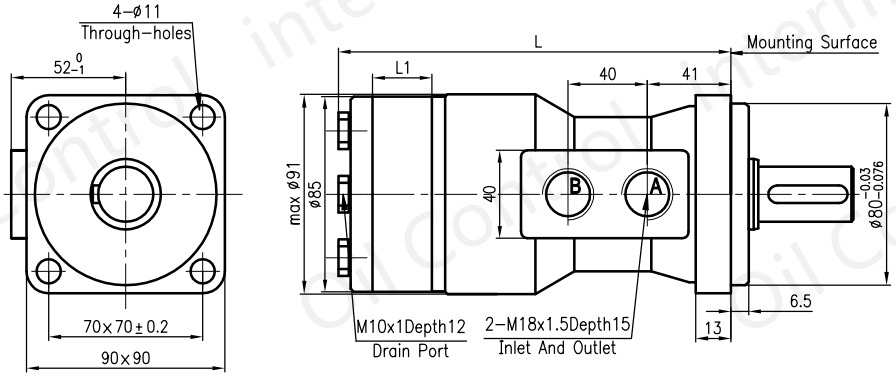
FEATURES

- Advanced processing and treatments of the Gerotor gear sets, which provides compact size, high efficiency and long service life of the motor.
- Shaft seal of high pressure tolerance applied to enable the use in parallel or in series.
- Advanced structure design, with improved power density charateristics
- The output shaft is equipped with 2 tapered bearings that allow some radial forces

TECHNICAL PERFORMANCE PARAMETERS

Type		EPMZ1 50	EPMZ1 80	EPMZ1 100	EPMZ1 125	EPMZ1 160	EPMZ1 200	EPMZ1 250	EPMZ1 315	EPMZ1 400
Displacement(ml/r)		51.77	77.7	96.2	117.9	155.5	189.9	231	311.7	386.2
Speed (rpm)	CONT	879	850	589	475	370	296	237	189	149
	INR	975	827	673	594	463	370	297	236	185
Torque (N.m)	CONT	81	129	161	202	245	286	360	406	435
	INR	108	171	213	268	342	390	456	505	533
Output Power (kW)	CONT	7	9.1	9	9.1	8.7	8.1	8.2	7.2	6.1
	INR	8.9	11.8	11.9	11.8	11.9	10.9	10.1	8.6	7.2
Pressure Drop (MPa)	Rated	12.5	12.5	12.5	12.5	12.5	11	11	11	10
	CONT	14	14	14	14	14	14	12	11	10
	INR	16.5	16.5	16.5	16.5	16.5	16.5	14	12.5	10.5
Flow (L/min)	CONT	45	60	60	60	60	60	60	60	60
	INR	50	75	75	75	75	75	75	75	75
Weight(kg)		5.6	5.7	5.9	6	6.2	6.4	6.6	6.9	7.4

EPMZ1 INSTALLATION DIMENSIONS

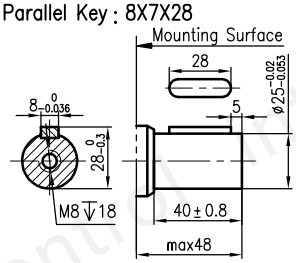


Type	L	L1
EPMZ1-50	132	7
EPMZ1-80	135.5	10.5
EPMZ1-100	138	13
EPMZ1-125	141	16
EPMZ1-160	146	21
EPMZ1-200	151	26
EPMZ1-250	157	32
EPMZ1-315	167	42
EPMZ1-400	177	52

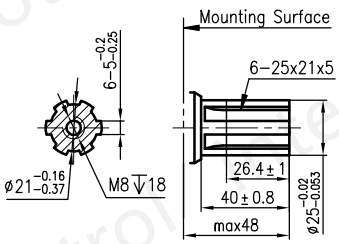
I4: Four Hole Square-flange

Standard Parallel Key Shaft: B1

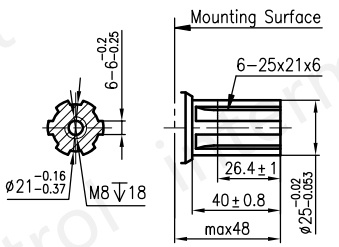
Parallel Key : 8X7X28



Splined Key Shaft: J1



Splined Key Shaft: J2



EPMZ2&EPMZ3 SERIES ORBIT HYDRAULIC MOTOR

EPMZ2&EPMZ3 series motors adopt shaft oil distribution design with a radial ball

FEATURES

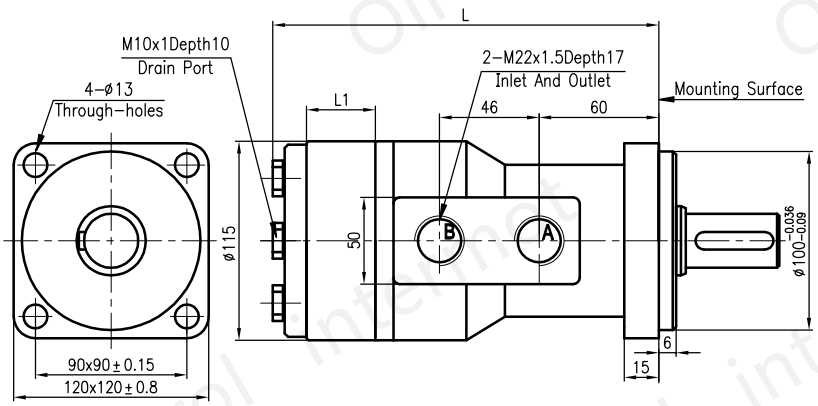
- Separation of oil distribution mechanism and torque output mechanism makes the distribution system free from any load,but only play the role of distribution,and makes the coupling purely without any abrasion. Advantage:little leakage,high volume efficiency and long service life.
- Adopts dual bearing design ,bear larger radial load force.
- Advanced gerotor gear set design,bear high back pressure used either in parallel or in series.
- Advanced construction design,high power and weight.

TECHNICAL PERFORMANCE PARAMETERS

型号		EPMZ2 125	EPMZ2 160	EPMZ2 200	EPMZ2 250	EPMZ2 315	EPMZ2 400	EPMZ3 500	EPMZ3 630
Displacement(ml/r)		124.1	164.7	200	248.3	319.2	400	518	666
Speed (rpm)	CONT	400	310	250	200	150	125	160	125
	INR	500	400	310	250	200	150	200	160
Torque (N.m)	CONT	215	285	347	385	495	477	772	993
	INR	268	355	459	470	568	620	1054	1355
Output Power (kW)	CONT	8.8	9	9	8	8	6	13	13
	INR	11	11	11	10	9	9	17	17
Pressure Drop (MPa)	Rated	14	14	14	12.5	12.5	10	12.5	12.5
	CONT	17	17	17	14	14	12.5	16	16
Flow (L/min)	CONT	60	60	60	60	60	60	60	60
	INR	75	75	75	75	75	75	75	75
Weight(kg)		7.2	7.8	8.1	8.4	9	9.5	17.5	18.5

◎ Rated Speed / Rated Torque: Speed / Torque value of the operating motor under rated flow and pressure
◎ Continuous value: Max. value of the operating motor in continuous working condition..
◎ Intermittent value: Max. value of the motor when working 6 seconds per minute.
◎ Peak value: Max. value of the motor when working for 0.6 second per minute.

EPMZ2 INSTALLATION DIMENSIONS

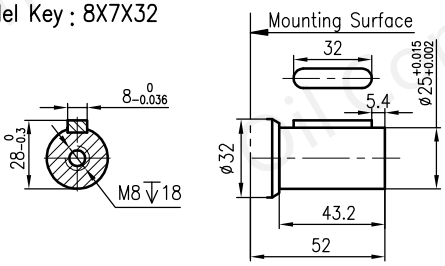


I4: Four Hole Square-flange

Type	L	L1
EPMZ2-125	180	25
EPMZ2-160	176	21
EPMZ2-200	182	27
EPMZ2-250	189	34
EPMZ2-315	197	42
EPMZ2-400	209	54

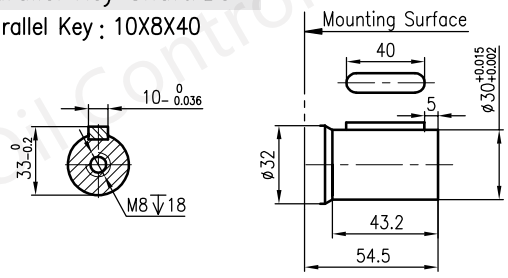
Standard Parallel Key Shaft: B1

Parallel Key : 8X7X32

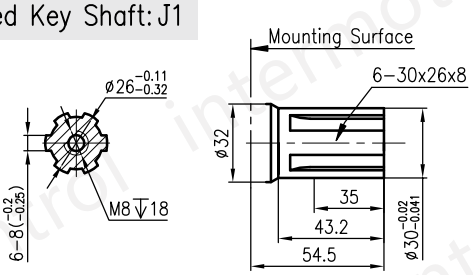


Parallel Key Shaft: B3

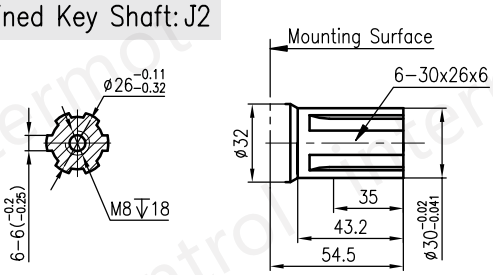
Parallel Key : 10X8X40



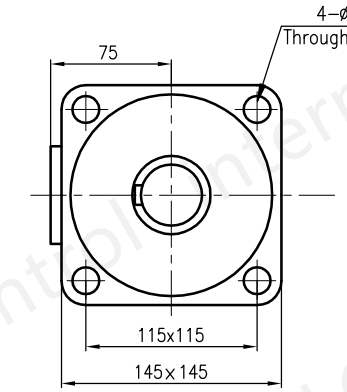
Splined Key Shaft: J1



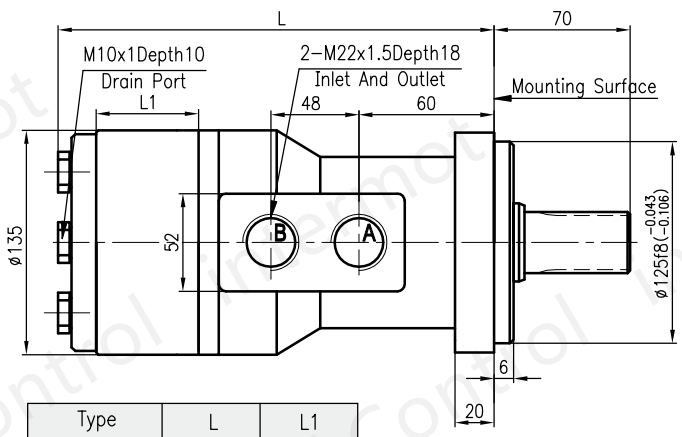
Splined Key Shaft: J2



EPMZ3 INSTALLATION DIMENSIONS

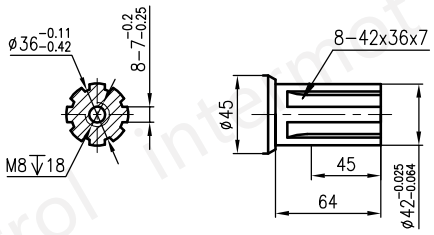


I4: Four Hole Square-flange

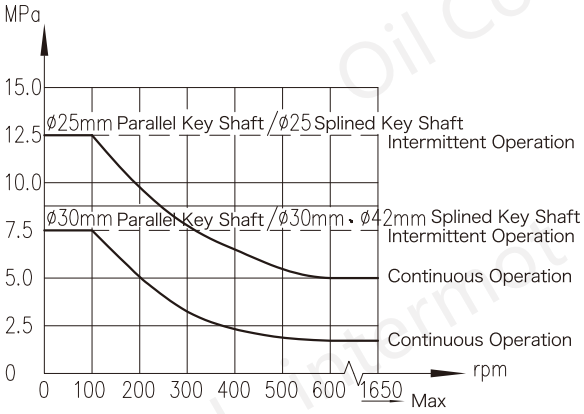


Type	L	L1
EPMZ3-500	214.5	42
EPMZ3-630	226.5	54

Splined Key Shaft: J1

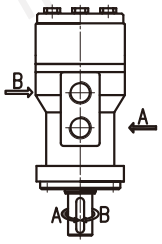


PERMISSABLE PRESSURE LIMIT OF OUTPUT SHAFT SEAL

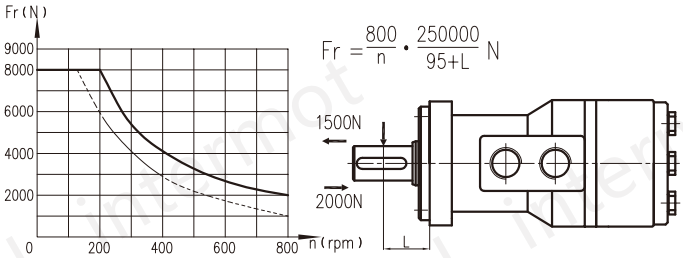


DIRECTION OF SHAFT ROTATION:STANDARD

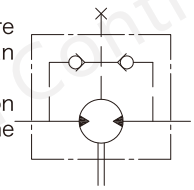
When facing shaft end of motor,shaft to rotate:Clockwise when port "A" is pressurized.Counter- clockwise when port "B" is pressurized.



STATUS OF THE SHAFT'S RADIAL FORCE



In applications without drain-line, pressure on output shaft seal is slightly higher than in the back-flow drain.
In applictions with drain-line, pressure on output shaft seal is the same with the pressure in the drain-line.



Diameter Of Coupling ShaftΦ25&Φ25.4
Diameter Of Coupling ShaftΦ30&Φ42

Fr=Radial Force (N)
L=Distance (mm)
n=Speed (rpm)
Max.Force Load
Rhomb-flange L=30mm
Square-flange L=24mm

ORDER CODES

	1		2		3		4		5		6
EPMZ		—		—		—		—		—	

Pos.1	2	3		4		5		6	
Structure Code	Displacement	Flange & Mounting		Output Shaft		Oil Ports & Drain Port		Rotation Direction	
1	50 80 100 125 160 200 250 315 400	I 4	4-Φ11Square-flange, MountingΦ80X5	BI J1 J2	ShaftΦ25, Parallel Key8X7X28 ShaftΦ25, Splined Key6-25X21X5 ShaftΦ25, Splined Key6-25X21X6	TA303 TA203 TA101	M18X1.5,M10X1 M22X1.5,M10X1 G1/2,G1/4	Omit F	Standard Opposite
2	80 100 125 160 200 250 315 400	I 4	4-Φ13Square-flange, MountingΦ100X6	BI B3 J J2	ShaftΦ25, Parallel Key8X7X32 ShaftΦ30, Parallel Key10X8X40 ShaftΦ30, Splined Key6-30X26X8 ShaftΦ30, Splined Key6-30X26X6	TA203	M22X1.5,M10X1		
3	500 630	I 4	4-Φ13Square-flange, MountingΦ125X6	J	ShaftΦ42, Splined Key8-42X36X7	TA203	M22X1.5, M10X1		

EPMZSY SERIES ORBIT HYDRAULIC MOTOR

EPMZSY SERIES Motor applies the advanced Gerolor gear set design with disc oil distribution.

FEATURES

- Application of advanced gerolor gear set design that features start-up under low pressure, smooth running and high efficiency.
- Comparatively high pressure tolerance with high output torque. The output shaft is equipped with tapered roller bearings that allow high axial and radial forces. The Type features excellent high pressure performance and high torque in wide range of applications
- Advanced design of gerolor gear set that realizes automatic compensation in operating under high pressure resulting in reliable and smooth operation, high efficiency and long service life.
- Advanced deign of disc oil distribution system features enhanced oil distribution reliability and precision which is the fundamental basis of high volumetric efficiency, long service life, smooth and stable running of the motor

TECHNICAL PERFORMANCE PARAMETERS

Type		EPMZSY 80	EPMZSY 100	EPMZSY 125	EPMZSY 160	EPMZSY 200	EPMZSY 250	EPMZSY 315	EPMZSY 400	EPMZSY 475
Displacement(ml/r)		80.6	100.8	125	154	194	243	311	394	475
Speed (rpm)	Rated	675	540	432	337	270	216	171	135	110
	CONT	800	748	600	470	375	300	240	185	155
	INR	988	900	720	560	450	360	280	225	185
Torque (N.m)	Rated	175	220	273	445	505	620	700	765	780
	CONT	225	290	365	485	586	708	880	880	910
	INR	250	320	400	540	645	806	960	960	960
Output Power (kW)	Rated	12	12.4	12.4	12.4	12.4	12.4	11.2	9.6	8.6
	CONT	16	18	18	18.1	18.1	18	17	11	9
	INR	20	22	23	25	24	23.8	20.2	12	11
Pressure Drop (MPa)	Rated	16	16	16	19	19	18	16	14	12
	CONT	20.5	20.5	20.5	21	21	20	20	16	14
	INR	22.5	22.5	22.5	22.5	22.5	22.5	22.5	17.5	15
	Peak	29.5	29.5	29.5	28	27	27	26	21	17.5
Flow (L/min)	CONT	65	75	75	75	75	75	75	75	75
	INR	80	90	90	90	90	90	90	90	90
Max.inlet Pressure (MPa)	Rated	21	21	21	21	21	21	21	21	21
	CONT	25	25	25	25	25	25	25	25	25
	INR	30	30	30	30	30	30	30	30	30
Weight(kg)		9.8	10	10.3	10.7	11.1	11.6	12.3	13.2	14.3

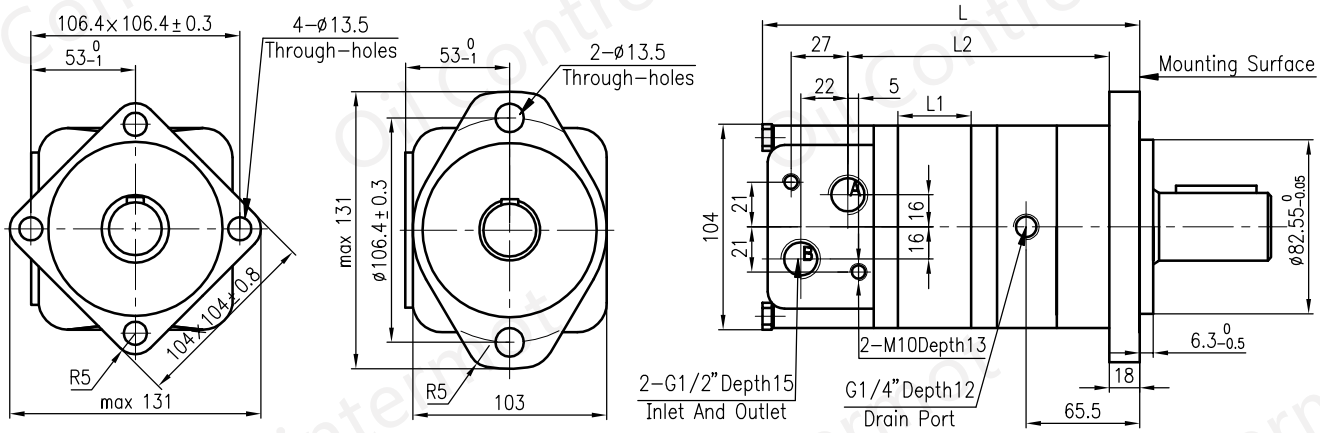
◎ Rated Speed / Rated Torque: Speed / Torque value of the operating motor under rated flow and pressure

◎ Continuous value: Max. value of the operating motor in continuous working condition..

◎ Intermittent value: Max. value of the motor when working 6 seconds per minute.

◎ Peak value: Max. value of the motor when working for 0.6 second per minute.

EPMZSY INSTALLATION DIMENSIONS

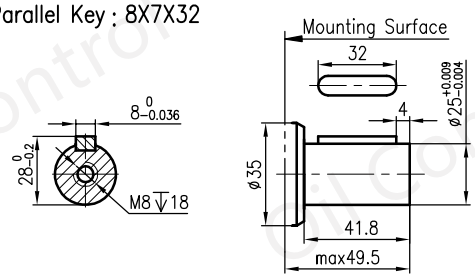


I4: Four Hole Square-flange I: Two Hole Rhomb-flange

Type	L	L1	L2
EPMZSY-80	170	16	126.5
EPMZSY-100	174	20	130.5
EPMZSY-125	179	25	135.5
EPMZSY-160	181	27	137.5
EPMZSY-200	188	34	144.5
EPMZSY-250	196	42	152.5
EPMZSY-315	208	54	164.5
EPMZSY-400	223	69	179.5
EPMZSY-475	237	83	193.5

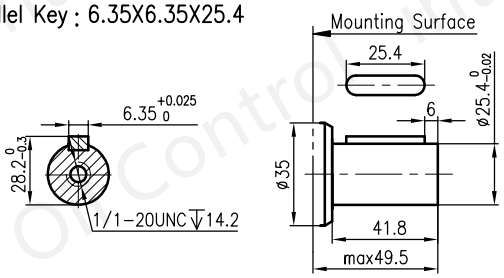
Standard Parallel Key Shaft: B1

Parallel Key : 8X7X32



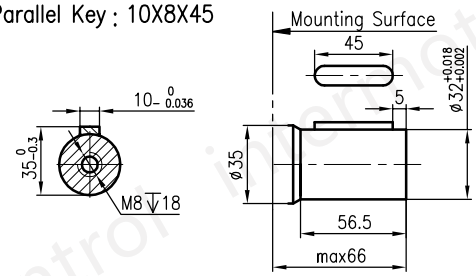
Parallel Key Shaft: B2

Parallel Key : 6.35X6.35X25.4

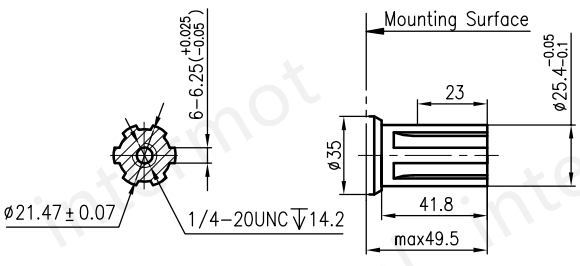


Parallel Key Shaft: B3

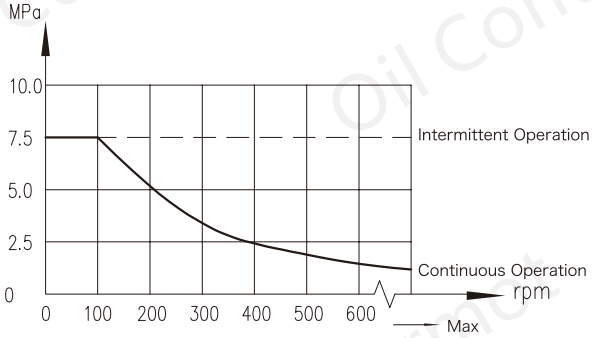
Parallel Key : 10X8X45



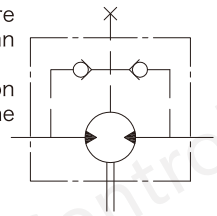
Standard Splined Key Shaft: J



PERMISSABLE PRESSURE LIMIT OF OUTPUT SHAFT SEAL

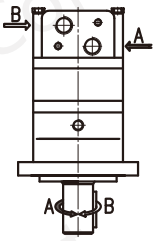


In applications without drain-line, pressure on output shaft seal is slightly higher than in the back-flow drain.
In applictions with drain-line, pressure on output shaft seal is the same with the pressure in the drain-line.

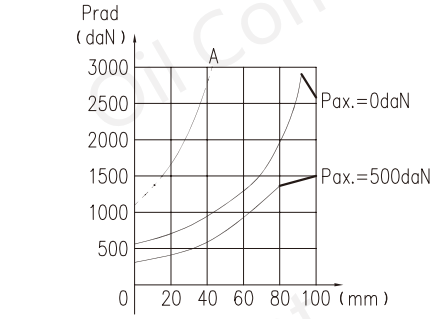


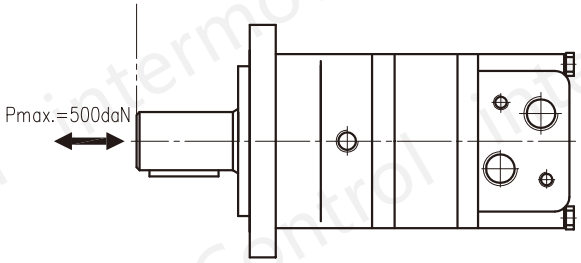
DIRECTION OF SHAFT ROTATION:STANDARD

When facing shaft end of motor,shaft to rotate:Clockwise when port "A" is pressurized.Counter- clockwise when port "B" is pressurized.



STATUS OF THE AXIAL&RODIAL FORCES ON THE OUTPUT SHAFT





The output shaft runs with tapered bearings that allow comparatively high axial and radial forces. Curve 'A' indicates the maximum radial load on the output shaft. Any shaft load exceeding the values quoted in the curve will involve a risk a breakage. The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.

ORDER CODES

1		2		3		4		5		6
EPMZSY	—		—		—		—		—	

Pos.1	2		3		4		5		6	
Structure Code	Displacement		Flange & Mounting		Output Shaft		Oil Ports & Drain Port		Rotation Direction	
	EPMZS	EPMZSY								
EPMZSY	80 100 125 160 200 250 315 375	80 100 125 160 200 250 315 400 475	I	2-Φ13.5Rhomb-flange, Φ106.4, MountingΦ82.5X6.3	B1	Φ25Shaft, Parallel Key8X7X32	TA1O1	G1/2Manifold2XM10, G1/4	Omit	Standard
			I4	4-ΦSquare-flange, Φ106.4, MountingΦ82.5X6.3	B2	Φ25.4Shaft, Parallel Key6.35X6.35X25.4	TA2O2	M22X1.5Manifold4XM10, M14X1.5	F	Opposite
					B3	Φ32Shaft, Parallel Key10X8X45	TA8O5	7/8-14UNF, O-ringManifold2X3/8-16, 7/16-20UNF		
					J	Φ25.4Shaft, Splined KeySAE 6B				

EPMZT SERIES ORBIT HY DRAULIC MOTOR

EPMZT SERIES Motor applies the advanced Gerolor gear set design with disc oil distribution.

FEATURES

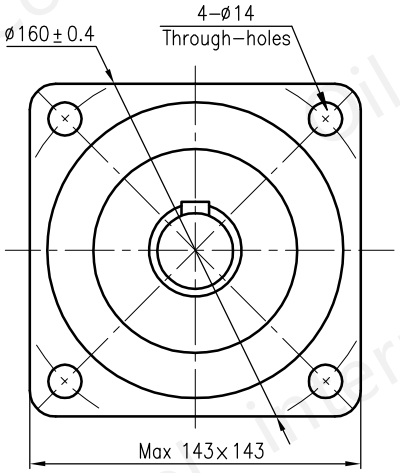
- Application of advanced gerolor gear set design that features start-up under low pressure, smooth running and high efficiency.
- Comparatively high pressure tolerance with high output torque. The output shaft is equipped with tapered roller bearings that allow high axial and radial forces. The Type features excellent high pressure performance and high torque in wide range of applications
- Advanced design of gerolor gear set that realizes automatic compensation in operating under high pressure resulting in reliable and smooth operation, high efficiency and long service life.
- Advanced deign of disc oil distribution system features enhanced oil distribution reliability and precision which is the fundamental basis of high volumetric efficiency, long service life, smooth and stable running of the motor

TECHNICAL PERFORMANCE PARAMETERS

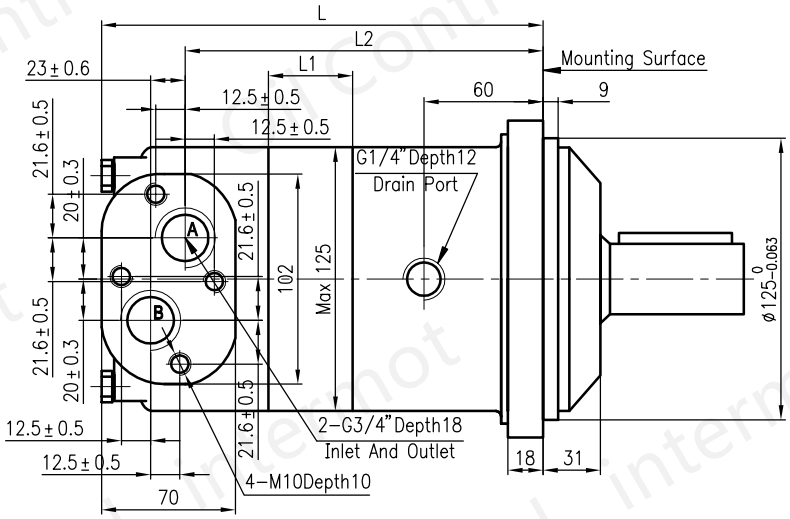
Type		EPMZT 160	EPMZT 200	EPMZT 230	EPMZT 250	EPMZT 315	EPMZT 400	EPMZT 500	EPMZT 630	EPMZT 800
Displacement(ml/r)		161.1	201.4	232.5	251.8	326.3	410.9	523.6	629.1	801.8
Speed (rpm)	Rated	470	475	412	381	294	228	183	150	121
	CONT	625	625	536	500	380	305	240	196	154
	INR	780	750	643	600	460	365	285	233	185
Torque (N.m)	Rated	379	471	530	582	758	896	1063	1156	1207
	CONT	470	590	670	730	950	1080	1220	1318	1464
	INR	560	710	821	880	1140	1260	1370	1498	1520
	Peak	669	838	958	1036	1346.3	1450.3	1643.8	1618.8	1665
Output Power (kW)	Rated	18.7	23.4	23.2	23.2	23.3	21.4	20.4	18.2	15.3
	CONT	27.7	34.9	34.7	34.5	34.9	31.2	28.8	25.3	22.2
	INR	32	40	40	40	40	35	35	27.5	26.8
Pressure Drop (MPa)	Rated	16	16	16	16	16	15	14	12	10.5
	CONT	20	20	20	20	20	18	16	14	12.5
	INR	24	24	24	24	24	21	18	16	13
	Peak	28	28	28	28	28	24	21	19	16
Flow (L/min)	Rated	80	100	100	100	100	100	100	100	100
	CONT	100	125	125	125	125	125	125	125	125
	INR	125	150	150	150	150	150	150	150	150
Max.inlet Pressure (MPa)	Rated	21	21	21	21	21	21	21	21	21
	CONT	21	21	21	21	21	21	21	21	21
	INR	25	25	25	25	25	25	25	25	25
	Peak	30	30	30	30	30	30	30	30	30
Weight(kg)		19.5	20	20.4	20.5	21	22	23	24	25

◎ Rated Speed / Rated Torque: Speed / Torque value of the operating motor under rated flow and pressure
◎ Continuous value: Max. value of the operating motor in continuous working condition..
◎ Intermittent value: Max. value of the motor when working 6 seconds per minute.
◎ Peak value: Max. value of the motor when working for 0.6 second per minute.

EPMZT INSTALLATION DIMENSIONS



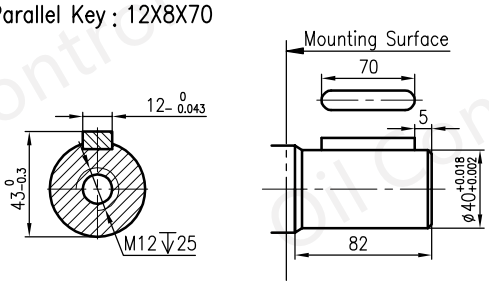
I4: Four Hole Square–flange



Type	L	L1	L2
EPMZT160	193	17	142.5
EPMZT200	197	21	146.5
EPMZT250	204	14	152.5
EPMZT315	210	20	158.5
EPMZT400	217	27	165.5
EPMZT500	225	35	173.5
EPMZT630	237	47	185.5
EPMZT800	248	58	196.5

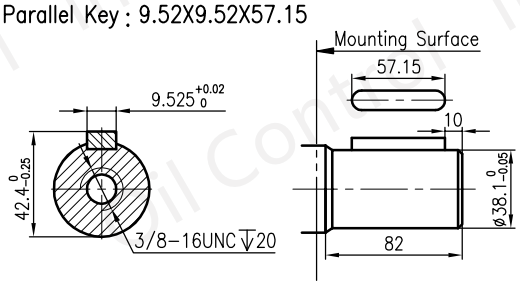
Standard Parallel Key Shaft: B1

Parallel Key : 12X8X70

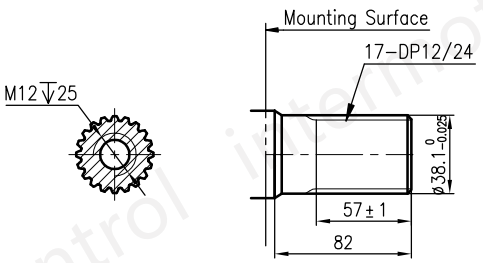


Parallel Key Shaft: B2

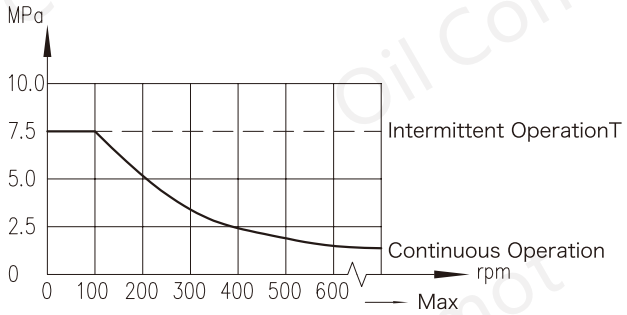
Parallel Key : 9.52X9.52X57.15



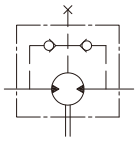
Involute Spline Key Shaft: K



PERMISSABLE PRESSURE LIMIT OF OUTPUT SHAFT SEAL

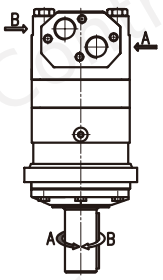


In applications without drain-line, pressure on output shaft seal is slightly higher than in the back-flow drain.
In applictions with drain-line, pressure on output shaft seal is the same with the pressure in the drain-line.

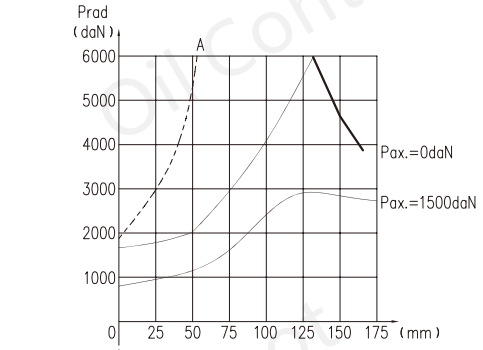


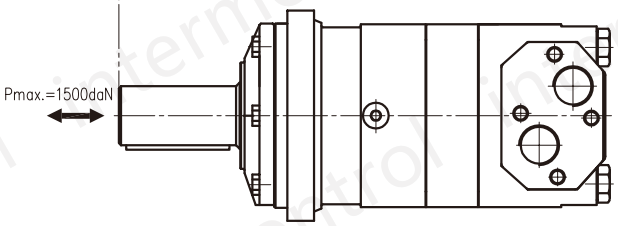
DIRECTION OF SHAFT ROTATION:STANDARD

When facing shaft end of motor,shaft to rotate:Clockwise when port "A" is pressurized.Counter-clockwise when port "B" is pressurized.



STATUS OF THE AXIAL&RODIAL FORCES ON THE OUTPUT SHAFT





The output shaft runs with tapered bearings that allow comparatively high axial and radial forces. Curve 'A' indicates the maximum radial load on the output shaft. Any shaft load exceeding the values quoted in the curve will involve a risk a breakage. The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.

ORDER CODES

1		2		3		4		5		6
EPMZT	—		—		—		—		—	

Pos.1	2	3		4		5		6	
Structure Code	Displacement	Flange & Mounting		Output Shaft		Oil Ports & Drain Port		Rotation Direction	
EPMZT	160 200 250 315 400 500 630 800	I 4	4-Φ14Square-flange, Φ160, MountingΦ125X9	BI B2 K	ShaftΦ40, Parallel Key12X8X70 ShaftΦ38.1, Parallel Key9.52X9.52X57.15 ShaftΦ38.1, Splined Key17-DP12/24	TA401	G3/4Manifold, 4-M10, G1/4	Omit F	Standard Opposite

EPMZV SERIES ORBIT HYDRAULIC MOTOR

EPMZV SERIES Motor applies the advanced Gerolor gear set design with disc oil distribution.

FEATURES

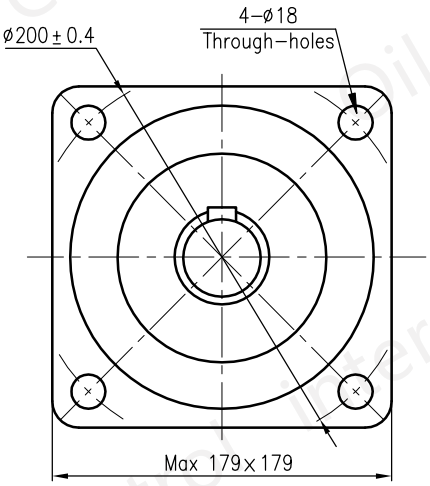
- Application of advanced gerolor gear set design that features start-up under low pressure, smooth running and high efficiency.
- Comparatively high pressure tolerance with high output torque. The output shaft is equipped with tapered roller bearings that allow high axial and radial forces. The Type features excellent high pressure performance and high torque in wide range of applications
- Advanced design of gerolor gear set that realizes automatic compensation in operating under high pressure resulting in reliable and smooth operation, high efficiency and long service life.
- Advanced deign of disc oil distribution system features enhanced oil distribution reliability and precision which is the fundamental basis of high volumetric efficiency, long service life, smooth and stable running of the motor

TECHNICAL PERFORMANCE PARAMETERS

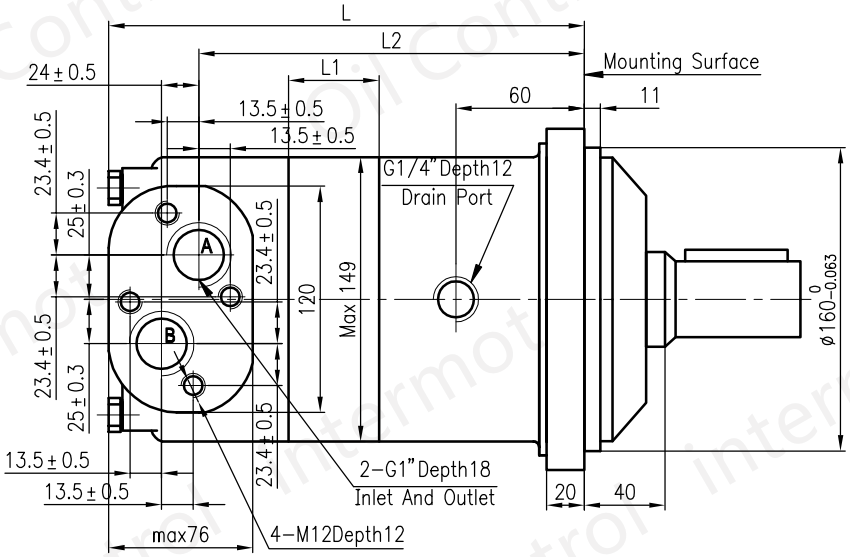
Type		EPMZV 315	EPMZV 400	EPMZV 500	EPMZV 630	EPMZV 800	EPMZV 1000
Displacement(ml/r)		333	419	518	666	801	990
Speed (rpm)	Rated	335	270	215	170	140	105
	CONT	510	500	400	320	250	200
	INR	630	600	480	380	300	240
Torque (N.m)	Rated	730	1020	1210	1422	1590	2015
	CONT	920	1180	1460	1660	1880	2015
	INR	1110	1410	1760	1940	2110	2280
	Peak	1290	1640	2050	2210	2470	2400
Output Power (kW)	CONT	38	47	47	40	33	28.6
	INR	46	56	56	56	44	40
Pressure Drop (MPa)	Rated	16	16	16	16	14	14
	CONT	20	20	20	18	16	14
	INR	24	24	24	21	18	16
	Peak	28	28	28	24	21	18
Flow (L/min)	Rated	110	110	110	110	110	110
	CONT	160	200	200	200	200	200
	INR	200	240	240	240	240	240
Max.inlet Pressure (MPa)	Rated	21	21	21	21	21	21
	CONT	21	21	21	21	21	21
	INR	25	25	25	25	25	25
	Peak	30	30	30	30	30	30
Weight(kg)		31.8	32.6	33.5	34.9	36.5	38.6

◎ Rated Speed / Rated Torque: Speed / Torque value of the operating motor under rated flow and pressure
◎ Continuous value: Max. value of the operating motor in continuous working condition..
◎ Intermittent value: Max. value of the motor when working 6 seconds per minute.
◎ Peak value: Max. value of the motor when working for 0.6 second per minute.

EPMZV INSTALLATION DIMENSIONS



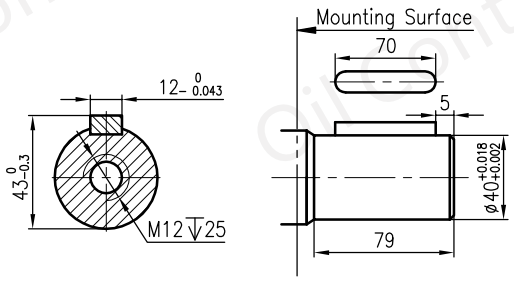
I4: Four Hole Square–flange



Type	L	L1	L2
EPMZV315	217	20	161.5
EPMZV400	224	27	168.5
EPMZV500	232	35	176.5
EPMZV630	244	47	188.5
EPMZV800	255	58	199.5
EPMZV1000	271	74	215.5

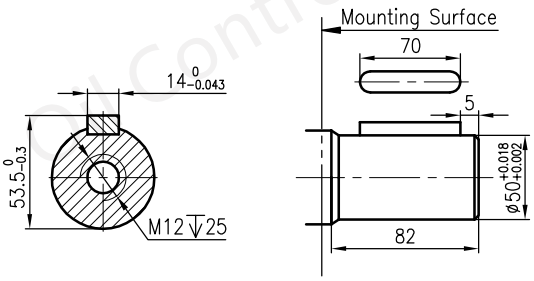
Standard Parallel Key Shaft: B1

Parallel Key : 12X8X70



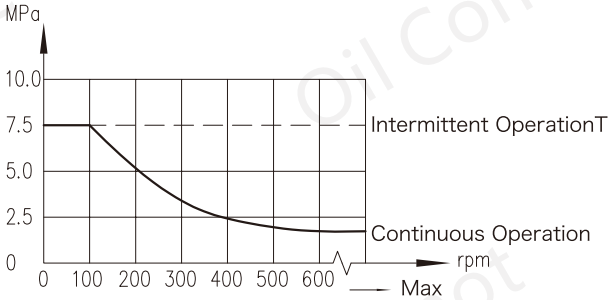
Parallel Key Shaft: B2

Parallel Key : 14X9X70

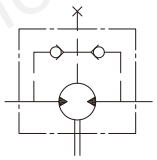


INTERMOT
HYDRAULIC MOTOR

PERMISSABLE PRESSURE LIMIT OF OUTPUT SHAFT SEAL

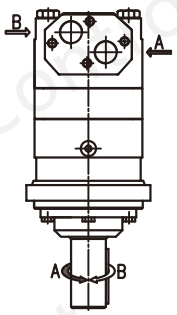


In applications without drain-line, pressure on output shaft seal is slightly higher than in the back-flow drain.
In applictions with drain-line, pressure on output shaft seal is the same with the pressure in the drain-line.

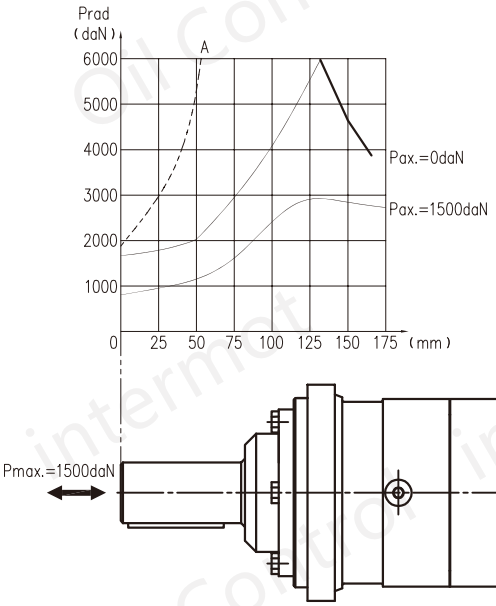


DIRECTION OF SHAFT ROTATION:STANDARD

When facing shaft end of motor,shaft to rotate:Clockwise when port "A" is pressurized.Counter- clockwise when port "B" is pressurized.



STATUS OF THE AXIAL&RODIAL FORCES ON THE OUTPUT SHAFT



The output shaft runs with tapered bearings that allow comparatively high axial and radial forces. Curve 'A' indicates the maximum radial load on the output shaft. Any shaft load exceeding the values quoted in the curve will involve a risk a breakage. The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.

ORDER CODES

1		2		3		4		5		6
EPMZV	—		—		—		—		—	

Pos.1	2	3		4		5		6	
Structure Code	Displacement	Flange & Mounting		Output Shaft		Oil Ports & Drain Port		Rotation Direction	
EPMZV	315 400 500 630 800 1000	I 4	4-Φ18Square-flange, Φ200, MountingΦ160X11	BI B2	ShaftΦ40, Parallel Key12X8X63 ShaftΦ50, Parallel Key14X9X70	TA501	G1Manifold4-M12, G1/4	Omit F	Standard Opposite

EPMZR-BK SERIES BUILT-IN BRAKE CYCLOIDAL HYDRAULIC MOTOR

EPMZR-BK series built-in brake cycloid hydraulic motor is a kind of hydraulic cycloid motor with braking function by adding mechanical device inside EPMZR series shaft-equipped cycloid hydraulic motor. The performance of this series of motors has the following characteristics:

- With advanced rotor and stator parameter design, it has low starting pressure, high efficiency, good retention and stable operation.
- High-pressure shaft seal can be used, and the motor is only allowed to be used alone, not in series.
- The linkage shaft is specially designed and the motor has a long service life.
- Special system parameter design can meet the requirements of low noise.
- Compact structure and convenient installation.
- Built-in brake has small volume, large braking force and convenient integration.

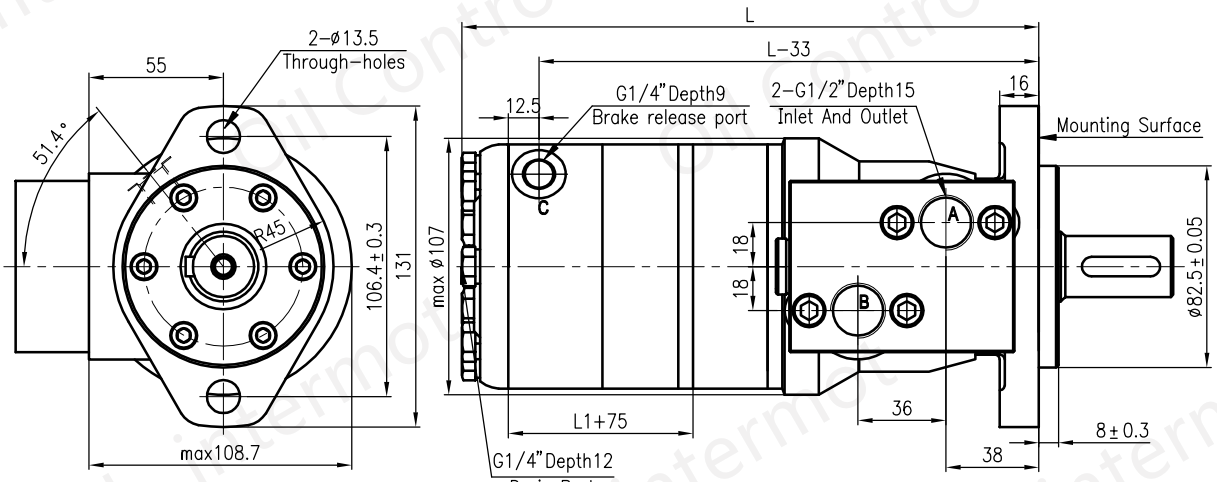
TECHNICAL PERFORMANCE PARAMETERS

Type		EPMZR -BK** -50	EPMZR -BK** -80	EPMZR -BK** -100	EPMZR -BK** -125	EPMZR -BK** -160	EPMZR -BK** -200	EPMZR -BK** -250	EPMZR -BK** -315	EPMZR -BK** -375
Displacement(mL/r)		51.7	81.5	102	128	157	195	253	318	381
Speed(rpm)	Rated	490	479	478	421	341	276	212	169	141
	Continuous	509	502	497	459	372	301	231	184	166
	Intermittent	603	598	574	574	465	376	289	230	192
Torque(Nm)	Rated	104	164	205	256	316	335	437	456	465
	Continuous	103	203	254	317	391	359	437	456	465
	Intermittent	88.6	160	200	250	308	333	473	502	520
Output Power (kW)	Rated	5.3	8.2	10.3	11.3	11.3	9.7	9.7	8.1	6.9
	Continuous	5.5	10.7	13.2	15.2	15.2	11.3	10.6	8.8	8.1
	Intermittent	5.6	10	12	15	15	13.1	14.3	12.1	10.5
Pressure Drop (MPa)	Rated	14	14	14	14	14	12	12	10	8.5
	Continuous	14	17.5	17.5	17.5	17.5	13	12	10	8.5
	Intermittent	17.5	20	20	20	20	17.5	13	11	9.5
Flow(L/min)	Rated	26	40	50	55	55	55	55	55	55
	Continuous	27	42	52	60	60	60	60	60	65
	Intermittent	32	50	60	75	75	75	75	75	75
Brake Opening Pressure(MPa)		1.7—2.2								
Max Pressure Of Inlet And Outlet(MPa)		25								
Max Pressure Of Brake Port(MPa)		20								
Max Static Braking Torque(Nm)		400								
Weight(kg)		11.7	11.9	11.9	12.2	12.5	13	13.5	14	14.5

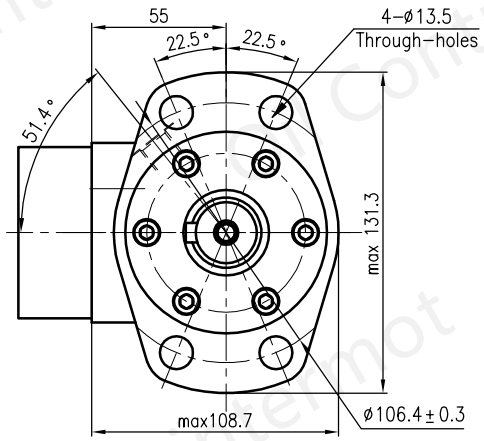
◎ Rated speed and torque refer to the output value under rated flow and pressure.
◎ Continuous value refers to the maximum value that the displacement motor can work continuously.
◎ Intermittent value refers to the maximum value of the displacement motor working for 6 seconds within 1 minute.
◎ Built-in brake is normally closed full-disc static brake. Precautions for use are as follows:

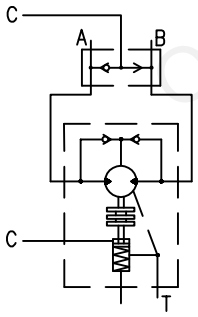
When the motor is working, the pressure at the brake release port must be greater than 2.2MPa; After the motor stops, the brake release port pressure must be less than 1.7MPa, preferably 0MPa. Therefore, it must be noted that the back pressure of the oil circuit system where the brake is located should be 0MPa. When designing hydraulic systems ,the intermediate function of the directional valve must have a unloading function (Y-type or H-type), and it is strictly prohibited to use the intermediate function without unloading function (O-type).

EPMZR-BK01 INSTALLATION DIMENSIONS



I :Two Hole Rhomb-flange



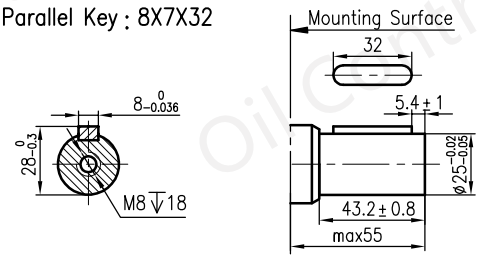


Type	L	L1
EPMZR-BK01-50	217	10
EPMZR-BK01-80	223	16
EPMZR-BK01-100	227	20
EPMZR-BK01-125	232	25
EPMZR-BK01-160	237.5	30.5
EPMZR-BK01-200	245	38.1
EPMZR-BK01-250	257	50
EPMZR-BK01-315	269	62
EPMZR-BK01-375	281	74

II4: Four Hole Rhomb-flange

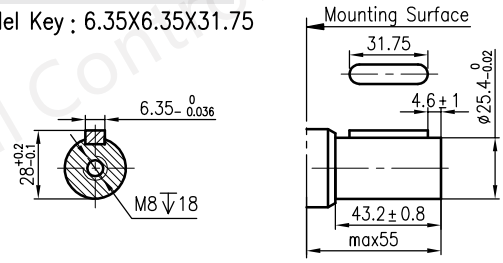
Standard Parallel Key Shaft: B1

Parallel Key : 8X7X32



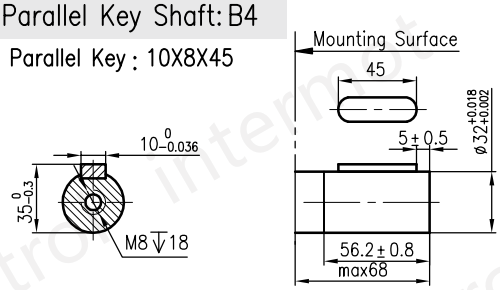
Parallel Key Shaft: B2

Parallel Key : 6.35X6.35X31.75

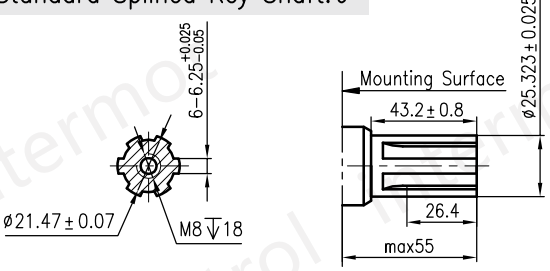


Parallel Key Shaft: B4

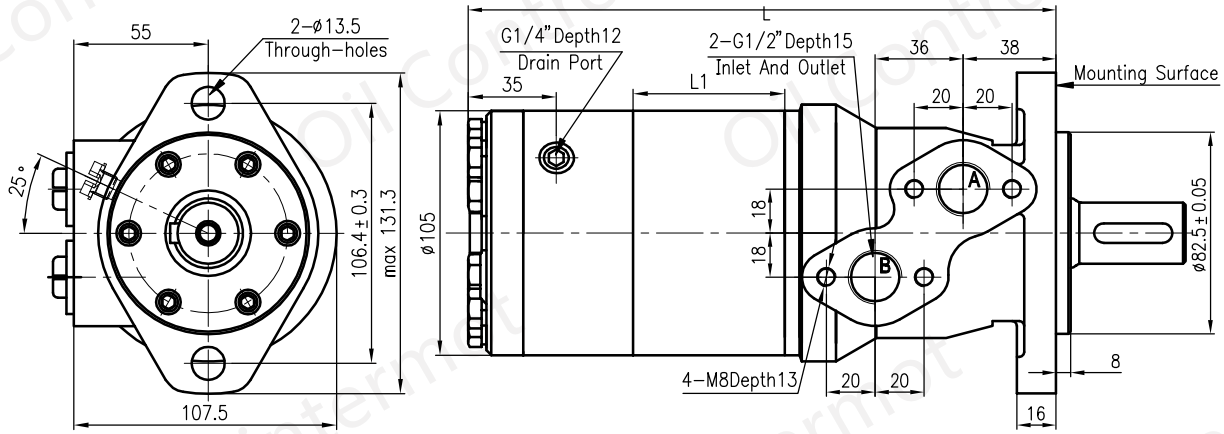
Parallel Key : 10X8X45



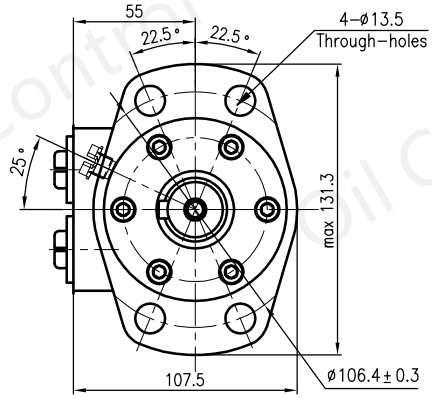
Standard Splined Key Shaft: J

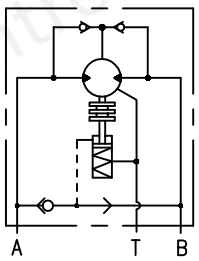


EPMZR-BK02 INSTALLATION DIMENSIONS



Ⅰ:Two Hole Rhomb-flange





Type	L	L1
EPMZR-BK02-50	191	10
EPMZR-BK02-80	197	16
EPMZR-BK02-100	201	20
EPMZR-BK02-125	206	25
EPMZR-BK02-160	211	30.5
EPMZR-BK02-200	219	38.1
EPMZR-BK02-250	231	50
EPMZR-BK02-315	243	62
EPMZR-BK02-375	255	74

Ⅱ4: Four Hole Rhomb-flange

*For Output Shaft Dimensions,please refer to EPMZR-BK01,see Page F29

ORDER CODES

	1		2		3		4		5
EPMZR-BK		—		—		—		—	

Pos.1	2	3		4		5	
Structure Code	Displacement	Flange & Mounting		Output Shaft		Rotation Direction	
Shuttle Valve Outlay: 01 Shuttle Valve Built-in: 02	50	I	2- ϕ 13.5Romb-flange、Mounting ϕ 82.5×8	B1	Shaft ϕ 25, Parallel Key8×7×32	Omit	Standard
	80			B2	Shaft ϕ 25.4, Parallel Key6.35×6.35×31.75		
	100						
	125						
	160	Ⅱ4	4- ϕ 13.5Romb-flange、Mounting ϕ 82.5×8	B4	Shaft ϕ 32, Parallel Key10×8×45	F	Opposite
	200						
	250			J	Shaft ϕ 25.4, Splined Key SAE6B		
	315						
	375						

VER: OIL-25-01/1009

NINGBO OIL CONTROL HYDRAULIC CO., LTD.
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