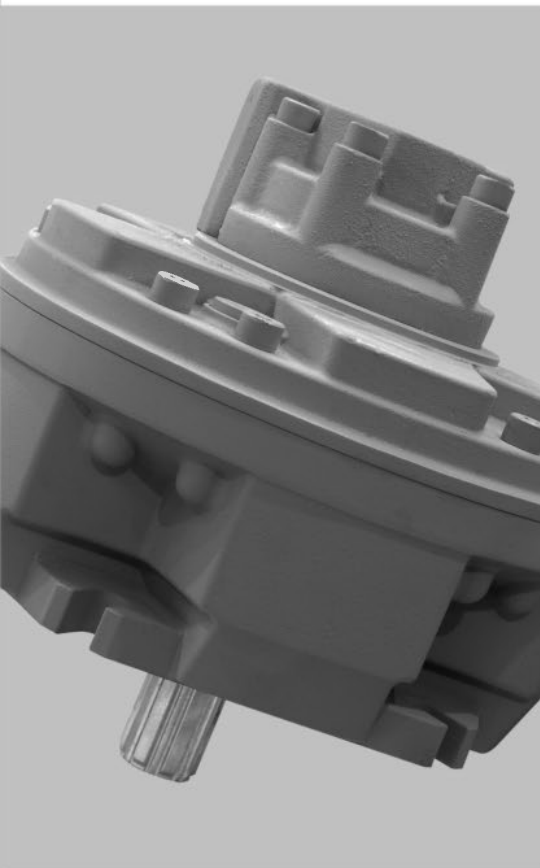


HGM摆缸液压马达

HGM swiveling cylinder hydraulic motors



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HGM系列/HGM Series

产品特点 / Product Feature

HGM 系列液压马达是本公司结合多年实践经验、在意大利技术基础上进行设计改进的一种新型产品。

HGM 液压马达主要特点如下：

- 1、由于活塞与摆缸不存在侧向力，活塞底部设计成静压平衡，活塞与曲轴之间通过滚动轴承传递扭力，减少了传力过程中的摩擦损失，因而HGM系列液压马达具有很高的机械效率，较高的启动扭矩（启动时机械效率0.92 以上）的特点。
- 2、平面配流器（专利技术）简单可靠，密封性能好，泄漏很少，活塞与摆缸之间用塑料活塞环密封无泄露，因而具有很高的容积效率（可达0.98）。
- 3、由于结构上减少了磨擦损失，提高了密封性能，因而低速稳定性很好，可以在1r/min 工况下平稳运转，调速范围大。
- 4、由于活塞与轴承套通过卡环贴牢不存在间隙，因而该系列液压马达可以作泵工况下运转。
- 5、该系列液压马达压力高，重量轻，体积小，比功率高。
- 6、由于结构简单，设计合理，采用负荷能力大的轴承，因而工作可靠，寿命长，噪音低，传动轴允许承受径向负荷，旋转方向可逆。

HGM series hydraulic motor is a new type of product of our company, which based on years practical experience and designed and improved the original products on the basis of Italian technologies. HGM hydraulic motor mainly has the following characteristics:

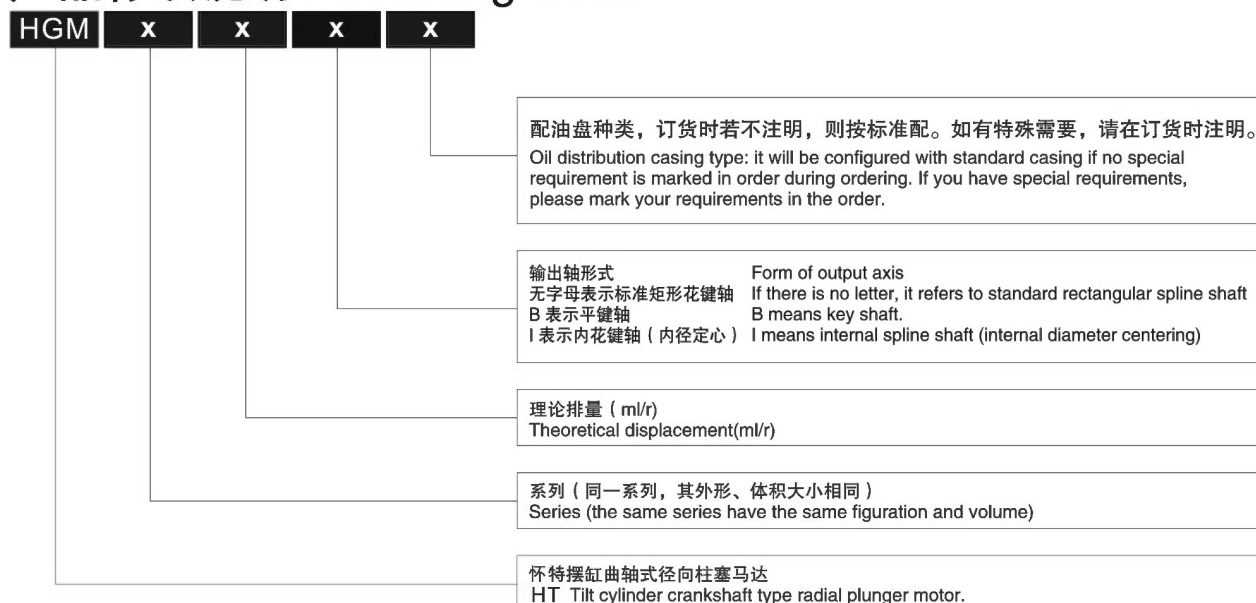
1. As the piston and the tilt cylinder have no side force, the piston bottom is designed to be static pressure balance. The torsional force is transferring between the piston and the crankshaft through rolling bearing, so the friction loss during the transferring process of force is reduced. Therefore, HGM series hydraulic motor has such features as: very high mechanical efficiency and comparatively high startup torque (mechanical efficiency of over 0.92 during startup).
2. The plane distributor (patented technology) is simple and reliable with perfect seal performance and almost no leakage. The plastic piston ring is used to seal between the piston and the tilt cylinder, so it has very high volumetric efficiency (can be as high as 0.98).
3. As the structure of this product has reduced friction loss and enhanced the seal performance, the product has perfect stability at low speed. It can stably run at 1r/min working condition and has big speed regulation range.
4. As the piston is jointed closely with bearing bushing without any clearance, this series of hydraulic motor can run at pump working condition.
5. This series of hydraulic motor has high pressure, light weight, small bulk and high specific power.
6. As this series hydraulic motor has simple structure, reasonable design and adopts bearing with big load ability, it can work reliably and has long life and low noise; the transmission shaft allows endure radial load and the rotational direction is reversible.

适用范围 / Applicable range

由于HGM 系列液压马达具有上述一系列特点，因而它的适用范围广，可以在注塑机、轻工机械、工程机械、冶金设备、石油、煤矿、地质勘探、铁路、船舶、环保、机床、农机等各种机械的液压传动系统中应用。

As HGM series hydraulic motor has the above characteristics, it has wide application range. it can be applied in the hydraulic transmission systems of various types of machinery in plastic injection machine, light industry machine, engineering machine, metallurgical equipment, petroleum, coal mine, geological prospecting, railway, ship, environment protection, machine tool and agricultural machine industries.

产品标识说明 / Ordering Code



HGM系列/HGM Series

技术参数 / Technical data

型 号 Model	理论排量 Theory Displacement	压力/Pressure		扭矩/Torque		最大功率 Max Power	最高转速 Max. Speed	重量 Weight
		额定压力 Rated Pressure	尖峰压力 Max. Pressure	额定扭矩 Rated Torque	单位扭矩 Unit Torque			
	ml/r	Mpa	Mpa	N.m	N.m/MPa	KW	r/min	Kg
HGM05-60	59	25	31.5	235	9.4	20	1000	22
HGM05-75	74	25	31.5	295	11.8	20	1000	
HGM05-90	86	25	31.5	343	13.7	20	1000	
HGM05-110	115	25	31.5	458	18.3	20	900	
HGM05-130	129	25	31.5	513	20.5	20	900	
HGM05-150	151	25	31.5	600	24	20	900	
HGM05-170	166	25	31.5	660	26.4	20	800	
HGM05-200	191	25	31.5	760	30.4	20	800	
HGM1-100	99	25	31.5	385	15.4	48	1000	31
HGM1-150	154	25	31.5	600	24	48	1000	
HGM1-175	172	25	31.5	670	26.8	48	900	
HGM1-200	201	25	31.5	785	31.4	48	800	
HGM1-250	243	25	31.5	950	38	48	700	
HGM1-300	290	25	31.5	1130	45.2	48	650	
HGM1-320	314	25	31.5	1225	49	48	600	
HGM1-350	340	20	31.5	1060	53	48	550	
HGM2-200	192	25	31.5	750	30	59	800	51
HGM2-250	251	25	31.5	980	39.2	59	800	
HGM2-300	304	25	31.5	1188	47.5	59	750	
HGM2-350	347	25	31.5	1355	54.2	59	750	
HGM2-420	425	25	31.5	1658	66.3	59	750	
HGM2-500	493	25	31.5	1923	76.9	59	700	
HGM2-600	565	25	31.5	2208	88.3	59	700	
HGM2-630	623	25	31.5	2433	97.3	59	650	
HGM3-425	426	25	31.5	1660	66.4	80	650	87
HGM3-500	486	25	31.5	1895	75.8	80	600	
HGM3-600	595	25	31.5	2320	92.8	80	575	
HGM3-700	690	25	31.5	2700	108	80	500	
HGM3-800	792	25	31.5	3100	124	80	500	
HGM3-900	873	25	31.5	3400	136	80	400	
HGM3-1000	987	25	31.5	3850	154	80	350	
HGM4-600	616	25	31.5	2403	96.1	100	550	120
HGM4-800	793	25	31.5	3100	124	100	550	
HGM4-900	904	25	31.5	3525	141	100	450	
HGM4-1000	1022	25	31.5	4000	160	100	400	
HGM4-1100	1116	25	31.5	4350	174	100	400	
HGM4-1300	1316	25	31.5	5125	205	100	350	

HGM系列/HGM Series

技术参数 / Technical data

型 号 Model	理论排量 Theory Displacement	压力/Pressure		扭矩/Torque		最大功率 Max Power	最高转速 Max. Speed	重量 Weight
		额定压力 Rated Pressure	尖峰压力 Max. Pressure	额定扭矩 Rated Torque	单位扭矩 Unit Torque			
		Mpa	Mpa	N.m	N.m/MPa			
HGM5-800	807	25	31.5	3150	126	120	450	175
HGM5-1000	1039	25	31.5	4050	162	120	450	
HGM5-1200	1185	25	31.5	4625	185	120	400	
HGM5-1300	1340	25	31.5	5225	209	120	400	
HGM5-1450	1462	25	31.5	5700	228	120	350	
HGM5-1600	1634	25	31.5	6350	254	120	300	
HGM5-1800	1816	25	31.5	7075	283	120	300	
HGM5-2000	2007	25	31.5	7825	313	120	250	275
HGM6-1700	1690	25	31.5	6600	264	170	400	
HGM6-2100	2127	25	31.5	8300	332	170	350	
HGM6-2500	2513	25	31.5	9800	392	170	300	
HGM6-3000	3041	25	31.5	11875	475	170	250	340
HGM7-2000	2007	25	31.5	7975	319	210	450	
HGM7-2500	2526	25	31.5	10050	402	210	350	
HGM7-3000	2985	25	31.5	11877	475	210	300	
HGM7-3300	3290	25	31.5	13075	523	210	275	
HGM7-3600	3611	25	31.5	14350	574	210	250	
HGM7-4300	4298	25	31.5	17100	684	210	225	700
HGM9-4600	4618	25	31.5	18377	735	260	160	
HGM9-5700	5654	25	31.5	22500	900	260	150	
HGM9-6600	6636	25	31.5	26400	1056	300	145	
HGM9-7700	7696	25	31.5	30625	1225	320	140	
HGM9-8800	8836	25	31.5	35150	1406	345	130	
HGM9-10000	10053	25	31.5	40000	1600	360	120	
HGM9-12000	12026	25	31.5	47850	1914	375	110	

HFM

HGM

QJM

H-HMB

H-HMC

HCA

HCB

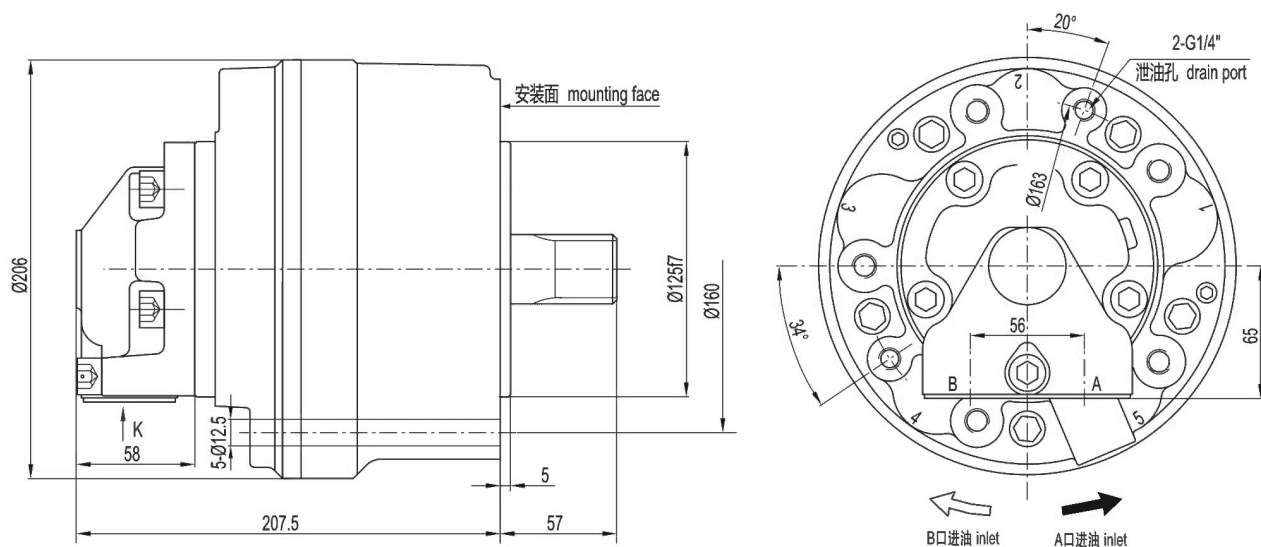
HMS

HA6V

HA2F

HGM05系列/HGM05 Series

HGM05 外形及安装尺寸/ HGM05 Installation Dimensions

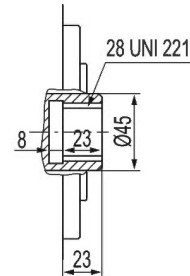
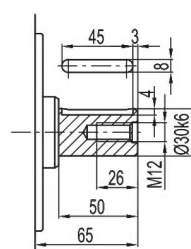
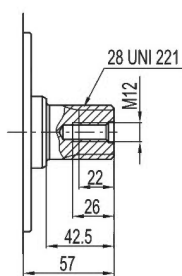
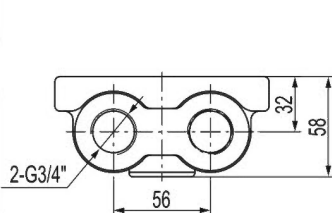


K向旋转
K Direction Rotation

矩形外花键
Rectangular male spline

圆柱平键B
Cylinder Flat Key B

内花键
Female spline



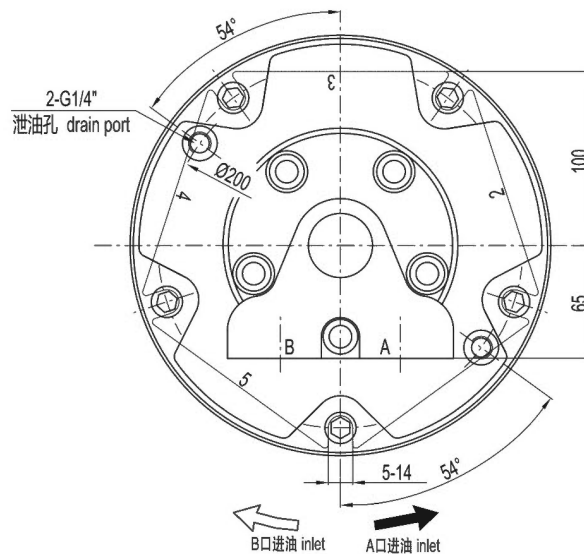
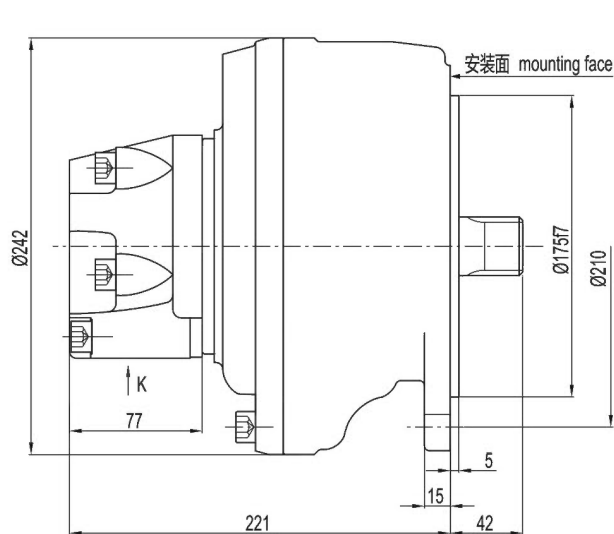
花键参数/ Spline parameters

35-2-16 DIN 5480	
d0	Ø32
d1	$\text{Ø}35^{+0.52}_{-0} \text{H14}$
d2	$\text{Ø}31^{+0.16}_{-0} \text{H11}$
A	Ø3.5
da	$\text{Ø}27.711 \text{H11}$
d3	$\text{Ø}34.6^{+0}_{-0.16} \text{H11}$
d4	$\text{Ø}31.6^{+0}_{-0.52} \text{H11}$
B	Ø4.0
db	Ø39.00 f8

28 UNI 221 (6-28-34) DIN 5463	
d1	$\text{Ø}28^{+0.021}_{-0} \text{H7}$
d2	$\text{Ø}34^{+0.16}_{-0} \text{H11}$
A	$7^{+0.028}_{-0.013} \text{F7}$
d3	$\text{Ø}28^{+0.007}_{-0.02} \text{g6}$
d4	$\text{Ø}34^{+0.065}_{-0.16} \text{h14}$
B	$7^{+0.013}_{-0.028} \text{f7}$

HGM1系列/HGM1 Series

HGM1 外形及安装尺寸/HGM1 Installation Dimensions

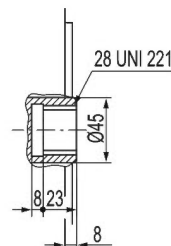
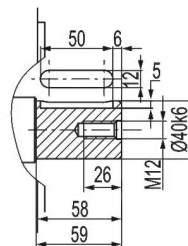
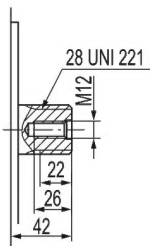
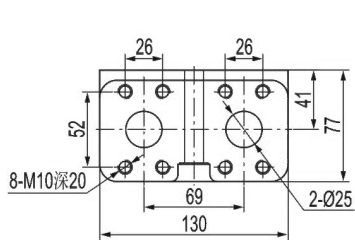


K向旋转
K Direction Rotation

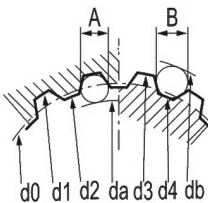
矩形外花键
Rectangular male spline

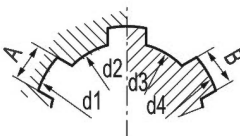
圆柱平键B
Cylinder Flat Key B

内花键
Female spline



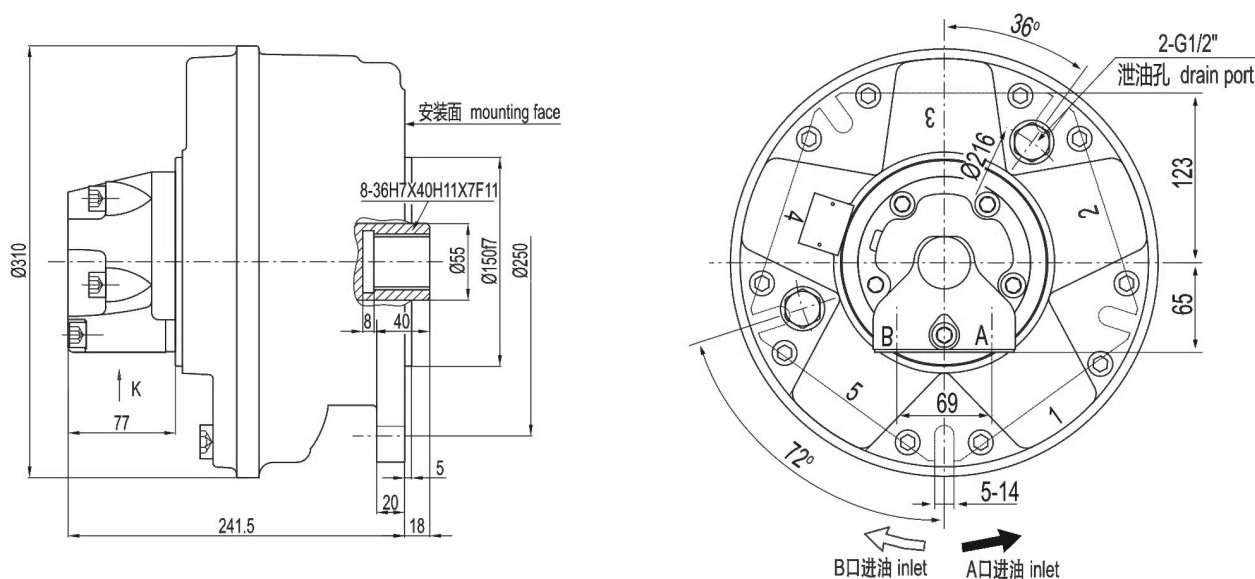
花键参数/ Spline parameters

35-2-16 DIN 5480	
	
d0	Ø32
d1	Ø35 ^{+0.52} ₀ H14
d2	Ø31 ^{+0.16} ₀ H11
A	Ø3.5
da	Ø27.711 H11
d3	Ø34.6 ⁰ _{-0.16} H11
d4	Ø31.6 ⁰ _{-0.52} H11
B	Ø4.0
db	Ø39.00 f8

28 UNI 221 (6-28-34) DIN 5463	
	
d1	Ø28 ^{+0.021} ₀ H7
d2	Ø34 ^{+0.16} ₀ H11
A	7 ^{+0.028} _{+0.013} F7
d3	Ø28 ^{-0.007} _{-0.02} g6
d4	Ø34 ^{-0.065} _{-0.16} h14
B	7 ^{-0.013} _{-0.028} f7

HGM2系列/HGM2 Series

HGM2 外形及安装尺寸/HGM2 Installation Dimensions

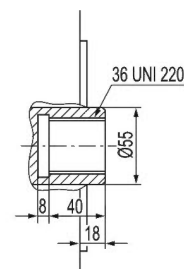
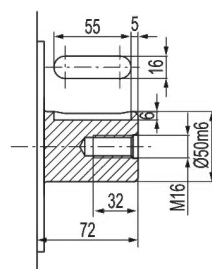
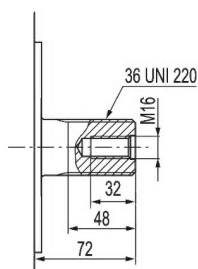
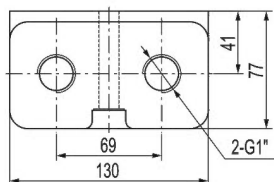


K向旋转
K Direction Rotation

矩形外花键
Rectangular male spline

圆柱平键B
Cylinder Flat Key B

内花键
Female spline



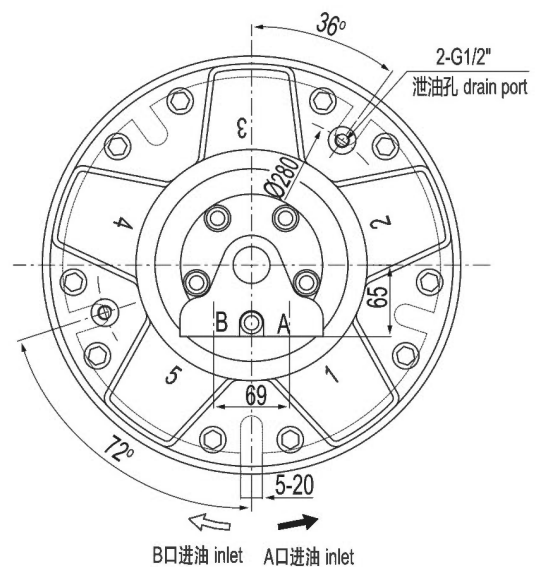
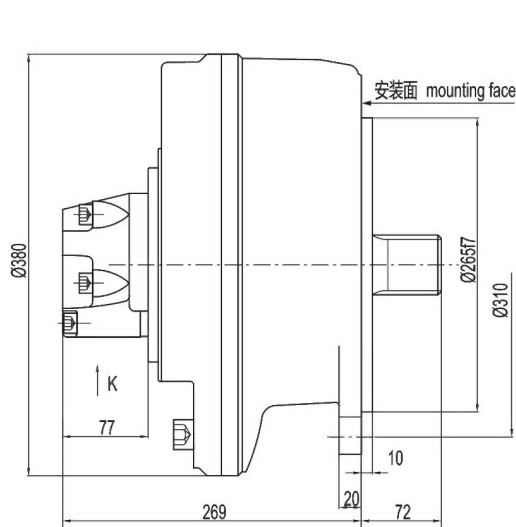
花键参数/ Spline parameters

40-3-12 DIN5480	
d0	Ø36
d1	Ø40 ^{+0.62} ₀ H14
d2	Ø34 ^{+0.16} ₀ H11
A	Ø5.25
da	Ø28.964 H11
d3	Ø39.4 ⁰ _{-0.16} h11
d4	Ø33.4 ⁰ _{-0.62} h14
B	Ø6.0
db	Ø45.989 f8

36 uni 220 (8-36-40)	
d1	Ø36 ^{+0.025} ₀ H7
d2	Ø40 ^{+0.16} ₀ H11
A	7 ^{+0.028} _{+0.013} F7
d3	Ø36 ^{-0.009} _{-0.025} g6
d4	Ø40 ^{-0.065} _{-0.16} d11
B	7 ^{-0.013} _{-0.028} f7

HGM3系列/HGM3 Series

HGM3 外形及安装尺寸/ HGM3 Installation Dimensions

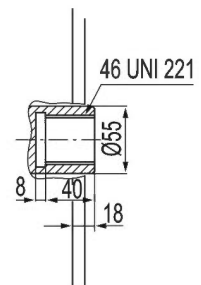
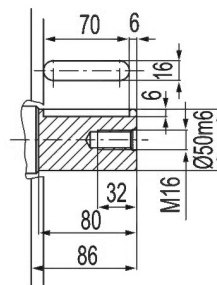
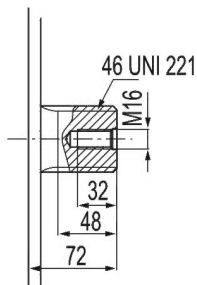
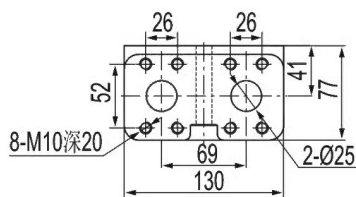


K向旋转
K Direction Rotation

矩形外花键
Rectangular male spline

圆柱平键B
Cylinder Flat Key B

内花键
Female spline



花键参数/ Spline parameters

40-3-12 DIN5480	
d0	Ø36
d1	Ø40 ^{+0.62} ₀ H14
d2	Ø34 ^{+0.16} ₀ H11
A	Ø5.25
da	Ø28.964 H11
d3	Ø39.4 ⁰ _{-0.16} h11
d4	Ø33.4 ⁰ _{-0.62} h14
B	Ø6.0
db	Ø45.989 f8

46 UNI (8-46-54) DIN 5463	
d1	Ø46 ^{+0.03} ₀ H7
d2	Ø54 ^{+0.19} ₀ H11
A	9 ^{+0.028} _{-0.013} F7
d3	Ø46 ^{-0.009} _{-0.025} g6
d4	Ø54 ^{-0.1} _{-0.29} d11
B	9 ^{-0.013} _{-0.028} f7

HFM

HGM

QJM

H-HMB

H-HMC

HCA

HCB

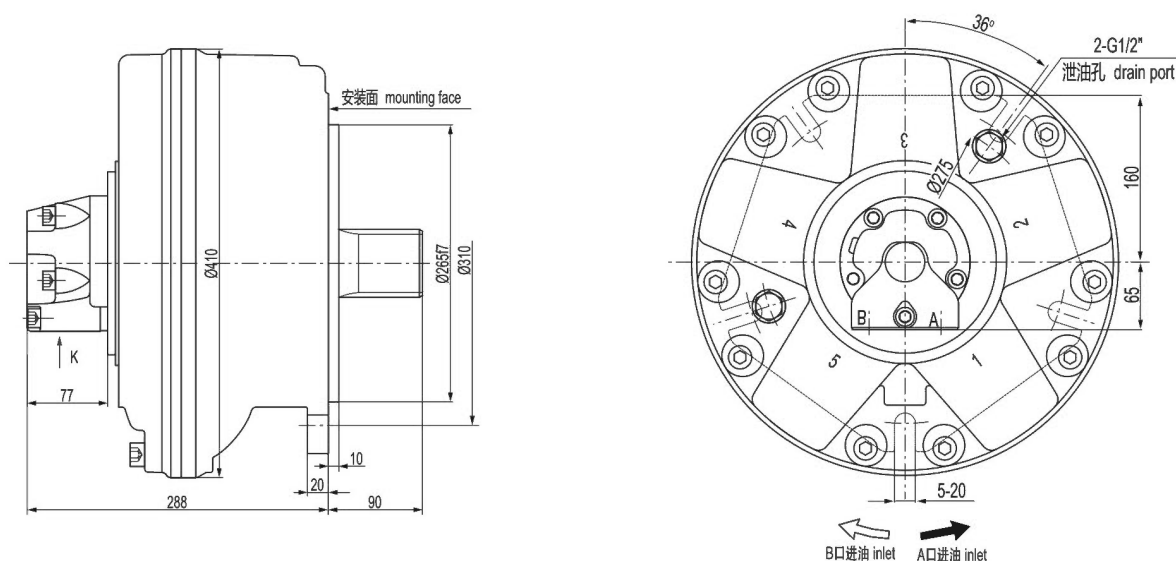
HMS

HA6V

HA2F

HGM4系列/HGM4 Series

HGM4 外形及安装尺寸/HGM4 Installation Dimensions

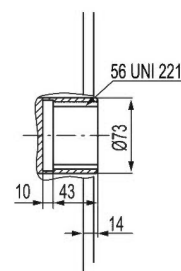
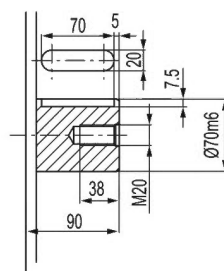
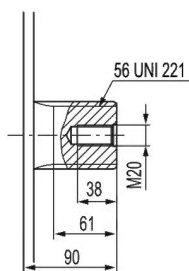
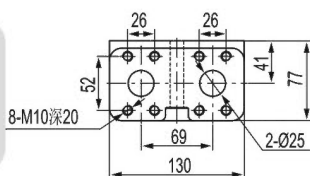


K向旋转
K Direction Rotation

矩形外花键
Rectangular male spline

圆柱平键B
Cylinder Flat Key B

内花键
Female spline

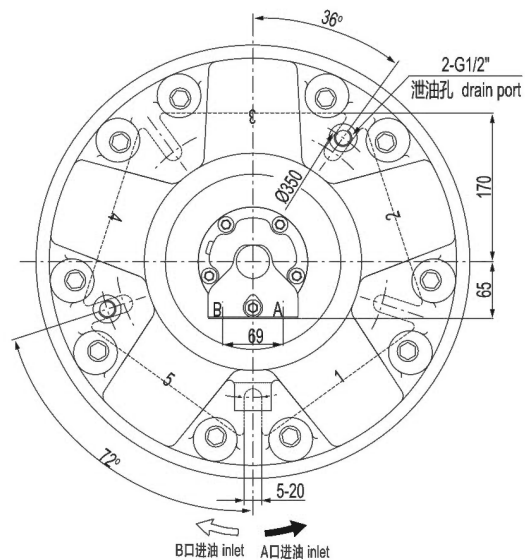
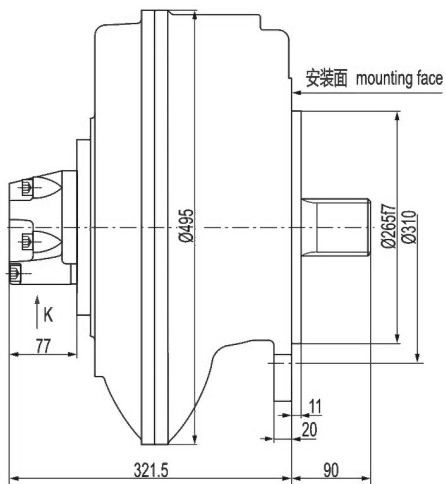


花键参数/ Spline parameters

	65-3-20 DIN 5480	55-2-26 DIN 5482	55-3-17 DIN 5480	56 UNI 221
	d0 Ø60	Ø52	Ø51	d1 Ø56 ^{+0.03} ₀ H7
	d1 Ø65 ^{+0.74} ₀ H14	Ø55 ^{+0.3} ₀ H12	Ø55 ^{+0.74} ₀ H14	d2 Ø65 ^{+0.19} ₀ H11
	d2 Ø59 ^{+0.19} ₀ H11	Ø50 ^{+0.16} ₀ H11	Ø49 ^{+0.16} ₀ H11	A Ø10 ^{+0.028} _{-0.013} F7
	A Ø5.25	Ø3.5	Ø5.25	d3 Ø56 ^{-0.01} _{-0.029} g6
	da Ø54.101 H11	Ø46.902 H10	Ø43.807 H11	d4 Ø65 ^{-0.1} _{-0.19} d11
	d3 Ø64.4 ⁰ _{-0.19} h11	Ø54.5 ⁰ _{-0.19} h11	Ø54.4 ⁰ _{-0.19} h11	B Ø10 ^{-0.013} _{-0.028} f7
	d4 Ø58.4 ⁻⁰ _{-0.74} h14	Ø49 ⁻⁰ _{-0.3} h12	Ø48.4 ⁻⁰ _{-0.62} h14	
	B Ø6.0	Ø3.5	Ø6.0	
	db Ø70.999 f8	Ø56.953 e9	Ø60.873 f8	

HGM5系列/HGM5 Series

HGM5 外形及安装尺寸/HGM5 Installation Dimensions

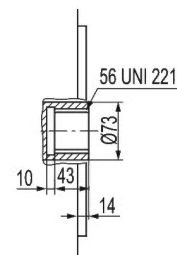
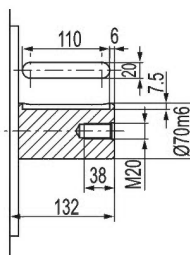
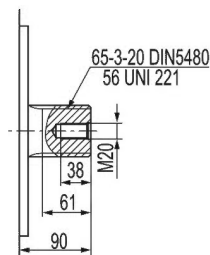
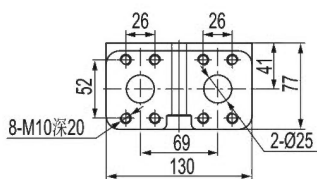


K向旋转
K Direction Rotation

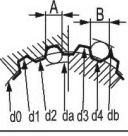
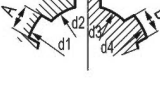
矩形外花键
Rectangular male spline

圆柱平键B
Cylinder Flat Key B

内花键
Female spline

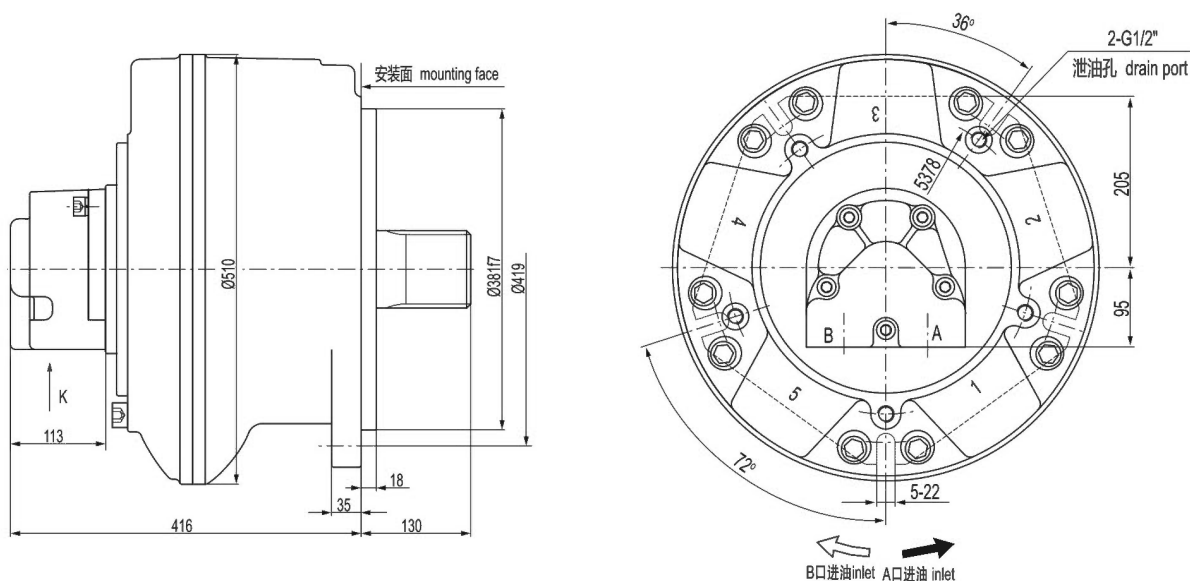


花键参数/ Spline parameters

	65-3-20 DIN 5480	55-2-26 DIN 5482	55-3-17 DIN 5480	56 UNI 221
	d0 Ø 60	Ø 52	Ø 51	d1 Ø 56 ^{+0.03} ₀ H7
	d1 Ø 65 ^{+0.74} ₀ H14	Ø 55 ^{+0.3} ₀ H12	Ø 55 ^{+0.74} ₀ H14	d2 Ø 65 ^{+0.19} ₀ H11
	d2 Ø 59 ^{+0.19} ₀ H11	Ø 50 ^{+0.16} ₀ H11	Ø 49 ^{+0.16} ₀ H11	A Ø 10 ^{+0.028} _{-0.013} F7
	A Ø 5.25	Ø 3.5	Ø 5.25	d3 Ø 56 ^{-0.01} _{-0.029} g6
	da Ø 54.101 H11	Ø 46.902 H10	Ø 43.807 H11	d4 Ø 65 ^{-0.1} _{-0.19} d11
	d3 Ø 64.4 ⁰ _{-0.19} h11	Ø 54.5 ⁰ _{-0.19} h11	Ø 54.4 ⁰ _{-0.19} h11	B Ø 10 ^{-0.013} _{-0.028} f7
	d4 Ø 58.4 ⁻⁰ _{-0.74} h14	Ø 49 ⁻⁰ _{-0.3} h12	Ø 48.4 ⁻⁰ _{-0.62} h14	
	B Ø 6.0	Ø 3.5	Ø 6.0	
	db Ø 70.999 f8	Ø 56.953 e9	Ø 60.873 f8	

HGM6系列/HGM6 Series

HGM6 外形及安装尺寸/HGM6 Installation Dimensions

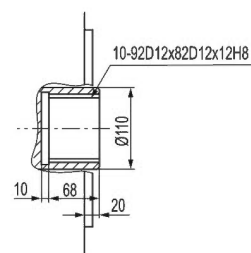
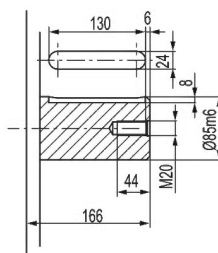
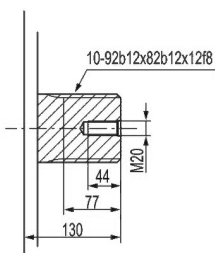
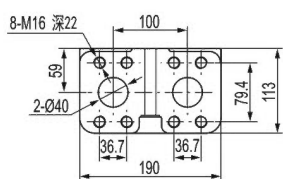


K向旋转
K Direction Rotation

矩形外花键
Rectangular male spline

圆柱平键B
Cylinder Flat Key B

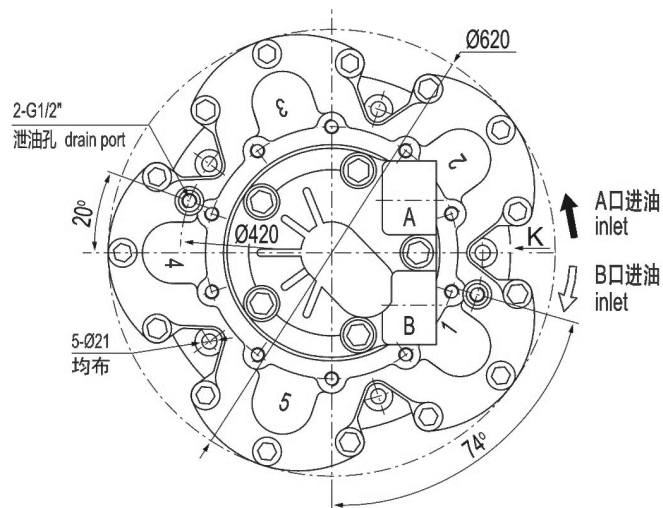
内花键
Female spline



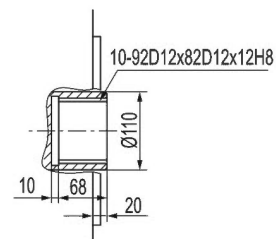
花键参数/ Spline parameters

	80-3-25 DIN 5480		pitch 6/12 BS 3550	
	d0	Ø75	A	Ø88 ^{+0.047} _{-0.17}
	d1	Ø80 ^{+0.87} ₀ H14	B	Ø84.6
	d2	Ø74 ^{+0.19} ₀ H11	C	Ø80 ^{-0.48} _{-0.07}
	A	Ø5.25	D	Ø97 ^{+0.082} _{-0.03}
	da	Ø68.9 H9	E	Ø8.12
	d3	Ø79.4 ⁰ _{-0.19} h11		
	d4	Ø73.4 ⁻⁰ _{-0.87} h14		
	B	Ø6.0		
	db	Ø85.9 f8		

HGM7 外形及安装尺寸/HGM7 Installation Dimensions



内花键
Female spline

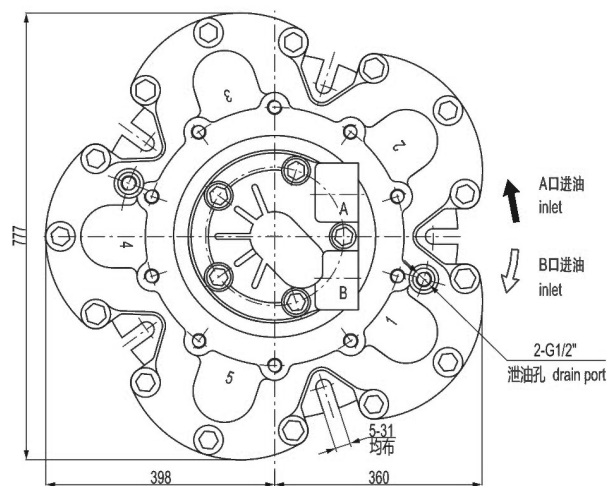
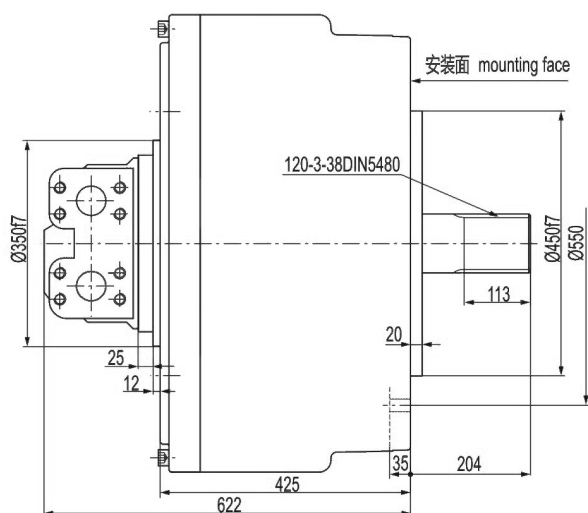


花键参数/ Spline parameters

	80-3-25 DIN 5480	pitch 6/12 BS 3550
	d0 Ø75	A Ø88 ^{-0.047} _{-0.17}
	d1 Ø80 ^{+0.87} ₀ H14	B Ø84.6
	d2 Ø74 ^{+0.19} ₀ H11	C Ø80 ^{-0.48} _{-0.07}
	A Ø5.25	D Ø97 ^{+0.082} _{+0.03}
	da Ø68.9 H9	E Ø8.12
	d3 Ø79.4 ⁰ _{-0.19} h11	
	d4 Ø73.4 ⁻⁰ _{-0.87} h14	
	B Ø6.0	
	db Ø85.9 f8	

HGM9系列/HGM9 Series

HGM9 外形及安装尺寸/HGM9 Installation Dimensions

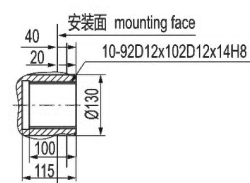
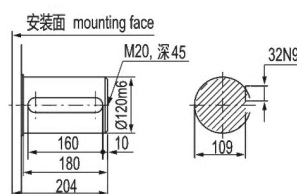
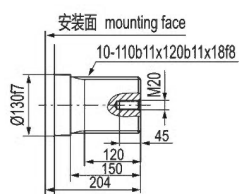
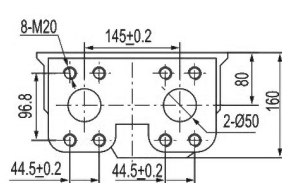


K向旋转
K Direction Rotation

矩形外花键
Rectangular male spline

圆柱平键B
Cylinder Flat Key B

内花键
Female spline



花键参数/ Spline parameters

	外花键 External spline 120-3-38 DIN 5480		内花键 Internal spline 100-3-32 DIN 5480	
	d0	Ø114	d0	Ø96
	d3	Ø119.4 ⁰ _{-0.22} h11	d1	Ø100 ^{+0.22} ₀ H11
	d4	Ø113.4 ⁰ _{-0.22} h11	d2	Ø94 ^{+0.22} ₀ H11
	B	Ø6.0	A	Ø5.25
	db	Ø126.095 f8	da	Ø89.066 H9