

## GM SERIES

### GM 系列低速大扭矩液压马达 Low Speed high Torque Hydraulic Motor

#### ◆产品概述

GM 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。GM 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 GM 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、由于结构上减少了摩擦损失, 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。

GM 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. GM hydraulic motor mainly has the following characteristics:

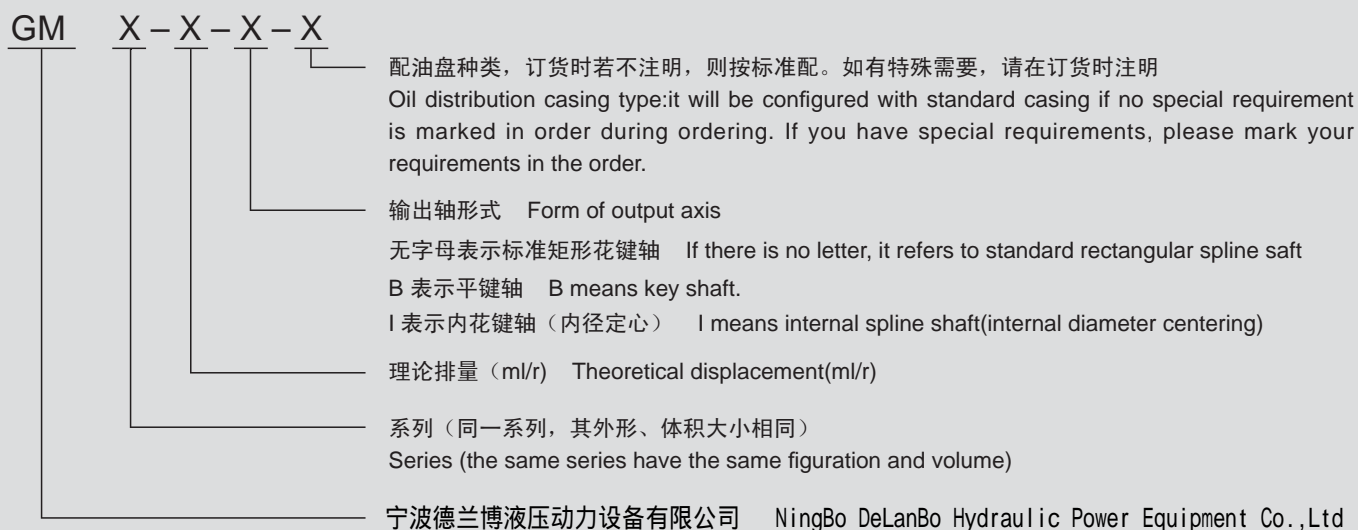
- 1.As the piston and the tilt cylinder have no side force, the piston bottom is designed to be static pressure balance. The torsional force is transferring between the piston and the crankshaft through rolling bearing, so the friction loss during the transferring process of force is reduced. Therefore, GM 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.

#### ◆产品适用范围 / Applicable range of products:

由于 GM 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 GM 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.

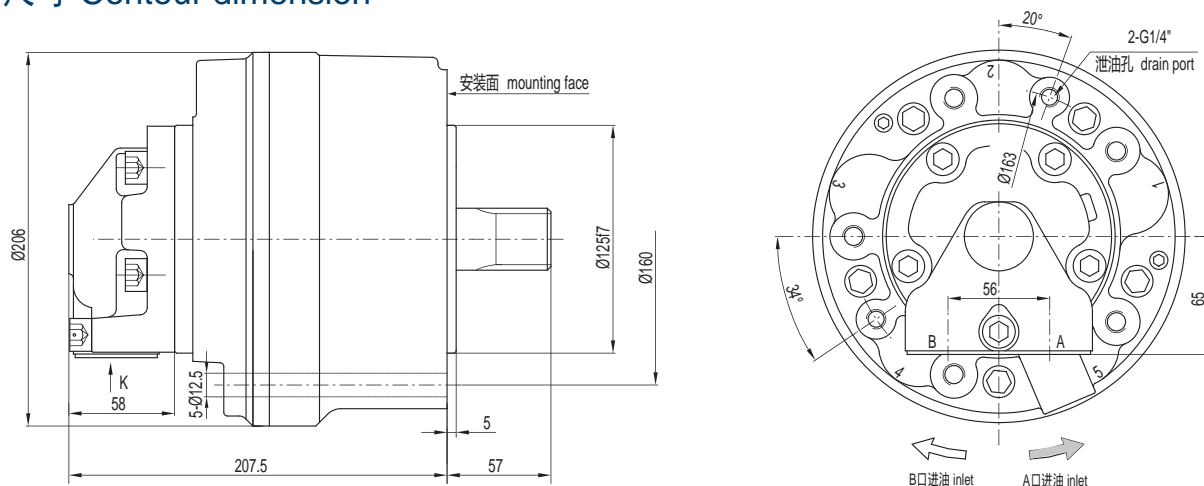
#### ◆液压马达说明 / Description of hydraulic motor:



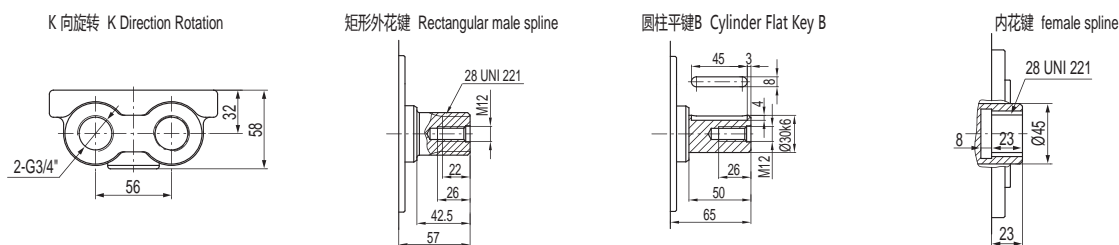
## GM-05

## GM-05 hydraulic motor

### ◆外形尺寸 Contour dimension



### ◆轴伸型式 / Shaft extension type



### ◆花键参数 / Spline parameters

35-2-16 DIN 5480																			
	<tr><td>d0</td><td>Ø32</td></tr> <tr><td>d1</td><td>Ø35<sup>+0.52</sup><sub>0</sub> H14</td></tr> <tr><td>d2</td><td>Ø31<sup>+0.16</sup><sub>0</sub> H11</td></tr> <tr><td>A</td><td>Ø3.5</td></tr> <tr><td>da</td><td>Ø27.711 H11</td></tr> <tr><td>d3</td><td>Ø34.6<sup>0</sup><sub>-0.16</sub> H11</td></tr> <tr><td>d4</td><td>Ø31.6<sup>0</sup><sub>-0.52</sub> H11</td></tr> <tr><td>B</td><td>Ø4.0</td></tr> <tr><td>db</td><td>Ø39.00 f8</td></tr>	d0	Ø32	d1	Ø35 <sup>+0.52</sup> <sub>0</sub> H14	d2	Ø31 <sup>+0.16</sup> <sub>0</sub> H11	A	Ø3.5	da	Ø27.711 H11	d3	Ø34.6 <sup>0</sup> <sub>-0.16</sub> H11	d4	Ø31.6 <sup>0</sup> <sub>-0.52</sub> H11	B	Ø4.0	db	Ø39.00 f8
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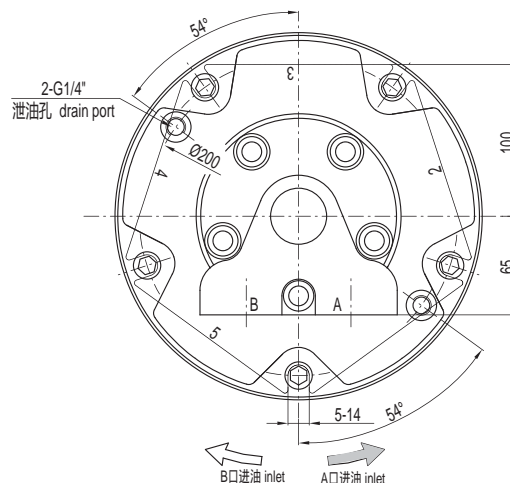
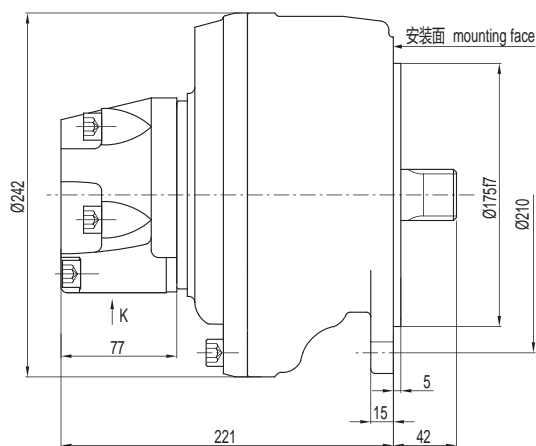
28 UNI 221 (6-28-34) DIN 5463													
	<tr><td>d1</td><td>Ø28<sup>+0.021</sup><sub>0</sub> H7</td></tr> <tr><td>d2</td><td>Ø34<sup>+0.16</sup><sub>0</sub> H11</td></tr> <tr><td>A</td><td>7<sup>+0.028</sup><sub>-0.013</sub> F7</td></tr> <tr><td>d3</td><td>Ø28<sup>0.007</sup><sub>-0.02</sub> g6</td></tr> <tr><td>d4</td><td>Ø34<sup>0.065</sup><sub>-0.16</sub> h14</td></tr> <tr><td>B</td><td>7<sup>-0.013</sup><sub>-0.028</sub> f7</td></tr>	d1	Ø28 <sup>+0.021</sup> <sub>0</sub> H7	d2	Ø34 <sup>+0.16</sup> <sub>0</sub> H11	A	7 <sup>+0.028</sup> <sub>-0.013</sub> F7	d3	Ø28 <sup>0.007</sup> <sub>-0.02</sub> g6	d4	Ø34 <sup>0.065</sup> <sub>-0.16</sub> h14	B	7 <sup>-0.013</sup> <sub>-0.028</sub> f7
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### ◆技术参数 / Parameters

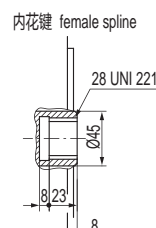
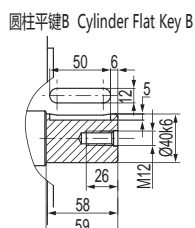
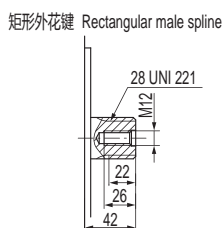
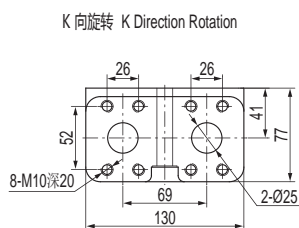
技术参数 Technical Parameters	05-60	05-75	05-90	05-110	05-130	05-150	05-170	05-200
理论排量 Theoretical Displacement (ml/r)	59	74	86	115	129	151	166	191
额定压力 Rated Pressure (MPa)	25	25	25	25	25	25	25	25
最高压力 Max Pressure (MPa)	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
额定扭矩 Rated Torque (N.M)	235	295	343	458	513	600	660	760
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	9.4	11.8	13.7	18.3	20.5	24	26.4	30.4
最大功率 Max Power (Kw)	20	20	20	20	20	20	20	20
最高转速 Max Rotation Speed (r/min)	1000	1000	1000	900	900	900	800	800
重量 Weight (kg)	22	22	22	22	22	22	22	22

## GM-1 GM-1 hydraulic motor

### ◆外形尺寸 Contour dimension



### ◆轴伸型式 / Shaft extension type



### ◆花键参数 / Spline parameters

35-2-16 DIN 5480																			
	<tr> <td>d0</td><td>Ø32</td></tr> <tr> <td>d1</td><td>Ø35<sup>+0.52</sup><sub>0</sub> H14</td></tr> <tr> <td>d2</td><td>Ø31<sup>+0.16</sup><sub>0</sub> H11</td></tr> <tr> <td>A</td><td>Ø3.5</td></tr> <tr> <td>da</td><td>Ø27.711 H11</td></tr> <tr> <td>d3</td><td>Ø34.6<sup>0</sup><sub>-0.16</sub> H11</td></tr> <tr> <td>d4</td><td>Ø31.6<sup>0</sup><sub>-0.52</sub> H11</td></tr> <tr> <td>B</td><td>Ø4.0</td></tr> <tr> <td>db</td><td>Ø39.00 f8</td></tr>	d0	Ø32	d1	Ø35 <sup>+0.52</sup> <sub>0</sub> H14	d2	Ø31 <sup>+0.16</sup> <sub>0</sub> H11	A	Ø3.5	da	Ø27.711 H11	d3	Ø34.6 <sup>0</sup> <sub>-0.16</sub> H11	d4	Ø31.6 <sup>0</sup> <sub>-0.52</sub> H11	B	Ø4.0	db	Ø39.00 f8
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28 UNI 221 (6-28-34) DIN 5463													
	<tr> <td>d1</td><td>Ø28<sup>+0.021</sup><sub>0</sub> H7</td></tr> <tr> <td>d2</td><td>Ø34<sup>+0.16</sup><sub>0</sub> H11</td></tr> <tr> <td>A</td><td>7<sup>+0.028</sup><sub>+0.013</sub> F7</td></tr> <tr> <td>d3</td><td>Ø28<sup>-0.007</sup><sub>-0.02</sub> g6</td></tr> <tr> <td>d4</td><td>Ø34<sup>-0.065</sup><sub>-0.16</sub> h14</td></tr> <tr> <td>B</td><td>7<sup>-0.013</sup><sub>-0.028</sub> f7</td></tr>	d1	Ø28 <sup>+0.021</sup> <sub>0</sub> H7	d2	Ø34 <sup>+0.16</sup> <sub>0</sub> H11	A	7 <sup>+0.028</sup> <sub>+0.013</sub> F7	d3	Ø28 <sup>-0.007</sup> <sub>-0.02</sub> g6	d4	Ø34 <sup>-0.065</sup> <sub>-0.16</sub> h14	B	7 <sup>-0.013</sup> <sub>-0.028</sub> f7
d1	Ø28 <sup>+0.021</sup> <sub>0</sub> H7												
d2	Ø34 <sup>+0.16</sup> <sub>0</sub> H11												
A	7 <sup>+0.028</sup> <sub>+0.013</sub> F7												
d3	Ø28 <sup>-0.007</sup> <sub>-0.02</sub> g6												
d4	Ø34 <sup>-0.065</sup> <sub>-0.16</sub> h14												
B	7 <sup>-0.013</sup> <sub>-0.028</sub> f7												

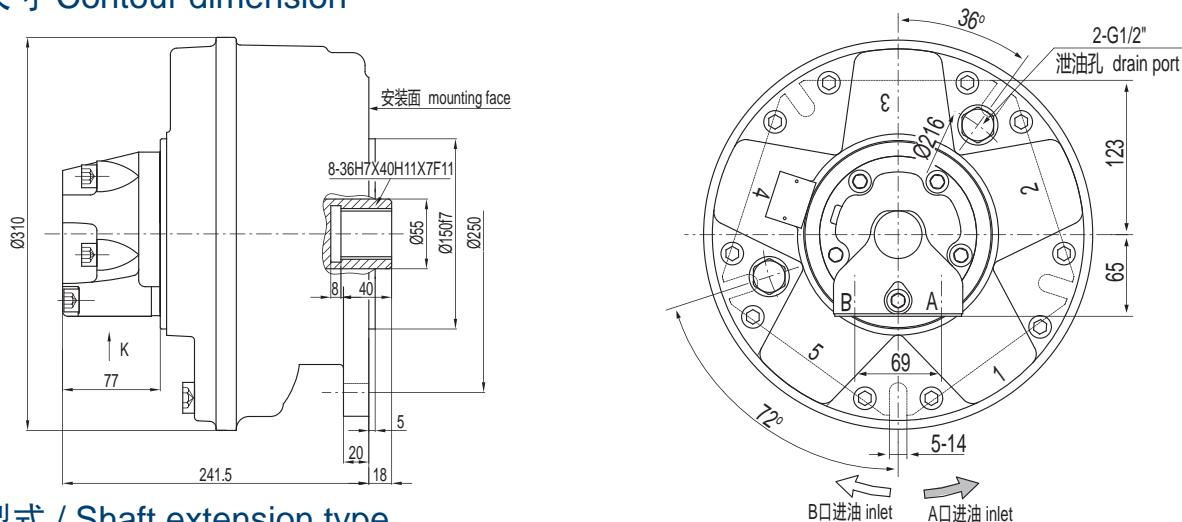
### ◆技术参数 / Parameters

技术参数 Technical Parameters	1-100	1-150	1-175	1-200	1-250	1-300	1-320	1-350
理论排量 Theoretical Displacement (ml/r)	99	154	172	201	243	290	314	340
额定压力 Rated Pressure (MPa)	25	25	25	25	25	25	25	20
最高压力 Max Pressure (MPa)	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
额定扭矩 Rated Torque (N.M)	385	600	670	785	950	1130	1225	1060
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	15.4	24	26.8	31.4	38	45.2	49	53
最大功率 Max Power (Kw)	48	48	48	48	48	48	48	48
最高转速 Max Rotation Speed (r/min)	1000	1000	900	800	700	650	600	550
重量 Weight (kg)	31	31	31	31	31	31	31	31

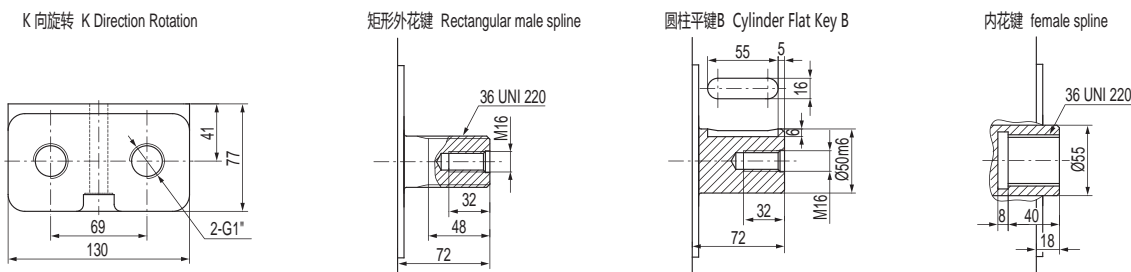
## GM-2

## GM-2 hydraulic motor

### ◆外形尺寸 Contour dimension



### ◆轴伸型式 / Shaft extension type



### ◆花键参数 / Spline parameters

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

36 uni 220 (8-36-40)	
d1	Ø36 <sup>+0.025</sup> <sub>0</sub> H7
d2	Ø40 <sup>+0.16</sup> <sub>0</sub> H11
A	7 <sup>+0.028</sup> <sub>-0.013</sub> F7
d3	Ø36 <sup>-0.009</sup> <sub>-0.025</sub> g6
d4	Ø40 <sup>-0.065</sup> <sub>-0.16</sub> d11
B	7 <sup>-0.013</sup> <sub>-0.028</sub> f7

### ◆技术参数 / Parameters

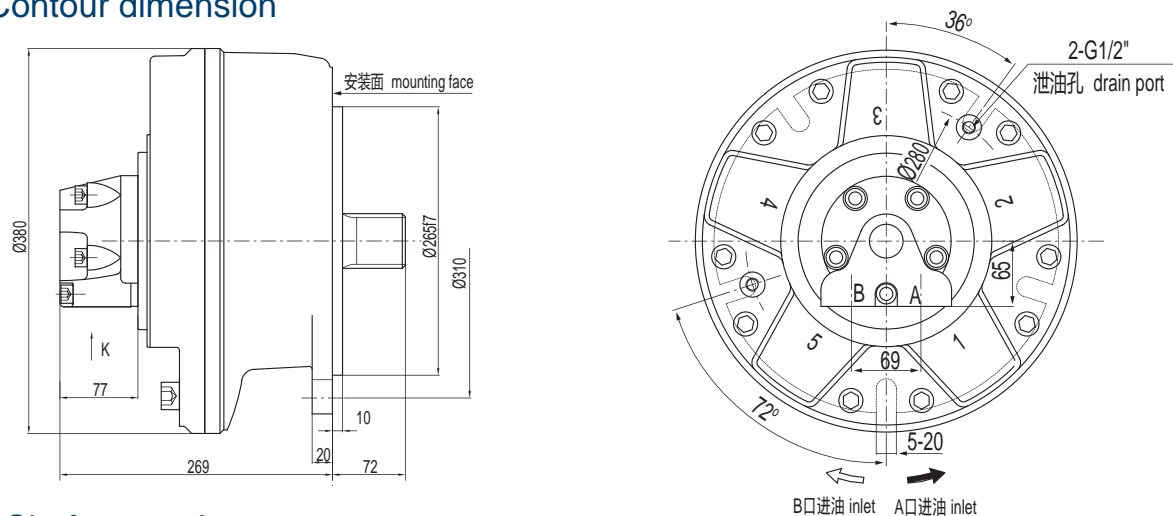
技术参数 Technical Parameters	2-200	2-250	2-300	2-350	2-420	2-500	2-600	2-630
理论排量 Theoretical Displacement (ml/r)	192	251	304	347	425	493	565	623
额定压力 Rated Pressure (MPa)	25	25	25	25	25	25	25	25
最高压力 Max Pressure (MPa)	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
额定扭矩 Rated Torque (N.M)	750	980	1188	1355	1658	1923	2208	2433
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	30	39.2	47.5	54.2	66.3	76.9	88.3	97.3
最大功率 Max Power (Kw)	59	59	59	59	59	59	59	59
最高转速 Max Rotation Speed (r/min)	800	800	750	750	750	700	700	650
重量 Weight (kg)	51	51	51	51	51	51	51	51



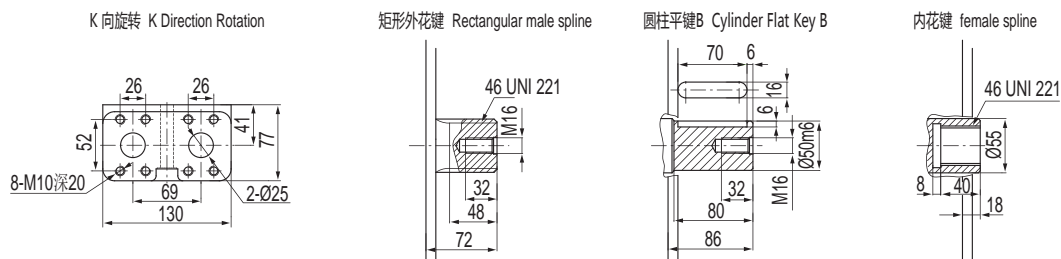
## GM-3

## GM-3 hydraulic motor

### ◆外形尺寸 Contour dimension



### ◆轴伸型式 / Shaft extension type



### ◆花键参数 / Spline parameters

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

46 UNI (8-46-54) DIN 5463	
d1	Ø46 <sup>+0.03</sup> <sub>0</sub> H7
d2	Ø54 <sup>+0.19</sup> <sub>0</sub> H11
A	9 <sup>+0.028</sup> <sub>+0.013</sub> F7
d3	Ø46 <sup>+0.009</sup> <sub>-0.025</sub> g6
d4	Ø54 <sup>+0.1</sup> <sub>-0.29</sub> d11
B	9 <sup>-0.013</sup> <sub>-0.028</sub> f7

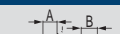

### ◆技术参数 / Parameters

技术参数 Technical Parameters	3-425	3-500	3-600	3-700	3-800	3-900	3-1000
理论排量 Theoretical Displacement (ml/r)	426	486	595	690	792	873	987
额定压力 Rated Pressure (MPa)	25	25	25	25	25	25	25
最高压力 Max Pressure (MPa)	31.5	31.5	31.5	31.5	31.5	31.5	31.5
额定扭矩 Rated Torque (N.M)	1660	1895	2320	2700	3100	3400	3850
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	66.4	75.8	92.8	108	124	136	154
最大功率 Max Power (Kw)	80	80	80	80	80	80	80
最高转速 Max Rotation Speed (r/min)	650	600	575	500	500	400	350
重量 Weight (kg)	87	87	87	87	87	87	87

## GM-4 hydraulic motor

## ◆外形尺寸 Contour dimension



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

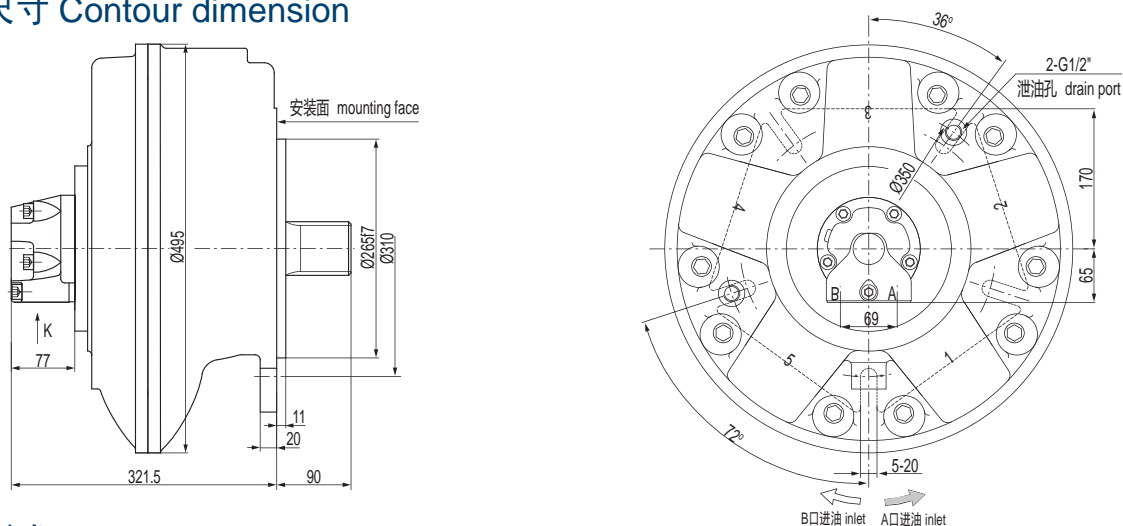
### ◆技术参数 / Parameters

技术参数 Technical Parameters	4-600	4-800	4-900	4-1000	4-1100	4-1300
理论排量 Theoretical Displacement (ml/r)	616	793	904	1022	1116	1316
额定压力 Rated Pressure (MPa)	25	25	25	25	25	25
最高压力 Max Pressure (MPa)	31.5	31.5	31.5	31.5	31.5	31.5
额定扭矩 Rated Torque (N.M)	2403	3100	3525	4000	4350	5125
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	96.1	124	141	160	174	205
最大功率 Max Power (Kw)	100	100	100	100	100	100
最高转速 Max Rotation Speed (r/min)	550	550	450	400	400	350
重量 Weight (kg)	120	120	120	120	120	120

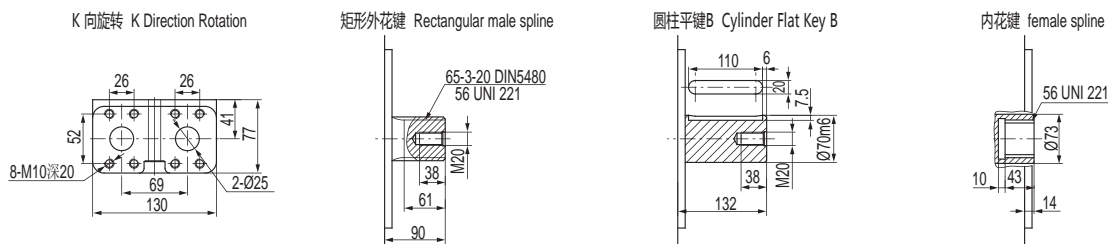
## GM-5

## GM-5 hydraulic motor

### ◆外形尺寸 Contour dimension



### ◆轴伸型式 / Shaft extension type



### ◆花键参数 / Spline parameters

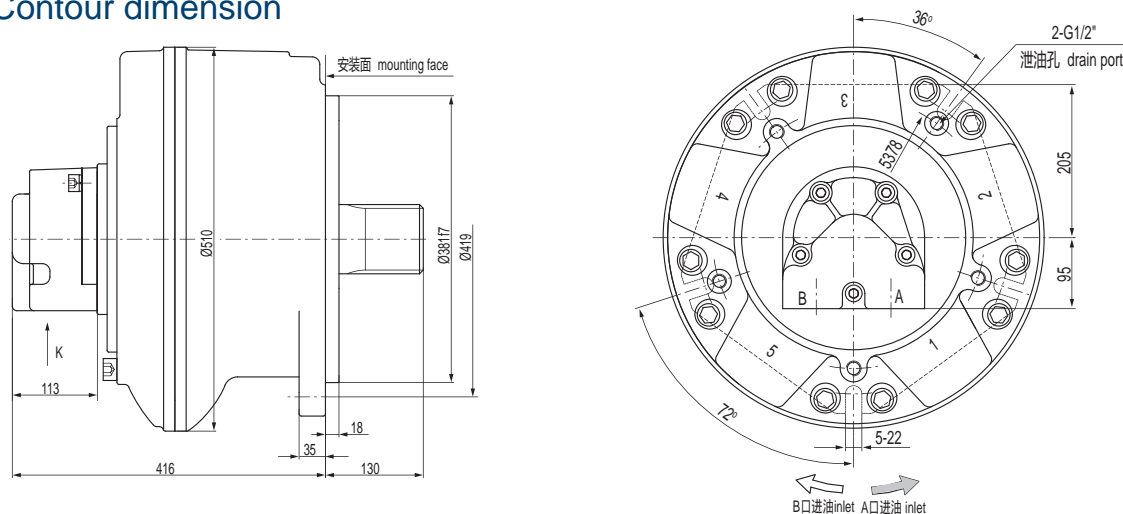
	65-3-20 DIN 5480	55-2-26 DIN 5482	55-3-17 DIN 5480	56 UNI 221
d0	Ø 60	Ø 52	Ø 51	d1 Ø 56 <sup>+0.03</sup> H7
d1	Ø 65 <sup>+0.74</sup> H14	Ø 55 <sup>+0.3</sup> H12	Ø 55 <sup>+0.74</sup> H14	d2 Ø 65 <sup>+0.19</sup> H11
d2	Ø 59 <sup>+0.19</sup> H11	Ø 50 <sup>+0.16</sup> H11	Ø 49 <sup>+0.16</sup> H11	A Ø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

### ◆技术参数 / Parameters

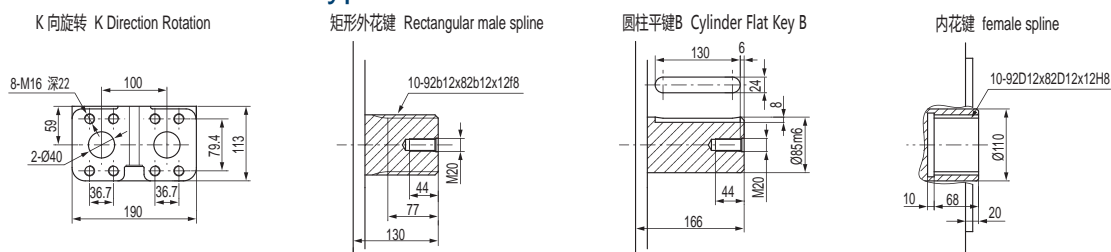
技术参数 Technical Parameters	5-800	5-1000	5-1200	5-1300	5-1450	5-1600	5-1800	5-2000
理论排量 Theoretical Displacement (ml/r)	807	1039	1185	1340	1462	1634	1816	2007
额定压力 Rated Pressure (MPa)	25	25	25	25	25	25	25	25
最高压力 Max Pressure (MPa)	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
额定扭矩 Rated Torque (N.M)	3150	4050	4625	5225	5700	6350	7075	7825
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	126	162	185	209	228	254	283	313
最大功率 Max Power (Kw)	120	120	120	120	120	120	120	120
最高转速 Max Rotation Speed (r/min)	450	450	400	400	350	300	300	250
重量 Weight (kg)	175	175	175	175	175	175	175	175

## GM-6 GM-6 hydraulic motor

### ◆外形尺寸 Contour dimension



### ◆轴伸型式 / Shaft extension type



### ◆花键参数 / Spline parameters

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

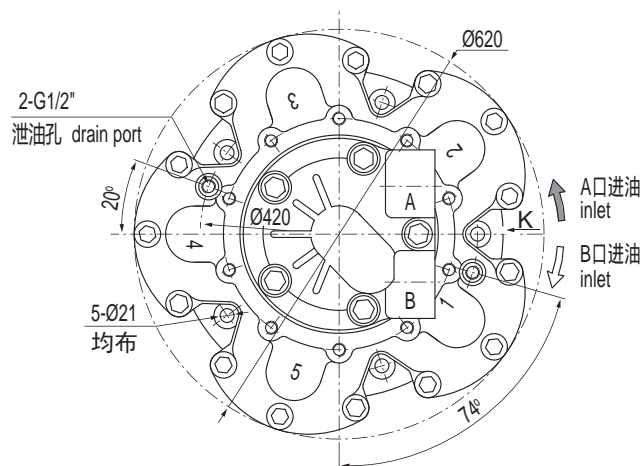
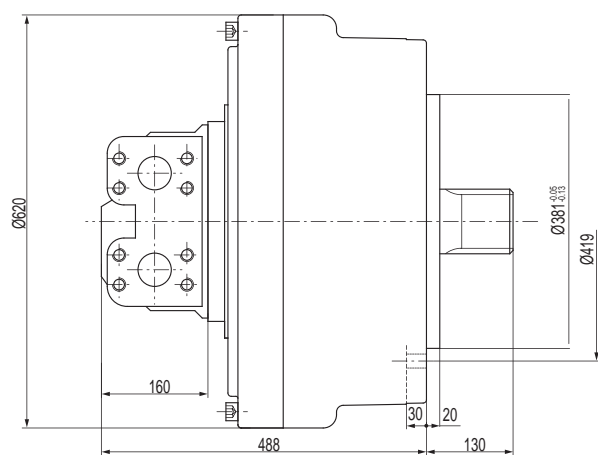
### ◆技术参数 / Parameters

技术参数 Technical Parameters	6-1700	6-2100	6-2500	6-3000
理论排量 Theoretical Displacement (ml/r)	1690	2127	2513	3041
额定压力 Rated Pressure (MPa)	25	25	25	25
最高压力 Max Pressure (MPa)	31.5	31.5	31.5	31.5
额定扭矩 Rated Torque (N.M)	6600	8300	9800	11875
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	264	332	392	475
最大功率 Max Power (Kw)	170	170	170	170
最高转速 Max Rotation Speed (r/min)	400	350	300	250
重量 Weight (kg)	275	275	275	275

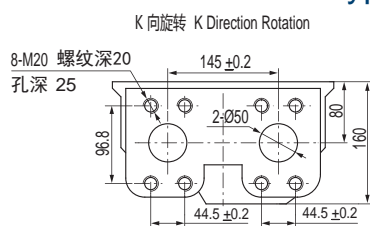
## GM-7

## GM-7 hydraulic motor

### ◆外形尺寸 Contour dimension

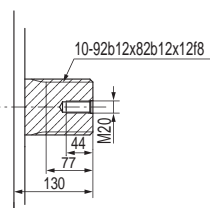


### ◆轴伸型式 / Shaft extension type

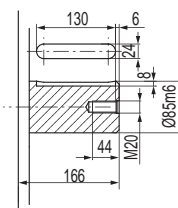


K 向旋转 K Direction Rotation

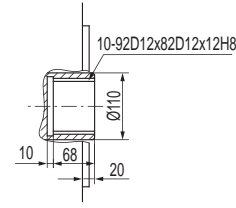
矩形外花键 Rectangular male spline



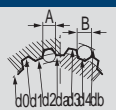

圆柱平键B Cylinder Flat Key B



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 $\text{Ø}80^{+0.87}_0$ H14	B Ø84.6
	d2 $\text{Ø}74^{+0.19}_0$ H11	C Ø80 $^{+0.48}_{-0.07}$
	A Ø5.25	D Ø97 $^{+0.082}_{+0.03}$
	da Ø68.9 H9	E Ø8.12
	d3 $\text{Ø}79.4^{+0.19}_0$ h11	
	d4 $\text{Ø}73.4^{+0.19}_{-0.87}$ h14	
	B Ø6.0	
	db Ø85.9 f8	

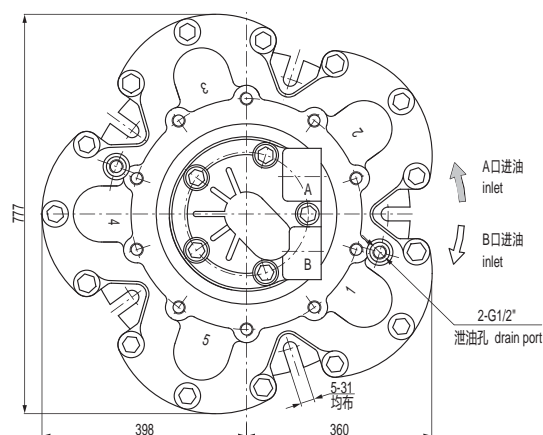
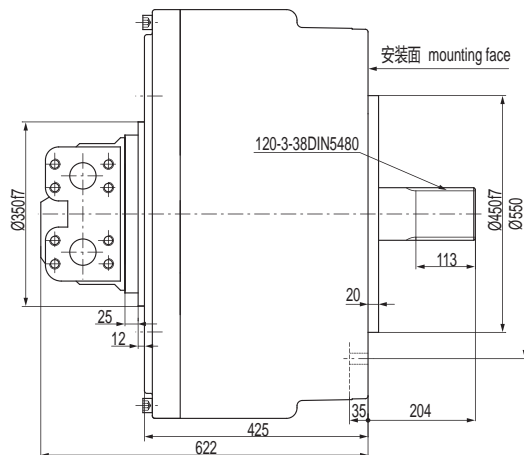
### ◆技术参数 / Parameters

技术参数 Technical Parameters	7-2000	7-2500	7-3000	7-3300	7-3600	7-4300
理论排量 Theoretical Displacement (ml/r)	2007	2526	2985	3290	3611	4298
额定压力 Rated Pressure (MPa)	25	25	25	25	25	25
最高压力 Max Pressure (MPa)	31.5	31.5	31.5	31.5	31.5	31.5
额定扭矩 Rated Torque (N.M)	7975	10050	11877	13075	14350	17100
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	319	402	475	523	574	684
最大功率 Max Power (Kw)	210	210	210	210	210	210
最高转速 Max Rotation Speed (r/min)	450	350	300	275	250	225
重量 Weight (kg)	340	340	340	340	340	340

## GM-9

## GM-9 hydraulic motor

### ◆外形尺寸 Contour dimension



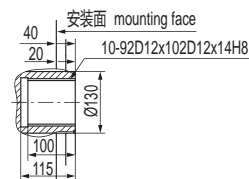
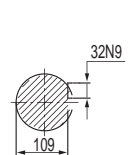
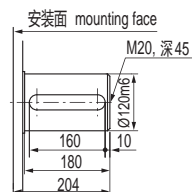
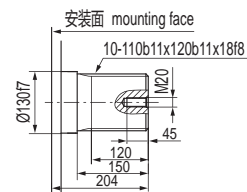
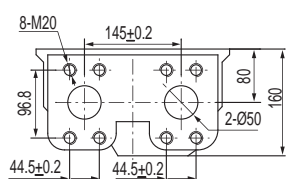
### ◆轴伸型式 / Shaft extension type

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 <sup>0</sup> <sub>-0.22</sub> h11	d1 Ø100 <sup>+0.22</sup> <sub>0</sub> H11
d4	Ø113.4 <sup>0</sup> <sub>-0.22</sub> h11	d2 Ø94 <sup>+0.22</sup> <sub>0</sub> H11
B	Ø6.0	A Ø5.25
db	Ø126.095 f8	da Ø89.066 H9

### ◆技术参数 / Parameters

技术参数 Technical Parameters	9-4600	9-5700	9-6600	9-7700	9-8800	9-10000	9-12000
理论排量 Theoretical Displacement (ml/r)	4618	5654	6636	7696	8836	10053	12026
额定压力 Rated Pressure (MPa)	4618	25	25	25	25	25	25
最高压力 Max Pressure (MPa)	31.5	31.5	31.5	31.5	31.5	31.5	31.5
额定扭矩 Rated Torque (N.M)	18377	22500	26400	30625	35150	40000	47850
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	735	900	1056	1225	1406	1600	1914
最大功率 Max Power (Kw)	260	260	300	320	345	360	375
最高转速 Max Rotation Speed (r/min)	160	150	145	140	130	120	110
重量 Weight (kg)	700	700	700	700	700	700	700



# NIM SERIES

## NIM 系列低速大扭矩外五星液压马达 Low Speed High Torque Hydraulic Motor

### ◆产品概述 /Product overview

本公司生产的 NIM 系列曲轴连杆式低速大扭矩液压马达是按意大利标准并结合中国国情设计生产的，主要零部件由加工中心和数控机床加工，所有密封件及高强度内六角螺钉由德国、意大利以及台湾地区进口，铸件采用取聚脂沙铸造球墨铸铁，从而保证了产品性能和外观质量赶超国内外同类产品水平，其主要特点如下：

- 1、采用偏心曲轴及较低激振频率的五活塞结构，因而具有低噪音特点；
- 2、起动扭矩大，低速稳定性好，能在很低的速度下平稳运转；
- 3、专利技术的平面补偿配流盘可靠性好，泄漏少，活塞套采用密封环密封，因而具有较高的容积效率；
- 4、曲轴与连杆间由滚柱支承，因而具有很高的机械效率；
- 5、旋转方向可逆，输出轴允许承受一定的径向和轴向外力；
- 6、具有较高的功率质量比。

The NIM series crankshaft connecting rod type low speed high torque hydraulic motor is produced according to Italian standards but in consideration of actual situations of China. The main parts and components are machined by machining center and CNC machine tools. All the seal parts and high strength interior hexagonal bolts are imported from Germany, Italia and Taiwan. The casting is made of polyester sand nodular cast iron to ensure the performance and appearance quality of the products to overpass the similar products in China and overseas market. The product has the following features:

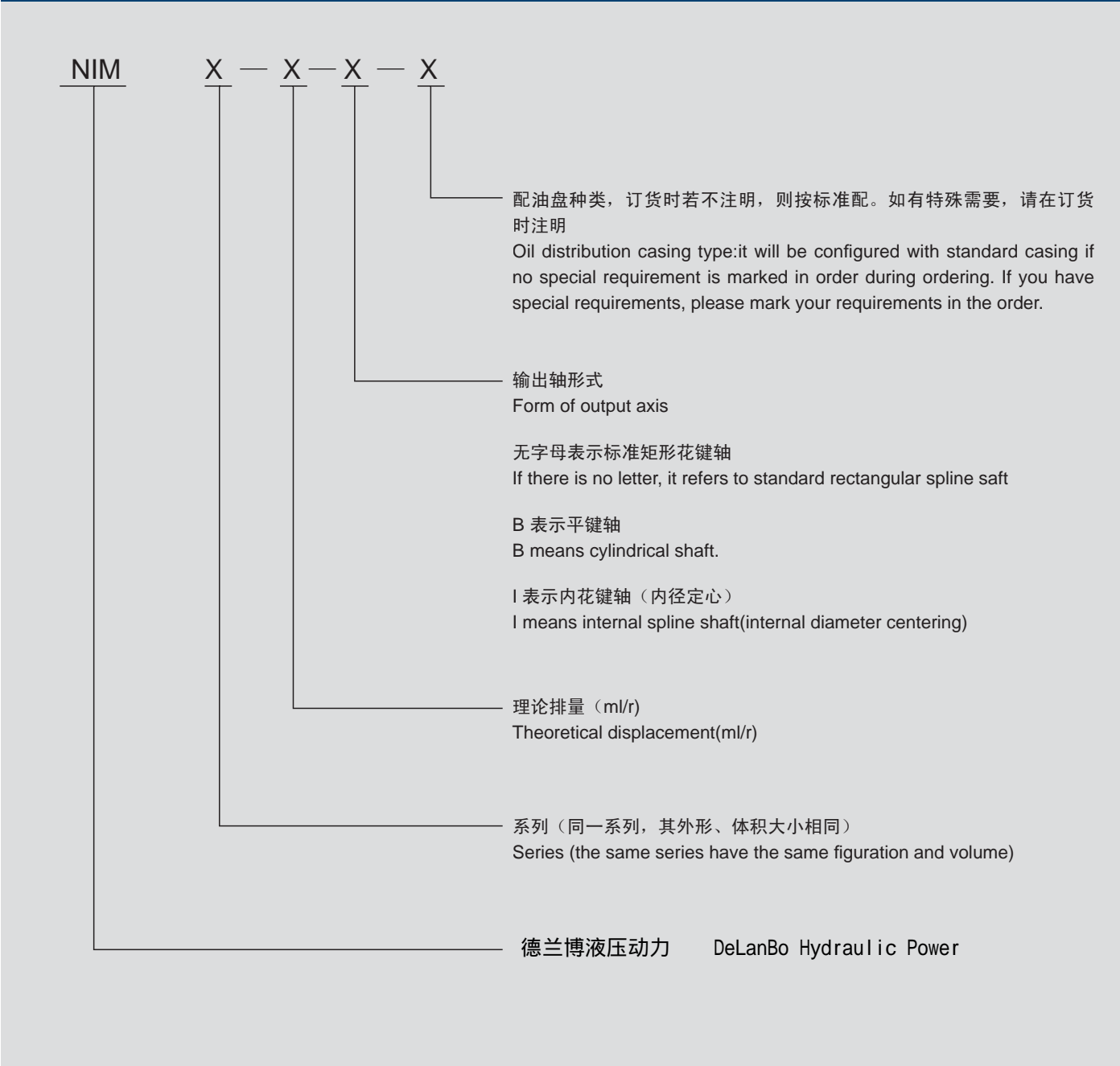
- 1.As the product adopts eccentric crankshaft and five-piston structure with comparatively low frequency, it has low noise characteristic;
- 2.It has big startup torque, perfect stability at low speed, so it can stably operate at very low speed;
3. The patented plane compensation port plate has perfect reliability and almost no leakage. The piston bushing is sealed by seal ring, so it has comparatively high volume efficiency;
4. The crankshaft and the connecting rod are supported by roller, so it has very high mechanical efficiency;
5. The rotational direction is reversible, the output shaft allows endure certain radial and axial force;
6. It has comparatively high power mass ratio.

### ◆产品适用范围 /Applicable range of products:

由于 NIM 系列低速大扭矩液压马达具有可靠性好、效率高、寿命长、噪音低、转速范围宽等一系列特点，因而适用范围广，可广泛应用于建筑工程机械、起重运输设备、重型冶金机械、石油煤矿机械、船舶甲板机械、机床、轻工、塑料机械、地质钻探设备等各种机械的液压传动系统中。特别适用于注塑机的螺杆驱动、提升绞盘卷筒、各种回转机构的驱动、履带和轮子行走机械的驱动等传动装置中。

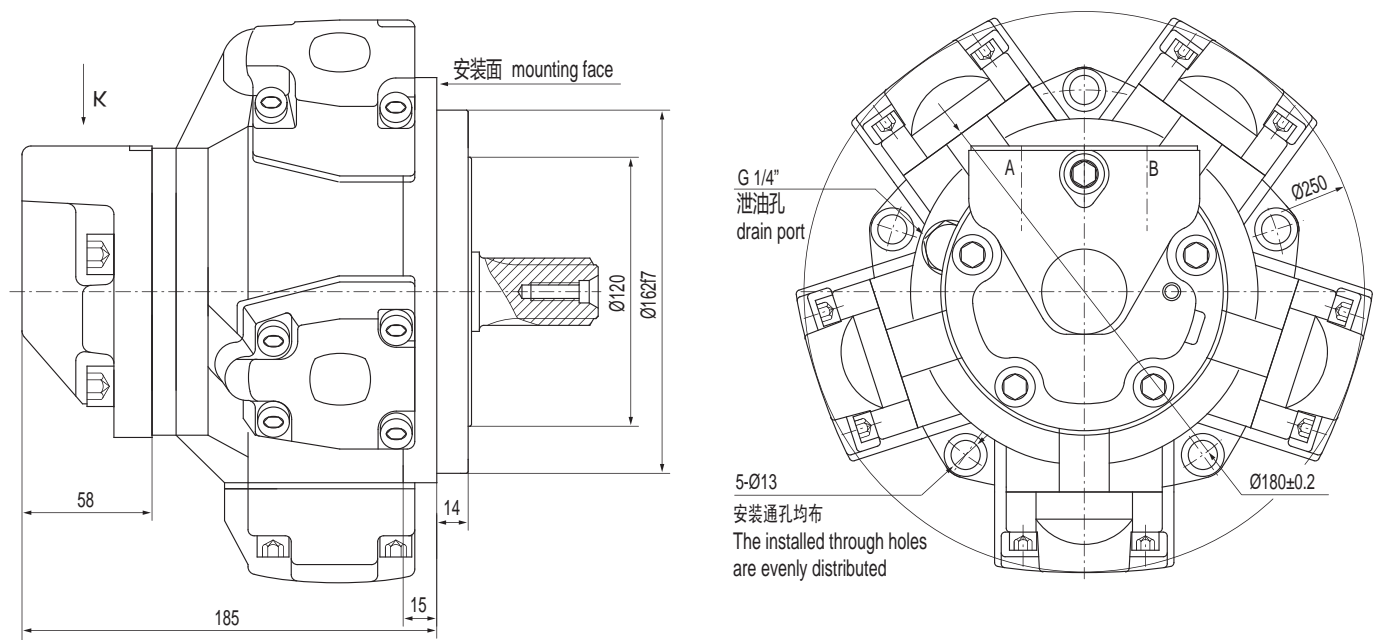
As NIM series low speed high torque hydraulic motor has such characteristics as: perfect reliability, high efficiency, long life, low noise and wide rotation speed range, it has wide application range. It can be widely applied in the hydraulic and transmission systems of construction engineering machinery, lifting and transportation equipment, heavy type metallurgical machinery, petroleum and coal mining machinery, ship's deck machinery, machine tools, light industry and plastic machinery, geological prospecting equipments. This product is especially applicable for the transmission devices of screw drive of plastic injection machine, hoisting winch, all sorts of rotational mechanism and the track and wheel travel machine.

◆ 液压马达说明 / Description of hydraulic motor:



NIM2---125~300 安装联接尺寸图

Dimensions Diagram for Installation & Connection of NIM2---125-300



◆本系列马达配 D31 标准通油盘，具体安装尺寸见附表（特殊要求另议）

This series motor is outfitted with D31 standard oil through plate. Please refer to the attached table for specific installation dimensions(special requirements should be netotiated additionally)

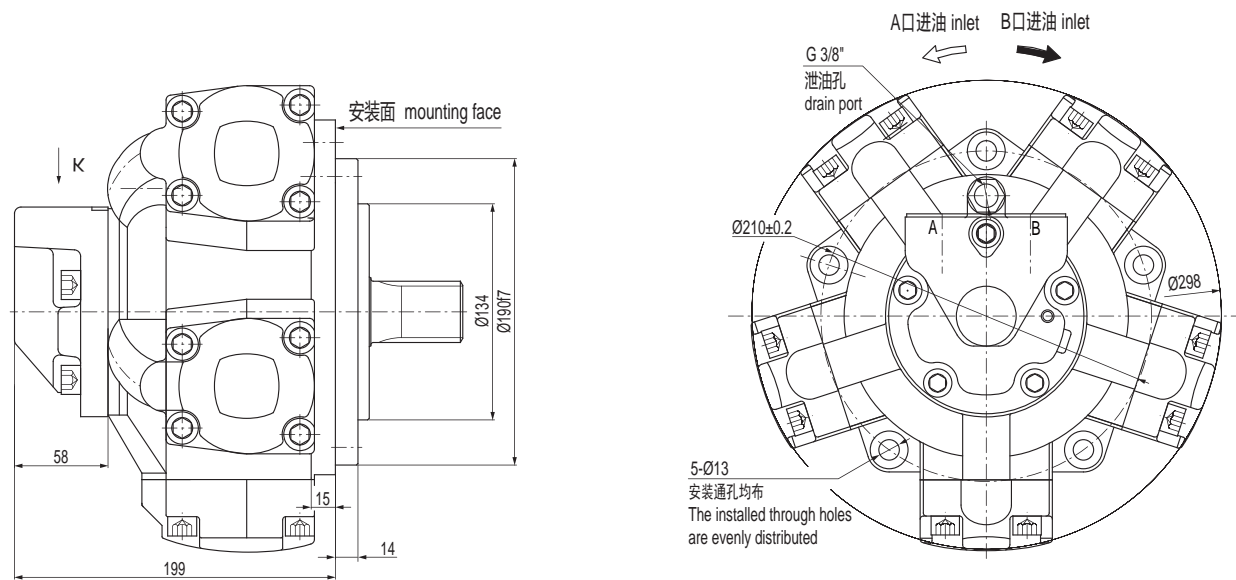
K向旋转 Direction rotation	NIM2 **	NIM2 **B	NIM2 **I

◆技术参数 / Parameters

技术参数 Technical Parameters	2-125	2-150	2-175	2-200	2-250	2-280	2-300
理论排量 Theoretical Displacement (ml/r)	124	151	180	206	235	276	318
额定压力 Rated Pressure (MPa)	20	20	16	16	16	16	16
最高压力 Max Pressure (MPa)	28	28	25	25	25	24	24
额定扭矩 Rated Torque (N.M)	394	480	457	523	298	702	809
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	20	24	29	33	38	44	51
最大功率 Max Power (Kw)	22	22	22	22	22	22	22
最高转速 Max Rotation Speed (r/min)	700	650	600	550	500	450	400
马达重量 Motor Weight (kg)	27	27	27	27	27	27	27

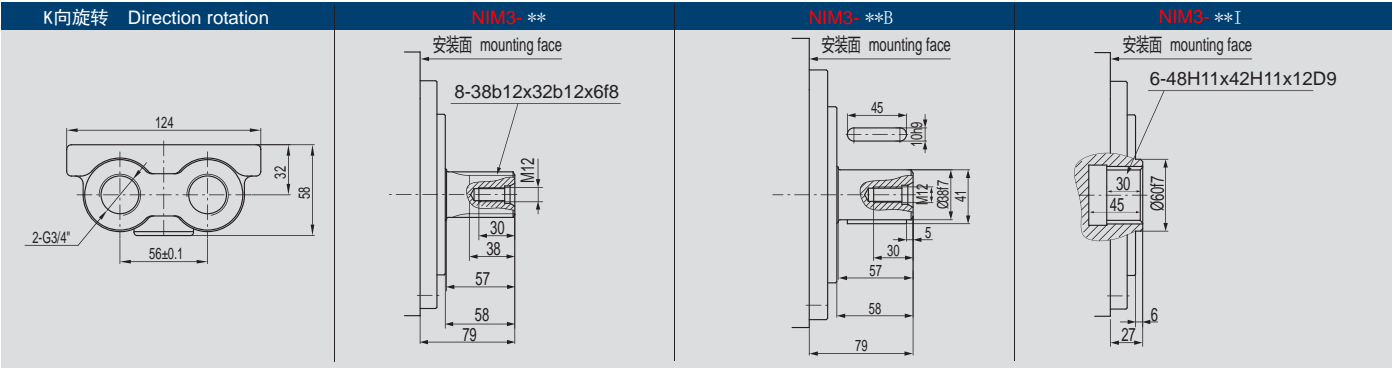
NIM3---175~400 安装联接尺寸图

Dimensions Diagram for Installation & Connection of NIM3---175-400



◆本系列马达配 D31、D47 通油盘，具体安装尺寸见附表

This series motor is outfitted with D31 and D47 oil through plate. Please refer to the attached table for specific installation dimensions

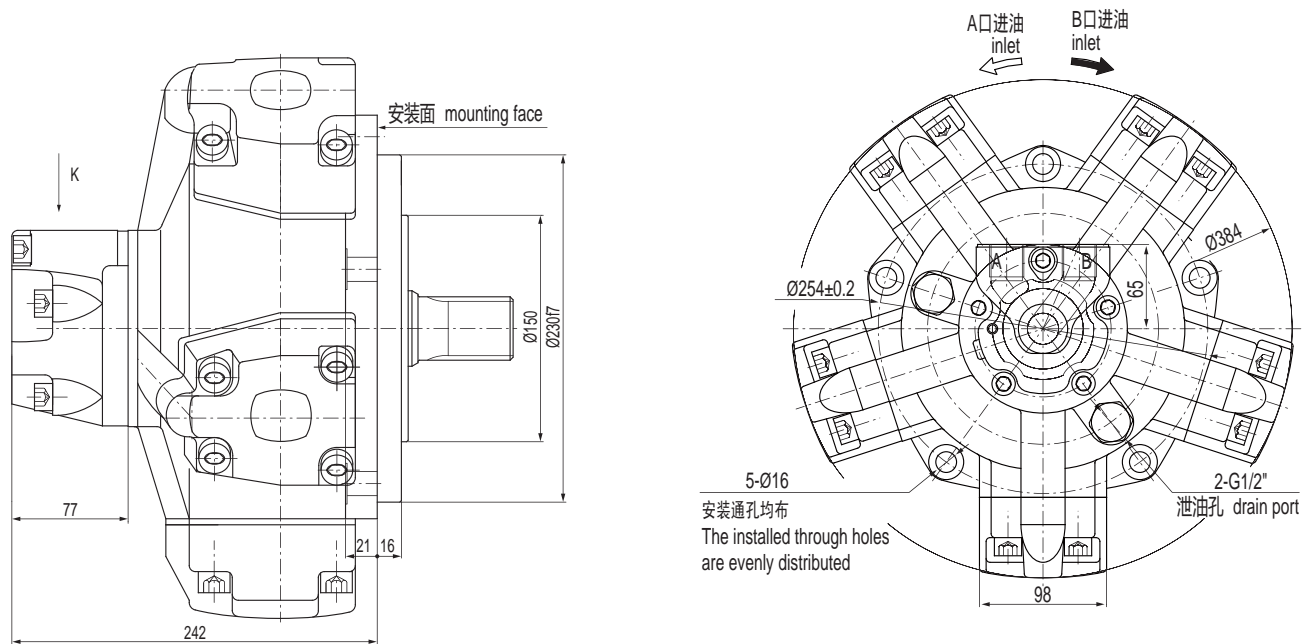


◆技术参数 / Parameters

技术参数 Technical Parameters	3-175	3-200	3-250	3-300	3-350	3-400
理论排量 Theoretical Displacement (ml/r)	181	201	25	289	339	403
额定压力 Rated Pressure (MPa)	20	20	20	20	16	16
最高压力 Max Pressure (MPa)	30	30	30	30	25	25
额定扭矩 Rated Torque (N.M)	578	640	810	920	864	1027
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	29	32	40	46	54	64
最大功率 Max Power (Kw)	36	36	36	36	36	36
最高转速 Max Rotation Speed (r/min)	800	700	600	500	420	350
马达重量 Motor Weight (kg)	35	35	35	35	35	35

NIM6---400~750 安装联接尺寸图

Dimensions Diagram for Installation & Connection of NIM6---400-750



◆本系列马达配 D31、D47 通油盘，具体安装尺寸见附表

This series motor is outfitted with D31 and D47 oil through plate. Please refer to the attached table for specific installation dimensions

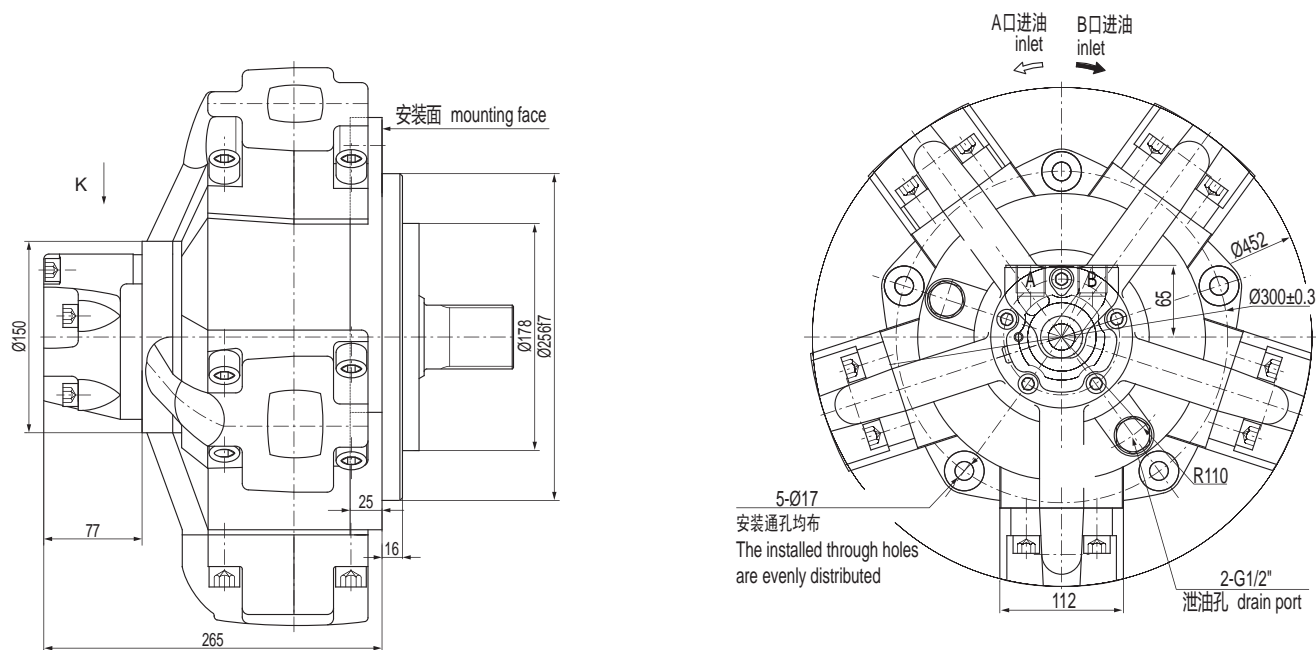
K向旋转 Direction rotation	NIM6- **	NIM6- **B	NIM6- **I

◆技术参数 / Parameters

技术参数 Technical Parameters	6-400	6-450	6-500	6-600	6-650	6-700	6-750
理论排量 Theoretical Displacement (ml/r)	397	452	490	593	660	706	754
额定压力 Rated Pressure (MPa)	20	20	20	20	16	16	16
最高压力 Max Pressure (MPa)	30	30	30	30	25	25	25
额定扭矩 Rated Torque (N.M)	1265	1440	1562	1890	1680	1800	1921
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	63	72	78	95	105	112	120
最大功率 Max Power (Kw)	52	52	52	52	52	52	52
最高转速 Max Rotation Speed (r/min)	500	480	450	420	400	380	350
马达重量 Motor Weight (kg)	57	57	57	57	57	57	57

# NIM11---700~1200 安装联接尺寸图

## Dimensions Diagram for Installation & Connection of NIM11---700-1200



### ◆本系列马达配 D40、D47 通油盘，具体安装尺寸见附表

This series motor is outfitted with D40 and D47 oil through plate. Please refer to the attached table for specific installation dimensions

K向旋转 Direction rotation	NIM11- **	NIM11- **B	NIM11- **I

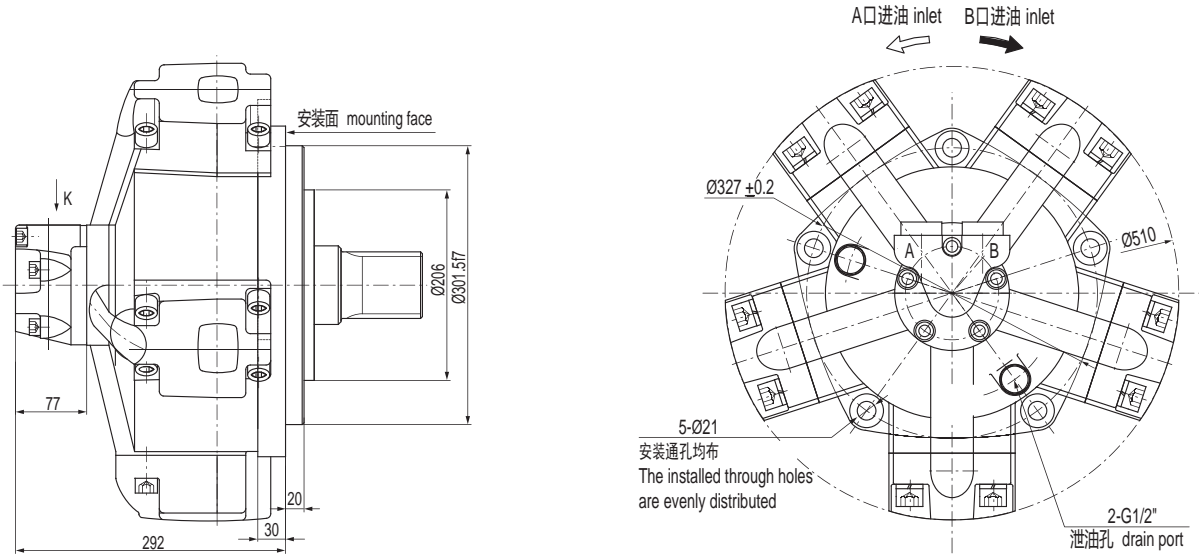
### ◆技术参数 / Parameters

技术参数 Technical Parameters	11-700	11-800	11-900	11-1000	11-1100	11-1200
理论排量 Theoretical Displacement (ml/r)	714	792	904	992	1116	1247
额定压力 Rated Pressure (MPa)	20	20	20	20	20	20
最高压力 Max Pressure (MPa)	30	30	30	30	30	25
额定扭矩 Rated Torque (N.M)	2260	2520	2860	3140	3540	3740
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	113	126	143	157	177	187
最大功率 Max Power (Kw)	78	78	78	78	78	78
最高转速 Max Rotation Speed (r/min)	400	400	380	320	300	280
马达重量 Motor Weight (kg)	94	94	94	94	94	94



## NIM16---1400~3000 安装联接尺寸图

## Dimensions Diagram for Installation & Connection of NIM16---1400-3000



◆本系列马达配 D47、D90 通油盘，具体安装尺寸见附表

This series motor is outfitted with D47 and D90 oil through plate. Please refer to the attached table for specific installation dimensions

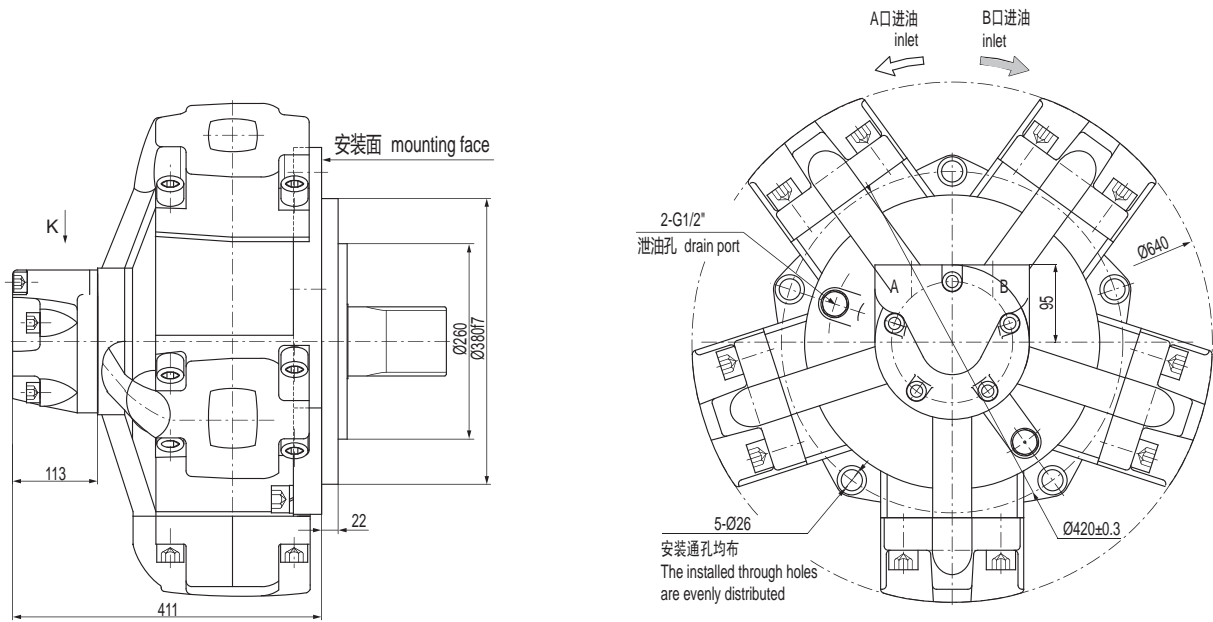
K向旋转 Direction rotation	NIM16- **	NIM16- **B	NIM16- **I

## ◆技术参数 / Parameters

技术参数 Technical Parameters	16-1400	16-1600	16-1800	16-2000	16-2400	16-3000
理论排量 Theoretical Displacement (ml/r)	1413	1648	1815	2035	2267	3041
额定压力 Rated Pressure (MPa)	20	20	18	16	16	16
最高压力 Max Pressure (MPa)	30	30	28	25	20	20
额定扭矩 Rated Torque (N.M)	4500	5248	5184	5168	5763	7326
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	225	262	288	323	360	483
最大功率 Max Power (Kw)	95	95	95	95	95	95
最高转速 Max Rotation Speed (r/min)	300	250	220	200	160	120
马达重量 Motor Weight (kg)	170	170	170	170	170	170

NIM31---2500~5000 安装联接尺寸图

Dimensions Diagram for Installation & Connection of NIM31---2500~5000



◆本系列马达配 D90、D250 通油盘，具体安装尺寸见附表

This series motor is outfitted with D90 and D250 oil through plate. Please refer to the attached table for specific installation dimensions

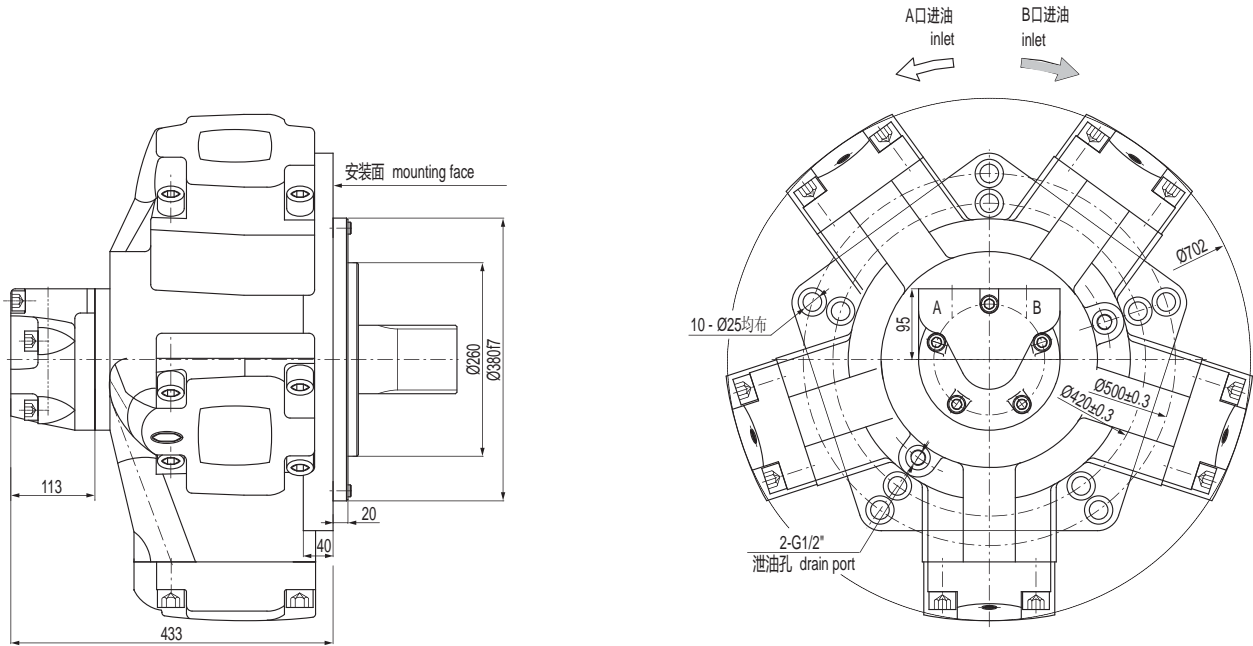
K向旋转 Direction rotation	NIM31- **	NIM31- **B	NIM31- **I

◆技术参数 / Parameters

技术参数 Technical Parameters	31-2500	31-2800	31-3000	31-3150	31-3500	31-4000	31-4500	31-5000
理论排量 Theoretical Displacement (ml/r)	2553	2683	3063	3218	3462	4155	4524	4828
额定压力 Rated Pressure (MPa)	25	25	20	20	20	20	20	16
最高压力 Max Pressure (MPa)	32	32	25	25	25	25	25	20
额定扭矩 Rated Torque (N.M)	9523	10559	9135	9392	10220	12481	13508	12387
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	405	443	485	500	544	665	720	825
最大功率 Max Power (Kw)	110	110	110	110	110	110	110	110
最高转速 Max Rotation Speed (r/min)	120	120	120	120	120	110	110	110
马达重量 Motor Weight (kg)	298	298	298	298	298	298	298	298

## NIM40---3000~6300 安装联接尺寸图

## Dimensions Diagram for Installation & Connection of NIM40---3000~6300



◆本系列马达配 D90、D250 通油盘，具体安装尺寸见附表

This series motor is outfitted with D90 and D250 oil through plate. Please refer to the attached table for specific installation dimensions

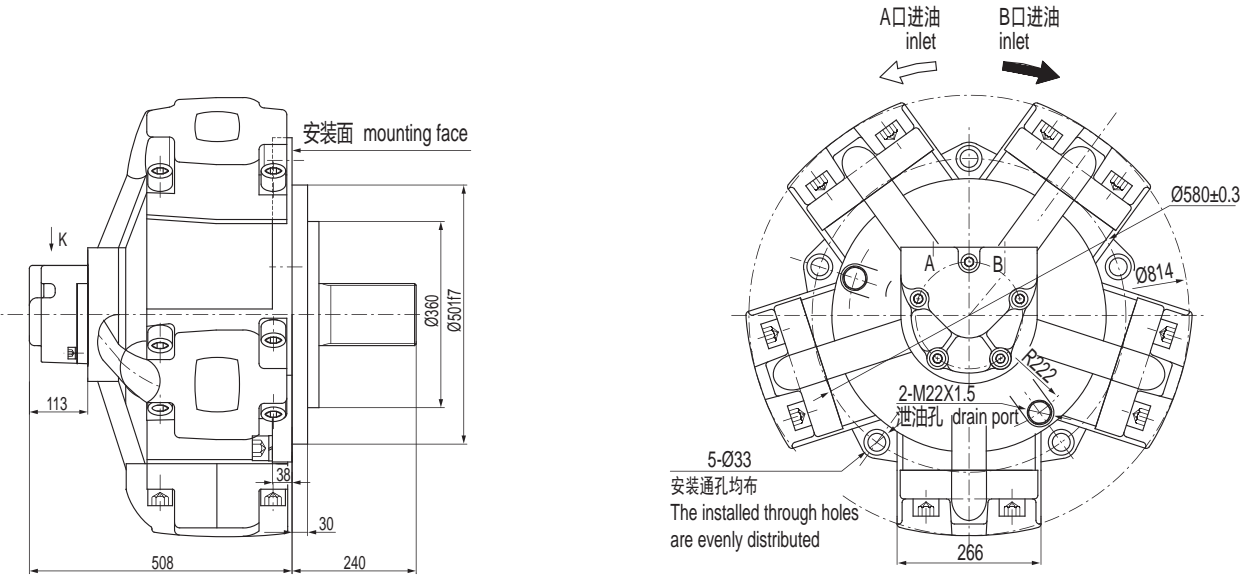
K向旋转 Direction rotation	NIM40-**	NIM40-**B	NIM40-**I
<p>8-M16-6H 钻深25攻深22 100±0.1 59±0.1 2-Ø40 63.3±0.1 136.7±0.2 36.7±0.2 113 79.4±0.2 10-92b12X82b12X12f8 M20 40 80 110 132.5 24 166.5</p>	<p>安装面 mounting face 10-92b12X82b12X12f8 M20 40 80 110 132.5 24 166.5</p>	<p>安装面 mounting face 10-92b12X82b12X12f8 M20 40 80 110 132.5 24 166.5</p>	<p>安装面 mounting face 10-92H11X82H11X12D9 24H9 120 M20 Ø85f7 131 132 166.5 51 72</p>

### ◆技术参数 / Parameters

技术参数 Technical Parameters	40-3500	40-4000	40-4500	40-5000	40-5500	40-6300
理论排量 Theoretical Displacement (ml/r)	3462	4155	4524	4988	5508	6311
额定压力 Rated Pressure (MPa)	20	20	20	20	20	20
最高压力 Max Pressure (MPa)	25	25	25	25	25	25
额定扭矩 Rated Torque (N.M)	10220	12481	13508	15900	17490	19080
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	544	665	720	795	875	954
最大功率 Max Power (Kw)	120	120	120	120	120	120
最高转速 Max Rotation Speed (r/min)	120	120	120	100	100	100
马达重量 Motor Weight (kg)	420	420	420	420	420	420

NIM100---6300~10000 安装联接尺寸图

Dimensions Diagram for Installation & Connection of NIM100-6300-10000



◆本系列马达配 D90、D250 通油盘，具体安装尺寸见附表

This series motor is outfitted with D90 and D50 oil through plate. Please refer to the attached table for specific installation dimensions

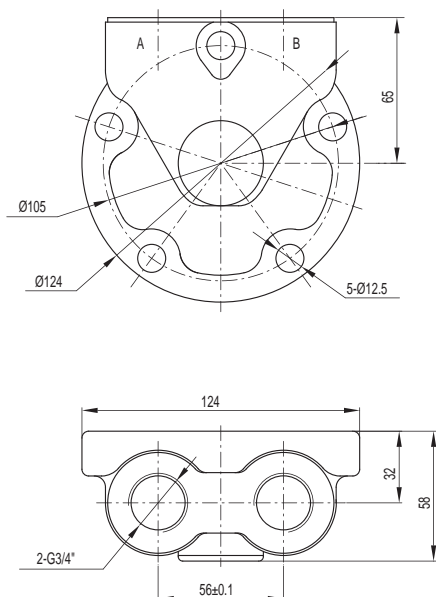
K向旋转 Direction rotation	NIM100- **	NIM100- **B	NIM100- **I

◆技术参数 / Parameters

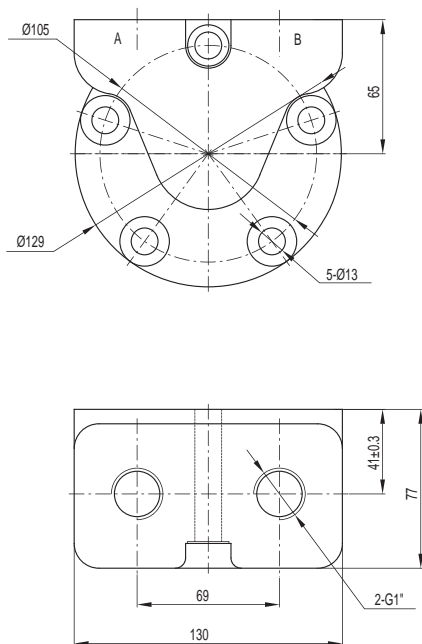
技术参数 Technical Parameters	100-6300	100-8000	100-10000
理论排量 Theoretical Displacement (ml/r)	6765	8298	9982
额定压力 Rated Pressure (MPa)	20	20	20
最高压力 Max Pressure (MPa)	25	25	25
额定扭矩 Rated Torque (N.M)	18330	23000	25550
单位理论扭矩 Unit Theoretical Torque (N.m/MPa)	975	1223	1669
最高转速 Max Rotation Speed (r/min)	125	125	100
马达重量 Motor Weight (kg)	700	700	700

## 配流器种类选型 / Types distributor

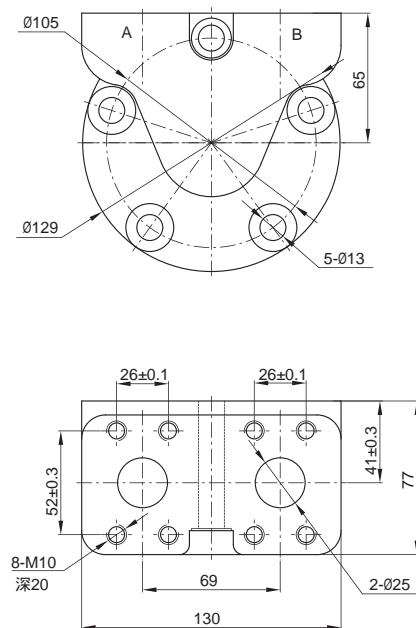
### ◆ D31 通油盘 Oil Through Plate



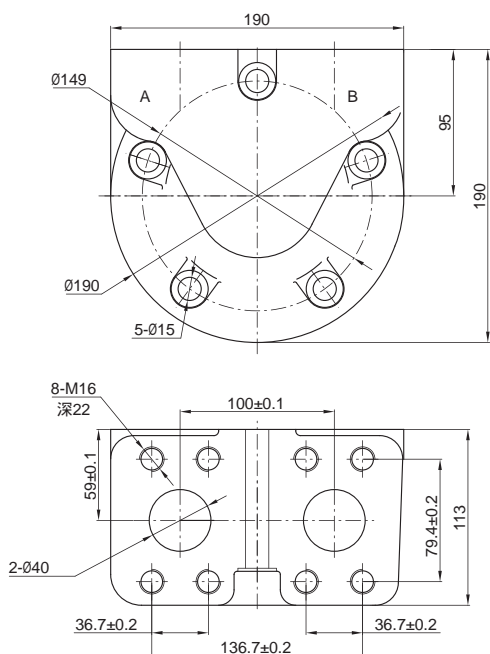
### ◆ D40 通油盘 Oil Through Plate



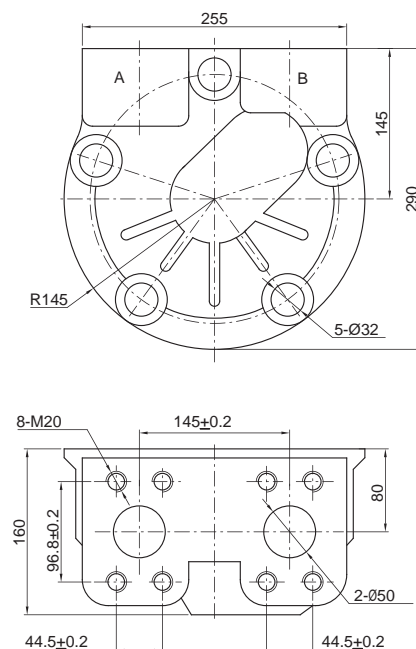
### ◆ D47 通油盘 Oil Through Plate



### ◆ D90 通油盘 / Oil Through Plate



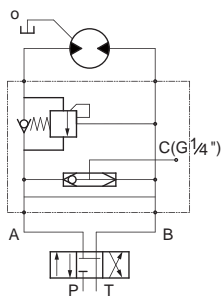
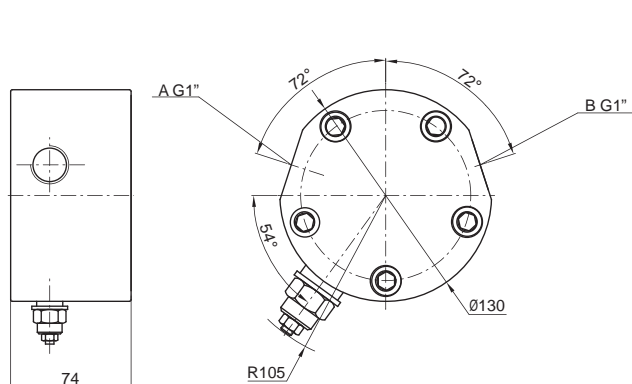
### ◆ D250 通油盘 / Oil Through Plate



## 配流器种类选型 / Types distributor

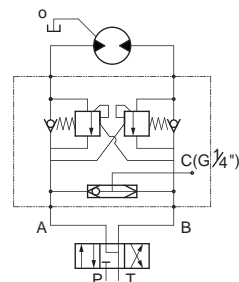
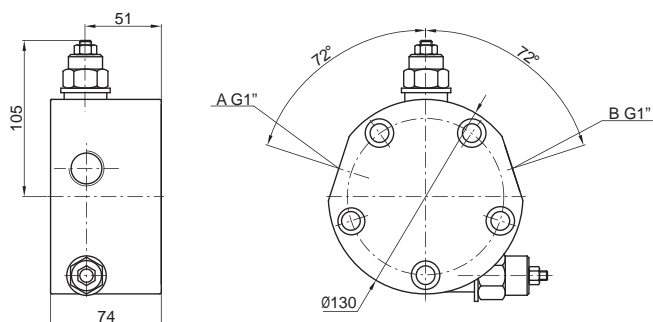
### ◆ D501 梭阀带单向平衡阀及高压梭阀

D501 Shuttle Valve with One-Way Balance Valve  
High Pressure

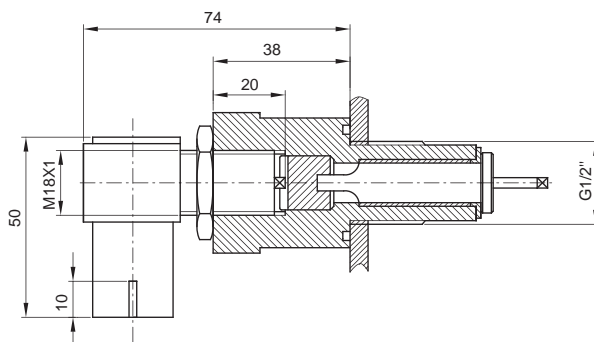
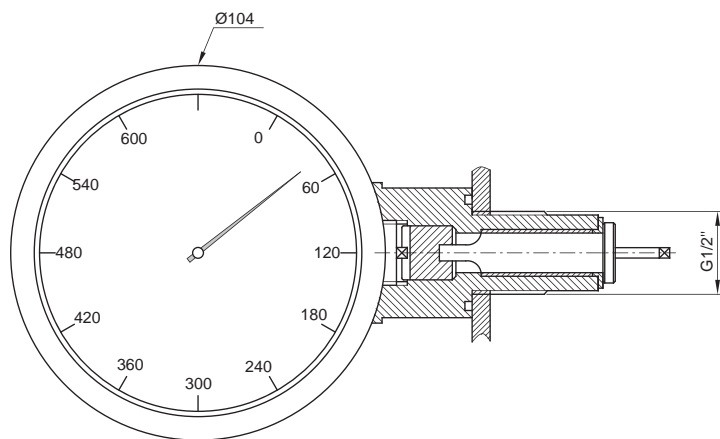


### ◆ D503 带双向平衡阀及高压梭阀

D503 Shuttle Valve with Two-Way Balance Valve &  
High Pressure



### ◆ 配流器上安装测速装置 / Speed Measuring Equipment is Installed on Distributor

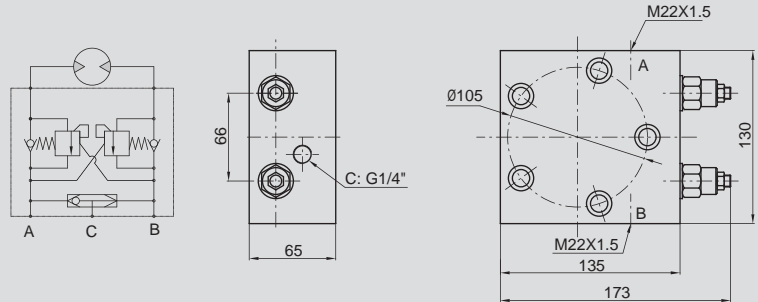




## 配流器种类选型/Types distributor

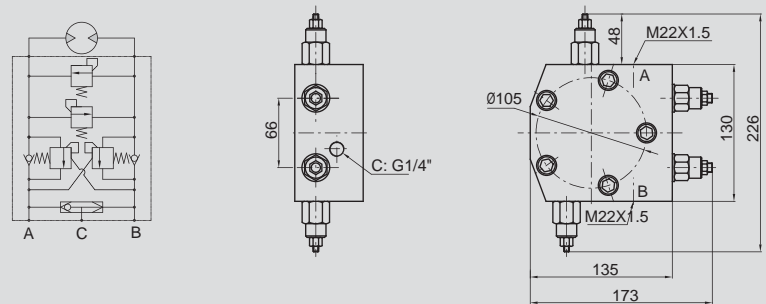
### ◆ D60201

- 双向平衡阀
- 高压梭阀
- 最高设定压力 35MPa
- 最大流量 60L/min
- Two-way balance valve
- High pressure shuttle valve
- Max setting pressure 35MPa
- Max flow 60L/min



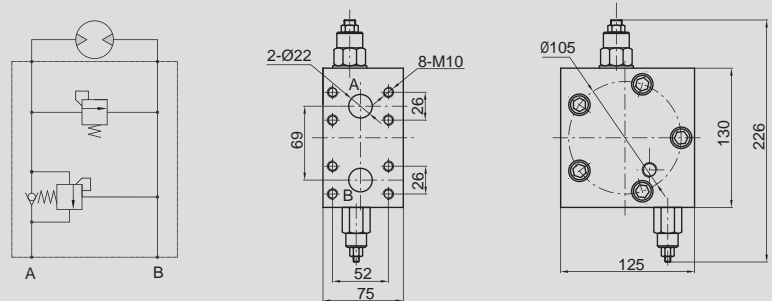
### ◆ D60221

- 双向过载阀, 双向平衡阀
- 高压梭阀
- 最高设定压力 35MPa
- 最大流量 60L/min
- Two-way overload valve, two-way balance valve
- High pressure shuttle valve
- Max setting pressure 35MPa
- Max flow 60L/min



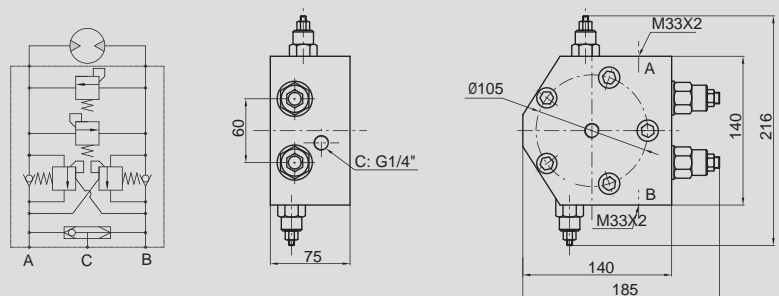
### ◆ D12011

- 单向过载阀, 单向平衡阀
- 最高设定压力 35MPa
- 最大流量 120L/min
- One-way overload valve, one-way balance valve
- Max setting pressure 35MPa
- Max flow 120L/min



### ◆ D120221

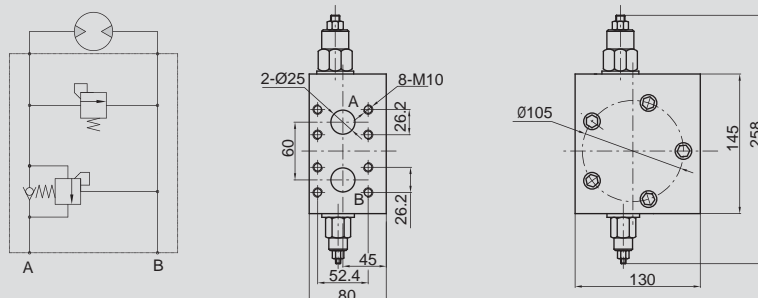
- 双向过载阀, 双向平衡阀
- 高压梭阀
- 最高设定压力 35MPa
- 最大流量 120L/min
- Two-way balance valve
- High pressure shuttle valve
- Max setting pressure 35MPa
- Max flow 120L/min



## 配流器种类选型 / Types distributor

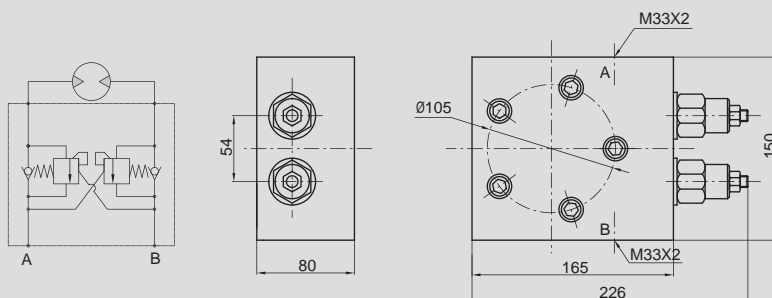
### ◆ D24011

- 单向过载阀, 单向平衡阀
- 最高设定压力 35MPa
- 最大流量 240L/min
- One-way overload valve, one-way balance valve
- Max setting pressure 35MPa
- Max flow 240L/min



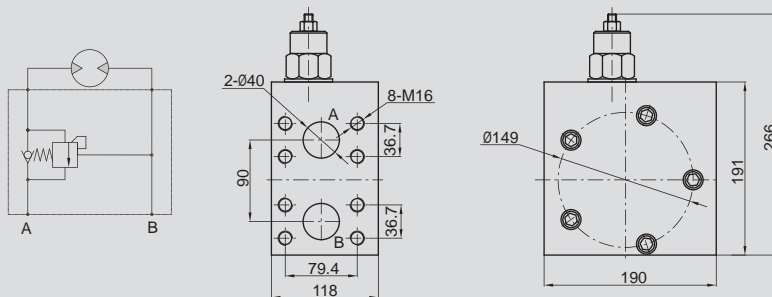
### ◆ D2402

- 双向平衡阀
- 最高设定压力 35MPa
- 最大流量 240L/min
- Two-way balance valve
- Max setting pressure 35MPa
- Max flow 240L/min



### ◆ D4801

- 单向平衡阀
- 最高设定压力 35MPa
- 最大流量 480L/min
- One-way balance valve
- Max setting pressure 35MPa
- Max flow 480L/min



### ◆ D480101

- 单向平衡阀
- 高压梭阀
- 最高设定压力 35MPa
- 最大流量 480L/min
- One-way balance valve
- High pressure shuttle valve
- Max setting pressure 35MPa
- Max flow 480L/min

