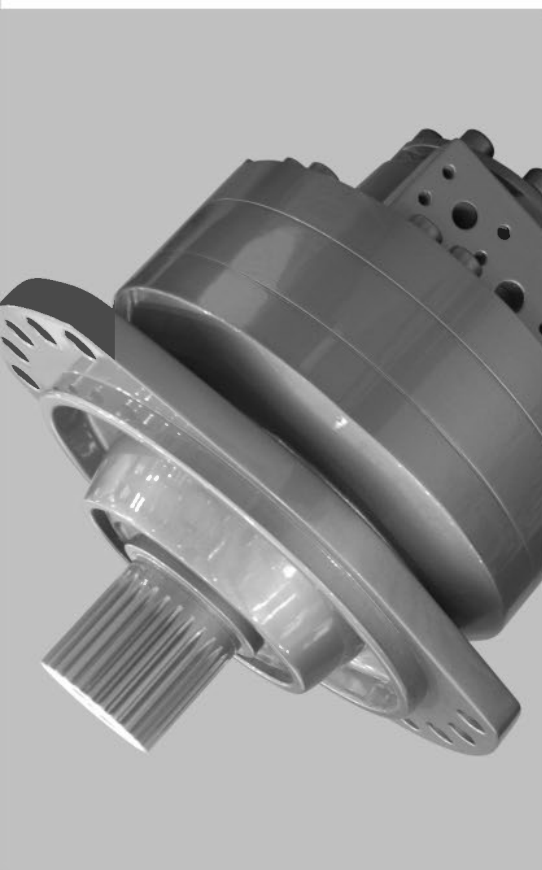


HMS液压马达

HMS hydraulic motors



1、产品特点/ Product Feature	138
2、技术参数/ Technical Specification	139
3、HMS02/HMSE02系列/ HMS02/HMSE02 Series	140
4、HMS05/HMSE05系列/ HMS05/HMSE05 Series	146
5、HMS08/HMSE08系列/ HMS08/HMSE08 Series	152
6、HMS11/HMSE11系列/ HMS11/HMSE11 Series	159
7、HMS18/HMSE18系列/ HMS18/HMSE18 Series	165
8、HMS25系列/ HMS25 Series	171
9、HMS35系列/ HMS35 Series	178

HMS/HMSE系列/HMS/HMSE Series

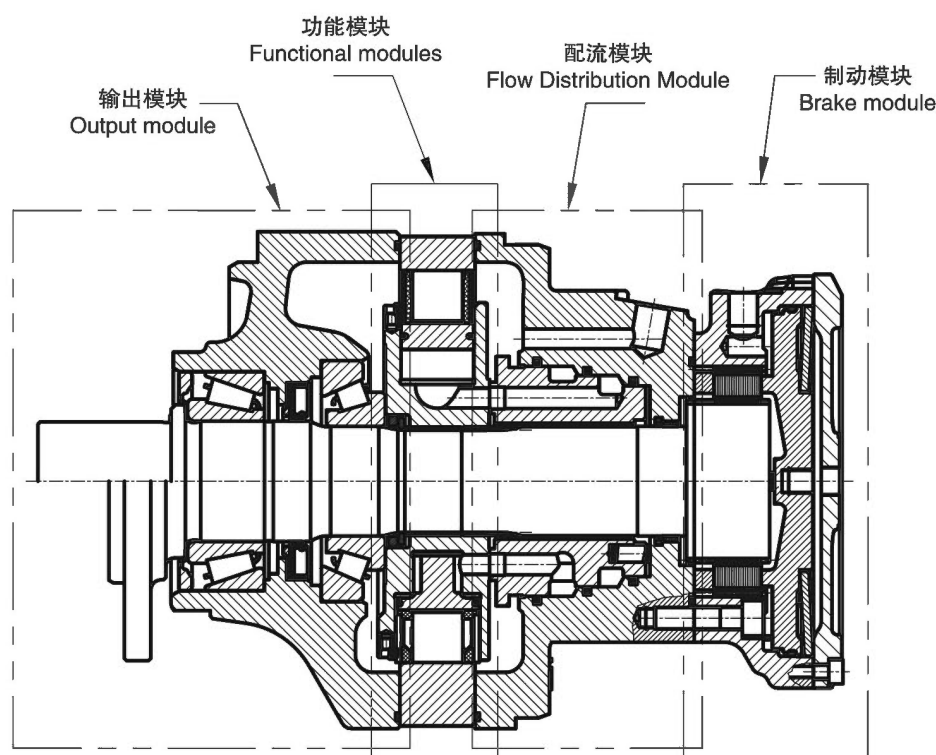
产品特点 / Product Feature

HMS系列内曲线多作用径向低速大扭矩液压马达适应能力强，可广泛应用于船舶机械、工程机械、钻探设备、矿山机械、水泥设备、重型冶金、军工等多种领域，也可直接配置用于静液压传动装置中。

- 产品整体为模块化设计，分输出模块、功能模块、配流模块、制动模块四部分。可根据主机企业的实际要求进行模块选定。可以减少客户的机械配置，使布局灵活、简单。
- 输出模块采用双锥滚子轴承进行支承，可承受更大的径向力和轴向力。
- 配流模块采用国际先进的端面配油模式，并具有自动磨损补偿功能，可长期保持液压马达较高的容积效率。
- 功能模块采用了高承载、低摩擦、耐高温的高性能滑瓦，降低了机械摩擦损失，同时采用输出转矩，转速无脉动的导轨曲线设计，提高了液压马达整机工作的平稳性及抗冲击性能。
- 新型复合强化处理技术在液压马达中的应用，大幅提高了零部件的抗疲劳性能，耐磨性以及防腐性能，整体提升了液压马达的使用寿命。

HMS series' LSHT radial cam-ring hydraulic motors are widely applied in deck, construction, mining machinery, cement equipments, heavy metallurgy, military industry, and can be directly used in hydrostatic transmission units.

- The modular design of the product, output module, function module, flow-distribution module and brake module, enables customers to select according to their actual requirements, thus to reduce their mechanical configuration to make the whole layout flexible and simple.
- The output module of products applies biconical roller bearing to withstand stronger radial and axial force.
- The disc flow-distribution module features with automatic wear-compensation function, which keeps high volumetric efficiency of motors in long term.
- The Function module applies sliding shoe which features with high load, anti-friction and heat-resistance performance, to reduce mechanical friction loss, optimizes stator curves' design, thus to improve the running stability and impact-resistance of the motor.
- The application of new composite processing technology enhances fatigue, abrasive and corrosion resistance of the parts, thus to prolong the service life of the motor. Customers select according to their actual requirements, thus to reduce their mechanical configuration to make the whole layout flexible and simple.



HFM

HGM

QJM

H-HMB

H-HMC

HCA

HCB

HMS

HA6V

HA2F

HMS/HMSE系列/HMS/HMSE Series

技术参数表/ Technical Parameter

A: 全排量 First displacement B: 半排量 Second displacement

产品型号 Type	排量代号 Displacement Code	A	B	理论扭矩 Theoretical Torque	最大功率 Max.Power			最大扭矩 Max.Speed		最高压力 Max.Pressure
					A	B	B	B		
		ml/r	ml/r	100bar N.m	KW	优先度向/Preferred KW	非优先度向/Non-Preferred KW	r/min	bar	
HMS02	8	172	86	273	18	12	9	390		450
	0	213	107	339				310		
	1	235	118	374				285		
	2	255	128	405				260		
HMSE02	0	332	166	528	22	16.5	11	200		400
	1	364	182	579				182		
	2	398	199	633				165		
HMS05	6	260	130	413	29	19	15	265		450
	8	376	188	598				250		
	0	468	234	744				240		
	1	514	257	817				220		
	2	560	280	890				200		
HMSE05	8	530	265	843	29	19	15	200		400
	0	625	312.5	994				190		
	1	688	344	1094				175		
	2	750	375	1193				160		
	3	820	410	1304				145		
HMS08	6	467	234	743	41	27	21	210		450
	8	627	314	997				210		
	9	702	351	1116				185		
	0	780	390	1240				170		
	1	857	429	1363				155		
	2	934	467	1485				140		
HMSE08	0	1043	522	1658	41	27	21	130		400
	1	1146	573	1822				110		
	2	1248	624	1984				105		
HMS11	7	730	365	1161	50	33	25	200		450
	8	837	418.5	1331				195		
	9	943	471.5	1499				190		
	0	1048	524	1666				185		
	1	1147	573.5	1824				180		
	2	1259	629.5	2002				170 175		
HMSE11	9	1263	631.5	2008	50	33	25	170	190	400
	0	1404	702	2232				155	185	
	1	1536	768	2442				140	180	
	2	1687	843.5	2682				130	165	
HMS18	6	1091	546	1735	70	47	35	170	170	450
	8	1395	698	2218				155	160	
	9	1571	786	2498				140	155	
	0	1747	874	2778				125	150	
	1	1911	956	3038				115	135	
	2	2099	1050	3337				100	125	
HMSE18	0	2340	1170	3721	70	47	35	90	110	400
	1	2560	1280	4070				85	100	
	2	2812	1406	4471				75	90	
HMS25	8	2004	1002	3186	90	60	45	145	145	450
	0	2498	1249	3972				137	137	
	1	2752	1376	4376				125	135	
	2	3006	1503	4780				115	130	
HMS35	7	2439	1220	3878	110	73	55	140		450
	9	3143	1572	4997				140		
	0	3494	1747	5555				130		
	2	4198	2099	6675				110		

*非对称变排量可咨询怀特

HMS02/HMSE02系列/HMS02/HMSE02 Series

产品标识说明/ Ordering code

***** - * - *** - *** - ***** - *****

1 2 3 4 5 6 7 8

1、马达型号 Moter type _____
HMS02/HMSE02

2、排量代号 Displacement Code _____
A: 全排量 First displacement B: 半排量 Second displacement

产品型号 Type	代号 Code	A ml/r	B ml/r
HMS02	8	172	86
	0	213	107
	1	235	118
	2	255	128
HMSE02	0	332	166
	1	364	182
	2	398	199

3、配流体形式 Valving type _____

1	单排量配流体 1-displacement valving
D	排量比2 Ration 2 双排量配流体 (顺时针方向) 2-displacement valving(Clockwise)
G	排量比2 Ration 2 双排量配流体 (逆时针方向) 2-displacement valving(Counteclockwise)

4、安装法兰形式 Mounting options _____

不带安装法兰 Without mounting	1	4
带安装法兰 With mounting	2	5
1-单排量/1-Displacement 2-双排量/2-Displacement		热交换阀 Exchange

5、油口形式 Distributor _____
A——SAE连接/SAE connection 3——BSPP连接/BSPP connection

6、制动器 Brake _____
A02——无制动器 (普通端盖) /Without brake(simple plate)
F02——带制动器/With brake
R02——无制动器 (加强端盖) /Without brake(reinforced plate)

7、输出轴形式 Shaft options _____

0-无轴承支撑 /Without bearing support	1-无安装法兰 /Without mounting	2-带安装法兰 /Lug mounting
0-无伸出轴 /Without shaft	1-5x Ø18, Ø140	A-伸出轴承支撑 /For male shaft bearing support
1-无螺栓 /Without studs		2-螺栓螺母 /With studs+nuts
3-螺栓 /With studs		4-M螺纹孔 /M threaded holes
伸出轴/Male shaft		5-伸出轴 DIN5480花键 /Male shaft din5480 splines
0-无鼓式制动器 /Without drum brakes		

8、附加项 Additional items _____

0 无选项 With Options or Adaptations	6 工业轴承支撑 Industrial bearing support	H 高效率 High efficiency
1 氟化橡胶密封 Fluorinated elastomer seals	8 预留速度传感器位置 Predisposition for speed sensor	J 加强轴肩 Reinforced bearing stop
3 不带机械解除制动的端盖 Brake environmental cover without plug	B 轴承支撑上带泄油口 Drain on the bearing support	K 加强轴 Reinforced shaft
5 泄油口 (配流系统附加泄漏油口) Drainage(additional drain on valving systems)	D 特殊喷漆或无喷漆 Special paint or no paint	M 高速 Hight speed
	E 加强轴封 Reinforced sealing	
	G 特殊轮辋安装 Special wheel rim mounting	

HFM

HGM

QJM

H-HMB

H-HMC

HCA

HCB

HMS

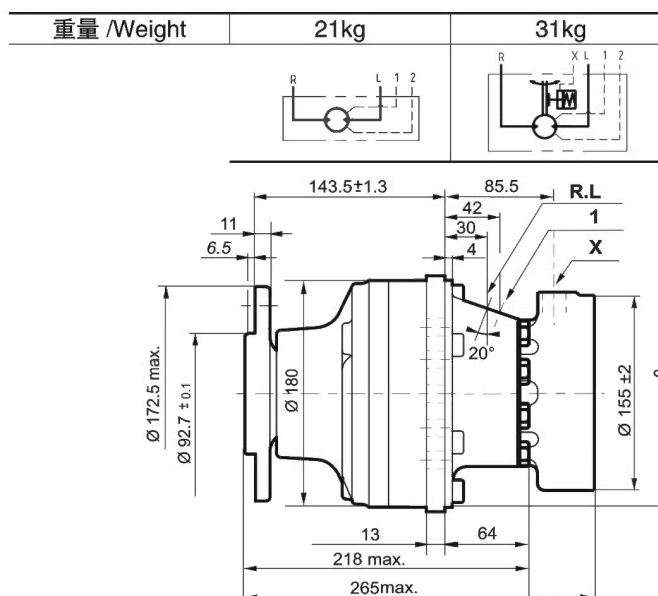
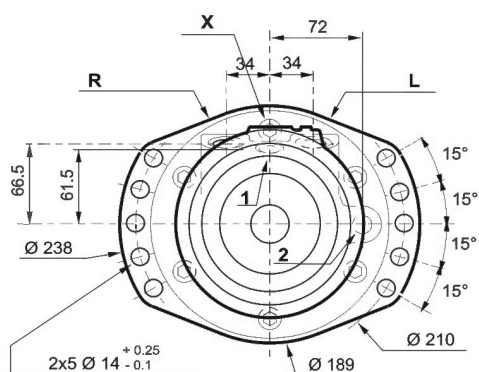
HA6V

HA2F

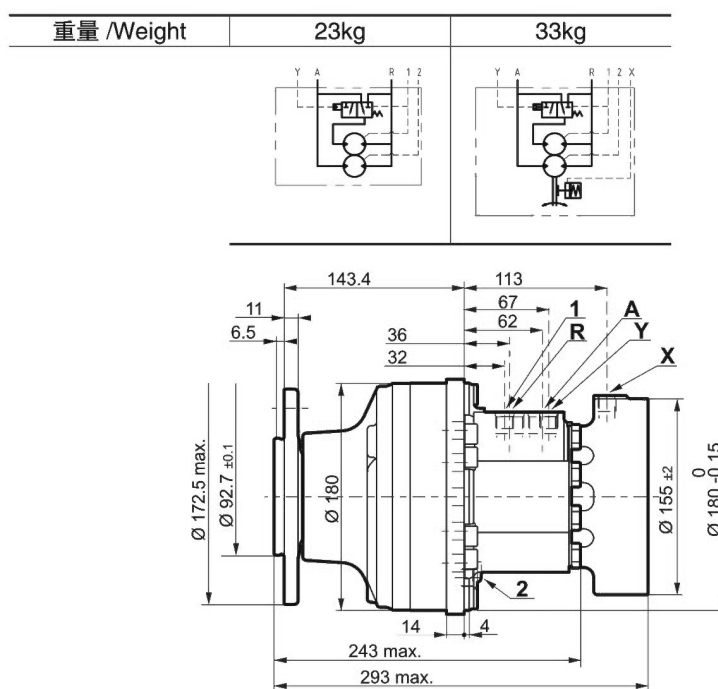
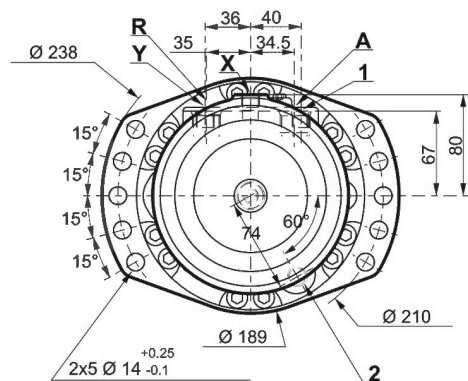
HMS02/HMSE02系列/HMS02/HMSE02 Series

HMS02/HMSE02 轮边马达/ HMS02/HMSE02 Wheel Motor

单排量马达 (1110) 标准尺寸/Dimensions for standard(1110)1-displacement motor

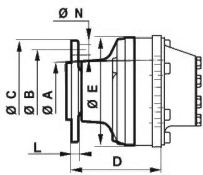


双排量马达 (1110) 标准尺寸/Dimensions for standard(1110)2-displacement motor



HMS02/HMSE02系列/HMS02/HMSE02 Series

输出轴形式/Shaft Options



	A	B	C	D	E	N	轮辋安装 Wheel rim mounting	L
1 1 1 0	Ø92.7	Ø140	Ø169	143.4	Ø179.5	Ø18	5xM14x1.5	11

螺栓/Studs

各种螺栓 Various studs	螺栓尺寸 Studs size	P	C min.	C max.	D	等级 CLASS	扭矩 (1) * Torque	扭矩 (2) * Torque
		mm	mm	mm	mm		N.m	N.m
	M14x1.5	45	5	18	16.5	12.9	200	250
		50		23				
62		33						
							轮胎/Tire	钢轮/Drum

- (*) :紧固扭矩是针对指定载荷给出的。
The tightening torques are given for the indicated loads.
- (1) 轮辋: 轮辋安装紧固扭矩建议值 (>240 N/mm²)。
Wheel rim:Suggested tightening torque for wheel rim mountings(Re steel disc>240 N/mm²)
- (2) 标准: 其它安装方式紧固扭矩建议值 (>360 N/mm²)。
Standard:Suggested tightening torque in other cases(Re steel flange >360 N/mm²)

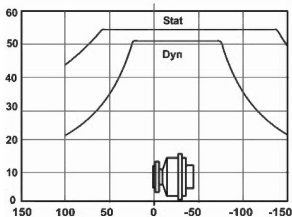
负载曲线/Load Curves

部件的使用寿命受压力的影响, 所以必须核实应用到部件上的合力(轴向载荷/径向载荷)应与部件承受载荷的允许值相协调一致, 并且这些部件的最终使用寿命应遵守其应用规范。
The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components,and that the resulting service life of these components complies with the application's specifications.

径向载荷允许值 Permissible radial loads

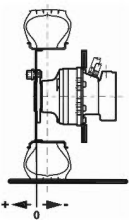
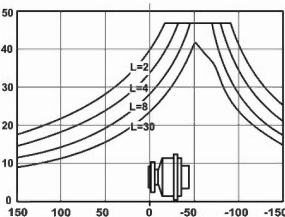
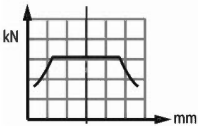
试验条件/Test conditions:
静态/Static: 0 r/min 0bar
动态: 0 r/min, 标准排量, 最大扭矩时无轴向载荷
Dynamic: 0 r/min code 0 displacement,without axial load at max.torque

1 1 1 0



轴承寿命 Service life of bearings

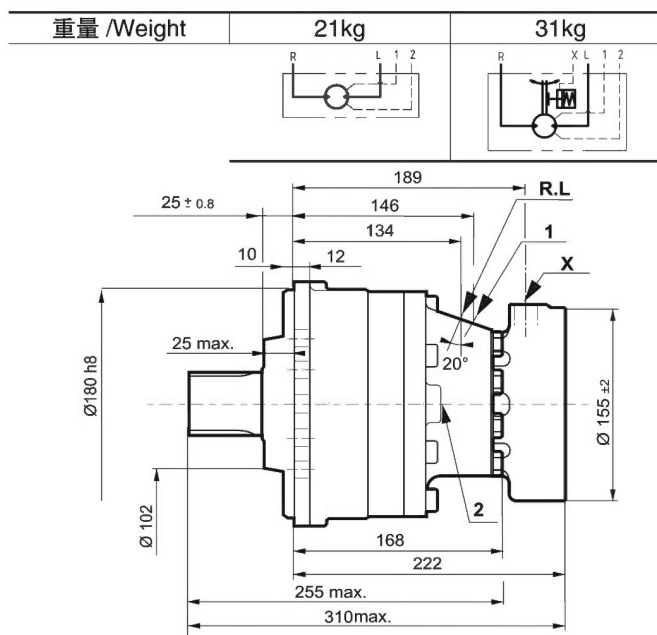
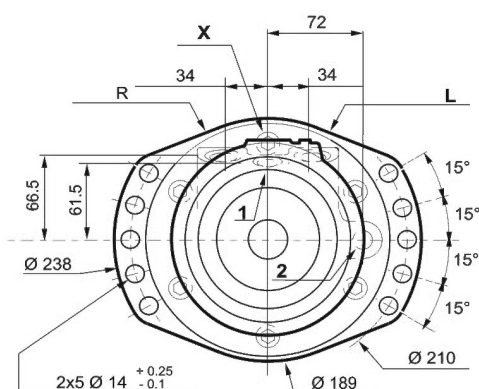
试验条件/Test conditions:
L: 150bars(平均压力)时, 百万转 (B10), 采用25cSt 流体, 标准排量, 无轴向载荷
L: Millions B10 revolutions at 150 bars(average prssure),with 25cSt fluid, code 0 displacement,without axial load



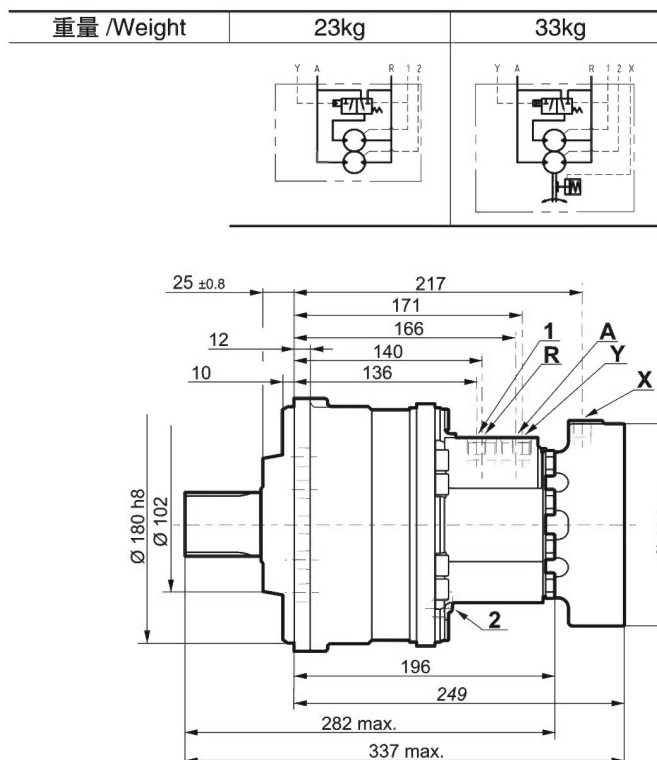
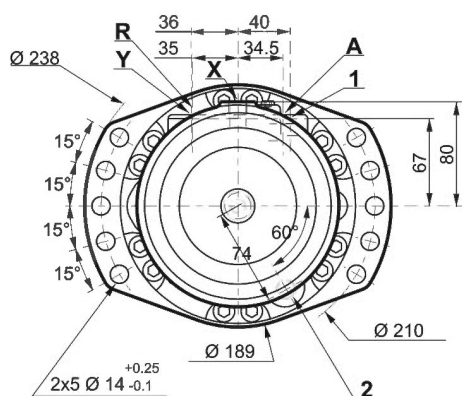
HMS02/HMSE02系列/HMS02/HMSE02 Series

HMS02/HMSE02 轴边马达/ HMS02/HMSE02 Shaft Motor

单排量马达 (2A50) 标准尺寸/Dimensions for standard(2A50)1-displacement motor

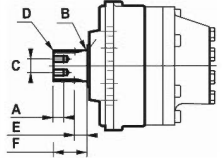


双排量马达 (2A50) 标准尺寸/Dimensions for standard(2A50)2-displacement motor



HMS02/HMSE02系列/HMS02/HMSE02 Series

输出轴形式/Shaft Options

2 A 5 0		A	B	C	D	E	F	
DIN 5480 花键 DIN 5480 splines								
公称直径/Nominal $\varnothing$	50	15	R2.5	23.8	2xM10	22	60	
模数/Module	2							
Z	24							

负载曲线/Load Curves

部件的使用寿命受压力的影响, 所以必须核实应用到部件上的合力(轴向载荷/径向载荷)应与部件承受载荷的允许值相协调一致, 并且这些部件的最终使用寿命应遵守其应用规范。

The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components, and that the resulting service life of these components complies with the application's specifications.

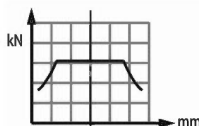
径向载荷允许值 Permissible radial loads

试验条件/Test conditions:

静态/Static: 0 r/min 0 bar

动态: 0 r/min, 标准排量, 最大扭矩时无轴向载荷

Dynamic: 0 r/min code 0 displacement, without axial load at max. torque



轴承寿命 Service life of bearings

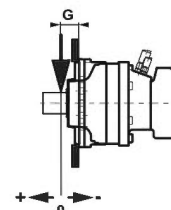
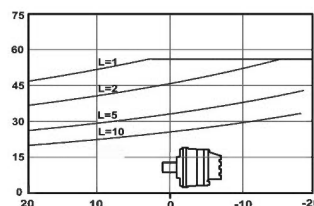
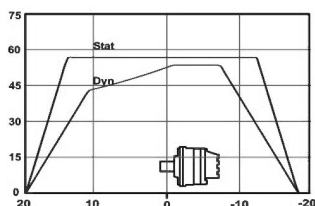
试验条件/Test conditions:

L: 150 bars (平均压力) 时, 百万转 (B10), 采用 25cSt 流体, 标准排量, 无轴向载荷

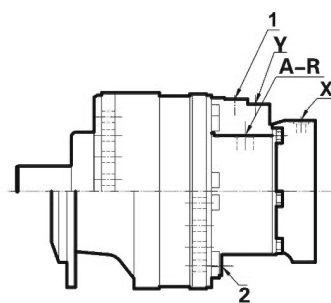
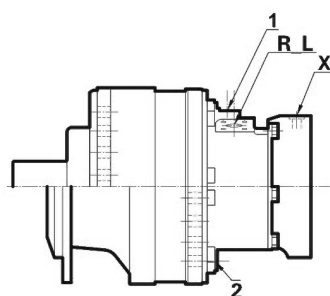
L: Millions B10 revolutions at 150 bars (average pressure), with 25cSt fluid, code 0 displacement, without axial load

G
66.45

2 A 5 0



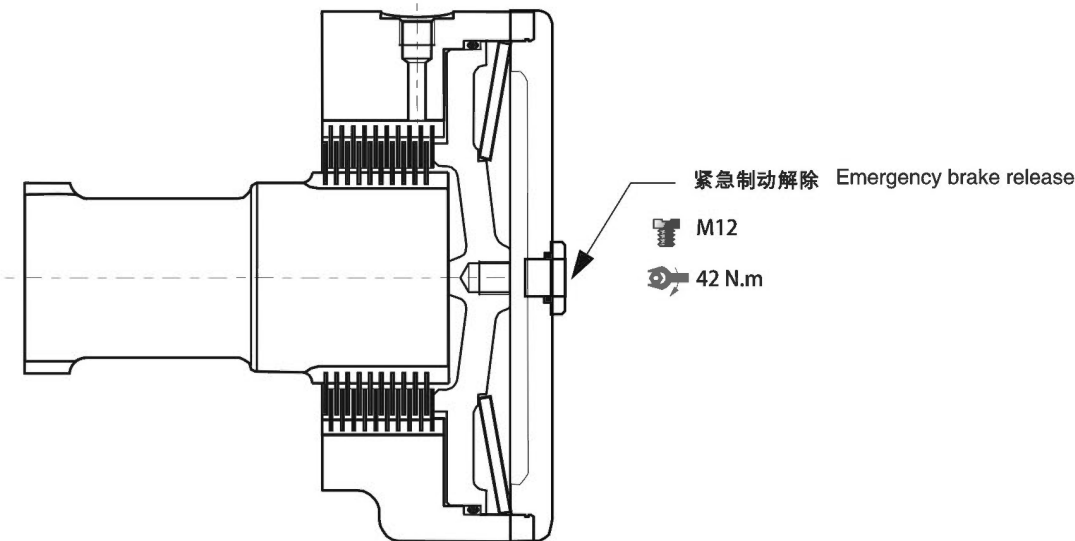
油口形式/Distributor



	旧标准 Old standards	标准 Standards	主油口 Power supply	变量油口 Displacement control	壳体泄油口 Case drain	驻车制动控制油口 Control of parking break
			A_R R_L	Y	1.2	X
A	SAE J514	ISO 11926-1	1"1/16"-12 UNF	1/19"-18 UNF	9/16"-18 UNF	9/16"-18 UNF
3	BSPP	ISO 1179-1	Ø21	Ø13	Ø17	Ø13
		ISO 9974-1				
最高压力 Max. pressure	PS PSE	bar	450 400	30	1	30

HMS02/HMSE02系列/HMS02/HMSE02 Series

驻动制动器/Brakes



制动器原理/Brake principle

在失压状态下多片式制动器起作用。弹簧对制动片产生作用力，该力使制动片抱紧转轴，制动扭矩与释放压力成正比。
This is a multidisc brake which is activated by a lack of pressure. The spring exerts a force on the piston ,which presses on the fixed and mobile discs,and immobilizes the shaft.The braking torque decreases in linear proportion to the brake release pressure.

	F	0	2
制动腔内压为0时制动器的制动扭矩（新制动器） Parking brake torque at 0 bars on housing (new brake)	1400 Nm		
制动腔内压力为0时紧急制动扭矩（最多可作紧急制动使用10次） Dynamic emergency braking torque at 0 bars on housing(max.10 uses of emergency brakes)	910 Nm		
制动腔内压力为0时剩余的驻车制动扭矩* Residual parking braking at 0 bars on housing*	1050 Nm		
最小的制动器释放压力 Min.brake release pressure	15 bar		
油量 Oil capacity	100 ml		
用于制动器释放液压油量 Volume for brake release	16 ml		

* 作为紧急制动使用后 After emergency brake has been used

- ① 制动时不要运转马达。 Do not run in multidisc brakes.
- ① 每当驻车制动器作为辅助性制动（或紧急制动器）使用时，都要对驻车制动器进行功能上的检查。
A functional check of the parking brake must be carried out each time it is used as an auxiliary brake (or emergency brake).

HMS05/HMSE05系列/HMS05/HMSE05 Series

技术参数表/ Technical Parameter

A: 全排量 First displacement B: 半排量 Second displacement

产品型号 Type	排量代号 Displacement Code	A	B	理论扭矩 Theoretical Torque	最大功率 Max.Power			最大扭矩 Max.Speed	最高压力 Max.Pressure
				A	B	B	B		
		ml/r	ml/r	100bar N.m	KW	优先旋向/Preferred KW	非优先旋向/Non-Preferred KW	r/min	
HMS05	6	260	130	413	29	19	15	265	450
	8	376	188	598				250	
	0	468	234	744				240	
	1	514	257	817				220	
	2	560	280	890				200	
HMSE05	8	530	265	843	29	19	15	200	400
	0	625	312.5	994				190	
	1	688	344	1094				175	
	2	750	375	1193				160	
	3	820	410	1304				145	

产品标识说明/ Ordering Code

***** - * - *** - *** - ***** - *****

1、马达型号 Motor type

HMS05/HMSE05

2、排量代号 Displacement Code

HMS05: 6, 8, 0, 1, 2
HMSE05: 8, 0, 1, 2, 3

3、配流体形式 Valving type

1		单排量配流体 1-displacement valving
D	排量比2 Ration 2	双排量配流体 (顺时针方向) 2-displacement valving(Clockwise)
G	排量比2 Ration 2	双排量配流体 (逆时针方向) 2-displacement valving(Counterclockwise)

4、安装法兰形式 Mounting options

不带安装法兰	Without mounting	1	4
带安装法兰	With mounting	2	-
蹄形安装法兰	Horseshoe fixing	3	6
1-单排量/1-Displacement 2-双排量/2-Displacement		热交换阀 Exchange	

5、油口形式 Distributor

3—ISO 1179-1连接/ISO 1179-1 connection
4—ISO 9974-1连接/ISO 9974-1 connection

6、制动器 Brake

A05—无制动器 (普通端盖) /Without brake(simple plate)
F05—带制动器/With brake
R05—无制动器 (加强端盖) /Without brake(reinforced plate)

7、输出轴形式 Shaft options

0—无轴承支撑 /Without bearing support
1—无安装法兰 /Without mounting
2—带安装法兰 /Lug mounting

8、附加项 Additional items

0	无选项 With Options or Adaptations
1	氟化橡胶密封 Fluorinated elastomer seals
3	不带机械解除制动的端盖 Brake environmental cover without plug
5	泄油口 (配流系统附加泄漏油口) Drainage(additional drain on valving systems)
6	工业轴承支撑 Industrial bearing support
8	预留速度传感器位置 Predisposition for speed sensor
A	空心轴 Hollow shaft
B	轴承支撑上带泄油口 Drain on the bearing support
C	恶劣工况 Abrasive environment
D	特殊喷漆或无喷漆 Special paint or no paint
E	加强轴封 Reinforced sealing
G	特殊轮辋安装 Special wheel rim mounting
H	高效率 High efficiency
J	加强轴肩 Reinforced bearing stop
K	加强轴 Reinforced shaft
M	高速 Hight speed

0—无鼓式制动器 /Without drum brakes

1—无螺栓 /Without studs
2—螺栓螺母 /With studs+nuts
3—螺栓 /With studs
4—M螺纹孔 /M threaded holes

伸出轴/Male shaft

5—伸出轴 DIN5480花键
Male shaft din5480 splines

0—无伸出轴 /Without shaft
2—10x Ø18, Ø140

A—伸出轴承支撑
For male shaft bearing support

HFM

HGM

QJM

H-HMB

H-HMC

HCA

HCB

HMS

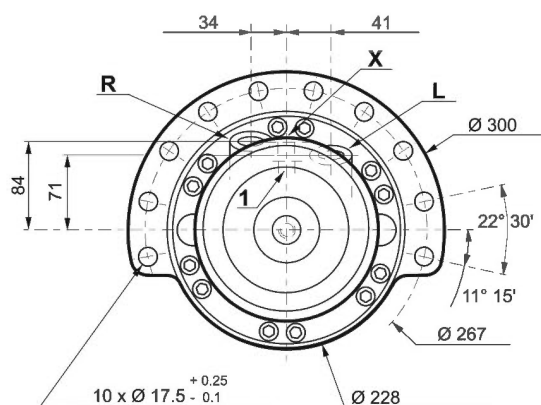
HA6V

HA2F

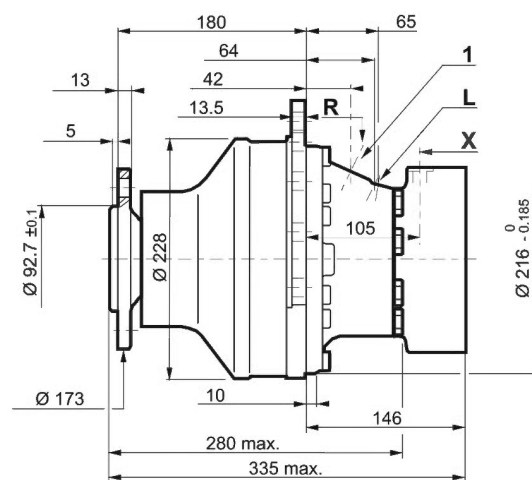
HMS05/HMSE05系列/HMS05/HMSE05 Series

HMS05/HMSE05 轮边马达/ HMS05/HMSE05 Wheel Motor

单排量马达 (1210) 标准尺寸/Dimensions for standard(1210)1-displacement motor

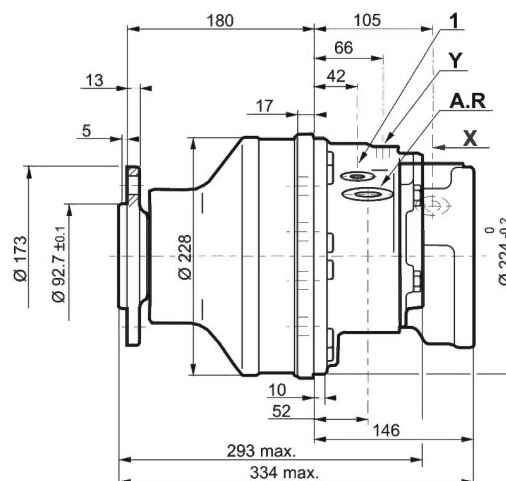
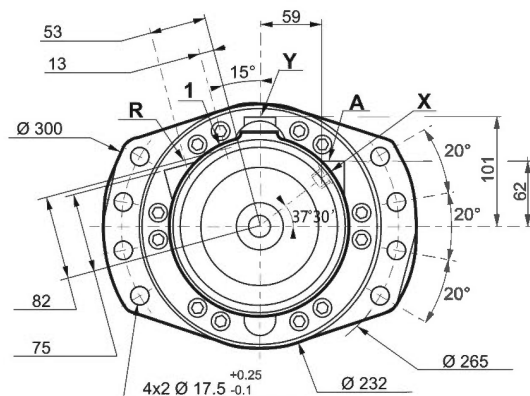


重量 /Weight	40kg	50kg



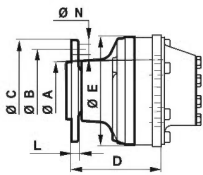
双排量马达 (1210) 标准尺寸/Dimensions for standard(1210)2-displacement motor

重量 /Weight	41kg	52kg



HMS05/HMSE05系列/HMS05/HMSE05 Series

输出轴形式/Shaft Options



				A	B	C	D	E	N	轮辋安装 Wheel rim mountings	L
1	2	1	0	Ø92.7	Ø140	Ø170	178.6	Ø228	Ø18	10xM14x1.5	11

螺栓/Studs

各种螺栓 Various studs	螺栓尺寸 Studs size	P	C min.	C max.	D	等级 CLASS	扭矩 (1) * Torque	扭矩 (2) * Torque
		mm	mm	mm	mm		N.m	N.m
	M14x1.5	45	5	18	16.5	12.9	200	250
		50		23				
		62		33				
							轮胎/Tire	钢轮/Drum

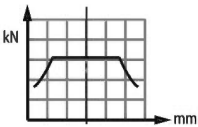
- (*) :紧固扭矩是针对指定载荷给出的。
The tightening torques are given for the indicated loads.
- (1) 轮辋: 轮辋安装紧固扭矩建议值 (>240 N/mm²) 。
Wheel rim:Suggested tightening torque for wheel rim mountings(Re steel disc>240 N/mm²)
- (2) 标准: 其它安装方式紧固扭矩建议值 (>360 N/mm²) 。
Standard:Suggested tightening torque in other cases(Re steel flange >360 N/mm²)

负载曲线/Load Curves

部件的使用寿命受压力的影响, 所以必须核实应用到部件上的合力(轴向载荷/径向载荷)应与部件承受载荷的允许值相协调一致, 并且这些部件的最终使用寿命应遵守其应用规范。
The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components,and that the resulting service lives of these components complies with the application's specifications.

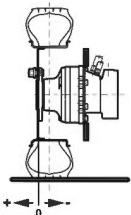
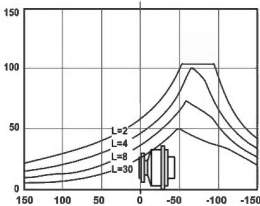
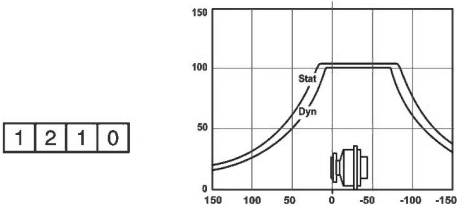
径向载荷允许值 Permissible radial loads

试验条件/Test conditions:
静态/Static: 0 r/min 0bar
动态: 0 r/min, 标准排量, 最大扭矩时无轴向载荷
Dynamic: 0 r/min code 0 displacement,without axial load at max.torque



轴承寿命 Service life of bearings

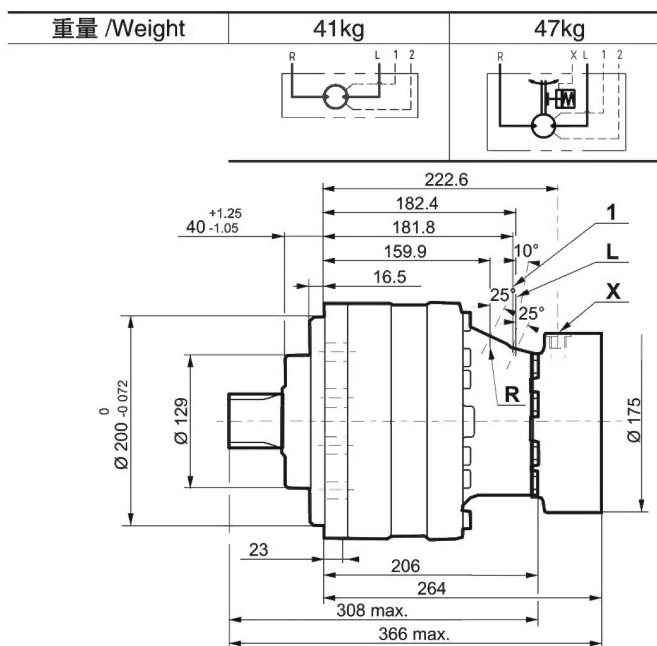
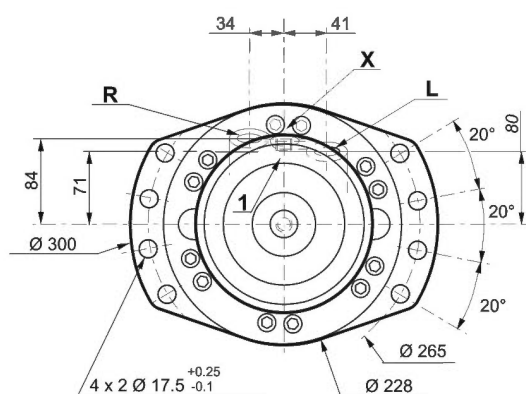
试验条件/Test conditions:
L: 150bars(平均压力)时, 百万转 (B10),采用25cSt 流体, 标准排量, 无轴向载荷
L: Millions B10 revolutions at 150 bars(average prssure),with 25cSt fluid, code 0 displacement,without axial load



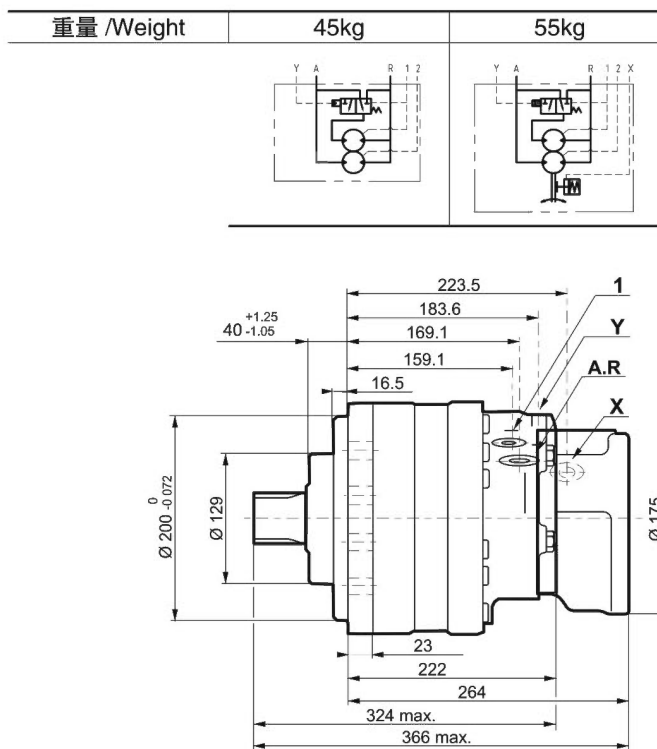
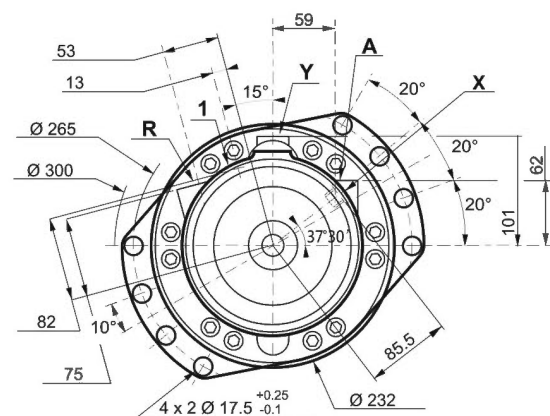
HMS05/HMSE05系列/HMS05/HMSE05 Series

HMS05/HMSE05 轴边马达/ HMS05/HMSE05 Shaft Motor

单排量马达 (2A50) 标准尺寸/Dimensions for standard(2A50)1-displacement motor

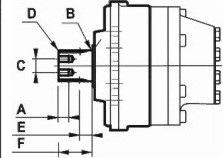


双排量马达 (2A50) 标准尺寸/Dimensions for standard(2A50)2-displacement motor



HMS05/HMSE05系列/HMS05/HMSE05 Series

输出轴形式/Shaft Options

2 A 5 0		A	B	C	D	E	F	
DIN 5480 花键 DIN 5480 splines								
公称直径/Nominal Ø	55	15	R2.3	23.8	2xM10	23	60	
模数/Module	3							
Z	17							

负载曲线/Load Curves

部件的使用寿命受压力的影响, 所以必须核实应用到部件上的合力(轴向载荷/径向载荷)应与部件承受载荷的允许值相协调一致, 并且这些部件的最终使用寿命应遵守其应用规范。

The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components, and that the resulting service life of these components complies with the application's specifications.

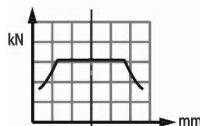
径向载荷允许值 Permissible radial loads

试验条件/Test conditions:

静态/Static: 0 r/min 0 bar

动态: 0 r/min, 标准排量, 最大扭矩时无轴向载荷

Dynamic: 0 r/min code 0 displacement, without axial load at max. torque



轴承寿命 Service life of bearings

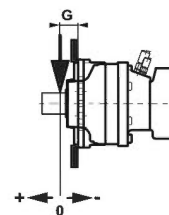
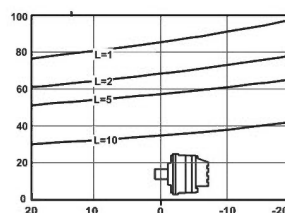
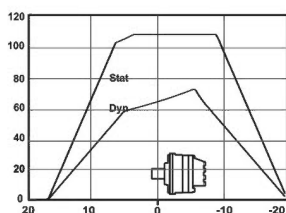
试验条件/Test conditions:

L: 150 bars(平均压力)时, 百万转 (B10), 采用 25cSt 流体, 标准排量, 无轴向载荷

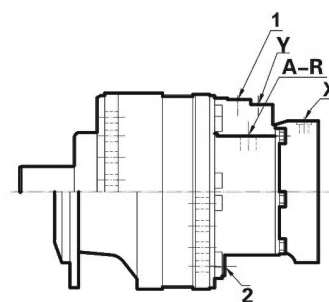
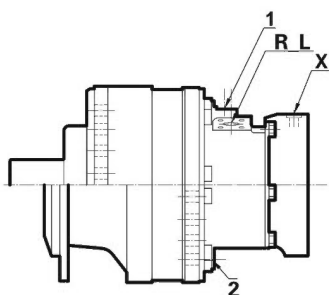
L: Millions B10 revolutions at 150 bars (average pressure), with 25cSt fluid, code 0 displacement, without axial load

$$\frac{G}{81.75}$$

2 A 5 0



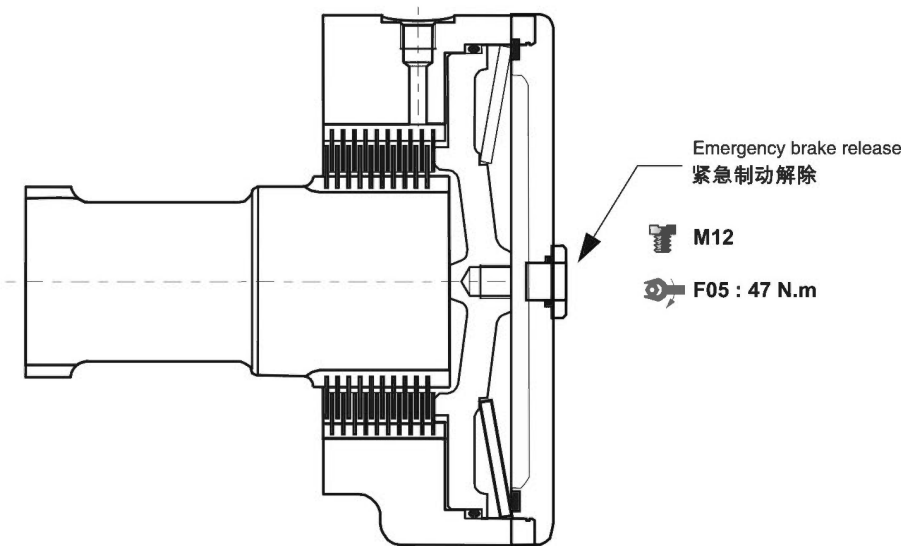
油口形式/Distributor



	旧标准 Old standards	标准 Standards	主油口 Power supply	变量油口 Displacement control	壳体泄油口 Case drain	驻车制动控制油口 Control of parking break
			A_R R_L	Y	1.2	X
3	BSPP	ISO 1179-1	Ø27	Ø13	Ø17	Ø13
4	DIN3852	ISO 9974-1	M27x2	M14x1.5	M16x1.5	M14x1.5
最高压力 Max. pressure	PS PSE	bar	450 400	30	1	30

HMS05/HMSE05系列/HMS05/HMSE05 Series

驻动制动器/Brakes



制动器原理/Brake principle

在失压状态下多片式制动器起作用。弹簧对制动片产生作用力，该力使制动片抱紧转轴，制动扭矩与释放压力成正比。
This is a multidisc brake which is activated by a lack of pressure. The spring exerts a force on the piston ,which presses on the fixed and mobile discs,and immobilizes the shaft.The braking torque decreases in linear proportion to the brake release pressure.

	F	0	5
制动腔内压为0时制动器的制动扭矩（新制动器） Parking brake torque at 0 bars on housing (new brake)	3060 N.m		
制动腔内压力为0时紧急制动扭矩（最多可作紧急制动使用10次） Dynamic emergency braking torque at 0 bars on housing(max.10 uses of emergency brakes)	1990 N.m		
制动腔内压力为0时剩余的驻车制动扭矩* Residual parking braking at 0 bars on housing*	2295 N.m		
最小的制动器释放压力 Min.brake release pressure	15 bar		
油量 Oil capacity	70 ml		
用于制动器释放液压油量 Volume for brake release	32 ml		

* 作为紧急制动使用后 After emergency brake has been used

- ① 制动时不要运转马达。 Do not run in multidisc brakes.
- ① 每当驻车制动器作为辅助性制动（或紧急制动器）使用时，都要对驻车制动器进行功能上的检查。
A functional check of the parking brake must be carried out each time it is used as an auxiliary brake (or emergency brake).

HMS08/HMSE08系列/HMS08/HMSE08 Series

技术参数表/ Technical Parameter

A: 全排量 First displacement B: 半排量 Second displacement

产品型号 Type	排量代号 Displacement Code	A	B	理论扭矩 Theoretical Torque	最大功率 Max.Power			最大扭矩 Max.Speed	最高压力 Max.Pressure
				A	B	B	B		
			优先旋向/Preferred		非优先旋向/Non-Preferred				
				ml/r	ml/r	100bar N.m	kW	kW	kW
HMS08	6	467	234	743	41	27	21	210	450
	8	627	314	997				210	
	9	702	351	1116				185	
	0	780	390	1240				170	
	1	857	429	1363				155	
	2	934	467	1485				140	
HMSE08	0	1043	522	1658	41	27	21	130	400
	1	1146	573	1822				110	
	2	1248	624	1984				105	

产品标识说明/ Ordering Code

***** - * - *** - *** - ***** - *****

1 2 3 4 5 6 7 8

1、马达型号 Motor type
HMS08/HMSE08

2、排量代号 Displacement Code
HMS08: 6, 8, 9, 0, 1, 2
HMSE08: 0, 1, 2

3、配流体形式 Valving type

1	单排量配流体 1-displacement valving
D	排量比2 Ration 2 双排量配流体 (顺时针方向) 2-displacement valving(Clockwise)
G	排量比2 Ration 2 双排量配流体 (逆时针方向) 2-displacement valving(Counterclockwise)

4、安装法兰形式 Mounting options

不带安装法兰 Without mounting	1	4
带安装法兰 With mounting	2	5
1-单排量/1-Displacement 2-双排量/2-Displacement		热交换阀 Exchange

5、油口形式 Distributor

ISO 6162 法兰/Flange
ISO 9974-1 连接/Connection
ISO9974-1 连接/Connection (M27x2)

6、制动器 Brake

A08——无制动器 (普通端盖) /Without brake(simple plate)
F08——带制动器/With brake
R08——无制动器 (加强端盖) /Without brake(reinforced plate)

7、输出轴形式 Shaft options

0—无轴承支撑 /Without bearing support
1—无安装法兰 /Without mounting
2—带安装法兰 /Lug mounting

8、附加项 Additional items

0	无选项 With Options or Adaptations
1	氟化橡胶密封 Fluorinated elastomer seals
2	有连接件的速度传感器 Speed sensor with connector
3	不带机械解除制动的端盖 Brake environmental cover without plug
5	泄油口 (配流系统附加泄漏油口) Drainage(additional drain on valving systems)
6	工业轴承支撑 Industrial bearing support
8	预留速度传感器位置 Predisposition for speed sensor
A	空心轴 Hollow shaft
B	轴承支撑上带泄油口 Drain on the bearing support
C	恶劣工况 Abrasive environment
D	特殊喷漆或无喷漆 Special paint or no paint
E	加强轴封 Reinforced sealing
G	特殊轮辋安装 Special wheel rim mounting
J	加强轴肩 Reinforced bearing stop
K	加强轴 Reinforced shaft
M	高速 High speed

0—无鼓式制动器 /Without drum brakes

1—无螺栓 /Without studs
2—螺栓螺母 /With studs+nuts
3—螺栓 /With studs
4—M螺纹孔 /M threaded holes

伸出轴/Male shaft

5—伸出轴 DIN5480花键
Male shaft din5480 splines

0—无伸出轴 /Without shaft
1—6x Ø20, Ø205
A—伸出轴支撑
For male shaft bearing support

HFM

HGM

QJM

H-HMB

H-HMC

HCA

HCB

HMS

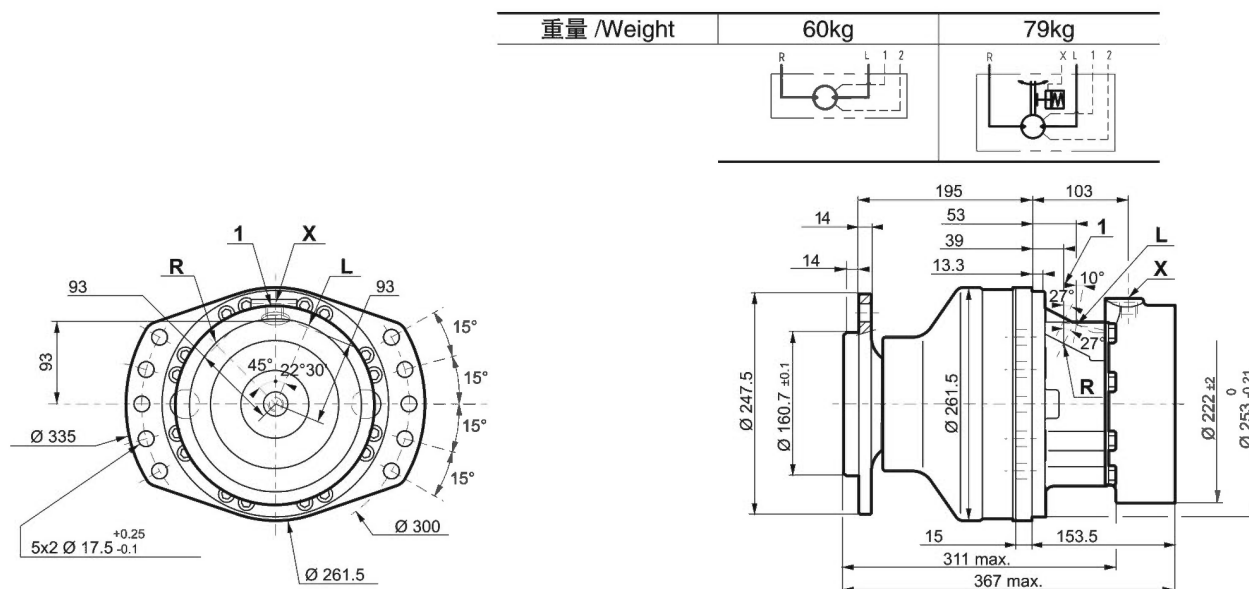
HA6V

HA2F

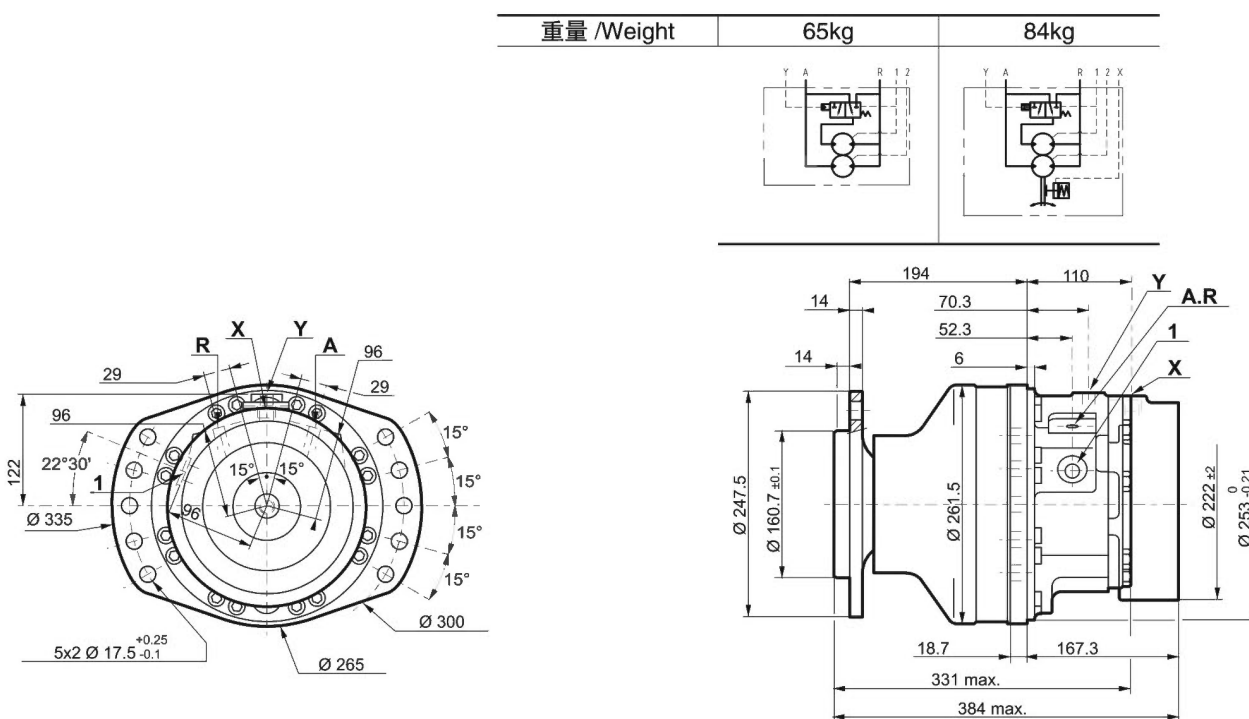
HMS08/HMSE08系列/HMS08/HMSE08 Series

HMS08/HMSE08 轮边马达/ HMS08/HMSE08 Wheel Motor

单排量马达 (1110) 标准尺寸/Dimensions for standard(1110)1-displacement motor

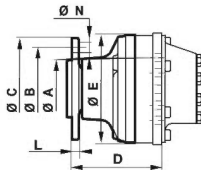


双排量马达 (1110) 标准尺寸/Dimensions for standard(1110)2-displacement motor



HMS08/HMSE08系列/HMS08/HMSE08 Series

输出轴形式/Shaft Options



	A	B	C	D	E	N	轮辋安装 Wheel rim mountings	L
1 1 1 0	Ø160.7	Ø205	Ø245	195	Ø261.5	6xØ20	M18x1.5	13.5

螺栓/Studs

各种螺栓 Various studs	螺栓尺寸 Studs size	P	C min.	C max.	D	等级 CLASS	扭矩 (1) * Torque N.m	扭矩 (2) * Torque N.m
		mm	mm	mm	mm			
	M18x1.5	55 60	5	18 23	23	12.9	420	550
							轮胎/Tire	钢轮/Drum

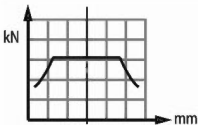
- (*) 紧固扭矩是针对指定载荷给出的。
The tightening torques are given for the indicated loads.
- (1) 轮辋: 轮辋安装紧固扭矩建议值 (>240 N/mm²)。
Wheel rim:Suggested tightening torque for wheel rim mountings(Re steel disc>240 N/mm²)
- (2) 标准: 其它安装方式紧固扭矩建议值 (>360 N/mm²)。
Standard:Suggested tightening torque in other cases(Re steel flange >360 N/mm²)

负载曲线/Load Curves

部件的使用寿命受压力的影响,所以必须核实应用到部件上的合力(轴向载荷/径向载荷)应与部件承受载荷的允许值相协调一致,并且这些部件的最终使用寿命应遵守其应用规范。
The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components,and that the resulting service life of these components complies with the application's specifications.

径向载荷允许值 Permissible radial loads

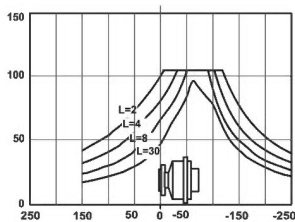
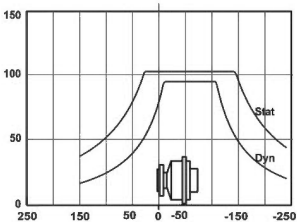
试验条件/Test conditions:
静态/Static: 0 r/min 0bar
动态: 0 r/min, 标准排量, 最大扭矩时无轴向载荷
Dynamic: 0 r/min code 0 displacement,without axial load at max.torque



轴承寿命 Service life of bearings

试验条件/Test conditions:
L: 150bars(平均压力)时, 百万转 (B10), 采用25cSt 流体, 标准排量, 无轴向载荷
L: Millions B10 revolutions at 150 bars(average prssure),with 25cSt fluid, code 0 displacement,without axial load

1 1 1 0

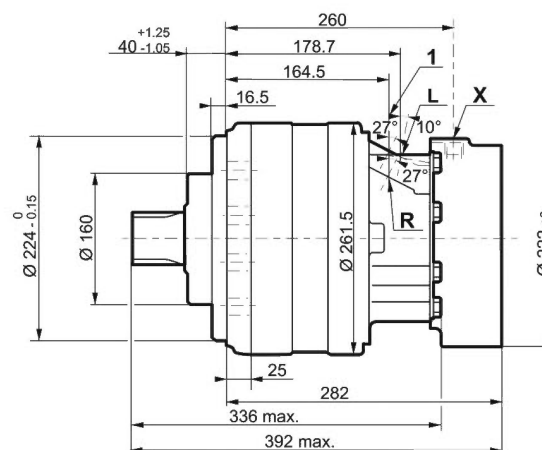
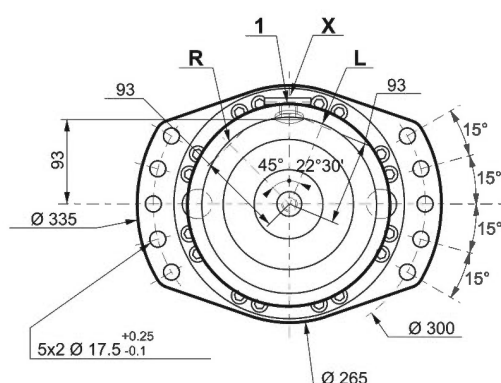


HMS08/HMSE08系列/HMS08/HMSE08 Series

HMS08/HMSE08 轴边马达/ HMS08/HMSE08 Shaft Motor

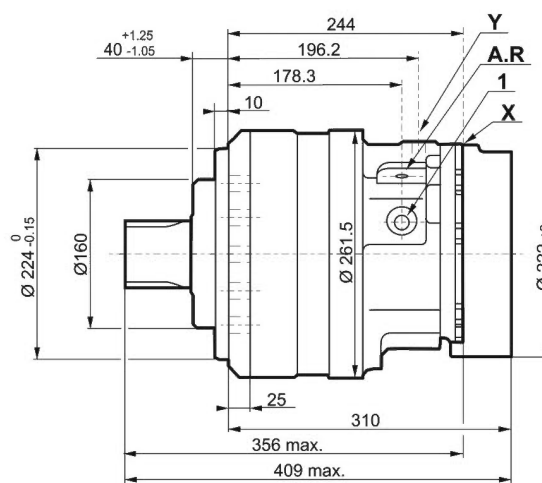
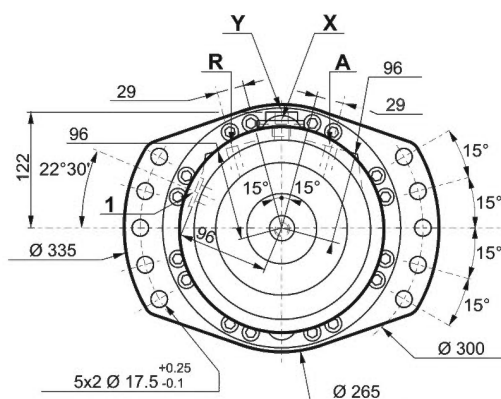
单排量马达 (2A50) 标准尺寸/Dimensions for standard(2A50)1-displacement motor

重量 /Weight	62kg	80kg



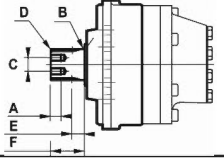
双排量马达 (2A50) 标准尺寸/Dimensions for standard(2A50)2-displacement motor

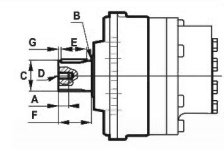
重量 /Weight	67kg	85kg



HMS08/HMSE08系列/HMS08/HMSE08 Series

输出轴形式/Shaft Options

2 A 5 0		A	B	C	D	E	F	
DIN 5480 花键 DIN 5480 splines								
公称直径/Nominal $\varnothing$	70	15	R2.5	35	2xM10	23	70	
模数/Module	3							
Z	22							

2 A 4 0		A	B	C	D	E	F	
DIN 6885 花键 DIN 6885 splines								
X 20		30	R2.5	$\varnothing 69.99$	M16	90	106	
Y 74 max.								

负载曲线/Load Curves

部件的使用寿命受压力的影响,所以必须核实应用到部件上的合力(轴向载荷/径向载荷)应与部件承受载荷的允许值相协调一致,并且这些部件的最终使用寿命应遵守其应用规范。

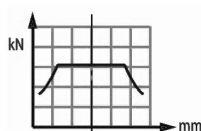
The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components, and that the resulting service lives of these components complies with the application's specifications.

径向载荷允许值 Permissible radial loads

试验条件/Test conditions:

静态/Static: 0 r/min 0 bar

动态/Dynamic: 0 r/min, 标准排量, 最大扭矩时无轴向载荷
Dynamic: 0 r/min code 0 displacement, without axial load at max. torque



轴承寿命 Service life of bearings

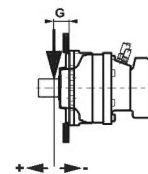
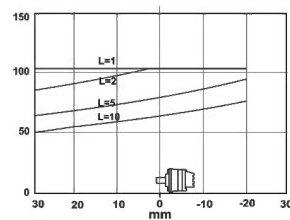
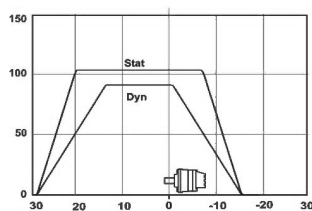
试验条件/Test conditions:

L: 150bars(平均压力)时, 百万转 (B10), 采用25cSt 流体, 标准排量, 无轴向载荷

L: Millions B10 revolutions at 150 bars(average pressure), with 25cSt fluid, code 0 displacement, without axial load

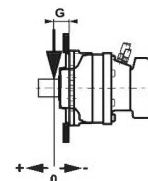
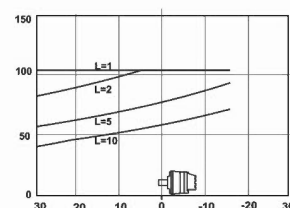
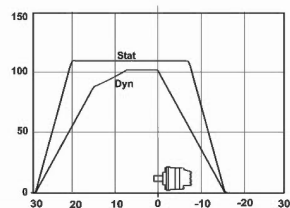
$$\frac{G}{86.75}$$

2 A 5 0



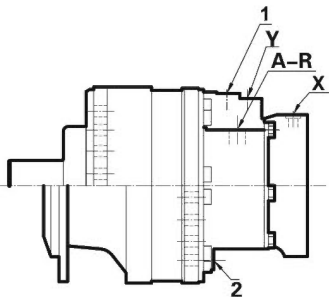
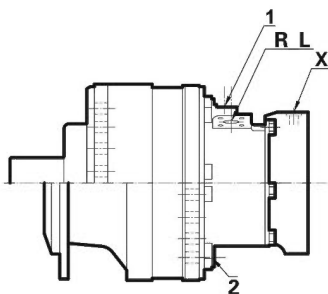
$$\frac{G}{87.25}$$

2 A 4 0



HMS08/HMSE08系列/HMS08/HMSE08 Series

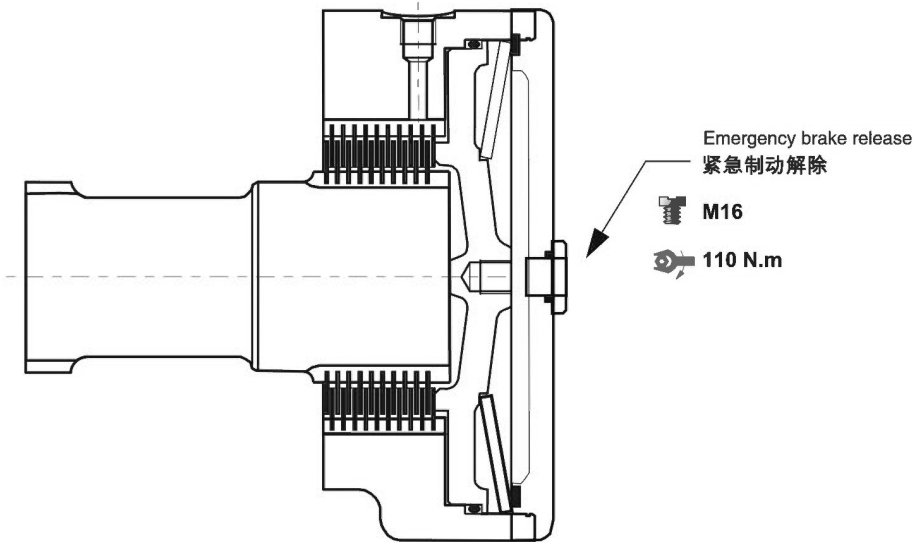
油口形式/Distributor



	旧标准 Old standards	标准 Standards	主油口 Power supply	变量油口 Displacement control	壳体泄油口 Case drain	驻车制动控制油口 Control of parking break
			A_R R_L	Y	1.2	X
1	ISO 6162 DIN 3852	ISO 6162 ISO 9974-1	DN13 PN400	M14x1.5	M18x1.5	M16x1.5
5	DIN 3852	ISO 9974-1	M27x2	M14x1.5	M18x1.5	M16x1.5
最高压力 Max.pressure	MS MSE bar		450 400	30	1	30

HMS08/HMSE08系列/HMS08/HMSE08 Series

驻动制动器/Brakes



制动器原理/Brake principle

在失压状态下多片式制动器起作用。弹簧对制动片产生作用力，该力使制动片抱紧转轴，制动扭矩与释放压力成正比。
This is a multidisc brake which is activated by a lack of pressure. The spring exerts a force on the piston ,which presses on the fixed and mobile discs,and immobilizes the shaft.The braking torque decreases in linear proportion to the brake release pressure.

	F	0	8
制动腔内压力为0时制动器的制动扭矩（新制动器） Parking brake torque at 0 bars on housing (new brake)	5620 Nm		
制动腔内压力为0时紧急制动扭矩（最多可作紧急制动使用10次） Dynamic emergency braking torque at 0 bars on housing(max.10 uses of emergency brakes)	3653 Nm		
制动腔内压力为0时剩余的驻车制动扭矩* Residual parking braking at 0 bars on housing*	4215 Nm		
最小的制动器释放压力 Min.brake release pressure	15 bar		
油量 Oil capacity	100 ml		
用于制动器释放液压油量 Volume for brake release	40 ml		

* 作为紧急制动使用后 After emergency brake has been used

- ⓘ 制动时不要运转马达。 Do not run in multidisc brakes.
- ⓘ 每当驻车制动器作为辅助性制动（或紧急制动器）使用时，都要对驻车制动器进行功能上的检查。
A functional check of the parking brake must be carried out each time it is used as an auxiliary brake (or emergency brake).

HMS11/HMSE11系列/HMS11/HMSE11 Series

技术参数表/ Technical Parameter

A: 全排量 First displacement B: 半排量 Second displacement

产品型号 Type	排量代号 Displacement Code	A	B	理论扭矩 Theoretical Torque	最大功率 Max.Power			最大扭矩 Max.Speed		最高压力 Max.Pressure
					A	B	B	A	B	
		优先偏向/Preferred	非优先偏向/Non-Preferred							
		ml/r	ml/r	100bar N.m	kW	kW	kW	r/min	bar	
HMS11	7	730	365	1161	50	33	25	200	450	
	8	837	418.5	1331				195		
	9	943	471.5	1499				190		
	0	1048	524	1666				185		
	1	1147	573.5	1824				180		
	2	1259	629.5	2002				170		175
HMSE11	9	1263	631.5	2008	50	33	25	170	190	400
	0	1404	702	2232				155	185	
	1	1536	768	2442				140	180	
	2	1687	843.5	2682				130	165	

产品标识说明/ Ordering Code

***** - * - *** - *** - ***** - *****

1 2 3 4 5 6 7 8

* * * 0

1、马达型号 Motor type

HMS11/HMSE11

2、排量代号 Displacement Code

HMS11: 7, 8, 9, 0, 1, 2

HMSE11: 9, 0, 1, 2

3、配流体形式 Valving type

1	单排量配流体
	1-displacement valving
D	排量比2 双排量配流体 (顺时针方向)
	2-displacement valving (Clockwise)
G	排量比2 双排量配流体 (逆时针方向)
	2-displacement valving (Counterclockwise)

4、安装法兰形式 Mounting options

不带安装法兰 Without mounting	1	4
带安装法兰 With mounting	2	5
1-单排量/1-Displacement 2-双排量/2-Displacement	热交换阀 Exchange	

5、油口形式 Distributor

0	无配流体端盖/No transmission cover
1	ISO 6162 法兰/ISO 6162 Flange
	ISO 9974-1 连接/ISO 9974-1 Connection
4	ISO 9974-1 连接/ISO 9974-1 Connection
A	ISO 11926-1 连接/ISO 11926-1 Connection

6、制动器 Brake

A11——无制动器 (普通端盖) /Without brake (simple plate)

F11——带制动器 /With brake

R11——无制动器 (加强端盖) /Without brake (reinforced plate)

7、输出轴形式 Shaft options

0—无轴承支撑 /Without bearing support

1—无安装法兰 /Without mounting

2—带安装法兰 /Lug mounting

8、附加项 Additional items

0	无选项 With Options or Adaptations
1	氟化橡胶密封 Fluorinated elastomer seals
3	不带机械解除制动的端盖 Brake environmental cover without plug
5	泄油口 (配流系统附加泄漏油口) Drainage (additional drain on valving systems)
6	工业轴承支撑 Industrial bearing support
8	预留速度传感器位置 Predisposition for speed sensor
A	空心轴 Hollow shaft
B	轴承支撑上带泄油口 Drain on the bearing support
C	恶劣工况 Abrasive environment
D	特殊喷漆或无喷漆 Special paint or no paint
E	加强轴封 Reinforced sealing
G	特殊轮辋安装 Special wheel rim mounting
J	加强轴肩 Reinforced bearing stop
K	加强轴 Reinforced shaft
M	高速 High speed

0—无鼓式制动器 /Without drum brakes

1—无螺栓 /Without studs

2—螺栓螺母 /With studs+nuts

3—螺栓 /With studs

4—M螺纹孔 /M threaded holes

伸出轴/Male shaft

5—伸出轴 DIN5480花键

Male shaft din5480 splines

0—无伸出轴 /Without shaft

1—5x Ø24, Ø205

A—伸出轴承支撑

For male shaft bearing support

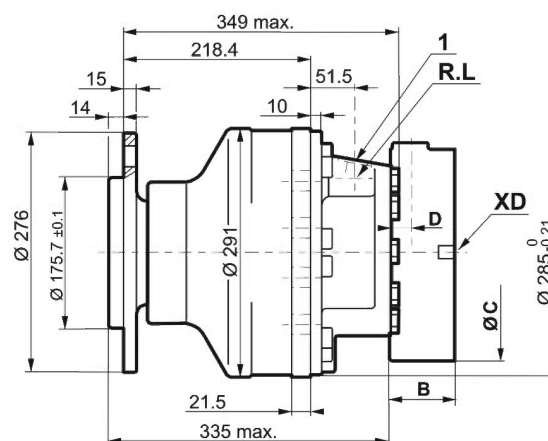
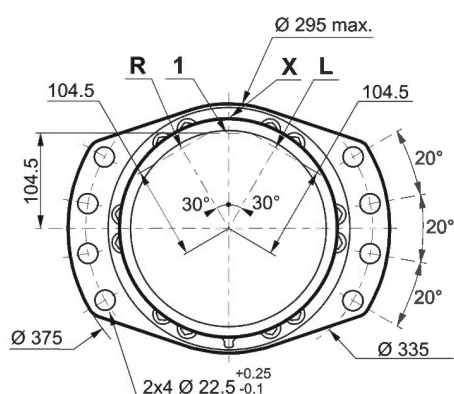
HMS11/HMSE11系列/HMS11/HMSE11 Series

HMS11/HMSE11 轮边马达/ HMS11/HMSE11 Wheel Motor

单排量马达 (1110) 标准尺寸/Dimensions for standard(1110)1-displacement motor

	F11
B	76.7
C	Ø247
D	26

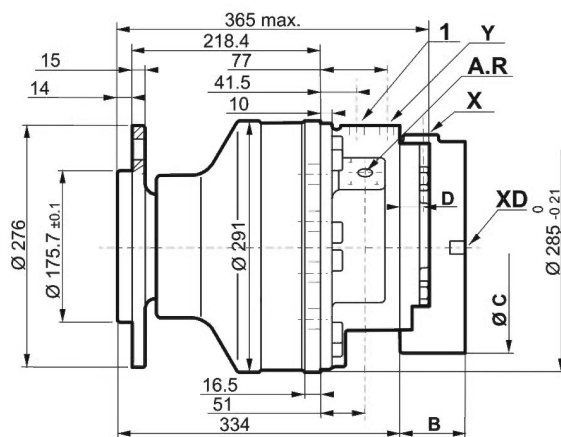
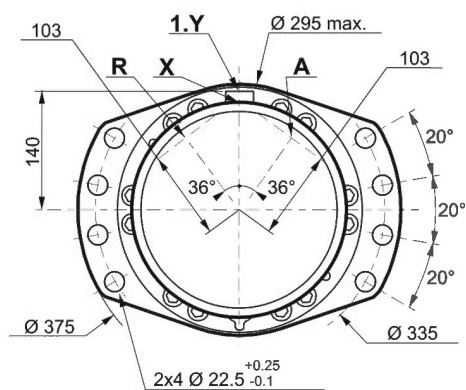
重量 /Weight	86kg	112kg



双排量马达 (1110) 标准尺寸/Dimensions for standard(1110)2-displacement motor

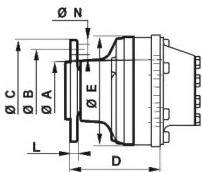
	F11
B	76.7
C	Ø 247
D	26

重量 /Weight	90kg	116kg



HMS11/HMSE11系列/HMS11/HMSE11 Series

输出轴形式/Shaft Options



	A	B	C	D	E	N	轮辋安装 Wheel rim mountings	L
1 1 1 0	Ø175.7	Ø225	Ø276	218.6	Ø291	Ø24	5xM22x1.5	14

螺栓/Studs

各种螺栓 Various studs	螺栓尺寸 Studs size	P	C min.	C max.	D	等级 CLASS	扭矩 (1) * Torque	扭矩 (2) * Torque
	mm	mm	mm	mm	mm		N.m	N.m
	M22x1.5	65	5	24	26	12.9	695	1050
							轮胎/Tire	钢轮/Drum

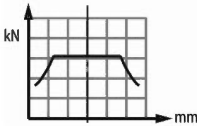
- (*) :紧固扭矩是针对指定载荷给出的。
The tightening torques are given for the indicated loads.
- (1) 轮辋: 轮辋安装紧固扭矩建议值 (>240 N/mm²)。
Wheel rim:Suggested tightening torque for wheel rim mountings(Re steel disc>240 N/mm²)
- (2) 标准: 其它安装方式紧固扭矩建议值 (>360 N/mm²)。
Standard:Suggested tightening torque in other cases(Re steel flange >360 N/mm²)

负载曲线/Load Curves

部件的使用寿命受压力的影响，所以必须核实应用到部件上的合力（轴向载荷/径向载荷）应与部件承受载荷的允许值相协调一致，并且这些部件的最终使用寿命应遵守其应用规范。
The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components,and that the resulting service life of these components complies with the application's specifications.

径向载荷允许值 Permissible radial loads

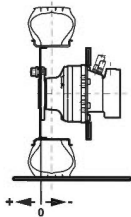
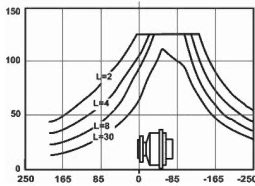
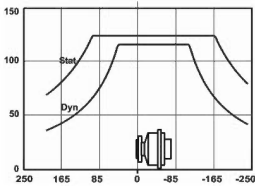
试验条件/Test conditions:
静态/Static: 0 r/min 0bar
动态: 0 r/min, 标准排量, 最大扭矩时无轴向载荷
Dynamic: 0 r/min code 0 displacement,without axial load at max.torque



轴承寿命 Service life of bearings

试验条件/Test conditions:
L: 150bars(平均压力)时, 百万转 (B10), 采用25cSt 流体, 标准排量, 无轴向载荷
L: Millions B10 revolutions at 150 bars(average prssure),with 25cSt fluid, code 0 displacement,without axial load

1 1 1 0



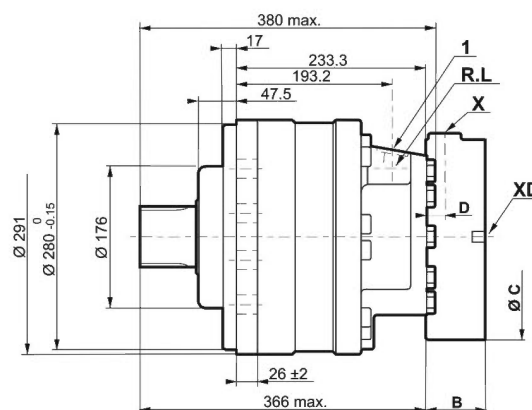
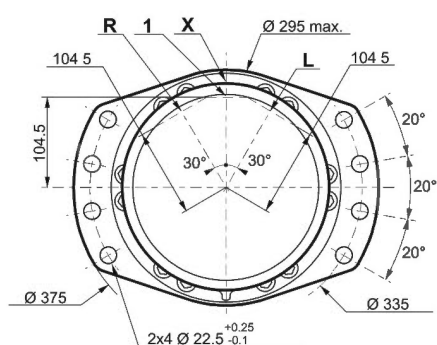
HMS11/HMSE11系列/HMS11/HMSE11 Series

HMS11/HMSE11 轴边马达/ HMS11/HMSE11 Shaft Motor

单排量马达 (2A50) 标准尺寸/Dimensions for standard(2A50)1-displacement motor

	F11
B	76.7
C	Ø247
D	26

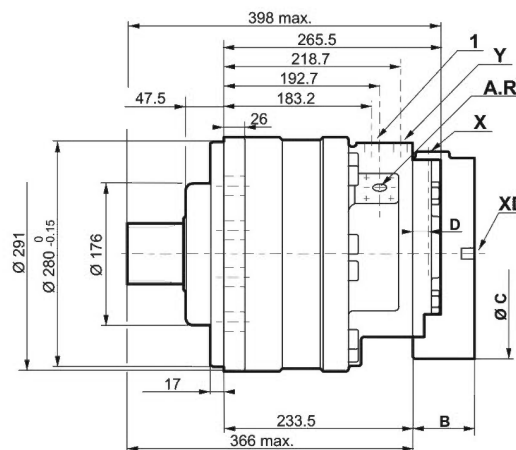
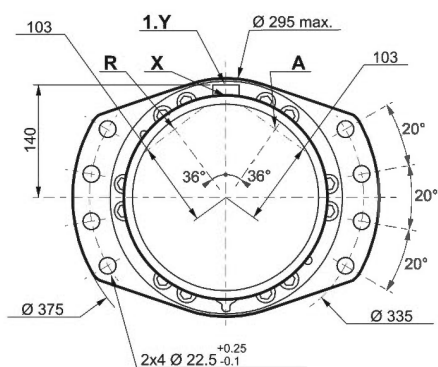
重量 /Weight	88kg	114kg



双排量马达 (2A50) 标准尺寸/Dimensions for standard(2A50)2-displacement motor

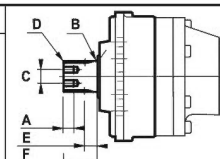
	F11
B	76.7
C	Ø247
D	26

重量 /Weight	88kg	114kg
		



HMS11/HMSE11系列/HMS11/HMSE11 Series

输出轴形式/Shaft Options

2A50								
DIN 5480 花键 DIN 5480 splines								
公称直径/Nominal Ø	80							
模数/Module	3							
Z	25							
		15	R2.75	35	2xM10	23	80	

负载曲线/Load Curves

部件的使用寿命受压力的影响,所以必须核实应用到部件上的合力(轴向载荷/径向载荷)应与部件承受载荷的允许值相协调一致,并且这些部件的最终使用寿命应遵守其应用规范。

The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components, and that the resulting service life of these components complies with the application's specifications.

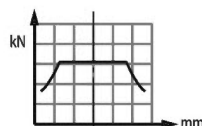
径向载荷允许值 Permissible radial loads

试验条件/Test conditions:

静态/Static: 0 r/min 0bar

动态: 0 r/min, 标准排量, 最大扭矩时无轴向载荷

Dynamic: 0 r/min code 0 displacement, without axial load at max. torque



轴承寿命 Service life of bearings

试验条件/Test conditions:

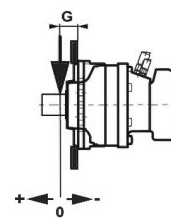
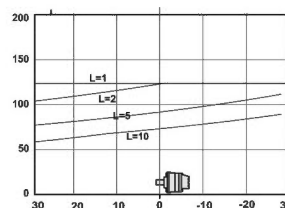
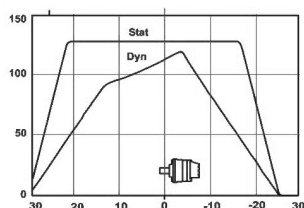
L: 150bars(平均压力)时, 百万转 (B10), 采用25cSt 流体, 标准排量, 无轴向载荷

L: Millions B10 revolutions at 150 bars(average pressure), with 25cSt fluid, code 0 displacement, without axial load

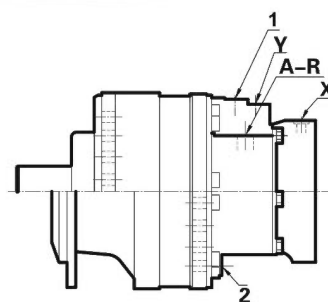
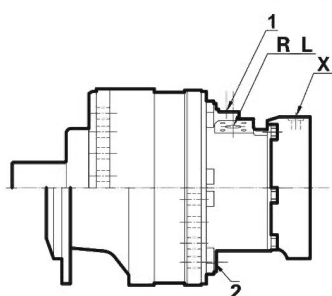
G

101.25

2 A 5 0



油口形式/Distributor

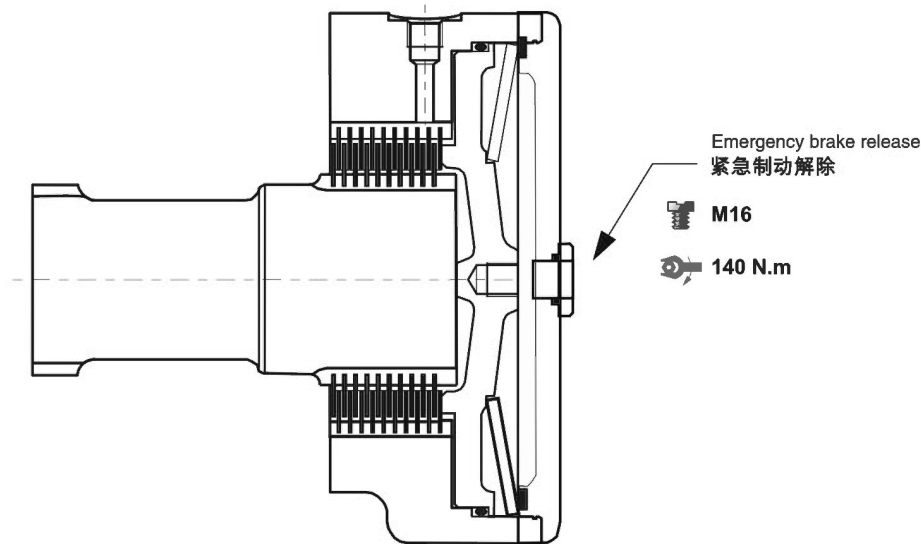


	旧标准 Old standards	标准 Standards	主油口 Power supply	变量油口 Displacement control	壳体泄油口 Case drain	驻车制动控制油口 Control of parking break
			A_R R_L	Y	1.2	X
A	SAE J514	ISO 11926-1	1"1/16-12 UNF	9/16"-18 UNF	3/4"-16 UNF	9/16"-18 UNF
1	ISO 6162	ISO 6162	A DN19 PN400	M16x1.5	M18x1.5	M18x1.5
	DIN3852	ISO 9974-1	B DN13 PN400			
4	NF E48050	ISO9974-1	M27x2	30	1	30
最高压力 Max.pressure	PS PSE	bar	450 400			

A: 全排量 First displacement B: 半排量 Second displacement

HMS11/HMSE11系列/HMS11/HMSE11 Series

驻动制动器/Brakes



制动器原理/Brake principle

在失压状态下多片式制动器起作用。弹簧对制动片产生作用力，该力使制动片抱紧转轴，制动扭矩与释放压力成正比。
This is a multidisc brake which is activated by a lack of pressure. The spring exerts a force on the piston ,which presses on the fixed and mobile discs,and immobilizes the shaft.The braking torque decreases in linear proportion to the brake release pressure.

	F	1	1
制动腔内压为为0时制动器的制动扭矩（新制动器） Parking brake torque at 0 bars on housing (new brake)	7320 Nm		
制动腔内压力为0时紧急制动扭矩（最多可作紧急制动使用10次） Dynamic emergency braking torque at 0 bars on housing(max.10 uses of emergency brakes)	4760 Nm		
制动腔内压力为0时剩余的驻车制动扭矩* Residual parking braking at 0 bars on housing*	5490 Nm		
最小的制动器释放压力 Min.brake release pressure	15	bar	
最大的制动器释放压力 Max.brake release pressure	30	bar	
油量 Oil capacity	170	ml	
用于制动器释放液压油量 Volume for brake release	40	ml	

* 作为紧急制动使用后 After emergency brake has been used

- ⚠ 制动时不要运转马达。 Do not run in multidisc brakes.
- ⚠ 每当驻车制动器作为辅助性制动（或紧急制动器）使用时，都要对驻车制动器进行功能上的检查。
A functional check of the parking brake must be carried out each time it is used as an auxiliary brake (or emergency brake).

HMS18/HMSE18系列/HMS18/HMSE18 Series

技术参数表/ Technical Parameter

A: 全排量 First displacement B: 半排量 Second displacement

产品型号 Type	排量代号 Displacement Code	A	B	理论扭矩 Theoretical Torque	最大功率 Max.Power			最大扭矩 Max.Speed		最高压力 Max.Pressure
					A	B	B	A	B	
				优先旋向/Preferred		非优先旋向/Preferred				
		ml/r	ml/r	100bar N.m	kW	kW	kW	r/min	bar	
HMS18	6	1091	546	1735	70	47	35	170	170	450
	8	1395	698	2218				155	160	
	9	1571	786	2498				140	155	
	0	1747	874	2778				125	150	
	1	1911	956	3038				115	135	
	2	2099	1050	3337				100	125	
HMSE18	0	2340	1170	3721	70	47	35	90	110	400
	1	2560	1280	4070				85	100	
	2	2812	1406	4471				75	90	

产品标识说明/ Ordering Code

***** - * - *** - *** - ***** - *****

1 2 3 4 5 6 7 8

1、马达型号 Motor type

HMS18/HMSE18

2、排量代号 Displacement Code

HMS18: 6, 8, 9, 0, 1, 2

HMSE18: 0, 1, 2

3、配流体形式 Valving type

1	单排量配流体 1-displacement valving
A	排量比2 Ration 2
D	对称型配流体 Symmetrical
D	排量比2 Ration 2
G	双排量配流体 (顺时针方向) 2-displacement valving(Clockwise)
G	排量比2 Ration 2
G	双排量配流体 (逆时针方向) 2-displacement valving(Counterclockwise)
G	排量比2 Ration 2

4、安装法兰形式 Mounting options

S18	不带安装法兰	Without mounting	1	1	4
	带安装法兰	With mounting	2	2	5
S35	不带安装法兰	Without mounting	B		
	带安装法兰	With mounting	C		
			单排量 1-Disp.	双排量 2-Disp.	热交换阀 Exchange

5、油口形式 Distributor

0	无配流体端盖	No transmission cover
1	ISO 9974-1 连接/ISO 9974-1 Connection	
1	ISO 6162 法兰/ISO 6162 Flange	DN19
4	ISO1179-1 连接/ISO9974-1 Connection	

6、制动器 Brake

	无制动器	Without brake	A18
S18	带制动器	轴承载安装或配流体端盖	驻车制动器
SE18	Brakes	Bearing mounting or valving cover mounting	Parking brake
	无制动器(加强端盖)	Without brake(reinforced plate)	R18
S35	无制动器	Without brake	A35
	无制动器(加强端盖)	Without brake(reinforced plate)	R35

7、输出轴形式 Shaft options

0-无轴承支撑 /Without bearing support 1-无安装法兰 /Without mounting
2-带安装法兰 /Lug mounting

8、附加项 Additional items

0	无选项 With Options or Adaptations
1	氟化橡胶密封 Fluorinated elastomer seals
3	不带机械解除制动的端盖 Brake environmental cover without plug
5	泄油口 (配流系统附加泄漏油口) Drainage(additional drain on valving systems)
6	工业轴承支撑 Industrial bearing support
8	预留速度传感器位置 Predisposition for speed sensor
A	空心轴 Hollow shaft
B	轴承支撑上带泄油口 Drain on the bearing support
C	恶劣工况 Abrasive environment
D	特殊喷漆或无喷漆 Special paint or no paint
E	加强轴封 Reinforced sealing
G	特殊轮圈安装 Special wheel rim mounting
J	加强轴肩 Reinforced bearing stop
K	加强轴 Reinforced shaft
M	高速 Hight speed

0-无鼓式制动器 /Without drum brakes

1-无螺栓 /Without studs
2-螺栓螺母 /With studs+nuts
3-螺栓 /With studs
4-M螺纹孔 /M threaded holes

伸出轴/Male shaft

5-伸出轴 DIN5480花键
Male shaft din5480 splines

0-无伸出轴 /Without shaft

1-10x Ø24, Ø225

A-伸出轴承支撑

For male shaft bearing support

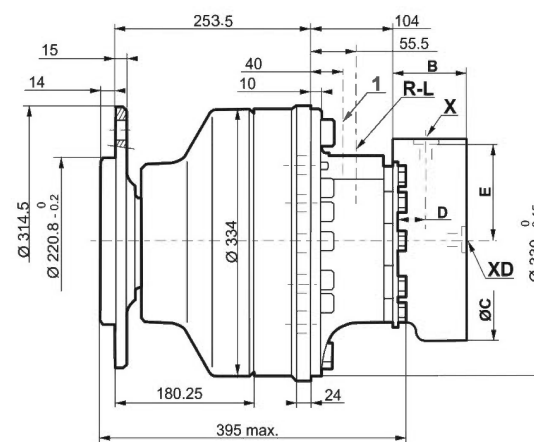
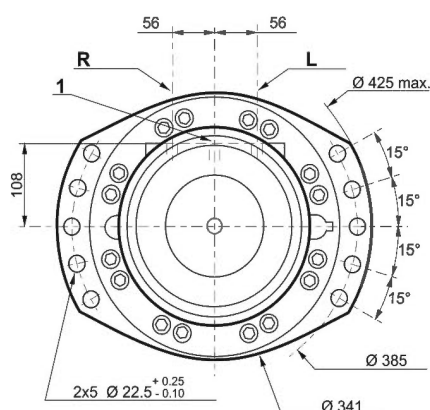
HMS18/HMSE18系列/HMS18/HMSE18 Series

HMS18/HMSE18 轮边马达/ HMS18/HMSE18 Wheel Motor

单排量马达 (1110) 标准尺寸/Dimensions for standard(1110)1-displacement motor

	F19
B	98.5
C	Ø250
D	45
E	121.5

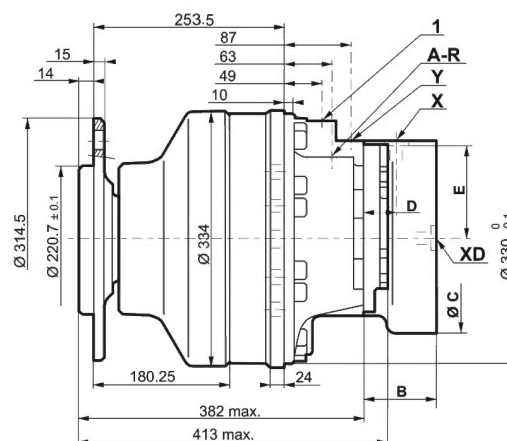
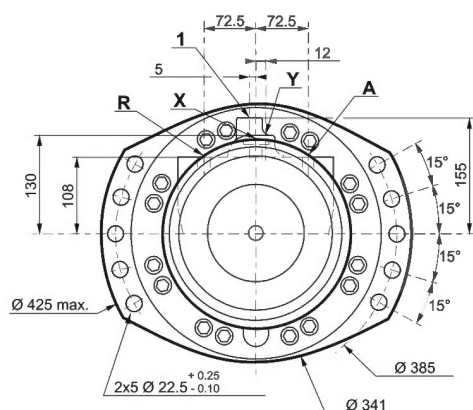
重量 /Weight	120kg	150kg



双排量马达 (1110) 标准尺寸/Dimensions for standard(1110)2-displacement motor

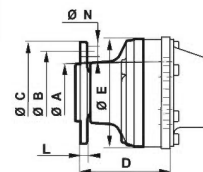
	F19
B	98.5
C	Ø250
D	45
E	121.5

重量 /Weight	130kg	160kg



HMS18/HMSE18系列/HMS18/HMSE18 Series

输出轴形式/Shaft Options



	A	B	C	D	E	N	轮辋安装 Wheel rim mountings	L
1 1 1 0	Ø175.7	Ø225	Ø265	253.5	Ø334	Ø24	10xM22x1.5	14

螺栓/Studs

各种螺栓 Various studs	螺栓尺寸 Studs size	P	C min.	C max.	D	等级 CLASS	扭矩（1）* Torque	扭矩（2）* Torque
		mm	mm	mm	mm		N.m	N.m
	M22x1.5	65	5	24	26	12.9	695	1050
		80		29				
							轮胎/Tire	钢轮/Drum

(*) :紧固扭矩是针对指定载荷给出的。

The tightening torques are given for the indicated loads.

(1) 轮辋: 轮辋安装紧固扭矩建议值 ($>240 \text{ N/mm}^2$)。

Wheel rim: Suggested tightening torque for wheel rim mountings (Re steel disc $>240 \text{ N/mm}^2$)

(2) 标准: 其它安装方式紧固扭矩建议值 ($>360 \text{ N/mm}^2$)。

Standard: Suggested tightening torque in other cases (Re steel flange $>360 \text{ N/mm}^2$)

负载曲线/Load Curves

部件的使用寿命受压力的影响, 所以必须核实应用到部件上的合力 (轴向载荷/径向载荷) 应与部件承受载荷的允许值相协调一致, 并且这些部件的最终使用寿命应遵守其应用规范。

The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components, and that the resulting service life of these components complies with the application's specifications.

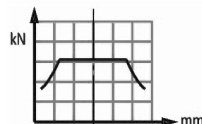
径向载荷允许值 Permissible radial loads

试验条件/Test conditions:

静态/Static: 0 r/min 0 bar

动态: 0 r/min, 标准排量, 最大扭矩时无轴向载荷

Dynamic: 0 r/min code 0 displacement, without axial load at max. torque

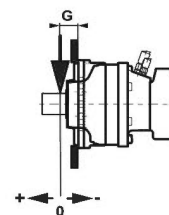
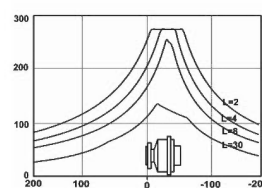
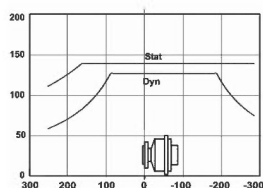


轴承寿命 Service life of bearings

试验条件/Test conditions:

L: 150 bars (平均压力) 时, 百万转 (B10), 采用 25cSt 流体, 标准排量, 无轴向载荷

L: Millions B10 revolutions at 150 bars (average pressure), with 25cSt fluid, code 0 displacement, without axial load



1 1 1 0

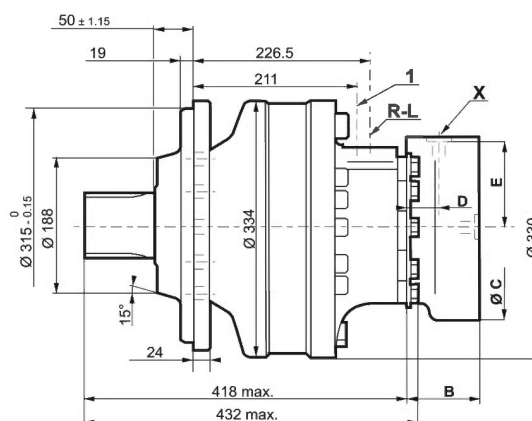
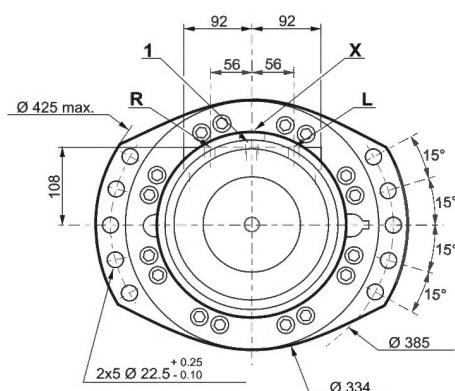
HMS18/HMSE18系列/HMS18/HMSE18 Series

HMS18/HMSE18 轴边马达/ HMS18/HMSE18 Shaft Motor

单排量马达 (2A50) 标准尺寸/Dimensions for standard(2A50)1-displacement motor

	F19
B	98.5
C	Ø 250
D	45
E	121.5

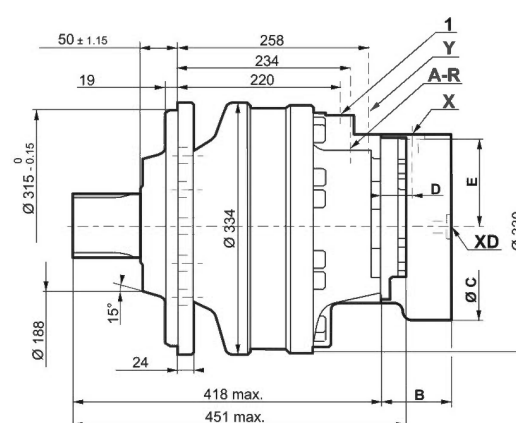
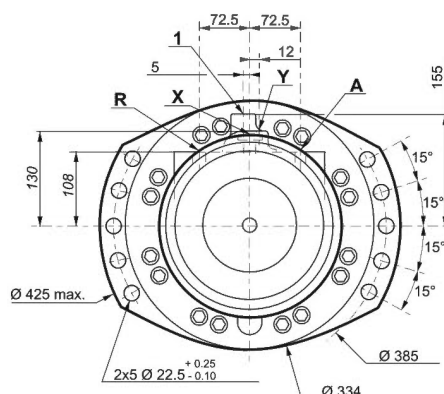
重量 /Weight	112kg	142kg



双排量马达 (2A50) 标准尺寸/Dimensions for standard(2A50)2-displacement motor

	F19
B	98.5
C	Ø 250
D	45
E	121.5

重量 /Weight	112kg	152kg



HFM

HGM

QJM

H-HMB

H-HMC

HCA

HCB

HMS

HA6V

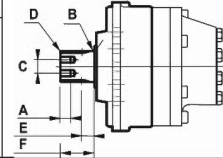
HA2F

HMS18/HMSE18系列/HMS18/HMSE18 Series

输出轴形式/Shaft Options

2	A	5	0
DIN 5480 花键 DIN 5480 splines			
公称直径/Nominal $\varnothing$	90		
模数/Module	3		
Z	28		

	A	B	C	D	E	F
	23	R3	35	2xM14	23	90



负载曲线/Load Curves

部件的使用寿命受压力的影响,所以必须核实应用到部件上的合力(轴向载荷/径向载荷)应与部件承受载荷的允许值相协调一致,并且这些部件的最终使用寿命应遵守其应用规范。

The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components, and that the resulting service life of these components complies with the application's specifications.

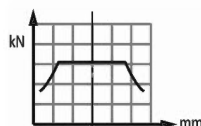
径向载荷允许值 Permissible radial loads

试验条件/Test conditions:

静态/Static: 0 r/min 0bar

动态: 0 r/min, 标准排量, 最大扭矩时无轴向载荷

Dynamic: 0 r/min code 0 displacement, without axial load at max. torque

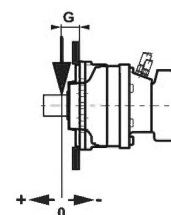
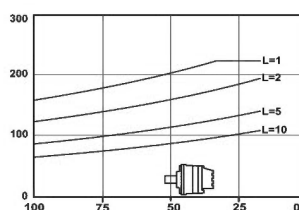
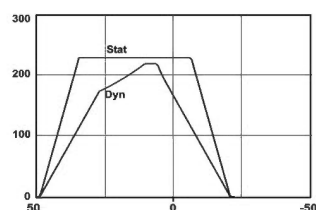


轴承寿命 Service life of bearings

试验条件/Test conditions:

L: 150bars(平均压力)时, 百万转 (B10), 采用25cSt 流体, 标准排量, 无轴向载荷

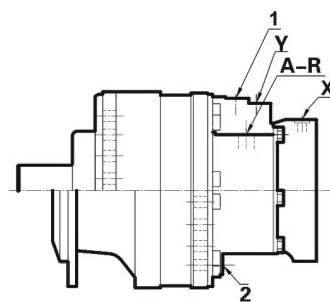
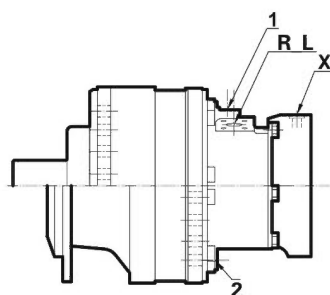
L: Millions B10 revolutions at 150 bars(average pressure), with 25cSt fluid, code 0 displacement, without axial load



G
106.5

2 A 5 0

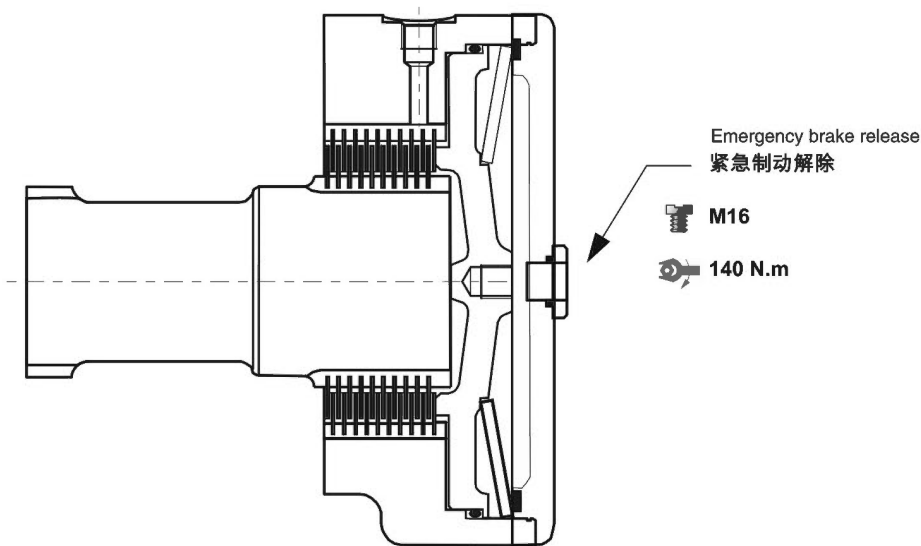
油口形式/Distributor



	旧标准 Old standards	标准 Standards	主油口 Power supply	变量油口 Displacement control	壳体泄油口 Case drain	驻车制动控制油口 Control of parking break
			A_R I R_L	Y	1.2	X
1	ISO 6162 DIN 3852	ISO 6162-1 ISO 9974-1	DN19 PN400 DN25 PN400	M16x1.5 M18x1.5	M22x1.5	M16x1.5
4	NF E48050	ISO 9974-1	M27x1.5	M16x1.5 M22x1.5		
最高压力 Max. pressure	PS PSE	bar	450 400	30	1	30

HMS18/HMSE18系列/HMS18/HMSE18 Series

驻动制动器/Brakes



制动器原理/Brake principle

在失压状态下多片式制动器起作用。弹簧对制动片产生作用力，该力使制动片抱紧转轴，制动扭矩与释放压力成正比。
This is a multidisc brake which is activated by a lack of pressure. The spring exerts a force on the piston ,which presses on the fixed and mobile discs,and immobilizes the shaft.The braking torque decreases in linear proportion to the brake release pressure.

	F	1	9
制动腔内压为0时制动器的制动扭矩（新制动器） Parking brake torque at 0 bars on housing (new brake)	18600 Nm		
制动腔内压力为0时紧急制动扭矩（最多可作紧急制动使用10次） Dynamic emergency braking torque at 0 bars on housing(max.10 uses of emergency brakes)	12800 Nm		
制动腔内压力为0时剩余的驻车制动扭矩* Residual parking braking at 0 bars on housing*	13940 Nm		
最小的制动器释放压力 Min.brake release pressure	15 bar		
最大的制动器释放压力 Max.brake release pressure	30 bar		
油量 Oil capacity	180 ml		
用于制动器释放液压油量 Volume for brake release	70 ml		

* 作为紧急制动使用后 After emergency brake has been used

- ⚠ 制动时不要运转马达。 Do not run in multidisc brakes.
- ⚠ 每当驻车制动器作为辅助性制动（或紧急制动器）使用时，都要对驻车制动器进行功能上的检查。
A functional check of the parking brake must be carried out each time it is used as an auxiliary brake (or emergency brake).

HMS25系列/HMS25 Series

技术参数表/ Technical Parameter

A: 全排量 First displacement B: 半排量 Second displacement

产品型号 Type	排量代号 Displacement Code	A	B	理论扭矩 Theoretical Torque	最大功率 Max.Power			最大扭矩 Max.Speed		最高压力 Max.Pressure
					A	B	B	A	B	
		优先旋向/Preferred	非优先旋向/Non-Preferred							
		ml/r	ml/r	100bar N.m	kW	kW	kW	r/min	bar	
HMS25	8	2004	1002	3186	90	60	45	145	145	450
	0	2498	1249	3972				137	137	
	1	2752	1376	4376				125	135	
	2	3006	1503	4780				115	130	

产品标识说明/ Ordering Code

***** - * - *** - *** - ***** - *****

1 2 3 4 5 6 7 8

1、马达型号 Motor type

HMS25

2、排量代号 Displacement Code

产品型号 Type	排量代号 Displacement Code	A	B
HMS25	8	2004	1002
	0	2498	1249
	1	2752	1376
	2	3006	1503

3、配流体形式 Valving type

1	单排量配流体 1-displacement valving
A	排量比2 Ration 2
D	对称型配流体 Symmetrical
D	排量比2 Ration 2
G	双排量配流体 (顺时针方向) 2-displacement valving(Clockwise)
G	排量比2 Ration 2
G	双排量配流体 (逆时针方向) 2-displacement valving(Counterclockwise)

4、安装法兰形式 Mounting options

不带安装法兰	Without mounting	1	1
带安装法兰	With mounting	2	2
		单排量 1-Disp.	双排量 2-Disp.

5、油口形式 Distributor

ISO 6149-1 连接/ISO 6149-1 Connection
ISO 6162 法兰/ISO 6162 Flange
ISO11926-1 连接/ISO11926-1 Connection

6、制动器 Brake

A25——无制动器 (普通端盖) /Without brake(simple plate)
F42——带制动器/With brake
R25——无制动器 (加强端盖) /Without brake(reinforced plate)

8、附加项 Additional items

0	无选项 With Options or Adaptations
1	氟化橡胶密封 Fluorinated elastomer seals
6	工业轴承支撑 Industrial bearing support
8	预留速度传感器位置 Predisposition for speed sensor
A	空心轴 Hollow shaft
B	轴承支撑上带泄油口 Drain on the bearing support
C	恶劣工况 Abrasive environment
D	特殊喷漆或无喷漆 Special paint or no paint
E	加强轴封 Reinforced sealing
G	特殊轮辋安装 Special wheel rim mounting
J	加强轴肩 Reinforced bearing stop

7、输出轴形式 Shaft options

0-无鼓式制动器 /Without drum brakes

1-无螺栓 /Without studs
2-螺栓螺母 /With studs+nuts
3-螺栓 /With studs
4-M螺纹孔 /M threaded holes

伸出轴/Male shaft

5-伸出轴 DIN5480花键
Male shaft din5480 splines

0-无伸出轴 /Without shaft

1-10x Ø24, Ø335

A-伸出轴承支撑

For male shaft bearing support

0-无轴承支撑 /Without bearing support

1-无安装法兰 /Without mounting

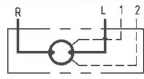
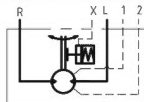
2-带安装法兰 /Lug mounting

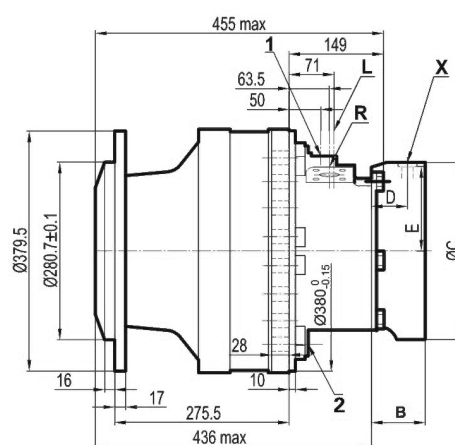
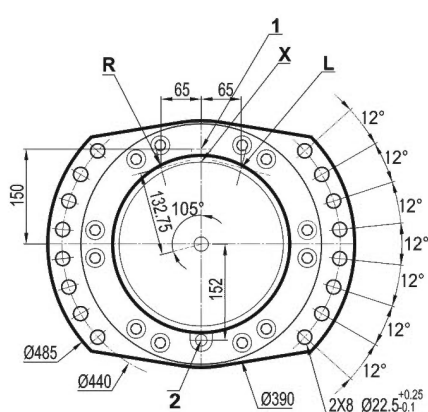
HMS25系列/HMS25 Series

HMS25 轮边马达/ HMS25 Wheel Motor

单排量马达 (1110) 标准尺寸/Dimensions for standard(1110)1-displacement motor

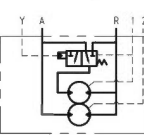
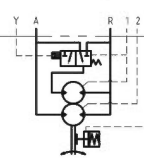
	F42
B	142
C	Ø375
D	64.0
E	183.5

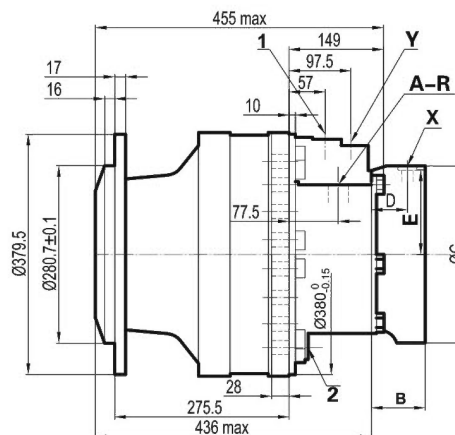
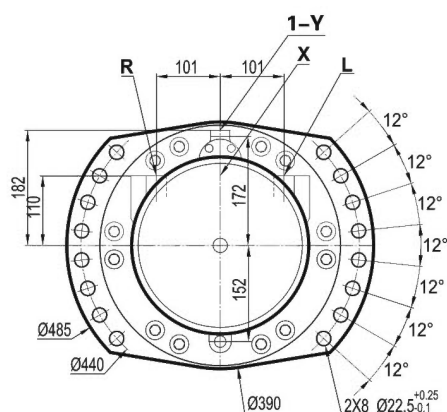
重量 /Weight	210kg	270kg
		



双排量马达 (1110) 标准尺寸/Dimensions for standard(1110)2-displacement motor

	F42
B	142
C	Ø375
D	64.0
E	183.5

重量 /Weight	210kg	270kg
		



HFM

HGM

QJM

H-HMB

H-HMC

HCA

HCB

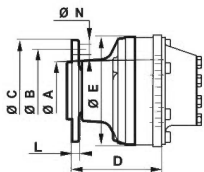
HMS

HA6V

HA2F

HMS25系列/HMS25 Series

输出轴形式/Shaft Options



	A	B	C	D	E	N	轮辋安装 Wheel rim mounting	L
1 1 1 0	Ø280.7	Ø335	Ø379	275.5	Ø390	Ø24	10xM22x1.5	17

螺栓/Studs

各种螺栓 Various studs	螺栓尺寸 Studs size	P	C min.	C max.	D	等级 CLASS	扭矩 (1) * Torque	扭矩 (2) * Torque
		mm	mm	mm	mm		N.m	N.m
	M22x1.5	80	5	36	26	12.9	695	1050
								轮胎/Tire

(*) :紧固扭矩是针对指定载荷给出的。

The tightening torques are given for the indicated loads.

(1) 轮辋: 轮辋安装紧固扭矩建议值 (>240 N/mm²) 。

Wheel rim: Suggested tightening torque for wheel rim mountings(Re steel disc>240 N/mm²)

(2) 标准: 其它安装方式紧固扭矩建议值 (>360 N/mm²) 。

Standard: Suggested tightening torque in other cases(Re steel flange >360 N/mm²)

负载曲线/Load Curves

部件的使用寿命受压力的影响, 所以必须核实应用到部件上的合力 (轴向载荷/径向载荷) 应与部件承受载荷的允许值相协调一致, 并且这些部件的最终使用寿命应遵守其应用规范。

The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components, and that the resulting service life of these components complies with the application's specifications.

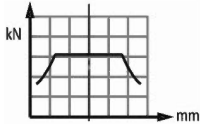
径向载荷允许值 Permissible radial loads

试验条件/Test conditions:

静态/Static: 0 r/min 0bar

动态: 0 r/min, 标准排量, 最大扭矩时无轴向载荷

Dynamic: 0 r/min code 0 displacement, without axial load at max. torque

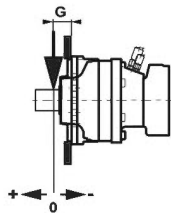
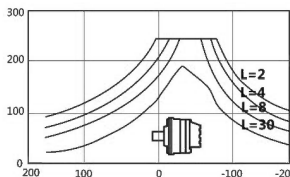
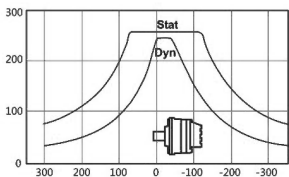


轴承寿命 Service life of bearings

试验条件/Test conditions:

L: 150bars(平均压力)时, 百万转 (B10), 采用25cSt流体, 标准排量, 无轴向载荷

L: Millions B10 revolutions at 150 bars(average pressure), with 25cSt fluid, code 0 displacement, without axial load



1 1 1 0

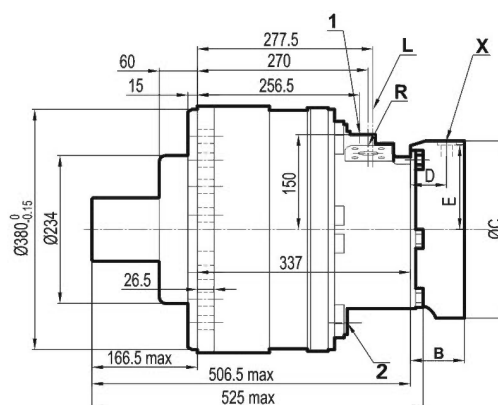
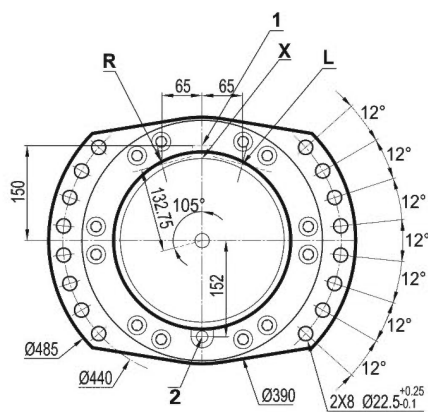
HMS25系列/HMS25 Series

HMS25 轴边马达/ HMS25 Shaft Motor

单排量马达 (2A50) 标准尺寸/Dimensions for standard(2A50)1-displacement motor

	F42
B	142
C	Ø375
D	64.0
E	183.5

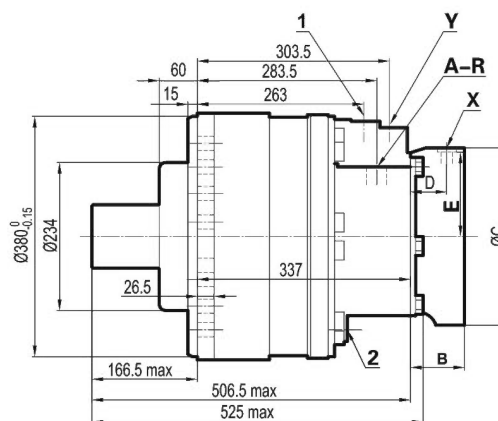
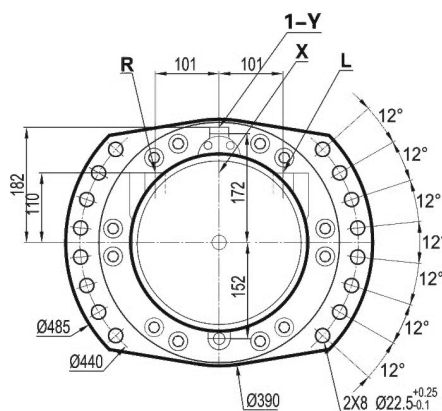
重量 /Weight	195kg	255kg



双排量马达 (2A50) 标准尺寸/Dimensions for standard(2A50)2-displacement motor

	F42
B	142
C	Ø375
D	64.0
E	183.5

重量 /Weight	195kg	255kg



HFM

HGM

QJM

H-HMB

H-HMC

HCA

HCB

HMS

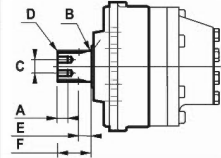
HA6V

HA2F

HMS25系列/HMS25 Series

输出轴形式/Shaft Options

2	A	5	0
DIN 5480 花键 DIN 5480 splines			
公称直径/NominalØ		100	
模数/Module		3	
Z		32	
		A	B
		C	D
		E	F
		23	R4
		35	2xM14
		25	105



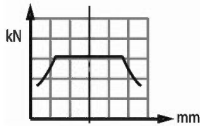
负载曲线/Load Curves

部件的使用寿命受压力的影响，所以必须核实应用到部件上的合力（轴向载荷/径向载荷）应与部件承受载荷的允许值相协调一致，并且这些部件的最终使用寿命应遵守其应用规范。

The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components, and that the resulting service life of these components complies with the application's specifications.

径向载荷允许值 Permissible radial loads

试验条件/Test conditions:
静态/Static: 0 r/min 0bar
动态: 0 r/min, 标准排量, 最大扭矩时无轴向载荷
Dynamic: 0 r/min code 0 displacement, without axial load at max. torque

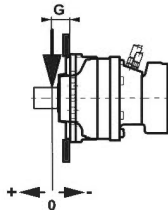
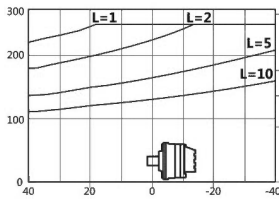
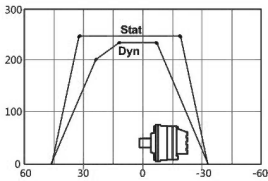


轴承寿命 Service life of bearings

试验条件/Test conditions:
L: 150bars(平均压力)时, 百万转 (B10), 采用25cSt 流体, 标准排量, 无轴向载荷
L: Millions B10 revolutions at 150 bars(average prssure), with 25cSt fluid, code 0 displacement, without axial load

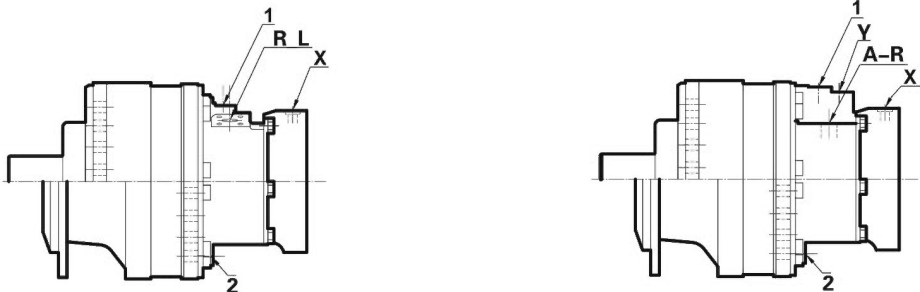
G
125

2 A 5 0



HMS25系列/HMS25 Series

油口形式/Distributor



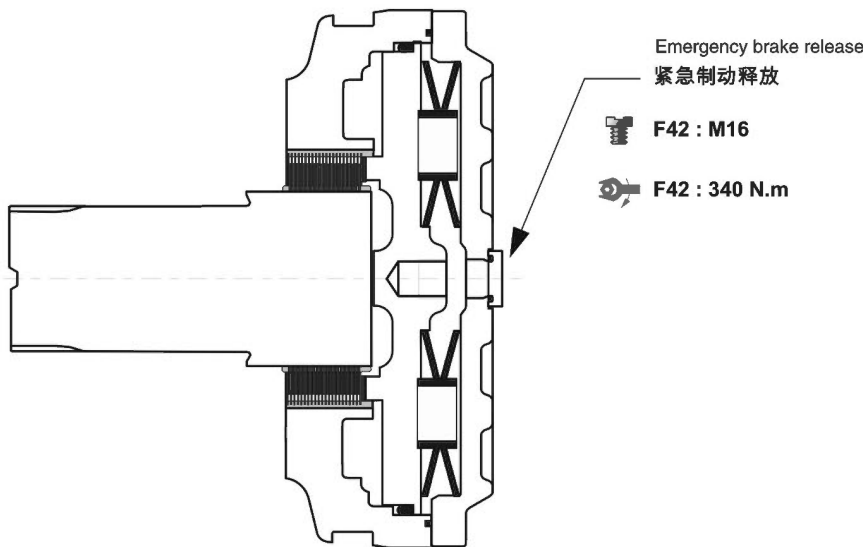
	旧标准 Old standards	标准 Standards	主油口 Power supply	变量油口 Displacement control	壳体泄油口 Case drain	驻车制动控制油口 Control of parking break
			A_R R_L	Y	1.2	X
A	SAE J511	ISO 11926-2	1"1/16-12 UNF	3/4"-16 UNF	7/8"-14 UNF	3/4"-16 UNF
1	ISO 6162	ISO 6162	A DN32 PN400	M18x1.5	M22x1.5	M18x1.5
	DIN 3852	ISO 9974-1	A&B DN25 PN400			
最高压力 Max.pressure		PS bar	450	30	1	30

A: 全排量 First displacement B: 半排量 Second displacement

- HFM
- HGM
- QJM
- H-HMB
- H-HMC
- HCA
- HCB
- HMS
- HA6V
- HA2F

HMS25系列/HMS25 Series

驻动制动器/Brakes



制动器原理/Brake principle

在失压状态下多片式制动器起作用。弹簧对制动片产生作用力，该力使制动片抱紧转轴，制动扭矩与释放压力成正比。
This is a multidisc brake which is activated by a lack of pressure. The spring exerts a force on the piston ,which presses on the fixed and mobile discs,and immobilizes the shaft.The braking torque decreases in linear proportion to the brake release pressure.

	F	4	2
制动腔内压为为0时制动器的制动扭矩（新制动器） Parking brake torque at 0 bars on housing (new brake)	25000 Nm		
制动腔内压力为0时紧急制动扭矩（最多可作紧急制动使用10次） Dynamic emergency braking torque at 0 bars on housing(max.10 uses of emergency brakes)	16250 Nm		
制动腔内压力为0时剩余的驻车制动扭矩* Residual parking braking at 0 bars on housing*	18750 Nm		
最小的制动器释放压力 Min.brake release pressure	15	bar	
最大的制动器释放压力 Max.brake release pressure	30	bar	
油量 Oil capacity	400 ml		
用于制动器释放液压油量 Volume for brake release	135 ml		

* 作为紧急制动使用后 After emergency brake has been used

- ① 制动时不要运转马达。 Do not run in multidisc brakes.
- ① 每当驻车制动器作为辅助性制动（或紧急制动器）使用时，都要对驻车制动器进行功能上的检查。
A functional check of the parking brake must be carried out each time it is used as an auxiliary brake (or emergency brake).

HMS35系列/HMS35 Series

技术参数表/ Technical Parameter

A: 全排量 First displacement B: 半排量 Second displacement

产品型号 Type	排量代号 Displacement Code	A	B	理论扭矩 Theoretical Torque	最大功率 Max.Power			最大扭矩 Max.Speed	最高压力 Max.Pressure
					A	B	B		
		A	优先度向/Preferred	非优先度向/Non-Preferred				B	
		ml/r	ml/r	100bar N.m	kW	kW	kW	r/min	
HMS35	7	2439	1220	3878	110	73	55	140	450
	9	3143	1572	4997				140	
	0	3494	1747	5555				130	
	2	4198	2099	6675				110	

产品标识说明/ Ordering Code

***** - * - *** - *** - ***** - *****

1、马达型号 Motor type

HMS35

2、排量代号 Displacement Code

产品型号 Type	排量代号 Displacement Code	A	B
HMS35	7	2439	1220
	9	3143	1572
	0	3494	1747
	2	4198	2099

3、配流体形式 Valving type

1	单排量配流体 1-displacement valving
A	排量比2 对称型配流体 Ration 2 Symmetrical
D	排量比2 双排量配流体 (顺时针方向) Ration 2 2-displacement valving(Clockwise)
G	排量比2 双排量配流体 (逆时针方向) Ration 2 2-displacement valving(Counterclockwise)

4、安装法兰形式 Mounting options

S18	不带安装法兰	Without mounting	1	1
	带安装法兰	With mounting	2	2
S35	不带安装法兰	Without mounting	B	1
	带安装法兰	With mounting	C	2
			单排量 1-Disp.	双排量 2-Disp.

5、油口形式 Distributor

无配流体端盖	No transmission cover
ISO 9974-1 连接/ISO 9974-1 Connection	
ISO DP6162 法兰/ISO DP6162 Flange	

6、制动器 Brake

S35	无制动器	Without brake	A35
	带制动器	轴承支撑安装或配流体端盖	F42
	驻车制动器	Bearing mounting or valving cover mounting Parking brake	
S18	无制动器(加强端盖)	Without brake(reinforced plate)	R35
	无制动器	Without brake	A18
	无制动器(加强端盖)	Without brake(reinforced plate)	R18

8、附加项 Additional items

0	无选项 With Options or Adaptations
1	氟化橡胶密封 Fluorinated elastomer seals
3	不带机械解除制动的端盖 Brake environmental cover without plug
5	泄油口 (配流系统附加泄漏油口) Drainage(additional drain on valving systems)
6	工业轴承支撑 Industrial bearing support
8	预留速度传感器位置 Predisposition for speed sensor
A	空心轴 Hollow shaft
B	轴承支撑上带泄油口 Drain on the bearing support
E	加强轴封 Reinforced sealing
G	特殊轮辋安装 Special wheel rim mounting
J	加强轴肩 Reinforced bearing stop

7、输出轴形式 Shaft options

0-无鼓式制动器 /Without drum brakes

- 1-无螺栓 /Without studs
- 2-螺栓螺母 /With studs+nuts
- 3-螺栓 /With studs
- 4-M螺纹孔 /M threaded holes

伸出轴/Male shaft

5-伸出轴 DIN5480花键
Male shaft din5480 splines

0-无伸出轴 /Without shaft

1-10x Ø24, Ø335

A-伸出轴承支撑

For male shaft bearing support

0-无轴承支撑 /Without bearing support

1-无安装法兰 /Without mounting

2-带安装法兰 /Lug mounting

HFM

HGM

QJM

H-HMB

H-HMC

HCA

HCB

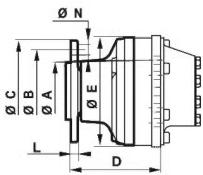
HMS

HA6V

HA2F

HMS35系列/HMS35 Series

输出轴形式/Shaft Options



	A	B	C	D	E	N	轮辋安装 Wheel rim mounting	L
1 1 1 0	Ø280.7	Ø335	Ø385	338	Ø334	Ø24	10xM22x1.5	24

螺栓/Studs

各种螺栓 Various studs	螺栓尺寸 Studs size	P	C min.	C max.	D	等级 CLASS	扭矩 (1) * Torque	扭矩 (2) * Torque
		mm	mm	mm	mm		N.m	N.m
	M22x1.5	64 80	5	-	16.5	12.9	695	1050
							轮胎/Tire	钢轮/Drum

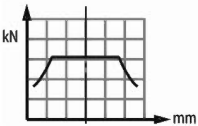
- (*) :紧固扭矩是针对指定载荷给出的。
The tightening torques are given for the indicated loads.
- (1) 轮辋: 轮辋安装紧固扭矩建议值 (>240 N/mm²) 。
Wheel rim:Suggested tightening torque for wheel rim mountings(Re steel disc>240 N/mm²)
- (2) 标准: 其它安装方式紧固扭矩建议值 (>360 N/mm²) 。
Standard:Suggested tightening torque in other cases(Re steel flange >360 N/mm²)

负载曲线/Load Curves

部件的使用寿命受压力的影响, 所以必须核实应用到部件上的合力(轴向载荷/径向载荷)应与部件承受载荷的允许值相协调一致, 并且这些部件的最终使用寿命应遵守其应用规范。
The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components,and that the resulting service life of these components complies with the application's specifications.

径向载荷允许值 Permissible radial loads

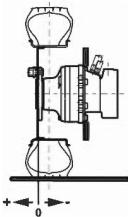
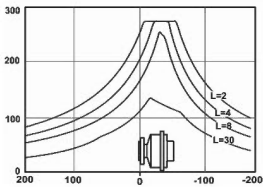
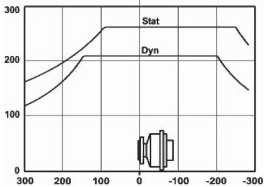
试验条件/Test conditions:
静态/Static: 0 r/min 0bar
动态: 0 r/min, 标准排量, 最大扭矩时无轴向载荷
Dynamic: 0 r/min code 0 displacement,without axial load at max.torque



轴承寿命 Service life of bearings

试验条件/Test conditions:
L: 150bars(平均压力)时, 百万转 (B10) ,采用25cSt 流体, 标准排量, 无轴向载荷
L: Millions B10 revolutions at 150 bars(average prssure),with 25cSt fluid, code 0 displacement,without axial load

1 1 1 0



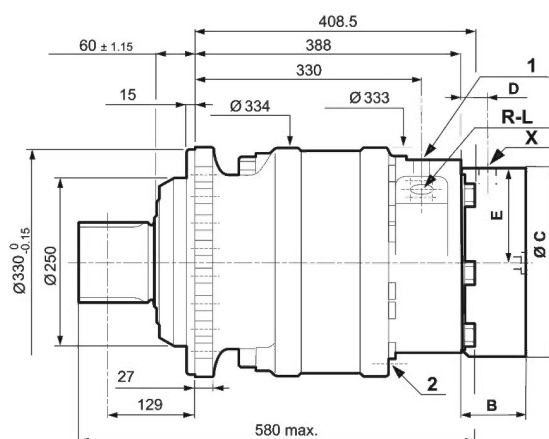
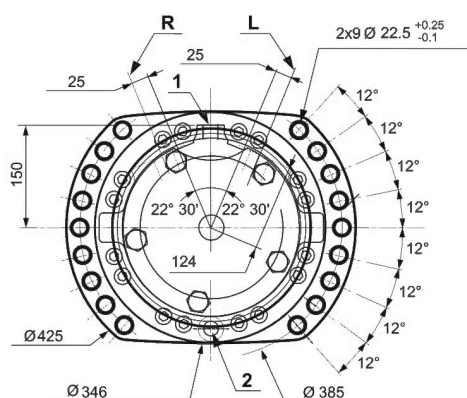
HMS35系列/HMS35 Series

HMS35 轴边马达/ HMS35 Shaft Motor

单排量马达 (2A50) 标准尺寸/Dimensions for standard(2A50)1-displacement motor

	F42
B	142.5
C	Ø375
D	63.5
E	183.5

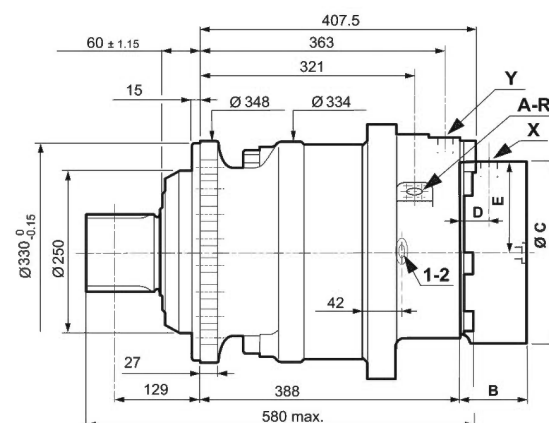
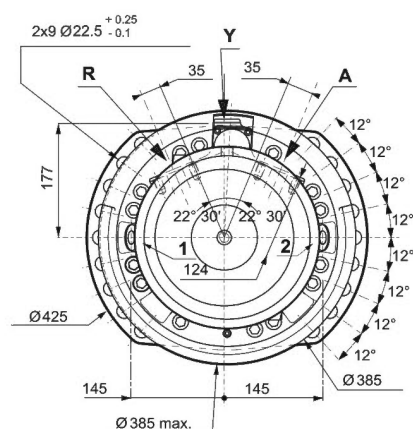
重量 /Weight	188kg	248kg



双排量马达 (2A50) 标准尺寸/Dimensions for standard(12A50)2-displacement motor

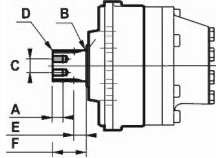
	F42
B	142.5
C	Ø375
D	63.5
E	183.5

重量 /Weight	188kg	248kg



HMS35系列/HMS35 Series

输出轴形式/Shaft Options

2 A 5 0		A	B	C	D	E	F	
DIN 5480 花键 DIN 5480 splines								
公称直径/NominalØ	120	40	R3	60	2xM16	28	110	
模数/Module	5							
Z	22							

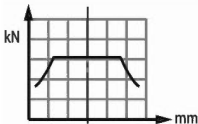
负载曲线/Load Curves

部件的使用寿命受压力的影响，所以必须核实应用到部件上的合力（轴向载荷/径向载荷）应与部件承受载荷的允许值相协调一致，并且这些部件的最终使用寿命应遵守其应用规范。

The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components, and that the resulting service life of these components complies with the application's specifications.

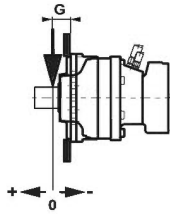
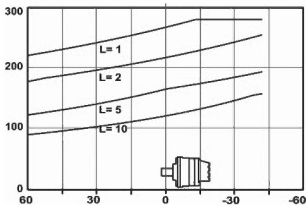
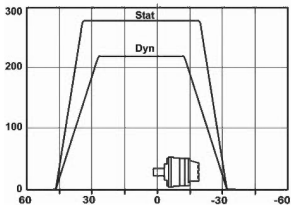
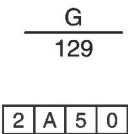
径向载荷允许值 Permissible radial loads

试验条件/Test conditions:
静态/Static: 0 r/min 0bar
动态: 0 r/min, 标准排量, 最大扭矩时无轴向载荷
Dynamic: 0 r/min code 0 displacement, without axial load at max. torque

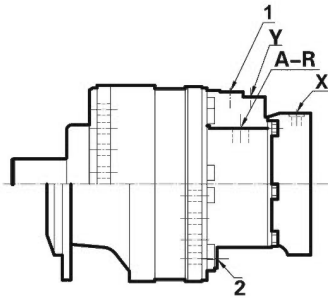
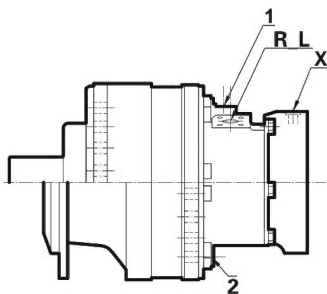


轴承寿命 Service life of bearings

试验条件/Test conditions:
L: 150bars(平均压力)时, 百万转 (B10), 采用25cSt 流体, 标准排量, 无轴向载荷
L: Millions B10 revolutions at 150 bars(average pressure), with 25cSt fluid, code 0 displacement, without axial load



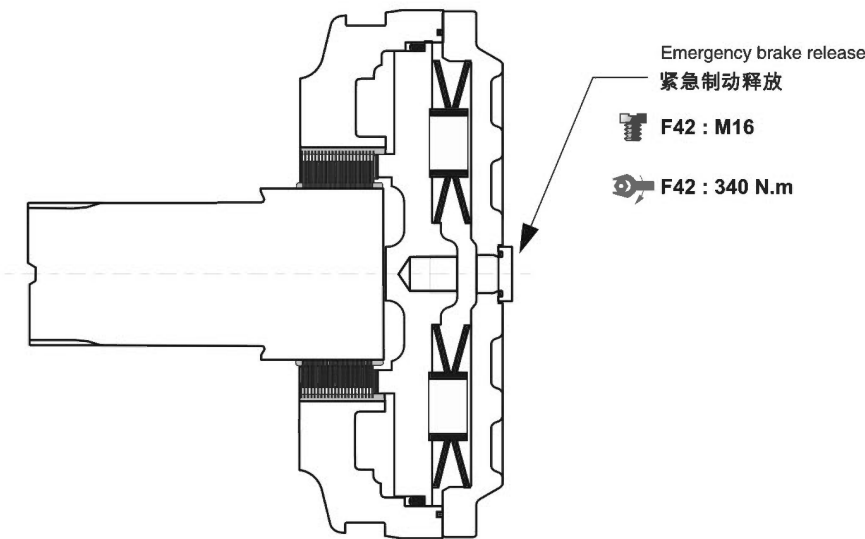
油口形式/Distributor



	旧标准 Old standards	标准 Standards		主油口 Power supply	变量油口 Displacement control	壳体泄油口 Case drain	驻车制动控制油口 Control of parking break
				R_L	Y	1.2	X
1	ISO 6162	ISO 6162-1	S18	DN19 PN400	M16x1.5	M22x1.5	M16x1.5
	DIN 3852	ISO 9974-1	S35 2C	DN25 PN400	M18x1.5		
最高压力 Max. pressure	PS PSE	bar		450 400	30	1	30

HMS35系列/HMS35 Series

驻动制动器/Brakes



制动器原理/Brake principle

在失压状态下多片式制动器起作用。弹簧对制动片产生作用力，该力使制动片抱紧转轴，制动扭矩与释放压力成正比。
This is a multidisc brake which is activated by a lack of pressure. The spring exerts a force on the piston ,which presses on the fixed and mobile discs,and immobilizes the shaft.The braking torque decreases in linear proportion to the brake release pressure.

	F	4	2
制动腔内压为0时制动器的制动扭矩（新制动器） Parking brake torque at 0 bars on housing (new brake)	25000 Nm		
制动腔内压力为0时紧急制动扭矩（最多可作紧急制动使用10次） Dynamic emergency braking torque at 0 bars on housing(max.10 uses of emergency brakes)	16250 Nm		
制动腔内压力为0时剩余的驻车制动扭矩* Residual parking braking at 0 bars on housing*	18750 Nm		
最小的制动器释放压力 Min.brake release pressure	15	bar	
最大的制动器释放压力 Max.brake release pressure	30	bar	
油量 Oil capacity	400 ml		
用于制动器释放液压油量 Volume for brake release	135 ml		

* 作为紧急制动使用后 After emergency brake has been used

- ⚠ 制动时不要运转马达。 Do not run in multidisc brakes.
- ⚠ 每当驻车制动器作为辅助性制动（或紧急制动器）使用时，都要对驻车制动器进行功能上的检查。
A functional check of the parking brake must be carried out each time it is used as an auxiliary brake (or emergency brake).