

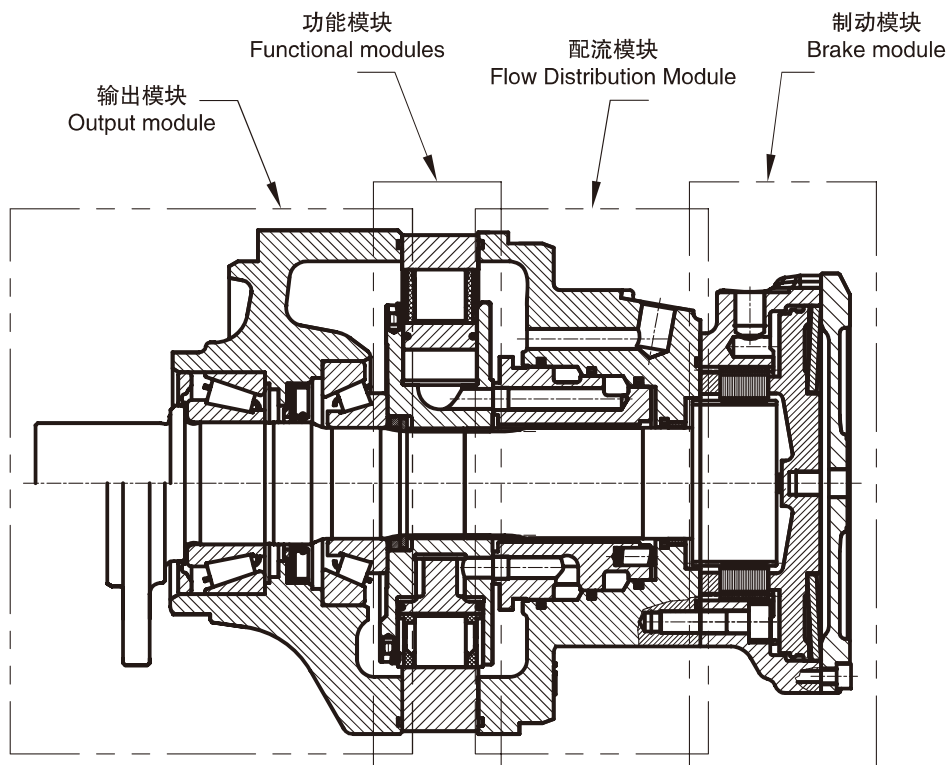
产品特点 / Product Feature

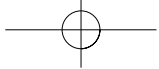
M-PS系列内曲线多作用径向低速大扭矩液压马达适应能力强，可广泛应用于船舶机械、工程机械、钻探设备、矿山机械、水泥设备、重型冶金、军工等多种领域，也可直接配置用于静液压传动装置中。

- 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。

M-PS 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 correction 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.





M-PS/PSE 系列/ M-PS/PSE Serie

HYDRAULIC TRANSMISSIONS

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	A	B	B	B		
		ml/r	ml/r	100bar N.m	KW	KW	KW		r/min	
M-PS02	8	172	86	273	18	12	9	390		450
	0	213	107	310						
	1	235	118	285						
	2	255	128	260						
M-PSE02	0	332	166	528	22	16.5	11	200		400
	1	364	182	182						
	2	398	199	165						
M-PS05	6	260	130	413	29	19	15	265		450
	8	376	188	250						
	0	468	234	240						
	1	514	257	220						
	2	560	280	200						
M-PSE05	8	530	265	843	29	19	15	200		400
	0	625	312.5	190						
	1	688	344	175						
	2	750	375	160						
	3	820	410	145						
M-PS08	6	467	234	743	41	27	21	210		450
	8	627	314	210						
	9	702	351	185						
	0	780	390	170						
	1	857	429	155						
	2	934	467	140						
M-PSE08	0	1043	522	1658	41	27	21	130		400
	1	1146	573	110						
	2	1248	624	105						
M-PS11	7	730	365	1161	50	33	25	200		450
	8	837	418.5	195						
	9	943	471.5	190						
	0	1048	524	185						
	1	1147	573.5	180						
	2	1259	629.5	170 175						
M-PSE11	9	1263	631.5	2008	50	33	25	170	190	400
	0	1404	702	155 185						
	1	1536	768	140 180						
	2	1687	843.5	130 165						
M-PS18	6	1091	546	1735	70	47	35	170	170	450
	8	1395	698	155 160						
	9	1571	786	140 155						
	0	1747	874	125 150						
	1	1911	956	115 135						
	2	2099	1050	100 125						
M-PSE18	0	2340	1170	3721	70	47	35	90	110	400
	1	2560	1280	85 100						
	2	2812	1406	75 90						
M-PS25	8	2004	1002	3186	90	60	45	145	145	450
	0	2498	1249	137 137						
	1	2752	1376	125 135						
	2	3006	1503	115 130						
M-PS35	7	2439	1220	3878	110	73	55	140		450
	9	3143	1572	140						
	0	3494	1747	130						
	2	4198	2099	110						

*非对称变排量可咨询

产品标识说明 / Ordering Code

***** _ * _ *** _ *** _ ***** _ *****

1

2

345

6

7

8

1、马达型号 Moter type

M-PS05/ M-PSE05

2、排量代号 Displacement Code

A: 全排量 First displacement

B: 半排量 Second displacement

产品型号 Type	排量代号 Displacement Code	A ml/r	B ml/r
CRM-PS05	6	260	130
	8	376	188
	0	468	234
	1	514	257
	2	560	280
CRM-PSE05	8	530	265
	0	625	312.5
	1	688	344
	2	750	375
	3	820	410

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

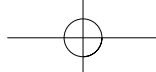
伸出轴/Male shaft

5-伸出轴 DIN5480花键
Male shaft din5480 splines

0-无伸出轴 /Without shaft

2-10x Ø18, Ø140

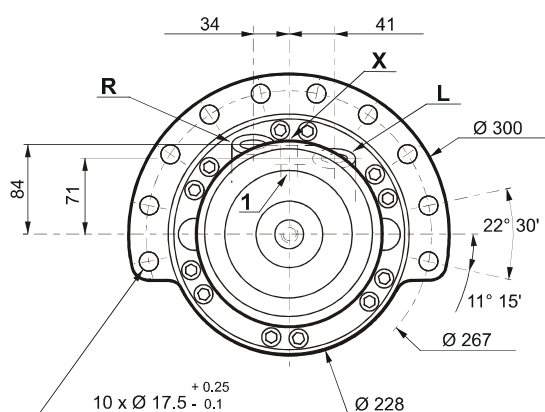
A-伸出轴承支撑
For male shaft bearing support



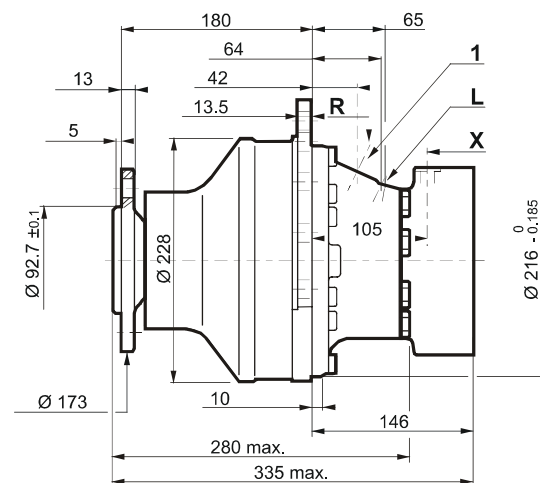
M-PS05/PSE05 系列/ M-PS05/PSE05 Serie

M-PS05/PSE05 轮边马达/ M-PS05/PSE05 Wheel Motor

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

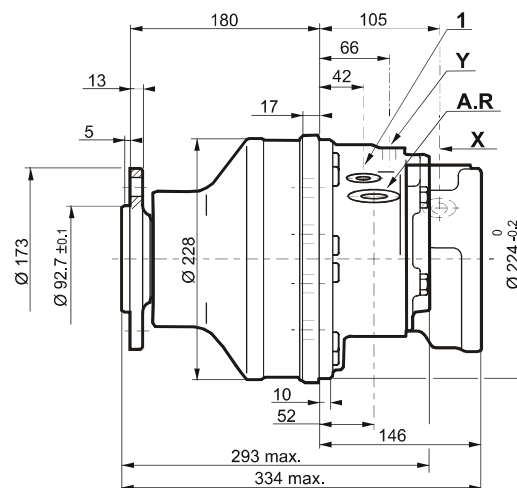
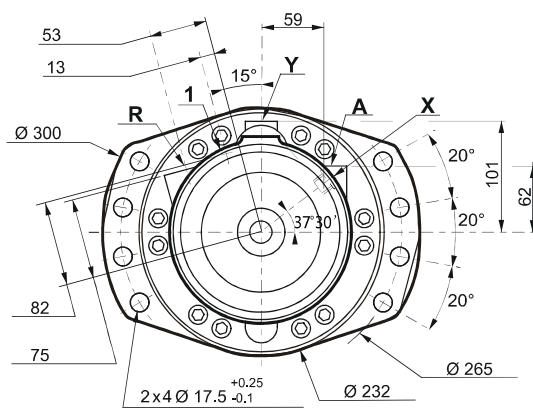


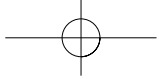
重量 /Weight	40kg	50kg



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

重量 /Weight	41kg	52kg

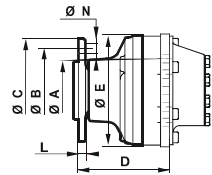




M-PS05/PSE05 系列/ M-PS05/PSE05 Serie

HYDRAULIC TRANSMISSIONS

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) 。

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.

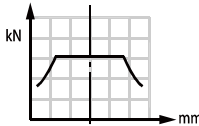
径向载荷允许值 Permissible radial loads

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



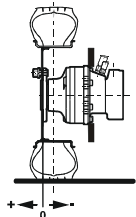
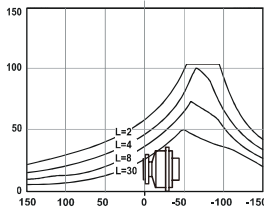
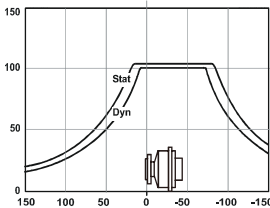
轴承寿命 Service life of bearings

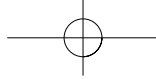
试验条件/Test conditions:

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

1 2 1 0

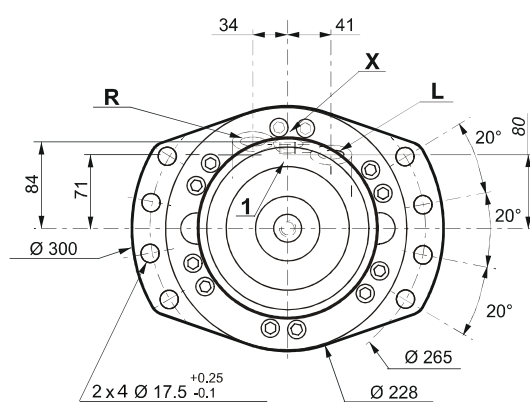




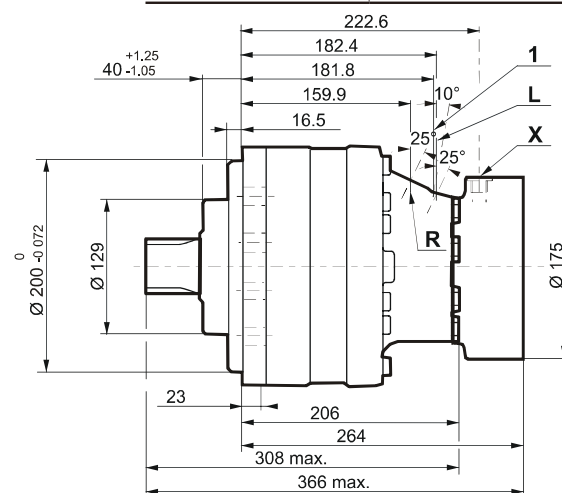
M-PS05/PSE05 系列/ M-PS05/PSE05 Serie

CRM-PS05/PSE05 轴马达/CRM-PS05/PSE05 Shaft Motor

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

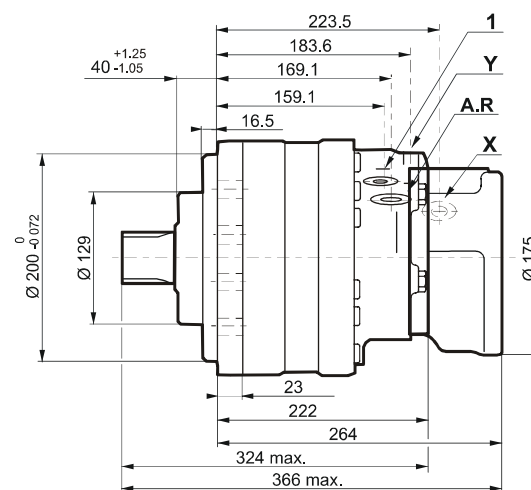
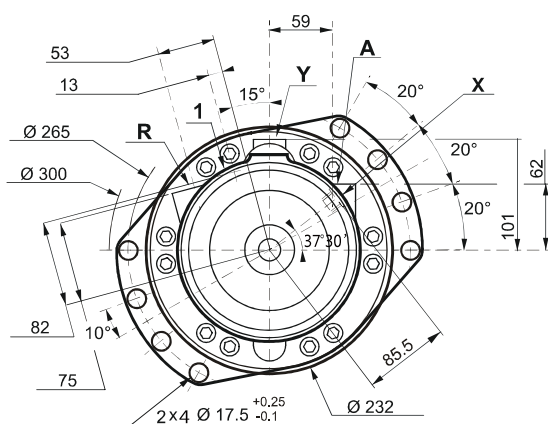


重量 /Weight	41kg	47kg



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

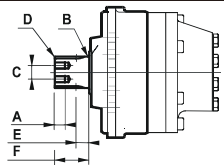
重量 /Weight	45kg	55kg



M-PS05/PSE05 系列/ M-PS05/PSE05 Serie

HYDRAULIC TRANSMISSIONS

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	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.

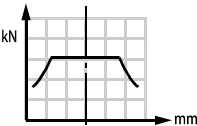
径向载荷允许值 Permissible radial loads

试验条件/Test conditions:

静态/Static: 0 r/min 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

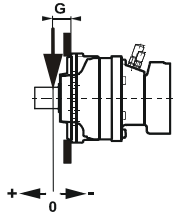
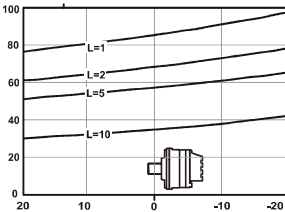
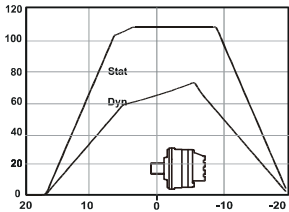
试验条件/Test conditions:

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

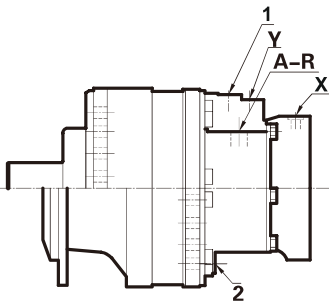
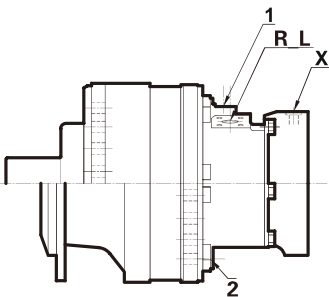
L: Millions B10 revolutions at 150 bars(average prssure), with 25cSt fluid, code 0 displacement, without axial load

G
81.75

2 A 5 0

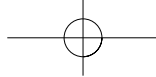


油口形式/Distributor



	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

M-PS



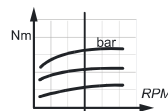
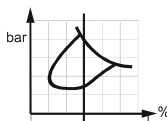
M-PS05/PSE05 系列/ M-PS05/PSE05 Serie

效率/Efficiency

总效率/Overall efficiency

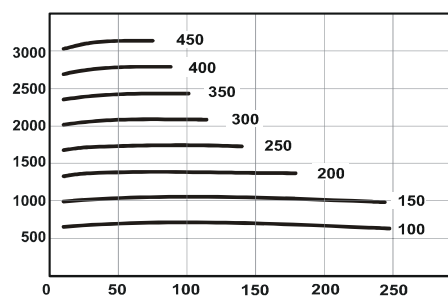
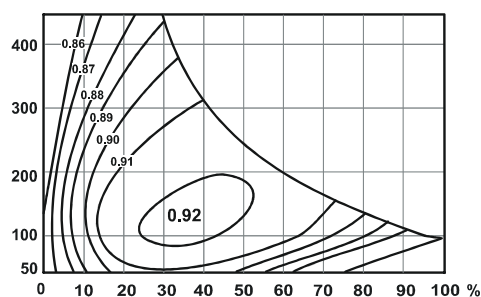
在50°C时, 使用HV46液压油标准排量马达工作100小时后的平均值

Average values given for guidance for code 0 displacement after 100 hours of operation with HV46 hydraulic fluid at 50°C

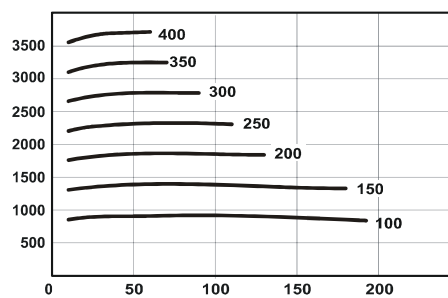
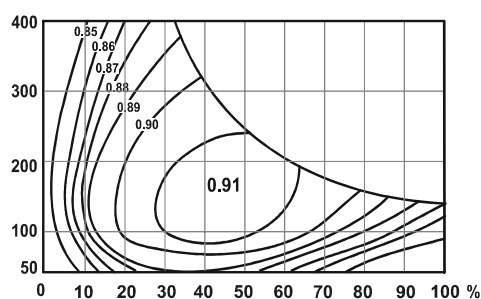


实际输出扭矩/Actual output torque

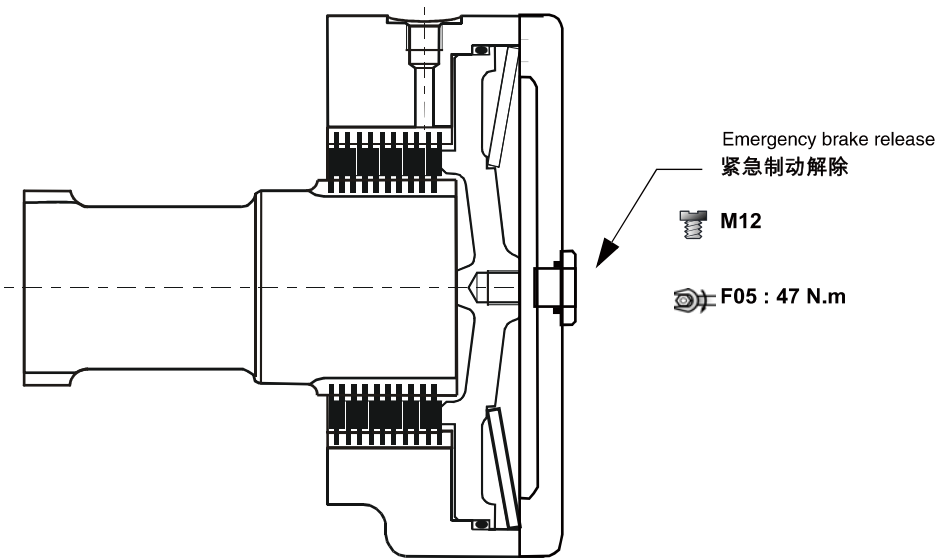
CRM-PS05



CRM-PSE05



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)	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

- ⚠ 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).