

产品标识说明 / Ordering Code

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

1 2 3 4 5 6 7 8

1、马达型号 Moter type _____
CRM-PS02/CRM-PSE02

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
CRM-PS02	8	172	86
	0	213	107
	1	235	118
	2	255	128
CRM-PSE02	0	332	166
	1	364	182
	2	398	199

3、配流体形式 Valving type _____

1	排量比2 Ration 2	双排量配流体 (顺时针方向) 2-displacement valving(Clockwise)
D	1	双排量配流体 (逆时针方向) 2-displacement valving(Counteclockwise)
G	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 <td>5</td>	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

8、附加项 Additional items _____
0-无鼓式制动器 /Without drum brakes

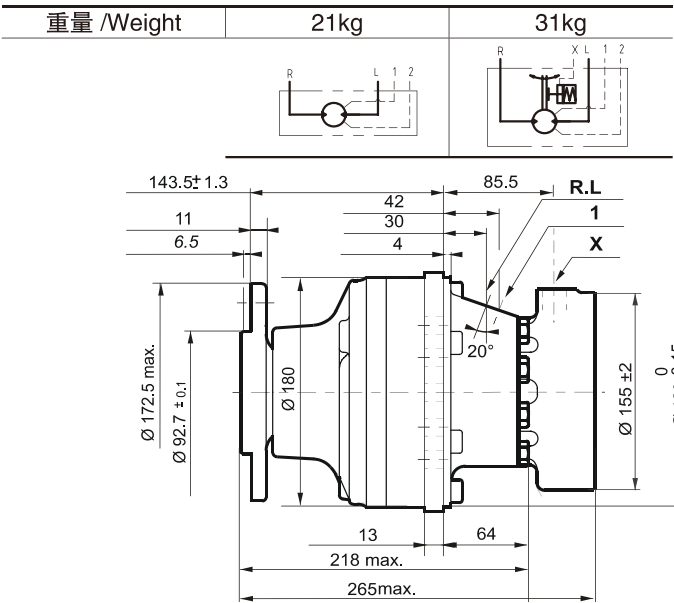
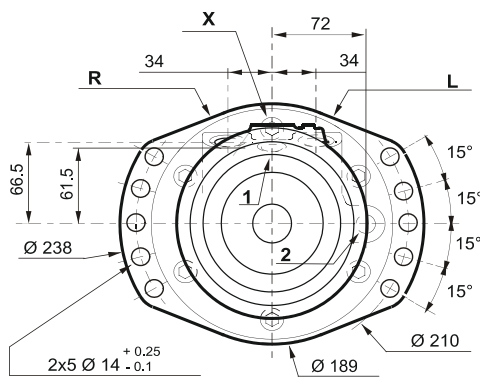
0 无选项 With Options or Adaptations	6 工业轴承支撑 Industrial bearing support	H 高效率 High efficiency
1 氟化橡胶密封 Fluorinated elastomer seals	8 预留速度传感器位置 Predisposition for speed sensor	J 加强轴肩 Reinforced bearing stop
3 不带机械解除制动的端盖 Brake environmental cover without plug	B 轴承支撑上带泄油口 Drain on the bearing support	K 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	

CRM-PS02/PSE02 系列/CRM-PS02/PSE02 Serie

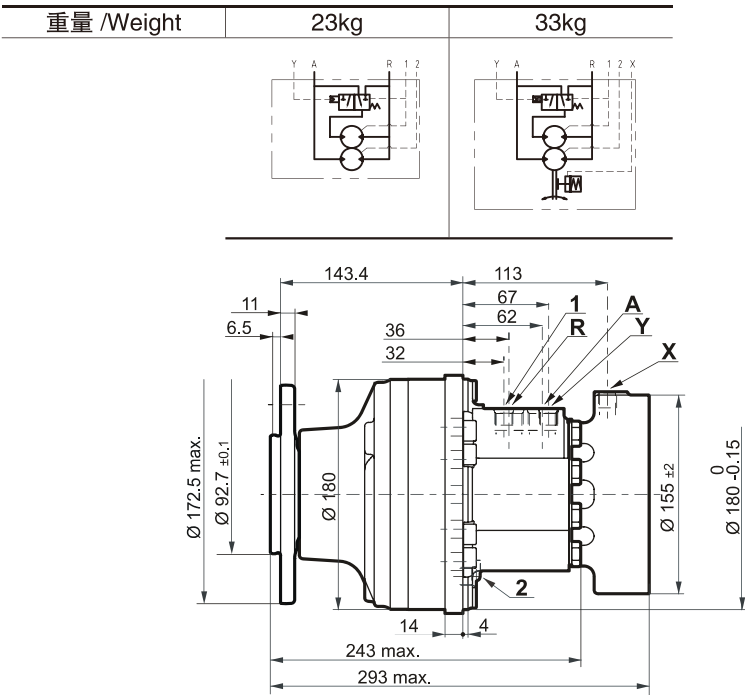
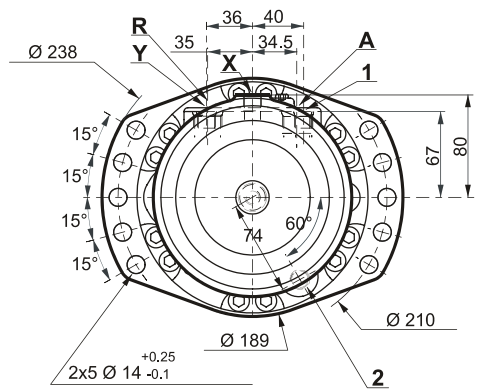


CRM-PS02/PSE02 轮边马达/CRM-PS02/PSE02 Wheel Motor

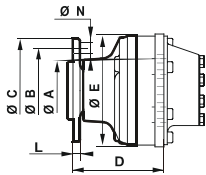
单排量马达 (1110) 标准尺寸/Dimensions for standard(1110)1-displacement motor



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



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	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 50 62	5	18 23 33	16.5	12.9	200	250
							轮胎/Tire	钢轮/Drum

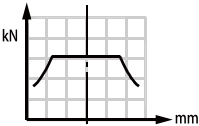
- (*) :紧固扭矩是针对指定载荷给出的。
 The tightening torques are given for the indicated loads.
- (1) 轮辋: 轮辋安装紧固扭矩建议值 (>240 N/mm²) 。
Wheel rim: Suggested tightening torque for wheel rim mountings(Re steel disc>240 N/mm²)
- (2) 标准: 其它安装方式紧固扭矩建议值 (>360 N/mm²) 。

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 life of these components complies with the application's specifications.

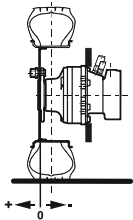
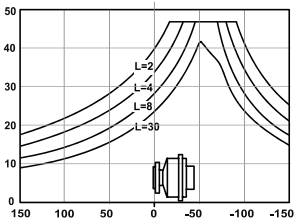
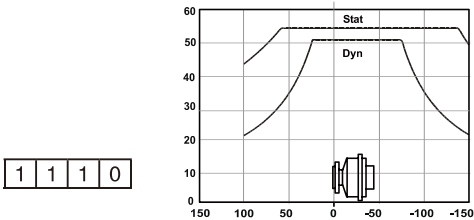
径向载荷允许值 Permissible radial loads

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

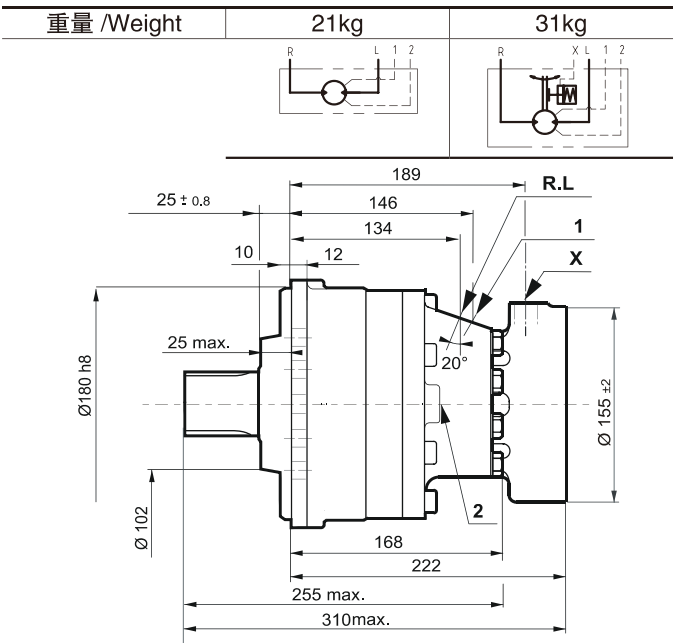
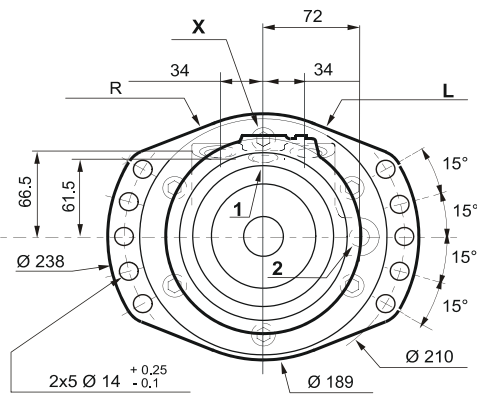


CRM-PS02/PSE02 系列/CRM-PS02/PSE02 Serie

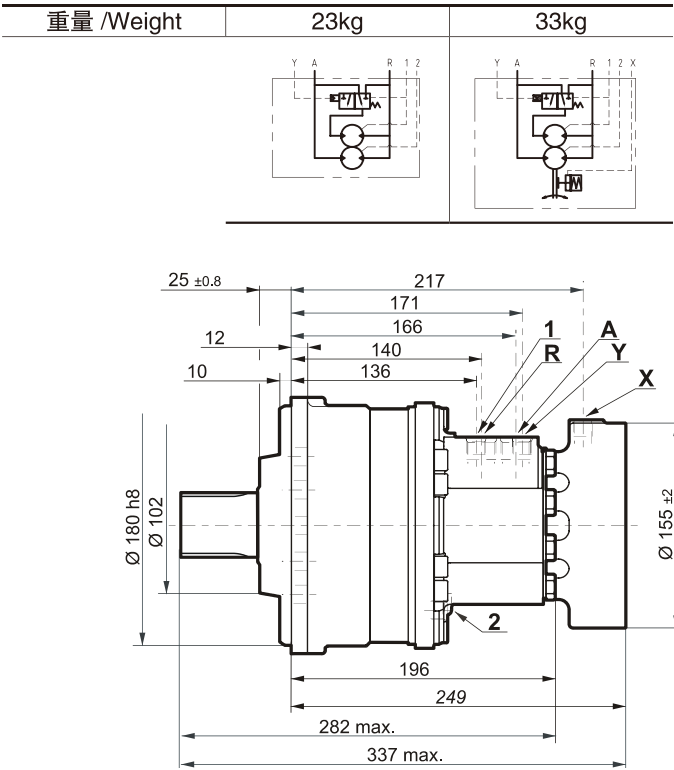
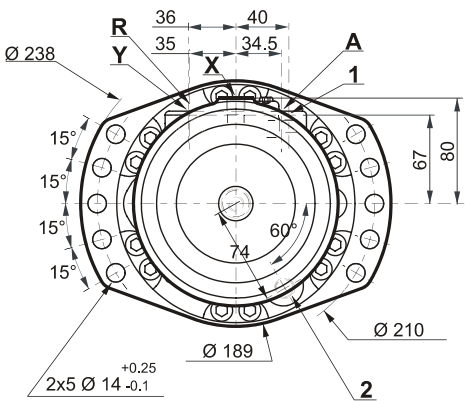


CRM-PS02/PSE02 轴马达/CRM-PS02/PSE02 Shaft Motor

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

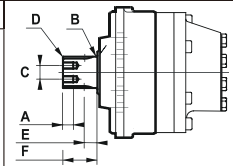


双排量马达 (2A50) 标准尺寸/Dimensions for standard(2A50)2-displacement motor



输出轴形式/Shaft Options

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



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.

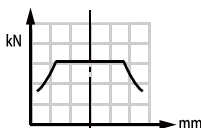
径向载荷允许值 Permissible radial loads

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

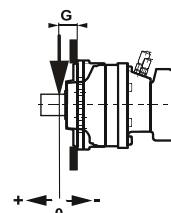
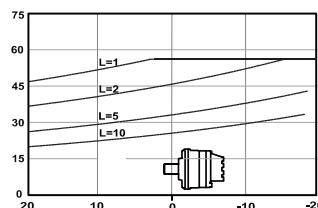
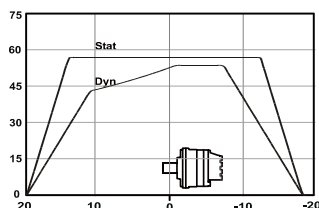


轴承寿命 Service life of bearings

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

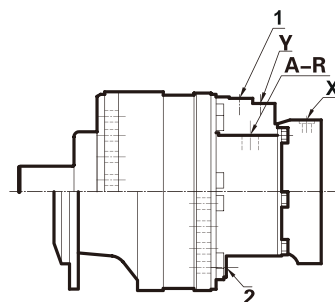
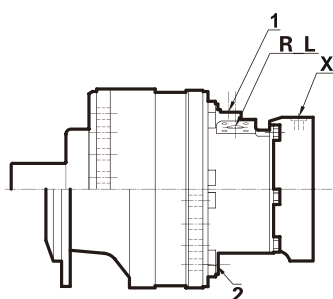
L: Millions B10 revolutions at 150 bars(average pressure), with 25cSt fluid, code 0 displacement, without axial load



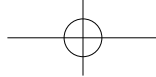
G
66.45

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



CRM-PS02/PSE02 系列/CRM-PS02/PSE02 Serie

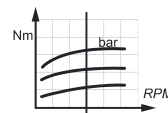
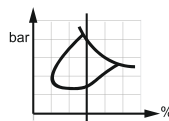
STF
HYDRAULIC TRANSMISSIONS

效率/Efficiency

总效率/Overall efficiency

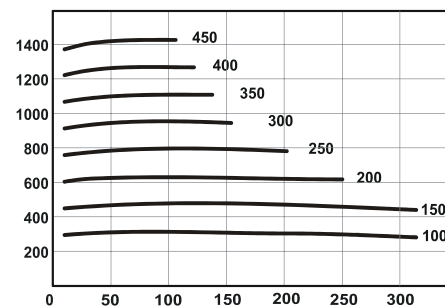
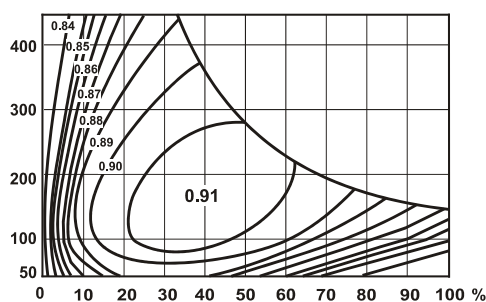
在50°C时, 使用HV46液压油标准排量马达工作100小时后的平均值

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

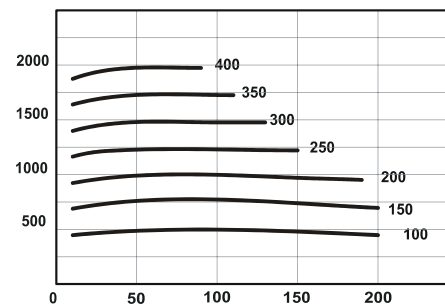
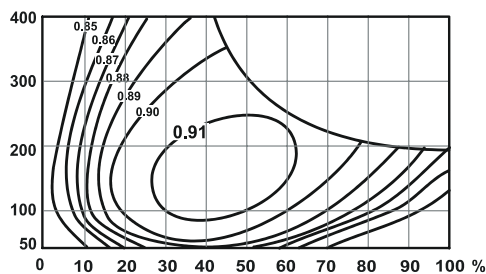


实际输出扭矩/Actual output torque

CRM-PS02



CRM-PSE02



ITM

ITMS

STFC

STFD

CRM-HA

CRM-HB

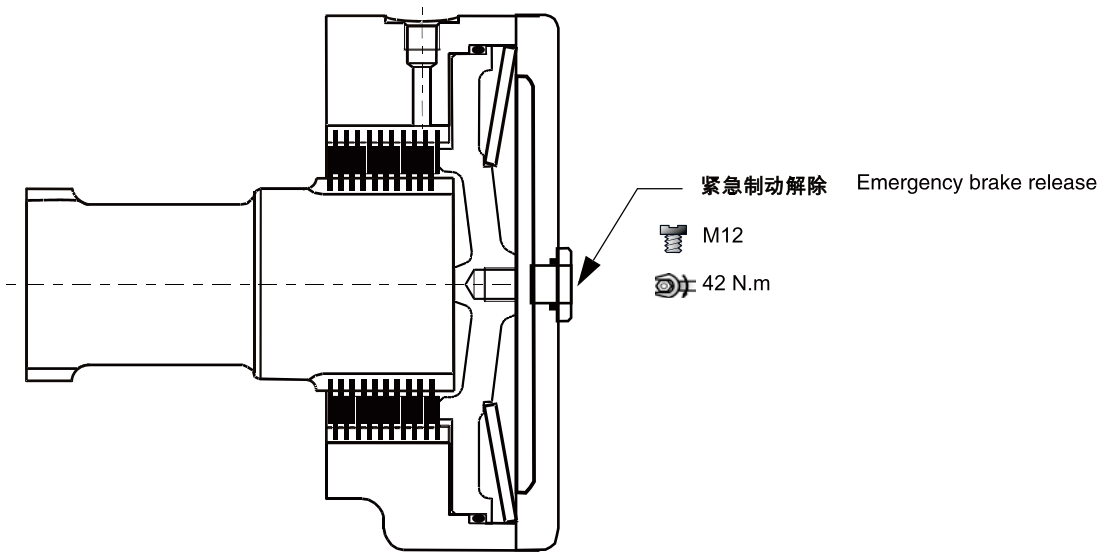
CRM-PS

SMA6V

SMA2F

OMZ

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)	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

- ⓘ 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).

产品标识说明 / Ordering Code

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

1

2

345

6

7

8

1、马达型号 Moter type

CRM-PS05/CRM-PSE05

2、排量代号 Displacement Code

A: 全排量 First displacement

B: 半排量 Second displacement

产品类型 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
CRM-PSE05	2	560	280
	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

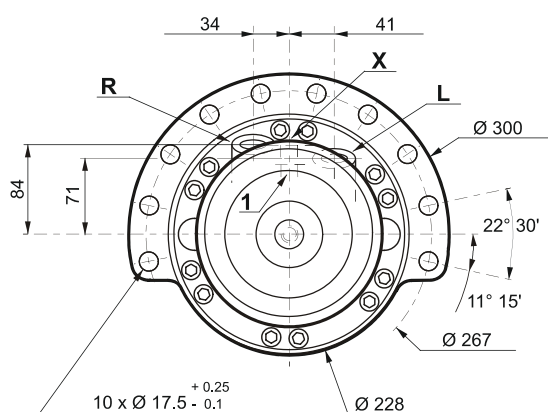
0-无伸出轴 /Without shaft

2-10x Ø18, Ø140

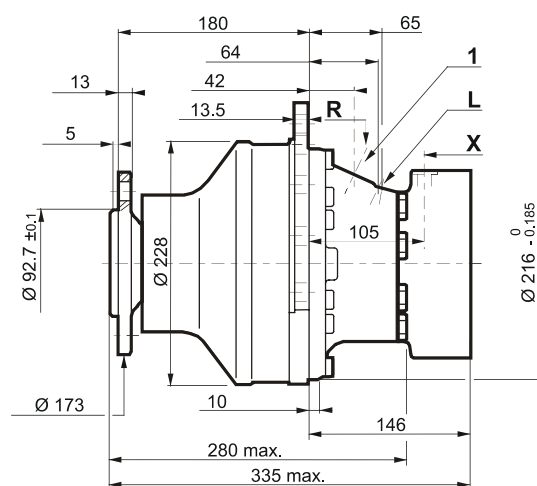
A-伸出轴承支撑 For male shaft bearing support

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

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

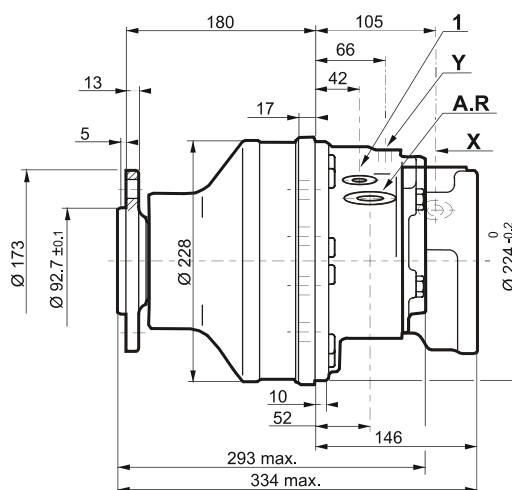
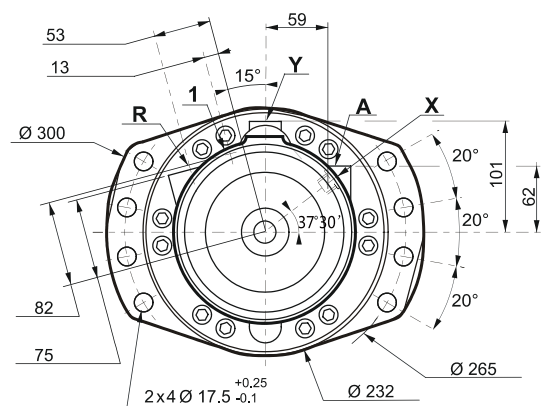


重量 /Weight	40kg	50kg

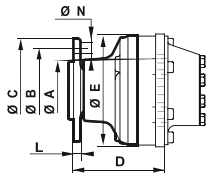


双排量马达 (1210) 标准尺寸/Dimensions for standard(1210)2-displacement motor

重量 /Weight	41kg	52kg



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.

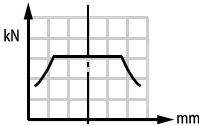
径向载荷允许值 Permissible radial loads

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



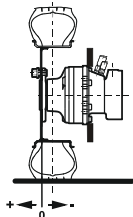
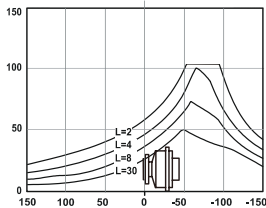
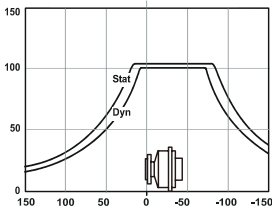
轴承寿命 Service life of bearings

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





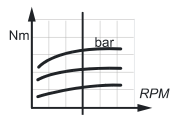
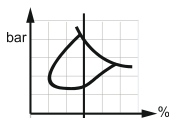
STF
HYDRAULIC TRANSMISSIONS

效率/Efficiency

总效率/Overall efficiency

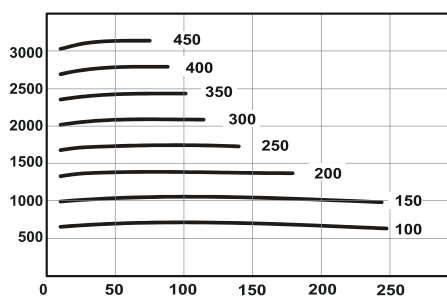
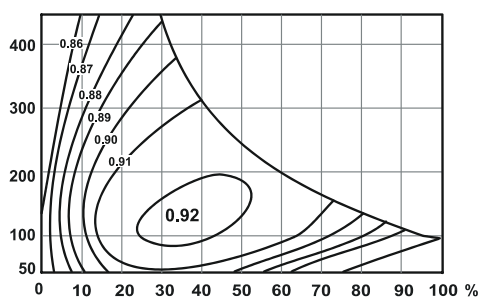
在50°C时，使用HV46液压油标准排量马达工作100小时后的平均值

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

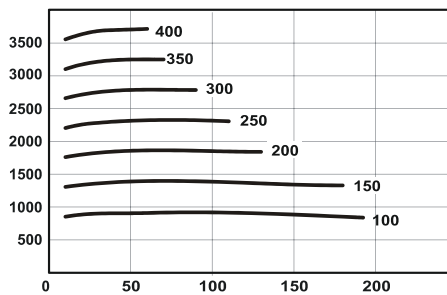
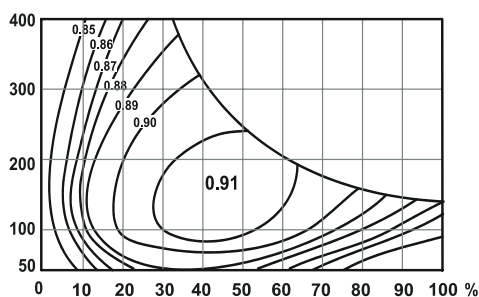


实际输出扭矩/Actual output torque

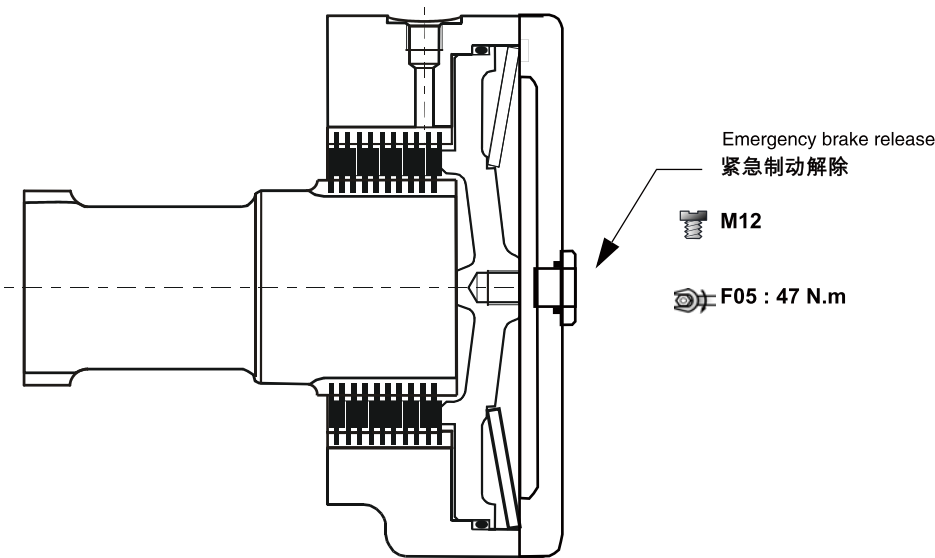
CRM-PS05



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).

产品标识说明 / Ordering Code

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

1	2	3	4	5	6	7	8
		*	*	*	0		

1、马达型号 Moter type

CRM-PS08/CRM-PSE08

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-PS08	6	467	234
	8	627	314
	9	702	351
	0	780	390
	1	857	429
	2	934	467
CRM-PSE08	0	1043	522
	1	1146	573
	2	1248	624

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) 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

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

1	ISO 6162 法兰/Flange
5	ISO 9974-1 连接/Connection
5	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-伸出轴承支撑

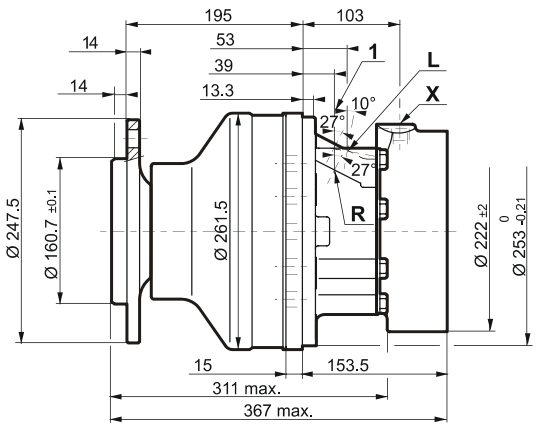
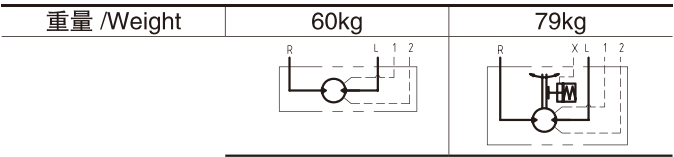
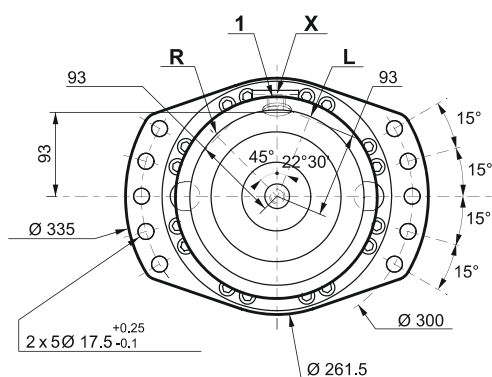
For male shaft bearing support

CRM-PS08/PSE08 系列/CRM-PS08/PSE08 Serie

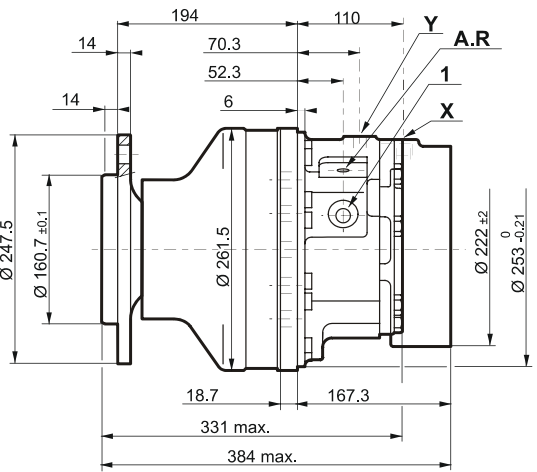
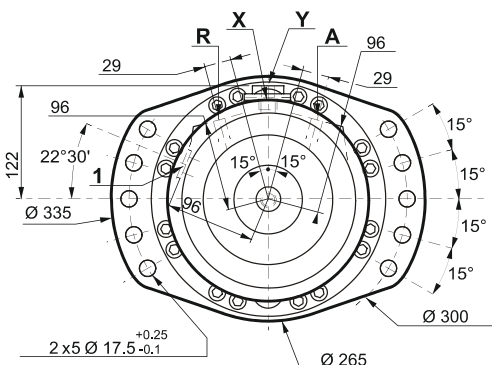
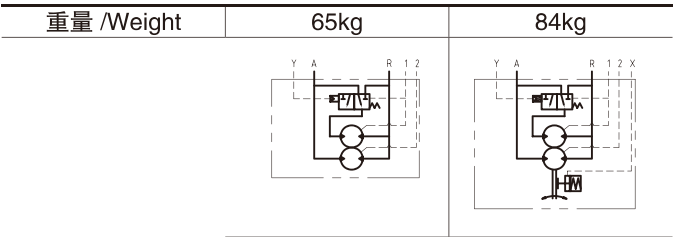


CRM-PS08/PSE08 轮边马达/CRM-PS08/PSE08 Wheel Motor

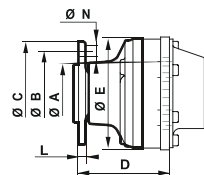
单排量马达 (1110) 标准尺寸/Dimensions for standard(1110)1-displacement motor



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



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
	M18x1.5	55	5	18	23	12.9	420	550
		60		23				
							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.

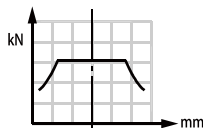
径向载荷允许值 Permissible radial loads

试验条件/Test conditions:

静态/Static: 0 r/min 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



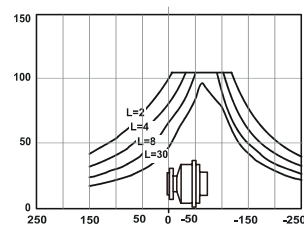
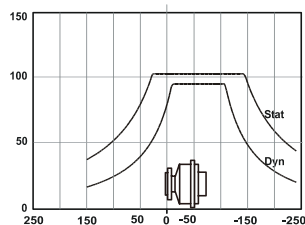
轴承寿命 Service life of bearings

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

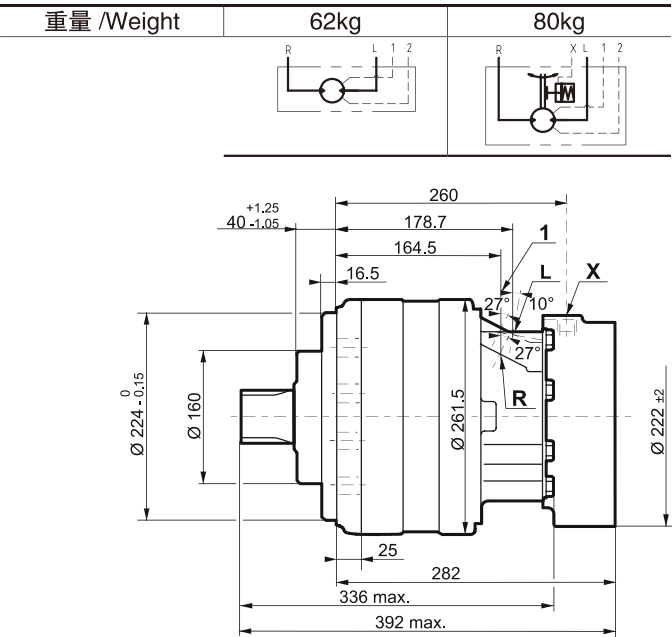
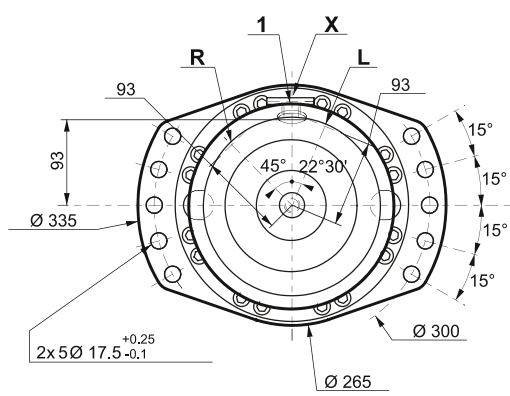


CRM-PS08/PSE08 系列/CRM-PS08/PSE08 Serie

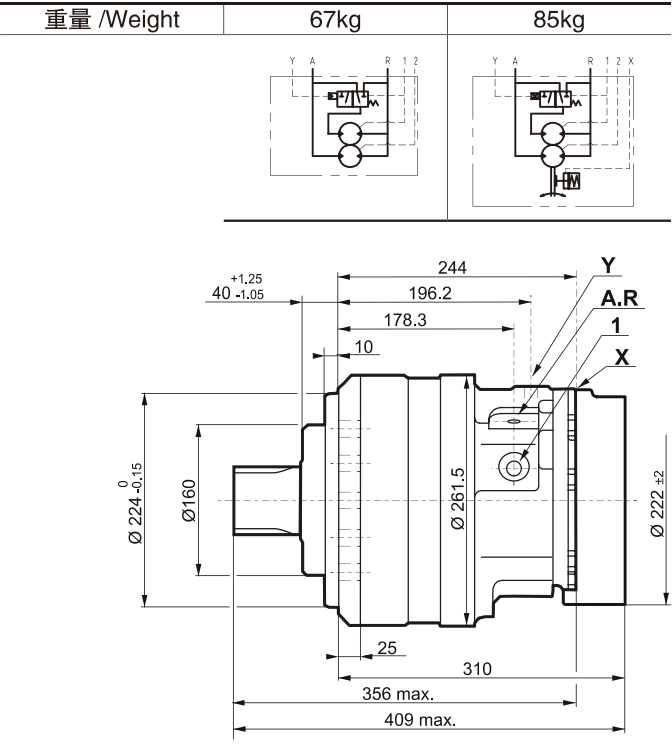
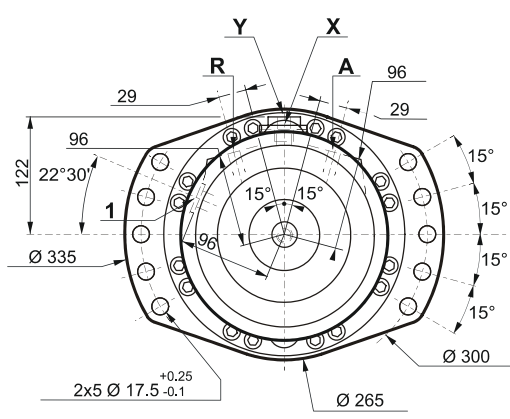


CRM-PS08/PSE08 轴马达/CRM-PS08/PSE08 Shaft Motor

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



输出轴形式/Shaft Options

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

2 A 4 0						A	B	C	D	E	F		
DIN 6885 花键 DIN 6885 splines						30	R2.5	Ø69.99	M16	90	106		
X 20													
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.

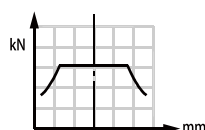
径向载荷允许值 Permissible radial loads

试验条件/Test conditions:

静态/Static: 0 r/min 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

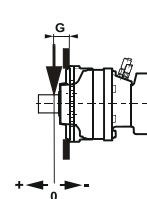
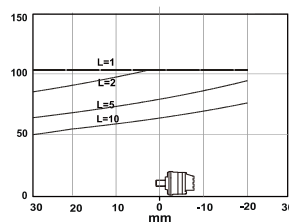
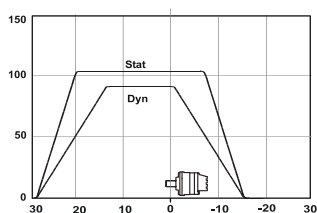


轴承寿命 Service life of bearings

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



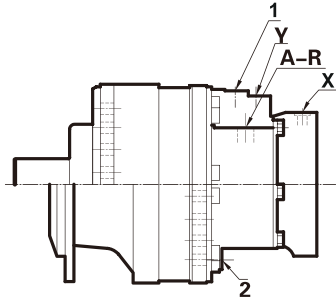
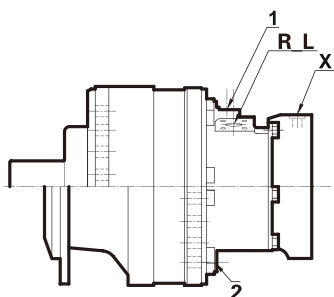
$\frac{G}{86.75}$

2 A 5 0

$\frac{G}{87.25}$

2 A 4 0

油口形式/Distributor

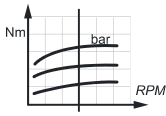
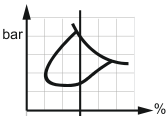


	旧标准 Old standards	标准 Standards	主油口 Power supply	变量油口 Displacement control	壳体泄油口 Case drain	驻车制动控制油口 Control of parking break
			A_R R_L	Y	1.2	X
1	ISO 6162	ISO 6162	DN13 PN400	M14x1.5	M18x1.5	M16x1.5
	DIN 3852	ISO 9974-1				
5	DIN 3852	ISO 9974-1	M27x2	M14x1.5	M18x1.5	M16x1.5
最高压力 Max.pressure	MS MSE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

效率/Efficiency

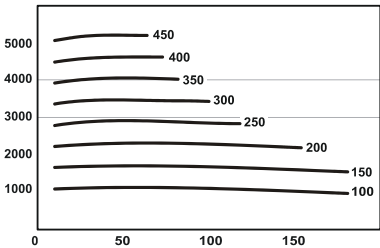
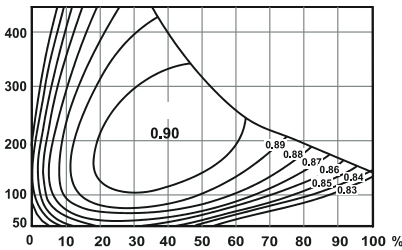
总效率/Overall efficiency

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

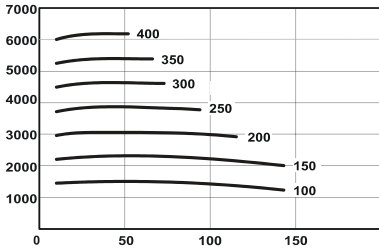
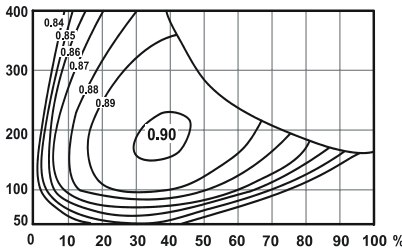


实际输出扭矩/Actual output torque

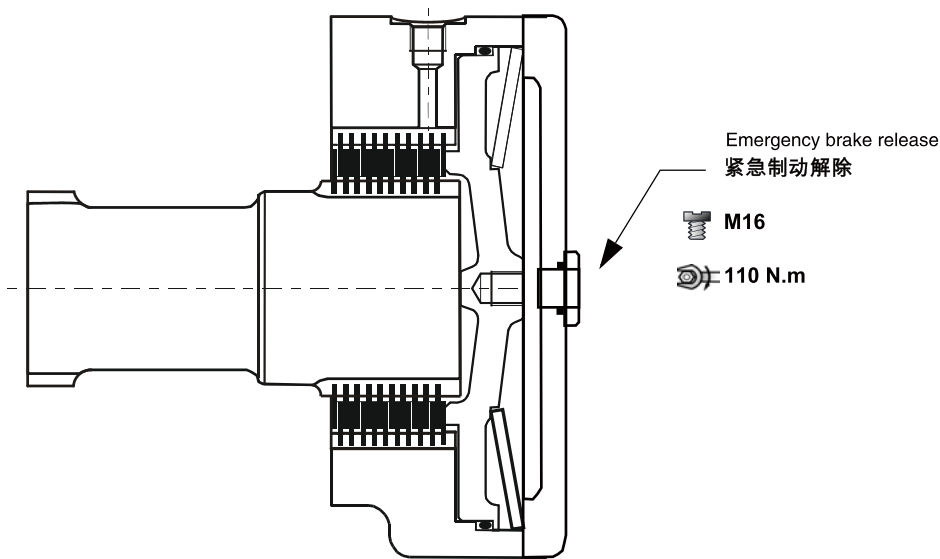
CRM-PS08



CRM-PSE08



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).

产品标识说明 / Ordering Code

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

1

2

345

6

7

8

1、马达型号 Moter type

CRM-PS11/CRM-PSE11

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-PS11	7	730	365
	8	837	418.5
	9	943	471.5
	0	1048	524
	1	1147	573.5
CRM-PSE11	2	1259	629.5
	9	1263	631.5
	0	1404	702
	1	1536	768
	2	1687	843.5

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

0	无配流体端盖/No transmission cover	
1	ISO 6162 法兰/ISO 6162 Flange	DN19
1	ISO 9974-1 连接/ISO 9974-1 Connection	DN13
4	ISO 9974-1 连接/ISO 9974-1 Connection	
A	ISO 11926-1 连接/SO 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

ITM

ITMS

STFC

STFD

CRM-HA

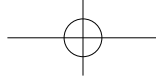
CRM-HB

CRM-PS

SMA6V

SMA2F

OMZ

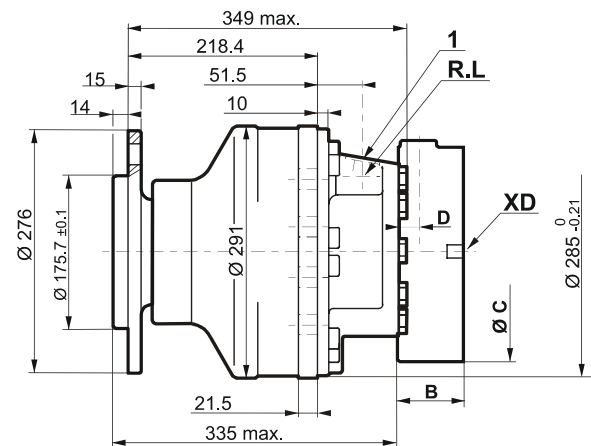
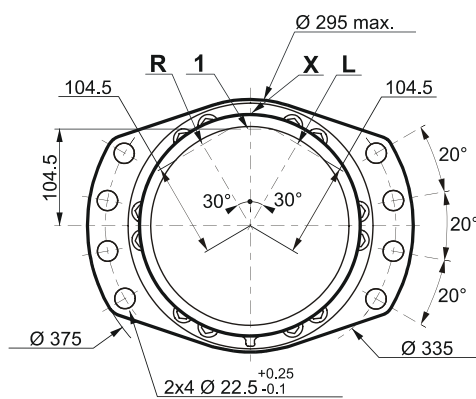


CRM-PS11/PSE11 轮边马达/CRM-PS11/PSE11 Wheel Motor

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

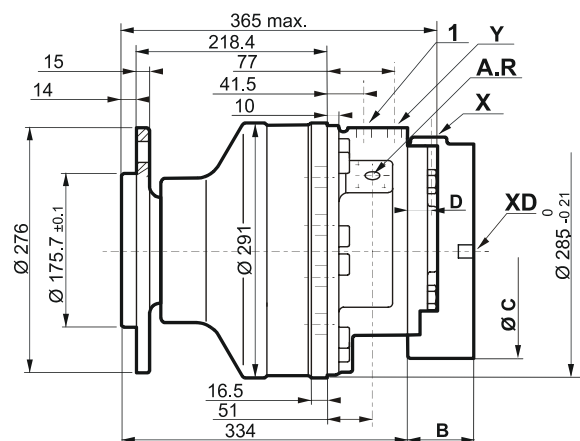
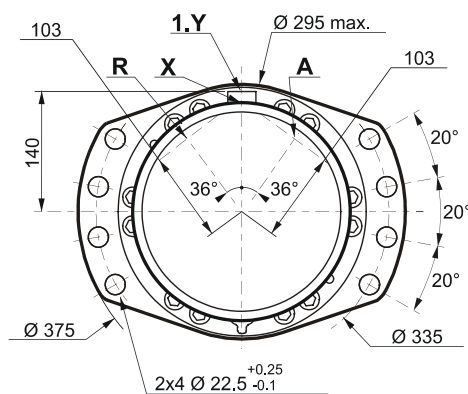
重量 /Weight	86kg	112kg



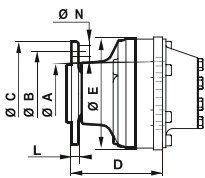
双排量马达 (1110) 标准尺寸/Dimensions for standard(1110)2-displacement motor

	F11
B	76.7
C	Ø247
D	26

重量 /Weight	90kg	116kg



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		N.m	N.m
	M22x1.5	65	5	24	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.

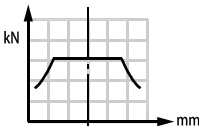
径向载荷允许值 Permissible radial loads

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



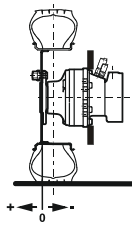
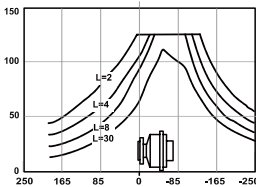
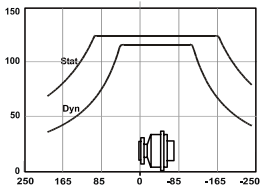
轴承寿命 Service life of bearings

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 prssure), with 25cSt fluid, code 0 displacement, without axial load

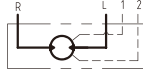
1 1 1 0

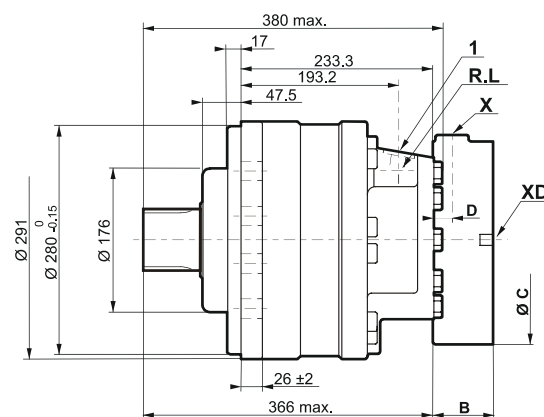
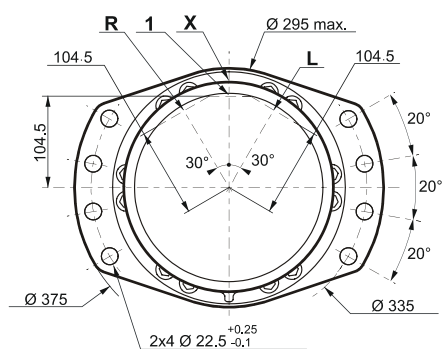


CRM-PS11/PSE11 轴马达/CRM-PS11/PSE11 Shaft Motor

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

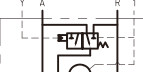
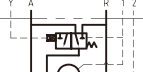
	F11
B	76.7
C	Ø247
D	26

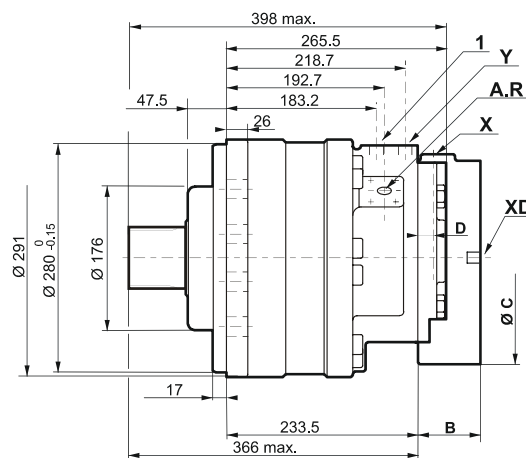
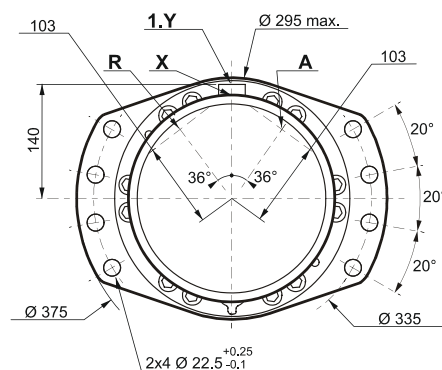
重量 /Weight	88kg	114kg
		



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
		



CRM-PS11/PSE11 系列/CRM-PS11/PSE11 Serie



输出轴形式/Shaft Options

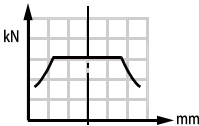
2 A 5 0		A	B	C	D	E	F	
DIN 5480 花键 DIN 5480 splines								
公称直径/NominalØ	80	15	R2.75	35	2xM10	23	80	
模数/Module	3							
Z	25							

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.

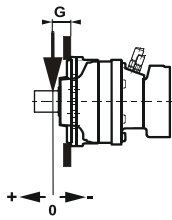
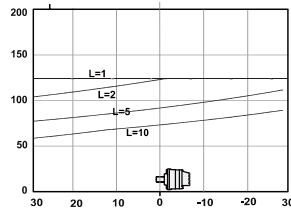
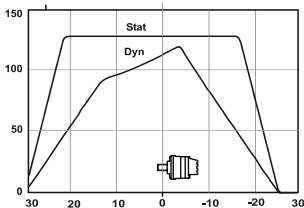
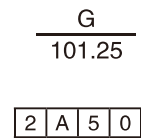
径向载荷允许值 Permissible radial loads

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

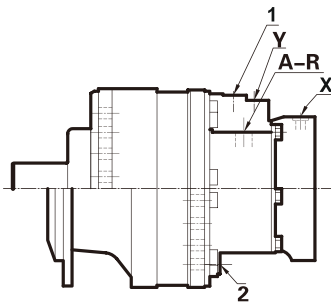
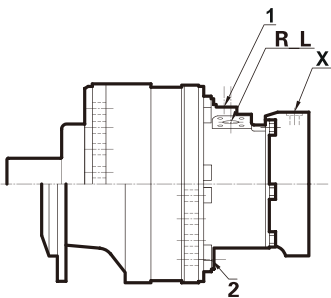


轴承寿命 Service life of bearings

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



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			

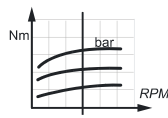
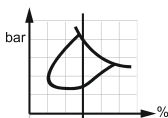
A: 全排量 First displacement B: 半排量 Second displacement

效率/Efficiency

总效率/Overall efficiency

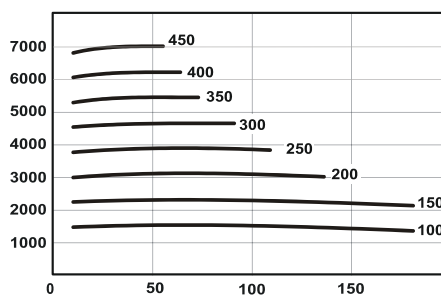
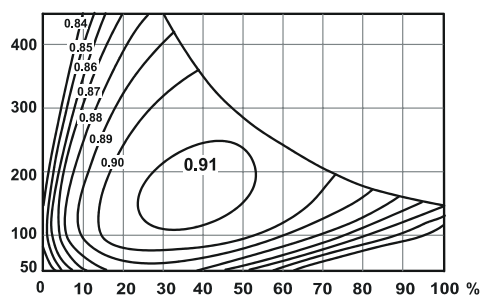
在50°C时，使用HV46液压油标准排量马达工作100小时后的平均值

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

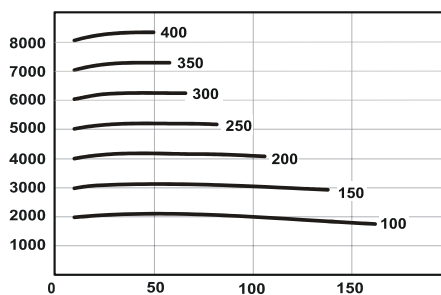
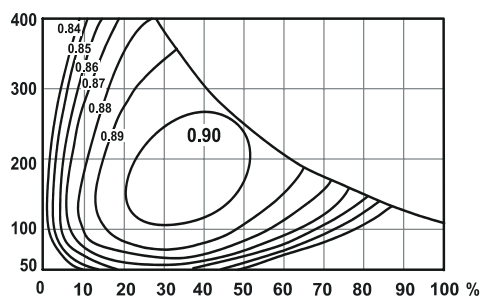


实际输出扭矩/Actual output torque

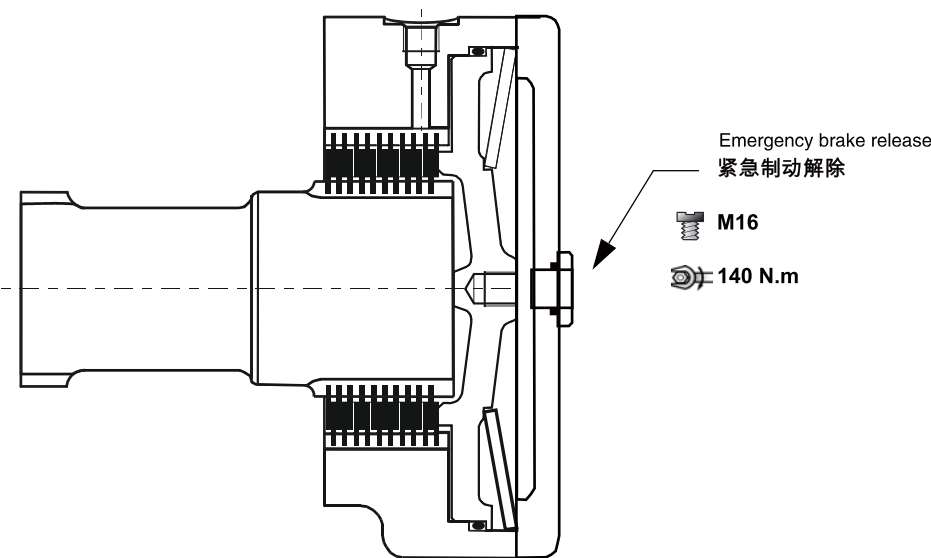
CRM-PS11



CRM-PSE11



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)		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

- 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).

产品标识说明 / Ordering Code

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

1 2 3 4 5 6 7 8

1、马达型号 Moter type

CRM-PS18/CRM-PSE18

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-PS18	6	1091	546
	8	1395	698
	9	1571	786
	0	1747	874
	1	1911	956
	2	2099	1050
CRM-PSE18	0	2340	1170
	1	2560	1280
	2	2812	1406

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	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			
	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 SE18	带制动器	轴承支撑安装或配流体端盖	驻车制动器 Parking brake
	Brakes	Bearing mounting or valving cover mounting	
	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

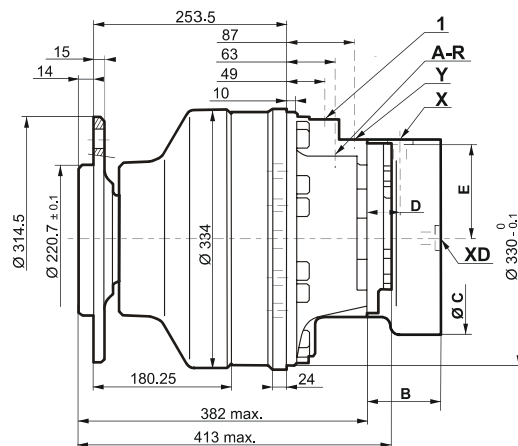
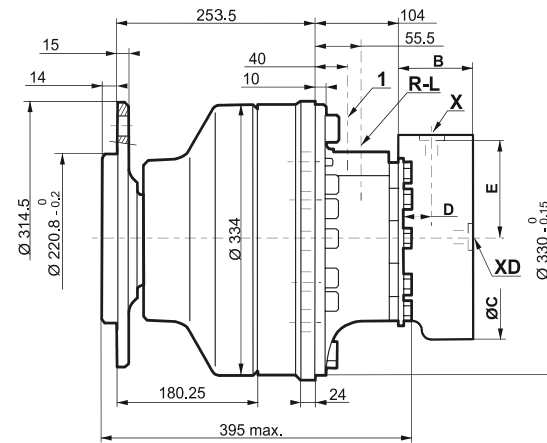
1-10x Ø24, Ø225

A-伸出轴承支撑

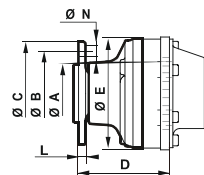
For male shaft bearing support



STF
HYDRAULIC TRANSMISSIONS



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 N.m	扭矩 (2) * Torque N.m
		mm	mm	mm	mm			
	M22x1.5	65 80	5	24 29	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 ($>240 \text{ N/mm}^2$)。

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.

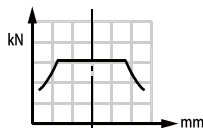
径向载荷允许值 Permissible radial loads

试验条件/Test conditions:

静态/Static: 0 r/min 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

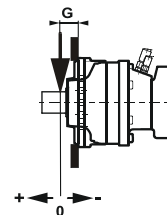
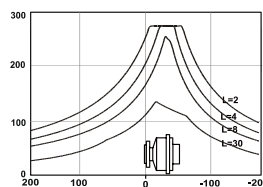
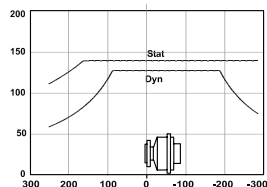


轴承寿命 Service life of bearings

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

CRM-PS18/PSE18 系列/CRM-PS18/PSE18 Serie

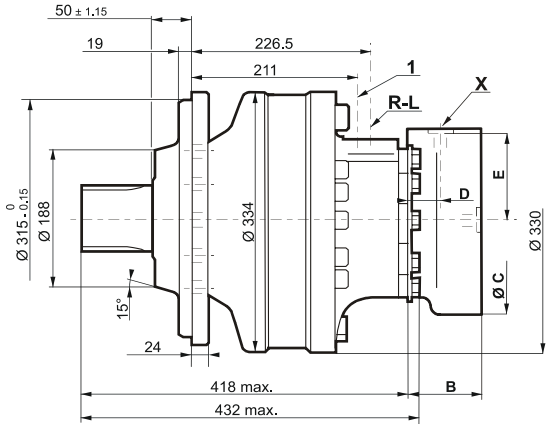
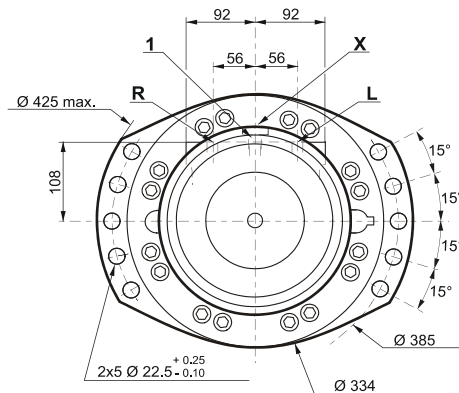


CRM-PS18/PSE18 轴马达/CRM-PS18/PSE18 Shaft Motor

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

	F19
B	98.5
C	Ø250
D	45
E	121.5

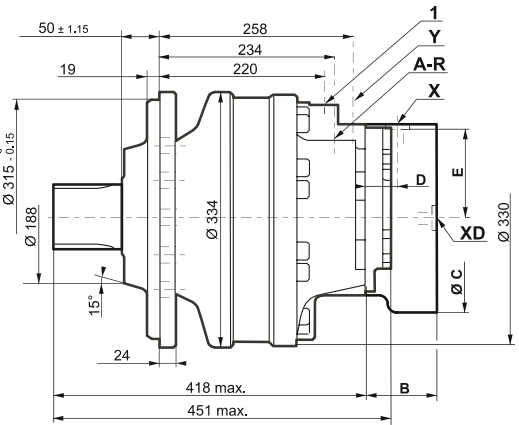
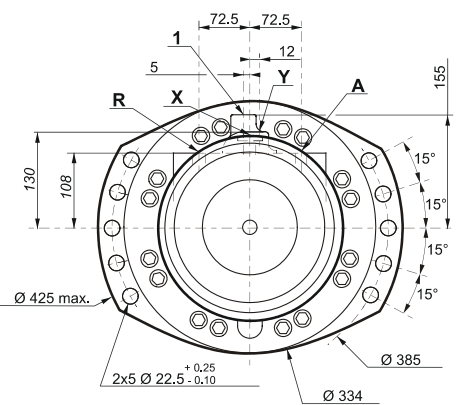
重量 /Weight	112kg	142kg



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

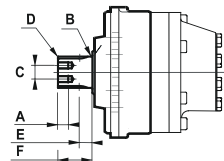
	F19
B	98.5
C	Ø250
D	45
E	121.5

重量 /Weight	112kg	152kg



输出轴形式/Shaft Options

2	A	5	0
DIN 5480 花键 DIN 5480 splines			
公称直径/NominalØ		90	
模数/Module		3	
Z		28	
	A	B	C
	23	R3	35
			D
			2xM14
			E
			23
			F
			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.

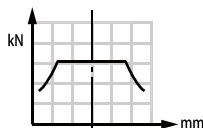
径向载荷允许值 Permissible radial loads

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

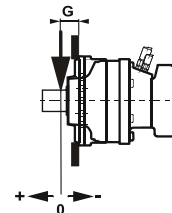
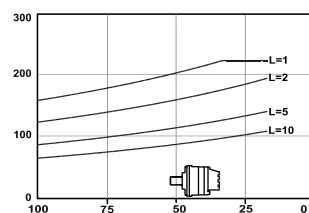
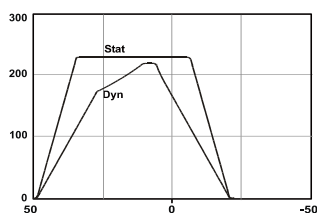
试验条件/Test conditions:

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

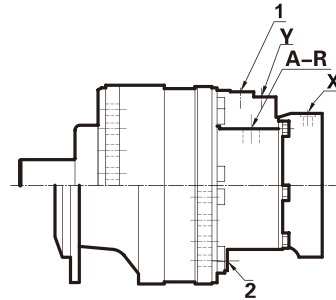
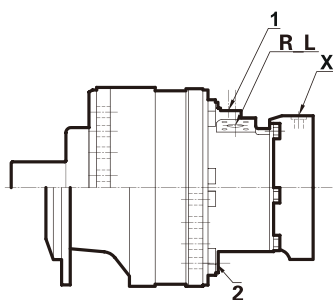
L: Millions B10 revolutions at 150 bars(average prssure), with 25cSt fluid, code 0 displacement, without axial load

$\frac{G}{106.5}$

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 R_L	Y	1,2	X
1	ISO 6162 DIN 3852	ISO 6162-1 ISO 9974-1	S18 S35 2C	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

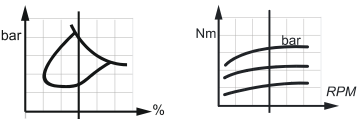
CRM-PS18/PSE18 系列/CRM-PS18/PSE18 Serie



效率/Efficiency

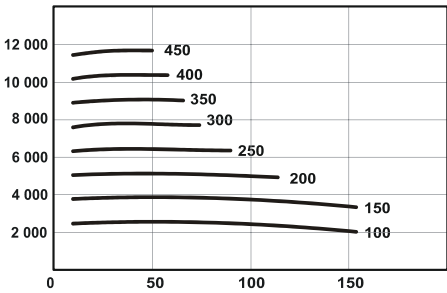
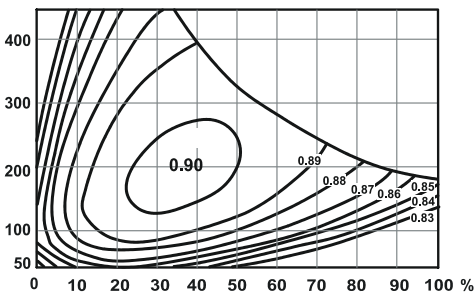
总效率/Overall efficiency

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

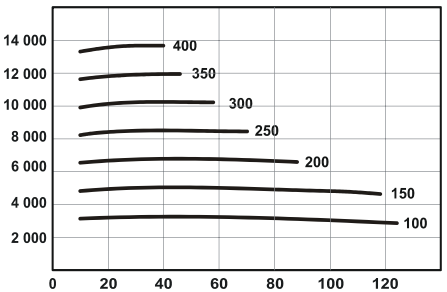
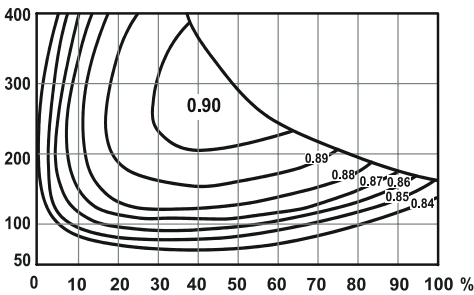


实际输出扭矩/Actual output torque

CRM-PS18



CRM-PSE18



ITM

ITMS

STFC

STFD

CRM-HA

CRM-HB

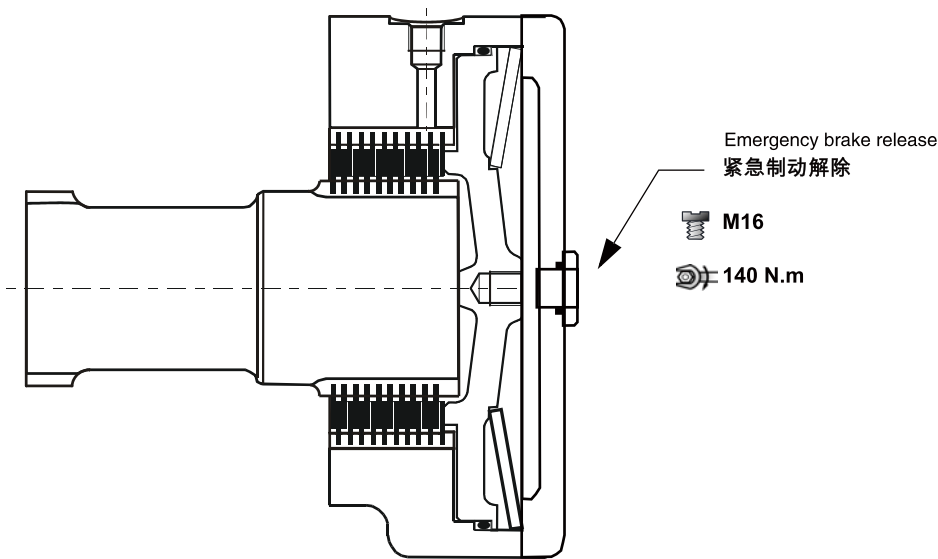
CRM-PS

SMA6V

SMA2F

OMZ

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)	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).

CRM-PS25 系列/CRM-PS25 Serie



产品标识说明 / Ordering Code

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

1

2

345

6

7

8

1、马达型号 Motor type

CRM-PS25

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-PS25	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 对称型配流体 Symmetrical
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	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

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

ITM

ITMS

STFC

STFD

CRM-HA

CRM-HB

CRM-PS

SMA6V

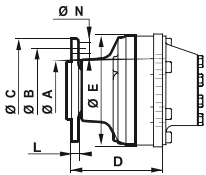
SMA2F

OMZ

CRM-PS25 系列/CRM-PS25 Serie



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	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

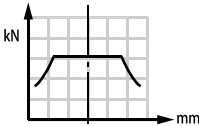
- (*) :紧固扭矩是针对指定载荷给出的。
The tightening torques are given for the indicated loads.
- (1) **轮辋**: 轮辋安装紧固扭矩建议值 (>240 N/mm²) 。
Wheel rim:Suggested tightening torque for wheel rim mountings(Re steel disc>240 N/mm²)
- (2) **标准**: 其它安装方式紧固扭矩建议值 (>360 N/mm²) 。
Standard:Suggested tightening torque in other cases(Re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

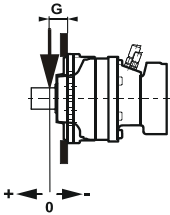
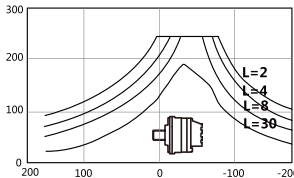
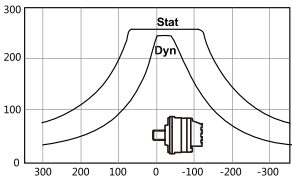
径向载荷允许值 Permissible radial loads

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 prssure),with 25cSt fluid, code 0 displacement,without axial load



1 1 1 0

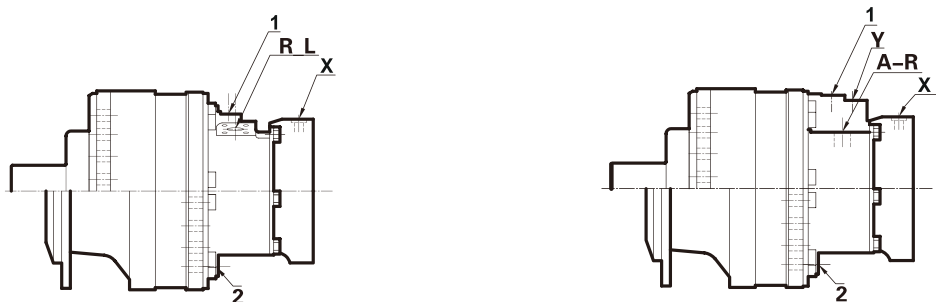




STF
HYDRAULIC TRANSMISSIONS

2013/11/8 15:34:21

油口形式/Distributor

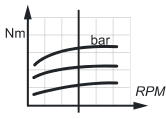
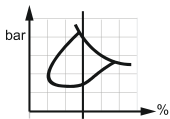


	旧标准 Old standards	标准 Standards	主油口 Power supply	变量油口 Displacement control	壳体泄油口 Case drain	驻车制动控制油口 Control of parking break
A	SAE J511	ISO 11926-2	A_R R_L	Y	1.2	X
1	ISO 6162	ISO 6162	DN32 PN400	M18x1.5	M22x1.5	M18x1.5
	DIN 3852	ISO 9974-1	DN25 PN400			
最高压力 Max.pressure	PS bar		450	30	1	30

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

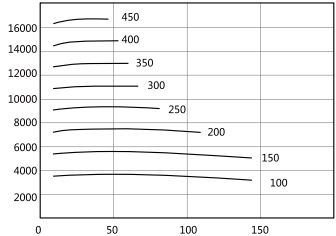
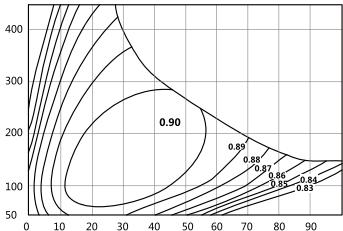
效率/Efficiency

总效率/Overall efficiency
在50°C时，使用HV46液压没标准排量马达工作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

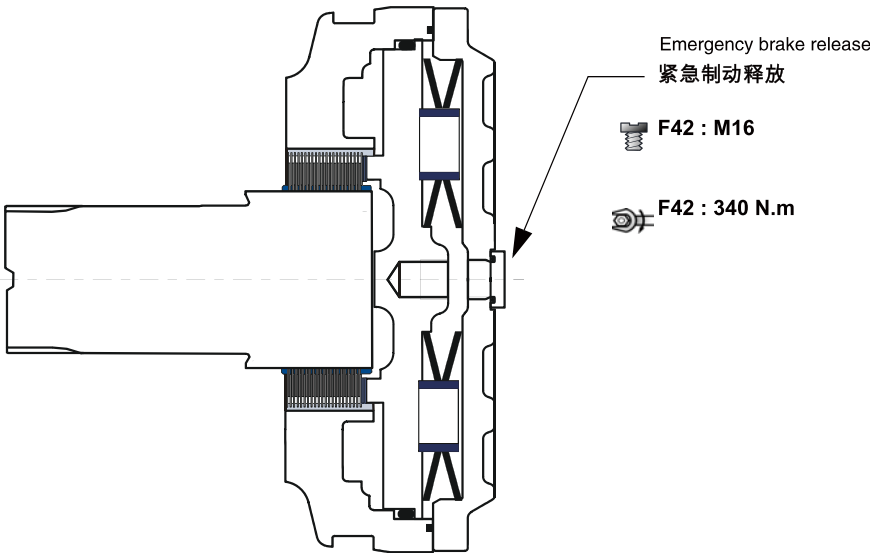


实际输出扭矩/Actual output torque

CRM-PS25



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)	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).

产品标识说明 / Ordering Code

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

1	2	3	4	5	6	7	8
		*	*	*		*	*

1、马达型号 Moter type

CRM-PS35

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	B
		ml/r	ml/r
CRM-PS35	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 Ration 2	对称型配流体 Symmetrical
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

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

0	无配流体端盖	No transmission cover
1	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	驻车制动器 Parking brake
	Brakes	Bearing mounting or valving cover mounting	
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

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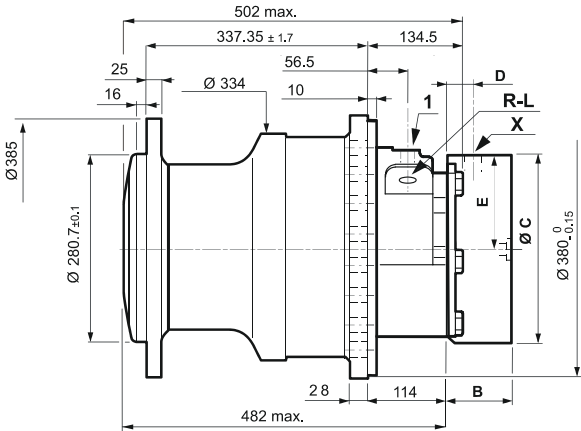
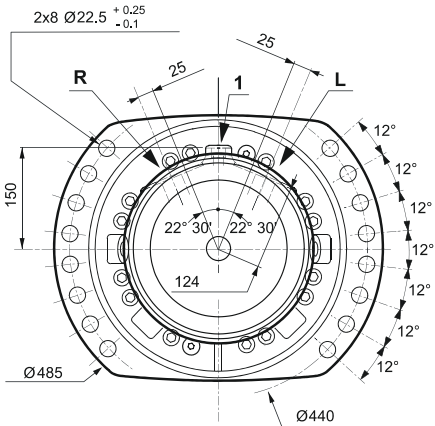


CRM-PS35 轮边马达/CRM-PS35 Wheel Motor

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

	F42
B	142.5
C	Ø375
D	63.5
E	183.5

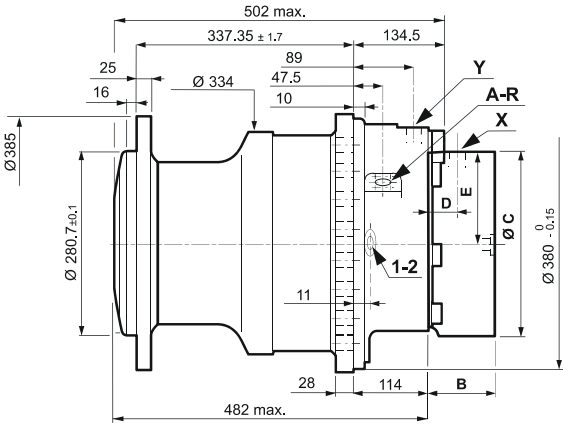
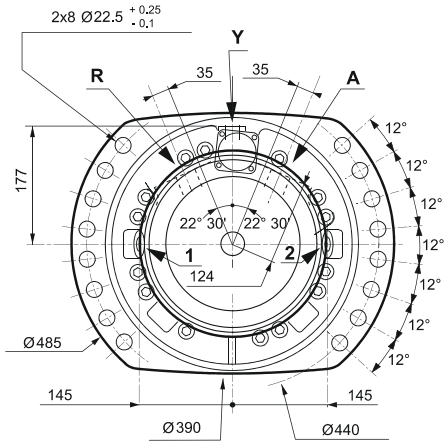
重量 /Weight	209kg	269kg



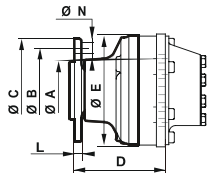
双排量马达 (1110) 标准尺寸/Dimensions for standard(1110)2-displacement motor

	F42
B	142.5
C	Ø375
D	63.5
E	183.5

重量 /Weight	209kg	269kg



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	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) *	扭矩 (2) *	
		mm	mm	mm	mm			Torque	Torque	
	M22x1.5	64	5	—	16.5			12.9	N.m	N.m
		80							695	1050
								轮胎/Tire	钢轮/Drum	

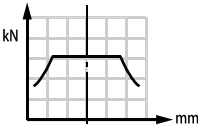
- (*) :紧固扭矩是针对指定载荷给出的。
 The tightening torques are given for the indicated loads.
- (1) **轮辋**: 轮辋安装紧固扭矩建议值 (>240 N/mm²) 。
Wheel rim:Suggested tightening torque for wheel rim mountings(Re steel disc>240 N/mm²)
- (2) **标准**: 其它安装方式紧固扭矩建议值 (>360 N/mm²) 。
Standard:Suggested tightening torque in other cases(Re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

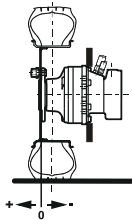
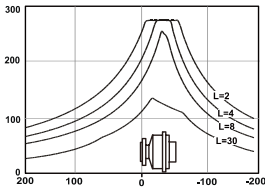
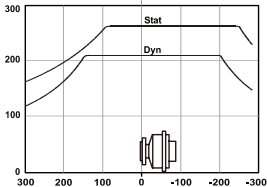
试验条件/Test conditions:
静态/Static: 0 r/min 0bar
动态: 0 r/min, 标准排量, 最大扭矩时无轴向载荷
Dynamic: 0 r/min code 0 displacement,without axial load at max.torque



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



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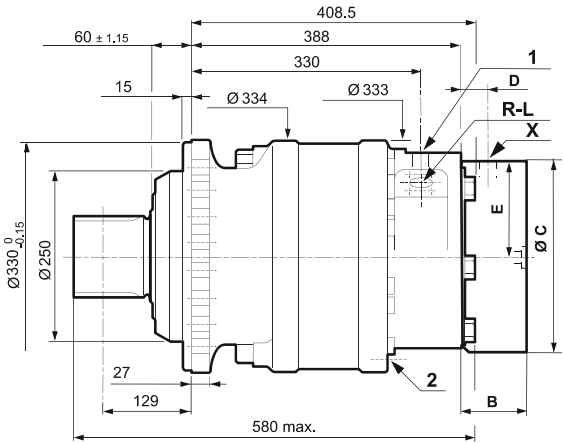
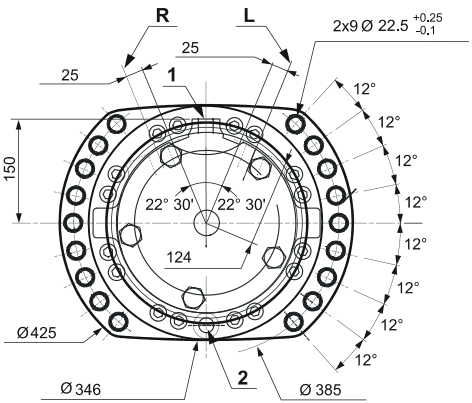


CRM-PS35 轴马达/CRM-PS35 Shaft Motor

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

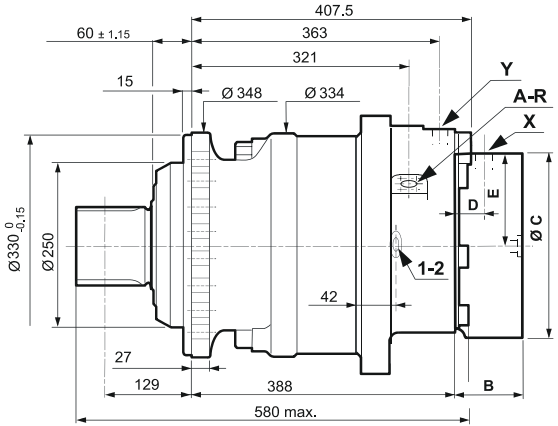
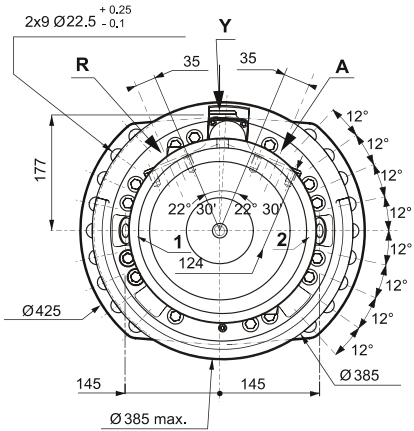
重量 /Weight	188kg	248kg



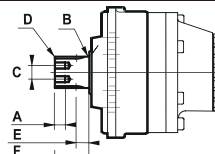
双排量马达 (2A50) 标准尺寸/Dimensions for standard(12A50)2-displacement motor

	F42
B	142.5
C	Ø375
D	63.5
E	183.5

重量 /Weight	188kg	248kg



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	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。

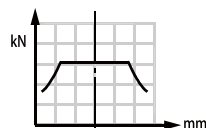
The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load/Radial load) is compatible with the permissible loads for the components, and that the resulting service life of these components complies with the application's specifications.

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

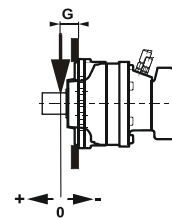
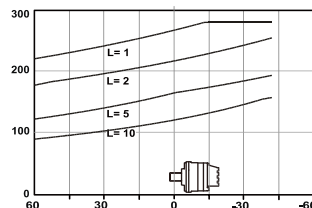
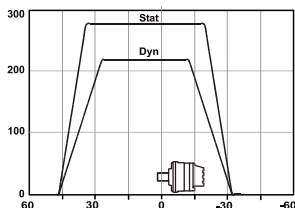
试验条件/Test conditions:

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

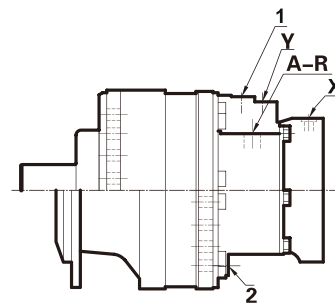
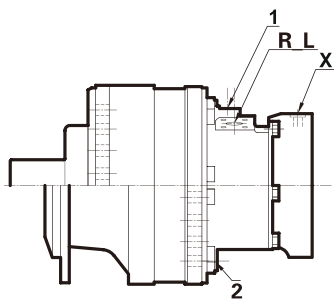
L: Millions B10 revolutions at 150 bars(average pressure), with 25cSt fluid, code 0 displacement, without axial load

G
129

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
				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

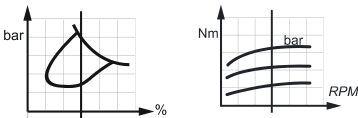
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效率/Efficiency

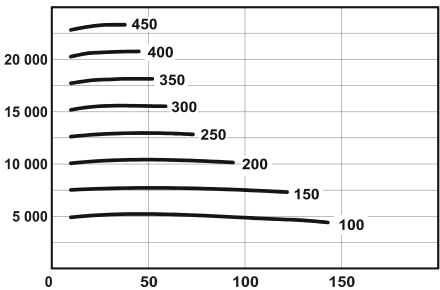
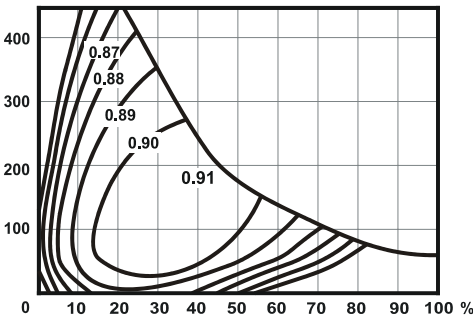
总效率/Overall efficiency

在50°C时，使用HV46液压没标准排量马达工作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

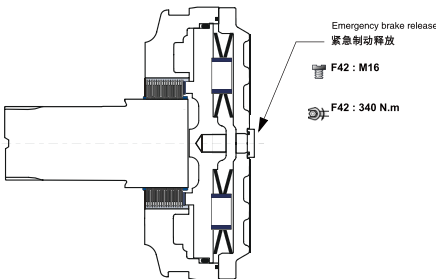


实际输出扭矩/Actual output torque

CRM-PS35



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)	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).