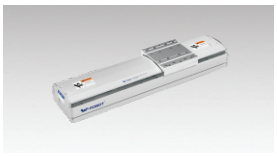
SF13

W-ROBOT®
威洛博工业机械手

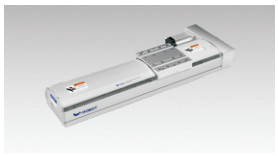
马达安装方式 Motor direction


M

BC

BM

BR


BL

型号表示方式 Guide for Model Selection

SF13 - L20 - S100 - M - ZP40B - A2P - 001

本体样式 Base Style	
S	精密级 Precision
P	高精密级 High Precision
F	半密封带框架 Semiclosed with Frame 丝杆驱动结构 Ball Screw Drive
13	本体135mm宽 Body width135

丝杆导程 Ball Screw Lead	
L5	5mm
L10	10mm
L20	20mm

行程(mm) Stroke(mm)
100~1500

马达方式 Motor way	
M	直联内置 Built-in
BC	直联外置 External
BM	马达下折 Bottom Side
BR	马达右折 Right Side
BL	马达左折 Left Side

马达类型 Motor Type		马达功率 Motor power	
P	松下 Panasonic	40	400W
M	三菱 Mitsubishi	57	57步进 Stepper
Y	安川 Yaskawa	刹车 Brakes	
T	台达 Delta	无 No	无刹车 No brake
*为 Z :代表客户自配电机 *For Z: Motor is from clients.		B	带刹车 With brake

原点开关位置 Original Sensor position		极限开关数量 Limit Sensor Qty	
内藏式: Built-in		内藏式: Built-in	
A	马达侧 Motor side	1	1个 1pcs
B	反马达侧 Oppsite motor side	2	2个 1pcs
外置式: External		外置式: External	
C	马达侧 Motor side	3	1个 1pcs
D	反马达侧 Oppsite motor side	4	2个 1pcs
E	无 No	5	无感应器 No sensor

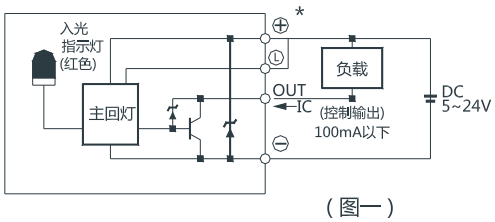
非标特注 Non-standard, d.c.,	
无 No	无特注 No, d.c.,
001	特注序列号 Special order no.

感应器类型 Sensor type	
无 No	NPN
P	PNP

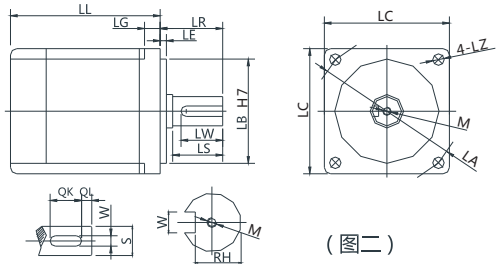
■ 基本规格 Specification

马达功率 AC (W) Motor power AC(W)		400W/750W		
滚珠丝杆驱动-外径 BallScrewØ		SF13	20(C7级)	
		PF13	20(C5级)	
重复定位精度 Repeatability		SF13	±0.01	
		PF13	±0.005	
滚珠丝杆导程 BallScrew Lead(mm)		5	10	20
最快速度 MaximumSpeed(mm/sec) 马达转速 3000 Motor Speed3000(rpm/mim)		250	500	1000
最大载重(kg) Maximum Payload(kg)	水平使用 Horizontal	100/122	80/101	65/82
	垂直使用 Vertical	40/50	20/28	11/15
额定推力 Rated Thrust(N)		1153	753	373
直线导轨Linear Guide(mm)		15x14 -2		
联轴器 Coupling(mm)	14x10 16x10 19x10	(Motor side)x(Ball Screw Side)		
	400W 750W	马达功率 Motor Output		
原点感应器 Home Sensor	外挂 Outside	EE-SX672(NPN) EE-SX672P(PNP)		

感应器接线图＜原点及端点＞



(图一)



(图二)

*以上重复定位精度是300行程范围内测量所得，如行程加长，则重复定位精度适当放大；行程超过600时，会产生丝杆偏摆，此时请将速度降低；更换不同电机时，请注意图二电机尺寸是否同表一尺寸相同，否则需更换联轴器和马达固定座。

*Above repeatability is within stroke 300mm，if logner travel needed，it will be lower.In case stroke over 600 will lead to swing of ball screw，please slow down the speed.Please note figure 2 motor size is same with table 1，or needed to replace coupler and motor holder.

■ 搭配伺服马达一览表 Servo Motor Matches List

(表一)

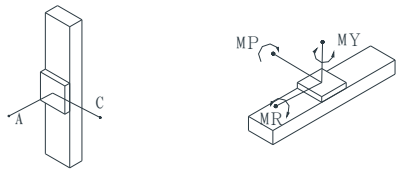
伺服电机外形尺寸																			
功率W	品牌	型号		LL	LL(刹车) LL(brake)	LA	LE	LZ	LC	LG	LW	RH	W	LR	S	LB	M	QK	QL
400W	松下 Panasonic	MSMD042G1□	V：带刹车 U:无刹车 V:With brake U:No brake	99	135	70	3	4.5	60	6.5	20	11	5h9	30	14h6	50h7	M5x10L	-	-
	台达 Delta	ECMA-C20604□S	S：带刹车 R:无刹车 S:With brake R:No brake	130.7	166.6	70	3	5.5	60	7.5	20	11	5	30	14h6	50h7	M4x15L	-	-
		ECMA-C20804□S	S：带刹车 R:无刹车 S:With brake R:No brake	112.3	152.8	90	3	6.6	80	8	20	11	5	35	14h6	70h7	M4x15L	-	-
	三菱 Mitsubishi	HC-KFS43□K	B：带刹车□：无刹车 B:With brake□:No brake	124.5	165.5	70	3	5.8	62	7	-	-	-	30	14h6	50h7	-	-	-
750W	松下 Panasonic	MSMD082G1□	V：带刹车 U:无刹车 V:With brake U:No brake	122	149	90	3	6	80	8	25	15.5	6h9	35	19h6	70h7	M5x10L	-	-
	台达 Delta	ECMA-C20807□S	S：带刹车 R:无刹车 S:With brake R:No brake	138.3	178	90	3	6.6	80	8	25	15.5	6	35	19h6	70h7	M6x20L	-	-
		ECMA-C20907□S	S：带刹车 R:无刹车 S:With brake R:No brake	130.2	161.3	100	3	6.6	86	8	20	13	5	35	16h6	80h7	M5x15L	-	-
	三菱 Mitsubishi	HC-KFS73□K	B：带刹车□：无刹车 B:With brake□:No brake	142	177.5	90	3	6.6	82	8	-	-	-	40	19h6	70h7	-	-	-

□表示为空

■ 容许负载力矩表 Allow Load Torque Table

(单位: mm) (Unit ： mm)

(单位: N.m)(Unit : N.m)



水平安装 Horizontal installation		A	B	C
导程5 Lead5	60kg	2448	435	577
	100kg	2000	247	331
	110kg	1846	202	269
导程10 Lead10	30kg	2652	899	994
	50kg	1775	526	593
	75kg	1396	317	267

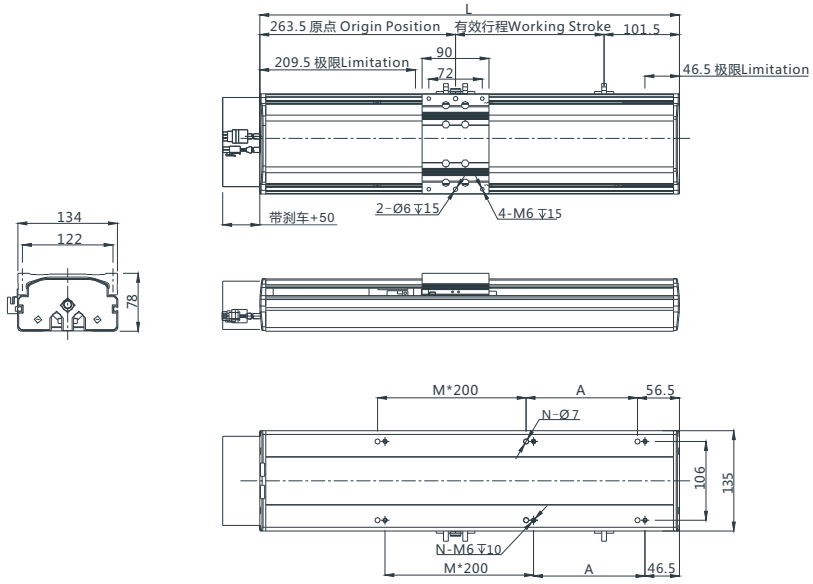
墙面安装 Wall installation		A	B	C
导程5 Lead5	60kg	530	350	2438
	100kg	277	165	1995
	110kg	215	118	1836
导程10 Lead10	30kg	982	815	2573
	50kg	569	442	1680
	75kg	337	232	1258

垂直安装 Vertical installation		A	C
导程5 Lead5	20kg	3030	3030
	30kg	1792	1792
	66kg	1262	1262
导程10 Lead10	5kg	1700	1700
	10kg	2202	2202
	14kg	1485	1485

MY	1032
MP	1034
MR	908

M:直联内置(Buil-in)

单位（mm）



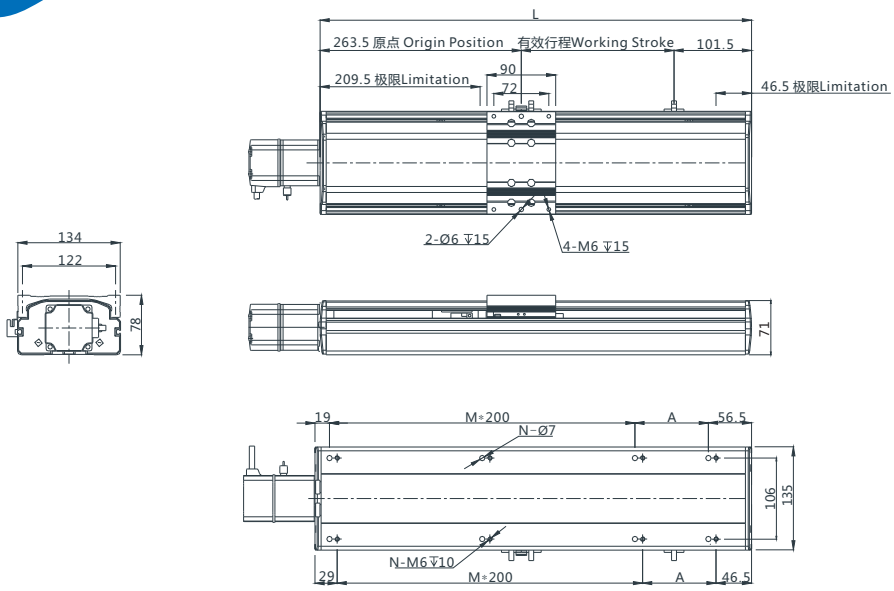
注:以下不含电机重量。Note: Not including motor weight.

有效行程 Working Stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	465	515	565	615	665	715	765	815	865	915	965	1015	1065	1115	1165	1215	1265	1315	1365	1415	1465	1515	1565	1615	1665	1715	1765	1815	1865
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
重量 KG Weight KG	11.4	11.97	12.54	13.11	13.68	14.25	14.82	15.39	15.96	16.53	17.1	17.67	18.24	18.81	19.38	19.95	20.52	21.09	21.66	22.23	22.8	23.37	23.94	24.51	25.08	25.65	27.22	28.05	28.85

*如有特殊行程请先与技术人员联系。*In case special stroke please contact technical services.

BC:直联外置(External)

单位（mm）



注:以下不含电机重量。Note: Not including motor weight.

有效行程 Working Stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	325.5	375.5	425.5	475.5	525.5	575.5	625.5	675.5	725.5	775.5	825.5	875.5	925.5	975.5	1025.5	1075.5	1125.5	1175.5	1225.5	1275.5	1325.5	1375.5	1425.5	1475.5	1525.5	1575.5	1625.5	1675.5	1725.5
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
重量 KG Weight KG	10.95	11.57	12.44	12.51	13.28	12.55	14.42	14.89	15.56	16.13	16.6	17.27	17.74	18.41	19.08	19.55	20.12	20.69	21.26	21.73	22.4	23	23.54	24.11	24.68	25.25	26.52	27.65	28.42

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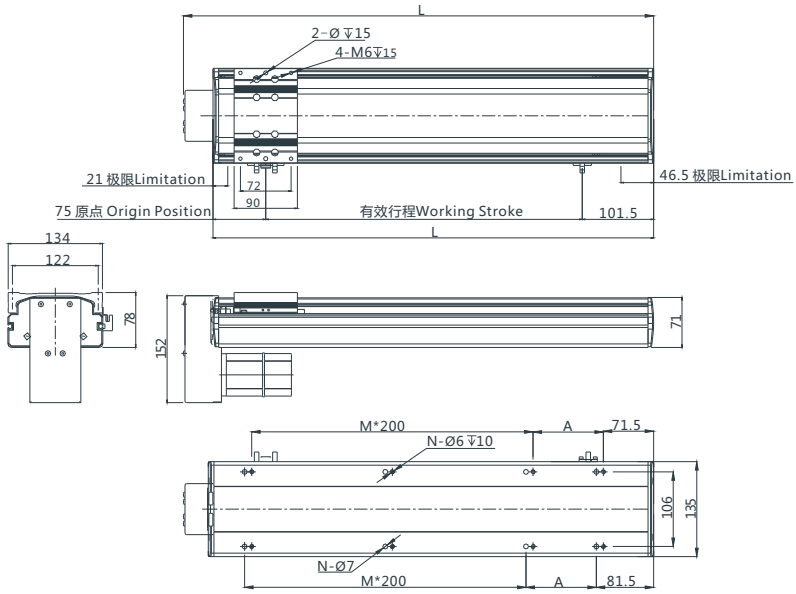
SF13

BM:马达下折(Bottom Side)

单位（mm）



注:以下不含电机重量。Note: Not including motor weight.

有效行程 Working Stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	325.5	375.5	425.5	475.5	525.5	575.5	625.5	675.5	725.5	775.5	825.5	875.5	925.5	975.5	1025.5	1075.5	1125.5	1175.5	1225.5	1275.5	1325.5	1375.5	1425.5	1475.5	1525.5	1575.5	1625.5	1675.5	1725.5
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
重量 KG Weight KG	10.95	11.57	12.44	12.51	13.28	12.55	14.42	14.89	15.56	16.13	16.6	17.27	17.74	18.41	19.08	19.55	20.12	20.69	21.26	21.73	22.4	23	23.54	24.11	24.68	25.25	26.52	27.65	28.42

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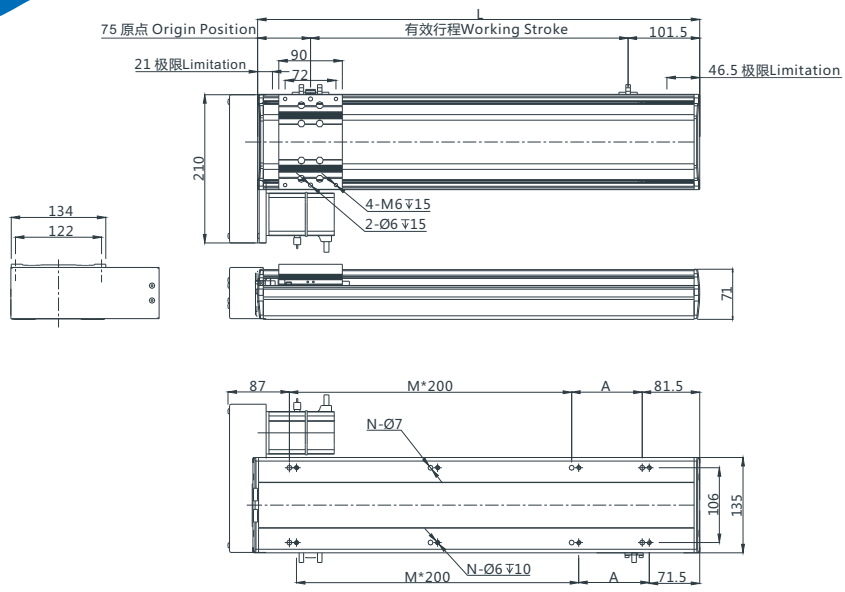
BR:马达右折(Right Side)

单位（mm）



注:以下不含电机重量。Note: Not including motor weight.

有效行程 Working Stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	325.5	375.5	425.5	475.5	525.5	575.5	625.5	675.5	725.5	775.5	825.5	875.5	925.5	975.5	1025.5	1075.5	1125.5	1175.5	1225.5	1275.5	1325.5	1375.5	1425.5	1475.5	1525.5	1575.5	1625.5	1675.5	1725.5
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
重量 KG Weight KG	10.95	11.57	12.44	12.51	13.28	12.55	14.42	14.89	15.56	16.13	16.6	17.27	17.74	18.41	19.08	19.55	20.12	20.69	21.26	21.73	22.4	23	23.54	24.11	24.68	25.25	26.52	27.65	28.42

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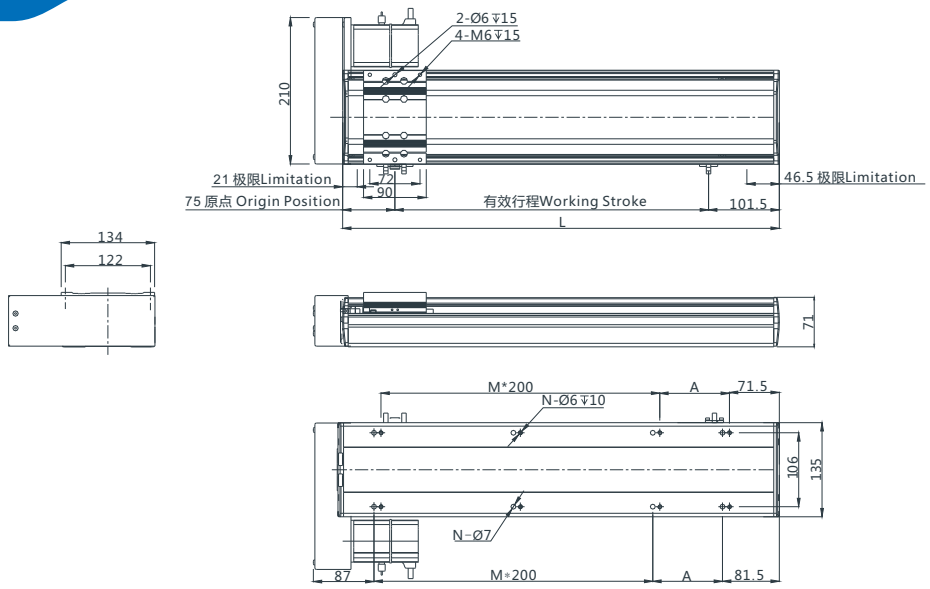
BL:马达左折(Left Side)

单位 (mm)



注:以下不含电机重量。Note: Not including motor weight.

有效行程 Working Stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	325.5	375.5	425.5	475.5	525.5	575.5	625.5	675.5	725.5	775.5	825.5	875.5	925.5	975.5	1025.5	1075.5	1125.5	1175.5	1225.5	1275.5	1325.5	1375.5	1425.5	1475.5	1525.5	1575.5	1625.5	1675.5	1725.5
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
重量 KG Weight KG	10.95	11.57	12.44	12.51	13.28	12.55	14.42	14.89	15.56	16.13	16.6	17.27	17.74	18.41	19.08	19.55	20.12	20.69	21.26	21.73	22.4	23	23.54	24.11	24.68	25.25	26.52	27.65	28.42

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MEMO