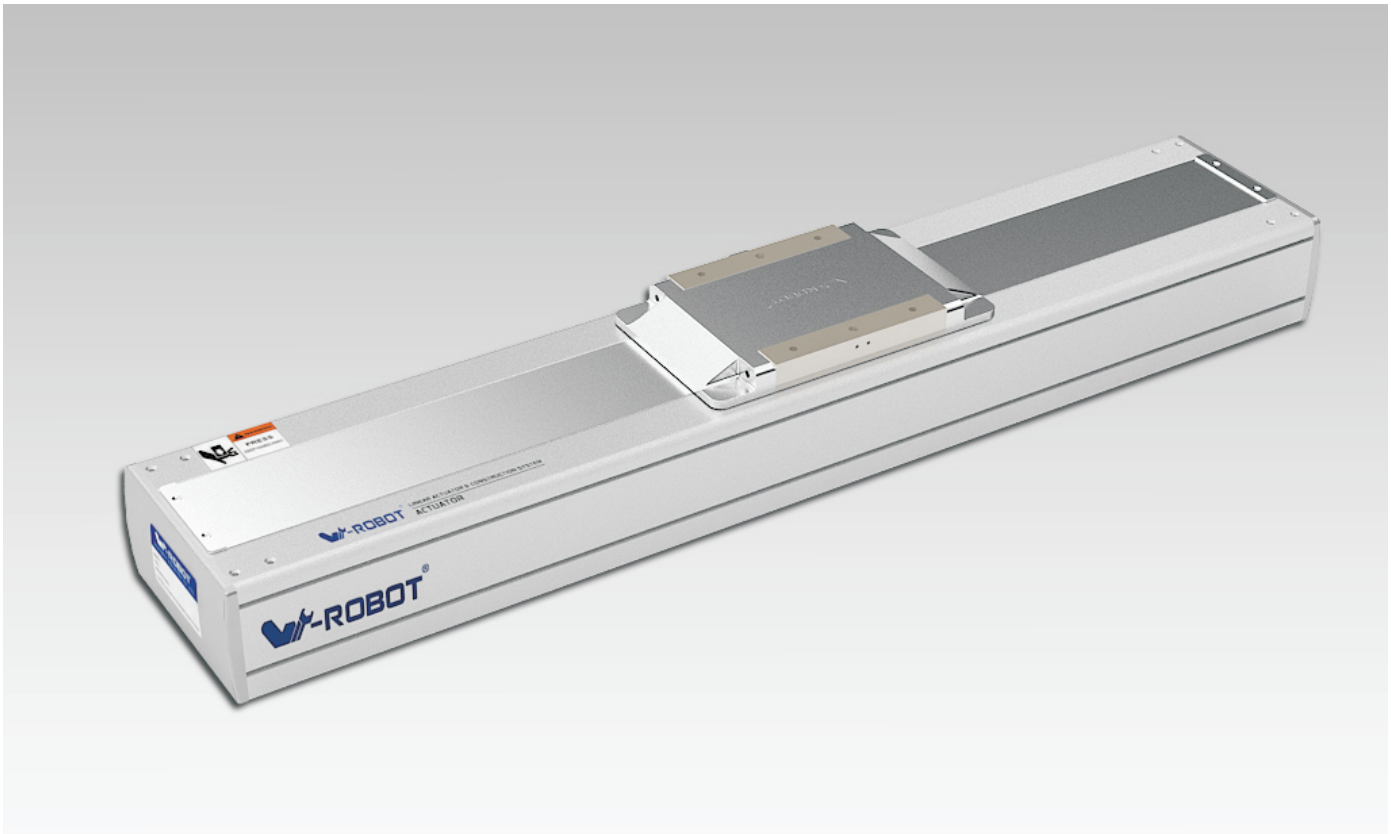
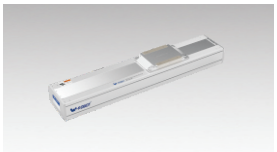
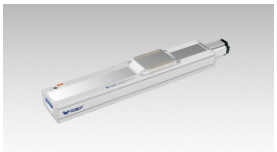
ST14

W-ROBOT®
威洛博工业机械手



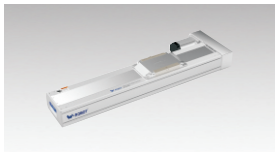
马达安装方式 Motor direction


M


BC

BM

BR


BL

型号表示方式 Guide for Model Selection

ST14 — L10 — S100 — M — ZP40B — C2P — 001

本体样式 Base Style	
S	精密级 Precision
P	高精密级 High Precision
C	洁净型 Cleanse
T	全封闭样式 Fully-enclosed
14	本体140mm宽 Body width140

丝杆导程 Ball Screw Lead	
L5	L5mm
L10	L10mm
L20	L20mm

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	75	750W
T	台达 Delta	57	57步进 Stepper
*为 Z :代表客户自配电机 *For Z: Motor is from clients.		刹车 Brakes	
		无 No	无刹车 No brake
		B	带刹车 With brake

原点开关位置 Original Sensor position		极限开关数量 Limit Sensor Qty	
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 2pcs
E	无 No	5	无感应器 No sensor

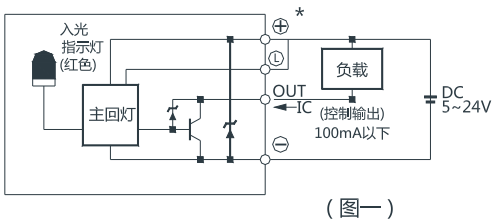
非标特注 Non-standard, d.c.,	
无 No	无特注 No, d.c.,
001	特注序列号 Special order no

感应器类型 Sensor type	
无 No	NPN
P	PNP

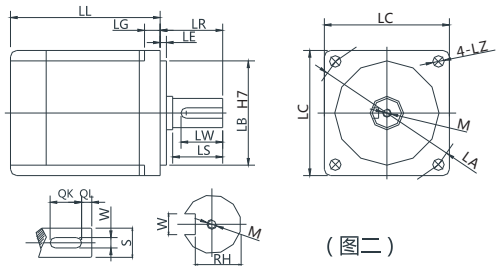
■ 基本规格 Specification

马达功率 AC (W) Motor power AC(W)		400W/750W		
滚珠丝杆驱动-外径 BallScrewØ		ST14	20(C7级)	
		PT14	20(C5级)	
重复定位精度 Repeatability		ST14	±0.01	
		PT14	±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	110/137	90/112	75/93
	垂直使用 Vertical	50/62	25/31	14/17
额定推力 Rated Thrust(N)		1153	753	373
直线导轨Linear Guide(mm)		20x15.5 -2		
联轴器 Coupling(mm)	14x12 / 16x12 / 19x12	(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)		
	导轨安装 Outside Guide	EE-SX674(NPN) EE-SX674P(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）

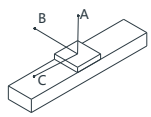
伺服电机外形尺寸

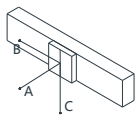
功率W	品牌	型号		LL	LL(刹车) LL(brake)	LA	LE	LZ	LC	LG	LW	RH	W	LR	S	LB	M	QK	QL
400W	松下 Panasonic	MSMD042G1□	V：带刹车 U:无刹车 V:With brake U:No brake	99	135	70	3	4.5	60	6.5	20	11	5h9	30	14h6	50h7	M5x10L		
	台达 Delta	ECMA-C20604□S	S：带刹车 R:无刹车 S:With brake R:No brake	130.7	166.6	70	3	5.5	60	7.5	20	11	5	30	14h6	50h7	M4x15L		
		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			

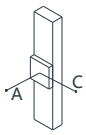
□表示为空

■ 容许负载力矩表 Allow Load Torque Table

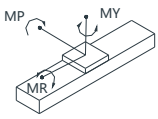
(单位: mm)（ Unit ：mm ）







(单位: N.m)(Unit: N.m)



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

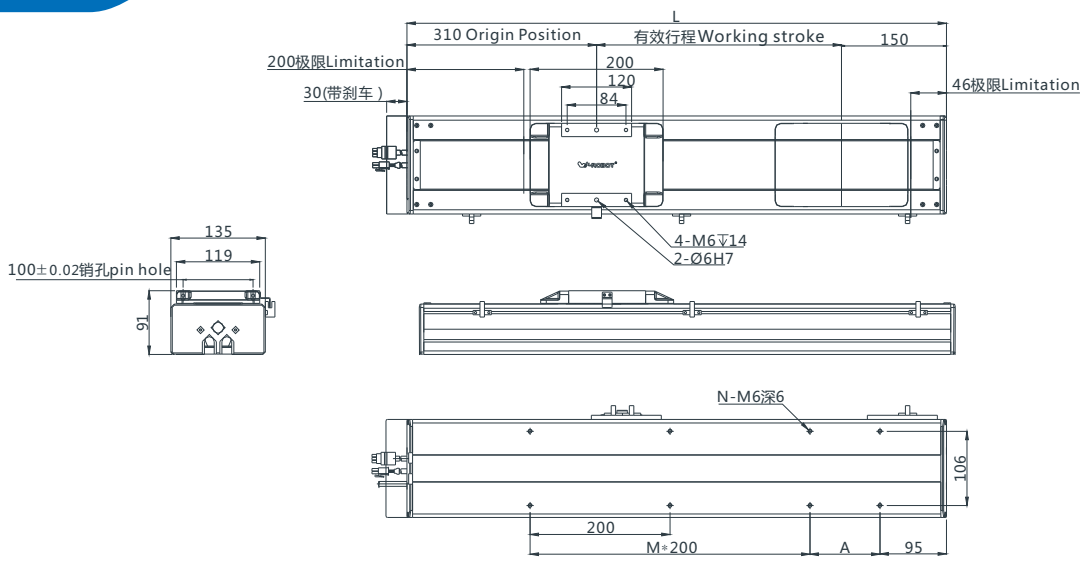
墙面安装 Wall installation		A	B	C
导程 5 Lead 5	60kg	530	350	2438
	100kg	277	165	1995
	110kg	215	118	1836
导程 10 Lead 10	30kg	982	815	2573
	50kg	569	442	1680
	75kg	337	232	1258

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

MY	1032
MP	1034
MR	908

M:直联内置(Built-in)

单位（mm）



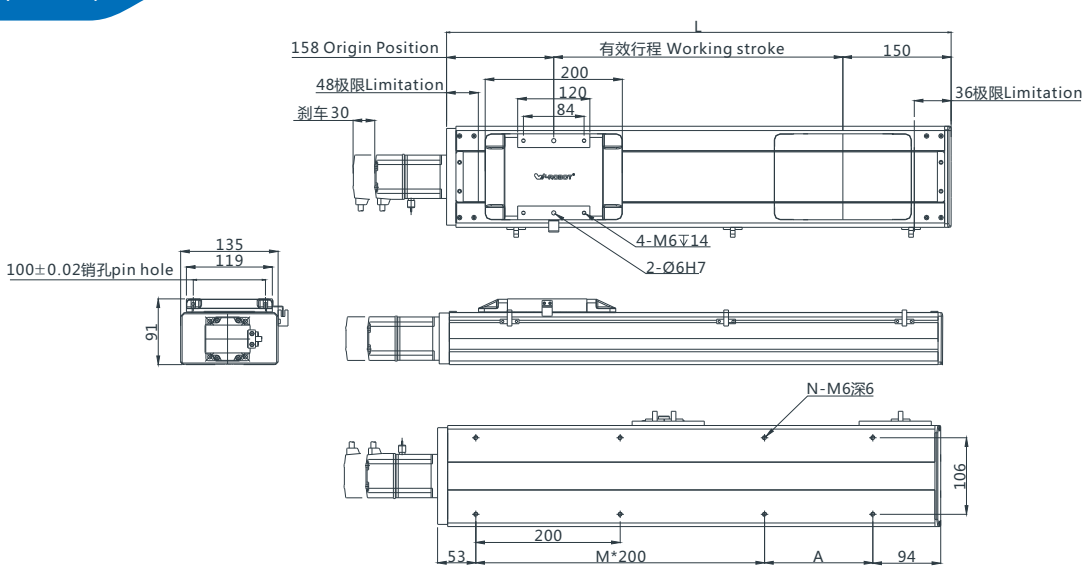
注:以下不含电机重量。Note: Not including motor weight.

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	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270	1320	1370	1420	1470	1520	1570	1620	1670	1720	1770	1820	1870	1920
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
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	19
重量KG Weight KG	10.6	11	11.5	12	12.5	13	13.4	14	14.4	15	15.4	15.9	16.4	16.9	17.4	17.9	18.4	18.9	19.3	19.9	20.4	20.9	21.4	21.9	22.4	22.9	23.4	23.9	24.4

*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	397	447	497	547	597	647	697	747	797	847	897	947	997	1047	1097	1147	1197	1247	1297	1347	1397	1447	1497	1547	1597	1647	1697	1747	1797
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
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	19
重量KG Weight KG	10.6	11	11.5	12	12.5	13	13.4	14	14.4	15	15.4	15.9	16.4	16.9	17.4	17.9	18.4	18.9	19.3	19.9	20.4	20.9	21.4	21.9	22.4	22.9	23.4	23.9	24.4

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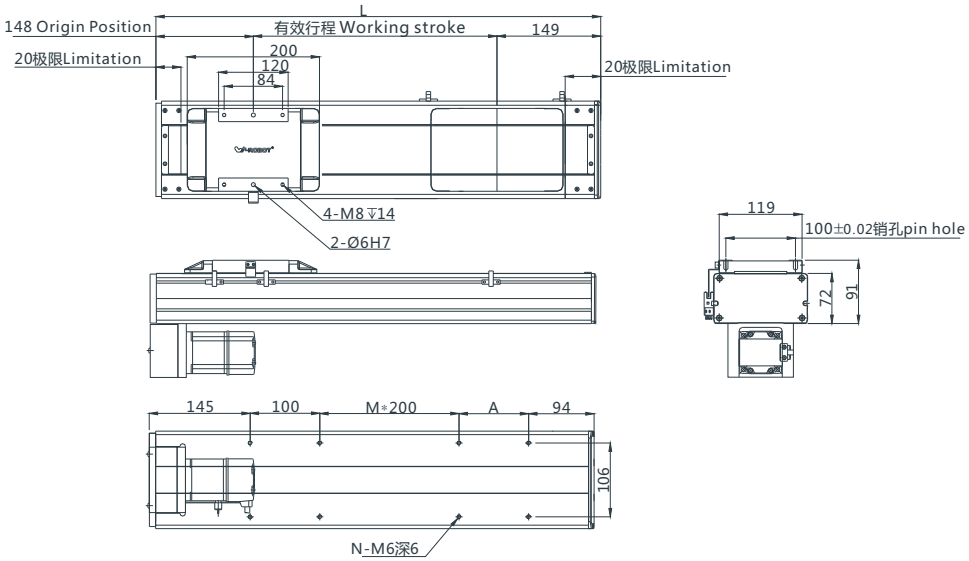
BM:马达下折(Bottom Side)

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	389	439	489	539	589	639	689	739	789	839	889	939	989	1039	1089	1139	1189	1239	1289	1339	1389	1439	1489	1539	1589	1639	1689	1739	1789
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
M	0	0	0	0	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
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	19
重量KG Weight KG	10.6	11	11.5	12	12.5	13	13.4	14	14.4	15	15.4	15.9	16.4	16.9	17.4	17.9	18.4	18.9	19.3	19.9	20.4	20.9	21.4	21.9	22.4	22.9	23.4	23.9	24.4

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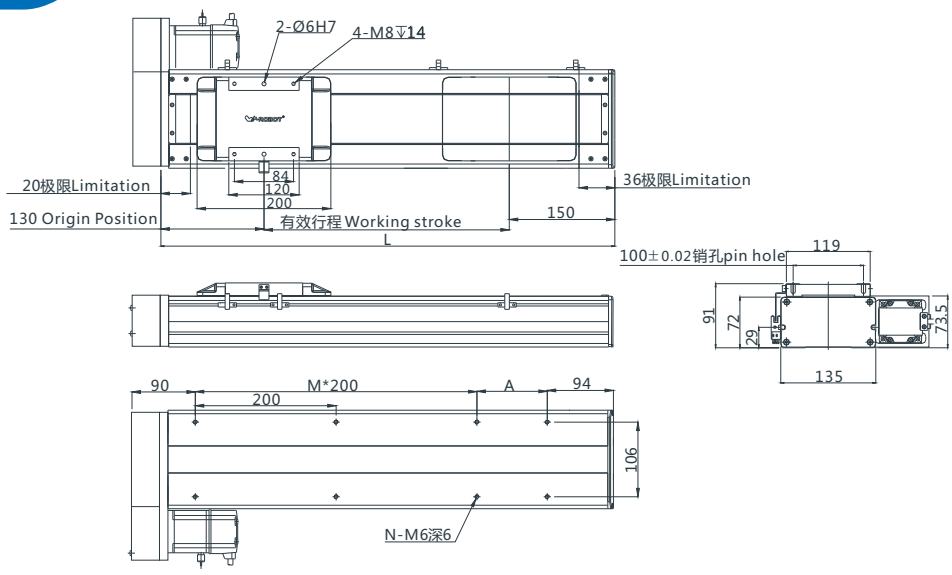
BR:马达右折(Right Side)

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	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234	1284	1334	1384	1434	1484	1534	1584	1634	1684	1734	1784	1834
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
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	19
重量KG Weight KG	10.6	11	11.5	12	12.5	13	13.4	14	14.4	15	15.4	15.9	16.4	16.9	17.4	17.9	18.4	18.9	19.3	19.9	20.4	20.9	21.4	21.9	22.4	22.9	23.4	23.9	24.4

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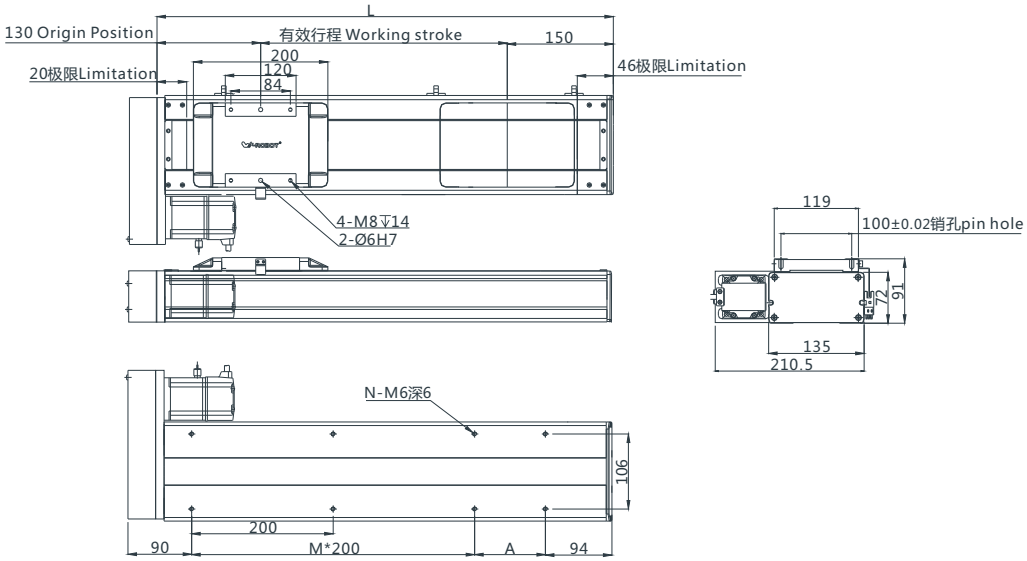
BL:马达左折(Left Side)

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	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234	1284	1334	1384	1434	1484	1534	1584	1634	1684	1734	1784	1834
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
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	19
重量KG Weight KG	10.6	11	11.5	12	12.5	13	13.4	14	14.4	15	15.4	15.9	16.4	16.9	17.4	17.9	18.4	18.9	19.3	19.9	20.4	20.9	21.4	21.9	22.4	22.9	23.4	23.9	24.4

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

MEMO