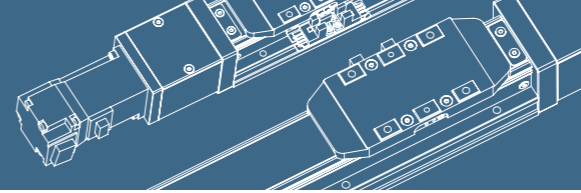


# GTH12D 单轴 /1-axis

▶ 轨道内嵌  
Integrated Linear Bearing  
双滑台系列

▶ 螺杆驱动  
Ball Screw Drive



2023 综合目录 **BRTR**

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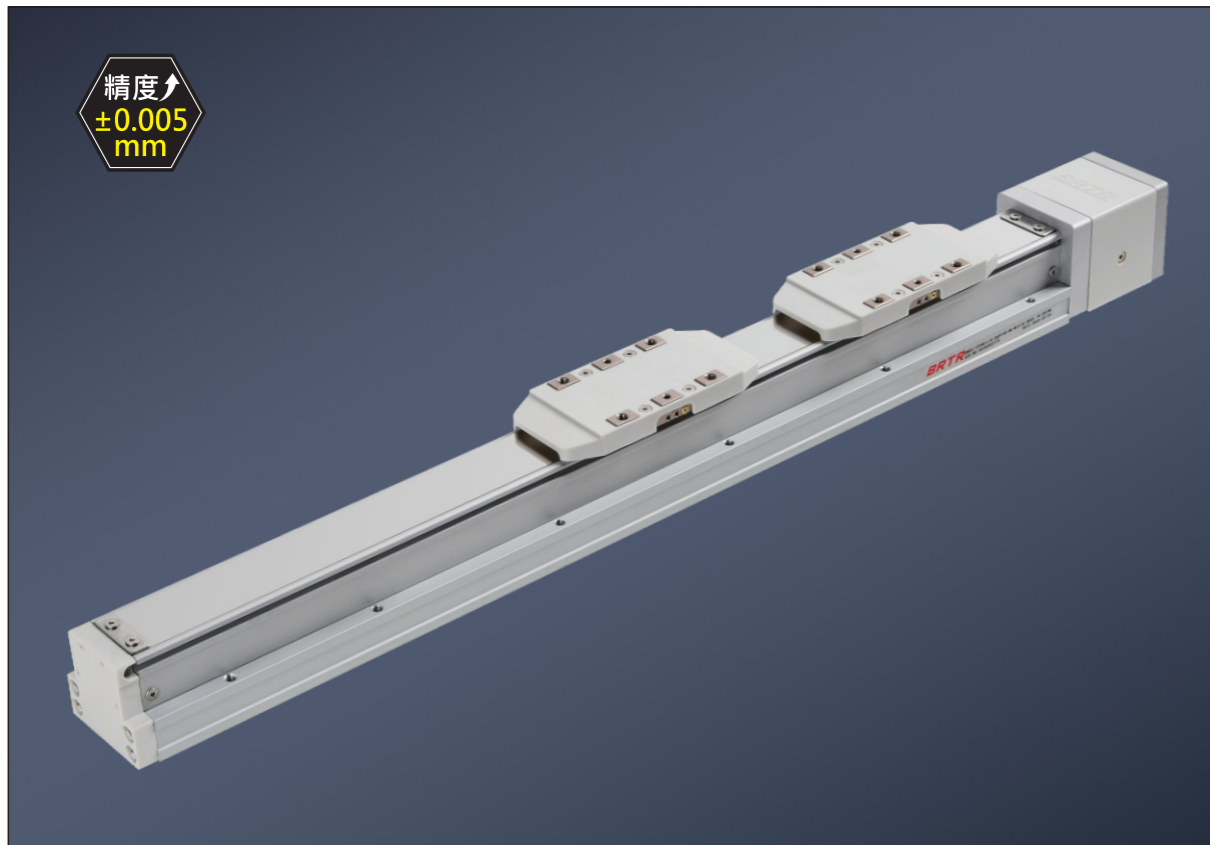
应用列

一般螺杆式样  
GTHD series

无尘/螺柱式样  
GCH

直交连接  
XYGT

参考资料  
Reference



精度  
±0.005 mm

最大行程  
Maximum Stroke 1040mm

最高速度  
Maximum Speed 1920mm/s

马达容量  
Motor Output 400W

最大可搬重量  
Max Payload 110kg

## 型号表示方式 Ordering Method

GTH12D- L 5 - 100 - BC - M40B - C 4 - 0001

本体型号  
Model

行程  
Stroke

转造级  
Rolled Ballscrews  
50-1250mm  
研磨级  
Ground Ballscrews  
50-700mm  
\*间隔50 Pitch 50mm

马达位置  
Motor Position

BC 马达外露  
Motor Exposed  
BM 马达下折  
Motor Bottom Side  
BR 马达左折  
Motor Right Side  
BL 马达右折  
Motor Left Side

马达厂牌、功率  
Motor Brand · Power Output

M	三菱 Mitsubishi	05	-	B
P	松下 Panasonic	10	-	
Y	安川 Yaskawa	20	-	
T	台达 Delta	40	400W	

原点感应器  
Home Sensor

外挂型 Outside  
C 马达侧 Motor Side  
D 反马达侧 Opposite Motor Side  
无 SENSOR No Sensor  
E 无 SENSOR No Sensor

端点极限感应器  
Limit Sensor

外挂型 Outside  
3 1只 1Pc  
4 2只 2Pc  
无 SENSOR No Sensor  
5 无 SENSOR No Sensor

特注式样  
Customization Order No.

螺杆等级  
Ball Screw Accuracy Grade  
L 转造级  
Rolled Ballscrews  
C 研磨级  
Ground Ballscrews  
\*选用C研磨级螺杆, 有行程限制, 详见基本式样  
C precision-level ground ball screws are not available in all stroke lengths, please consult the model datasheet.

\*若无刹车则不表示  
If No Brake, No Description.

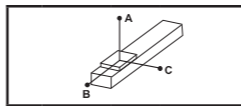
\*选择行程50时, 有以下限制:  
When the stroke is 50mm, the sensor installation has the following restrictions:  
1. 原点与极限需放置与不同侧。  
Home sensor and limit sensor has to be installed on the different side of body.  
2. 滑座左右两侧均需安装感应片。

## 基本式样 Specification

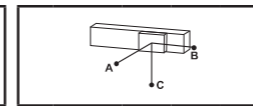
性能	性能等级代号 Ballscrew Accuracy Grade Code	L		C		
		C7 转造 C7 Rolled Ballscrew	C5 研磨 C5 Ground Ballscrew			
位置重复精度 Repeatability	mm	± 0.01		±0.005		
标准行程 Stroke (increments)	mm	40-1040mm /50 间隔 (50 increments)		40-490mm /50 间隔 (50 increments)		
螺柱导程 Lead	mm	5	10	20	32	
最高转速 Maximum Rotating speed	rpm	3600	3600	3600	3600	
最高速度 Maximum linear speed <sup>※1</sup> <sup>※2</sup>	mm/s	300	600	1200	1920	
最大可搬重量 Maximum Payload	水平使用 Horizontal	kg	110	88	40	30
	垂直使用 Vertical	kg	33	22	10	8
定格推力 Rated Thrust	N	1388	694	347	218	
最大加速度 Maximum acceleration	G	0.3	0.3	0.6	0.6	
滚珠螺柱 Ball screw	基本动额定负荷 Basic dynamic load rating Ca	N	—	—	—	
	基本静额定负荷 Basic static load rating Coa	N	—	—	—	
直线滑轨 Linear Guide	动态水平负载 Dynamic horizontal (100km)	N	—			
	静态水平负载 Static Horizontal	N	—			
固定侧轴承 Fixed bearing	基本动额定负荷 Basic dynamic load rating Cr	N	—			
	静态容许负荷 Static load rating Cor	N	—			
AC伺服马达容量 AC Servo Motor Output	W	400				
滚珠螺柱外径 Ball Screw Ø	mm	Ø16				
联轴器 Coupling	mm	10X14				
原点感应器 Home Sensor	外挂 Outside	FF-U674(NPN)				

※1 马达加减速设定0.2秒, Acceleration and deceleration value is set 0.2 second.  
※2 长行程时, 会产生螺柱偏摆, 需将速调降 (线速度请参阅尺寸图下文表格)  
During in a long stroke, it causes ballscrew deflection, the speed must reduce. (Please refer to the linear velocity from the data sheet below the dimension graph.)

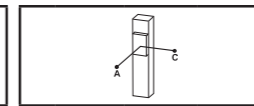
## 容许负载力矩表 Allowable Overhang



(单位 Unit: mm)



(单位 Unit: mm)



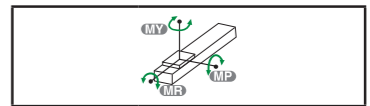
(单位 Unit: mm)

水平安装 Horizontal Installation	A	B	C
导程 5 Lead	60kg 2480	248 340	80kg 1800
10 Lead	30kg 2321	459 591	110kg 1240
20 Lead	10kg 2675	1070 1153	50kg 1358
32 Lead	15kg 708	448 397	88kg 736
	25kg 415	259 230	40kg 638
	30kg 341	211 189	25kg 259

壁挂安装 Wall Mounting	A	B	C
导程 5 Lead	60kg 361	254 2540	80kg 262
10 Lead	30kg 634	478 2321	110kg 180
20 Lead	10kg 1410	1235 2995	50kg 367
32 Lead	15kg 508	527 847	88kg 194
	25kg 296	306 496	40kg 332
	30kg 243	251 408	25kg 296

垂直安装 Vertical Installation	A	C
导程 5 Lead	15kg 1188	1188
10 Lead	10kg 1546	1546
20 Lead	7kg 1556	1556
32 Lead	3kg 2220	2220

## 静额定扭矩 Static Loading Moment



(单位 Unit: mm)

MY	606
MP	606
MR	1168

\*力矩表所表示的数据, 代表荷重的重心位置单一方向容许悬出的长度。  
The data represented by the moment table is the center of gravity of the load. The length of the overhang is allowed in a single direction.  
\*符合型录规范的正常使用时, 保证寿命为10000公里。  
Operation life is 10,000km when the product is using under the specified conditions.  
\*倒吊使用无法套用标准规范, 如有需求请咨询我司业务。  
Data information is not for ceiling-mount inverse use. Contact us for the details if you want to apply ceiling-mount inverse usage.

## 搭配伺服马达一览表 Suitable Motor Brand

厂牌 Brand	马达记号 Mark	刹车有无 Brake	马达容量 Watt	电源电压 AC-Voltage	伺服马达型号 Motor Model	驱动器型号 Driver Model
三菱 Mitsubishi	M	无刹车 (水平式样) No Brake (Horizontal Type)	400	220	HG-KR43	MR-J4-40A
		有刹车 (垂直式样) With Brake (Vertical Type)	400	220	HG-KR43B	MR-J4-40A
松下 Panasoni	P	无刹车 (水平式样) No Brake (Horizontal Type)	400	220	MSMD042G1U	MBDHT2510
		有刹车 (垂直式样) With Brake (Vertical Type)	400	220	MSMD042G1V	MBDHT2510
台达 Delta	T	无刹车 (水平式样) No Brake (Horizontal Type)	400	220	ECMA-C20604ES	ASD-B20421-B
		有刹车 (垂直式样) With Brake (Vertical Type)	400	220	ECMA-C20604FS	ASD-B20421-B

# GTH12D 单轴 /1-axis

轨道内嵌  
Integrated Linear Bearing

螺杆驱动  
Ball Screw Drive

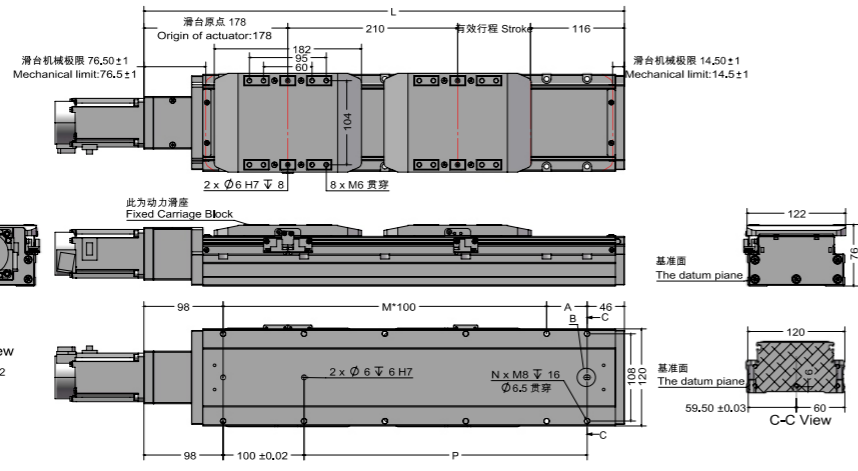
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## BC 马达外露 Motor Exposed

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单位 Unit: mm



※双滑座设计, 机构内部无同步连接, 由客户自行于外部固定。  
The dual-carriage design does not feature an internal synchronous mechanism; the customer can select an external connection to best-fit application requirements.

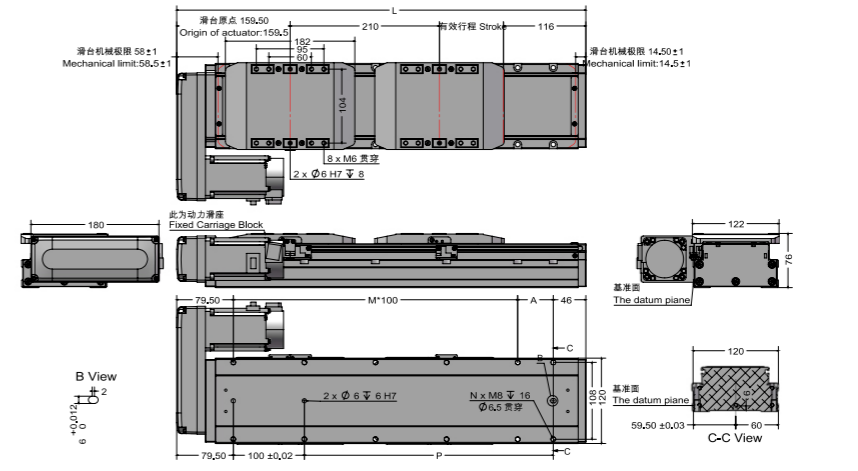
有效行程 Stroke	40 <sup>T2</sup>	90 <sup>T2</sup>	140	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040
极限行程 Limit Stroke (±1)	48.5	98.5	148.5	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5	898.5	948.5	998.5	1048.5
L	544	594	644	694	744	794	844	894	944	994	1044	1094	1144	1194	1244	1294	1344	1394	1444	1494	1544
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
N	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
KG	8.1	8.45	8.8	9.15	9.5	9.85	10.2	10.55	10.9	11.25	11.6	11.95	12.3	12.65	13	13.35	13.7	14.05	14.4	14.75	15.1
线速度 Linear Speed mm/s	导程 Lead 5	300																			
	导程 Lead 10	600																			
	导程 Lead 20	1200																			
	导程 Lead 32	1920																			

※ 2行程50时, 因本体上锁式固定孔会被滑座遮挡, 仅能使用4支螺丝固定, 建议客户本体用下锁式固定孔锁附。 When the stroke is 40~90mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

## BL 马达左折 Motor Left Side

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单位 Unit: mm



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The dual-carriage design does not feature an internal synchronous mechanism; the customer can select an external connection to best-fit application requirements.

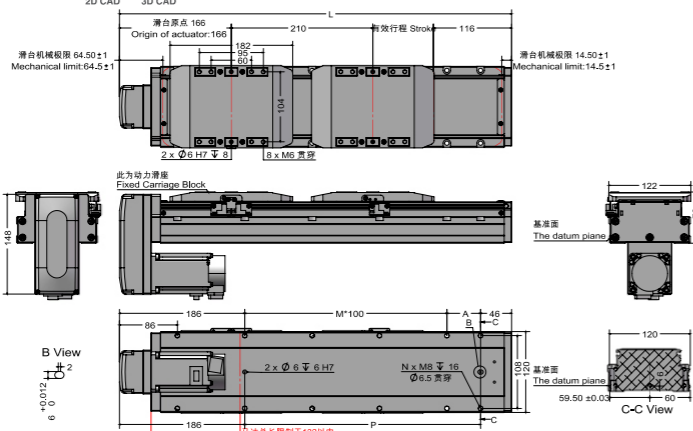
有效行程 Stroke	40 <sup>T2</sup>	90 <sup>T2</sup>	140	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040
极限行程 Limit Stroke (±1)	48.5	98.5	148.5	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5	898.5	948.5	998.5	1048.5
L	525.5	575.5	625.5	675.5	725.5	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
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
N	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
KG	8.3	8.65	9	9.35	9.7	10.05	10.4	10.75	11.1	11.45	11.8	12.5	12.85	13.2	13.55	13.9	14.25	14.6	14.95	15.3	15.6
线速度 Linear Speed mm/s	导程 Lead 5	300																			
	导程 Lead 10	600																			
	导程 Lead 20	1200																			
	导程 Lead 32	1920																			

※ 2行程50时, 因本体上锁式固定孔会被滑座遮挡, 仅能使用4支螺丝固定, 建议客户本体用下锁式固定孔锁附。 When the stroke is 40~90mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

## BM 马达下折 Motor Bottom Side

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单位 Unit: mm



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The dual-carriage design does not feature an internal synchronous mechanism; the customer can select an external connection to best-fit application requirements.

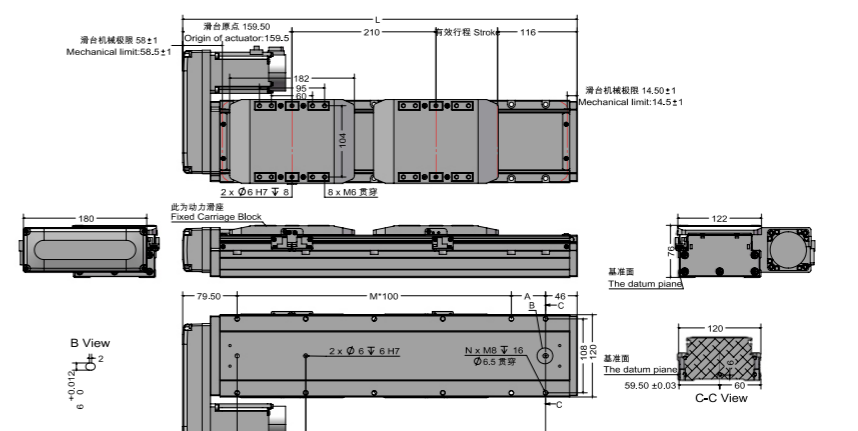
有效行程 Stroke	40 <sup>T2</sup>	90 <sup>T2</sup>	140	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040
极限行程 Limit Stroke (±1)	48.5	98.5	148.5	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5	898.5	948.5	998.5	1048.5
L	532	582	632	682	732	782	832	882	932	982	1032	1082	1132	1182	1232	1282	1332	1382	1432	1482	1532
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12
N	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
KG	8.26	8.61	8.96	9.31	9.66	10.01	10.36	10.71	11.06	11.41	11.76	12.11	12.46	12.81	13.16	13.51	13.86	14.21	14.56	14.91	15.26
线速度 Linear Speed mm/s	导程 Lead 5	300																			
	导程 Lead 10	600																			
	导程 Lead 20	1200																			
	导程 Lead 32	1920																			

※ 1 马达下折时, 若选用刹车马达, 或是超出马达总长度限制时, 无法套用标准PIN孔, 如有需求, 请联系我司业务。 When motor with brake assembled on lower side, or the total length over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.  
※ 2行程50时, 因本体上锁式固定孔会被滑座遮挡, 仅能使用4支螺丝固定, 建议客户本体用下锁式固定孔锁附。 When the stroke is 40~90mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

## BR 马达右折 Motor Right Side

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单位 Unit: mm



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The dual-carriage design does not feature an internal synchronous mechanism; the customer can select an external connection to best-fit application requirements.

有效行程 Stroke	40 <sup>T2</sup>	90 <sup>T2</sup>	140	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040
极限行程 Limit Stroke (±1)	48.5	98.5	148.5	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5	898.5	948.5	998.5	1048.5
L	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
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
N	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
KG	8.3	8.65	9	9.35	9.7	10.05	10.4	10.75	11.1	11.45	11.8	12.5	12.85	13.2	13.55	13.9	14.25	14.6	14.95	15.3	15.6
线速度 Linear Speed mm/s	导程 Lead 5	300																			
	导程 Lead 10	600																			
	导程 Lead 20	1200																			
	导程 Lead 32	1920																			

※ 2行程50时, 因本体上锁式固定孔会被滑座遮挡, 仅能使用4支螺丝固定, 建议客户本体用下锁式固定孔锁附。 When the stroke is 40~90mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.