

# LMR20

單軸  
1-axis

## 軸棒線馬

Linear shaft motor



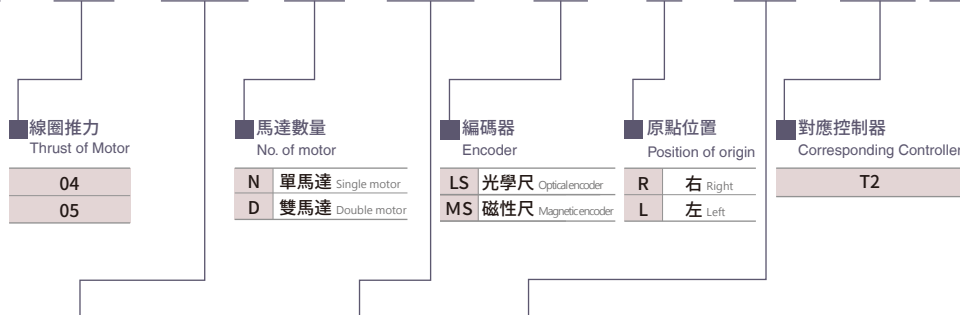
最大行程 Maximum Stroke	990mm	最高速度 Maximum Speed	2500mm/s	連續推力 Continuous thrust	55N
連續可搬重量 Continuous Payload	15kg	磁棒外徑 Outer dia. Of stator	φ20mm	直線滑軌 Linear Guide	24mmX8.5mm- 1 pcs

### 型號表示方式 Ordering Method

LMR20 - 04 - RH - N - 990 - LS - R - 05 - T2 21L - A001

本體型號  
Model

特注式樣  
Customization Order No.



■ 本體固定方式 Main body fixed method	RH 本體水平固定 Horizontally fixed
	LW 本體壁掛固定 Wall mounting

■ 行程 Stroke	80 80mm
	990 990mm
	※60mm間距。 ※ Pitch: 60mm.

■ 線長 Cable Length	05 5m
	08 8m
	12 12m
	標配5m。 Standard:5m.

■ 控制器型號 Controller type	容量 Capacity	電壓 Voltage
	2 200W	1 單相220V Single-phase 220V
		3 三相220V Three phase 220V

■ 功能 Function	
L	標準型 Standard type(pulse)
F	DMCNET
U	電子凸輪 eCAM
M	CANopen

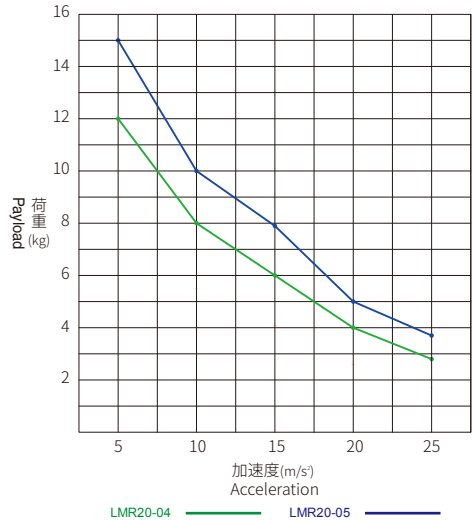
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Toll-free Number China Taiwan

**基本仕様 Specification**

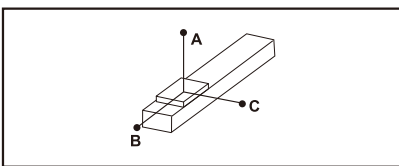
規格 Spec	型號 Model	LMR20-04	LMR20-05
	位置重複精度 Repeatability (mm)	±0.002mm	
	最大推力 Max. thrust (N)	177	221
	連續推力 Continuous thrust (N)	44	55
	連續可搬重量 Continuous Payload (kg)	12	15
標準行程 Stroke / Pitch (mm)	單馬達 N	150-990mm / 60間隔	180-960mm / 60間隔
	雙馬達 D	80-800mm / 60間隔	80-740mm / 60間隔
最高速度 Maximum Speed (mm/s) ※1	2500mm/s		
部品 Parts	定子外徑 Outer dia. Of stator	φ 20	
	光學尺廠牌 Brand of linear scale	RENISHAW	
	讀頭 Reader	RH200X05A00A	
	Z相原點 Origin of Z phase	A-9541-0037	
	光學尺解析度 Resolution of linear scale	0.001mm	

※1 連續可搬重量為到達線速度1m/s,最大加速度5m/s<sup>2</sup>固定行程來回,不同情況會有不同。  
The continuous payload is the data when the robot runs with maximum speed 1m/s and acceleration 5m/s<sup>2</sup>. Different application will have different result.

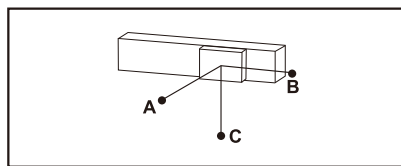
**加速度-連續可搬重量 Acceleration-Continuous Payload**



**容許負載力距表 Allowable Moment**

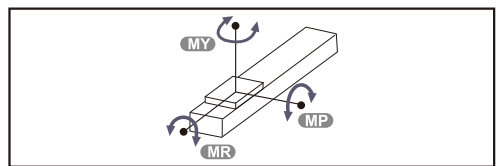


(單位 Unit:mm)



(單位 Unit:mm)

**靜態容許負載慣量 Static Loading moment**



(單位 Unit:N.m)

水平安裝 Horizontal Installation ※2					
	速度 Speed (m/s)	荷重 Load (kg)	A	B	C
LMR 20 - 04 - RH	1	12	375	100	39
	1	5.5	890	253	99
	1.5	6.5	305	143	53
	1.5	3	710	345	128
	2	4	265	193	66
	2	2	559	415	141
	2.5	3.2	250	248	78
2.5	1.5	559	560	175	
LMR 20 - 05 - RH	1	15	360	92	29
	1	7.5	790	220	70
	1.5	9.2	256	115	35
	1.5	4.5	570	275	84
	2	5.6	225	390	46
	2	2.5	550	405	115
	2.5	3.8	260	255	67
2.5	2	515	520	137	

壁掛安裝 Wall Installation ※2					
	速度 Speed (m/s)	荷重 Load (kg)	A	B	C
LMR 20 - 04 - LW	1	12	39	100	374
	1	6	90	230	810
	1.5	7	49	131	280
	1.5	3.5	108	294	600
	2	4	66	193	265
	2	2	142	415	560
	2.5	2.9	86	275	280
2.5	1.5	175	560	560	
LMR 20 - 05 - LW	1	15	29	92	355
	1	7.5	70	220	790
	1.5	9	36	120	260
	1.5	4.5	84	275	570
	2	5.7	45	158	220
	2	2.5	115	405	550
	2.5	3.8	67	255	260
2.5	2	137	520	520	

	MY	MP	MR
LMR 20 - 04	63	63	26
LMR 20 - 05	79	79	26

※2 相同速度下加速度時間不同, 加速度也隨之變化, 荷重也隨之改變, 表為加速度時間0.2s。  
Even the speed is same, if acceleration and acceleration time is changed, the payload will be different. Above chart is based on acceleration time 0.2 sec.

**對應控制器一覽表 Corresponding Controller Chart**

外觀 Exterior	控制器型號 Controller Model	選配介面 Control Mode	電氣規格 Electrical Spec.	詳細參閱 Reference Page
	T2	標準型 Pulse Control Mode	單相或三相220V Single-phase 220V or Three phase 220V	P.33
		DMCNET		
		電子凸輪 ECAM		
		CANopen		

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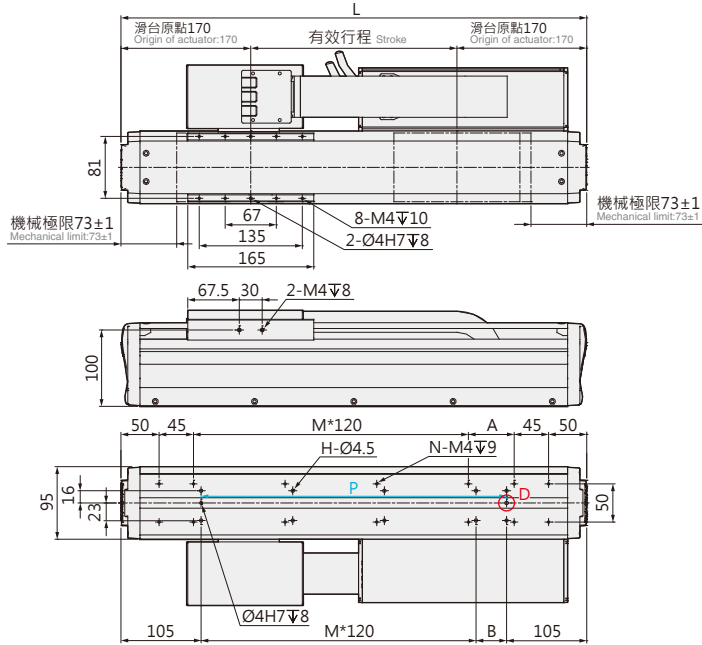
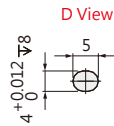
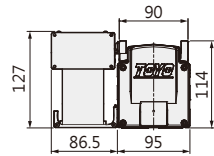
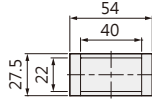
Linear shaft motor

## LMR20-04-RH-N



• CAD圖面可至 [www.toyorobot.com](http://www.toyorobot.com) 下載  
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履帶截面圖  
Sectional view of connecting track



單位 Unit : mm

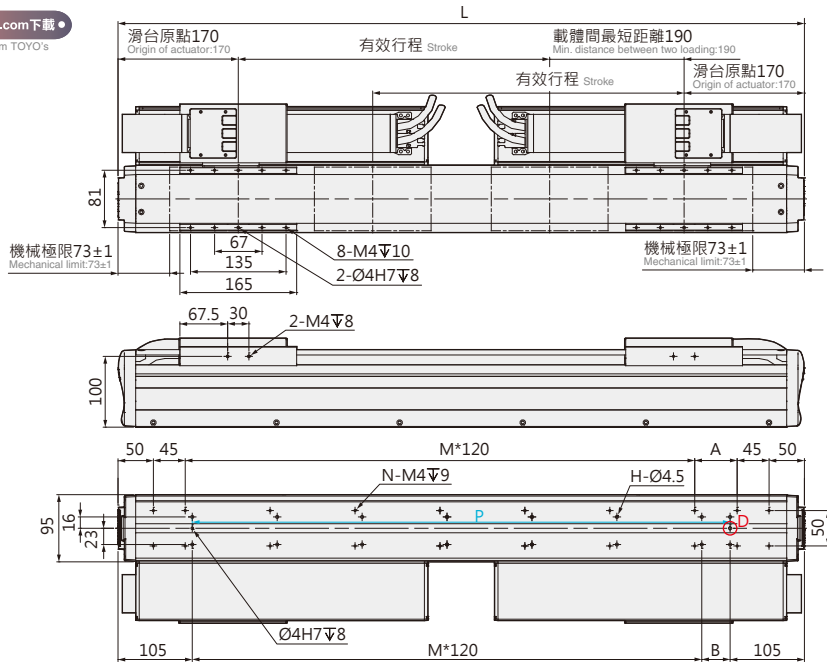
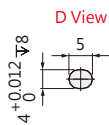
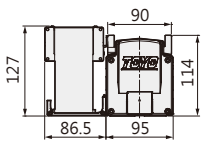
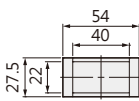
有效行程 stroke	150	210	270	330	390	450	510	570	630	690	750	810	870	930	990
L	490	550	610	670	730	790	850	910	970	1030	1090	1150	1210	1270	1330
A	60	120	60	120	60	120	60	120	60	120	60	120	60	120	60
B	40	100	40	100	40	100	40	100	40	100	40	100	40	100	40
P	280	340	400	460	520	580	640	700	760	820	880	940	1000	1060	1120
M	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
N	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
H	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22
KG	9.2	9.9	10.6	11.3	12	12.6	13.3	14	14.7	15.3	16	16.7	17.4	18.1	18.7

## LMR20-04-RH-D



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履帶截面圖  
Sectional view of connecting track



單位 Unit : mm

有效行程 stroke	80	140	200	260	320	380	440	500	560	620	680	740	800
L	610	670	730	790	850	910	970	1030	1090	1150	1210	1270	1330
A	60	120	60	120	60	120	60	120	60	120	60	120	60
B	40	100	40	100	40	100	40	100	40	100	40	100	40
P	400	460	520	580	640	700	760	820	880	940	1000	1060	1120
M	3	3	4	4	5	5	6	6	7	7	8	8	9
N	14	14	16	16	18	18	20	20	22	22	24	24	26
H	10	10	12	12	14	14	16	16	18	18	20	20	22
KG	15.1	15.8	16.4	17.1	17.8	18.5	19.2	19.8	20.5	21.2	21.9	22.6	23.2

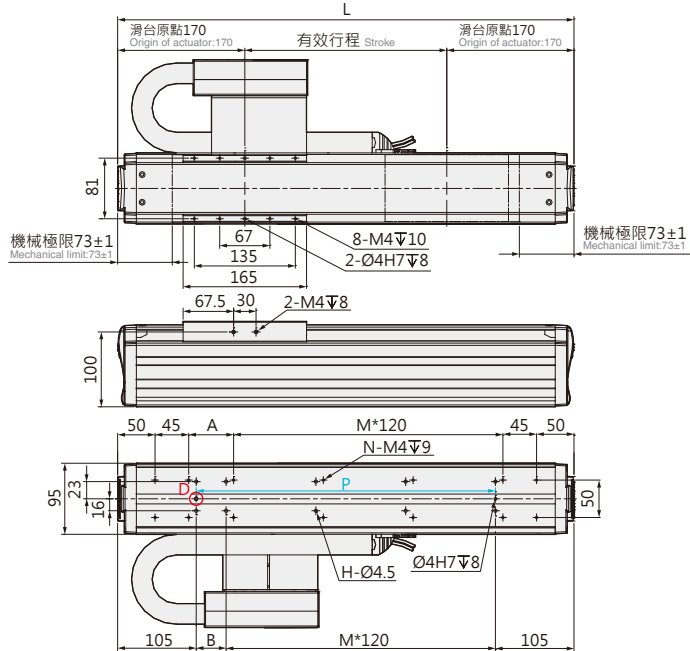
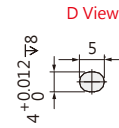
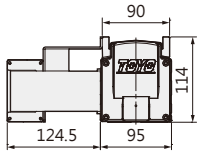
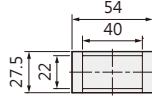
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單位 Unit : mm

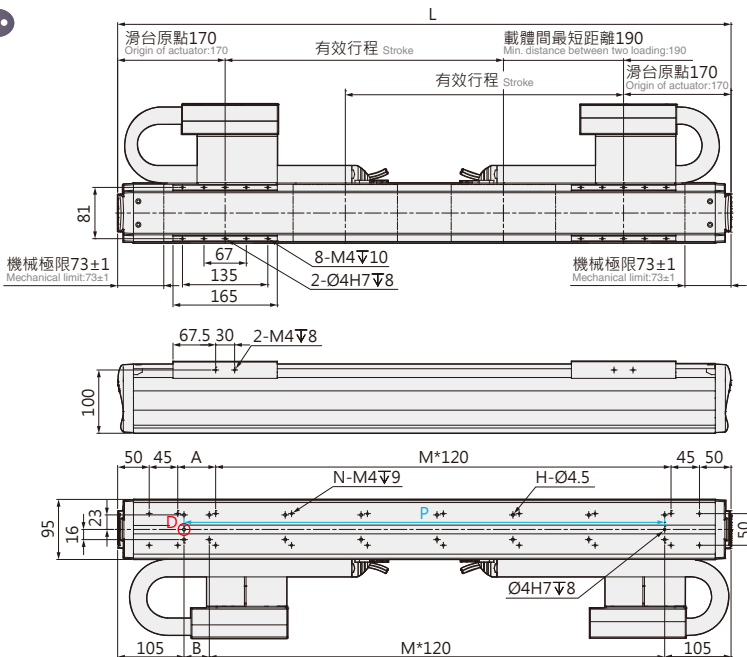
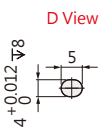
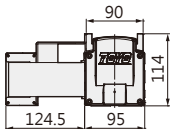
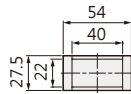
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B	40	100	40	100	40	100	40	100	40	100	40	100	40	100	40
P	280	340	400	460	520	580	640	700	760	820	880	940	1000	1060	1120
M	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
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H	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22
KG	9.2	9.9	10.5	11.2	11.8	12.5	13.1	13.8	14.4	15.1	15.7	16.4	17	17.7	18.3

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Sectional view of connecting track



單位 Unit : mm

有效行程 stroke	80	140	200	260	320	380	440	500	560	620	680	740	800
L	610	670	730	790	850	910	970	1030	1090	1150	1210	1270	1330
A	60	120	60	120	60	120	60	120	60	120	60	120	60
B	40	100	40	100	40	100	40	100	40	100	40	100	40
P	400	460	520	580	640	700	760	820	880	940	1000	1060	1120
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KG	15.2	15.8	16.4	17	17.6	18.2	18.8	19.4	20	20.6	21.2	21.8	22.4