GTY8

螺桿驅動 Ball Screw Drive

免費服務專線 Toll-Free Number：大陸 China 400-875-0009 台灣 Taiwan 0800-800-893

最大行程 Maximum Stroke 800mm | 最高速度 Maximum Speed 1000mm/s | 馬達容量 Motor Output 200W | 滾珠螺桿 Ball Screw ∅16mm

型號表示方式 Ordering Method

GTY8 - L10 - 100 - BC - M20B - C4 - 0001

- GTY8 — 本體型號 Model
- L10 — 螺桿導程 Ball Screw Lead
- 100 — 行程 Stroke
- BC — 馬達位置 Motor Position
- M20B — 馬達廠牌、功率 Motor Brand、Power Output
- C4 — 原點感應器 Home Sensor
- 0001 — 特注式樣 Customization Order No.

螺桿導程 Ball Screw Lead

5	5mm
10	10mm
20	20mm

行程 Stroke

50-800mm
間隔50 50 mm Pitch

馬達位置 Motor Position

BC	馬達外露 Motor Exposed
BM	馬達下折 Motor Bottom Side
BL	馬達左折 Motor Left Side
BR	馬達右折 Motor Right Side

馬達廠牌、功率 Motor Brand、Power Output

M	三菱 Mitsubishi	05	-	B
P	松下 Panasonic	10	-	
Y	安川 Yaskawa	20	200W	
T	台達 Delta	40	-	

*若無煞車則不表示。
If No Brake,No Description.

原點感應器 Home Sensor

外掛型 Outside	
C	馬達側 Motor Side
D	反馬達側 Opposite Motor Side
無 SENSOR No Sensor	
E	無 SENSOR No Sensor

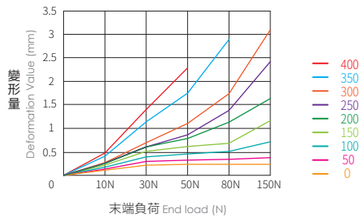
端點極限感應器 Limit Sensor

外掛型 Outside	
3	1只 1 Pc
4	2只 2 Pc
無 SENSOR No Sensor	
5	無 SENSOR No Sensor

基本仕樣 Specification

規格 Spec	位置重複精度 Repeatability (mm)		±0.01		
	螺桿導程 Ball Screw Lead (mm)		5	10	20
	最高速度 Maximum Speed (mm/s)※1		250	500	1000
	最大可搬重量 Maximum Payload	水平使用 Horizontal (kg) (註1)	50	30	18
		垂直使用 Vertical (kg)	15	8	3
	定格推力 Rated Thrust (N)		683	341	174
	標準行程 Stroke / Pitch (mm)※2		50-800mm/50 間隔 50 mm Pitch		
部品 Parts	AC伺服馬達容量 AC Servo Motor Output (W)		200		
	滾珠螺桿外徑 Ball Screw Ø (mm)		C7 ϕ 16		
	連軸器 Coupling (mm)		10X14/11 (註2)		
	原點感應器 Home Sensor	外掛 Outside	CS-6T (NPN)		

出力軸變形量 Shaft Output Deformation Value

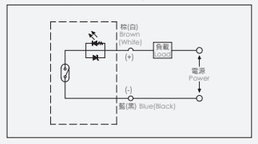


※此圖表為參考值。
This form is only reference values.

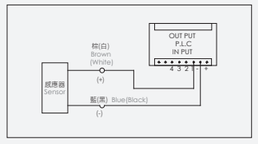
※1 馬達加減速設定 0.2 秒。
Acceleration and deacceleration value is set 0.2 second.
※2 行程超過 750 時，會產生螺桿偏擺震動，此時請將速度調降。詳細請參考 P69 頁說明。
When the stroke is over 750mm, the run-out of the ballscrew will occur. We recommend to low down the working speed under this circumstances. Please refer to P69 for details.
註1: 此荷重條件外部需搭配輔助滑軌以承受徑向負載。
If payload is near maximum, it requires to collocate externally with auxiliary guideway for bearing radial load.
註2: 使用Panasonic 200W馬達時,馬達軸心為ϕ11;其他廠牌,馬達軸心為ϕ14。
Motor (200W) Shaft Diameter: Panasonic: 11mm; Other: 14mm.

感應器接線圖<原點極端點> Sensor Layout

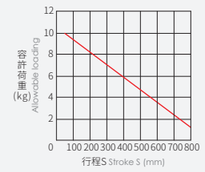
一般性負載：如繼電器或其它之電阻性負載
General load : Such as relay or other resistive load

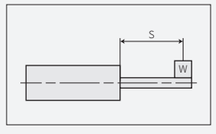


可程式控制器接線圖
Programmable controller connection diagram



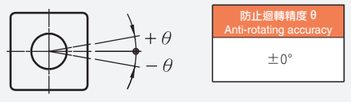
允許安裝負載 Allowable installation load





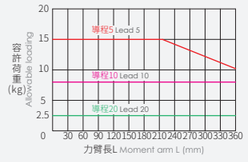
※無外部輔助機構,負載延伸距離0。
No external auxiliary mechanism, extension distance of load = 0.

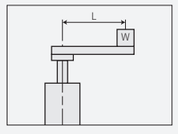
出力桿的防止迴轉精度 Anti-rotating Accuracy of Rod



※使用時請避免活塞桿承受迴轉扭力，因為有可能會造成防轉塊變形，導致自動開關反應異常，內部滑軌變形，進而造成增加作動阻抗。
Avoid using the electric actuator in such a way that rotational torque would be applied to the piston rod. This may cause deformation of the Anti-rotating guide, abnormal responses of the auto switch, play in the internal guide or an increase in the sliding resistance.

垂直安裝負載 Load in vertical installation





※計算條件:3000rpm/min , 加減速0.2s。
Calculation conditions: 3000 rpm / min, acceleration and deceleration: 0.2s.

搭配伺服馬達一覽表 Suitable Motor Brand

廠牌 Brand	馬達記號 Mark	煞車有無 Brake	馬達容量 Watt	電源電壓 AC-Voltage	伺服馬達型號 Motor Model	驅動器型號 Driver Model
三菱 Mitsubishi	M	無煞車(水平仕樣) No Brake (Horizontal Type)	200	220	HG-KR23	MR-J4-20A
		有煞車(垂直仕樣) With Brake (Vertical Type)	200	220	HG-KR23B	MR-J4-20A
松下 Panasonic	P	無煞車(水平仕樣) No Brake (Horizontal Type)	200	220	MHMD022G1U	MADHT1507
		有煞車(垂直仕樣) With Brake (Vertical Type)	200	220	MHMD022G1V	MADHT1507
台達 Delta	T	無煞車(水平仕樣) No Brake (Horizontal Type)	200	220	ECMA-C20602ES	ASD-B20221-B
		有煞車(垂直仕樣) With Brake (Vertical Type)	200	220	ECMA-C20602FS	ASD-B20221-B

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Ball Screw Drive

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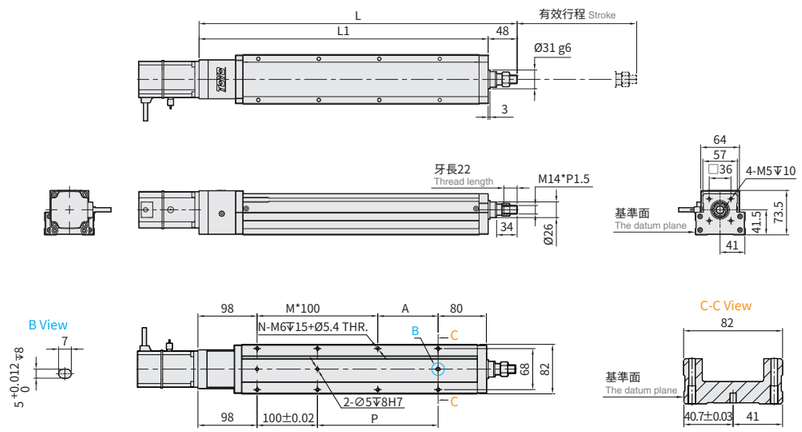
BC 馬達外露 Motor Exposed

2D CAD 3D CAD

● CAD圖面可至www.toyorobot.com下載 ●
Please download the CAD file from TOYO's website: www.toyorobot.com

(單位 Unit : mm)



有效行程 Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	376	426	476	526	576	626	676	726	776	826	876	926	976	1026	1076	1126
L1	328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
KG	4.06	4.44	4.85	5.15	5.50	5.83	6.15	6.50	6.79	7.12	7.56	7.86	8.27	8.56	8.80	9.11

BL 馬達左折 Motor Left Side

2D CAD 3D CAD

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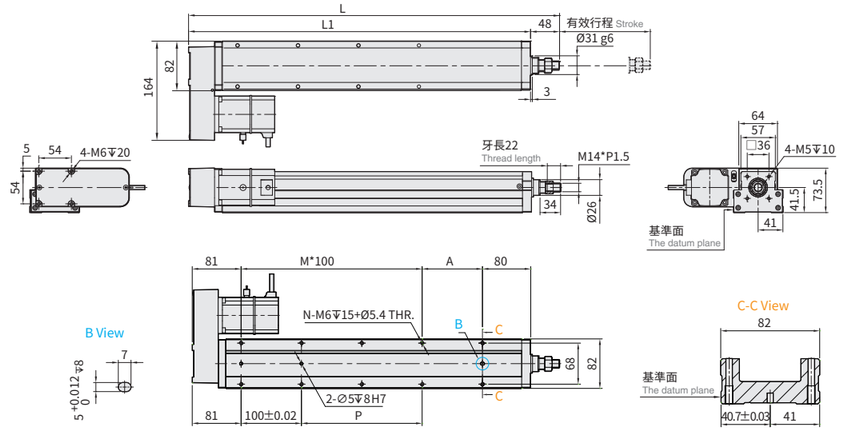
(單位 Unit : mm)



有效行程 Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109
L1	311	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
KG	4.16	4.54	4.95	5.30	5.60	5.93	6.25	6.60	6.89	7.22	7.66	7.96	8.37	8.66	8.90	9.21

BM 馬達下折 Motor Bottom Side

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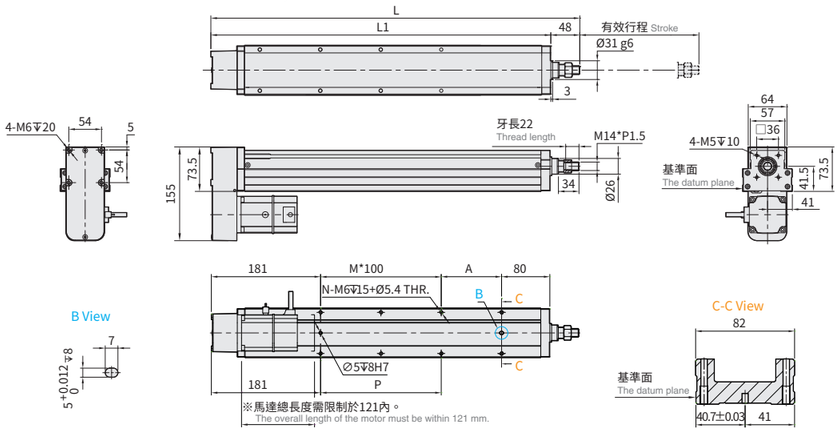
(單位 Unit : mm)



有效行程 Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109
L1	311	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
KG	4.16	4.54	4.95	5.30	5.60	5.93	6.25	6.60	6.89	7.22	7.66	7.96	8.37	8.66	8.90	9.21

※馬達下折時，若選用煞車馬達，或是超出馬達總長度限制時無法套用標準 PIN 孔，如有需求請洽我司業務。
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.

BR 馬達右折 Motor Right Side

2D CAD 3D CAD

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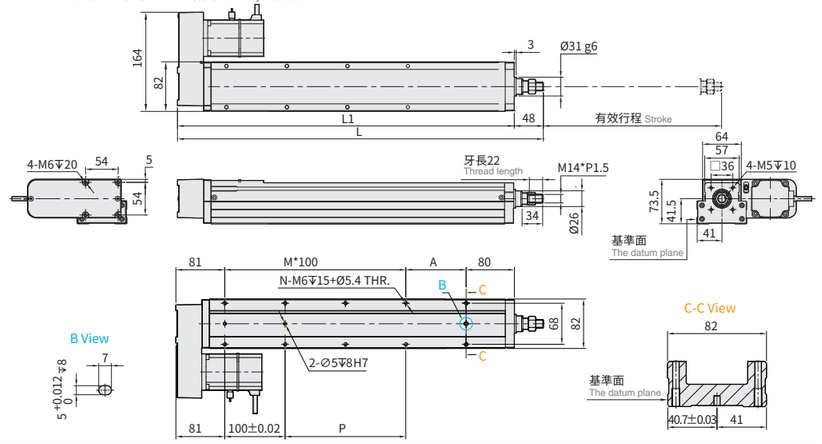

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A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
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GTY8

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型號表示方式 Ordering Method

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螺桿導程 Ball Screw Lead

5	5mm
10	10mm
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行程 Stroke

50-800mm
間隔50 50 mm Pitch

馬達位置 Motor Position

BC	馬達外露 Motor Exposed
BM	馬達下折 Motor Bottom Side
BL	馬達左折 Motor Left Side
BR	馬達右折 Motor Right Side

馬達廠牌、功率 Motor Brand、Power Output

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

*若無煞車則不表示。
If No Brake,No Description.

原點感應器 Home Sensor

外掛型 Outside	
C	馬達側 Motor Side
D	反馬達側 Opposite Motor Side
無 SENSOR No Sensor	
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端點極限感應器 Limit Sensor

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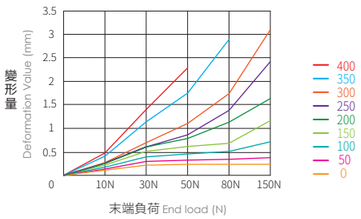
	最大可搬重量 Maximum Payload	水平使用 Horizontal (kg) (註1)	50	30	18
		垂直使用 Vertical (kg)	15	8	3
	定格推力 Rated Thrust (N)		1388	694	347
	標準行程 Stroke / Pitch (mm)※2		50-800mm/50 間隔 50 mm Pitch		
部品 Parts	AC伺服馬達容量 AC Servo Motor Output (W)		400		
	滾珠螺桿外徑 Ball Screw Ø (mm)		C7 ϕ 16		
	連軸器 Coupling (mm)		10X14(註2)		
	原點感應器 Home Sensor	外掛 Outside	CS-6T (NPN)		

出力軸變形量 Shaft Output Deformation Value



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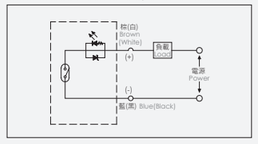
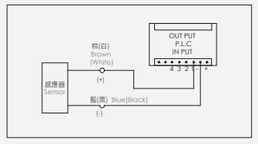
註2: 使用Panasonic 200W馬達時,馬達軸心為ϕ11;其他廠牌,馬達軸心為ϕ14。
Motor (200W) Shaft Diameter: Panasonic: 11mm; Other: 14mm.

感應器接線圖<原點極端點> Sensor Layout

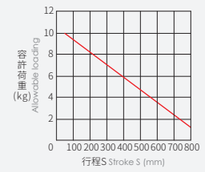
一般性負載：如繼電器或其它之電阻性負載
General load : Such as relay or other resistive load

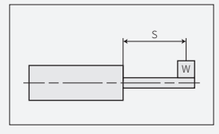


可程式控制器接線圖
Programmable controller connection diagram



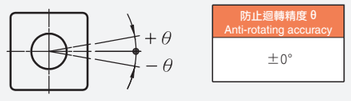
允許安裝負載 Allowable installation load





※無外部輔助機構,負載延伸距離0。
No external auxiliary mechanism, extension distance of load = 0.

出力桿的防止迴轉精度 Anti-rotating Accuracy of Rod



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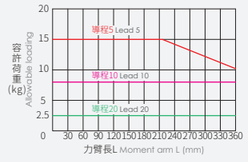
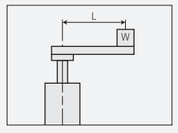
Avoid using the electric actuator in such a way that rotational torque would be applied to the piston rod. This may cause deformation of the Anti-rotating guide, abnormal responses of the auto switch, play in the internal guide or an increase in the sliding resistance.

垂直安裝負載 Load in vertical installation





※計算條件:3000rpm/min , 加減速0.2s。
Calculation conditions: 3000 rpm / min, acceleration and deceleration: 0.2s.

搭配伺服馬達一覽表 Suitable Motor Brand

廠牌 Brand	馬達記號 Mark	煞車有無 Brake	馬達容量 Watt	電源電壓 AC-Voltage	伺服馬達型號 Motor Model	驅動器型號 Driver Model
三菱 Mitsubishi	M	無煞車(水平仕樣) No Brake (Horizontal Type)	400	220	HG-KR43	MR-J4-40A
		有煞車(垂直仕樣) With Brake (Vertical Type)	400	220	HG-KR43B	MR-J4-40A
松下 Panasonic	P	無煞車(水平仕樣) No Brake (Horizontal Type)	400	220	MHMD042G1U	MBDHT2510
		有煞車(垂直仕樣) With Brake (Vertical Type)	400	220	MHMD042G1V	MBDHT2510
台達 Delta	T	無煞車(水平仕樣) No Brake (Horizontal Type)	400	220	ECMA-C20604ES	ASD-B20421-B
		有煞車(垂直仕樣) With Brake (Vertical Type)	400	220	ECMA-C20604FS	ASD-B20421-B

GTY8

螺桿驅動 Ball Screw Drive

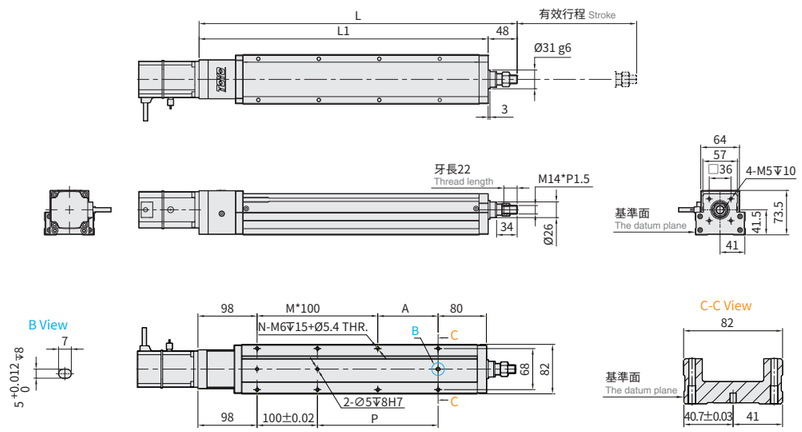
免費服務專線：大陸 China 400-875-0009 台灣 Taiwan 0800-800-893

BC 馬達外露 Motor Exposed

2D CAD 3D CAD

● CAD圖面可至www.toyorobot.com下載 ●
Please download the CAD file from TOYO's website: www.toyorobot.com

(單位 Unit : mm)



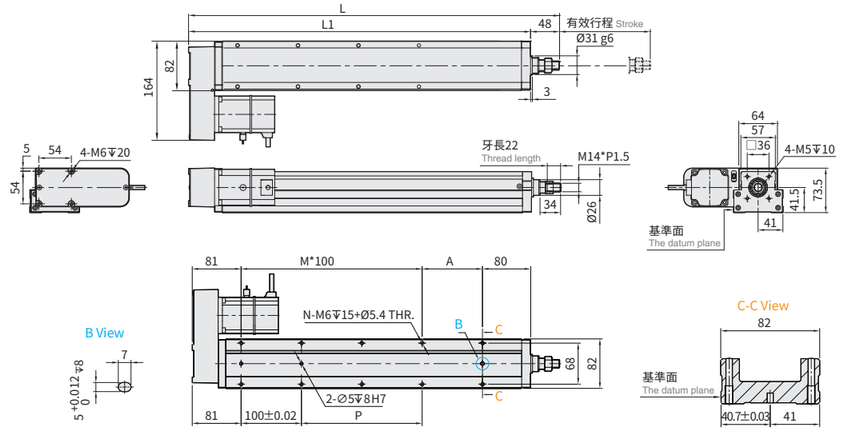
有效行程 Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	376	426	476	526	576	626	676	726	776	826	876	926	976	1026	1076	1126
L1	328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
KG	4.06	4.44	4.85	5.15	5.50	5.83	6.15	6.50	6.79	7.12	7.56	7.86	8.27	8.56	8.80	9.11

BL 馬達左折 Motor Left Side

2D CAD 3D CAD

● CAD圖面可至www.toyorobot.com下載 ●
Please download the CAD file from TOYO's website: www.toyorobot.com

(單位 Unit : mm)



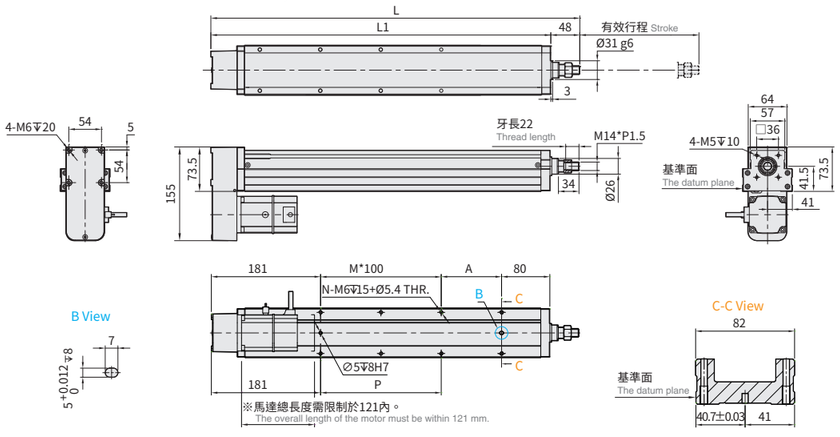
有效行程 Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109
L1	311	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
KG	4.16	4.54	4.95	5.30	5.60	5.93	6.25	6.60	6.89	7.22	7.66	7.96	8.37	8.66	8.90	9.21

BM 馬達下折 Motor Bottom Side

2D CAD 3D CAD

● CAD圖面可至www.toyorobot.com下載 ●
Please download the CAD file from TOYO's website: www.toyorobot.com

(單位 Unit : mm)



※馬達總長度需限制於121內。
The overall length of the motor must be within 121 mm.

有效行程 Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109
L1	311	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
KG	4.16	4.54	4.95	5.30	5.60	5.93	6.25	6.60	6.89	7.22	7.66	7.96	8.37	8.66	8.90	9.21

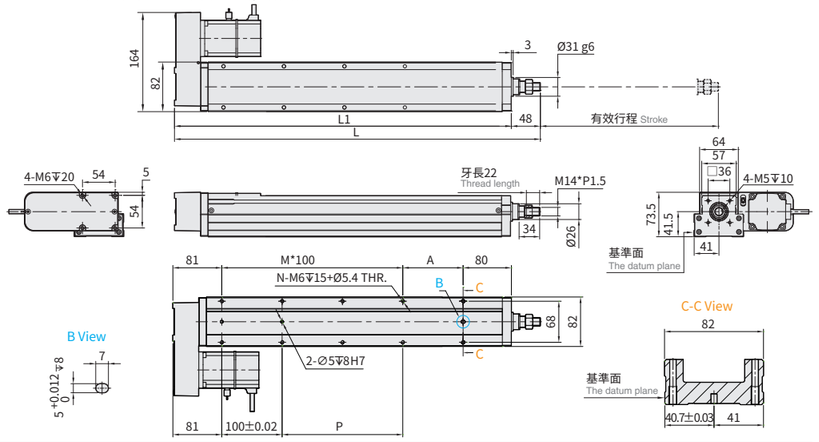
※馬達下折時，若選用煞車馬達，或是超出馬達總長度限制時無法套用標準 PIN 孔，如有需求請洽我司業務。
When motor with brake assembled on lower side, or the total length over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.

BR 馬達右折 Motor Right Side

2D CAD 3D CAD

● CAD圖面可至www.toyorobot.com下載 ●
Please download the CAD file from TOYO's website: www.toyorobot.com

(單位 Unit : mm)



有效行程 Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109
L1	311	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
KG	4.16	4.54	4.95	5.30	5.60	5.93	6.25	6.60	6.89	7.22	7.66	7.96	8.37	8.66	8.90	9.21