


# CGTH

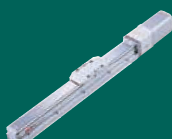
## 軌道內嵌式電動滑台

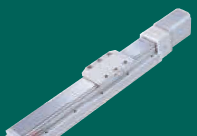
### Integrated Linear Bearings Servo Cylinder-Slider Type

#### Contents

小型 SMALL		本體寬幅 30mm Width 最大行程 500mm ..... 123 Max. stroke 連續可搬重量 13kg Continuous payload
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小型 SMALL		本體寬幅 44mm Width 最大行程 1000mm ..... 129 Max. stroke 連續可搬重量 25kg Continuous payload
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小型 SMALL		本體寬幅 54mm Width 最大行程 1050mm ..... 135 Max. stroke 連續可搬重量 30kg Continuous payload
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小型 SMALL		本體寬幅 82mm Width 最大行程 1250mm ..... 141 Max. stroke 連續可搬重量 30kg Continuous payload
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# 規格索引

## Spec Index

### CGTH 軌道內嵌式小型電動缸 - 滑台式 CGTH Integrated Linear Bearings Servo Cylinder-Slider Type

使用環境 Environment	傳動方式 Driven Mode	仕樣 Specification	馬達尺寸 Motor dimension (mm)	本體寬幅 Width (mm)	位置重複精度 Repeatability(mm)	螺桿規格 Ball Screw Spec			最大可搬重量 Maximum Payload(kg)		最高速度 *1 Maximum Speed (mm/s)	
						等級 Accuracy	外徑 Outer Diameter(mm)	導程 Lead(mm)	水平使用 Horizontal	垂直使用 Vertical		
一般環境 Standard	滾珠螺桿 Ball screw	CGTH3	25□	30	±0.005	轉造 Rolled	C7	6	2	13	5	100
									8	10	2	400
		CGTH4	35□	44	±0.005	轉造 Rolled	C7	10	2	25	8	100
									6	20	8	300
									12	12	3.5	600
		CGTH5	42□	54	±0.005	轉造 Rolled	C7	12	2	30	10	100
									5	30	10	250
									10	15	5	500
									20	10	2.5	1000
		CGTH8	42□	82	±0.005	轉造 Rolled	C7	16	5	30	10	250
									10	15	5	500
									20	10	2.5	1000
CGTH5	42□								54	±0.003	研磨 Ground	C5
		5	30	10	250							
		10	15	5	500							
CGTH8	42□	82	±0.005	研磨 Ground	C5	16	5	30	10	250		
							10	15	5	500		
							20	10	2.5	1000		

\*1: 最高速度的使用條件有限制，請參閱各仕樣內頁的速度 - 荷重曲線圖。  
The working condition of max. speed is restricted limited. Please refer to the curve graph of speed and loading in this catalog.

\*2: 標準行程內的黑色數字，代表該行程內可使用的最高安全速度。若超過此速度，機械手可能會有嚴重共振產生。  
The number written in the column means the highest safe speed within stroke.

※ 此表內的速度為無荷重情況下，螺桿可承受的速度。  
If the speed is over the value shown in the chart, the vibration will be caused on the actuator.

※ 此表內的速度為無荷重情況下，螺桿可承受的速度。  
The values in this table represent the maximum linear speed under zero-load conditions.

※ CGTH5/CGTH8 可對應研磨螺桿等級 C5。  
Accuracy grade C5 ground ball screw option available for all CGTH5/CGTH8 linear module models.



# CGTH3



## 螺桿驅動 Ball Screw Drive



**最大行程** Maximum Stroke **500mm**

**最高速度** Maximum Speed **400mm/s**

**馬達尺寸** Motor Dimension **25□mm**

**滾珠螺桿** Ball Screw **Ø6mm**

### 型號表示方式 Ordering Method

## CGTH3 - L2 - 100 - M B - TC100 - 03 - N1 - WR - C4 - A001

#### 本體型號 Model

**螺桿導程**  
Ball Screw Lead

2	2mm
8	8mm

**行程**  
Stroke

50-500mm  
間隔50 50mm Pitch

**是否煞車**  
Brake (Optional)

垂直使用時  
追加內藏式煞車器  
Built-in brake is added  
when vertically used  
\*若無煞車則不表示。  
If No Brake, No Description.

**I/O線種類**  
Kind of I/O Cable

N1 隔離I/O線  
Shielded I/O Cable

\*標配1.5m  
Standard: 1.5m

**接頭型式**  
Connector Type

-	直結型接頭 Straight Connector
WR	90度接頭出線朝右 *1 90° Connector outlet (Right Side)
WL	90度接頭出線朝左 *1 90° Connector outlet (Left Side)
WW	90度接頭出線朝上 *1 90° Connector outlet (Up Side)
WM	90度接頭出線朝下 90° Connector outlet (Down Side)

\*1 馬達方向BM無法選用WW  
馬達方向BL無法選用WR  
馬達方向BR無法選用WL  
詳見尺寸圖  
WW cannot be selected for the motor direction BM  
WL cannot be selected for the motor direction BL  
WL cannot be selected for the motor direction BR  
For details, please refer to the dimension drawing

#### 特注式樣 Customization Order No.

**端點極限感應器**  
Limit Sensor

外掛型	Outside
3	1只 1 Pcs
4	2只 2 Pcs
無 SENSOR	No Sensor
5	無 SENSOR 需求則不表示。 Not indicated if there is no need for a SENSOR.

**電纜線長**  
Cable Length

01	1m
03	3m
05	5m
10	10m
R01	1m 耐繞曲型 1m Flexible cable
R03	3m 耐繞曲型 3m Flexible cable
R05	5m 耐繞曲型 5m Flexible cable
R10	10m 耐繞曲型 10m Flexible cable

\*標配3m  
Standard: 3m

**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 需求則不表示。 Not indicated if there is no need for a SENSOR.

\*選用E5時, 出貨將附上感應片及3組光電固定片。  
When E5 is selected, the sensor flag and 3 brackets of the optical sensor will be provided.

\*選擇行程50mm, 有以下限制:  
When the stroke is 50mm, the sensor installation has the following restrictions:

- 原點與極限帶放置於不同側。  
Home sensor and limit sensor has to be installed on the different side of body.
- 消塵左右兩側皆需安裝感應片。  
Both sides of slider need to install the sensor trigger device.

**馬達位置**  
Motor Position

M	馬達直結 Motor Hidden In
BM	馬達下折 Motor Bottom Side
BR	馬達右折 Motor Right Side
BL	馬達左折 Motor Left Side

**對應控制器**  
Corresponding Controller

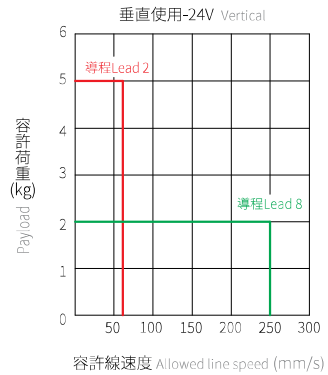
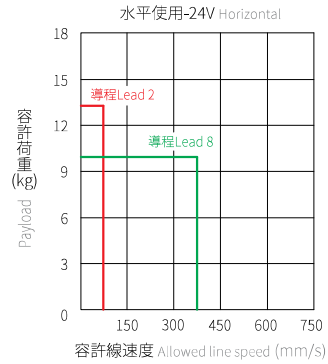
TC100	標準版 Standard
TC100E	EtherCAT版 With EtherCAT Function

基本仕様 Specification

規格 Spec	位置重複精度 Repeatability (mm)	±0.005		
	螺桿導程 Ball Screw Lead (mm)	2	8	
	最高轉速 Maximum rotating speed(rpm)	≦ 3000	≦ 3000	
	最高速度 Maximum Speed (mm/s) ※1※2※3	水平使用 Horizontal (kg)	≦ 100	≦ 400
		垂直使用 Vertical (kg)	≦ 60	≦ 250
	最大可搬重量 Maximum Payload	水平使用 Horizontal (kg)	≦ 13	≦ 10
		垂直使用 Vertical (kg)	≦ 5	≦ 2
	定格推力 Rated Thrust (N)	373	93	
標準行程 Stroke (increments) (mm)	50-500mm / 50 間隔 (50 increments)			
部品 Parts	馬達尺寸 Motor Dimension (mm)	25□		
	滾珠螺桿規格 Ball Screw Spec	C7 Ø6mm		

- ※1 此處最高速度為軟體移動速度設定為 100% 時。  
The maximum speed shown here is when software speed setting is 100%.
- ※2 長行程時，會產生螺桿偏擺，需將速度調降 (線速度請參閱尺寸圖下方表格)  
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.)
- ※3 最高速度及最大荷重無法同時存在，選用前請詳見右側速度 - 荷重曲線圖。  
The maximum speed and maximum payload cannot exist at the same time. Please refer to the speed-load curve diagram on the right side before selection.

速度 - 荷重曲線圖 Speed-Payload Curve Diagram



容許負載力距表 Allowable Overhang

水平安裝 Horizontal Installation (單位 Unit: mm)					壁掛安裝 Wall Installation (單位 Unit: mm)					垂直安裝 Vertical Installation (單位 Unit: mm)				
	A	B	C		A	B	C		A	C		A	C	
導程 2 Lead	10kg	450	14	15	10kg	15	14	450	3kg	57	57	5kg	34	34
	12kg	360	11	12	12kg	12	11	360	-	-	-	-	-	
	13kg	330	10	11	13kg	11	10	330	-	-	-	-	-	
導程 8 Lead	6kg	140	18	19	6kg	19	18	140	1kg	128	128	2kg	64	64
	8kg	103	13	13	8kg	13	13	103	-	-	-	-	-	
	10kg	80	10	10	10kg	10	10	80	-	-	-	-	-	

靜額定扭矩 Static Loading Moment

	(單位 Unit: N.m)
MY	39
MP	39
MR	44

- \* 力距表所表示的數據，代表荷重的重心位置置於單一方容許懸出的長度。  
The data shown in the load moment table represents the allowable overhang length of the center of gravity of the payload in a single direction.
- \* 符合型錄規範的正常使用下，保證壽命為 10000 公里。  
Operation life is 10,000km when the product is using under the specified conditions.
- \* 倒吊使用無法套用標準規範，如有需求請諮詢我司業務。  
Data information is not for ceiling-mount inverse usage. Contact us for the details if you want to apply ceiling-mount inverse usage.
- \* 壽命及力矩是以馬達加減速設定 0.3 秒計算。  
Life and torque are calculated based on the motor acceleration/ deceleration setting of 0.3 seconds.

對應控制器一覽表 Corresponding Controller Chart

外觀 Exterior	控制器型號 Controller Model	控制介面 Control Mode	特點 Features	電氣規格 Electrical Spec	詳細參閱 Reference Page
	TC100	Pulse 控制 Pulse Control Mode	Line driver 200k Hz / Open collector 60k Hz 同時只能使用一種。 Support Line driver and Open collector Max.pulse receiving speed 200k/60k Hz.	控制電路只能使用 24V。 工作電壓 DC24V，額定電流 2A，峰值電流 3A。	P.297
		I/O 控制 I/O Control Mode	利用 I/O 變化，最多可以執行 127 個位置控制。 By I/O control, max. 127 positioning points, can be executed.	工作電壓 DC48V，額定電流 1A，峰值電流 2A。	
		通訊控制 Communication Control Mode	採 Modbus 的 RS485 通訊或 EtherCAT (最大並接 16 台以上) 及一組 mini USB (TOYO-Single 專用) With Modbus RS-485 or EtherCAT (connect over 16 axes in series) and USB module	使用 DC48V 時在相同扭力下，轉速會提升，詳細內容請跟服務窗口連絡。 The voltage of control circuit is 24V only. Operating voltage DC24V, rated current 2A, peak current 3A.	
選配 Optional	EtherCAT 透過 EtherCAT 可串接 16 軸以上 With EtherCAT, connect over 16 axes can be in series.	Operating voltage DC48V, rated current 1A, peak current 2A. When the voltage is DC48V but same torque, the rotation speed will be raised. Please contact your service window to details.			

# CGTH3



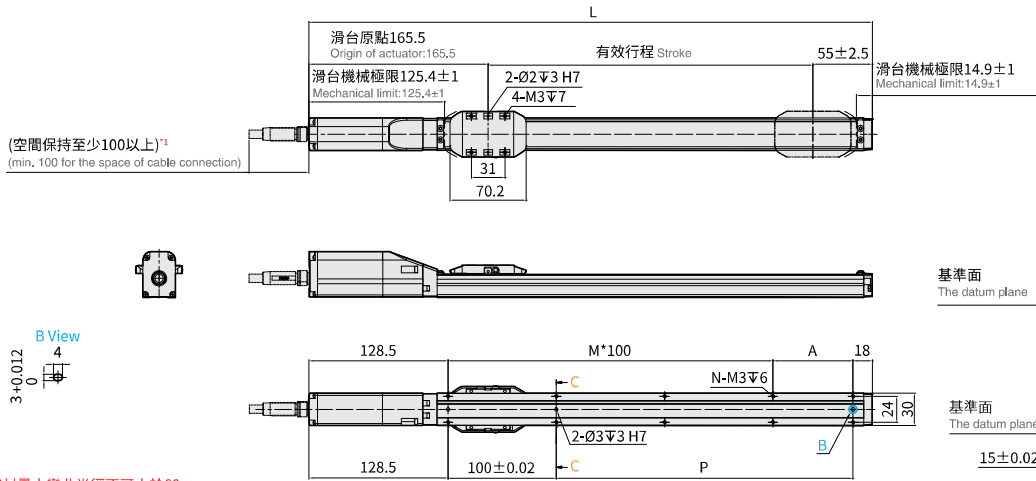
## 螺桿驅動 Ball Screw Drive

### M 馬達直結 Motor Hidden In



• CAD圖面可至 [www.toyorobot.com](http://www.toyorobot.com) 下載 •  
Please do not unload the CAD file from TOYO's website : [www.toyorobot.com](http://www.toyorobot.com)

單位 Unit : mm



\*1 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke		50	100	150	200	250	300	350	400	450	500
極限行程 Limit Stroke (±1)		60	110	160	210	260	310	360	410	460	510
L		270.5	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5
A		24	74	24	74	24	74	24	74	24	74
M		1	1	2	2	3	3	4	4	5	5
N		6	6	8	8	10	10	12	12	14	14
P		24	74	124	174	224	274	324	374	424	474
※1 Weight (kg)		0.56	0.66	0.75	0.84	0.94	1.03	1.14	1.23	1.33	1.44
線速度 Linear Speed mm/s	水平使用 Horizontal (kg)	導程 Lead 2	≤ 100								
		導程 Lead 8	≤ 400		≤ 360		≤ 320		≤ 280		≤ 240
	垂直使用 Vertical (kg)	導程 Lead 2	≤ 60								
		導程 Lead 8	≤ 250			≤ 240			≤ 200		≤ 160

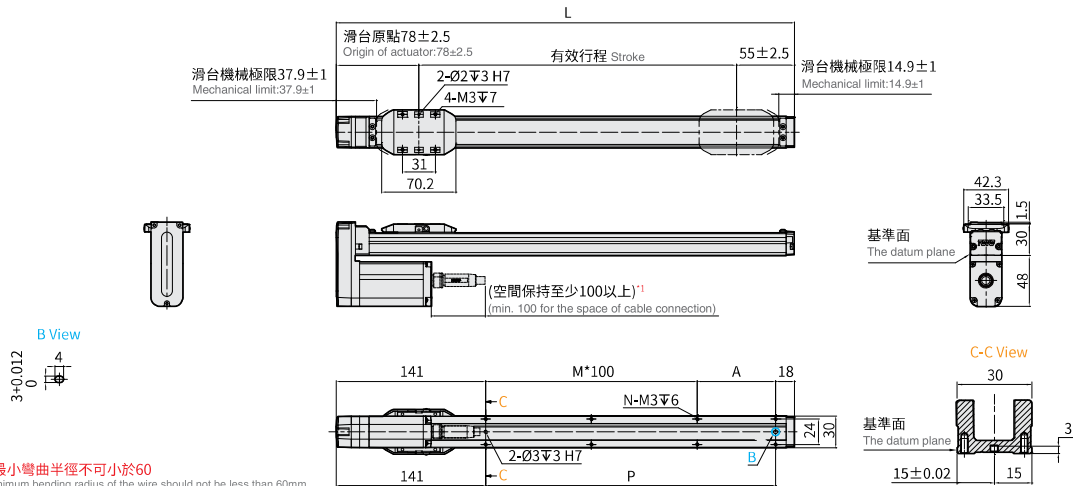
※1 重量包含本體與馬達。 Weight of model with motor.

### BM 馬達下折 Motor Bottom Side



• CAD圖面可至 [www.toyorobot.com](http://www.toyorobot.com) 下載 •  
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單位 Unit : mm



\*1 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke		50	100	150	200	250	300	350	400	450	500
極限行程 Limit Stroke (±1)		60	110	160	210	260	310	360	410	460	510
L		183	233	283	333	383	433	483	533	583	633
A		24	74	24	74	24	74	24	74	24	74
M		0	0	1	1	2	2	3	3	4	4
N		4	4	6	6	8	8	10	10	12	12
P		24	74	124	174	224	274	324	374	424	474
※1 Weight (kg)		0.66	0.75	0.84	0.94	1.03	1.12	1.21	1.3	1.39	1.48
線速度 Linear Speed mm/s	水平使用 Horizontal (kg)	導程 Lead 2	≤ 100								
		導程 Lead 8	≤ 400		≤ 360		≤ 320		≤ 280		≤ 240
	垂直使用 Vertical (kg)	導程 Lead 2	≤ 60								
		導程 Lead 8	≤ 250			≤ 240			≤ 200		≤ 160

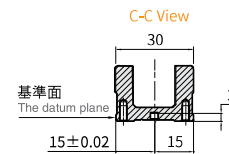
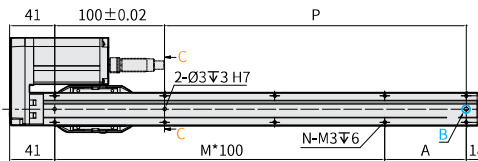
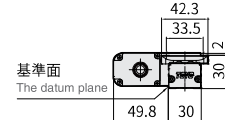
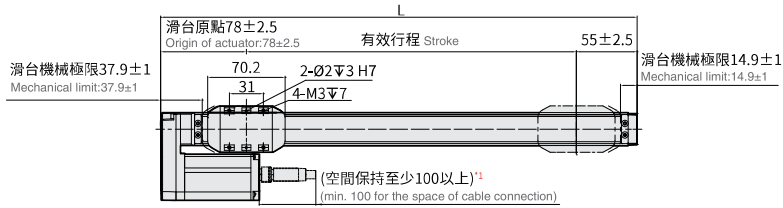
※1 重量包含本體與馬達。 Weight of model with motor.

**BL 馬達左折 Motor Left Side**



CAD圖面可至www.toyorobot.com下載  
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單位 Unit : mm



\*1 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke		50	100	150	200	250	300	350	400	450	500
極限行程 Limit Stroke (±1)		60	110	160	210	260	310	360	410	460	510
L		183	233	283	333	383	433	483	533	583	633
A		24	74	24	74	24	74	24	74	24	74
M		1	1	2	2	3	3	4	4	5	5
N		6	6	8	8	10	10	12	12	14	14
P		24	74	124	174	224	274	324	374	424	474
※1 Weight (kg)		0.66	0.75	0.84	0.94	1.03	1.12	1.21	1.3	1.39	1.48
線速度 Linear Speed mm/s	水平使用 Horizontal (kg)	導程 Lead 2	≤ 100								
		導程 Lead 8	≤ 400		≤ 360		≤ 320		≤ 280		≤ 240
	垂直使用 Vertical (kg)	導程 Lead 2	≤ 60								
		導程 Lead 8	≤ 250			≤ 240			≤ 200		≤ 160

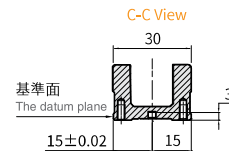
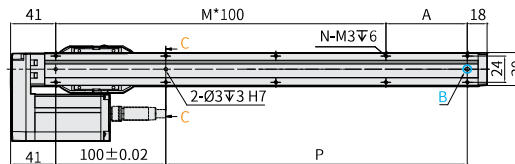
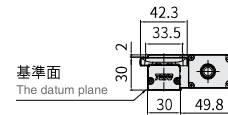
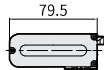
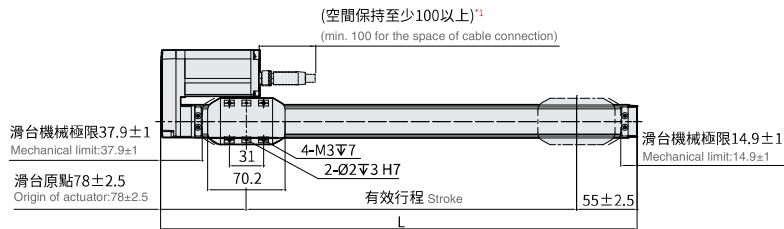
※1 重量包含本體與馬達。 Weight of model with motor.

**BR 馬達右折 Motor Right Side**



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

單位 Unit : mm



\*1 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke		50	100	150	200	250	300	350	400	450	500
極限行程 Limit Stroke (±1)		60	110	160	210	260	310	360	410	460	510
L		183	233	283	333	383	433	483	533	583	633
A		24	74	24	74	24	74	24	74	24	74
M		1	1	2	2	3	3	4	4	5	5
N		6	6	8	8	10	10	12	12	14	14
P		24	74	124	174	224	274	324	374	424	474
※1 Weight (kg)		0.66	0.75	0.84	0.94	1.03	1.12	1.21	1.3	1.39	1.48
線速度 Linear Speed mm/s	水平使用 Horizontal (kg)	導程 Lead 2	≤ 100								
		導程 Lead 8	≤ 400		≤ 360		≤ 320		≤ 280		≤ 240
	垂直使用 Vertical (kg)	導程 Lead 2	≤ 60								
		導程 Lead 8	≤ 250			≤ 240			≤ 200		≤ 160

※1 重量包含本體與馬達。 Weight of model with motor.

# CGTH3



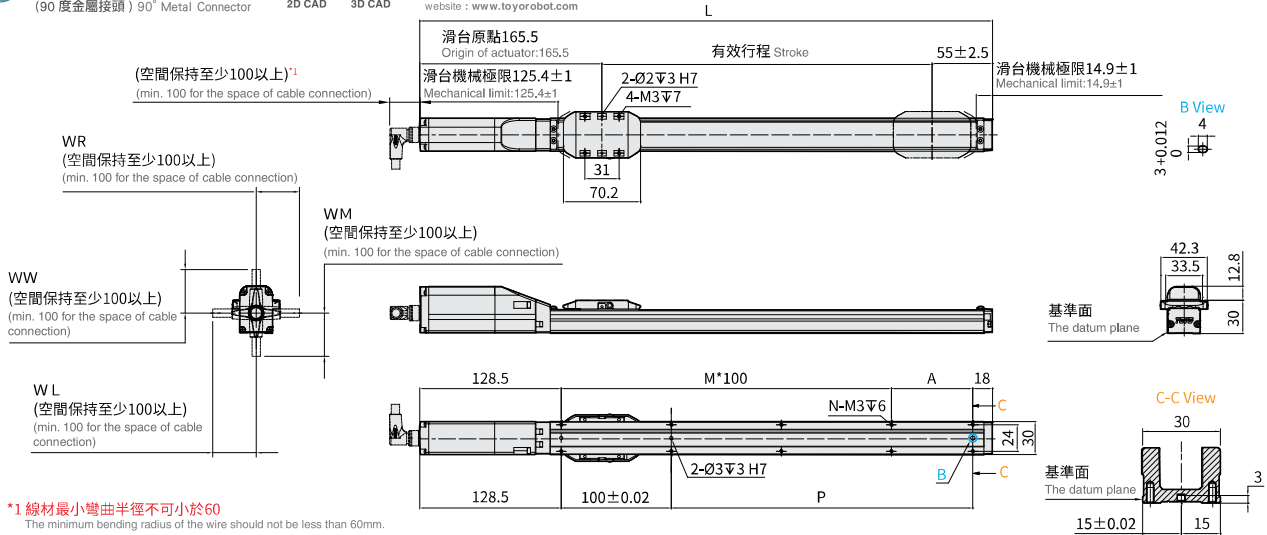
## 螺桿驅動 Ball Screw Drive

### M 馬達直結 Motor Hidden In (90度金屬接頭) 90° Metal Connector



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單位 Unit : mm



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The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke		50	100	150	200	250	300	350	400	450	500
極限行程 Limit Stroke (±1)		60	110	160	210	260	310	360	410	460	510
L		270.5	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5
A		24	74	24	74	24	74	24	74	24	74
M		1	1	2	2	3	3	4	4	5	5
N		6	6	8	8	10	10	12	12	14	14
P		24	74	124	174	224	274	324	374	424	474
※1 Weight (kg)		0.56	0.66	0.75	0.84	0.94	1.03	1.14	1.23	1.33	1.44
線速度 Linear Speed mm/s	水平使用 Horizontal (kg)	導程 Lead 2	≤ 100		≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 40	
		導程 Lead 8	≤ 400		≤ 360	≤ 320	≤ 280	≤ 240	≤ 200	≤ 160	
	垂直使用 Vertical (kg)	導程 Lead 2			≤ 60				≤ 50	≤ 40	
		導程 Lead 8			≤ 250			≤ 240	≤ 200	≤ 160	

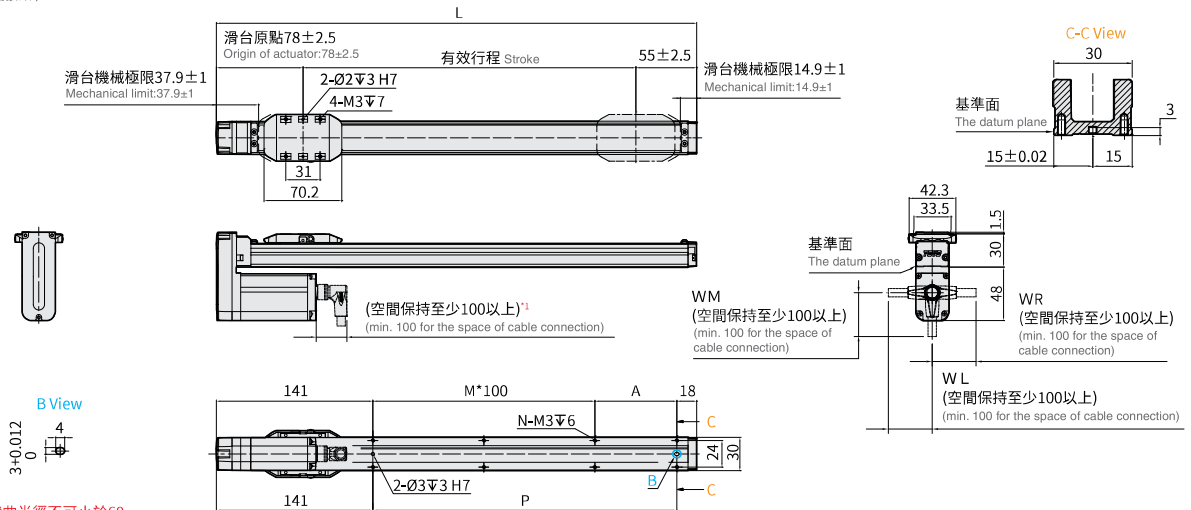
※1 重量包含本體與馬達。 Weight of model with motor.

### BM 馬達下折 Motor Bottom Side (90度金屬接頭) 90° Metal Connector



CAD圖面可至[www.toyorobot.com](http://www.toyorobot.com)下載  
Please do wnload the CAD file from TOYO's website : [www.toyorobot.com](http://www.toyorobot.com)

單位 Unit : mm



\*1 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke		50	100	150	200	250	300	350	400	450	500
極限行程 Limit Stroke (±1)		60	110	160	210	260	310	360	410	460	510
L		183	233	283	333	383	433	483	533	583	633
A		24	74	24	74	24	74	24	74	24	74
M		0	0	1	1	2	2	3	3	4	4
N		4	4	6	6	8	8	10	10	12	12
P		24	74	124	174	224	274	324	374	424	474
※1 Weight (kg)		0.66	0.75	0.84	0.94	1.03	1.12	1.21	1.3	1.39	1.48
線速度 Linear Speed mm/s	水平使用 Horizontal (kg)	導程 Lead 2	≤ 100		≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 40	
		導程 Lead 8	≤ 400		≤ 360	≤ 320	≤ 280	≤ 240	≤ 200	≤ 160	
	垂直使用 Vertical (kg)	導程 Lead 2			≤ 60				≤ 50	≤ 40	
		導程 Lead 8			≤ 250			≤ 240	≤ 200	≤ 160	

※1 重量包含本體與馬達。 Weight of model with motor.

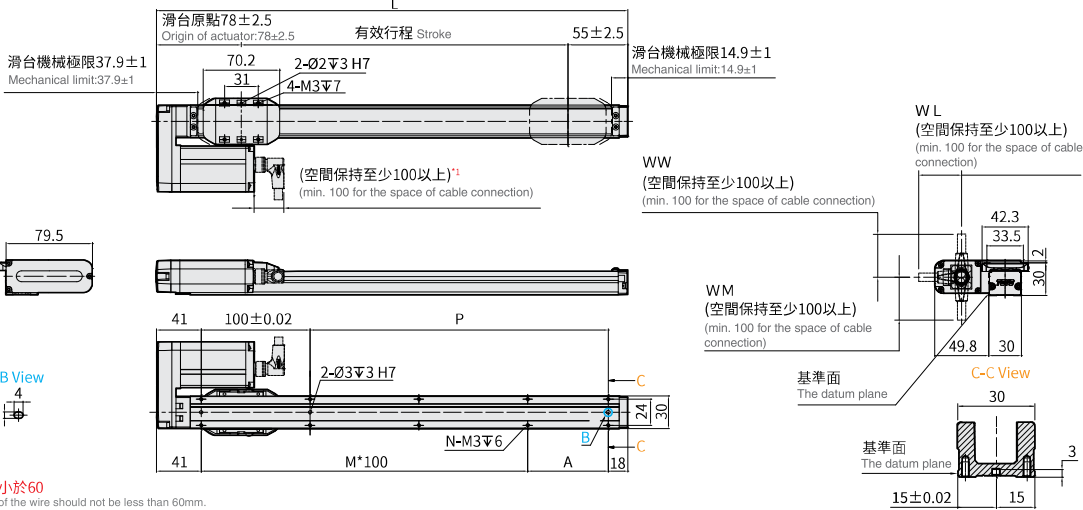


**BL 馬達左折 Motor Left Side**  
(90度金屬接頭) 90° Metal Connector



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

單位 Unit : mm



\*1 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke		50	100	150	200	250	300	350	400	450	500
極限行程 Limit Stroke (±1)		60	110	160	210	260	310	360	410	460	510
L		183	233	283	333	383	433	483	533	583	633
A		24	74	24	74	24	74	24	74	24	74
M		1	1	2	2	3	3	4	4	5	5
N		6	6	8	8	10	10	12	12	14	14
P		24	74	124	174	224	274	324	374	424	474
※1 Weight (kg)		0.66	0.75	0.84	0.94	1.03	1.12	1.21	1.3	1.39	1.48
線速度 Linear Speed mm/s	水平使用 Horizontal (kg)	導程 Lead 2	≤ 100		≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 40	
		導程 Lead 8	≤ 400		≤ 360	≤ 320	≤ 280	≤ 240	≤ 200	≤ 160	
	垂直使用 Vertical (kg)	導程 Lead 2			≤ 60				≤ 50	≤ 40	
		導程 Lead 8			≤ 250			≤ 240	≤ 200	≤ 160	

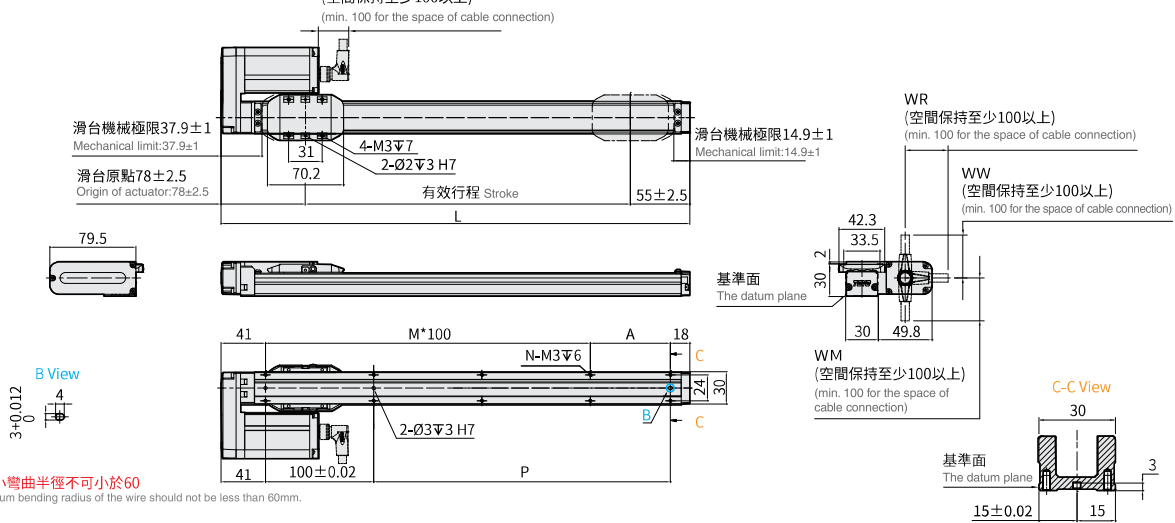
※1 重量包含本體與馬達。 Weight of model with motor.

**BR 馬達右折 Motor Right Side**  
(90度金屬接頭) 90° Metal Connector



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

單位 Unit : mm



\*1 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke		50	100	150	200	250	300	350	400	450	500
極限行程 Limit Stroke (±1)		60	110	160	210	260	310	360	410	460	510
L		183	233	283	333	383	433	483	533	583	633
A		24	74	24	74	24	74	24	74	24	74
M		1	1	2	2	3	3	4	4	5	5
N		6	6	8	8	10	10	12	12	14	14
P		24	74	124	174	224	274	324	374	424	474
※1 Weight (kg)		0.66	0.75	0.84	0.94	1.03	1.12	1.21	1.3	1.39	1.48
線速度 Linear Speed mm/s	水平使用 Horizontal (kg)	導程 Lead 2	≤ 100		≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 40	
		導程 Lead 8	≤ 400		≤ 360	≤ 320	≤ 280	≤ 240	≤ 200	≤ 160	
	垂直使用 Vertical (kg)	導程 Lead 2			≤ 60				≤ 50	≤ 40	
		導程 Lead 8			≤ 250			≤ 240	≤ 200	≤ 160	

※1 重量包含本體與馬達。 Weight of model with motor.

# CGTH4



## 螺桿驅動 Ball Screw Drive



**最大行程** 1000mm  
Maximum Stroke

**最高速度** 600mm/s  
Maximum Speed

**馬達尺寸** 35□mm  
Motor Dimension

**滾珠螺桿** Ø10mm  
Ball Screw

### 型號表示方式 Ordering Method

## CGTH4 - L2 - 100 - M B - TC100 - 03 - N1 - WR - C4 - A001

**本體型號**  
Model

**螺桿導程**  
Ball Screw Lead

2	2mm
6	6mm
12	12mm

**行程**  
Stroke

50-1000mm
間隔50 50 mm Pitch

**是否煞車**  
Brake (Optional)

垂直使用時  
追加內藏式煞車器  
Built-in brake is added  
when vertically used

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

**I/O線種類**  
Kind of I/O Cable

**N1 隔離I/O線**  
Shielded I/O Cable

\*標配1.5m  
Standard: 1.5m

**接頭型式**  
Connector Type

-	直結型接頭 Straight Connector
WR	90度接頭出線朝右 *1 90° Connector outlet (Right Side)
WL	90度接頭出線朝左 *1 90° Connector outlet (Left Side)
WW	90度接頭出線朝上 *1 90° Connector outlet (Up Side)
WM	90度接頭出線朝下 90° Connector outlet (Down Side)

\*1 馬達方向BM無法選用WW  
馬達方向BL無法選用WR  
馬達方向BR無法選用WL  
詳見尺寸圖

WW cannot be selected for the motor direction BM  
WR cannot be selected for the motor direction BL  
WL cannot be selected for the motor direction BR  
For details, please refer to the dimension drawing

**端點極限感應器**  
Limit Sensor

<b>外掛型</b> Outside	
3	1只 1 Pc
4	2只 2 Pcs
無	無 SENSOR No Sensor
5	無 SENSOR No Sensor

\*若無SENSOR需求則不表示。  
Not indicated if there is no need for a SENSOR.

**馬達位置**  
Motor Position

M	馬達直結 Motor Hidden In
BM	馬達下折 Motor Bottom Side
BR	馬達右折 Motor Right Side
BL	馬達左折 Motor Left Side

**對應控制器**  
Corresponding Controller

TC100	標準版 Standard
TC100E	EtherCAT版 With EtherCAT Function

**電纜線長**  
Cable Length

01	1m
03	3m
05	5m
10	10m
R01	1m耐繞曲型 1m Flexible cable
R03	3m耐繞曲型 3m Flexible cable
R05	5m耐繞曲型 5m Flexible cable
R10	10m耐繞曲型 10m Flexible cable

\*標配3m  
Standard: 3m

**原點感應器**  
Home Sensor

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

\*若無SENSOR需求則不表示。  
Not indicated if there is no need for a SENSOR.

\*選用E5時, 出貨將附上感應片及3組光電固定片。  
When E5 is selected, the sensor flag and 3 brackets of the optical sensor will be provided.

\*選擇行程50時, 有以下限制:  
When the stroke is 50mm, the sensor installation has the following restrictions:

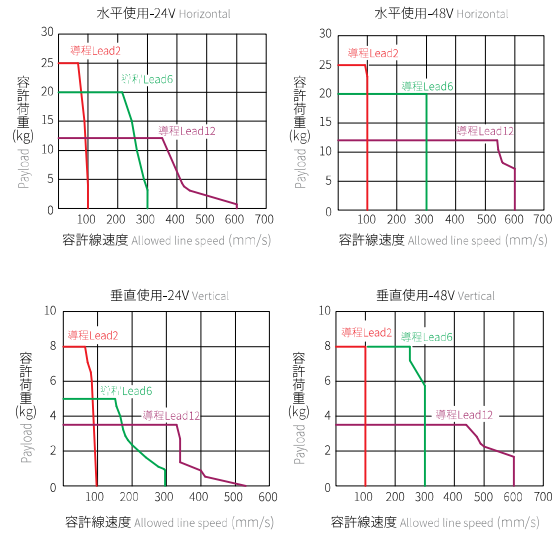
- 原點與極限需放置於不同側。  
Home sensor and limit sensor has to be installed on the different side of body.
- 滑座左右兩側皆需安裝感應片。  
Both sides of slider need to install the sensor trigger device.

基本仕様 Specification

規格 Spec	位置重複精度 Repeatability (mm)	±0.005			
	螺桿導程 Ball Screw Lead (mm)	2	6	12	
	最高轉速 Maximum rotating speed(rpm)	≤ 3000	≤ 3000	≤ 3000	
	最高速度 Maximum Speed (mm/s) ※1※2※3	水平使用 Horizontal (kg)	≤ 100	≤ 300	≤ 600
		垂直使用 Vertical (kg)	≤ 100	≤ 300	≤ 600
	最大可搬重量 Maximum Payload	水平使用 Horizontal (kg)	≤ 25	≤ 20	≤ 12
		垂直使用 Vertical (kg)	≤ 8	≤ 8	≤ 3.5
定格推力 Rated Thrust (N)	1094      365      182				
標準行程 Stroke (increments) (mm)	50-1000mm / 50 間隔 (50 increments)				
部品 Parts	馬達尺寸 Motor Dimension (mm)	35□			
	滾珠螺桿規格 Ball Screw Spec	C7 Ø10mm			

- ※1 此處最高速度為軟體移動速度設定為 100% 時。  
The maximum speed shown here is when software speed setting is 100%.
- ※2 長行程時，會產生螺桿偏擺，需將速度調降 (線速度請參閱尺寸圖下方表格)  
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.)
- ※3 最高速度及最大荷重無法同時存在，選用前請詳見右側速度 - 荷重曲線圖。  
The maximum speed and maximum payload cannot exist at the same time. Please refer to the speed-load curve diagram on the right side before selection.

速度 - 荷重曲線圖 Speed-Payload Curve Diagram



容許負載力距表 Allowable Overhang

水平安裝 Horizontal Installation				壁掛安裝 Wall Installation				垂直安裝 Vertical Installation			
	A	B	C		A	B	C		A	C	
導程 2 Lead	12kg	640	64	94	12kg	93	64	640	3.6kg	246	246
	18kg	400	40	59	18kg	58	40	400	5.4kg	165	165
	25kg	280	28	42	25kg	41	28	280	8kg	116	116
導程 6 Lead	8kg	770	77	107	8kg	107	77	770	3.2kg	215	215
	12kg	480	48	68	12kg	68	48	480	5.4kg	140	140
	20kg	280	28	39	20kg	39	28	280	8kg	99	99
導程 12 Lead	6kg	990	99	135	6kg	135	99	990	1kg	646	646
	9kg	610	61	77	9kg	88	61	610	2.3kg	288	288
	12kg	440	44	55	12kg	63	44	440	3.5kg	190	190

靜額定扭矩 Static Loading Moment

	(單位 Unit : N.m)
MY	79
MP	79
MR	116

- \* 力距表所表示的數據，代表荷重的重心位置於單一方向容許懸出的長度。  
The data shown in the load moment table represents the allowable overhang length of the center of gravity of the payload in a single direction.
- \* 符合型錄規範的正常使用下，保證壽命為 10000 公里。  
Operation life is 10,000km when the product is using under the specified conditions.
- \* 倒吊使用無法套用標準規範，如有需求請洽詢我司業務。  
Data information is not for ceiling-mount inverse usage. Contact us for the details if you want to apply ceiling-mount inverse usage.
- \* 壽命及力矩是以馬達加速減速設定 0.3 秒計算。  
Life and torque are calculated based on the motor acceleration/deceleration setting of 0.3 seconds.

對應控制器一覽表 Corresponding Controller Chart

外觀 Exterior	控制器型號 Controller Model	控制介面 Control Mode	特點 Features	電氣規格 Electrical Spec	詳細參閱 Reference Page
	TC100	<b>Pulse 控制</b> Pulse Control Mode	Line driver 200k Hz / Open collector 60k Hz 同時只能使用一種。 Support Line driver and Open collector Max.pulse receiving speed 200k/60k Hz.	控制電路只能使用 24V。 工作電壓 DC24V，額定電流 2A，峰值電流 3A。	P.297
		<b>I/O 控制</b> I/O Control Mode	利用 I/O 變化，最多可以執行 127 個位置控制。 By I/O control, max. 127 positioning points, can be executed.	工作電壓 DC48V，額定電流 1A，峰值電流 2A。	
		<b>通訊控制</b> Communication Control Mode	採 Modbus 的 RS485 通訊或 EtherCAT (最大並接 16 台以上) 及一組 mini USB (TOYO-Single 專用) With Modbus RS-485 or EtherCAT (connect over 16 axes in series) and USB module	使用 DC48V 時在相同扭力下，轉速會提升， 詳細內容請跟服務窗口連絡。 The voltage of control circuit is 24V only. Operating voltage DC24V, rated current 2A, peak current 3A.	
		<b>選配</b> EtherCAT 透過 EtherCAT 可串接 16 軸以上 With EtherCAT, connect over 16 axes can be in series.	Operating voltage DC48V, rated current 1A, peak current 2A. When the voltage is DC48V but same torque, the rotation speed will be raised. Please contact your service window to details.		

# CGTH4



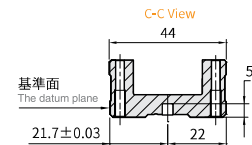
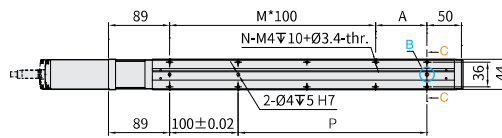
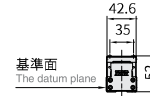
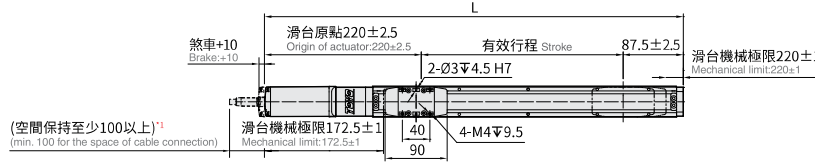
## 螺桿驅動 Ball Screw Drive

### M 馬達直結 Motor Hidden In



CAD圖面可至[www.toyorobot.com](http://www.toyorobot.com)下載  
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單位 Unit : mm



\*1 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020
L	357.5	407.5	457.5	507.5	557.5	607.5	657.5	707.5	757.5	807.5	857.5	907.5	957.5	1007.5	1057.5	1107.5	1157.5	1207.5	1257.5	1307.5
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
※1 Weight (kg)	1.2	1.45	1.7	1.95	2.19	2.44	2.69	2.94	3.18	3.43	3.68	3.93	4.18	4.43	4.68	4.93	5.18	5.43	5.68	5.93
線速度 Linear Speed mm/s	導程 Lead 2											≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 43	≤ 40	≤ 36	≤ 33
	導程 Lead 6											≤ 270	≤ 240	≤ 210	≤ 180	≤ 150	≤ 130	≤ 120	≤ 110	≤ 100
	導程 Lead 12											≤ 540	≤ 480	≤ 420	≤ 360	≤ 300	≤ 260	≤ 240	≤ 220	≤ 200

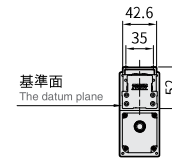
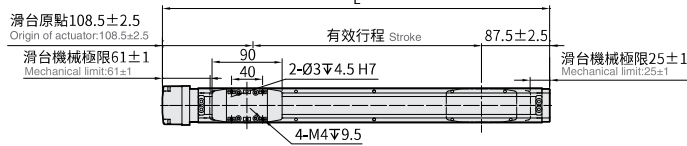
※1 重量包含本體與馬達。Weight of model with motor.  
 ※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
 When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

### BM 馬達下折 Motor Bottom Side



CAD圖面可至[www.toyorobot.com](http://www.toyorobot.com)下載  
Please do wnload the CAD file from TOYO's website : [www.toyorobot.com](http://www.toyorobot.com)

單位 Unit : mm



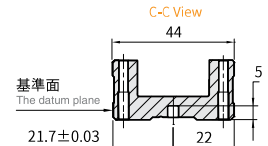
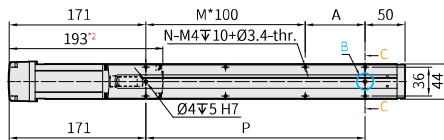
(空間保持至少100以上)<sup>3</sup>  
(min. 100 for the space of cable connection)

\*1 追加煞車時，尺寸及外觀變更如下：  
When the brake is added, dimension and outer side will be changed as below :



\*2 選用追加煞車型號時，請注意底部固定孔是否需要合需求。  
When choosing brake, please check if the fixed holes match demand.

\*3 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.



有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020
L	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
※1 Weight (kg)	1.46	1.71	1.96	2.2	2.45	2.7	2.95	3.19	3.44	3.69	3.94	4.19	4.44	4.69	4.94	5.19	5.44	5.69	5.94	6.19
線速度 Linear Speed mm/s	導程 Lead 2											≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 43	≤ 40	≤ 36	≤ 33
	導程 Lead 6											≤ 270	≤ 240	≤ 210	≤ 180	≤ 150	≤ 130	≤ 120	≤ 110	≤ 100
	導程 Lead 12											≤ 540	≤ 480	≤ 420	≤ 360	≤ 300	≤ 260	≤ 240	≤ 220	≤ 200

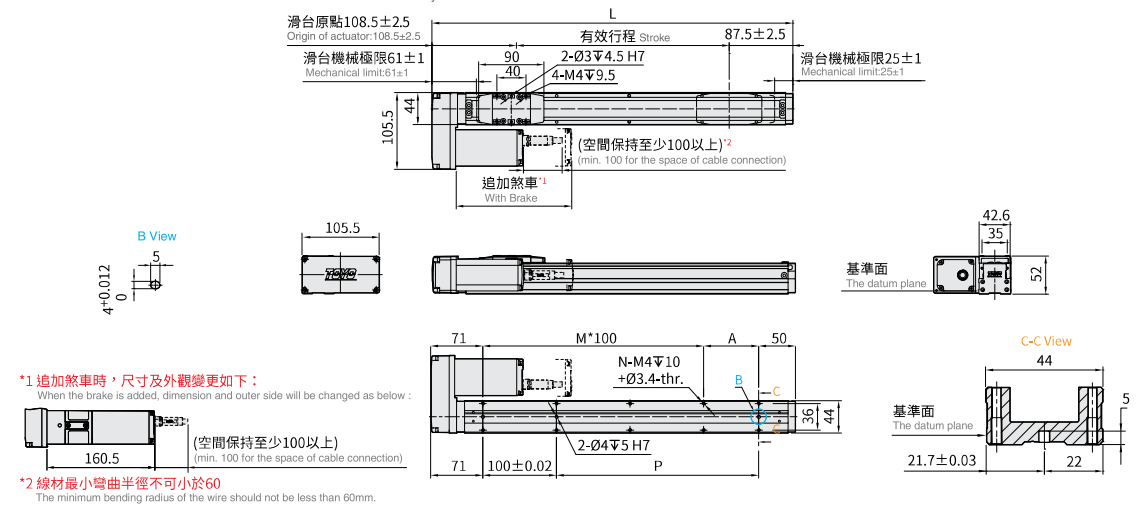
※1 重量包含本體與馬達。Weight of model with motor.  
 ※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
 When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

**BL 馬達左折 Motor Left Side**



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

單位 Unit : mm



有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020
L	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
※1 Weight (kg)	1.46	1.71	1.96	2.2	2.45	2.7	2.95	3.19	3.44	3.69	3.94	4.19	4.44	4.69	4.94	5.19	5.44	5.69	5.94	6.19
線速度 L linear Speed mm/s	導程 Lead 2											≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 43	≤ 40	≤ 36	≤ 33
	導程 Lead 6											≤ 270	≤ 240	≤ 210	≤ 180	≤ 150	≤ 130	≤ 120	≤ 110	≤ 100
	導程 Lead 12											≤ 540	≤ 480	≤ 420	≤ 360	≤ 300	≤ 260	≤ 240	≤ 220	≤ 200

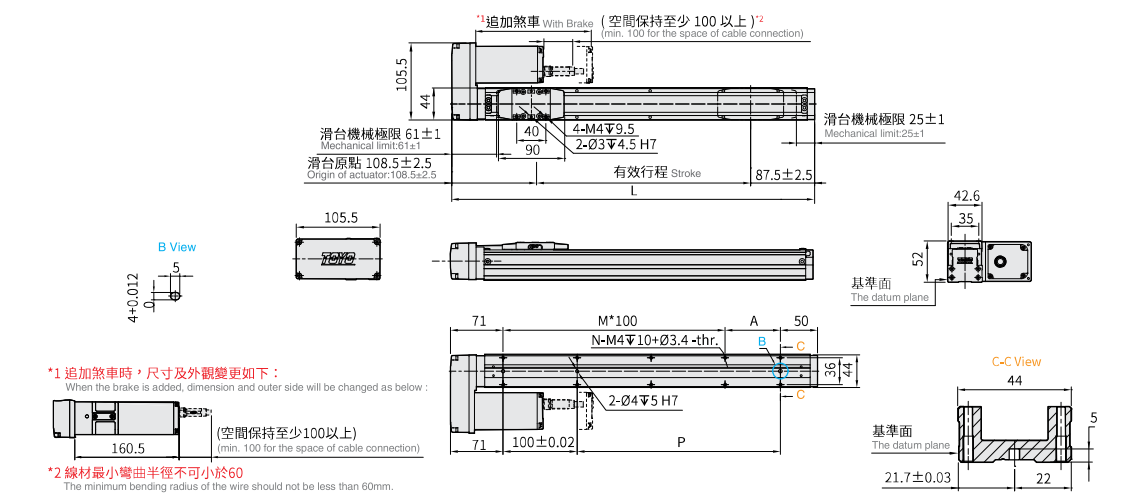
※1 重量包含本體與馬達。 Weight of model with motor.  
 ※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
 When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

**BR 馬達右折 Motor Right Side**



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

單位 Unit : mm



有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020
L	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
※1 Weight (kg)	1.46	1.71	1.96	2.2	2.45	2.7	2.95	3.19	3.44	3.69	3.94	4.19	4.44	4.69	4.94	5.19	5.44	5.69	5.94	6.19
線速度 L linear Speed mm/s	導程 Lead 2											≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 43	≤ 40	≤ 36	≤ 33
	導程 Lead 6											≤ 270	≤ 240	≤ 210	≤ 180	≤ 150	≤ 130	≤ 120	≤ 110	≤ 100
	導程 Lead 12											≤ 540	≤ 480	≤ 420	≤ 360	≤ 300	≤ 260	≤ 240	≤ 220	≤ 200

※1 重量包含本體與馬達。 Weight of model with motor.  
 ※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
 When the stroke is 50mm, 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.

# CGTH4



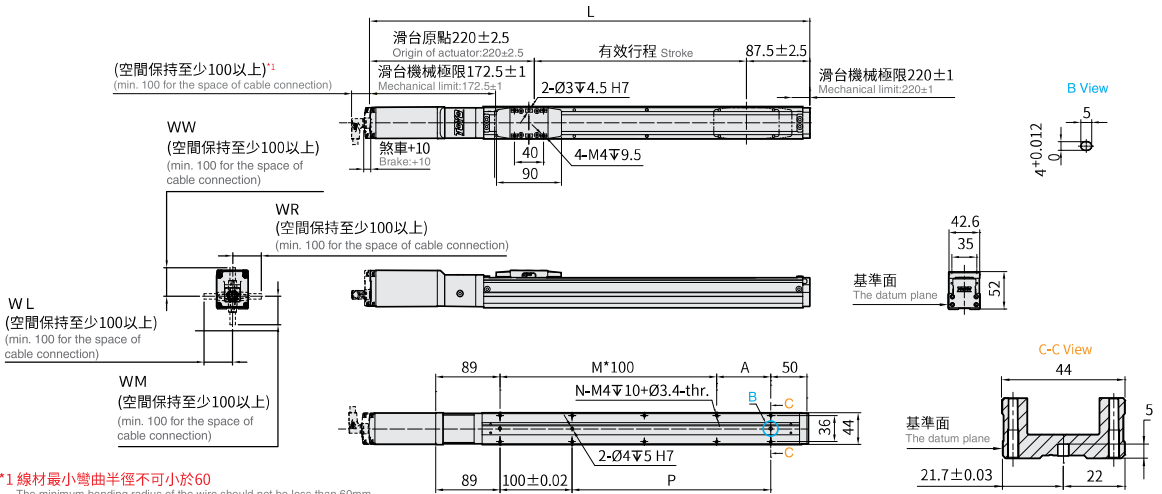
## 螺桿驅動 Ball Screw Drive

**M 馬達直結** Motor Hidden In  
(90度金屬接頭) 90° Metal Connector



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

單位 Unit : mm



\*1 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020
L	357.5	407.5	457.5	507.5	557.5	607.5	657.5	707.5	757.5	807.5	857.5	907.5	957.5	1007.5	1057.5	1107.5	1157.5	1207.5	1257.5	1307.5
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
※1 Weight (kg)	1.2	1.45	1.7	1.95	2.19	2.44	2.69	2.94	3.18	3.43	3.68	3.93	4.18	4.43	4.68	4.93	5.18	5.43	5.68	5.93
線速度 Linear Speed mm/s	導程 Lead 2		≤ 100																	
	導程 Lead 6		≤ 300																	
	導程 Lead 12		≤ 600																	
導程 Lead 2		≤ 90																		
導程 Lead 6		≤ 270																		
導程 Lead 12		≤ 540																		

※1 重量包含本體與馬達。Weight of model with motor.

※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。

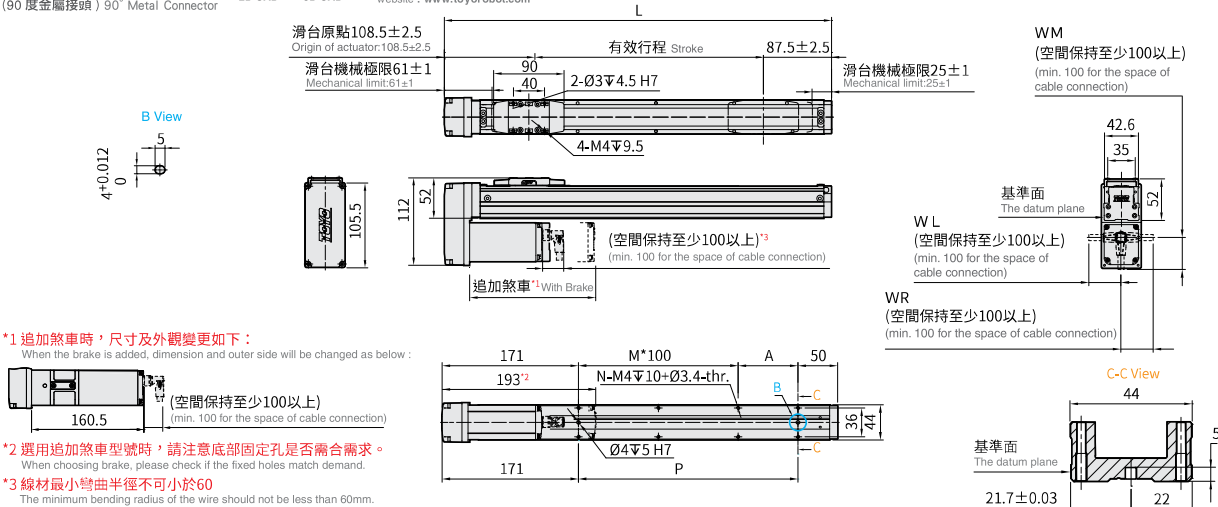
When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

**BM 馬達下折** Motor Bottom Side  
(90度金屬接頭) 90° Metal Connector



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

單位 Unit : mm



\*1 追加煞車時，尺寸及外觀變更如下：  
When the brake is added, dimension and outer side will be changed as below :



\*2 選用追加煞車型號時，請注意底部固定孔是否需合需求。  
When choosing brake, please check if the fixed holes match demand.

\*3 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020
L	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
※1 Weight (kg)	1.46	1.71	1.96	2.2	2.45	2.7	2.95	3.19	3.44	3.69	3.94	4.19	4.44	4.69	4.94	5.19	5.44	5.69	5.94	6.19
線速度 Linear Speed mm/s	導程 Lead 2		≤ 100																	
	導程 Lead 6		≤ 300																	
	導程 Lead 12		≤ 600																	
導程 Lead 2		≤ 90																		
導程 Lead 6		≤ 270																		
導程 Lead 12		≤ 540																		

※1 重量包含本體與馬達。Weight of model with motor.

※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。

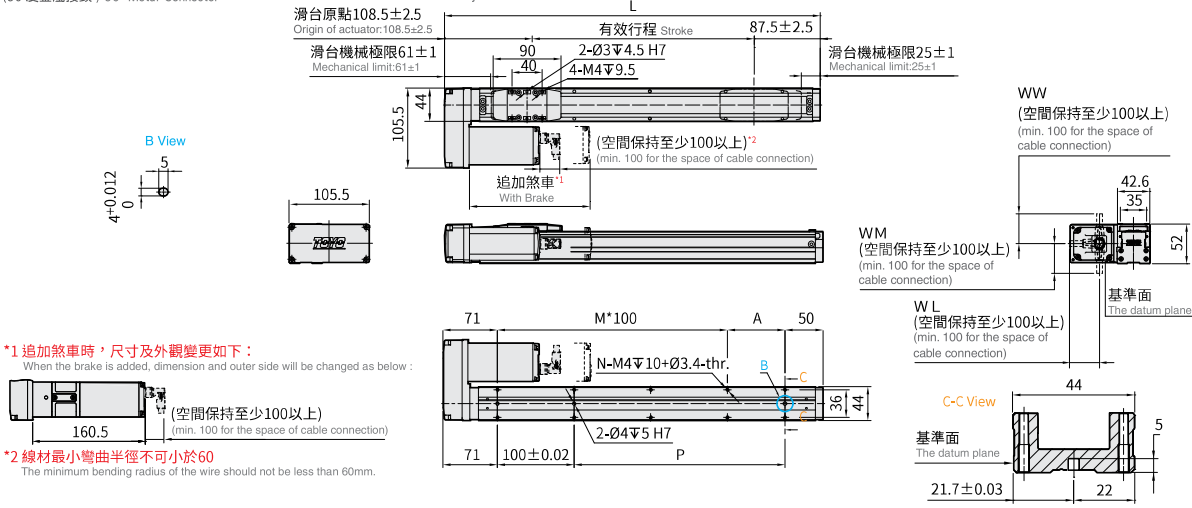
When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

**BL 馬達左折 Motor Left Side**  
(90度金屬接頭) 90° Metal Connector



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

單位 Unit : mm



有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020
L	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
<sup>※1</sup> Weight (kg)	1.46	1.71	1.96	2.2	2.45	2.7	2.95	3.19	3.44	3.69	3.94	4.19	4.44	4.69	4.94	5.19	5.44	5.69	5.94	6.19
線速度 Linear Speed mm/s	導程 Lead 2											≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 44	≤ 40	≤ 36	≤ 33
	導程 Lead 6											≤ 270	≤ 240	≤ 210	≤ 180	≤ 150	≤ 130	≤ 120	≤ 110	≤ 100
	導程 Lead 12											≤ 540	≤ 480	≤ 420	≤ 360	≤ 300	≤ 260	≤ 240	≤ 220	≤ 200

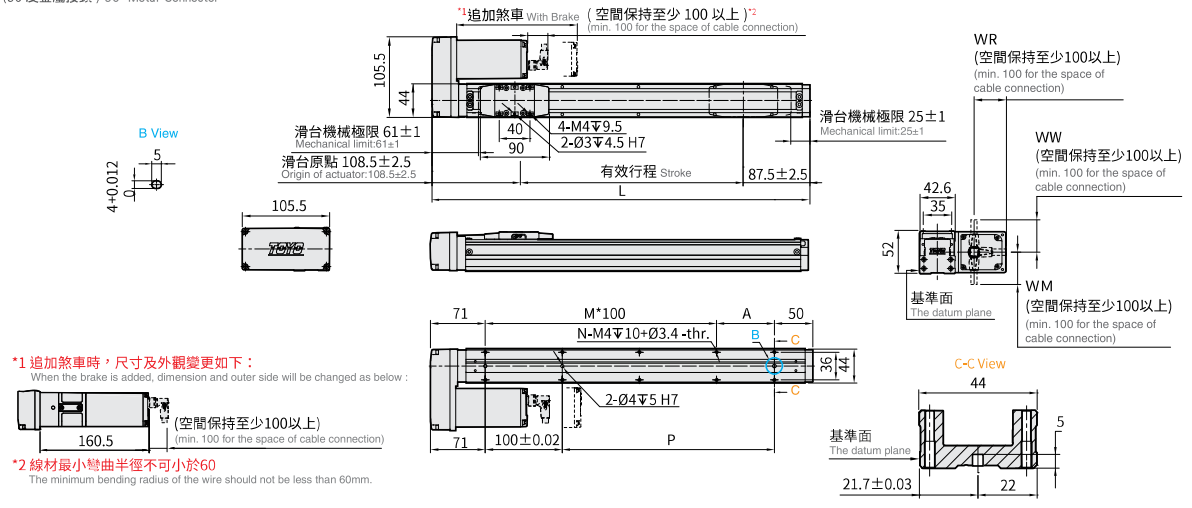
※1 重量包含本體與馬達。Weight of model with motor.  
 ※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
 When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

**BR 馬達右折 Motor Right Side**  
(90度金屬接頭) 90° Metal Connector



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

單位 Unit : mm



有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020
L	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
<sup>※1</sup> Weight (kg)	1.46	1.71	1.96	2.2	2.45	2.7	2.95	3.19	3.44	3.69	3.94	4.19	4.44	4.69	4.94	5.19	5.44	5.69	5.94	6.19
線速度 Linear Speed mm/s	導程 Lead 2											≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 44	≤ 40	≤ 36	≤ 33
	導程 Lead 6											≤ 270	≤ 240	≤ 210	≤ 180	≤ 150	≤ 130	≤ 120	≤ 110	≤ 100
	導程 Lead 12											≤ 540	≤ 480	≤ 420	≤ 360	≤ 300	≤ 260	≤ 240	≤ 220	≤ 200

※1 重量包含本體與馬達。Weight of model with motor.  
 ※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
 When the stroke is 50mm, 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.

# CGTH5



## 螺桿驅動 Ball Screw Drive



**最大行程** 1050mm  
Maximum Stroke

**最高速度** 1000mm/s  
Maximum Speed

**馬達尺寸** 42□mm  
Motor Dimension

**滾珠螺桿** Ø12mm  
Ball Screw

### 型號表示方式 Ordering Method

## CGTH5 - L5 - 100 - MB - TC100 - 03 - N1 - WR - C4 - A001

<p><b>本體型號</b> Model</p> <p><b>螺桿等級</b> Ball Screw Accuracy Grade</p> <p>L 轉造級 Rolled Ballscrews C 研磨級 Ground Ballscrews</p> <p>*選用C研磨級螺桿,有行程限制,詳見基本仕様 C precision-level ground ball screws are not available in all stroke lengths, please consult the model datasheet.</p>	<p><b>螺桿導程</b> Ball Screw Lead</p> <p>2 2mm 5 5mm 10 10mm 20 20mm</p>	<p><b>行程</b> Stroke</p> <p>轉造級 Rolled Ballscrews 50-1050mm</p> <p>研磨級 Ground Ballscrews 50-300mm</p> <p>*間隔50 Pitch 50 mm</p>	<p><b>是否煞車</b> Brake (Optional)</p> <p>垂直使用時 追加內藏式煞車器 Built-in brake is added when vertically used.</p> <p>*若無煞車則不表示。 If No Brake, No Description.</p>	<p><b>I/O線種類</b> Kind of I/O Cable</p> <p>N1 隔離I/O線 Shielded I/O Cable</p> <p>*標配1.5m Standard: 1.5m</p>	<p><b>接頭型式</b> Connector Type</p> <p>- 直結型接頭 Straight Connector</p> <p>WR 90度接頭出線朝右 *1 90° Connector outlet (Right Side)</p> <p>WL 90度接頭出線朝左 *1 90° Connector outlet (Left Side)</p> <p>WW 90度接頭出線朝上 *1 90° Connector outlet (Up Side)</p> <p>WM 90度接頭出線朝下 90° Connector outlet (Down Side)</p> <p>*1 馬達方向BM無法選用WW 馬達方向BL無法選用WR 馬達方向BR無法選用WL 詳見尺寸圖 WW cannot be selected for the motor direction BM WR cannot be selected for the motor direction BL WL cannot be selected for the motor direction BR For details, please refer to the dimension drawing.</p>	<p><b>端點極限感應器</b> Limit Sensor</p> <p>外掛型 Outside</p> <p>3 1只 1 Pc 4 2只 2 Pcs</p> <p>無 SENSOR No Sensor 5 無 SENSOR No Sensor</p> <p>*若無SENSOR需求則不表示。 Not indicated if there is no need for a SENSOR.</p>
<p><b>馬達位置</b> Motor Position</p> <p>M 馬達直結 Motor Hidden In</p> <p>BM 馬達下折 Motor Bottom Side</p> <p>BR 馬達右折 Motor Right Side</p> <p>BL 馬達左折 Motor Left Side</p>	<p><b>對應控制器</b> Corresponding Controller</p> <p>TC100 標準版 Standard</p> <p>TC100E EtherCAT版 With EtherCAT Function</p>	<p><b>電纜線長</b> Cable Length</p> <p>01 1m 03 3m 05 5m 10 10m</p> <p>R01 1m耐繞曲型 1m Flexible cable</p> <p>R03 3m耐繞曲型 3m Flexible cable</p> <p>R05 5m耐繞曲型 5m Flexible cable</p> <p>R10 10m耐繞曲型 10m Flexible cable</p> <p>*標配3m Standard: 3m</p>	<p><b>原點感應器</b> Home Sensor</p> <p>外掛型 Outside</p> <p>C 馬達側 Motor Side</p> <p>D 反馬達側 Opposite Motor Side</p> <p>無 SENSOR No Sensor</p> <p>E 無 SENSOR No Sensor</p> <p>*若無SENSOR需求則不表示。 Not indicated if there is no need for a SENSOR.</p>	<p>*選用E5時,出貨將附上感應片及3組光電固定片。 When E5 is selected, the sensor flag and 3 brackets of the optical sensor will be provided.</p> <p>*選擇行程50時,有以下限制: When the stroke is 50mm, the sensor installation has the following restrictions:</p> <p>1. 原點與極限需放置於不同側。 Home sensor and limit sensor has to be installed on the different side of body.</p> <p>2. 滑座左右兩側皆需安裝感應片。 Both sides of slider need to install the sensor trigger device.</p>		

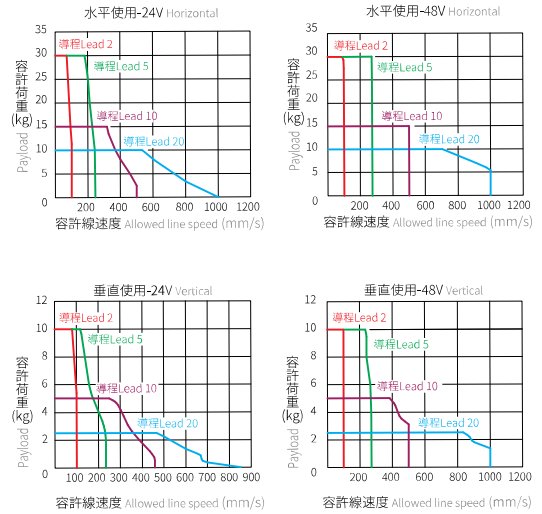


基本仕様 Specification

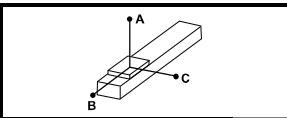
螺桿規格 Spec	螺桿等級代號 Ballscrew Accuracy Grade Code	L		C		
	螺桿等級 Ballscrew Accuracy Grade	C7 轉造 Rolled Ballscrews		C5 研磨 Ground Ballscrews		
	位置重複精度 Repeatability(mm)	±0.005		±0.003		
	標準行程 Stroke Pitch (mm)	50-1050mm / 50 間隔 50mm Pitch		50-300mm / 50 間隔 50mm Pitch		
規格 Spec	螺桿導程 Ball Screw Lead (mm)	2	5	10	20	
	最高轉速 Maximum rotating speed(rpm)	≤ 3000	≤ 3000	≤ 3000	≤ 3000	
	最高速度 Maximum Speed (mm/s) ※1※2※3	水平使用 Horizontal (kg)	≤ 100	≤ 250	≤ 500	≤ 1000
		垂直使用 Vertical (kg)	≤ 100	≤ 250	≤ 500	≤ 1000
	最大可搬重量 Maximum Payload	水平使用 Horizontal (kg)	≤ 30	≤ 30	≤ 15	≤ 10
		垂直使用 Vertical (kg)	≤ 10	≤ 10	≤ 5	≤ 2.5
定格推力 Rated Thrust (N)	1147	459	229	115		
部品 Parts	馬達尺寸 Motor Dimension (mm)	42 □				
	滾珠螺桿規格 Ball Screw Spec	Ø12mm				

- ※1 此處最高速度為軟體移動速度設定為 100% 時。  
The maximum speed shown here is when software speed setting is 100%.
- ※2 長行程時，會產生螺桿偏擺，需將速度調降（線速度請參閱尺寸圖下方表格）  
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.)
- ※3 最高速度及最大荷重無法同時存在，選用前請詳見右側速度 - 荷重曲線圖。  
The maximum speed and maximum payload cannot exist at the same time. Please refer to the speed-load curve diagram on the right side before selection.

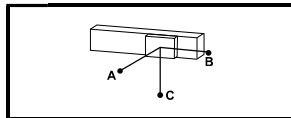
速度 - 荷重曲線圖 Speed-Payload Curve Diagram



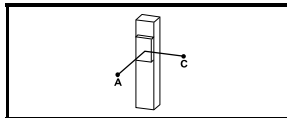
容許負載力距表 Allowable Overhang



(單位 Unit: mm)



(單位 Unit: mm)



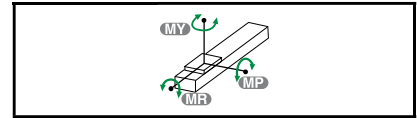
(單位 Unit: mm)

水平安裝 Horizontal Installation		A	B	C
導程 2 Lead	10kg	1290	129	180
	18kg	680	68	95
	30kg	380	38	53
導程 5 Lead	9kg	1140	114	155
	18kg	540	54	74
	30kg	290	29	41
導程 10 Lead	6kg	1414	59	204
	9g	1060	106	139
	15kg	610	61	81
導程 20 Lead	5kg	1660	166	198
	7kg	1200	120	145
	10kg	700	88	112

壁掛安裝 Wall Installation		A	B	C
導程 2 Lead	10kg	180	129	1290
	18kg	95	68	680
	30kg	53	38	380
導程 5 Lead	9kg	155	114	1140
	18kg	74	54	540
	30kg	41	29	290
導程 10 Lead	6kg	204	159	1414
	9g	139	106	1060
	15kg	81	61	610
導程 20 Lead	5kg	198	166	829
	7kg	145	120	660
	10kg	112	88	700

垂直安裝 Vertical Installation		A	C
導程 2 Lead	5.4kg	257	257
	8.1kg	175	175
	10kg	143	143
導程 5 Lead	4.5kg	277	277
	8.1kg	161	161
	10kg	123	123
導程 10 Lead	0.9kg	1120	1120
	2.7kg	392	392
	5kg	217	217
導程 20 Lead	0.9kg	1023	1023
	1.4kg	677	677
	2.5kg	396	396

靜額定扭矩 Static Loading Moment



(單位 Unit: N.m)

MY	103
MP	103
MR	144

- \* 力距表所表示的數據，代表荷重的重心位置於單一方容許懸出的長度。The data shown in the load moment table represents the allowable overhang length of the center of gravity of the payload in a single direction.
- \* 符合型錄規範的正常使用下，保證壽命為 10000 公里。Operation life is 10,000km when the product is using under the specified conditions.
- \* 倒吊使用無法套用標準規範，如有需求請洽詢我業務。Data information is not for ceiling-mount inverse use. Contact us for the details if you want to apply ceiling-mount inverse usage.
- \* 壽命及力距是以馬達加減速設定 0.3 秒計算。Life and torque are calculated based on the motor acceleration/ deceleration setting of 0.3 seconds.

對應控制器一覽表 Corresponding Controller Chart

外觀 Exterior	控制器型號 Controller Model	控制介面 Control Mode	特點 Features	電氣規格 Electrical Spec	詳細參閱 Reference Page
	TC100	Pulse 控制 Pulse Control Mode	Line driver 200k Hz / Open collector 60k Hz 同時只能使用一種。 Support Line driver and Open collector Max.pulse receiving speed 200k/60k Hz.	控制電路只能使用 24V。 工作電壓 DC24V，額定電流 2A，峰值電流 3A。	P.297
		I/O 控制 I/O Control Mode	利用 I/O 變化，最多可以執行 127 個位置控制。 By I/O control, max. 127 positioning points, can be executed.	工作電壓 DC48V，額定電流 1A，峰值電流 2A。	
		通訊控制 Communication Control Mode	採 Modbus 的 RS485 通訊或 EtherCAT (最大並接 16 台以上) 及一組 mini USB (TOYO-Single 專用) With Modbus RS-485 or EtherCAT (connect over 16 axes in series) and USB module	使用 DC48V 時在相同扭力下，轉速會提升，詳細內容請跟服務窗口連絡。 The voltage of control circuit is 24V only. Operating voltage DC24V, rated current 2A, peak current 3A.	
選配 Optional		EtherCAT 透過 EtherCAT 可串接 16 軸以上 With EtherCAT, connect over 16 axes can be in series.	When the voltage is DC48V but same torque, the rotation speed will be raised. Please contact your service window to details.		

# CGTH5



## 螺桿驅動 Ball Screw Drive

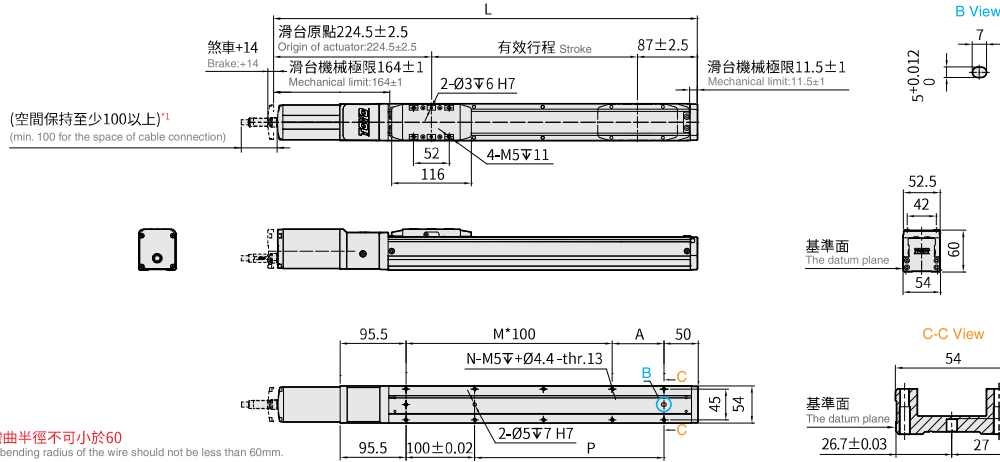
M

馬達直結 Motor Hidden In



● CAD圖面可至 [www.toyorobot.com](http://www.toyorobot.com) 下載 ●  
Please do wnload the CAD file from TOYO's website : [www.toyorobot.com](http://www.toyorobot.com)

單位 Unit : mm



有效行程 Stroke	50 <sup>*2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	
L	361.5	411.5	461.5	511.5	561.5	611.5	661.5	711.5	761.5	811.5	861.5	911.5	961.5	1011.5	1061.5	1111.5	1161.5	1211.5	1261.5	1311.5	1361.5	
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025	
<sup>*1</sup> Weight (kg)	1.97	2.18	2.4	2.62	2.83	3.05	3.27	3.48	3.7	3.92	4.13	4.35	4.57	4.78	5	5.22	5.44	5.66	5.88	6.1	6.32	
線速度 Linear Speed mm/s	導程 Lead 2											≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 46	≤ 40	≤ 36	≤ 33		
	導程 Lead 5											≤ 225	≤ 200	≤ 175	≤ 150	≤ 125	≤ 116	≤ 100	≤ 91	≤ 83		
	導程 Lead 10											≤ 450	≤ 400	≤ 350	≤ 300	≤ 250	≤ 233	≤ 200	≤ 183	≤ 166		
	導程 Lead 20											≤ 900	≤ 800	≤ 700	≤ 600	≤ 500	≤ 466	≤ 400	≤ 366	≤ 333		

<sup>\*1</sup> 重量包含本體與馬達。Weight of model with motor.  
<sup>\*2</sup> 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
When the stroke is 50mm, 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.

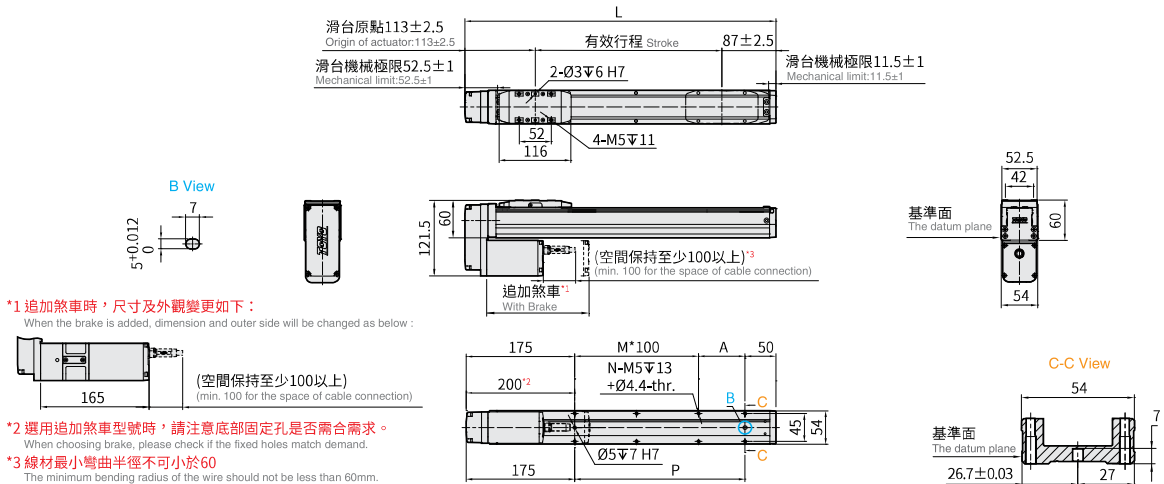
BM

馬達下折 Motor Bottom Side



● CAD圖面可至 [www.toyorobot.com](http://www.toyorobot.com) 下載 ●  
Please do wnload the CAD file from TOYO's website : [www.toyorobot.com](http://www.toyorobot.com)

單位 Unit : mm



有效行程 Stroke	50 <sup>*2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	
L	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025	
<sup>*1</sup> Weight (kg)	2.34	2.54	2.73	2.93	3.13	3.32	3.52	3.72	3.91	4.11	4.31	4.5	4.7	4.9	5.09	5.29	5.49	5.69	5.89	6.09	6.29	
線速度 Linear Speed mm/s	導程 Lead 2											≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 46	≤ 40	≤ 36	≤ 33		
	導程 Lead 5											≤ 225	≤ 200	≤ 175	≤ 150	≤ 125	≤ 116	≤ 100	≤ 91	≤ 83		
	導程 Lead 10											≤ 450	≤ 400	≤ 350	≤ 300	≤ 250	≤ 233	≤ 200	≤ 183	≤ 166		
	導程 Lead 20											≤ 900	≤ 800	≤ 700	≤ 600	≤ 500	≤ 466	≤ 400	≤ 366	≤ 333		

<sup>\*1</sup> 重量包含本體與馬達。Weight of model with motor.  
<sup>\*2</sup> 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
When the stroke is 50mm, 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.

伺服電動缸  
Servo Motor Cylinder

閉迴路步進電動缸  
Stepping Motor Cylinder

無塵系列  
Clean Room Type

電動夾爪  
Electric Gripper

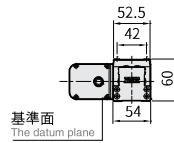
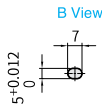
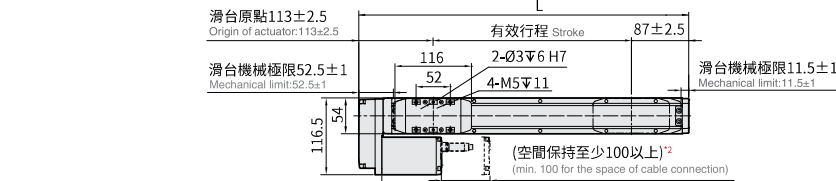
控制器規格  
Controller

### BL 馬達左折 Motor Left Side



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

單位 Unit : mm



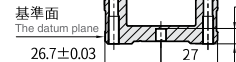
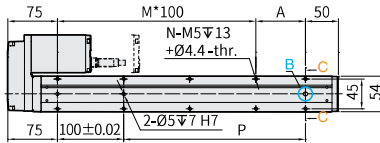
<sup>\*1</sup> 追加煞車時，尺寸及外觀變更如下：

When the brake is added, dimension and outer side will be changed as below :



<sup>\*2</sup> 線材最小彎曲半徑不可小於60

The minimum bending radius of the wire should not be less than 60mm.



有效行程 Stroke	50 <sup>*2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070
L	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
<sup>*1</sup> Weight (kg)	2.34	2.54	2.73	2.93	3.13	3.32	3.52	3.72	3.91	4.11	4.31	4.5	4.7	4.9	5.09	5.29	5.49	5.69	5.89	6.09	6.29
線速度 Linear Speed mm/s	導程 Lead 2											≤ 100	≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 46	≤ 40	≤ 36	≤ 33
	導程 Lead 5											≤ 250	≤ 225	≤ 200	≤ 175	≤ 150	≤ 125	≤ 116	≤ 100	≤ 91	≤ 83
	導程 Lead 10											≤ 600	≤ 450	≤ 400	≤ 350	≤ 300	≤ 250	≤ 233	≤ 200	≤ 183	≤ 166
	導程 Lead 20											≤ 1000	≤ 900	≤ 800	≤ 700	≤ 600	≤ 500	≤ 466	≤ 400	≤ 366	≤ 333

<sup>\*1</sup> 重量包含本體與馬達。 Weight of model with motor.

<sup>\*2</sup> 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。

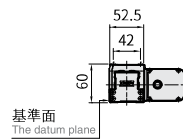
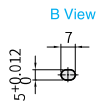
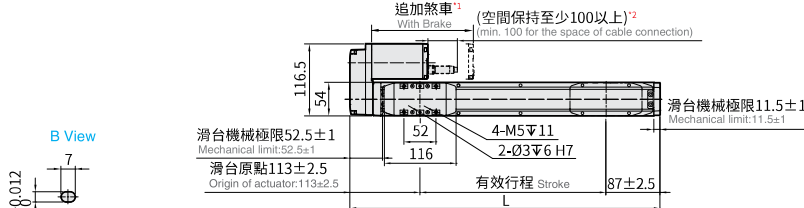
When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

### BR 馬達右折 Motor Right Side



CAD圖面可至www.toyorobot.com下載  
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單位 Unit : mm



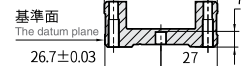
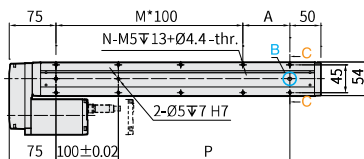
<sup>\*1</sup> 追加煞車時，尺寸及外觀變更如下：

When the brake is added, dimension and outer side will be changed as below :



<sup>\*2</sup> 線材最小彎曲半徑不可小於60

The minimum bending radius of the wire should not be less than 60mm.



有效行程 Stroke	50 <sup>*2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070
L	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
<sup>*1</sup> Weight (kg)	2.34	2.54	2.73	2.93	3.13	3.32	3.52	3.72	3.91	4.11	4.31	4.5	4.7	4.9	5.09	5.29	5.49	5.69	5.89	6.09	6.29
線速度 Linear Speed mm/s	導程 Lead 2											≤ 100	≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 46	≤ 40	≤ 36	≤ 33
	導程 Lead 5											≤ 250	≤ 225	≤ 200	≤ 175	≤ 150	≤ 125	≤ 116	≤ 100	≤ 91	≤ 83
	導程 Lead 10											≤ 600	≤ 450	≤ 400	≤ 350	≤ 300	≤ 250	≤ 233	≤ 200	≤ 183	≤ 166
	導程 Lead 20											≤ 1000	≤ 900	≤ 800	≤ 700	≤ 600	≤ 500	≤ 466	≤ 400	≤ 366	≤ 333

<sup>\*1</sup> 重量包含本體與馬達。 Weight of model with motor.

<sup>\*2</sup> 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。

When the stroke is 50mm, 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.

# CGTH5



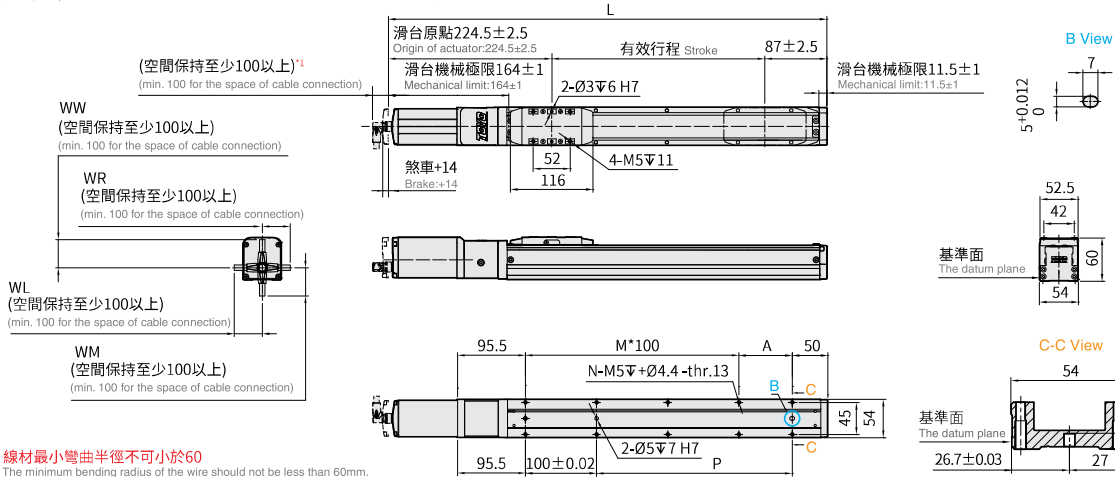
## 螺桿驅動 Ball Screw Drive

### M 馬達直結 Motor Hidden In (90度金屬接頭) 90° Metal Connector



CAD圖面可至[www.toyorobot.com](http://www.toyorobot.com)下載  
Please do wnload the CAD file from TOYO's website : [www.toyorobot.com](http://www.toyorobot.com)

單位 Unit : mm



\*1 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070
L	361.5	411.5	461.5	511.5	561.5	611.5	661.5	711.5	761.5	811.5	861.5	911.5	961.5	1011.5	1061.5	1111.5	1161.5	1211.5	1261.5	1311.5	1361.5
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
※1 Weight (kg)	1.97	2.18	2.4	2.62	2.83	3.05	3.27	3.48	3.7	3.92	4.13	4.35	4.57	4.78	5	5.22	5.44	5.66	5.88	6.1	6.32
線速度 Linear Speed mm/s	導程 Lead 2	≤ 100																			
	導程 Lead 5	≤ 250																			
	導程 Lead 10	≤ 600																			
	導程 Lead 20	≤ 1000																			

※1 重量包含本體與馬達。Weight of model with motor.

※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。

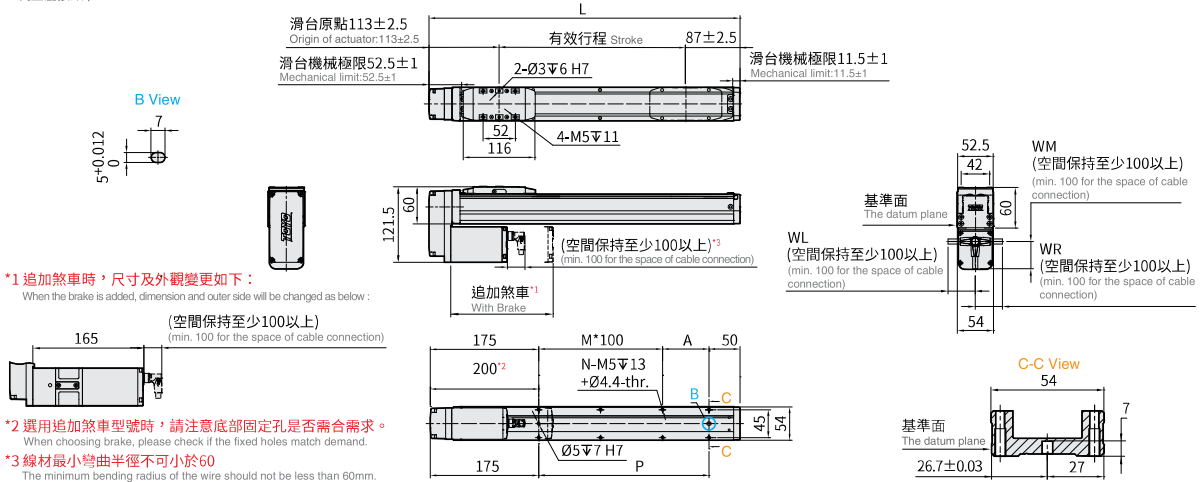
When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

### BM 馬達下折 Motor Bottom Side (90度金屬接頭) 90° Metal Connector



CAD圖面可至[www.toyorobot.com](http://www.toyorobot.com)下載  
Please do wnload the CAD file from TOYO's website : [www.toyorobot.com](http://www.toyorobot.com)

單位 Unit : mm



\*1 追加煞車時，尺寸及外觀變更如下：  
When the brake is added, dimension and outer side will be changed as below :

(空間保持至少100以上)  
(min. 100 for the space of cable connection)

\*2 選用追加煞車型號時，請注意底部固定孔是否需合需求。  
When choosing brake, please check if the fixed holes match demand.

\*3 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070
L	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
※1 Weight (kg)	2.34	2.54	2.73	2.93	3.13	3.32	3.52	3.72	3.91	4.11	4.31	4.5	4.7	4.9	5.09	5.29	5.49	5.69	5.89	6.09	6.29
線速度 Linear Speed mm/s	導程 Lead 2	≤ 100																			
	導程 Lead 5	≤ 250																			
	導程 Lead 10	≤ 600																			
	導程 Lead 20	≤ 1000																			

※1 重量包含本體與馬達。Weight of model with motor.

※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。

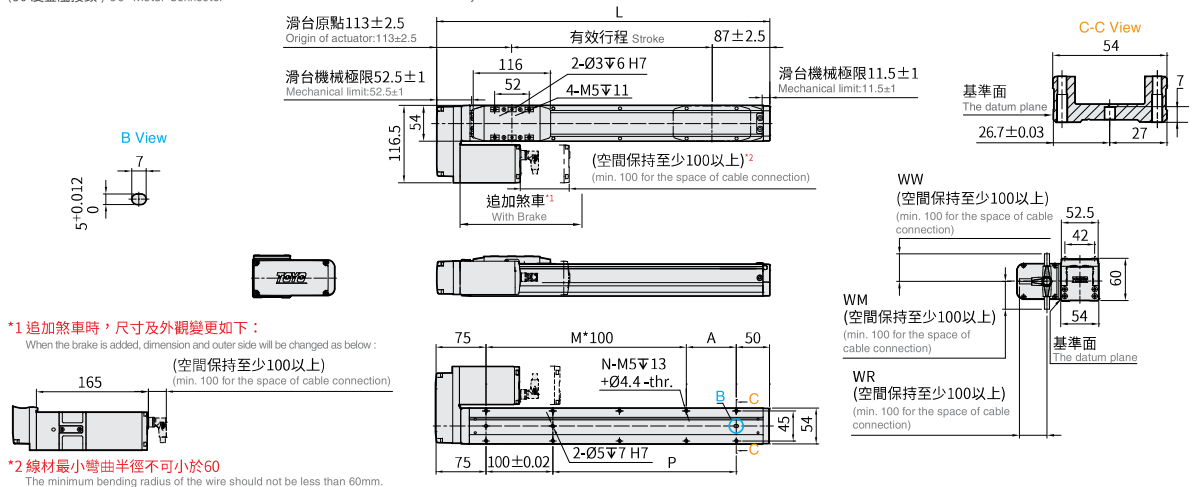
When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

**BL 馬達左折 Motor Left Side**  
(90度金屬接頭) 90° Metal Connector



CAD圖面可至www.toyorobot.com下載  
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單位 Unit : mm



\*1 追加煞車時，尺寸及外觀變更如下：  
When the brake is added, dimension and outer side will be changed as below:  
(空間保持至少100以上)  
(min. 100 for the space of cable connection)

\*2 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>*2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050																
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070																
L	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250																
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25																
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11																
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26																
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025																
*1 Weight (kg)	2.34	2.54	2.73	2.93	3.13	3.32	3.52	3.72	3.91	4.11	4.31	4.5	4.7	4.9	5.09	5.29	5.49	5.69	5.89	6.09	6.29																
線速度 Linear Speed mm/s	導程 Lead 2	≤ 100																																			
	導程 Lead 5	≤ 250																																			
	導程 Lead 10	≤ 600																																			
	導程 Lead 20	≤ 1000																																			
		≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 46	≤ 40	≤ 36	≤ 33	≤ 225	≤ 200	≤ 175	≤ 150	≤ 125	≤ 116	≤ 100	≤ 91	≤ 83	≤ 450	≤ 400	≤ 350	≤ 300	≤ 250	≤ 233	≤ 200	≤ 183	≤ 166	≤ 900	≤ 800	≤ 700	≤ 600	≤ 500	≤ 466	≤ 400	≤ 366	≤ 333

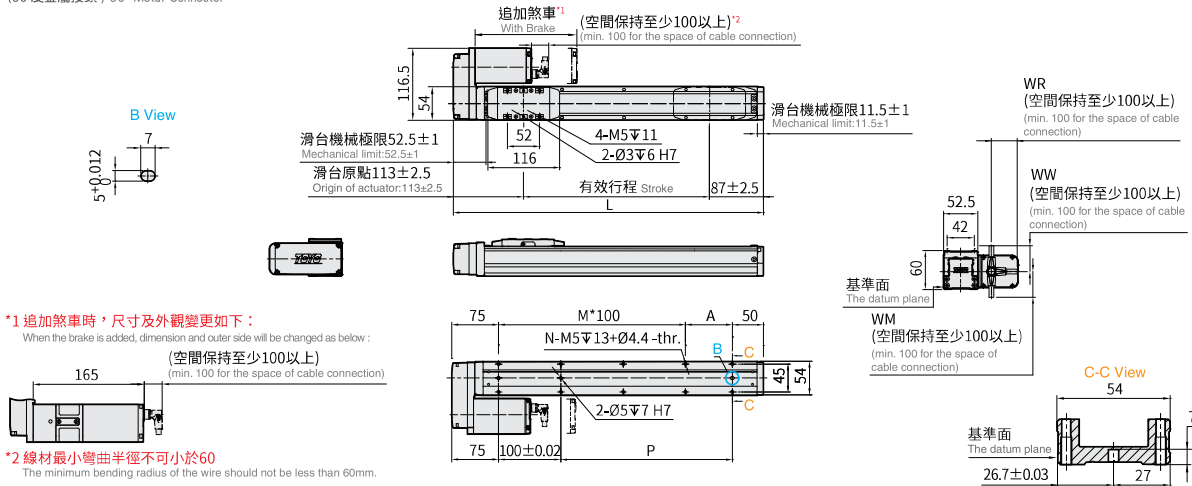
\*1 重量包含本體與馬達。 Weight of model with motor.  
\*2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

**BR 馬達右折 Motor Right Side**  
(90度金屬接頭) 90° Metal Connector



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

單位 Unit : mm



\*1 追加煞車時，尺寸及外觀變更如下：  
When the brake is added, dimension and outer side will be changed as below:  
(空間保持至少100以上)  
(min. 100 for the space of cable connection)

\*2 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>*2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050																
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070																
L	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250																
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25																
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11																
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26																
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025																
*1 Weight (kg)	2.34	2.54	2.73	2.93	3.13	3.32	3.52	3.72	3.91	4.11	4.31	4.5	4.7	4.9	5.09	5.29	5.49	5.69	5.89	6.09	6.29																
線速度 Linear Speed mm/s	導程 Lead 2	≤ 100																																			
	導程 Lead 5	≤ 250																																			
	導程 Lead 10	≤ 600																																			
	導程 Lead 20	≤ 1000																																			
		≤ 90	≤ 80	≤ 70	≤ 60	≤ 50	≤ 46	≤ 40	≤ 36	≤ 33	≤ 225	≤ 200	≤ 175	≤ 150	≤ 125	≤ 116	≤ 100	≤ 91	≤ 83	≤ 450	≤ 400	≤ 350	≤ 300	≤ 250	≤ 233	≤ 200	≤ 183	≤ 166	≤ 900	≤ 800	≤ 700	≤ 600	≤ 500	≤ 466	≤ 400	≤ 366	≤ 333

\*1 重量包含本體與馬達。 Weight of model with motor.  
\*2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
When the stroke is 50mm, 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.

# CGTH8



## 螺桿驅動 Ball Screw Drive



最大行程  
Maximum Stroke 1250mm

最高速度  
Maximum Speed 1000mm/s

馬達尺寸  
Motor Dimension 42□mm

滾珠螺桿  
Ball Screw Ø16mm

### 型號表示方式 Ordering Method

## CGTH8 - L5 - 100 - MB - TC100 - 03 - N1 - WR - C4 - A001

#### 本體型號 Model

#### 螺桿等級 Ball Screw Accuracy Grade

- L 轉造級 Rolled Ballscrews
- C 研磨級 Ground Ballscrews

\*選用C研磨級螺桿,有行程限制,詳見基本仕様  
C precision-level ground ball screws are not available in all stroke lengths, please consult the model datasheet.

#### 螺桿導程 Ball Screw Lead

- 5 5mm
- 10 10mm
- 20 20mm

#### 行程 Stroke

- 轉造級 Rolled Ballscrews 50-1250mm
- 研磨級 Ground Ballscrews 50-700mm

\*間隔50 Pitch 50 mm

#### 是否煞車 Brake (Optional)

垂直使用時  
追加內藏式煞車器  
Built-in brake is added when vertically used.  
\*若無煞車則不表示。  
If No Brake, No Description.

#### I/O線種類 Kind of I/O Cable

- N1 隔離I/O線  
Shielded I/O Cable  
\*標配1.5m  
Standard: 1.5m

#### 接頭型式 Connector Type

- 直結型接頭  
Straight Connector
- WR 90度接頭出線朝右 \*1  
90° Connector outlet (Right Side)
- WL 90度接頭出線朝左 \*1  
90° Connector outlet (Left Side)
- WW 90度接頭出線朝上 \*1  
90° Connector outlet (Up Side)
- WM 90度接頭出線朝下  
90° Connector outlet (Down Side)

\*1 馬達方向BM無法選用WW  
馬達方向BL無法選用WR  
馬達方向BR無法選用WL  
詳見尺寸圖  
WW cannot be selected for the motor direction BM  
WR cannot be selected for the motor direction BL  
WL cannot be selected for the motor direction BR  
For details, please refer to the dimension drawing

#### 特注式樣 Customization Order No.

#### 端點極限感應器 Limit Sensor

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

\*若無SENSOR需求則不表示。  
Not indicated if there is no need for a SENSOR.

#### 馬達位置 Motor Position

- M 馬達直結  
Motor Hidden In
- BM 馬達下折  
Motor Bottom Side
- BR 馬達右折  
Motor Right Side
- BL 馬達左折  
Motor Left Side

#### 對應控制器 Corresponding Controller

- TC100 標準版  
Standard
- TC100E EtherCAT版  
With EtherCAT Function

#### 電纜線長 Cable Length

- 01 1m
- 03 3m
- 05 5m
- 10 10m
- R01 1m耐繞曲型  
1m Flexible cable
- R03 3m耐繞曲型  
3m Flexible cable
- R05 5m耐繞曲型  
5m Flexible cable
- R10 10m耐繞曲型  
10m Flexible cable

\*標配3m  
Standard: 3m

#### 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

\*若無SENSOR需求則不表示。  
Not indicated if there is no need for a SENSOR.

\*選用E5時,出貨將附上感應片及3組光電固定片。  
When E5 is selected, the sensor flag and 3 brackets of the optical sensor will be provided.

\*選擇行程50時,有以下限制:

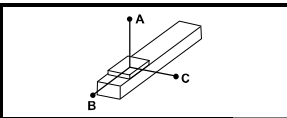
- When the stroke is 50mm, the sensor installation has the following restrictions:
- 1. 原點與極限需放置於不同側。  
Home sensor and limit sensor has to be installed on the different side of body.
- 2. 滑座左右兩側皆需安裝感應片。  
Both sides of slider need to install the sensor trigger device.

基本仕様 Specification

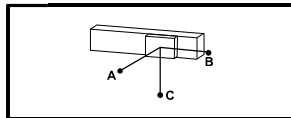
螺桿規格 Spec	螺桿等級代號 Ballscrew Accuracy Grade Code	L		C	
	螺桿等級 Ballscrew Accuracy Grade	C7 轉造 Rolled Ballscrews		C5 研磨 Ground Ballscrews	
	位置重複精度 Repeatability(mm)	±0.005		±0.003	
	標準行程 Stroke Pitch (mm)	50-1250mm / 50 間隔 50mm Pitch		50-700mm / 50 間隔 50mm Pitch	
規格 Spec	螺桿導程 Ball Screw Lead (mm)	5	10	20	
	最高轉速 Maximum rotating speed(rpm)	≤ 3000	≤ 3000	≤ 3000	
	最高速度 Maximum Speed (mm/s) ※1※2※3	水平使用 Horizontal (kg)	≤ 250	≤ 500	≤ 1000
		垂直使用 Vertical (kg)	≤ 250	≤ 500	≤ 1000
	最大可搬重量 Maximum Payload	水平使用 Horizontal (kg)	≤ 30	≤ 15	≤ 10
垂直使用 Vertical (kg)		≤ 10	≤ 5	≤ 2.5	
定額推力 Rated Thrust (N)	459	229	115		
部品 Parts	馬達尺寸 Motor Dimension (mm)	42 □			
	滾珠螺桿規格 Ball Screw Spec	Ø16mm			

- ※1 此處最高速度為軟體移動速度設定為 100% 時。  
The maximum speed shown here is when software speed setting is 100%.
- ※2 長行程時，會產生螺桿偏擺，需將速度調降（線速度請參閱尺寸圖下方表格）  
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.)
- ※3 最高速度及最大荷重無法同時存在，選用前請詳見右側速度-荷重曲線圖。  
The maximum speed and maximum payload cannot exist at the same time. Please refer to the speed-load curve diagram on the right side before selection.

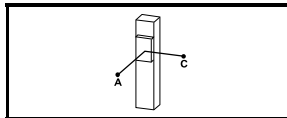
容許負載力距表 Allowable Overhang



(單位 Unit: mm)



(單位 Unit: mm)



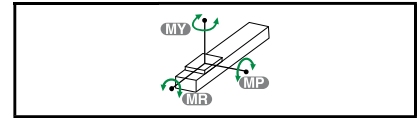
(單位 Unit: mm)

水平安裝 Horizontal Installation		A	B	C
導程 5 Lead	10kg	3210	321	515
	20kg	1600	160	258
	30kg	1060	106	171
導程 10 Lead	6kg	3900	493	734
	9g	3360	336	510
	15kg	2000	200	308
導程 20 Lead	5kg	2300	515	701
	7kg	1900	378	527
	10kg	1750	282	413

壁掛安裝 Wall Installation		A	B	C
導程 5 Lead	10kg	504	321	3210
	20kg	254	160	1600
	30kg	168	106	1060
導程 10 Lead	6kg	734	493	3900
	9g	510	336	3360
	15kg	308	200	2000
導程 20 Lead	5kg	701	515	2300
	7kg	527	378	1900
	10kg	413	282	1750

垂直安裝 Vertical Installation		A	C
導程 5 Lead	4.5kg	832	832
	8.1kg	483	483
	10kg	399	399
導程 10 Lead	1.5kg	2020	2020
	2.7kg	1175	1175
	5kg	652	652
導程 20 Lead	0.9kg	3066	3066
	1.4kg	2028	2028
	2.5kg	1186	1186

靜額定扭矩 Static Loading Moment



(單位 Unit: N.m)

MY	318
MP	318
MR	626

- \* 力距表所表示的數據，代表荷重的重心位置於單一方向容許懸出的長度。  
The data shown in the load moment table represents the allowable overhang length of the center of gravity of the payload in a single direction.
- \* 符合錄規規矩的正常使用下，保證壽命為 10000 公里。  
Operation life is 10,000km when the product is using under the specified conditions.
- \* 倒吊使用無法套用標準規矩，如有需求請洽詢我業務。  
Data information is not for ceiling-mount inverse use. Contact us for the details if you want to apply ceiling-mount inverse usage.
- \* 壽命及力矩是以馬達加減速設定 0.3 秒計算。  
Life and torque are calculated based on the motor acceleration/ deceleration setting of 0.3 seconds.

對應控制器一覽表 Corresponding Controller Chart

外觀 Exterior	控制器型號 Controller Model	控制介面 Control Mode	特點 Features	電氣規格 Electrical Spec	詳細參閱 Reference Page
	TC100	Pulse 控制 Pulse Control Mode	Line driver 200k Hz / Open collector 60k Hz 同時只能使用一種。 Support Line driver and Open collector Max.pulse receiving speed 200k/60k Hz.	控制電路只能使用 24V。 工作電壓 DC24V，額定電流 2A，峰值電流 3A。	P.297
		I/O 控制 I/O Control Mode	利用 I/O 變化，最多可以執行 127 個位置控制。 By I/O control, max. 127 positioning points, can be executed.	工作電壓 DC48V，額定電流 1A，峰值電流 2A。	
		通訊控制 Communication Control Mode	採 Modbus 的 RS485 通訊或 EtherCAT (最大並接 16 台以上) 及一組 mini USB (TOYO-Single 專用) With Modbus RS-485 or EtherCAT (connect over 16 axes in series) and USB module	使用 DC48V 時在相同扭力下，轉速會提升，詳細內容請跟服務窗口連絡。 The voltage of control circuit is 24V only. Operating voltage DC24V, rated current 2A, peak current 3A.	
		選配 EtherCAT	透過 EtherCAT 可串接 16 軸以上 With EtherCAT, connect over 16 axes can be in series.	When the voltage is DC48V but same torque, the rotation speed will be raised. Please contact your service window to details.	

# CGTH8



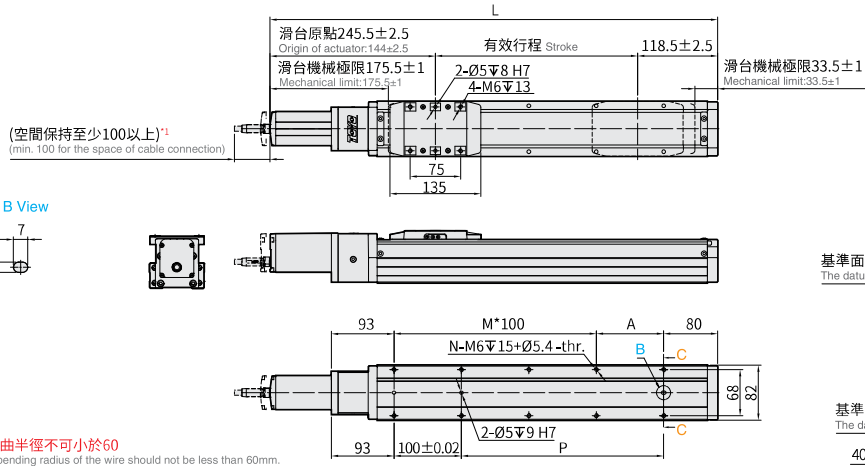
## 螺桿驅動 Ball Screw Drive

### M 馬達直結 Motor Hidden In



CAD圖面可至www.toyorobot.com下載  
Please do not unload the CAD file from TOYO's website: www.toyorobot.com

單位 Unit : mm



\*1 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250		
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270		
L	328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178	1228	1278	1328	1378	1428	1478	1528		
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50		
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13		
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30		
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250		
*1 Weight (kg)	5.16	5.51	5.86	6.2	6.55	6.9	7.25	7.6	7.95	8.29	8.64	8.99	9.34	9.69	10.04	10.38	10.73	11.08	11.43	11.78	12.13	12.48	12.83	13.18	13.53		
線速度 Linear Speed mm/s	導程 Lead 5																≤ 225		≤ 200	≤ 175	≤ 150	≤ 133	≤ 117	≤ 108	≤ 100	≤ 92	≤ 83
	導程 Lead 10																≤ 450		≤ 400	≤ 350	≤ 300	≤ 267	≤ 233	≤ 217	≤ 200	≤ 183	≤ 167
	導程 Lead 20																≤ 900		≤ 800	≤ 700	≤ 600	≤ 533	≤ 467	≤ 433	≤ 400	≤ 367	≤ 333

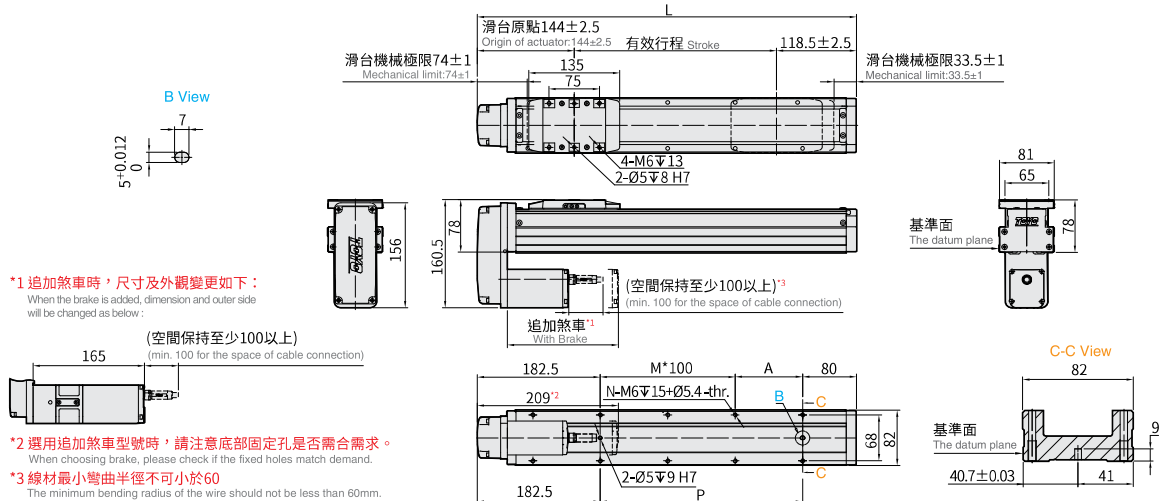
※1 重量包含本體與馬達。Weight of model with motor.  
※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

### BM 馬達下折 Motor Bottom Side



CAD圖面可至www.toyorobot.com下載  
Please do not unload the CAD file from TOYO's website: www.toyorobot.com

單位 Unit : mm



\*1 追加煞車時，尺寸及外觀變更如下：  
When the brake is added, dimension and outer side will be changed as below:



\*2 選用追加煞車型號時，請注意底部固定孔是否需求。  
When choosing brake, please check if the fixed holes match demand.

\*3 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250		
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270		
L	312.5	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5	962.5	1012.5	1062.5	1112.5	1162.5	1212.5	1262.5	1312.5	1362.5	1412.5	1462.5	1512.5		
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50		
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12		
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28		
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250		
*1 Weight (kg)	5.25	5.59	5.93	6.27	6.6	7.2	7.54	7.88	8.22	8.56	8.89	9.23	9.57	9.91	10.25	10.59	10.92	11.26	11.6	11.94	12.28	12.62	12.96	13.3	13.64		
線速度 Linear Speed mm/s	導程 Lead 5																≤ 225		≤ 200	≤ 175	≤ 150	≤ 133	≤ 117	≤ 108	≤ 100	≤ 92	≤ 83
	導程 Lead 10																≤ 450		≤ 400	≤ 350	≤ 300	≤ 267	≤ 233	≤ 217	≤ 200	≤ 183	≤ 167
	導程 Lead 20																≤ 900		≤ 800	≤ 700	≤ 600	≤ 533	≤ 467	≤ 433	≤ 400	≤ 367	≤ 333

※1 重量包含本體與馬達。Weight of model with motor.  
※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
When the stroke is 50mm, 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.

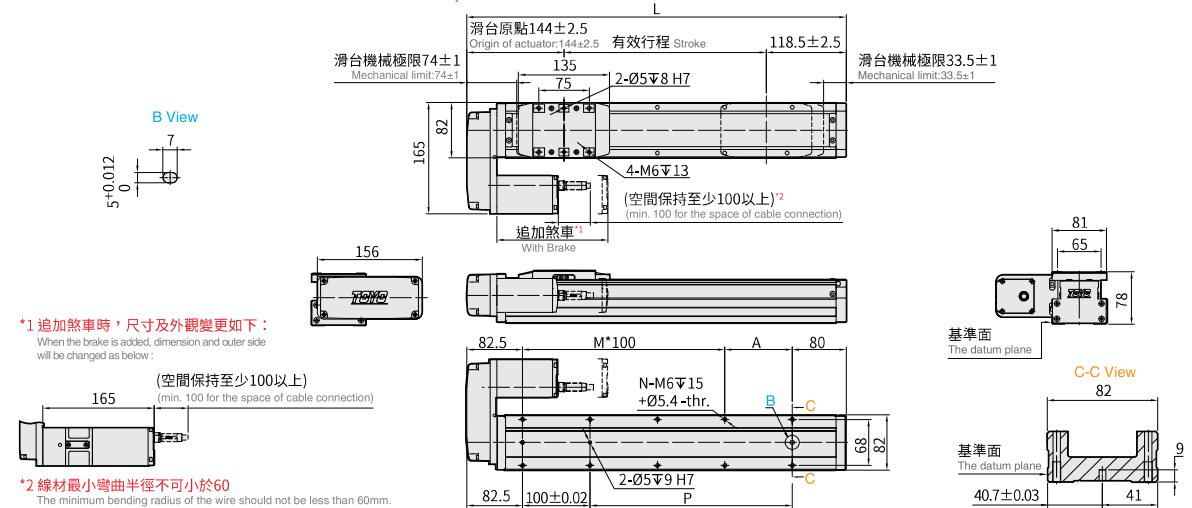


**BL 馬達左折 Motor Left Side**



CAD圖面可至 [www.toyorobot.com](http://www.toyorobot.com) 下載  
Please do wnlload the CAD file from TOYO's website : [www.toyorobot.com](http://www.toyorobot.com)

單位 Unit : mm



**\*1 追加煞車時，尺寸及外觀變更如下：**  
When the brake is added, dimension and outside size will be changed as below:



**\*2 線材最小彎曲半徑不可小於60**  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>*2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250										
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270										
L	312.5	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5	962.5	1012.5	1062.5	1112.5	1162.5	1212.5	1262.5	1312.5	1362.5	1412.5	1462.5	1512.5										
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50										
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13										
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30										
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250										
*1 Weight (kg)	5.25	5.59	5.93	6.27	6.6	7.2	7.54	7.88	8.22	8.56	8.89	9.23	9.57	9.91	10.25	10.59	10.92	11.26	11.6	11.94	12.28	12.62	12.96	13.3	13.64										
線速度 Linear Speed mm/s	導程 Lead 5															≤ 225		≤ 200		≤ 175		≤ 150		≤ 133		≤ 117		≤ 108		≤ 100		≤ 92		≤ 83	
	導程 Lead 10															≤ 450		≤ 400		≤ 350		≤ 300		≤ 267		≤ 233		≤ 217		≤ 200		≤ 183		≤ 167	
	導程 Lead 20															≤ 900		≤ 800		≤ 700		≤ 600		≤ 533		≤ 467		≤ 433		≤ 400		≤ 367		≤ 333	

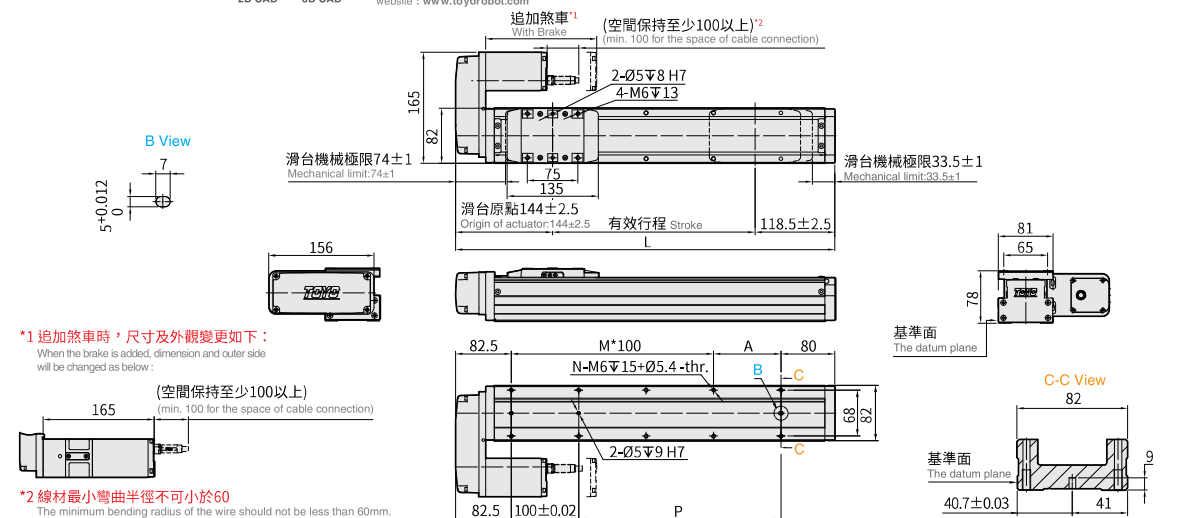
\*1 重量包含本體與馬達。Weight of model with motor.  
\*2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

**BR 馬達右折 Motor Right Side**



CAD圖面可至 [www.toyorobot.com](http://www.toyorobot.com) 下載  
Please do wnlload the CAD file from TOYO's website : [www.toyorobot.com](http://www.toyorobot.com)

單位 Unit : mm



**\*1 追加煞車時，尺寸及外觀變更如下：**  
When the brake is added, dimension and outside size will be changed as below:



**\*2 線材最小彎曲半徑不可小於60**  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>*2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250										
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270										
L	312.5	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5	962.5	1012.5	1062.5	1112.5	1162.5	1212.5	1262.5	1312.5	1362.5	1412.5	1462.5	1512.5										
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50										
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13										
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30										
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250										
*1 Weight (kg)	5.25	5.59	5.93	6.27	6.6	7.2	7.54	7.88	8.22	8.56	8.89	9.23	9.57	9.91	10.25	10.59	10.92	11.26	11.6	11.94	12.28	12.62	12.96	13.3	13.64										
線速度 Linear Speed mm/s	導程 Lead 5															≤ 225		≤ 200		≤ 175		≤ 150		≤ 133		≤ 117		≤ 108		≤ 100		≤ 92		≤ 83	
	導程 Lead 10															≤ 450		≤ 400		≤ 350		≤ 300		≤ 267		≤ 233		≤ 217		≤ 200		≤ 183		≤ 167	
	導程 Lead 20															≤ 900		≤ 800		≤ 700		≤ 600		≤ 533		≤ 467		≤ 433		≤ 400		≤ 367		≤ 333	

\*1 重量包含本體與馬達。Weight of model with motor.  
\*2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
When the stroke is 50mm, 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.

# CGTH8



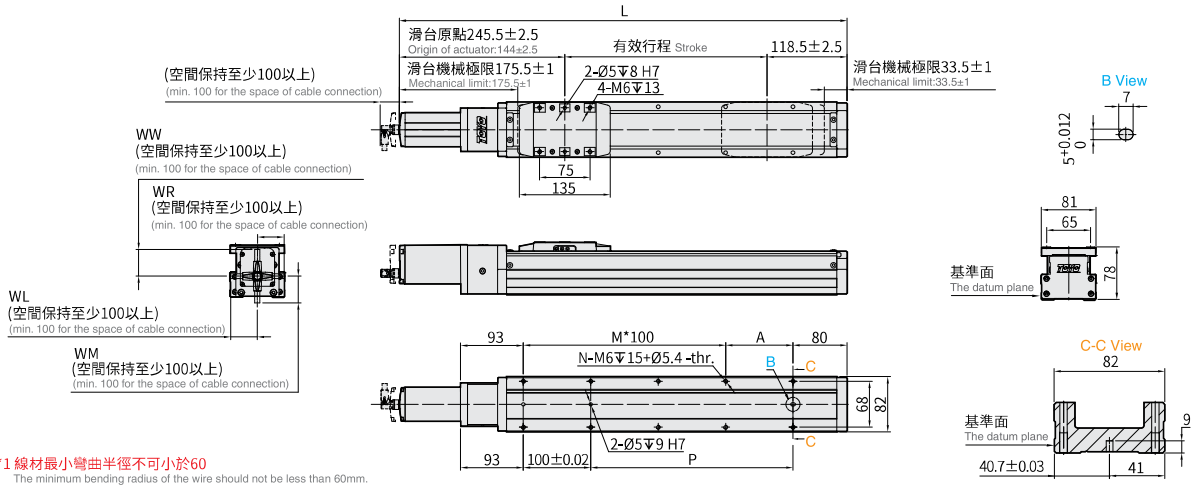
## 螺桿驅動 Ball Screw Drive

**M 馬達直結 Motor Hidden In**  
(90度金屬接頭) 90° Metal Connector



• CAD圖面可至www.toyorobot.com下載 •  
Please do wnload the CAD file from TOYO's website : www.toyorobot.com

單位 Unit : mm



\*1 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270	
L	328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178	1228	1278	1328	1378	1428	1478	1528	
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	10	11	11	12	12	
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	
*1 Weight (kg)	5.16	5.51	5.86	6.2	6.55	6.9	7.25	7.6	7.95	8.29	8.64	8.99	9.34	9.69	10.04	10.38	10.73	11.08	11.43	11.78	12.13	12.48	12.83	13.18	13.53	
線速度 Linear Speed mm/s	導程 Lead 5															≤ 225		≤ 200	≤ 175	≤ 150	≤ 133	≤ 117	≤ 108	≤ 100	≤ 92	≤ 83
	導程 Lead 10															≤ 450		≤ 400	≤ 350	≤ 300	≤ 267	≤ 233	≤ 217	≤ 200	≤ 183	≤ 167
	導程 Lead 20															≤ 900		≤ 800	≤ 700	≤ 600	≤ 533	≤ 467	≤ 433	≤ 400	≤ 367	≤ 333

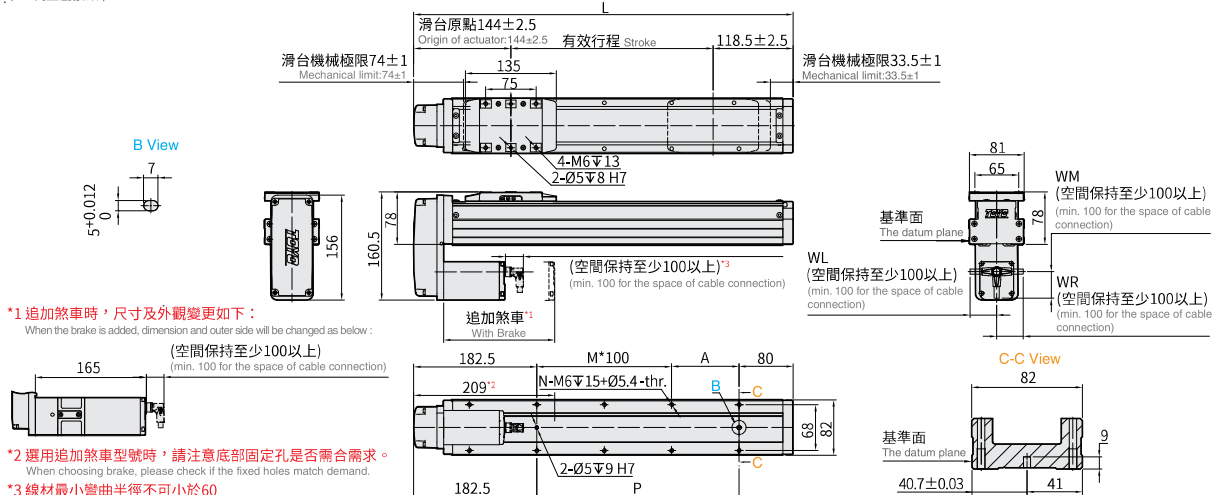
※1 重量包含本體與馬達。Weight of model with motor.  
 ※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
 When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

**BM 馬達下折 Motor Bottom Side**  
(90度金屬接頭) 90° Metal Connector

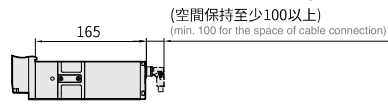


• CAD圖面可至www.toyorobot.com下載 •  
Please do wnload the CAD file from TOYO's website : www.toyorobot.com

單位 Unit : mm



\*1 追加煞車時，尺寸及外觀變更如下：  
When the brake is added, dimension and outer side will be changed as below :



\*2 選用追加煞車型號時，請注意底部固定孔是否需求。  
When choosing brake, please check if the fixed holes match demand.

\*3 線材最小彎曲半徑不可小於60  
The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270	
L	312.5	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5	962.5	1012.5	1062.5	1112.5	1162.5	1212.5	1262.5	1312.5	1362.5	1412.5	1462.5	1512.5	
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	
*1 Weight (kg)	5.25	5.59	5.93	6.27	6.6	7.2	7.54	7.88	8.22	8.56	8.89	9.23	9.57	9.91	10.25	10.59	10.92	11.26	11.6	11.94	12.28	12.62	12.96	13.3	13.64	
線速度 Linear Speed mm/s	導程 Lead 5															≤ 225		≤ 200	≤ 175	≤ 150	≤ 133	≤ 117	≤ 108	≤ 100	≤ 92	≤ 83
	導程 Lead 10															≤ 450		≤ 400	≤ 350	≤ 300	≤ 267	≤ 233	≤ 217	≤ 200	≤ 183	≤ 167
	導程 Lead 20															≤ 900		≤ 800	≤ 700	≤ 600	≤ 533	≤ 467	≤ 433	≤ 400	≤ 367	≤ 333

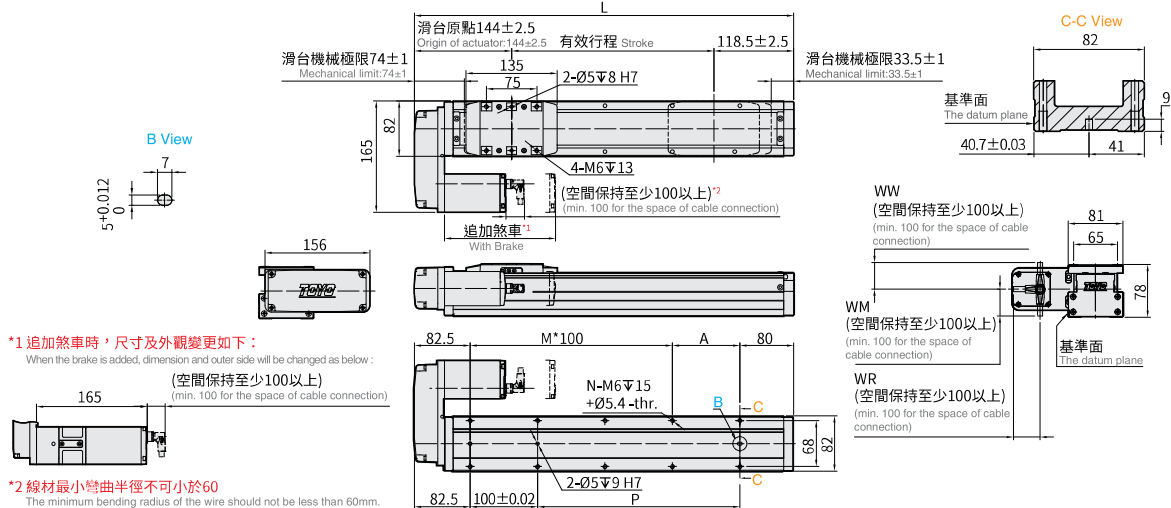
※1 重量包含本體與馬達。Weight of model with motor.  
 ※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。  
 When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

**BL 馬達左折 Motor Left Side**  
(90度金屬接頭) 90° Metal Connector



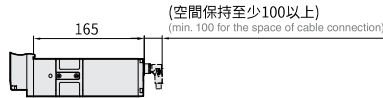
CAD圖面可至www.toyorobot.com下載  
Please do wnload the CAD file from TOYO's website : www.toyorobot.com

單位 Unit : mm



\*1 追加煞車時，尺寸及外觀變更如下：

When the brake is added, dimension and outer side will be changed as below :



\*2 線材最小彎曲半徑不可小於60

The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250					
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270					
L	312.5	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5	962.5	1012.5	1062.5	1112.5	1162.5	1212.5	1262.5	1312.5	1362.5	1412.5	1462.5	1512.5					
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50					
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13					
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30					
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250					
※1 Weight (kg)	5.25	5.59	5.93	6.27	6.6	7.2	7.54	7.88	8.22	8.56	8.89	9.23	9.57	9.91	10.25	10.59	10.92	11.26	11.6	11.94	12.28	12.62	12.96	13.3	13.64					
線速度 Linear Speed mm/s	導程 Lead 5															≤ 225	≤ 200	≤ 175	≤ 150	≤ 133	≤ 117	≤ 108	≤ 100	≤ 92	≤ 83					
	導程 Lead 10															≤ 450	≤ 400	≤ 350	≤ 300	≤ 267	≤ 233	≤ 217	≤ 200	≤ 183	≤ 167					
	導程 Lead 20															≤ 900	≤ 800	≤ 700	≤ 600	≤ 533	≤ 467	≤ 433	≤ 400	≤ 367	≤ 333					

※1 重量包含本體與馬達。Weight of model with motor.

※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。

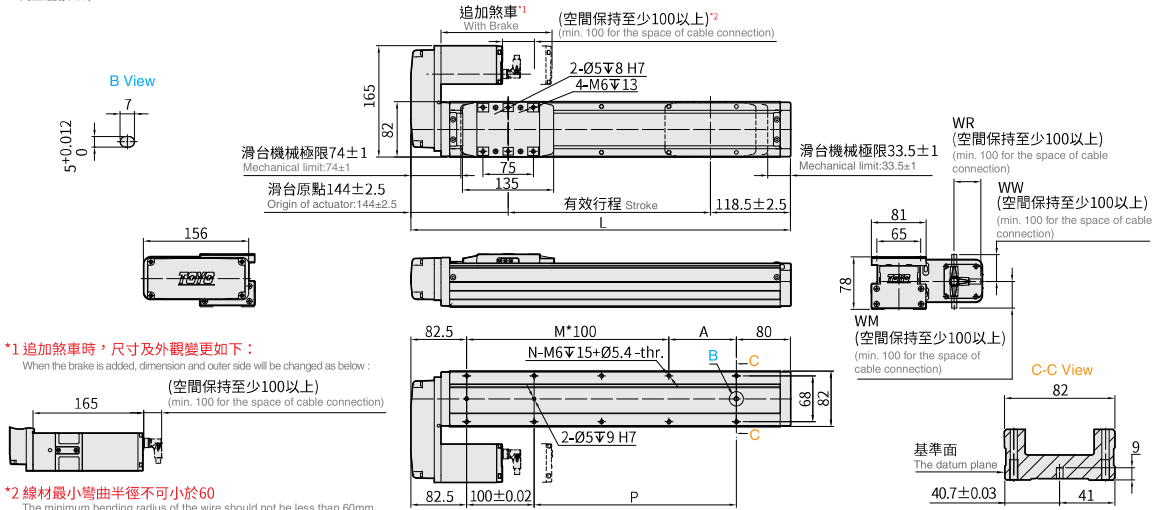
When the stroke is 50mm, if fixing the body from the top to the bottom, the fixing hole will be blocked by slider and only can be uses 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

**BR 馬達右折 Motor Right Side**  
(90度金屬接頭) 90° Metal Connector



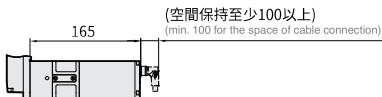
CAD圖面可至www.toyorobot.com下載  
Please do wnload the CAD file from TOYO's website : www.toyorobot.com

單位 Unit : mm



\*1 追加煞車時，尺寸及外觀變更如下：

When the brake is added, dimension and outer side will be changed as below :



\*2 線材最小彎曲半徑不可小於60

The minimum bending radius of the wire should not be less than 60mm.

有效行程 Stroke	50 <sup>※2</sup>	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250					
極限行程 Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270					
L	312.5	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5	962.5	1012.5	1062.5	1112.5	1162.5	1212.5	1262.5	1312.5	1362.5	1412.5	1462.5	1512.5					
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50					
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13					
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30					
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250					
※1 Weight (kg)	5.25	5.59	5.93	6.27	6.6	7.2	7.54	7.88	8.22	8.56	8.89	9.23	9.57	9.91	10.25	10.59	10.92	11.26	11.6	11.94	12.28	12.62	12.96	13.3	13.64					
線速度 Linear Speed mm/s	導程 Lead 5															≤ 225	≤ 200	≤ 175	≤ 150	≤ 133	≤ 117	≤ 108	≤ 100	≤ 92	≤ 83					
	導程 Lead 10															≤ 450	≤ 400	≤ 350	≤ 300	≤ 267	≤ 233	≤ 217	≤ 200	≤ 183	≤ 167					
	導程 Lead 20															≤ 900	≤ 800	≤ 700	≤ 600	≤ 533	≤ 467	≤ 433	≤ 400	≤ 367	≤ 333					

※1 重量包含本體與馬達。Weight of model with motor.

※2 行程 50 時，因本體上鎖式固定孔會被滑座遮住，僅能使用 4 支螺絲固定，建議客戶本體使用下鎖式固定孔鎖附。

When the stroke is 50mm, 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.

# Memo

目範例  
on Samples

伺服電動缸  
Servo Motor Cylinder

閉迴路步进電動缸  
Stepping Motor Cylinder

無塵系列  
Clean Room Type

電動夾爪  
Electric Gripper

控制器規格  
Controller