

## 滑台系列

## GCH Series

無塵環境 / 軌道內嵌式螺桿滑台

Clean Room/Built-in Linear Motion Guide Ball Screw Actuator

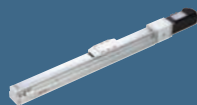
精度  
±0.005  
mm

## CONTENTS

## 無塵環境 / 螺桿仕様 Clean Room/Ball Screw

小型 SMALL

## GCH4



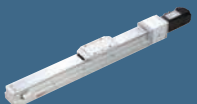
本體寬幅 44mm  
Width

最大行程 1000mm ..... 401  
Max. stroke

連續可搬重量 25kg  
Continuous payload

小型 SMALL

## GCH5



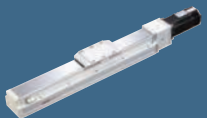
本體寬幅 54mm  
Width

最大行程 1050mm ..... 409  
Max. stroke

連續可搬重量 40kg  
Continuous payload

中型 MEDIUM

## GCH8



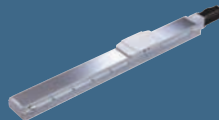
本體寬幅 82mm  
Width

最大行程 1250mm ..... 413  
Max. stroke

連續可搬重量 110kg  
Continuous payload

大型 LARGE

## GCH12



本體寬幅 120mm  
Width

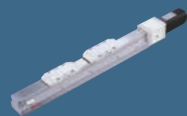
最大行程 1250mm ..... 421  
Max. stroke

連續可搬重量 110kg  
Continuous payload

## 反向同動雙滑座系列 Dual Carriage Synchronous Movement In Reverse Direction

中型 MEDIUM

## GCH5S



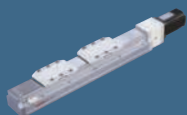
本體寬幅 54mm  
Width

最大行程 400mm ..... 425  
Max. stroke

連續可搬重量 30kg  
Continuous payload

中型 MEDIUM

## GCH8S



本體寬幅 82mm  
Width

最大行程 525mm ..... 429  
Max. stroke

連續可搬重量 110kg  
Continuous payload

# 滑台模組規格索引

## Spec Index of Electric Actuator

### GCH 軌道內嵌式螺桿滑台系列

#### GCH Clean Room Linear Motion Guide Ball Screw Actuator-Slider Type

使用環境 Environment	傳動方式 Driven Mode	仕様 Specification	馬達容量 Motor Output (W)	本體寬幅 Width(mm)	位置重複精度 Repeatability(mm)	螺桿規格 (C7 級) Ball Screw Spec		最大可搬重量 Maximum Payload(kg)		最高速度 <sup>*1</sup> Maximum Speed (mm/s)
						外徑 Outer Diameter(mm)	導程 Lead(mm)	水平使用 Horizontal	垂直使用 Vertical	
無塵環境 Clean Room	滾珠螺桿 Ball screw	GCH4	50W	44	±0.005	10	2	25	8	100
							6	20	5	360
							12	12	2	720
			2				25	8	100	
			6				20	8	360	
			12				20	3.5	720	
		GCH5	100W	54	±0.005	12	2	30	10	100
							5	40	10	300
							10	24	5	600
							20	12	2.5	1200
		GCH8	200W	82	±0.005	16	5	100	15	300
							10	80	8	600
							20	40	3	1200
			5				110	33	300	
			10				88	21	600	
			20				40	8	1200	
GCH12	400W	120	±0.005	16	5	110	33	300		
					10	88	22	600		
					20	40	10	1200		
					32	30	8	1920		

\*1: 最高速度 (mm/s) 是以伺服馬達最高轉速，導程 2 為 3000RPM 為計算基準，其餘導程為 3600RPM 為計算基準。  
 The maximum speed (mm/s) is based on the maximum rotating speed of the servo motor. Lead 2 is calculated on a 3000RPM basis, and the other leads are calculated on a 3600RPM basis.  
 \*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，滑台可能有嚴重共振產生。  
 Written here is the standard stroke's maximum safe speed. If over this speed, it may casue serious vibration.

### 反向同動雙滑座系列

Dual Carriage Synchronous Movement In Reverse Direction

使用環境 Environment	傳動方式 Driven Mode	仕様 Specification	馬達容量 Motor Output (W)	本體寬幅 Width(mm)	位置重複精度 Repeatability(mm)	螺桿規格 (C7 級) Ball Screw Spec		最大可搬重量 Maximum Payload(kg)		最高速度 <sup>*1</sup> Maximum Speed (mm/s)
						外徑 Outer Diameter(mm)	導程 Lead(mm)	水平使用 Horizontal	垂直使用 Vertical	
無塵環境 Clean Room	滾珠螺桿 Ball screw	GCH5S	100W	54	±0.005	12	2	30	10	100
		GCH8S	200W	82	±0.005	16	5	100	15	300
			400W				5	110	33	300

\*1: 最高速度 (mm/s) 是以伺服馬達最高轉速，導程 2 為 3000RPM 為計算基準，其餘導程為 3600RPM 為計算基準。  
 The maximum speed (mm/s) is based on the maximum rotating speed of the servo motor. Lead 2 is calculated on a 3000RPM basis, and the other leads are calculated on a 3600RPM basis.  
 \*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，滑台可能有嚴重共振產生。  
 Written here is the standard stroke's maximum safe speed. If over this speed, it may casue serious vibration.

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

應用例  
Application

一般 / 螺桿仕様  
GT/H / GT/Y / ETH / Y

一般 / 皮帶仕様  
ETB / M

無塵 / 螺桿仕様  
GCH

無塵 / 皮帶仕様  
ECB

直交連結  
XYGT / XTH / XYTB

參考資料  
Reference

標準行程及最高使用速度<sup>\*2</sup>  
Stroke(mm) & Maximum Speed(mm/s)

代表速度 Speed

頁數  
Page

行程 Stroke	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	1300	1350		
100												90	80	70	60	50	43	40	37	33									401
360											330	320	270	240	210	180	150	130	120	110	100								
720											660	640	540	480	420	360	300	260	240	220	200								
100												90	80	70	60	50	43	40	37	33									409
360											330	320	270	240	210	180	150	130	120	110	100								
720											660	640	540	480	420	360	300	260	240	220	200								
100													90	80	70	60	50	47	40	37	33								
300												292	250	225	200	175	150	125	117	100	92	83							
600												583	500	450	400	350	300	250	233	200	183	167							
1200												1167	1000	900	800	700	600	500	467	400	367	333							
300													292	250	225	200	175	150	133	117	108	100	92	83					
600													583	500	450	400	350	300	267	233	217	200	183	167					
1200													1167	1000	900	800	700	600	533	467	433	400	367	333					
300													292	250	225	200	175	150	133	117	108	100	92	83					
600													583	500	450	400	350	300	267	233	217	200	183	167					
1200													1167	1000	900	800	700	600	533	467	433	400	367	333					
300														275	250	225	200	175	167	158	142	133	125	117					
600														550	500	450	400	350	333	317	283	267	250	233					
1200														1100	1000	900	800	700	667	633	567	533	500	467					
1920															1760	1600	1440	1280	1120	1067	1013	907	853	800	747				

標準行程及最高使用速度<sup>\*2</sup>  
Stroke(mm) & Maximum Speed(mm/s)

代表速度 Speed

頁數  
Page

行程 Stroke	25	100	150	200	250	300	350	400	450	500	525	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350		
100																													425
300																													
300																													

精度  
±0.005 mm

Clean Room



最大行程  
Maximum Stroke 1000mm

最高速度  
Maximum Speed 720mm/s

馬達容量  
Motor Output 50W

最大可搬重量  
Max Payload 25kg

## 型號表示方式 Ordering Method

GCH4 - L2 - 100 - BC - M05B - C4N5 - 參照右頁  
Refer to the right page. - 0001

本體型號  
Model

行程  
Stroke

50-1000mm  
間隔50 Pitch 50 mm

選配  
Options

特注式樣  
Customization Order No.

螺桿導程  
Ball Screw Lead

2	2mm
6	6mm
12	12mm

馬達位置  
Motor Position

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

馬達廠牌、功率  
Motor Brand、Power Output

M	三菱 Mitsubishi	05	50W	B
P	松下 Panasonic	10	-	
Y	安川 Yaskawa	20	-	
T	台達 Delta	40	-	

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

原點感應器  
Home Sensor

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

\*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.

端點極限感應器  
Limit Sensor

外掛型 Out Side	
3	1只 1 Pc
4	2只 2 Pcs
6	3只 3 Pcs
7	4只 4 Pcs
8	5只 5 Pcs
9	6只 6 Pcs
無 SENSOR No Sensor	
5	無 SENSOR No Sensor

\*感應器由客戶自行安裝，圖面最多示意為3只

\*The sensors are installed by customers themselves, and the diagram shows a maximum of 3 sensors.

輸出方式&線長  
Output type & Cable length

N5	NPN+5米線 NPN+5M Cable
P2	PNP+2米線 PNP+2M Cable
P5	PNP+5米線 PNP+5M Cable
-	NPN+2米線 NPN+2M Cable

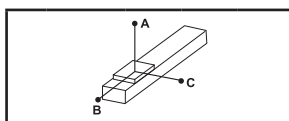
基本仕様 Specification

性能	位置重複精度 Repeatability	mm	±0.005			
	螺桿導程 Lead	mm	2	6	12	
	最高轉速 Maximum Rotating speed	rpm	3000	3600	3600	
	最高速度 Maximum linear speed <sup>※1</sup>	mm/s	100	360	720	
	最大可搬重量 Maximum Payload	水平使用 Horizontal	kg	25	20	12
		垂直使用 Vertical	kg	8	5	2
	定格推力 Rated Thrust	N	424	141	71	
	標準行程 Stroke (increments)	mm	50-1000mm / 50 間隔 (50 increments)			
	最大加速度 Maximum acceleration	G	0.3	0.3	0.6	
	滾珠螺桿 Ball screw	基本動額定負荷 Basic dynamic load rating Co	N	2265	2537	1740
基本靜額定負荷 Basic static load rating Coa		N	4839	4569	3052	
直線滑軌 Linear Guide	動態水平負載 Dynamic horizontal (100km)	N	4835			
	靜態水平負載 Static Horizontal	N	12678			
固定側軸承 Fixed bearing	基本動額定負荷 Basic dynamic load rating Cr	N	5361			
	靜態容許負荷 Static load rating Cor	N	2880			
部品	AC 伺服馬達容量 AC Servo Motor Output	W	50			
	滾珠螺桿外徑 Ball Screw Ø	mm	C7Ø10			
	連軸器 Coupling	mm	7X8			
	原點感應器 Home Sensor	外掛 Outside	T64N2 ( NPN+2 米線 ) (NPN+2M Cable)			

※1 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)

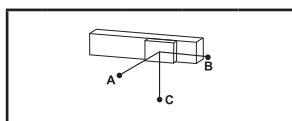
During in a long stroke, it causes ballscrew deflection, the speed must reduce. (Please refer to the linear velocity from the data sheet below the dimension graph.)

容許負載力距表 Allowable Overhang



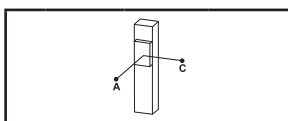
(單位 Unit : mm)

水平安裝 Horizontal Installation		A	B	C
導程 2 Lead	12kg	1000	55	80
	18kg	750	35	50
	25kg	500	23	32
導程 6 Lead	10kg	459	52	70
	15kg	292	32	44
	20kg	208	22	30
導程 12 Lead	8kg	250	58	71
	10kg	196	44	55
	12kg	160	36	44



(單位 Unit : mm)

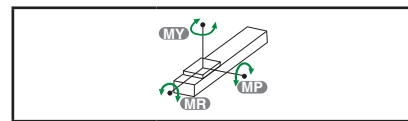
壁掛安裝 Wall Installation		A	B	C
導程 2 Lead	12kg	80	55	1000
	18kg	50	35	750
	25kg	32	23	500
導程 6 Lead	10kg	71	52	450
	15kg	44	32	292
	20kg	30	22	208
導程 12 Lead	8kg	75	58	250
	10kg	54	44	196
	12kg	44	36	160



(單位 Unit : mm)

垂直安裝 Vertical Installation		A	C
導程 2 Lead	4kg	192	192
	8kg	96	96
	-	-	-
導程 6 Lead	3kg	200	200
	5kg	120	120
	-	-	-
導程 12 Lead	1.5kg	338	338
	2kg	253	253
	-	-	-

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，代表重心。

The torque value in the chart indicate the center of gravity.

\* 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 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速減速設定 0.2 秒計算。

The life and torque are calculated by setting the motor acceleration and deceleration for 0.2 seconds.

選配 Options

EB

外觀黑色處理 Outer layer is treated with black oxide			
代號 Code	顏色 Color	說明 Instructions	需參照 Refer to
EB	黑色 Black	本體 Main Body	P.678
	原色 Original color	不銹鋼板材 Stainless steel plate 螺絲 Screw 鋼帶 Steel Band 滑座 Carriage 氣壓接頭 Air Fitting	

MM

指定馬達出線方向 Selectable Cable Leading Direction		
代號 Code	說明 Instructions	需參照 Refer to
MW	朝上 Upper side	P.679 ~ P.680
MM	朝下 Bottom side	
ML	朝左 Left side	
MR	朝右 Right side	

CMK

馬達傳動配件追加鍵槽 Additional keyway for motor drive parts				
代號 Code	說明 Instructions			需參照 Refer to
	追加鍵槽 Keyway Groove	馬達位置 Motor Position	出貨型式 Shipment Type	
CMK	單邊 (限定馬達側) Single (Limited to the motor side)	BC	鍵槽式聯軸器 Keyway Coupling	P.681 ~ P.682
		BL/BR/BM	鍵槽式皮帶輪 Keyway Belt Pulley	
SKY	雙邊 Double	BC	鍵槽式聯軸器 Keyway Coupling	
		BL/BR/BM	鍵槽式皮帶輪 Keyway Belt Pulley	
SKN	雙邊 Double	BC	無聯軸器 (請自行購買安裝) Without Coupling (Please purchase and install by yourself)	
		BL/BR/BM	無馬達端皮帶輪 (請自行購買安裝) Without Belt Pulley (Please purchase and install by yourself)	

# GCH4 單軸 /1-axis

▶ 軌道內嵌  
Integrated Linear Bearing

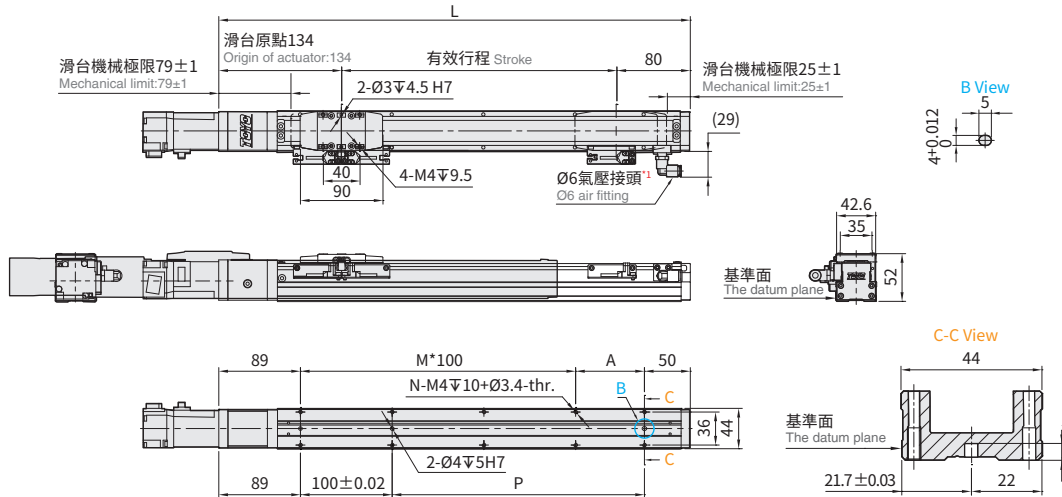
▶ 螺桿驅動  
Ball Screw Drive

## BC 馬達外露 Motor Exposed



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

單位 Unit : mm



有效行程 Stroke	50 <sup>*1</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	264	314	364	414	464	514	564	614	664	714	764	814	864	914	964	1014	1064	1114	1164	1214		
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		
KG	1.25	1.42	1.59	1.77	1.95	2.13	2.31	2.49	2.67	2.85	3.03	3.21	3.29	3.57	3.75	3.93	4.11	4.29	4.47	4.65		
線速度 Linear Speed mm/s	導程 Lead 2										90	80	70	60	50	43	40	37	33			
	導程 Lead 6	360									330	320	270	240	210	180	150	130	120	110	100	
	導程 Lead 12	720									660	640	540	480	420	360	300	260	240	220	200	

\*1 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.

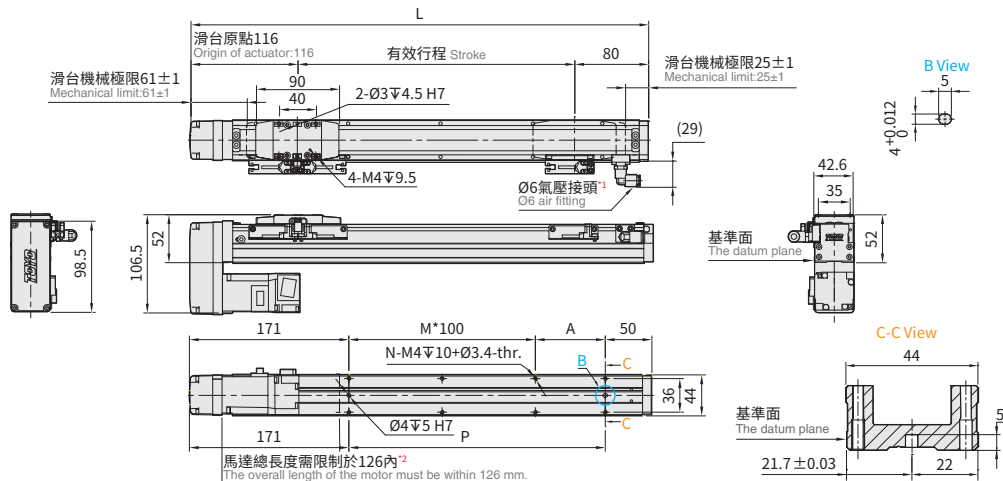
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

## BM 馬達下折 Motor Bottom Side



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

單位 Unit : mm



有效行程 Stroke	50 <sup>*1</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		
KG	1.34	1.52	1.7	1.88	2.06	2.24	2.42	2.6	2.78	2.96	3.14	3.32	3.5	3.68	3.86	4.04	4.22	4.4	4.58	4.76		
線速度 Linear Speed mm/s	導程 Lead 2										90	80	70	60	50	43	40	37	33			
	導程 Lead 6	360									330	320	270	240	210	180	150	130	120	110	100	
	導程 Lead 12	720									660	640	540	480	420	360	300	260	240	220	200	

\*1 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.

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

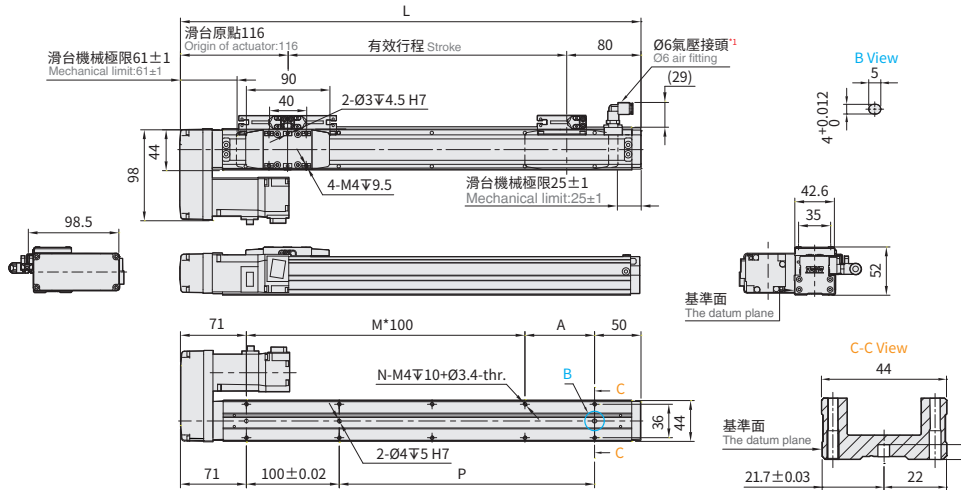
\*2 馬達下折時，若選用煞車馬達，或是超出馬達總長度限制時，無法套用標準 PIN 孔，如有需求，請洽我司業務。When motor with brake assembled on lower side, or the total len GCH over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.

BL 馬達左折 Motor Left Side



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

單位 Unit : mm



有效行程 Stroke	50 <sup>※1</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		
KG	1.34	1.52	1.7	1.88	2.06	2.24	2.42	2.6	2.78	2.96	3.14	3.32	3.5	3.68	3.86	4.04	4.22	4.4	4.58	4.76		
線速度 Linear Speed mm/s	導程 Lead 2	100										90	80	70	60	50	43	40	37	33		
	導程 Lead 6	360										330	320	270	240	210	180	150	130	120	110	100
	導程 Lead 12	720										660	640	540	480	420	360	300	260	240	220	200

※1 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.

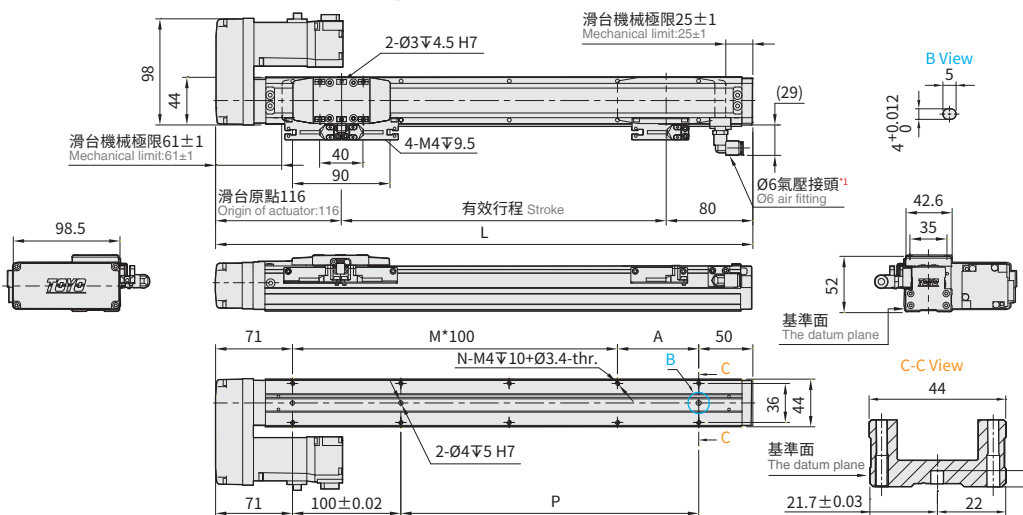
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

BR 馬達右折 Motor Right Side



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

單位 Unit : mm



有效行程 Stroke	50 <sup>※1</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		
KG	1.34	1.52	1.7	1.88	2.06	2.24	2.42	2.6	2.78	2.96	3.14	3.32	3.5	3.68	3.86	4.04	4.22	4.4	4.58	4.76		
線速度 Linear Speed mm/s	導程 Lead 2	100										90	80	70	60	50	43	40	37	33		
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※1 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.

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

精度  
±0.005 mm

Clean Room



最大行程  
Maximum Stroke 1000mm

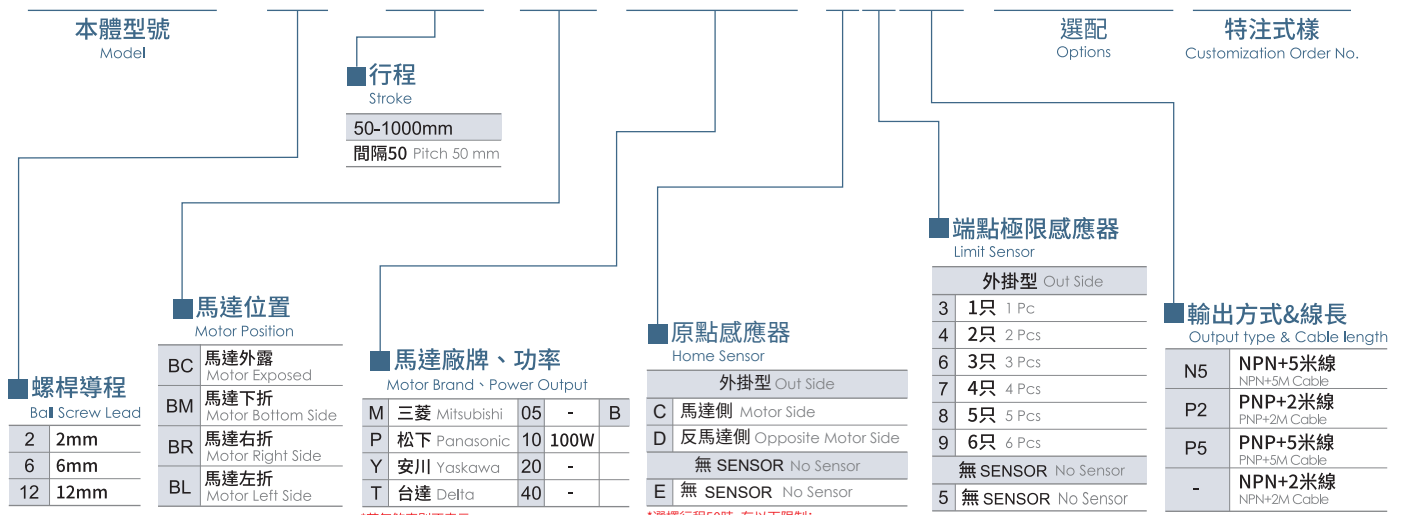
最高速度  
Maximum Speed 720mm/s

馬達容量  
Motor Output 100W

最大可搬重量  
Max Payload 25kg

## 型號表示方式 Ordering Method

GCH4 - L2 - 100 - BC - M10B - C4N5 - 參照右頁 - 0001



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

\*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.

\*感應器由客戶自行安裝，圖面最多示意為3只  
\*The sensors are installed by customers themselves, and the diagram shows a maximum of 3 sensors.



基本仕様 Specification

性能	位置重複精度 Repeatability	mm	±0.005			
	螺桿導程 Lead	mm	2	6	12	
	最高轉速 Maximum Rotating speed	rpm	3000	3600	3600	
	最高速度 Maximum linear speed *1	mm/s	100	360	720	
	最大可搬重量 Maximum Payload	水平使用 Horizontal	kg	25	20	20
		垂直使用 Vertical	kg	8	8	3.5
		搭配回升電阻垂直使用 Vertical with regenerative resistor *2	kg	8	15	8
	定格推力 Rated Thrust	N	854	285	142	
	標準行程 Stroke (increments)	mm	50-1000mm /50 間隔 (50 increments)			
	最大加速度 Maximum acceleration	G	0.3	0.3	0.6	
滾珠螺桿 Ball screw	基本動額定負荷 Basic dynamic load rating Ca	N	2265	2537	1740	
	基本靜額定負荷 Basic static load rating Coa	N	4839	4569	3052	
直線滑軌 Linear Guide	動態水平負載 Dynamic horizontal (100km)	N	4835			
	靜態水平負載 Static Horizontal	N	12678			
固定側軸承 Fixed bearing	基本動額定負荷 Basic dynamic load rating Cr	N	5361			
	靜態容許負荷 Static load rating Cor	N	2880			
部品	AC 伺服馬達容量 AC Servo Motor Output	W	100			
	滾珠螺桿外徑 Ball Screw Ø	mm	C7Ø10			
	連軸器 Coupling	mm	7X8			
	原點感應器 Home Sensor	外掛 Outside	T64N2 (NPN+2 米線) (NPN+2M Cable)			

\*1 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.)  
\*2 回升電阻由客戶自行購買安裝。The rebound resistor is purchased and installed by the customer.

容許負載力距表 Allowable Overhang

(單位 Unit : mm)	(單位 Unit : mm)	(單位 Unit : mm)																																																																																																																										
<table border="1"> <tr> <th colspan="2">水平安裝 Horizontal Installation</th> <th>A</th> <th>B</th> <th>C</th> </tr> <tr> <td rowspan="3">導程 2 Lead</td> <td>12kg</td> <td>1000</td> <td>55</td> <td>80</td> </tr> <tr> <td>18kg</td> <td>750</td> <td>35</td> <td>50</td> </tr> <tr> <td>25kg</td> <td>500</td> <td>23</td> <td>32</td> </tr> <tr> <td rowspan="3">導程 6 Lead</td> <td>10kg</td> <td>459</td> <td>52</td> <td>70</td> </tr> <tr> <td>15kg</td> <td>292</td> <td>32</td> <td>44</td> </tr> <tr> <td>20kg</td> <td>208</td> <td>22</td> <td>30</td> </tr> <tr> <td rowspan="3">導程 12 Lead</td> <td>8kg</td> <td>250</td> <td>58</td> <td>71</td> </tr> <tr> <td>14kg</td> <td>134</td> <td>29</td> <td>36</td> </tr> <tr> <td>20kg</td> <td>87</td> <td>18</td> <td>23</td> </tr> </table>	水平安裝 Horizontal Installation		A	B	C	導程 2 Lead	12kg	1000	55	80	18kg	750	35	50	25kg	500	23	32	導程 6 Lead	10kg	459	52	70	15kg	292	32	44	20kg	208	22	30	導程 12 Lead	8kg	250	58	71	14kg	134	29	36	20kg	87	18	23	<table border="1"> <tr> <th colspan="2">壁掛安裝 Wall Installation</th> <th>A</th> <th>B</th> <th>C</th> </tr> <tr> <td rowspan="3">導程 2 Lead</td> <td>12kg</td> <td>80</td> <td>55</td> <td>1000</td> </tr> <tr> <td>18kg</td> <td>50</td> <td>35</td> <td>750</td> </tr> <tr> <td>25kg</td> <td>32</td> <td>23</td> <td>500</td> </tr> <tr> <td rowspan="3">導程 6 Lead</td> <td>10kg</td> <td>71</td> <td>52</td> <td>459</td> </tr> <tr> <td>15kg</td> <td>44</td> <td>32</td> <td>292</td> </tr> <tr> <td>20kg</td> <td>30</td> <td>22</td> <td>208</td> </tr> <tr> <td rowspan="3">導程 12 Lead</td> <td>8kg</td> <td>71</td> <td>58</td> <td>250</td> </tr> <tr> <td>14kg</td> <td>36</td> <td>29</td> <td>134</td> </tr> <tr> <td>20kg</td> <td>23</td> <td>18</td> <td>87</td> </tr> </table>	壁掛安裝 Wall Installation		A	B	C	導程 2 Lead	12kg	80	55	1000	18kg	50	35	750	25kg	32	23	500	導程 6 Lead	10kg	71	52	459	15kg	44	32	292	20kg	30	22	208	導程 12 Lead	8kg	71	58	250	14kg	36	29	134	20kg	23	18	87	<table border="1"> <tr> <th colspan="2">垂直安裝 Vertical Installation</th> <th>A</th> <th>C</th> </tr> <tr> <td rowspan="3">導程 2 Lead</td> <td>4kg</td> <td>192</td> <td>192</td> </tr> <tr> <td>8kg</td> <td>96</td> <td>96</td> </tr> <tr> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td rowspan="3">導程 6 Lead</td> <td>4kg</td> <td>150</td> <td>150</td> </tr> <tr> <td>8kg</td> <td>75</td> <td>75</td> </tr> <tr> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td rowspan="3">導程 12 Lead</td> <td>2kg</td> <td>253</td> <td>253</td> </tr> <tr> <td>3.5kg</td> <td>144</td> <td>144</td> </tr> <tr> <td>-</td> <td>-</td> <td>-</td> </tr> </table>	垂直安裝 Vertical Installation		A	C	導程 2 Lead	4kg	192	192	8kg	96	96	-	-	-	導程 6 Lead	4kg	150	150	8kg	75	75	-	-	-	導程 12 Lead	2kg	253	253	3.5kg	144	144	-	-	-
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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，代表重心。  
The torque value in the chart indicate the center of gravity.  
\* 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 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 0.2 秒計算。  
The life and torque are calculated by setting the motor acceleration and deceleration for 0.2 seconds.

選配 Options

EB				MM			CMK				
外觀黑色處理 Outer layer is treated with black oxide				指定馬達出線方向 Selectable Cable Leading Direction			馬達傳動配件追加鍵槽 Additional keyway for motor drive parts				
代號 Code	顏色 Color	說明 Instructions	範圍 Range	代號 Code	說明 Instructions	需參照 Refer to	代號 Code	追加鍵槽 Keyway Groove	馬達位置 Motor Position	出貨型式 Shipment Type	需參照 Refer to
EB	黑色 Black	本體 Main Body	P.678	MW	朝上 Upper side	P.679 ~ P.680	CMK	單邊 (限定馬達側) Single (Limited to the motor side)	BC	鍵槽式聯軸器 Keyway Coupling	P.681 ~ P.682
	原色 Original color	不銹鋼板材 Stainless steel plate 螺絲 Screw 鋼帶 Steel Band 滑座 Carriage 氣壓接頭 Air Fitting		MM	朝下 Bottom side			BL/BR/BM	鍵槽式皮帶輪 Keyway Belt Pulley		
			ML	朝左 Left side	BC		鍵槽式聯軸器 Keyway Coupling				
			MR	朝右 Right side	BL/BR/BM		鍵槽式皮帶輪 Keyway Belt Pulley				
							SKN	雙邊 Double	BC	無聯軸器 (請自行購買安裝) Without Coupling (Please purchase and install by yourself)	
									BL/BR/BM	無馬達端皮帶輪 (請自行購買安裝) Without Belt Pulley (Please purchase and install by yourself)	

# GCH4 單軸 /1-axis

▶ 軌道內嵌  
Integrated Linear Bearing

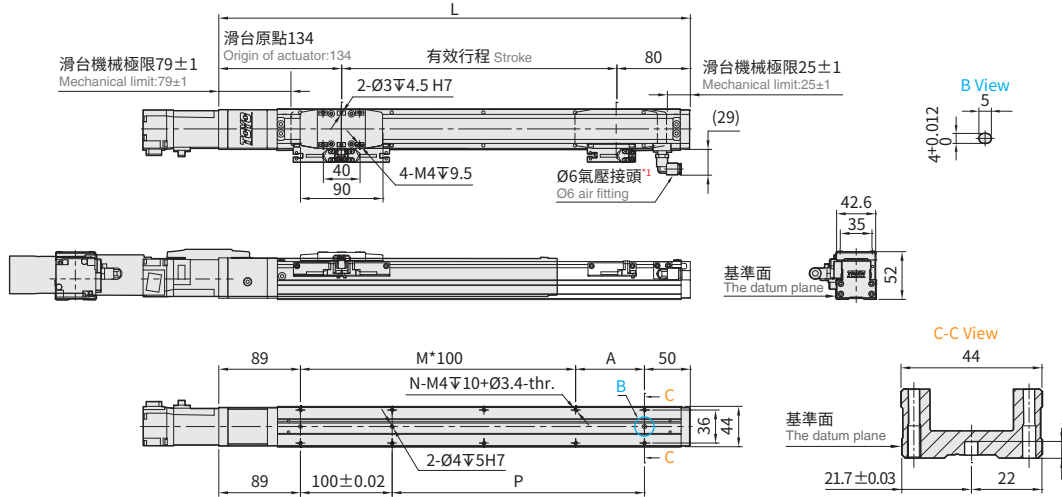
▶ 螺桿驅動  
Ball Screw Drive

## BC 馬達外露 Motor Exposed



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

單位 Unit : mm



有效行程 Stroke	50 <sup>*1</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	264	314	364	414	464	514	564	614	664	714	764	814	864	914	964	1014	1064	1114	1164	1214	
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	
KG	1.25	1.42	1.59	1.77	1.95	2.13	2.31	2.49	2.67	2.85	3.03	3.21	3.29	3.57	3.75	3.93	4.11	4.29	4.47	4.65	
線速度 Linear Speed mm/s	導程 Lead 2										90	80	70	60	50	43	40	37	33		
	導程 Lead 6	360									330	320	270	240	210	180	150	130	120	110	100
	導程 Lead 12	720									660	640	540	480	420	360	300	260	240	220	200

\*1 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.

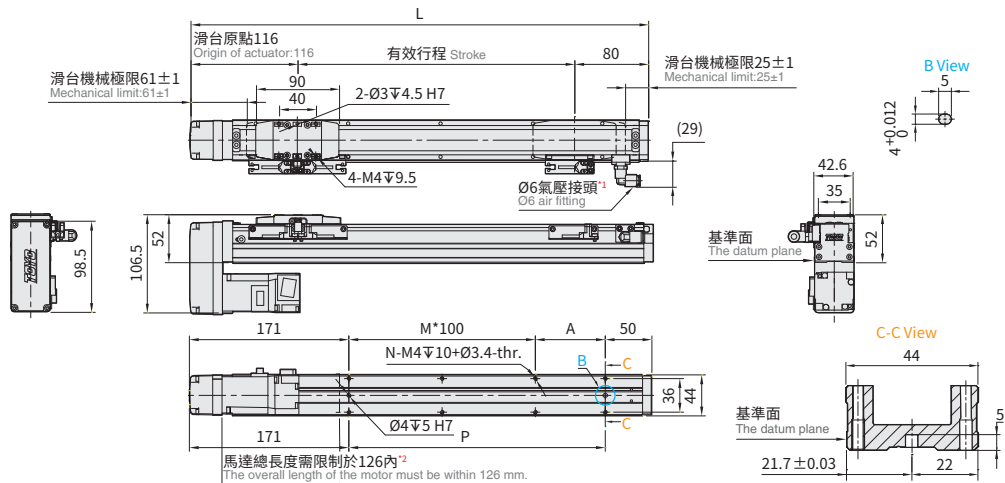
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

## BM 馬達下折 Motor Bottom Side



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

單位 Unit : mm



有效行程 Stroke	50 <sup>*1</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	
KG	1.34	1.52	1.7	1.88	2.06	2.24	2.42	2.6	2.78	2.96	3.14	3.32	3.5	3.68	3.86	4.04	4.22	4.4	4.58	4.76	
線速度 Linear Speed mm/s	導程 Lead 2										90	80	70	60	50	43	40	37	33		
	導程 Lead 6	360									330	320	270	240	210	180	150	130	120	110	100
	導程 Lead 12	720									660	640	540	480	420	360	300	260	240	220	200

\*1 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.

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

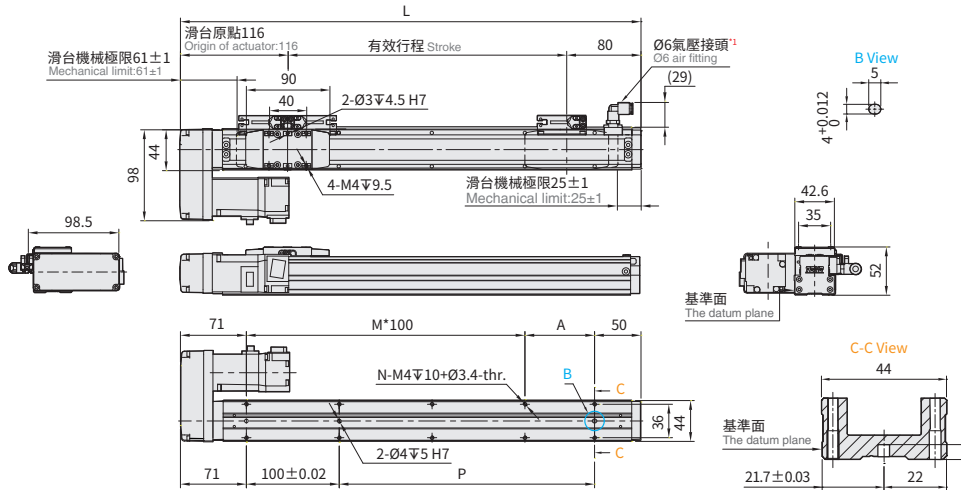
\*2 馬達下折時，若選用煞車馬達，或是超出馬達總長度限制時，無法套用標準 PIN 孔，如有需求，請洽我司業務。When motor with brake assembled on lower side, or the total len GCH over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.

BL 馬達左折 Motor Left Side



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

單位 Unit : mm



有效行程 Stroke	50 <sup>※1</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		
KG	1.34	1.52	1.7	1.88	2.06	2.24	2.42	2.6	2.78	2.96	3.14	3.32	3.5	3.68	3.86	4.04	4.22	4.4	4.58	4.76		
線速度 Linear Speed mm/s	導程 Lead 2	100										90	80	70	60	50	43	40	37	33		
	導程 Lead 6	360										330	320	270	240	210	180	150	130	120	110	100
	導程 Lead 12	720										660	640	540	480	420	360	300	260	240	220	200

※1 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.

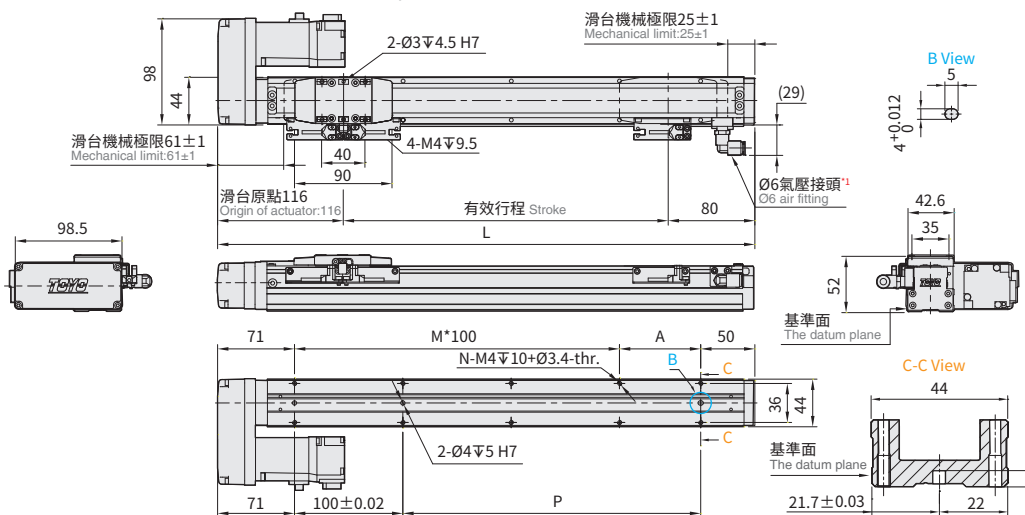
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

BR 馬達右折 Motor Right Side



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

單位 Unit : mm



有效行程 Stroke	50 <sup>※1</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		
KG	1.34	1.52	1.7	1.88	2.06	2.24	2.42	2.6	2.78	2.96	3.14	3.32	3.5	3.68	3.86	4.04	4.22	4.4	4.58	4.76		
線速度 Linear Speed mm/s	導程 Lead 2	100										90	80	70	60	50	43	40	37	33		
	導程 Lead 6	360										330	320	270	240	210	180	150	130	120	110	100
	導程 Lead 12	720										660	640	540	480	420	360	300	260	240	220	200

※1 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.

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

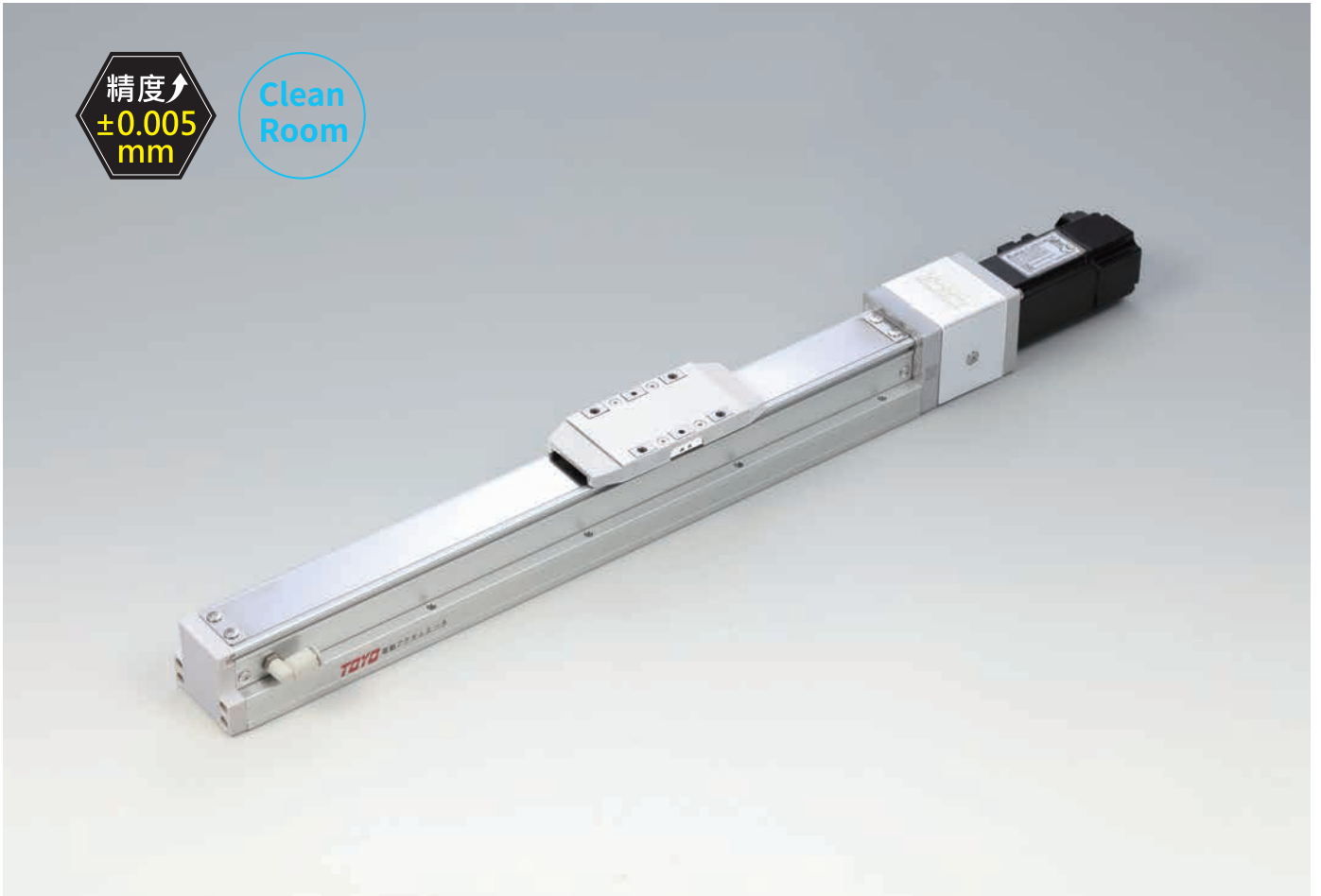
# GCH5 單軸 /1-axis

▶ 軌道內嵌  
Integrated Linear Bearing

▶ 螺桿驅動  
Ball Screw Drive

精度  
±0.005 mm

Clean Room



最大行程  
Maximum Stroke 1050mm

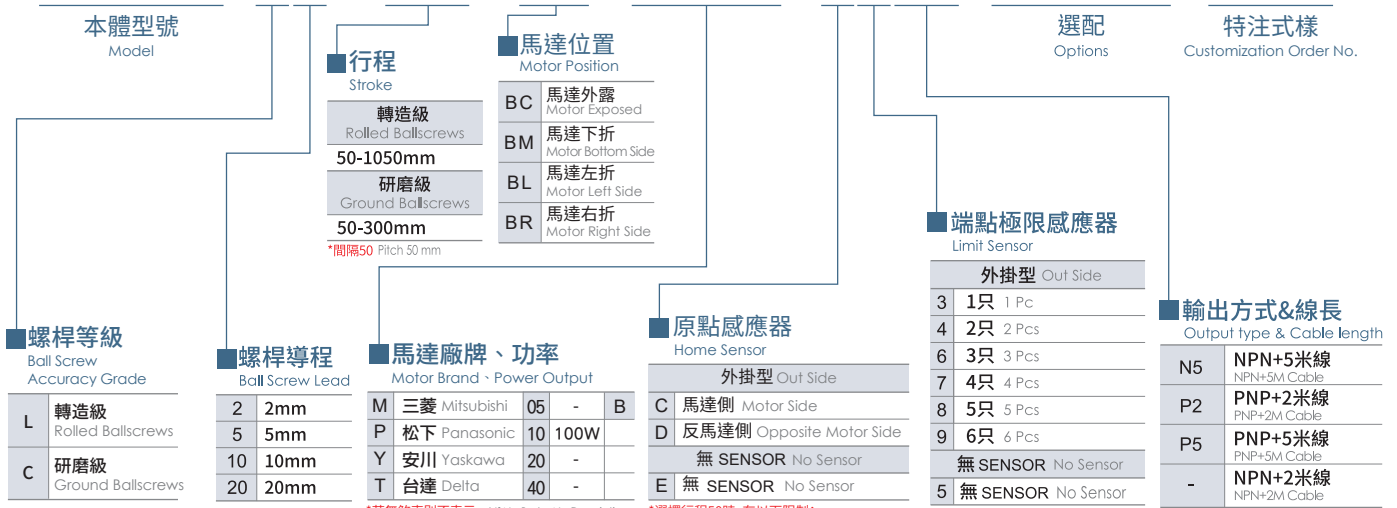
最高速度  
Maximum Speed 1200mm/s

馬達容量  
Motor Output 100W

最大可搬重量  
Max Payload 40kg

## 型號表示方式 Ordering Method

GCH5 - L5 - 100 - BC - M10B - C4N5 - 參照右頁  
Refer to the right page. - 0001



\*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.

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

應用例 Application

一般 / 螺桿仕様 GTH / GTY / ETH / Y

一般 / 皮帶仕様 ETB / M

無塵 / 螺桿仕様 GGH

無塵 / 皮帶仕様 ECB

直交連結 XYGT / XYTH / XYTB

參考資料 Reference

基本仕様 Specification

性能	螺桿等級代號 Ballscrew Accuracy Grade Code		L		C		
	螺桿等級 Ballscrew Accuracy Grade		C7 轉造 C7 Rolled Ballscrew		C5 研磨 C5 Ground Ballscrew		
	位置重複精度 Repeatability	mm	±0.005		±0.003		
	標準行程 Stroke (increments)	mm	50-1050mm /50 間隔 (50 increments)		50-300mm /50 間隔 (50 increments)		
性能	螺桿導程 Lead	mm	2	5	10	20	
	最高轉速 Maximum Rotating speed	rpm	3000	3600	3600	3600	
	最高速度 Maximum linear speed *1	mm/s	100	300	600	1200	
	最大可搬重量 Maximum Payload	水平使用 Horizontal	kg	30	40	24	12
		垂直使用 Vertical	kg	10	10	5	2.5
		搭配回升電阻垂直使用 Vertical with regenerative resistor *2	kg	10	12	6	3
	定格推力 Rated Thrust	N	854	341	170	85	
	最大加速度 Maximum acceleration	G	0.1	0.3	0.3	0.6	
	滾珠螺桿 Ball screw	基本動額定負荷 Basic dynamic load rating Ca	N	2411	4829	4680	11284
		基本靜額定負荷 Basic static load rating Coa	N	5779	7836	7649	20410
直線滑軌 Linear Guide	動態水平負載 Dynamic horizontal (100km)	N	5904				
	靜態水平負載 Static Horizontal	N	16904				
固定側軸承 Fixed bearing	基本動額定負荷 Basic dynamic load rating Cr	N	5361				
	靜態容許負荷 Static load rating Cor	N	2880				
部品	AC 伺服馬達容量 AC Servo Motor Output	W	100				
	滾珠螺桿外徑 Ball Screw Ø	mm	Ø12				
	連軸器 Coupling	mm	7X8				
	原點感應器 Home Sensor	外掛 Outside	T64N2 (NPN+2 米線) (NPN+2M Cable)				

\*1 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.)  
\*2 回升電阻由客戶自行購買安裝。The rebound resistor is purchased and installed by the customer.

容許負載力距表 Allowable Overhang

(單位 Unit : mm)	(單位 Unit : mm)	(單位 Unit : mm)																																																																		
<table border="1"> <tr><th colspan="4">水平安裝 Horizontal Installation</th></tr> <tr><th>導程 Lead</th><th>A</th><th>B</th><th>C</th></tr> <tr><td>2</td><td>10kg: 1130, 20kg: 700, 30kg: 550</td><td>113, 51, 31</td><td>155, 70, 42</td></tr> <tr><td>5</td><td>15kg: 560, 30kg: 262, 40kg: 178</td><td>56, 23, 14</td><td>74, 30, 20</td></tr> <tr><td>10</td><td>10kg: 404, 18kg: 209, 24kg: 148</td><td>78, 39, 26</td><td>95, 47, 32</td></tr> <tr><td>20</td><td>8kg: 189, 10kg: 148, 12kg: 120</td><td>73, 56, 45</td><td>75, 58, 47</td></tr> </table>	水平安裝 Horizontal Installation				導程 Lead	A	B	C	2	10kg: 1130, 20kg: 700, 30kg: 550	113, 51, 31	155, 70, 42	5	15kg: 560, 30kg: 262, 40kg: 178	56, 23, 14	74, 30, 20	10	10kg: 404, 18kg: 209, 24kg: 148	78, 39, 26	95, 47, 32	20	8kg: 189, 10kg: 148, 12kg: 120	73, 56, 45	75, 58, 47	<table border="1"> <tr><th colspan="4">壁掛安裝 Wall Installation</th></tr> <tr><th>導程 Lead</th><th>A</th><th>B</th><th>C</th></tr> <tr><td>2</td><td>10kg: 155, 20kg: 70, 30kg: 42</td><td>113, 51, 31</td><td>1130, 700, 550</td></tr> <tr><td>5</td><td>15kg: 74, 30kg: 30, 40kg: 19</td><td>56, 23, 14</td><td>560, 262, 178</td></tr> <tr><td>10</td><td>10kg: 95, 18kg: 47, 24kg: 32</td><td>78, 39, 26</td><td>404, 209, 148</td></tr> <tr><td>20</td><td>8kg: 75, 10kg: 58, 12kg: 47</td><td>73, 56, 45</td><td>189, 148, 120</td></tr> </table>	壁掛安裝 Wall Installation				導程 Lead	A	B	C	2	10kg: 155, 20kg: 70, 30kg: 42	113, 51, 31	1130, 700, 550	5	15kg: 74, 30kg: 30, 40kg: 19	56, 23, 14	560, 262, 178	10	10kg: 95, 18kg: 47, 24kg: 32	78, 39, 26	404, 209, 148	20	8kg: 75, 10kg: 58, 12kg: 47	73, 56, 45	189, 148, 120	<table border="1"> <tr><th colspan="3">垂直安裝 Vertical Installation</th></tr> <tr><th>導程 Lead</th><th>A</th><th>C</th></tr> <tr><td>2</td><td>6kg: 205, 8kg: 153, 10kg: 123</td><td>205, 153, 123</td></tr> <tr><td>5</td><td>6kg: 165, 8kg: 123, 10kg: 99</td><td>165, 123, 99</td></tr> <tr><td>10</td><td>1kg: 859, 3kg: 286, 5kg: 171</td><td>859, 286, 171</td></tr> <tr><td>20</td><td>1kg: 639, 2kg: 319, 2.5kg: 255</td><td>639, 319, 255</td></tr> </table>	垂直安裝 Vertical Installation			導程 Lead	A	C	2	6kg: 205, 8kg: 153, 10kg: 123	205, 153, 123	5	6kg: 165, 8kg: 123, 10kg: 99	165, 123, 99	10	1kg: 859, 3kg: 286, 5kg: 171	859, 286, 171	20	1kg: 639, 2kg: 319, 2.5kg: 255	639, 319, 255
水平安裝 Horizontal Installation																																																																				
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20	1kg: 639, 2kg: 319, 2.5kg: 255	639, 319, 255																																																																		

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，代表重心。  
The torque value in the chart indicate the center of gravity.  
\* 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 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速減速設定 0.2 秒計算。  
The life and torque are calculated by setting the motor acceleration and deceleration for 0.2 seconds.

選配 Options

EB 外觀黑色處理 Outer layer is treated with black oxide				指定馬達出線方向 Selectable Cable Leading Direction			馬達傳動配件追加鍵槽 Additional keyway for motor drive parts				
代號 Code	顏色 Color	說明 Instructions		代號 Code	說明 Instructions	需參照 Refer to	代號 Code	說明 Instructions		需參照 Refer to	
		範圍 Range	需參照 Refer to					追加鍵槽 Keyway Groove	馬達位置 Motor Position		出貨型式 Shipment Type
EB	黑色 Black	本體 Main Body		MW	朝上 Upper side	P.679 ~ P.680	CMK	單邊 (限定馬達側) Single (Limited to the motor side)	BC	鍵槽式聯軸器 Keyway Coupling	P.681 ~ P.682
	原色 Original color	不銹鋼板材 Stainless steel plate		MM	朝下 Bottom side				BL/BR/BM	鍵槽式皮帶輪 Keyway Belt Pulley	
		螺絲 Screw		ML	朝左 Left side			BC	鍵槽式聯軸器 Keyway Coupling		
		鋼帶 Steel Band		MR	朝右 Right side			BL/BR/BM	鍵槽式皮帶輪 Keyway Belt Pulley		
滑座 Carriage		氣壓接頭 Air Fitting				SKY	雙邊 Double	BC	無聯軸器 (請自行購買安裝) Without Coupling (Please purchase and install by yourself)		
						SKN	雙邊 Double	BL/BR/BM	無馬達端皮帶輪 (請自行購買安裝) Without Belt Pulley (Please purchase and install by yourself)		

GCH Series

GCH4

GCH5

GCH8

GCH12

GCH5S

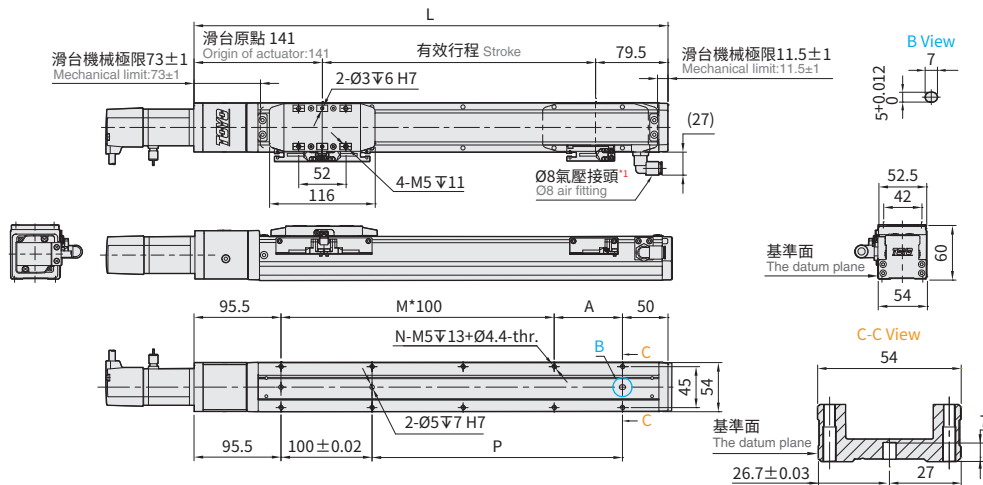
GCH8S

## BC 馬達外露 Motor Exposed



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

單位 Unit : mm



有效行程 Stroke	50 <sup>-1</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	270.5	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5	1220.5	1270.5			
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			
KG	1.95	2.09	2.22	2.41	2.69	2.8	2.82	3.05	3.16	3.25	3.45	3.58	3.74	3.88	4.01	4.39	4.77	5.15	5.53	5.91	6.29			
線速度 Linear Speed mm/s	導程 Lead 2	100										90	80	70	60	50	47	40	37	33				
	導程 Lead 5	300										292	250	225	200	175	150	125	117	100	92	83		
	導程 Lead 10	600										583	500	450	400	350	300	250	233	200	183	167		
	導程 Lead 20	1200										1167	1000	900	800	700	600	500	467	400	367	333		

※1 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.

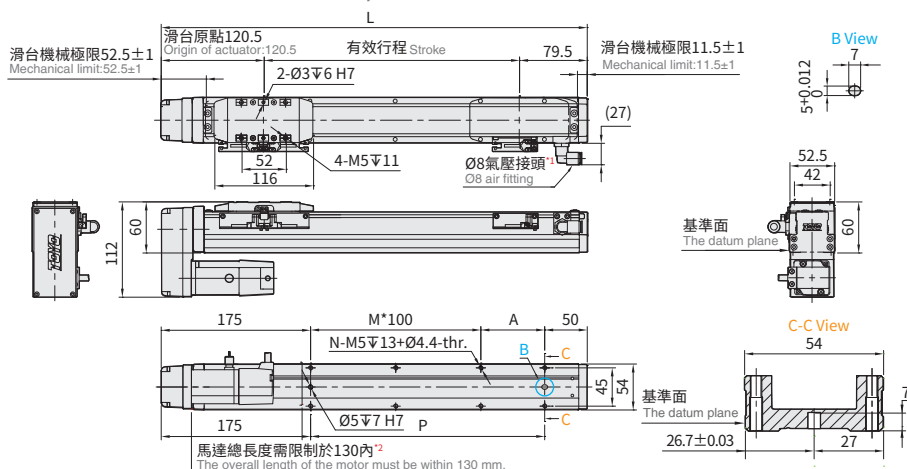
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

## BM 馬達下折 Motor Bottom Side



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

單位 Unit : mm



有效行程 Stroke	50 <sup>-1</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			
KG	1.98	2.1	2.33	2.44	2.72	2.83	2.88	3.08	3.19	3.28	3.48	3.61	3.77	3.9	4.04	4.42	4.8	5.18	5.56	5.94	6.32			
線速度 Linear Speed mm/s	導程 Lead 2	100										90	80	70	60	50	47	40	37	33				
	導程 Lead 5	300										292	250	225	200	175	150	125	117	100	92	83		
	導程 Lead 10	600										583	500	450	400	350	300	250	233	200	183	167		
	導程 Lead 20	1200										1167	1000	900	800	700	600	500	467	400	367	333		

※1 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.

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

\*2 馬達下折時，若選用款馬達，或是超出馬達總長度限制時，無法套用標準 PIN 孔，如有需求，請洽我司業務。When motor with brake assembled on lower side, or the total len GCH over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.

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

應用例  
Application

一般 / 螺桿仕様  
GTH / GTY / ETH / Y

一般 / 皮帶仕様  
ETB / M

無塵 / 螺桿仕様  
GCH

無塵 / 皮帶仕様  
ECB

直交連結  
XYGT / XYTH / XYTB

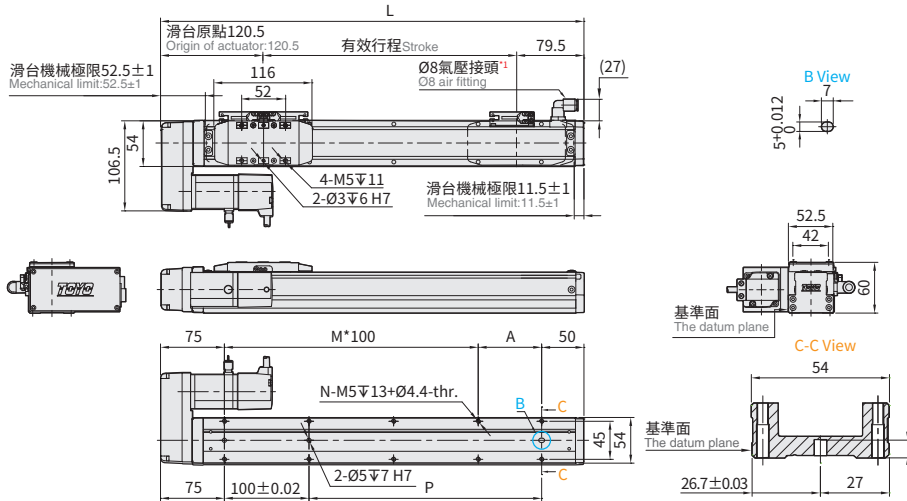
參考資料  
Reference

BL 馬達左折 Motor Left Side



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

單位 Unit : mm



有效行程 Stroke	50 <sup>±1</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			
KG	1.98	2.1	2.33	2.44	2.72	2.83	2.88	3.08	3.19	3.28	3.48	3.61	3.77	3.9	4.04	4.42	4.8	5.18	5.56	5.94	6.32			
線速度 Linear Speed mm/s	導程 Lead 2	100										90	80	70	60	50	47	40	37	33				
	導程 Lead 5	300										292	250	225	200	175	150	125	117	100	92	83		
	導程 Lead 10	600										583	500	450	400	350	300	250	233	200	183	167		
	導程 Lead 20	1200										1167	1000	900	800	700	600	500	467	400	367	333		

※1 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.

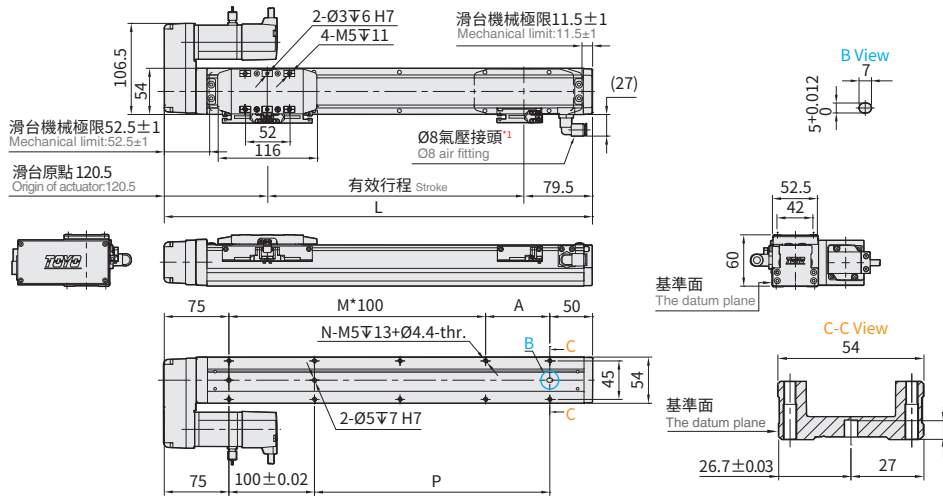
\*1 若光電選用 D4 時（原點 SENSOR 置於抱持端時）負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

BR 馬達右折 Motor Right Side



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

單位 Unit : mm



有效行程 Stroke	50 <sup>±1</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			
KG	1.98	2.1	2.33	2.44	2.72	2.83	2.88	3.08	3.19	3.28	3.48	3.61	3.77	3.9	4.04	4.42	4.8	5.18	5.56	5.94	6.32			
線速度 Linear Speed mm/s	導程 Lead 2	100										90	80	70	60	50	47	40	37	33				
	導程 Lead 5	300										292	250	225	200	175	150	125	117	100	92	83		
	導程 Lead 10	600										583	500	450	400	350	300	250	233	200	183	167		
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※1 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.

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GCH Series

GCH4

GCH5

GCH8

GCH12

GCH55

GCH85

精度  
±0.005 mm

Clean Room



最大行程  
Maximum Stroke 1250mm

最高速度  
Maximum Speed 1200mm/s

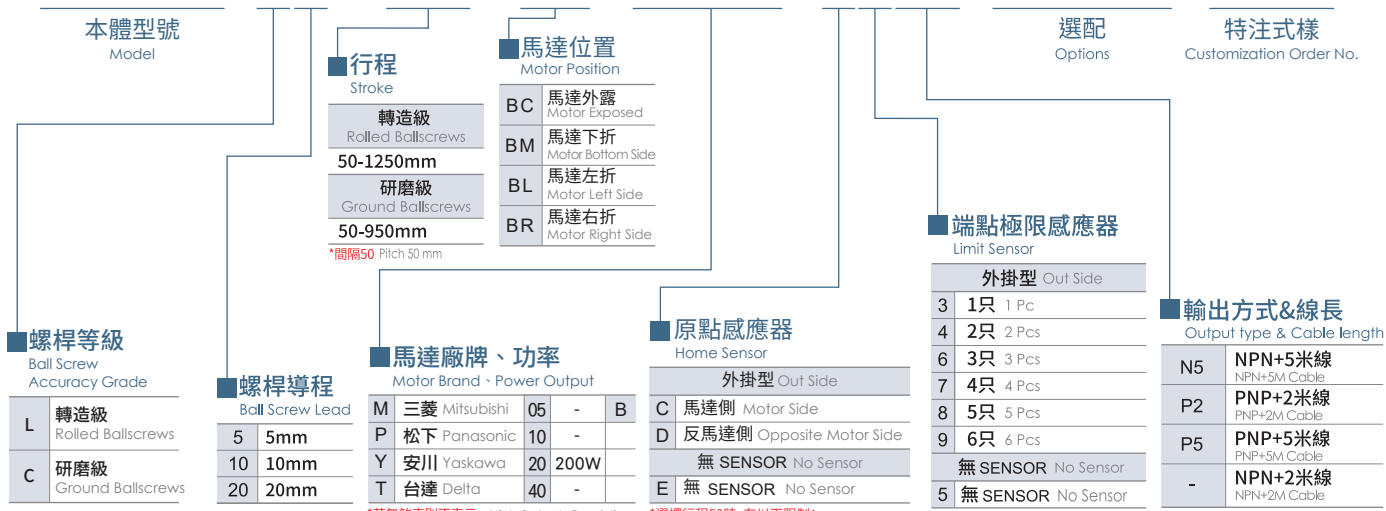
馬達容量  
Motor Output 200W

最大可搬重量  
Max Payload 100kg

## 型號表示方式 Ordering Method

GCH8 - L5 - 100 - BC - M20B - C4N5 - 0001

參照右頁  
Refer to the right page.



\*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.

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

\*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.

\*感應器由客戶自行安裝,圖面最多示意為3只  
\*The sensors are installed by customers themselves, and the diagram shows a maximum of 3 sensors.



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應用例  
Application

一般 / 螺桿仕様  
GTH / GTY / ETH / Y

一般 / 皮帶仕様  
ETB / M

無塵 / 螺桿仕様  
GCH

無塵 / 皮帶仕様  
ECB

直交連結  
XYGT / XYTH / XYTB

參考資料  
Reference

**基本仕様 Specification**

<b>性能</b>	螺桿等級代號 Ballscrew Accuracy Grade Code		L		C		
	螺桿等級 Ballscrew Accuracy Grade		C7 轉造 C7 Rolled Ballscrew		C5 研磨 C5 Ground Ballscrew		
	位置重複精度 Repeatability	mm	±0.005		±0.003		
	標準行程 Stroke (increments)	mm	50-1250mm / 50 間隔 (50 increments)		50-950mm / 50 間隔 (50 increments)		
<b>性能</b>	螺桿導程 Lead	mm	5	10	20		
	最高轉速 Maximum Rotating speed	rpm	3600	3600	3600		
	最高速度 Maximum linear speed *1	mm/s	300	600	1200		
	最大可搬重量 Maximum Payload	水平使用 Horizontal	kg	100	80	40	
		垂直使用 Vertical	kg	15	8	3	
		搭配回升電阻垂直使用 Vertical with regenerative resistor *3	kg	30	20	8	
	定格推力 Rated Thrust	N	683	341	174		
	最大加速度 Maximum acceleration	G	0.3	0.3	0.6		
	滾珠螺桿 Ball screw	基本動額定負荷 Basic dynamic load rating Ca	N	8042	6300	4152	
		基本靜額定負荷 Basic static load rating Coa	N	15088	11596	7439	
	直線滑軌 Linear Guide	動態水平負載 Dynamic horizontal (100km)	N	18620			
		靜態水平負載 Static Horizontal	N	34230			
固定側軸承 Fixed bearing	基本動額定負荷 Basic dynamic load rating Cr	N	8447				
	靜態容許負荷 Static load rating Cor	N	5060				
<b>部品</b>	AC 伺服馬達容量 AC Servo Motor Output	W	200				
	滾珠螺桿外徑 Ball Screw Ø	mm	Ø16				
	連軸器 Coupling	mm	10X14/11 *2				
	原點感應器 Home Sensor	外掛 Outside	T64N2 ( NPN+2 米線 ) (NPN+2M Cable)				

\*1 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.)  
\*2 使用 Panasonic 200W 馬達時，馬達軸心為 Ø11；其他廠牌，馬達軸心為 Ø14。Motor (200W) Shaft Diameter: Panasonic: 11mm; Other: 14mm.  
\*3 回升電阻由客戶自行購買安裝。The rebound resistor is purchased and installed by the customer.

**容許負載力距表 Allowable Overhang**

(單位 Unit: mm)	(單位 Unit: mm)	(單位 Unit: mm)																																																																																																							
<table border="1"> <thead> <tr> <th colspan="4">水平安裝 Horizontal Installation</th> </tr> <tr> <th>導程 Lead</th> <th>重量 Weight</th> <th>A</th> <th>B C</th> </tr> </thead> <tbody> <tr> <td rowspan="3">5</td> <td>50kg</td> <td>510</td> <td>51 79</td> </tr> <tr> <td>75kg</td> <td>290</td> <td>29 45</td> </tr> <tr> <td>100kg</td> <td>190</td> <td>19 29</td> </tr> <tr> <td rowspan="3">10</td> <td>30kg</td> <td>432</td> <td>82 115</td> </tr> <tr> <td>55kg</td> <td>214</td> <td>38 54</td> </tr> <tr> <td>80kg</td> <td>132</td> <td>22 31</td> </tr> <tr> <td rowspan="3">20</td> <td>20kg</td> <td>247</td> <td>95 110</td> </tr> <tr> <td>30kg</td> <td>157</td> <td>58 68</td> </tr> <tr> <td>40kg</td> <td>112</td> <td>40 47</td> </tr> </tbody> </table>	水平安裝 Horizontal Installation				導程 Lead	重量 Weight	A	B C	5	50kg	510	51 79	75kg	290	29 45	100kg	190	19 29	10	30kg	432	82 115	55kg	214	38 54	80kg	132	22 31	20	20kg	247	95 110	30kg	157	58 68	40kg	112	40 47	<table border="1"> <thead> <tr> <th colspan="4">壁掛安裝 Wall Installation</th> </tr> <tr> <th>導程 Lead</th> <th>重量 Weight</th> <th>A</th> <th>B C</th> </tr> </thead> <tbody> <tr> <td rowspan="3">5</td> <td>50kg</td> <td>79</td> <td>51 510</td> </tr> <tr> <td>75kg</td> <td>45</td> <td>29 290</td> </tr> <tr> <td>100kg</td> <td>29</td> <td>19 190</td> </tr> <tr> <td rowspan="3">10</td> <td>30kg</td> <td>115</td> <td>82 432</td> </tr> <tr> <td>55kg</td> <td>54</td> <td>38 214</td> </tr> <tr> <td>80kg</td> <td>31</td> <td>22 132</td> </tr> <tr> <td rowspan="3">20</td> <td>20kg</td> <td>110</td> <td>95 247</td> </tr> <tr> <td>30kg</td> <td>68</td> <td>58 157</td> </tr> <tr> <td>40kg</td> <td>47</td> <td>40 112</td> </tr> </tbody> </table>	壁掛安裝 Wall Installation				導程 Lead	重量 Weight	A	B C	5	50kg	79	51 510	75kg	45	29 290	100kg	29	19 190	10	30kg	115	82 432	55kg	54	38 214	80kg	31	22 132	20	20kg	110	95 247	30kg	68	58 157	40kg	47	40 112	<table border="1"> <thead> <tr> <th colspan="3">垂直安裝 Vertical Installation</th> </tr> <tr> <th>導程 Lead</th> <th>重量 Weight</th> <th>A C</th> </tr> </thead> <tbody> <tr> <td rowspan="4">5</td> <td>5kg</td> <td>647 647</td> </tr> <tr> <td>10kg</td> <td>323 323</td> </tr> <tr> <td>15kg</td> <td>215 215</td> </tr> <tr> <td>3kg</td> <td>937 937</td> </tr> <tr> <td rowspan="3">10</td> <td>5kg</td> <td>562 562</td> </tr> <tr> <td>8kg</td> <td>351 351</td> </tr> <tr> <td>2kg</td> <td>990 990</td> </tr> <tr> <td rowspan="2">20</td> <td>2.5kg</td> <td>792 792</td> </tr> <tr> <td>3kg</td> <td>660 660</td> </tr> </tbody> </table>	垂直安裝 Vertical Installation			導程 Lead	重量 Weight	A C	5	5kg	647 647	10kg	323 323	15kg	215 215	3kg	937 937	10	5kg	562 562	8kg	351 351	2kg	990 990	20	2.5kg	792 792	3kg	660 660
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**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，代表重心。  
The torque value in the chart indicate the center of gravity.  
\* 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 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 0.2 秒計算。  
The life and torque are calculated by setting the motor acceleration and deceleration for 0.2 seconds.

**選配 Options**

EB				MM			CMK					
外觀黑色處理 Outer layer is treated with black oxide				指定馬達出線方向 Selectable Cable Leading Direction			馬達傳動配件追加鍵槽 Additional keyway for motor drive parts					
代號 Code	顏色 Color	說明 Instructions	需參照 Refer to	代號 Code	說明 Instructions	需參照 Refer to	代號 Code	追加鍵槽 Keyway Groove	馬達位置 Motor Position	出貨型式 Shipment Type	需參照 Refer to	
EB	黑色 Black	本體 Main Body	P.678	MW	朝上 Upper side	P.679 ~ P.680	CMK	單邊 (限定馬達側) Single (Limited to the motor side)	BC	鍵槽式聯軸器 Keyway Coupling	P.681 ~ P.682	
	原色 Original color	不銹鋼板材 Stainless steel plate 螺絲 Screw 鋼帶 Steel Band 滑座 Carriage 氣壓接頭 Air Fitting		MM	朝下 Bottom side				BL/BR/BM	鍵槽式皮帶輪 Keyway Belt Pulley		
				ML	朝左 Left side			SKY	雙邊 Double	BC		鍵槽式聯軸器 Keyway Coupling
				MR	朝右 Right side					BL/BR/BM		鍵槽式皮帶輪 Keyway Belt Pulley
									BC	無聯軸器 (請自行購買安裝) Without Coupling (Please purchase and install by yourself)		
									BL/BR/BM	無馬達端皮帶輪 (請自行購買安裝) Without Belt Pulley (Please purchase and install by yourself)		

GCH Series

GCH4

GCH5

GCH8

GCH12

GCH5S

GCH8S

# GCH8 單軸 / 1-axis

▶ 軌道內嵌  
Integrated Linear Bearing

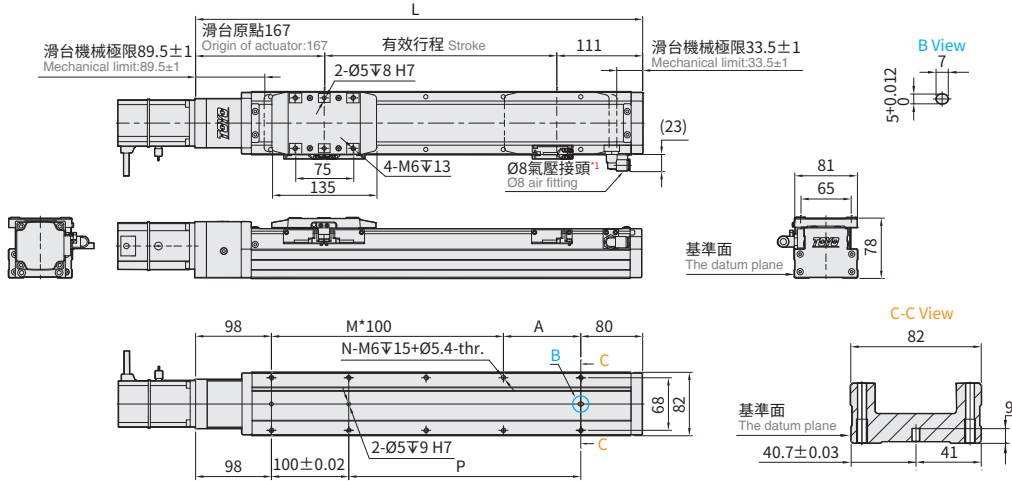
▶ 螺桿驅動  
Ball Screw Drive

## BC 馬達外露 Motor Exposed



• CAD圖面可至 [www.toyorobot.com](http://www.toyorobot.com) 下載 •  
Please download 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>※1</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
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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
KG	4.21	4.59	5	5.3	5.65	5.98	6.3	6.65	6.94	7.27	7.71	8.01	8.42	8.71	8.95	9.26	9.67	9.92	10.31	10.58	11	11.42	11.84	12.26	12.68
線速度 Linear Speed mm/s	導程 Lead 5	300											292	250	250	225	200	175	150	133	117	108	100	92	83
	導程 Lead 10	600											583	500	500	450	400	350	300	267	233	217	200	183	167
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※1 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 used 4 screws to fix, as a result, suggest that fixing actuator body from the bottom to the top.

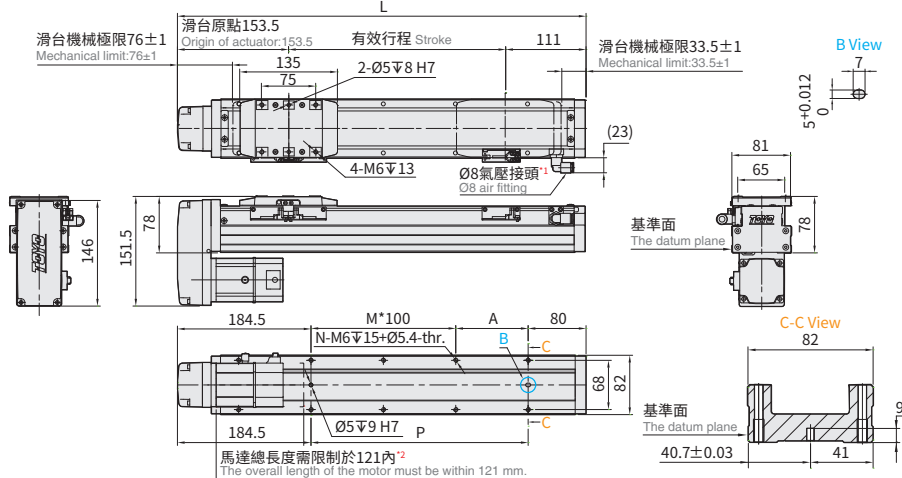
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

## BM 馬達下折 Motor Bottom Side



• CAD圖面可至 [www.toyorobot.com](http://www.toyorobot.com) 下載 •  
Please download 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>※1</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	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5	1414.5	1464.5	1514.5
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
KG	4.25	4.63	5.04	5.39	5.69	6.02	6.34	6.69	6.98	7.31	7.75	8.05	8.46	8.75	8.99	9.3	9.71	9.96	10.38	10.62	11.04	11.46	11.88	12.3	12.72
線速度 Linear Speed mm/s	導程 Lead 5	300											292	250	250	225	200	175	150	133	117	108	100	92	83
	導程 Lead 10	600											583	500	500	450	400	350	300	267	233	217	200	183	167
	導程 Lead 20	1200											1167	1000	1000	900	800	700	600	533	467	433	400	367	333

※1 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 used 4 screws to fix, as a result, suggest that fixing actuator body from the bottom to the top.

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

\*2 馬達下折時，若選用煞車馬達，或是超出馬達總長度限制時，無法套用標準 PIN 孔，如有需求，請洽我司業務。When motor with brake assembled on lower side, or the total len GCH over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.

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

應用例  
Application

一般 / 螺桿仕様  
GTH / GTV / ETH / Y

一般 / 皮帶仕様  
ETB / M

無塵 / 螺桿仕様  
GCH

無塵 / 皮帶仕様  
ECB

直交連結  
XYGT / XYTH / XYTB

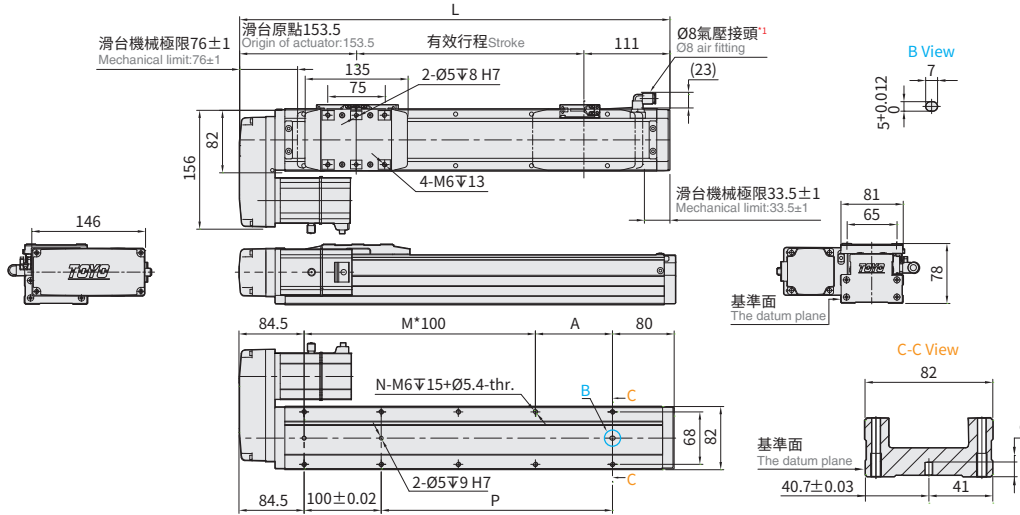
參考資料  
Reference

BL 馬達左折 Motor Left Side



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

單位 Unit : mm



有效行程 Stroke	50 <sup>±1</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	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5	1414.5	1464.5	1514.5		
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		
KG	4.25	4.63	5.04	5.39	5.69	6.02	6.34	6.69	6.98	7.31	7.75	8.05	8.46	8.75	8.99	9.3	9.71	9.96	10.38	10.62	11.04	11.46	11.88	12.3	12.72		
線速度 Linear Speed mm/s	導程 Lead 5	300													292	250	250	225	200	175	150	133	117	108	100	92	83
	導程 Lead 10	600													583	500	500	450	400	350	300	267	233	217	200	183	167
	導程 Lead 20	1200													1167	1000	1000	900	800	700	600	533	467	433	400	367	333

※1 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 used 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

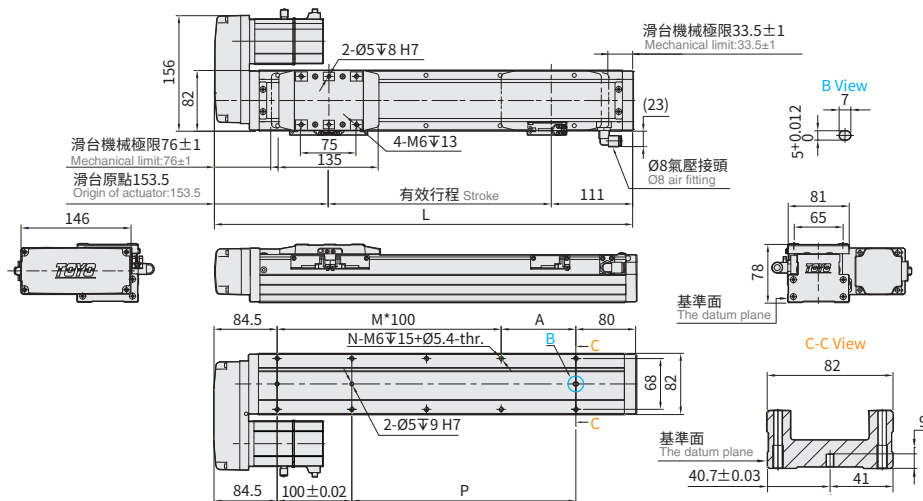
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

BR 馬達右折 Motor Right Side



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

單位 Unit : mm



有效行程 Stroke	50 <sup>±1</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	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5	1414.5	1464.5	1514.5		
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		
KG	4.25	4.63	5.04	5.39	5.69	6.02	6.34	6.69	6.98	7.31	7.75	8.05	8.46	8.75	8.99	9.3	9.71	9.96	10.38	10.62	11.04	11.46	11.88	12.3	12.72		
線速度 Linear Speed mm/s	導程 Lead 5	300													292	250	250	225	200	175	150	133	117	108	100	92	83
	導程 Lead 10	600													583	500	500	450	400	350	300	267	233	217	200	183	167
	導程 Lead 20	1200													1167	1000	1000	900	800	700	600	533	467	433	400	367	333

※1 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 used 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

GCH Series

GCH4

GCH5

GCH8

GCH12

GCH55

GCH85

精度  
±0.005 mm

Clean Room



最大行程  
Maximum Stroke 1250mm

最高速度  
Maximum Speed 1200mm/s

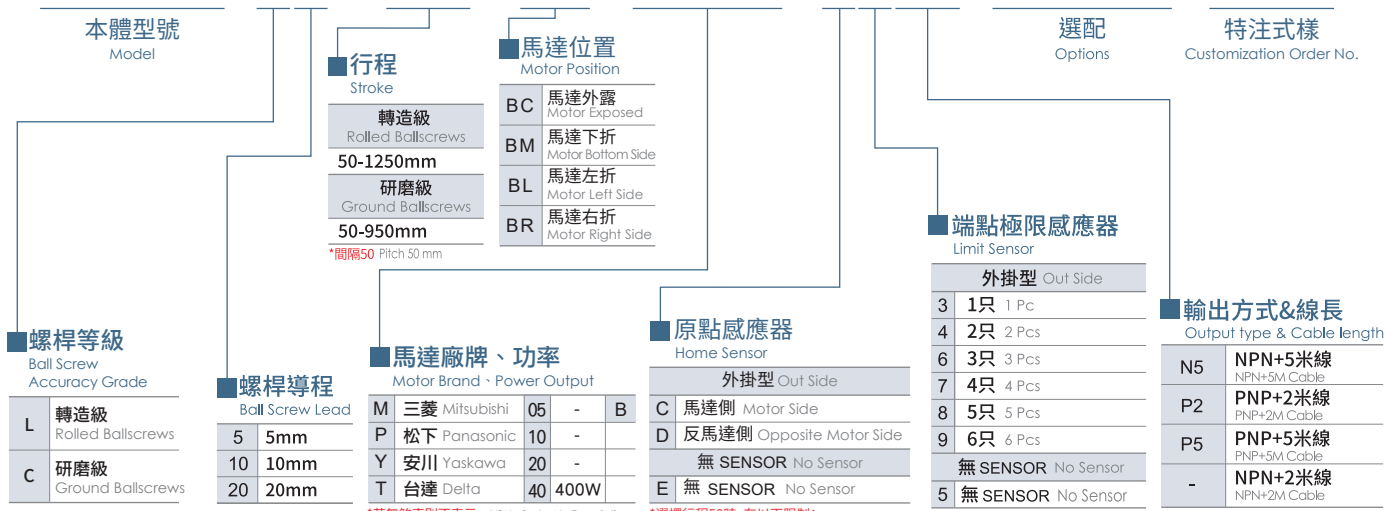
馬達容量  
Motor Output 400W

最大可搬重量  
Max Payload 110kg

### 型號表示方式 Ordering Method

GCH8 - L5 - 100 - BC - M40B - C4N5 - 0001

參照右頁  
Refer to the right page.



\*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.

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

應用例 Application

一般 / 螺桿仕様 GTH / GTY / ETH / Y

一般 / 皮帶仕様 ETB / M

無塵 / 螺桿仕様 GGH

無塵 / 皮帶仕様 ECB

直交連結 XYGT / XYTH / XYTB

參考資料 Reference

基本仕様 Specification

性能	螺桿等級代號 Ballscrew Accuracy Grade Code		L		C	
	螺桿等級 Ballscrew Accuracy Grade		C7 轉造 C7 Rolled Ballscrew		C5 研磨 C5 Ground Ballscrew	
	位置重複精度 Repeatability	mm	±0.005		±0.003	
	標準行程 Stroke (increments)	mm	50-1250mm / 50 間隔 (50 increments)		50-950mm / 50 間隔 (50 increments)	
性能	螺桿導程 Lead	mm	5	10	20	
	最高轉速 Maximum Rotating speed	rpm	3600	3600	3600	
	最高速度 Maximum linear speed *1	mm/s	300	600	1200	
	最大可搬重量 Maximum Payload	水平使用 Horizontal	kg	110	88	40
		垂直使用 Vertical	kg	33	21	8
		搭配回升電阻垂直使用 Vertical with regenerative resistor *2	kg	33	30	15
	定格推力 Rated Thrust	N	1388	694	347	
	最大加速度 Maximum acceleration	G	0.3	0.3	0.6	
	滾珠螺桿 Ball screw	基本動額定負荷 Basic dynamic load rating Ca	N	8042	6300	4152
		基本靜額定負荷 Basic static load rating Coa	N	15088	11596	7439
	直線滑軌 Linear Guide	動態水平負載 Dynamic horizontal (100km)	N	18620		
		靜態水平負載 Static Horizontal	N	34320		
固定側軸承 Fixed bearing	基本動額定負荷 Basic dynamic load rating Cr	N	8447			
	靜態容許負荷 Static load rating Cor	N	5060			
部品	AC 伺服馬達容量 AC Servo Motor Output	W	400			
	滾珠螺桿外徑 Ball Screw Ø	mm	Ø16			
	連軸器 Coupling	mm	10X14			
	原點感應器 Home Sensor	外掛 Outside	T64N2 (NPN+2 米線) (NPN+2M Cable)			

\*1 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.)  
\*2 回升電阻由客戶自行購買安裝。The rebound resistor is purchased and installed by the customer.

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	壁掛安裝 Wall Installation		A	B	C	垂直安裝 Vertical Installation		A	C
導程 5 Lead	55kg	495	45	70	導程 5 Lead	55kg	70	45	495	導程 5 Lead	10kg	323	323
	80kg	312	27	41		80kg	41	27	312		20kg	161	161
	110kg	198	16	24		110kg	24	16	198		33kg	98	98
導程 10 Lead	40kg	312	58	82	導程 10 Lead	40kg	82	58	312	導程 10 Lead	8kg	351	351
	65kg	174	30	43		65kg	43	30	174		15kg	187	187
	88kg	115	19	27		88kg	27	19	115		21kg	133	133
導程 20 Lead	20kg	247	95	110	導程 20 Lead	20kg	110	95	247	導程 20 Lead	3kg	660	660
	30kg	157	58	68		30kg	68	58	157		5kg	396	396
	40kg	112	40	47		40kg	47	40	112		8kg	247	247

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，代表重心。  
The torque value in the chart indicate the center of gravity.  
\* 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 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 0.2 秒計算。  
The life and torque are calculated by setting the motor acceleration and deceleration for 0.2 seconds.

選配 Options

EB				MM			CMK						
外觀黑色處理 Outer layer is treated with black oxide				指定馬達出線方向 Selectable Cable Leading Direction			馬達傳動配件追加鍵槽 Additional keyway for motor drive parts						
代號 Code	顏色 Color	說明 Instructions	範圍 Range	代號 Code	說明 Instructions	需參照 Refer to	代號 Code	追加鍵槽 Keyway Groove	馬達位置 Motor Position	出貨型式 Shipment Type	需參照 Refer to		
EB	黑色 Black	本體 Main Body	P.678	MW	朝上 Upper side	P.679 ~ P.680	CMK	單邊 (限定馬達側) Single (Limited to the motor side)	BC	鍵槽式聯軸器 Keyway Coupling	P.681 ~ P.682		
	原色 Original color	不銹鋼板材 Stainless steel plate 螺絲 Screw 鋼帶 Steel Band 滑座 Carriage 氣壓接頭 Air Fitting		MM	朝下 Bottom side				BL/BR/BM	鍵槽式皮帶輪 Keyway Belt Pulley			
SKY	原色 Original color	鋼帶 Steel Band 滑座 Carriage 氣壓接頭 Air Fitting	P.678	ML	朝左 Left side		SKN	雙邊 Double	BC	無聯軸器 (請自行購買安裝) Without Coupling (Please purchase and install by yourself)		BL/BR/BM	無馬達端皮帶輪 (請自行購買安裝) Without Belt Pulley (Please purchase and install by yourself)
				MR	朝右 Right side				BL/BR/BM	無馬達端皮帶輪 (請自行購買安裝) Without Belt Pulley (Please purchase and install by yourself)			

GCH Series

GCH4

GCH5

GCH8

GCH12

GCH5S

GCH8S

# GCH8 單軸 / 1-axis

▶ 軌道內嵌  
Integrated Linear Bearing

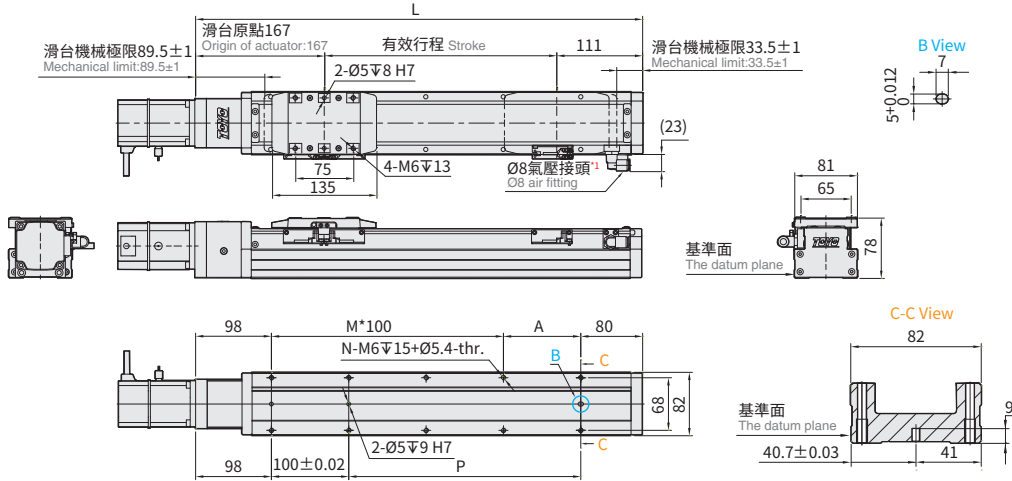
▶ 螺桿驅動  
Ball Screw Drive

## BC 馬達外露 Motor Exposed



• CAD圖面可至 [www.toyorobot.com](http://www.toyorobot.com) 下載 •  
Please download 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>*1</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
KG	4.21	4.59	5	5.3	5.65	5.98	6.3	6.65	6.94	7.27	7.71	8.01	8.42	8.71	8.95	9.26	9.67	9.92	10.31	10.58	11	11.42	11.84	12.26	12.68
線速度 Linear Speed mm/s	導程 Lead 5	300											292	250	250	225	200	175	150	133	117	108	100	92	83
	導程 Lead 10	600											583	500	500	450	400	350	300	267	233	217	200	183	167
	導程 Lead 20	1200											1167	1000	1000	900	800	700	600	533	467	433	400	367	333

\*1 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 used 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

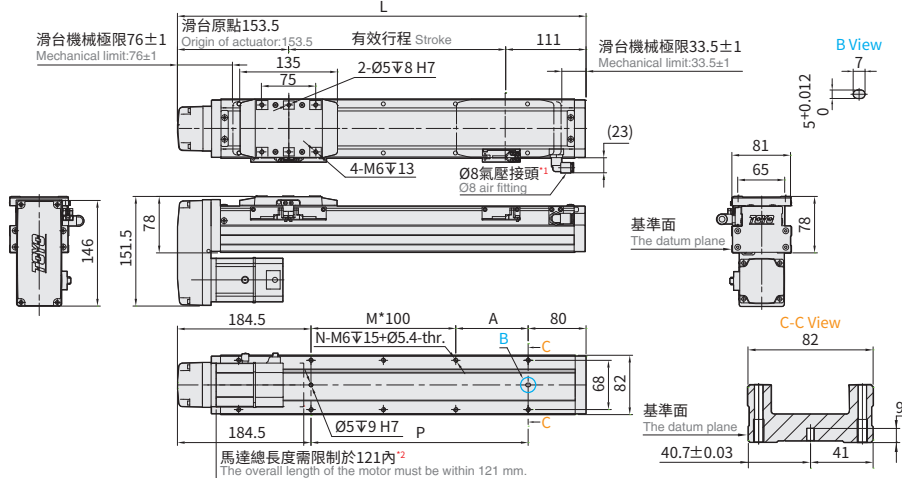
\*2 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

## BM 馬達下折 Motor Bottom Side



• CAD圖面可至 [www.toyorobot.com](http://www.toyorobot.com) 下載 •  
Please download 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>*1</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	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5	1414.5	1464.5	1514.5
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
KG	4.25	4.63	5.04	5.39	5.69	6.02	6.34	6.69	6.98	7.31	7.75	8.05	8.46	8.75	8.99	9.3	9.71	9.96	10.38	10.62	11.04	11.46	11.88	12.3	12.72
線速度 Linear Speed mm/s	導程 Lead 5	300											292	250	250	225	200	175	150	133	117	108	100	92	83
	導程 Lead 10	600											583	500	500	450	400	350	300	267	233	217	200	183	167
	導程 Lead 20	1200											1167	1000	1000	900	800	700	600	533	467	433	400	367	333

\*1 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 used 4 screws to fix; as a result, suggest that fixing actuator body from the bottom to the top.

\*2 馬達下折時，若選用煞車馬達，或是超出馬達總長度限制時，無法套用標準 PIN 孔，如有需求，請洽我司業務。When motor with brake assembled on lower side, or the total len GCH over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.

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

應用例  
Application

一般 / 螺桿仕様  
GTH / GTV / ETH / Y

一般 / 皮帶仕様  
ETB / M

無塵 / 螺桿仕様  
GCH

無塵 / 皮帶仕様  
ECB

直交連結  
XYGT / XYTH / XYTB

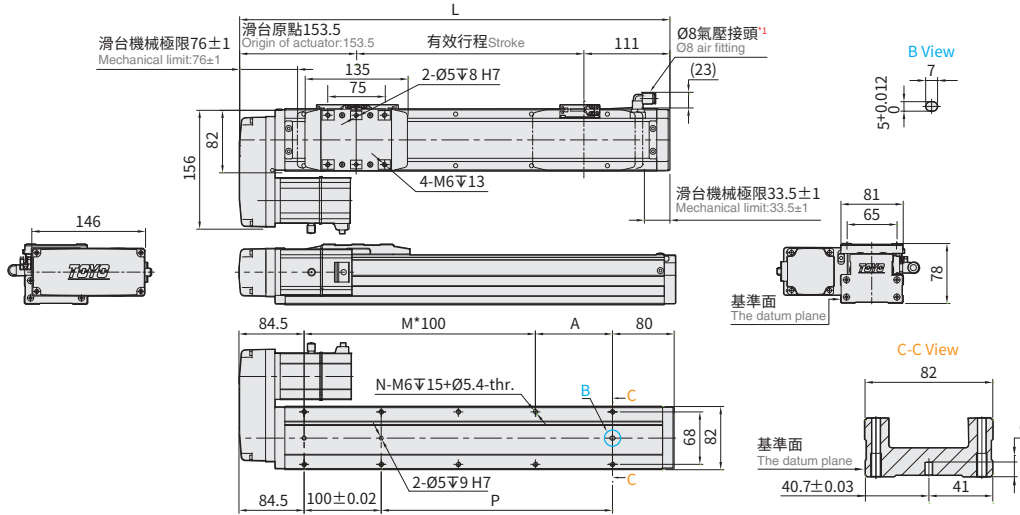
參考資料  
Reference

BL 馬達左折 Motor Left Side



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

單位 Unit : mm



有效行程 Stroke	50 <sup>±1</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	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5	1414.5	1464.5	1514.5	
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	
KG	4.25	4.63	5.04	5.39	5.69	6.02	6.34	6.69	6.98	7.31	7.75	8.05	8.46	8.75	8.99	9.3	9.71	9.96	10.38	10.62	11.04	11.46	11.88	12.3	12.72	
線速度 Linear Speed mm/s	導程 Lead 5	300												292	250	250	225	200	175	150	133	117	108	100	92	83
	導程 Lead 10	600												583	500	500	450	400	350	300	267	233	217	200	183	167
	導程 Lead 20	1200												1167	1000	1000	900	800	700	600	533	467	433	400	367	333

※1 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.

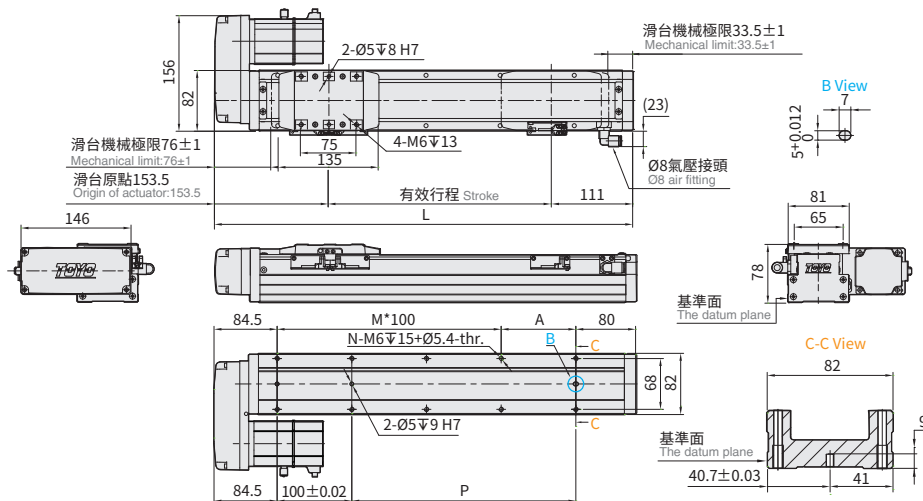
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

BR 馬達右折 Motor Right Side



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

單位 Unit : mm



有效行程 Stroke	50 <sup>±1</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	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5	1414.5	1464.5	1514.5	
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	
KG	4.25	4.63	5.04	5.39	5.69	6.02	6.34	6.69	6.98	7.31	7.75	8.05	8.46	8.75	8.99	9.3	9.71	9.96	10.38	10.62	11.04	11.46	11.88	12.3	12.72	
線速度 Linear Speed mm/s	導程 Lead 5	300												292	250	250	225	200	175	150	133	117	108	100	92	83
	導程 Lead 10	600												583	500	500	450	400	350	300	267	233	217	200	183	167
	導程 Lead 20	1200												1167	1000	1000	900	800	700	600	533	467	433	400	367	333

※1 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.

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

GCH Series

GCH4

GCH5

GCH8

GCH12

GCH55

GCH85

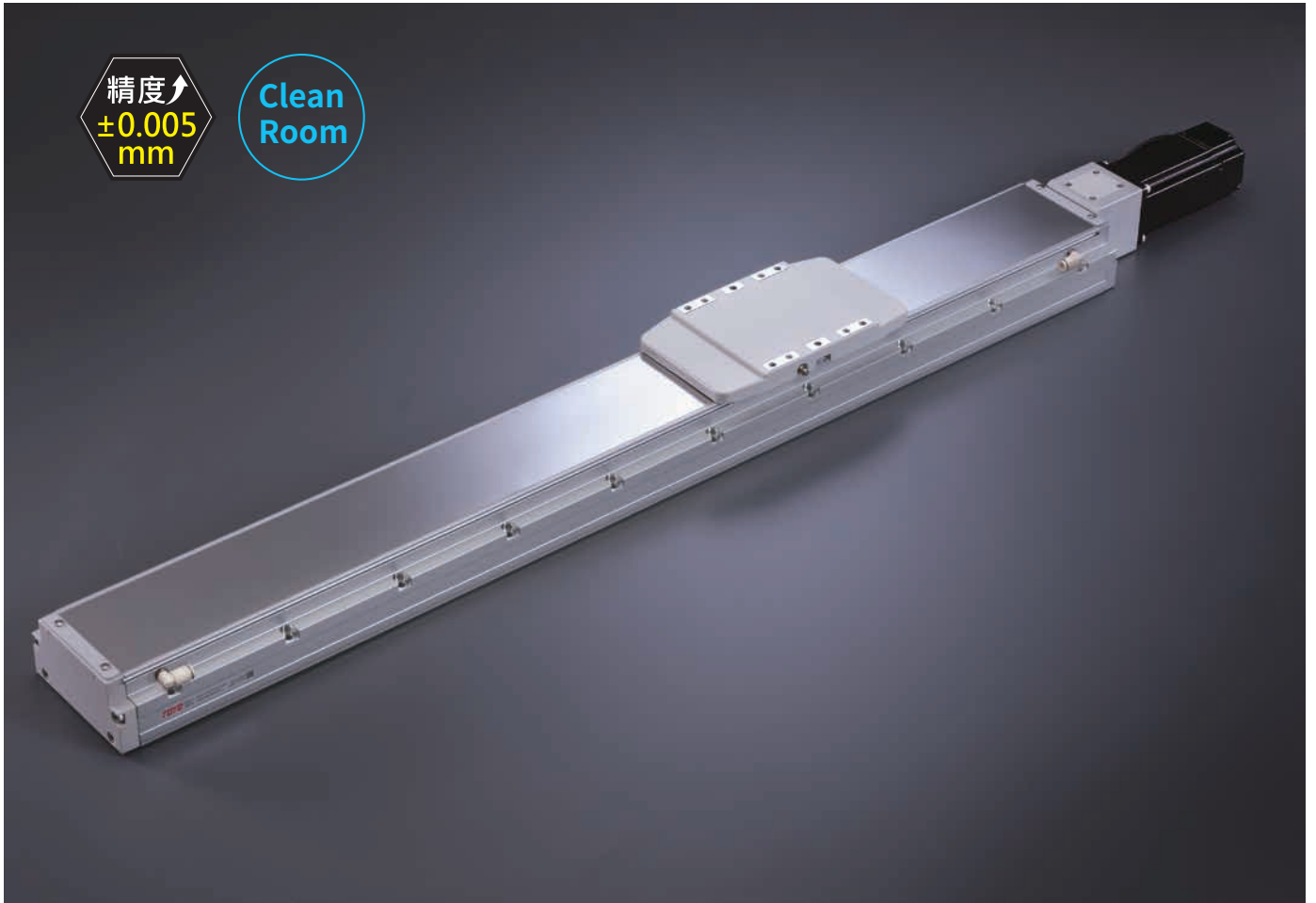
# GCH12 單軸 /1-axis

▶ 軌道內嵌  
Integrated Linear Bearing

▶ 螺桿驅動  
Ball Screw Drive

精度  
±0.005 mm

Clean Room



最大行程  
Maximum Stroke 1250mm

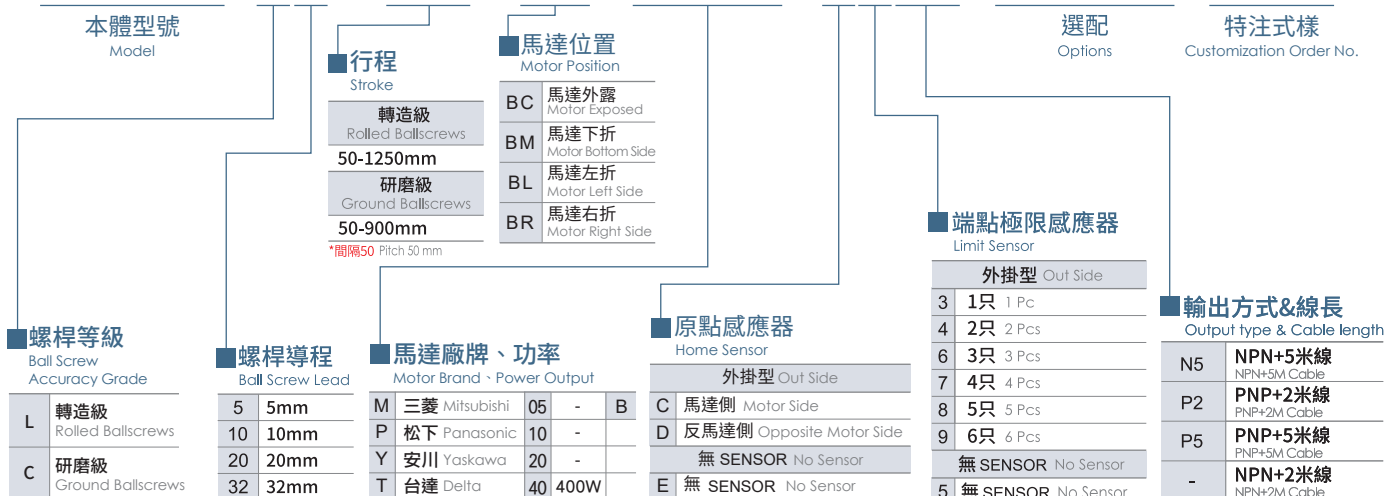
最高速度  
Maximum Speed 1920mm/s

馬達容量  
Motor Output 400W

最大可搬重量  
Max Payload 110kg

## 型號表示方式 Ordering Method

GCH12- L5 - 100 - BC - M40B - C4N5- 參照右頁  
Refer to the right page. - 0001



\*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.

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

\*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.

\*感應器由客戶自行安裝,圖面最多示意為3只  
\*The sensors are installed by customers themselves, and the diagram shows a maximum of 3 sensors.



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 Toll-Free Number China Taiwan

應用例  
Application

一般 / 螺桿仕様  
GTH / GT / ETH / Y

一般 / 皮帶仕様  
ETB / M

無塵 / 螺桿仕様  
GCH

無塵 / 皮帶仕様  
ECB

直交連結  
XYGT / XYTH / XYTB

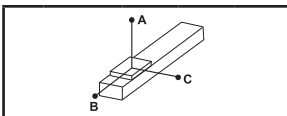
參考資料  
Reference

基本仕様 Specification

性能	螺桿等級代號 Ballscrew Accuracy Grade Code		L		C		
	螺桿等級 Ballscrew Accuracy Grade		C7 轉造 C7 Rolled Ballscrew		C5 研磨 C5 Ground Ballscrew		
	位置重複精度 Repeatability	mm	±0.005		±0.003		
	標準行程 Stroke (increments)	mm	50-1250mm /50 間隔 (50 increments)		50-900mm /50 間隔 (50 increments)		
性能	螺桿導程 Lead	mm	5	10	20	32	
	最高轉速 Maximum Rotating speed	rpm	3600	3600	3600	3600	
	最高速度 Maximum linear speed *1	mm/s	300	600	1200	1920	
	最大可搬重量 Maximum Payload	水平使用 Horizontal	kg	110	88	40	30
		垂直使用 Vertical	kg	33	22	10	8
	定格推力 Rated Thrust	N	1388	694	347	218	
	最大加速度 Maximum acceleration	G	0.3	0.3	0.6	0.6	
	滾珠螺桿 Ball screw	基本動額定負荷 Basic dynamic load rating Ca	N	11570	6300	4152	7326
		基本靜額定負荷 Basic static load rating Coa	N	23030	11596	7439	14157
	直線滑軌 Linear Guide	動態水平負載 Dynamic horizontal (100km)	N	51128			
靜態水平負載 Static Horizontal		N	84518				
固定側軸承 Fixed bearing	基本動額定負荷 Basic dynamic load rating Cr	N	8447				
	靜態容許負荷 Static load rating Cor	N	5060				
部品	AC 伺服馬達容量 AC Servo Motor Output	W	400				
	滾珠螺桿外徑 Ball Screw Ø	mm	Ø16				
	連軸器 Coupling	mm	10X14				
	原點感應器 Home Sensor	外掛 Outside	T64N2 ( NPN+2 米線 ) (NPN+2M Cable)				

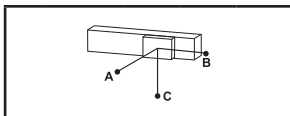
\*1 長行程時，會產生螺桿偏擺，需將速度調降 (線速度請參閱尺寸圖下方表格)  
 During in a long stroke, it causes ballscrew deflection, the speed must reduce. (Please refer to the linear velocity from the data sheet below the dimension graph.)

容許負載力距表 Allowable Overhang



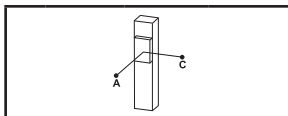
(單位 Unit : mm)

水平安裝 Horizontal Installation		A	B	C
導程 5 Lead	60kg	2480	248	340
	80kg	1800	180	250
	110kg	1240	124	170
導程 10 Lead	30kg	2321	459	591
	50kg	1358	265	342
	88kg	736	140	180
導程 20 Lead	10kg	2675	1070	1153
	22kg	1194	472	510
	40kg	638	248	269
導程 32 Lead	15kg	708	448	397
	25kg	415	259	230
	30kg	341	211	189



(單位 Unit : mm)

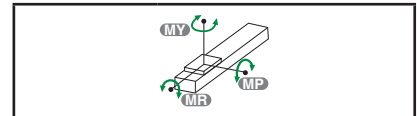
壁掛安裝 Wall Installation		A	B	C
導程 5 Lead	60kg	361	254	2540
	80kg	262	184	1840
	110kg	180	127	1270
導程 10 Lead	30kg	634	478	2321
	50kg	367	277	1358
	88kg	194	146	736
導程 20 Lead	10kg	1410	1235	2995
	22kg	626	547	1335
	40kg	332	289	713
導程 32 Lead	15kg	508	527	847
	25kg	296	306	496
	30kg	243	251	408



(單位 Unit : mm)

垂直安裝 Vertical Installation		A	C
導程 5 Lead	15kg	1188	1188
	22kg	810	810
	33kg	540	540
導程 10 Lead	10kg	1546	1546
	14kg	1107	1104
	22kg	702	702
導程 20 Lead	5kg	2170	2170
	7kg	1556	1556
	10kg	1089	1089
導程 32 Lead	3kg	2220	2220
	5kg	1332	1332
	8kg	832	832

靜額定扭矩 Static Loading Moment



(單位 Unit : N.m)

MY	606
MP	606
MR	1168

\* 力距表所表示的數據，代表重心。  
 The torque value in the chart indicate the center of gravity.  
 \* 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 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速減速設定 0.2 秒計算。  
 The life and torque are calculated by setting the motor acceleration and deceleration for 0.2 seconds.

選配 Options

EB				MM			CMK						
外觀黑色處理 Outer layer is treated with black oxide				指定馬達出線方向 Selectable Cable Leading Direction			馬達傳動配件追加鍵槽 Additional keyway for motor drive parts						
代號 Code	顏色 Color	說明 Instructions		代號 Code	說明 Instructions	需參照 Refer to	代號 Code	說明 Instructions		需參照 Refer to			
		範圍 Range						追加鍵槽 Keyway Groove	馬達位置 Motor Position		出貨型式 Shipment Type		
EB	黑色 Black	本體 Main Body		MW	朝上 Upper side	P.679 ~ P.680	CMK	單邊 (限定馬達側) Single (Limited to the motor side)	BC	鍵槽式聯軸器 Keyway Coupling	P.681 ~ P.682		
	原色 Original color	不銹鋼板材 Stainless steel plate 螺絲 Screw 鋼帶 Steel Band 滑座 Carriage 氣壓接頭 Air Fitting		MM	朝下 Bottom side			BL/BR/BM	鍵槽式皮帶輪 Keyway Belt Pulley				
SKY	原色 Original color			ML	朝左 Left side		SKY	雙邊 Double	BC	BL/BR/BM		鍵槽式聯軸器 Keyway Coupling	P.681 ~ P.682
				MR	朝右 Right side							鍵槽式皮帶輪 Keyway Belt Pulley	
SKN	原色 Original color						雙邊 Double	BC	BL/BR/BM	無聯軸器 (請自行購買安裝) Without Coupling (Please purchase and install by yourself)	P.681 ~ P.682		
										無馬達端皮帶輪 (請自行購買安裝) Without Belt Pulley (Please purchase and install by yourself)			

GCH Series

GCH4

GCH5

GCH8

GCH12

GCH5S

GCH8S

# GCH12 單軸 /1-axis

▶ 軌道內嵌  
Integrated Linear Bearing

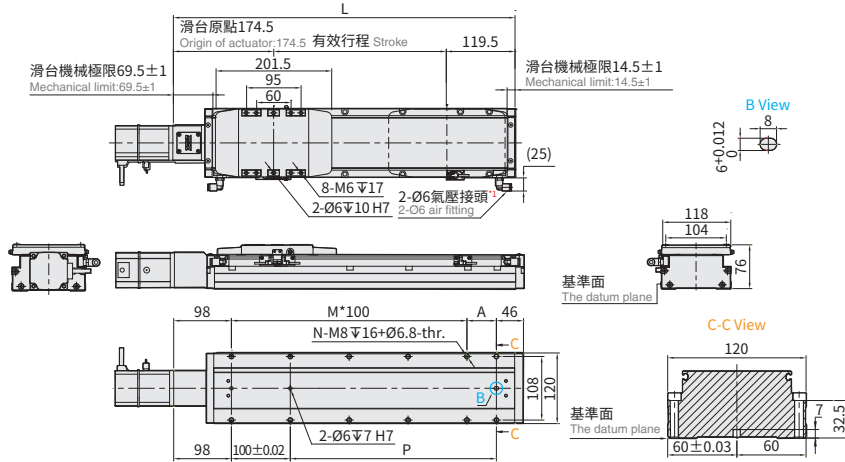
▶ 螺桿驅動  
Ball Screw Drive

BC 馬達外露 Motor Exposed



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

單位 Unit : mm



有效行程 Stroke	50 <sup>±1</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)	58.5	108.5	158.5	208.5	258.5	308.5	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5	858.5	908.5	958.5	1008.5	1058.5	1108.5	1158.5	1208.5	1258.5			
L	344	394	444	494	544	594	644	694	744	794	844	894	944	994	1044	1094	1144	1194	1244	1294	1344	1394	1444	1494	1544			
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100			
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13			
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	22	22	24	24	26	26	28	28	30	30	30			
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300			
KG	5.35	5.7	6.05	6.4	6.75	7.1	7.45	7.8	8.15	8.5	8.85	9.2	9.55	9.9	10.25	10.6	10.95	11.3	11.65	12	12.35	12.7	13.05	13.4	13.75			
線速度 Linear Speed mm/s	導程 Lead 5	300														275	250	225	200	175	167	158	142	133	125	117		
	導程 Lead 10	600														550	500	450	400	350	333	317	283	267	250	233		
	導程 Lead 20	1200														1100	1000	900	800	700	667	633	567	533	500	467		
	導程 Lead 32	1920														1760	1600	1440	1280	1120	1067	1013	907	853	800	747		

※1 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.

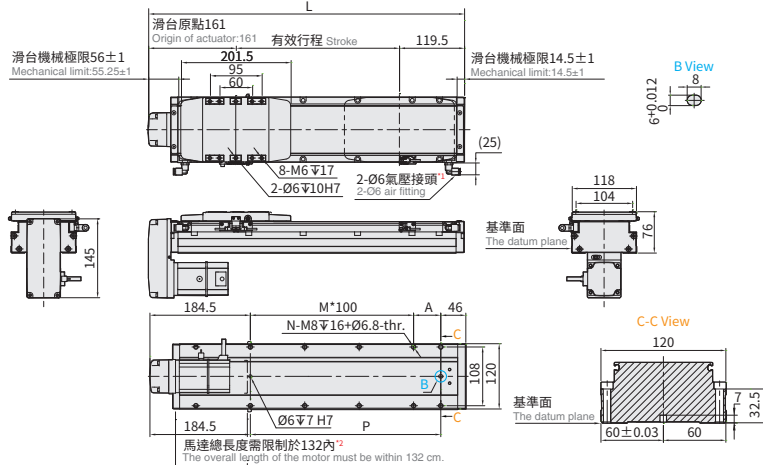
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

BM 馬達下折 Motor Bottom Side



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

單位 Unit : mm



有效行程 Stroke	50 <sup>±1</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)	58.5	108.5	158.5	208.5	258.5	308.5	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5	858.5	908.5	958.5	1008.5	1058.5	1108.5	1158.5	1208.5	1258.5			
L	330.5	380.5	430.5	480.5	530.5	580.5	630.5	680.5	730.5	780.5	830.5	880.5	930.5	980.5	1030.5	1080.5	1130.5	1180.5	1230.5	1280.5	1330.5	1380.5	1430.5	1480.5	1530.5			
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100			
M	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12			
N	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28			
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300			
KG	5.51	5.86	6.21	6.56	6.91	7.26	7.61	7.96	8.31	8.66	9.01	9.36	9.71	10.06	10.41	10.76	11.11	11.46	11.81	12.16	12.51	12.86	13.21	13.56	13.91			
線速度 Linear Speed mm/s	導程 Lead 5	300														275	250	225	200	175	167	158	142	133	125	117		
	導程 Lead 10	600														550	500	450	400	350	333	317	283	267	250	233		
	導程 Lead 20	1200														1100	1000	900	800	700	667	633	567	533	500	467		
	導程 Lead 32	1920														1760	1600	1440	1280	1120	1067	1013	907	853	800	747		

※1 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.

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

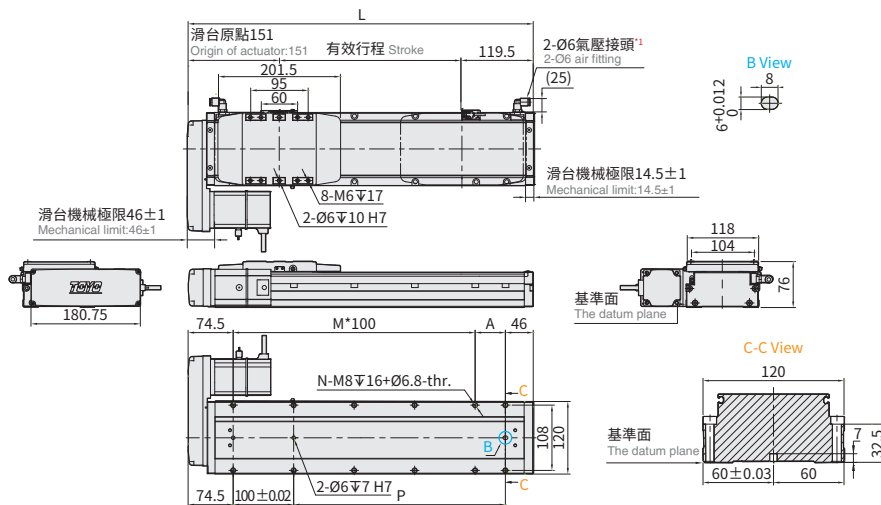
\*2 馬達下折時，若選用煞車馬達，或是超出馬達總長度限制時，無法套用標準 PIN 孔，如有需求，請洽我司業務。When motor with brake assembled on lower side, or the total len GCH over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.

BL 馬達左折 Motor Left Side



CAD圖面可至www.toyo-robot.com下載  
Please download the CAD file from TOYO's website : www.toyo-robot.com

單位 Unit : mm



有效行程 Stroke	50 <sup>±1</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)	58.5	108.5	158.5	208.5	258.5	308.5	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5	858.5	908.5	958.5	1008.5	1058.5	1108.5	1158.5	1208.5	1258.5
L	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5	1220.5	1270.5	1320.5	1370.5	1420.5	1470.5	1520.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
KG	5.51	5.86	6.21	6.56	6.91	7.26	7.61	7.96	8.31	8.66	9.01	9.36	9.71	10.06	10.41	10.76	11.11	11.46	11.81	12.16	12.51	12.86	13.21	13.56	13.91
線速度 Linear Speed mm/s	導程 Lead 5	300													275	250	225	200	175	167	158	142	133	125	117
	導程 Lead 10	600													550	500	450	400	350	333	317	283	267	250	233
	導程 Lead 20	1200													1100	1000	900	800	700	667	633	567	533	500	467
	導程 Lead 32	1920													1760	1600	1440	1280	1120	1067	1013	907	853	800	747

※1 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.

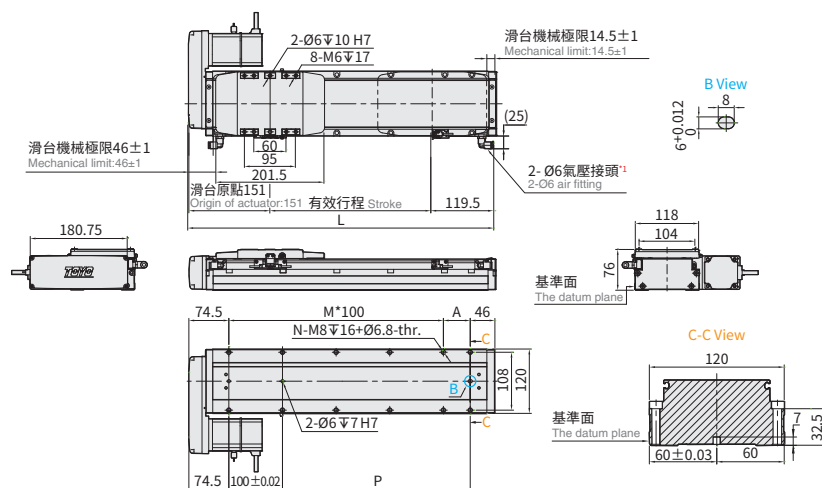
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

BR 馬達右折 Motor Right Side



CAD圖面可至www.toyo-robot.com下載  
Please download the CAD file from TOYO's website : www.toyo-robot.com

單位 Unit : mm



有效行程 Stroke	50 <sup>±1</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)	58.5	108.5	158.5	208.5	258.5	308.5	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5	858.5	908.5	958.5	1008.5	1058.5	1108.5	1158.5	1208.5	1258.5
L	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5	1220.5	1270.5	1320.5	1370.5	1420.5	1470.5	1520.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
KG	5.51	5.86	6.21	6.56	6.91	7.26	7.61	7.96	8.31	8.66	9.01	9.36	9.71	10.06	10.41	10.76	11.11	11.46	11.81	12.16	12.51	12.86	13.21	13.56	13.91
線速度 Linear Speed mm/s	導程 Lead 5	300													275	250	225	200	175	167	158	142	133	125	117
	導程 Lead 10	600													550	500	450	400	350	333	317	283	267	250	233
	導程 Lead 20	1200													1100	1000	900	800	700	667	633	567	533	500	467
	導程 Lead 32	1920													1760	1600	1440	1280	1120	1067	1013	907	853	800	747

※1 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.

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

GCH Series

GCH4

GCH5

GCH8

GCH12

GCH55

GCH85

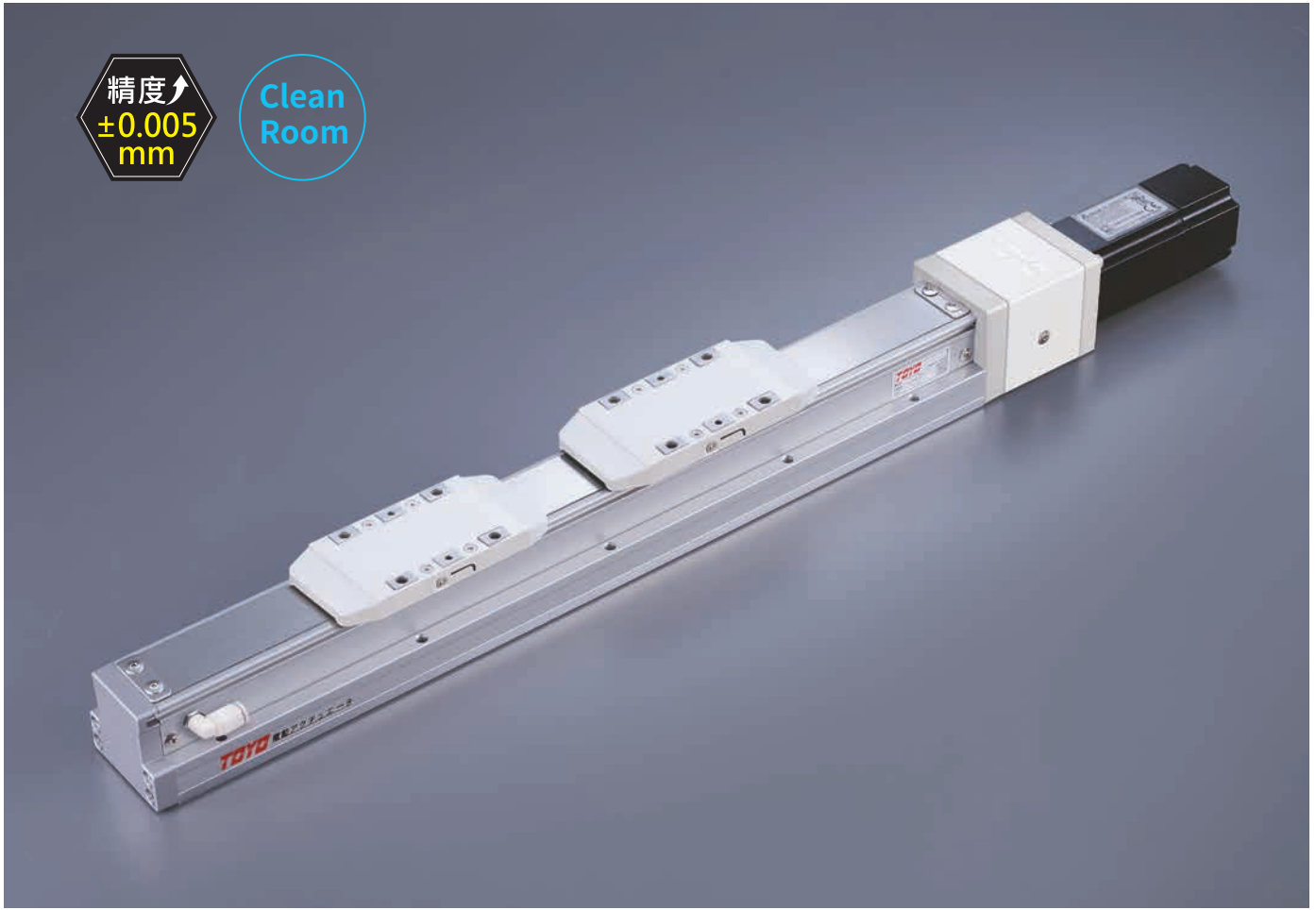
# GCH5S 單軸 /1-axis

▶ 軌道內嵌  
Integrated Linear Bearing

▶ 螺桿驅動  
Ball Screw Drive

精度  
±0.005 mm

Clean Room



最大行程  
Maximum Stroke 400mm

最高速度  
Maximum Speed 100mm/s

馬達容量  
Motor Output 100W

最大可搬重量  
Max Payload 30kg

## 型號表示方式 Ordering Method

GCH5S- L2 - 100 - BC - M10B - C4N5- 參照右頁 - 0001

本體型號  
Model

行程  
Stroke

25-400mm  
間隔25 Pitch 25 mm

選配  
Options

特注式樣  
Customization Order No.

馬達位置  
Motor Position

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

馬達廠牌、功率  
Motor Brand、Power Output

M	三菱 Mitsubishi	05	-	B
P	松下 Panasonic	10	100W	
Y	安川 Yaskawa	20	-	
T	台達 Delta	40	-	

原點感應器  
Home Sensor

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

端點極限感應器  
Limit Sensor

外掛型 Out Side	
3	1只 1 Pc
4	2只 2 Pcs
6	3只 3 Pcs
7	4只 4 Pcs
8	5只 5 Pcs
9	6只 6 Pcs
無 SENSOR No Sensor	
5	無 SENSOR No Sensor

輸出方式&線長  
Output type & Cable length

N5	NPN+5米線 NPN+5M Cable
P2	PNP+2米線 PNP+2M Cable
P5	PNP+5米線 PNP+5M Cable
-	NPN+2米線 NPN+2M Cable

螺桿導程  
Ball Screw Lead

2 2mm  
\*反向同動只能對應導程2  
Dual carriage synchronous movement in reverse direction can only fit at lead of 2mm.

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

\*選擇行程25/50/75時，有以下限制：  
When the stroke is 25/50/75mm, 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.

\*感應器由客戶自行安裝，圖面最多示意為3只  
\*The sensors are installed by customers themselves, and the diagram shows a maximum of 3 sensors.

**基本仕様 Specification**

<b>性能</b>	位置重複精度 Repeatability	mm	±0.005	
	螺桿導程 Lead	mm	2	
	最高轉速 Maximum Rotating speed	rpm	3000	
	最高速度 Maximum linear speed *1	mm/s	100	
	最大可搬重量 Maximum Payload	水平使用 Horizontal	kg	30 雙滑座 (Dual carriage)
		垂直使用 Vertical	kg	10 雙滑座 (Dual carriage)
		搭配回升電阻垂直使用 Vertical with regenerative resistor *2	kg	12 雙滑座 (Dual carriage)
	定格推力 Rated Thrust	N	854	
	標準行程 Stroke (increments)	mm	25-400mm /25 間隔 (25 increments)	
	最大加速度 Maximum acceleration	G	0.1	
	滾珠螺桿 Ball screw	基本動額定負荷 Basic dynamic load rating Ca	N	2411
		基本靜額定負荷 Basic static load rating Coa	N	5779
	直線滑軌 Linear Guide	動態水平負載 Dynamic horizontal (100km)	N	5904
		靜態水平負載 Static Horizontal	N	16904
固定側軸承 Fixed bearing	基本動額定負荷 Basic dynamic load rating Cr	N	5361	
	靜態容許負荷 Static load rating Cor	N	2880	
<b>部品</b>	AC 伺服馬達容量 AC Servo Motor Output	W	100	
	滾珠螺桿外徑 Ball Screw Ø	mm	C7Ø12	
	連軸器 Coupling	mm	7X8	
	原點感應器 Home Sensor	外掛 Outside	T64N2 (NPN+2M 米線) (NPN+2M Cable)	

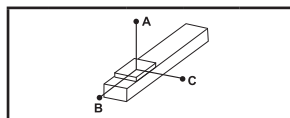
\*1 長行程時，會產生螺桿偏擺，需將速度調降 (線速度請參閱尺寸圖下方表格)

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.)

\*2 回升電阻由客戶自行購買安裝。

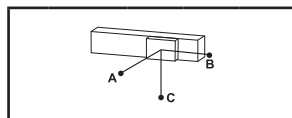
The rebound resistor is purchased and installed by the customer.

**容許負載力距表 Allowable Overhang**



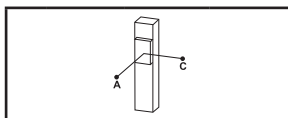
(單位 Unit: mm)

水平安裝 Horizontal Installation		A	B	C
導程 2 Lead	10kg	1130	113	155
	20kg	700	51	70
	30kg	550	31	42



(單位 Unit: mm)

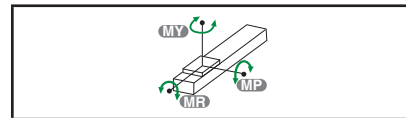
壁掛安裝 Wall Installation		A	B	C
導程 2 Lead	10kg	155	113	1130
	20kg	70	51	700
	30kg	42	31	550



(單位 Unit: mm)

垂直安裝 Vertical Installation		A	C
導程 2 Lead	6kg	205	205
	8kg	153	153
	10kg	123	123

**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，代表重心。

The torque value in the chart indicate the center of gravity.

\* 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 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速減速設定 0.2 秒計算。

The life and torque are calculated by setting the motor acceleration and deceleration for 0.2 seconds.

**選配 Options**

**EB**

外觀黑色處理 Outer layer is treated with black oxide			
代號 Code	顏色 Color	說明 Instructions	需參照 Refer to
EB	黑色 Black	本體 Main Body	P.678
	原色 Original color	不銹鋼板材 Stainless steel plate 螺絲 Screw 鋼帶 Steel Band 滑座 Carriage 氣壓接頭 Air Fitting	

**MM**

指定馬達出線方向 Selectable Cable Leading Direction		
代號 Code	說明 Instructions	需參照 Refer to
MW	朝上 Upper side	P.679 ~ P.680
MM	朝下 Bottom side	
ML	朝左 Left side	
MR	朝右 Right side	

**CMK**

馬達傳動配件追加鍵槽 Additional keyway for motor drive parts				
代號 Code	說明 Instructions			需參照 Refer to
	追加鍵槽 Keyway Groove	馬達位置 Motor Position	出貨型式 Shipment Type	
CMK	單邊 (限定馬達側) Single (Limited to the motor side)	BC	鍵槽式聯軸器 Keyway Coupling	P.681 ~ P.682
		BL/BR/BM	鍵槽式皮帶輪 Keyway Belt Pulley	
SKY	雙邊 Double	BC	鍵槽式聯軸器 Keyway Coupling	
		BL/BR/BM	鍵槽式皮帶輪 Keyway Belt Pulley	
SKN	雙邊 Double	BC	無聯軸器 (請自行購買安裝) Without Coupling (Please purchase and install by yourself)	
		BL/BR/BM	無馬達端皮帶輪 (請自行購買安裝) Without Belt Pulley (Please purchase and install by yourself)	

# GCH5S 單軸 / 1-axis

▶ 軌道內嵌  
Integrated Linear Bearing

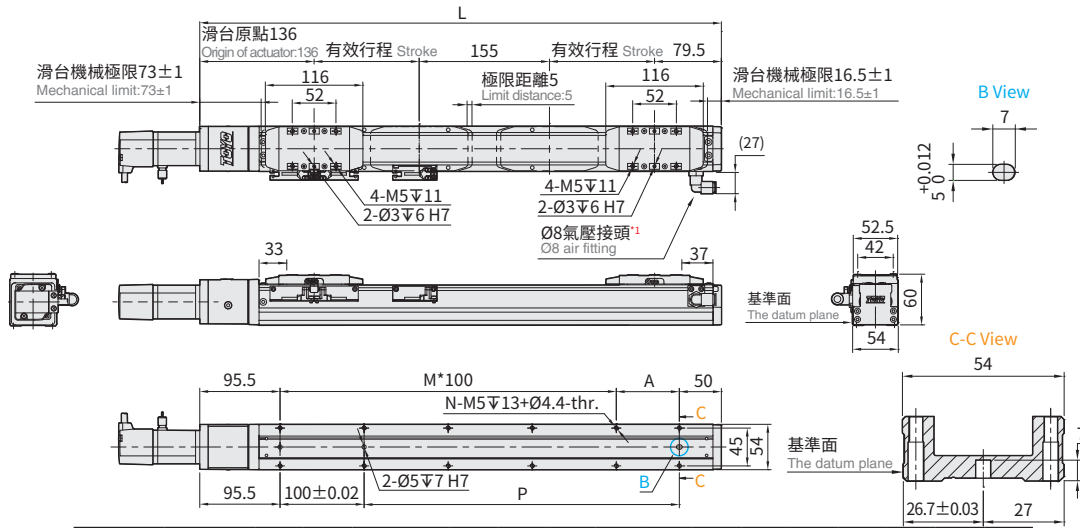
▶ 螺桿驅動  
Ball Screw Drive

## BC 馬達外露 Motor Exposed



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

單位 Unit : mm



有效行程 Stroke	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400
極限行程 Limit Stroke (±1)	35	60	85	110	135	160	185	210	235	260	285	310	335	360	385	410
L	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5
A	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25
M	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10
N	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24
P	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925
KG	3.12	3.31	3.51	3.71	3.9	4.1	4.3	4.49	4.69	4.89	5.08	5.28	5.48	5.68	5.88	6.08
線速度 Linear Speed mm/s	導程 Lead 2		100													

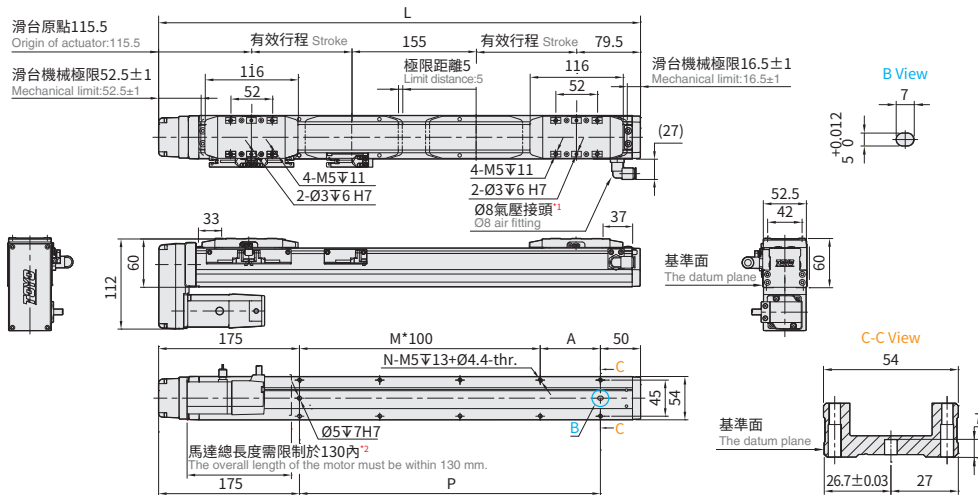
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

## BM 馬達下折 Motor Bottom Side



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

單位 Unit : mm



有效行程 Stroke	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400
極限行程 Limit Stroke (±1)	35	60	85	110	135	160	185	210	235	260	285	310	335	360	385	410
L	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
A	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22
P	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925
KG	3.29	3.48	3.68	3.88	4.07	4.27	4.47	4.66	4.86	5.06	5.25	5.45	5.65	5.85	6.05	6.25
線速度 Linear Speed mm/s	導程 Lead 2		100													

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

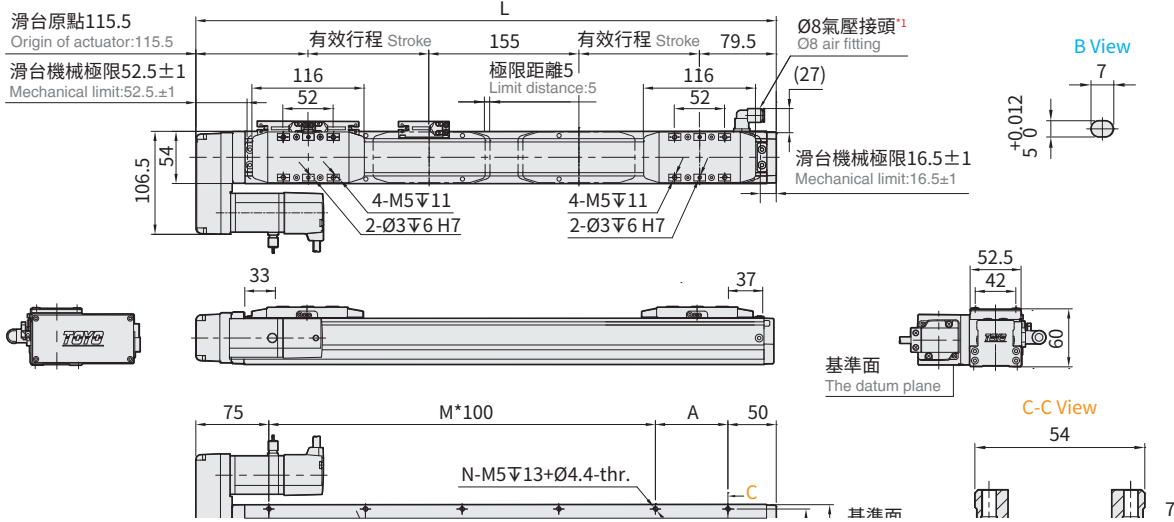
\*2 馬達下折時, 若選用煞車馬達, 或是超出馬達總長度限制時, 無法套用標準 PIN 孔, 如有需求, 請洽我業務。When motor with brake assembled on lower side, or the total len GCH over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.

BL 馬達左折 Motor Left Side



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

單位 Unit : mm



有效行程 Stroke	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400
極限行程 Limit Stroke (±1)	35	60	85	110	135	160	185	210	235	260	285	310	335	360	385	410
L	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
A	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25
M	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10
N	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24
P	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925
KG	3.29	3.48	3.68	3.88	4.07	4.27	4.47	4.66	4.86	5.06	5.25	5.45	5.65	5.85	6.05	6.25
線速度 Linear Speed mm/s	導程 Lead 2		100													

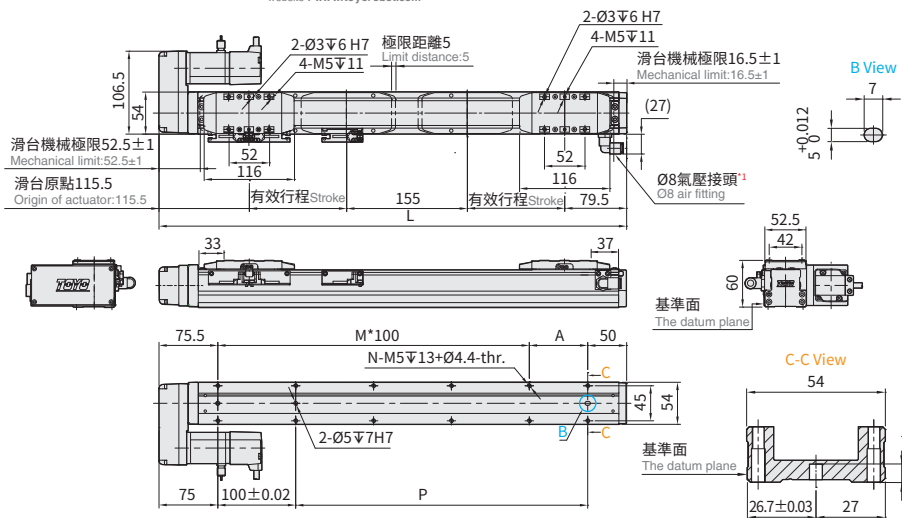
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

BR 馬達右折 Motor Right Side



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

單位 Unit : mm



有效行程 Stroke	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400
極限行程 Limit Stroke (±1)	35	60	85	110	135	160	185	210	235	260	285	310	335	360	385	410
L	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
A	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25
M	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10
N	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24
P	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925
KG	3.29	3.48	3.68	3.88	4.07	4.27	4.47	4.66	4.86	5.06	5.25	5.45	5.65	5.85	6.05	6.25
線速度 Linear Speed mm/s	導程 Lead 2		100													

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

GCH Series

GCH4

GCH5

GCH8

GCH12

GCH55

GCH85

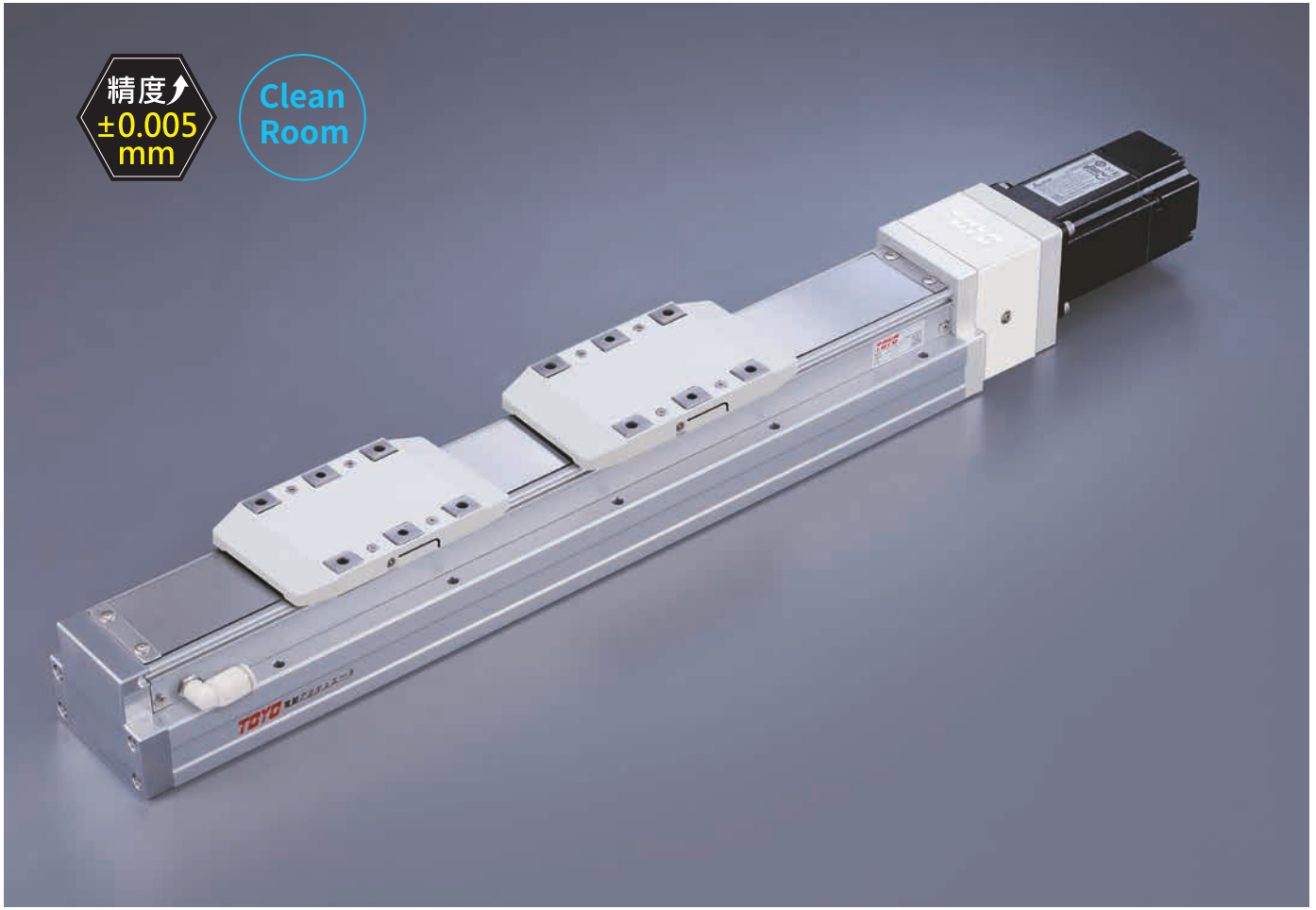
# GCH8S 單軸 /1-axis

▶ 軌道內嵌  
Integrated Linear Bearing

▶ 螺桿驅動  
Ball Screw Drive

精度  
±0.005 mm

Clean Room



最大行程  
Maximum Stroke 525mm

最高速度  
Maximum Speed 300mm/s

馬達容量  
Motor Output 200W

最大可搬重量  
Max Payload 100kg

## 型號表示方式 Ordering Method

GCH8S- L5 - 100 - BC - M20B - C4N5- 參照右頁  
Refer to the right page. - 0001

本體型號  
Model

行程  
Stroke

25-525mm  
間隔25 Pitch 25 mm

選配  
Options

特注式樣  
Customization Order No.

馬達位置  
Motor Position

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

馬達廠牌、功率  
Motor Brand、Power Output

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

原點感應器  
Home Sensor

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

端點極限感應器  
Limit Sensor

外掛型 Out Side	
3	1只 1 Pc
4	2只 2 Pcs
6	3只 3 Pcs
7	4只 4 Pcs
8	5只 5 Pcs
9	6只 6 Pcs
無 SENSOR No Sensor	
5	無 SENSOR No Sensor

輸出方式&線長  
Output type & Cable length

N5	NPN+5米線 NPN+5M Cable
P2	PNP+2米線 PNP+2M Cable
P5	PNP+5米線 PNP+5M Cable
-	NPN+2米線 NPN+2M Cable

螺桿導程  
Ball Screw Lead

5 5mm  
\*反向同動只能對應導程5  
Dual carriage synchronous  
movement in reverse  
direction can only fit at lead  
of 5mm.

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

\*選擇行程25/50/75時，有以下限制：  
When the stroke is 25/50/75mm, 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.

\*感應器由客戶自行安裝，圖面最多示意  
為3只  
\*The sensors are installed by customers  
themselves, and the diagram shows a  
maximum of 3 sensors.



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

應用例  
Application

一般 / 螺桿仕様  
GTH / GTY / EIH / Y

一般 / 皮帶仕様  
ETB / M

無塵 / 螺桿仕様  
GCH

無塵 / 皮帶仕様  
ECB

直交連結  
XYGT / XYTH / XYTB

參考資料  
Reference

**基本仕様 Specification**

<b>性能</b>	位置重複精度 Repeatability	mm	±0.005	
	螺桿導程 Lead	mm	5	
	最高轉速 Maximum Rotating speed	rpm	3600	
	最高速度 Maximum linear speed <sup>※1</sup>	mm/s	300	
	最大可搬重量 Maximum Payload	水平使用 Horizontal	kg	100 雙滑座 (Dual carriage)
		垂直使用 Vertical	kg	15 雙滑座 (Dual carriage)
		搭配回升電阻垂直使用 Vertical with regenerative resistor <sup>※3</sup>	kg	30 雙滑座 (Dual carriage)
	定格推力 Rated Thrust	N	683	
	標準行程 Stroke (increments)	mm	25-525mm /25 間隔 (25 increments)	
	最大加速度 Maximum acceleration	G	0.3	
	滾珠螺桿 Ball screw	基本動額定負荷 Basic dynamic load rating Ca	N	8042
		基本靜額定負荷 Basic static load rating Coa	N	15088
直線滑軌 Linear Guide	動態水平負載 Dynamic horizontal (100km)	N	18620	
	靜態水平負載 Static Horizontal	N	34230	
固定側軸承 Fixed bearing	基本動額定負荷 Basic dynamic load rating Cr	N	8447	
	靜態容許負荷 Static load rating Cor	N	5060	
<b>部品</b>	AC 伺服馬達容量 AC Servo Motor Output	W	200	
	滾珠螺桿外徑 Ball Screw Ø	mm	C7Ø16	
	連軸器 Coupling	mm	10X14/11 <sup>※2</sup>	
	原點感應器 Home Sensor	外掛 Outside	T64N2 (NPN+2 米線) (NPN+2M Cable)	

※1 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.)  
※2 使用 Panasonic 200W 馬達時，馬達軸心為 Ø11；其他廠牌，馬達軸心為 Ø14。Motor (200W) Shaft Diameter: Panasonic: 11mm; Other: 14mm.  
※3 回升電阻由客戶自行購買安裝。The rebound resistor is purchased and installed by the customer.

**容許負載力距表 Allowable Overhang**

(單位 Unit : mm)	(單位 Unit : mm)	(單位 Unit : mm)																																																							
<table border="1"> <tr> <th colspan="4">水平安裝 Horizontal Installation</th> </tr> <tr> <th>導程 5 Lead</th> <th>A</th> <th>B</th> <th>C</th> </tr> <tr> <td>50kg</td> <td>510</td> <td>51</td> <td>79</td> </tr> <tr> <td>75kg</td> <td>290</td> <td>29</td> <td>45</td> </tr> <tr> <td>100kg</td> <td>190</td> <td>19</td> <td>29</td> </tr> </table>	水平安裝 Horizontal Installation				導程 5 Lead	A	B	C	50kg	510	51	79	75kg	290	29	45	100kg	190	19	29	<table border="1"> <tr> <th colspan="4">壁掛安裝 Wall Installation</th> </tr> <tr> <th>導程 5 Lead</th> <th>A</th> <th>B</th> <th>C</th> </tr> <tr> <td>50kg</td> <td>79</td> <td>51</td> <td>510</td> </tr> <tr> <td>75kg</td> <td>45</td> <td>29</td> <td>290</td> </tr> <tr> <td>100kg</td> <td>29</td> <td>19</td> <td>190</td> </tr> </table>	壁掛安裝 Wall Installation				導程 5 Lead	A	B	C	50kg	79	51	510	75kg	45	29	290	100kg	29	19	190	<table border="1"> <tr> <th colspan="3">垂直安裝 Vertical Installation</th> </tr> <tr> <th>導程 5 Lead</th> <th>A</th> <th>C</th> </tr> <tr> <td>5kg</td> <td>647</td> <td>647</td> </tr> <tr> <td>10kg</td> <td>323</td> <td>323</td> </tr> <tr> <td>15kg</td> <td>215</td> <td>215</td> </tr> </table>	垂直安裝 Vertical Installation			導程 5 Lead	A	C	5kg	647	647	10kg	323	323	15kg	215	215
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10kg	323	323																																																							
15kg	215	215																																																							

**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，代表重心。  
The torque value in the chart indicate the center of gravity.  
\* 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 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速設定 0.2 秒計算。  
The life and torque are calculated by setting the motor acceleration and deceleration for 0.2 seconds.

**選配 Options**

EB				MM			CMK				
外觀黑色處理 Outer layer is treated with black oxide				指定馬達出線方向 Selectable Cable Leading Direction			馬達傳動配件追加鍵槽 Additional keyway for motor drive parts				
代號 Code	顏色 Color	說明 Instructions		代號 Code	說明 Instructions	需參照 Refer to	代號 Code	說明 Instructions		需參照 Refer to	
		範圍 Range	需參照 Refer to					追加鍵槽 Keyway Groove	馬達位置 Motor Position		出貨型式 Shipment Type
EB	黑色 Black	本體 Main Body	P.678	MW	朝上 Upper side	P.679 ~ P.680	CMK	單邊 (限定馬達側) Single (Limited to the motor side)	BC	鍵槽式聯軸器 Keyway Coupling	P.681 ~ P.682
	原色 Original color	不銹鋼板材 Stainless steel plate 螺絲 Screw 鋼帶 Steel Band 滑座 Carriage 氣壓接頭 Air Fitting		MM	朝下 Bottom side			BL/BR/BM	鍵槽式皮帶輪 Keyway Belt Pulley		
			ML	朝左 Left side	BC		鍵槽式聯軸器 Keyway Coupling				
			MR	朝右 Right side	BL/BR/BM		鍵槽式皮帶輪 Keyway Belt Pulley				
							SKN	雙邊 Double	BC	無聯軸器 (請自行購買安裝) Without Coupling (Please purchase and install by yourself)	
									BL/BR/BM	無馬達端皮帶輪 (請自行購買安裝) Without Belt Pulley (Please purchase and install by yourself)	

GCH Series

GCH4

GCH5

GCH8

GCH12

GCH55

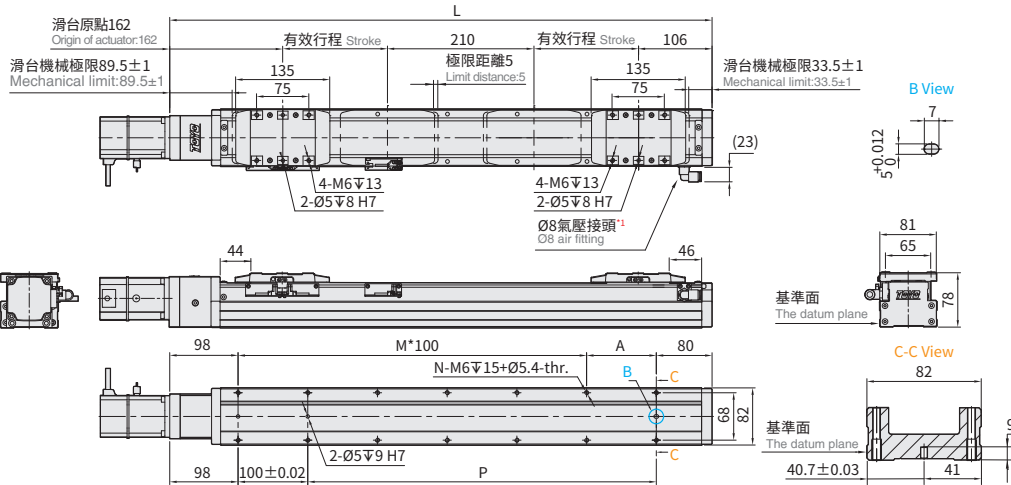
GCH8S

## BC 馬達外露 Motor Exposed



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

單位 Unit : mm



有效行程 Stroke	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525
極限行程 Limit Stroke ( $\pm 1$ )	35	60	85	110	135	160	185	210	235	260	285	310	335	360	385	410	435	460	485	510	535
L	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
M	3	3	4	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12
N	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
KG	6.94	7.3	7.67	8.03	8.4	8.76	9.13	9.49	9.86	10.22	10.59	10.95	11.32	11.68	12.05	12.41	12.78	13.15	13.52	13.89	14.26
線速度 Linear Speed mm/s	導程 Lead 5																				
	300																				

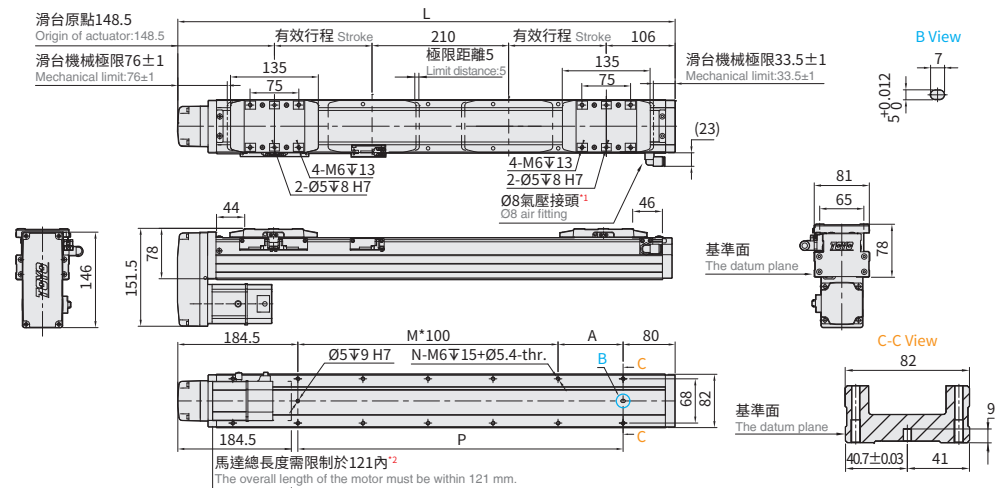
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

## BM 馬達下折 Motor Bottom Side



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

單位 Unit : mm



有效行程 Stroke	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525
極限行程 Limit Stroke ( $\pm 1$ )	35	60	85	110	135	160	185	210	235	260	285	310	335	360	385	410	435	460	485	510	535
L	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5	1414.5	1464.5	1514.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
M	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
N	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
KG	7.46	7.98	8.5	9.02	9.54	10.06	10.58	11.1	11.62	12.14	12.66	13.28	13.7	14.22	14.74	15.26	15.78	16.3	16.82	17.34	17.86
線速度 Linear Speed mm/s	導程 Lead 5																				
	300																				

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

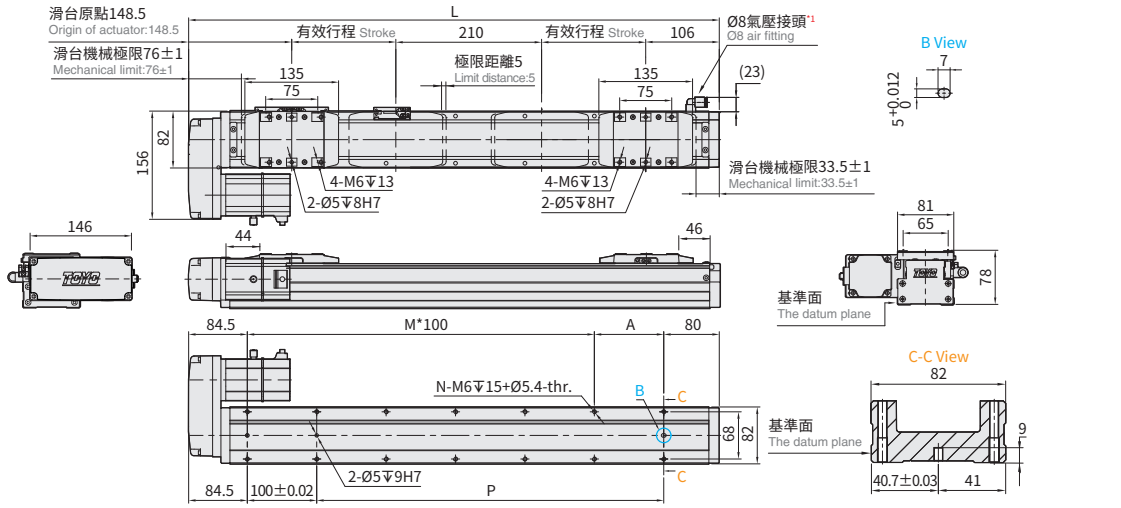
\*2 馬達下折時, 若選用煞車馬達, 或是超出馬達總長度限制時, 無法套用標準 PIN 孔, 如有需求, 請洽我司業務。When motor with brake assembled on lower side, or the total len GCH over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.

BL 馬達左折 Motor Left Side



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

單位 Unit : mm



有效行程 Stroke	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525
極限行程 Limit Stroke (±1)	35	60	85	110	135	160	185	210	235	260	285	310	335	360	385	410	435	460	485	510	535
L	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5	1414.5	1464.5	1514.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
M	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
N	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
KG	7.46	7.98	8.5	9.02	9.54	10.06	10.58	11.1	11.62	12.14	12.66	13.28	13.7	14.22	14.74	15.26	15.78	16.3	16.82	17.34	17.86
線速度 Linear Speed mm/s	300																				

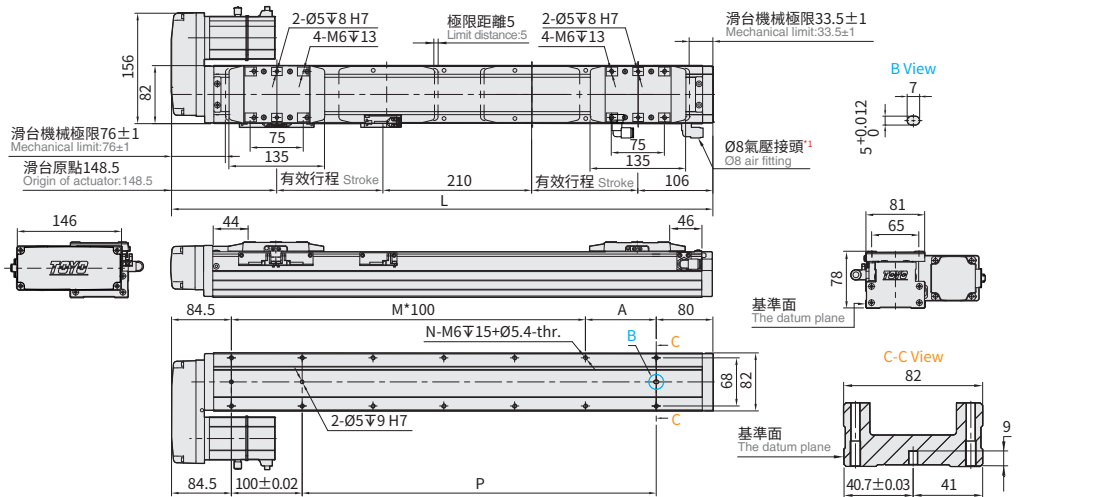
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。 When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

BR 馬達右折 Motor Right Side



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

單位 Unit : mm



有效行程 Stroke	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525
極限行程 Limit Stroke (±1)	35	60	85	110	135	160	185	210	235	260	285	310	335	360	385	410	435	460	485	510	535
L	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5	1414.5	1464.5	1514.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
M	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
N	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
KG	7.46	7.98	8.5	9.02	9.54	10.06	10.58	11.1	11.62	12.14	12.66	13.28	13.7	14.22	14.74	15.26	15.78	16.3	16.82	17.34	17.86
線速度 Linear Speed mm/s	300																				

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。 When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

GCH Series

- GCH4
- GCH5
- GCH8
- GCH12
- GCH55
- GCH85

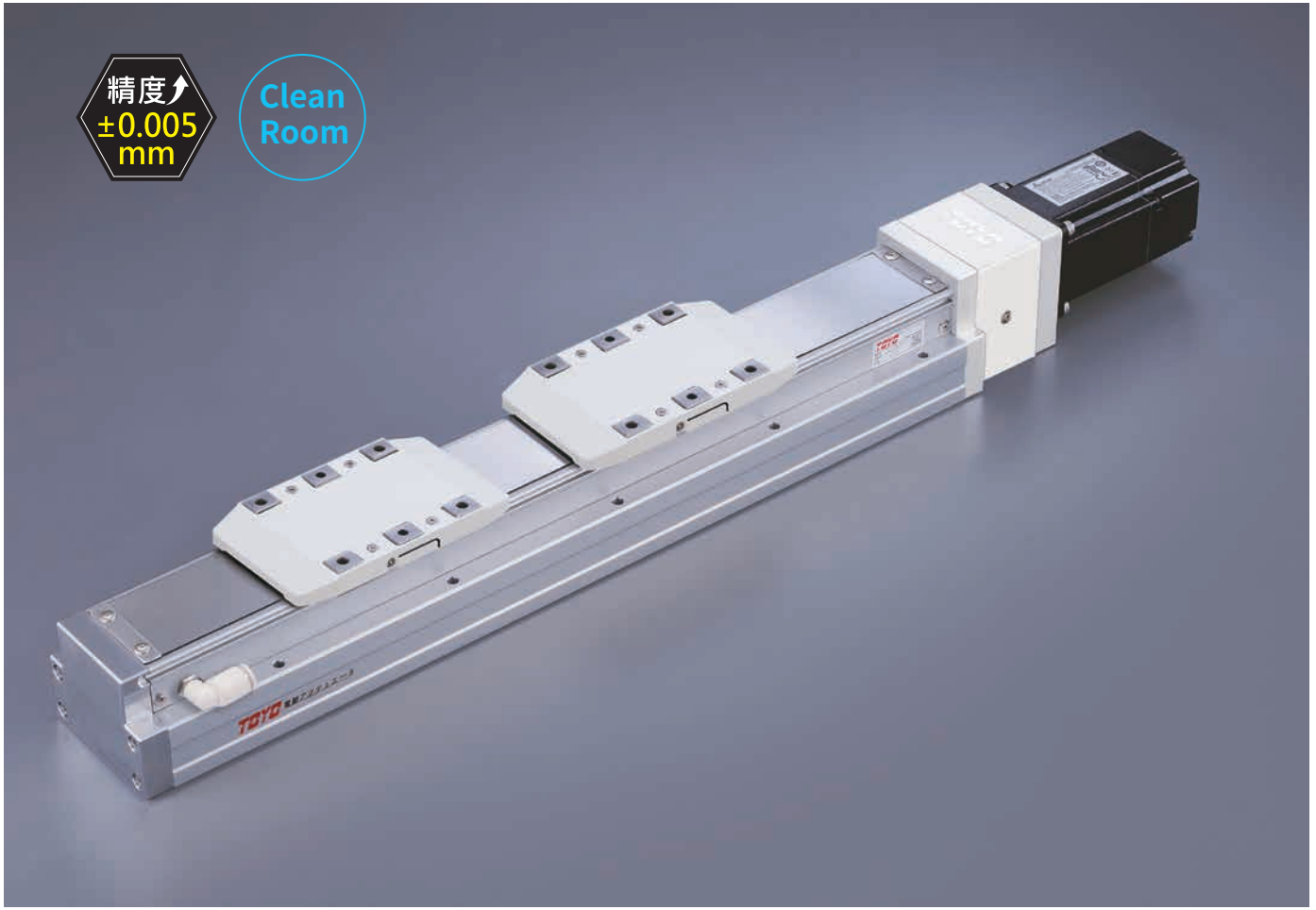
# GCH8S 單軸 /1-axis

▶ 軌道內嵌  
Integrated Linear Bearing

▶ 螺桿驅動  
Ball Screw Drive

精度  
±0.005 mm

Clean Room



最大行程  
Maximum Stroke 525mm

最高速度  
Maximum Speed 300mm/s

馬達容量  
Motor Output 400W

最大可搬重量  
Max Payload 110kg

## 型號表示方式 Ordering Method

GCH8S- L5 - 100 - BC - M40B - C4N5- 參照右頁 - 0001

本體型號  
Model

行程  
Stroke

25-525mm  
間隔25 Pitch 25 mm

選配  
Options

特注式樣  
Customization Order No.

馬達位置  
Motor Position

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

馬達廠牌、功率  
Motor Brand、Power Output

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

原點感應器  
Home Sensor

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

端點極限感應器  
Limit Sensor

外掛型 Out Side	
3	1只 1 Pc
4	2只 2 Pcs
6	3只 3 Pcs
7	4只 4 Pcs
8	5只 5 Pcs
9	6只 6 Pcs
無 SENSOR No Sensor	
5	無 SENSOR No Sensor

輸出方式&線長  
Output type & Cable length

N5	NPN+5米線 NPN+5M Cable
P2	PNP+2米線 PNP+2M Cable
P5	PNP+5米線 PNP+5M Cable
-	NPN+2米線 NPN+2M Cable

螺桿導程  
Ball Screw Lead

5 5mm  
\*反向同動只能對應導程5  
Dual carriage synchronous  
movement in reverse  
direction can only fit at lead  
of 5mm.

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

\*選擇行程25/50/75時，有以下限制：  
When the stroke is 25/50/75mm, 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.

\*感應器由客戶自行安裝，圖面最多示意  
為3只  
\*The sensors are installed by customers  
themselves, and the diagram shows a  
maximum of 3 sensors.

基本仕様 Specification

性能	位置重複精度 Repeatability	mm	±0.005	
	螺桿導程 Lead	mm	5	
	最高轉速 Maximum Rotating speed	rpm	3600	
	最高速度 Maximum linear speed *1	mm/s	300	
	最大可搬重量 Maximum Payload	水平使用 Horizontal	kg	110 雙滑座 (Dual carriage)
		垂直使用 Vertical	kg	33 雙滑座 (Dual carriage)
		搭配回升電阻垂直使用 Vertical with regenerative resistor *2	kg	33 雙滑座 (Dual carriage)
	定格推力 Rated Thrust	N	1388	
	標準行程 Stroke (increments)	mm	25-525mm /25 間隔 (25 increments)	
	最大加速度 Maximum acceleration	G	0.3	
滾珠螺桿 Ball screw	基本動額定負荷 Basic dynamic load rating Ca	N	8042	
	基本靜額定負荷 Basic static load rating Coa	N	15088	
直線滑軌 Linear Guide	動態水平負載 Dynamic horizontal (100km)	N	18620	
	靜態水平負載 Static Horizontal	N	34230	
固定側軸承 Fixed bearing	基本動額定負荷 Basic dynamic load rating Cr	N	8447	
	靜態容許負荷 Static load rating Cor	N	5060	
部品	AC 伺服馬達容量 AC Servo Motor Output	W	400	
	滾珠螺桿外徑 Ball Screw Ø	mm	C7Ø16	
	連軸器 Coupling	mm	10X14	
	原點感應器 Home Sensor	外掛 Outside	T64N2 (NPN+2M 米線) (NPN+2M Cable)	

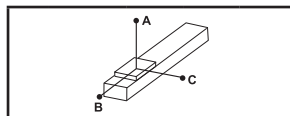
\*1 長行程時，會產生螺桿偏擺，需將速度調降 (線速度請參閱尺寸圖下方表格)

During in a long strokes, it causes ballscrew deflection, the speed must reduce. (Please refer to the linear velocity from the data sheet below the dimension graph.)

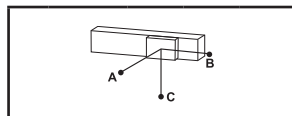
\*2 回升電阻由客戶自行購買安裝。

The rebound resistor is purchased and installed by the customer.

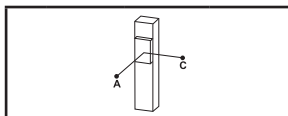
容許負載力距表 Allowable Overhang



(單位 Unit: mm)



(單位 Unit: mm)



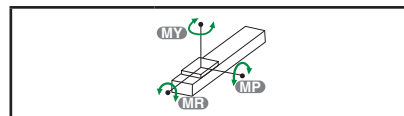
(單位 Unit: mm)

水平安裝 Horizontal Installation		A	B	C
導程 5 Lead	55kg	495	45	70
	80kg	312	27	41
	110kg	198	16	24

壁掛安裝 Wall Installation		A	B	C
導程 5 Lead	55kg	70	45	495
	80kg	41	27	312
	110kg	24	16	198

垂直安裝 Vertical Installation		A	C
導程 5 Lead	10kg	323	323
	20kg	161	161
	33kg	98	98

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，代表重心。

The torque value in the chart indicate the center of gravity.

\* 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 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 0.2 秒計算。

The life and torque are calculated by setting the motor acceleration and deceleration for 0.2 seconds.

選配 Options

EB

外觀黑色處理 Outer layer is treated with black oxide			
代號 Code	顏色 Color	說明 Instructions	需參照 Refer to
EB	黑色 Black	本體 Main Body	P.678
	原色 Original color	不銹鋼板材 Stainless steel plate 螺絲 Screw 鋼帶 Steel Band 滑座 Carriage 氣壓接頭 Air Fitting	

MM

指定馬達出線方向 Selectable Cable Leading Direction		
代號 Code	說明 Instructions	需參照 Refer to
MW	朝上 Upper side	P.679 ~ P.680
MM	朝下 Bottom side	
ML	朝左 Left side	
MR	朝右 Right side	

CMK

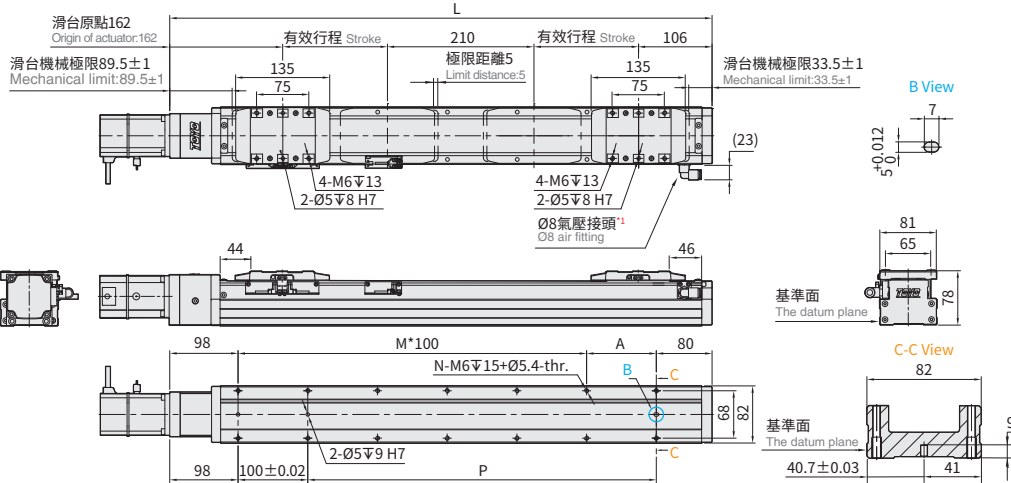
馬達傳動配件追加鍵槽 Additional keyway for motor drive parts				
代號 Code	說明 Instructions			需參照 Refer to
	追加鍵槽 Keyway Groove	馬達位置 Motor Position	出貨型式 Shipment Type	
CMK	單邊 (限定馬達側) Single (Limited to the motor side)	BC	鍵槽式聯軸器 Keyway Coupling	P.681 ~ P.682
		BL/BR/BM	鍵槽式皮帶輪 Keyway Belt Pulley	
SKY	雙邊 Double	BC	鍵槽式聯軸器 Keyway Coupling	
		BL/BR/BM	鍵槽式皮帶輪 Keyway Belt Pulley	
SKN	雙邊 Double	BC	無聯軸器 (請自行購買安裝) Without Coupling (Please purchase and install by yourself)	
		BL/BR/BM	無馬達端皮帶輪 (請自行購買安裝) Without Belt Pulley (Please purchase and install by yourself)	

## BC 馬達外露 Motor Exposed



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

單位 Unit : mm



有效行程 Stroke	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525
極限行程 Limit Stroke ( $\pm 1$ )	35	60	85	110	135	160	185	210	235	260	285	310	335	360	385	410	435	460	485	510	535
L	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
M	3	3	4	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12
N	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
KG	6.94	7.3	7.67	8.03	8.4	8.76	9.13	9.49	9.86	10.22	10.59	10.95	11.32	11.68	12.05	12.41	12.78	13.15	13.52	13.89	14.26
線速度 Linear Speed mm/s	導程 Lead 5																				
	300																				

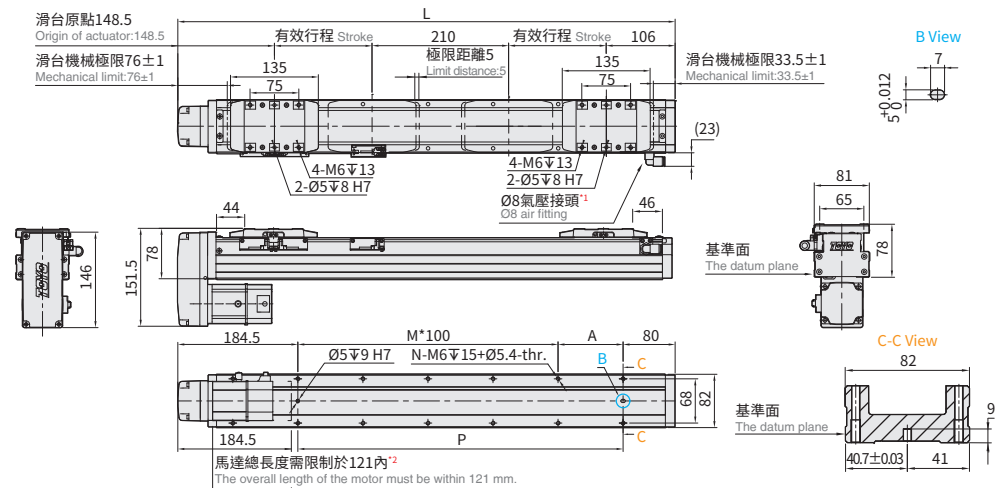
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

## BM 馬達下折 Motor Bottom Side



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

單位 Unit : mm



有效行程 Stroke	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525
極限行程 Limit Stroke ( $\pm 1$ )	35	60	85	110	135	160	185	210	235	260	285	310	335	360	385	410	435	460	485	510	535
L	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5	1414.5	1464.5	1514.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
M	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
N	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
KG	7.46	7.98	8.5	9.02	9.54	10.06	10.58	11.1	11.62	12.14	12.66	13.28	13.7	14.22	14.74	15.26	15.78	16.3	16.82	17.34	17.86
線速度 Linear Speed mm/s	導程 Lead 5																				
	300																				

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

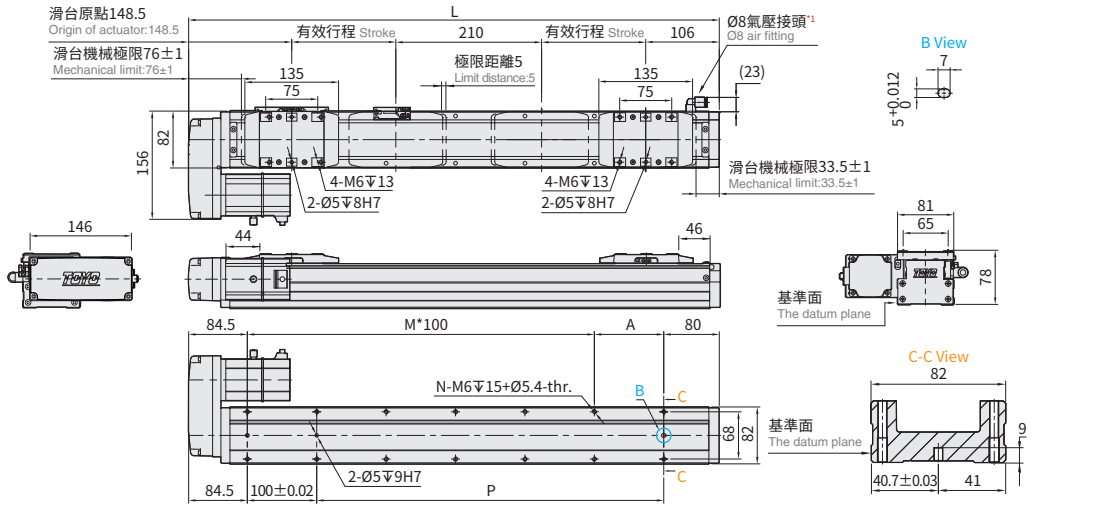
\*2 馬達下折時, 若選用煞車馬達, 或是超出馬達總長度限制時, 無法套用標準 PIN 孔, 如有需求, 請洽我司業務。When motor with brake assembled on lower side, or the total len GCH over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.

BL 馬達左折 Motor Left Side



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

單位 Unit : mm



有效行程 Stroke	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525
極限行程 Limit Stroke (±1)	35	60	85	110	135	160	185	210	235	260	285	310	335	360	385	410	435	460	485	510	535
L	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5	1414.5	1464.5	1514.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
M	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
N	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
KG	7.46	7.98	8.5	9.02	9.54	10.06	10.58	11.1	11.62	12.14	12.66	13.28	13.7	14.22	14.74	15.26	15.78	16.3	16.82	17.34	17.86
線速度 Linear Speed mm/s	300																				

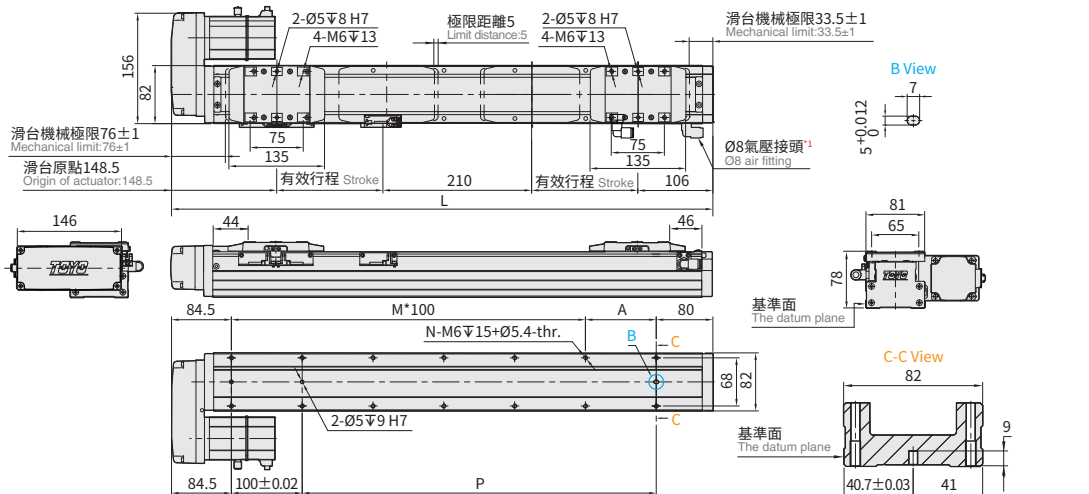
\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。 When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

BR 馬達右折 Motor Right Side



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

單位 Unit : mm



有效行程 Stroke	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525
極限行程 Limit Stroke (±1)	35	60	85	110	135	160	185	210	235	260	285	310	335	360	385	410	435	460	485	510	535
L	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5	1414.5	1464.5	1514.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
M	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
N	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
KG	7.46	7.98	8.5	9.02	9.54	10.06	10.58	11.1	11.62	12.14	12.66	13.28	13.7	14.22	14.74	15.26	15.78	16.3	16.82	17.34	17.86
線速度 Linear Speed mm/s	300																				

\*1 若光電選用 D4 時 (原點 SENSOR 置於抱持端時) 負壓接頭安裝於對側。 When sensor select is D4 (Origin sensor is placed at Holder end), vacuum pressure connector is installed on opposite side.

GCH Series

- GCH4
- GCH5
- GCH8
- GCH12
- GCH55
- GCH85