

# 規格索引

## Spec Index

### DGTY 軌道內嵌式小型電動缸-推桿式

#### DGTY Built-in Linear Motion Guide Servo Cylinder-Rod Type

| 使用環境<br>Environment | 傳動方式<br>Drive mode | 仕樣<br>Specification | 馬達容量<br>Motor Output (W) | 本體寬幅<br>Width of profile (mm) | 位置重複精度<br>Repeatability(mm) | 螺桿規格(C7級)<br>Ball screw spec (Accuracy C7) |                | 最大可搬重量<br>Maximum Payload(kg) |                  | 最高速度 <sup>*1</sup><br>Maximum speed (mm/s) |
|---------------------|--------------------|---------------------|--------------------------|-------------------------------|-----------------------------|--------------------------------------------|----------------|-------------------------------|------------------|--------------------------------------------|
|                     |                    |                     |                          |                               |                             | 外徑<br>Outer dia.(mm)                       | 導程<br>Lead(mm) | 水平使用<br>Horizontal            | 垂直使用<br>Vertical |                                            |
| 一般環境<br>Standard    | 滾珠螺桿<br>Ball screw | DGTY4               | 40                       | 44                            | ±0.01                       | 10                                         | 2              | 25                            | 8                | 100                                        |
|                     |                    |                     |                          |                               |                             |                                            | 6              | 20                            | 5                | 300                                        |
|                     |                    |                     |                          |                               |                             |                                            | 12             | 12                            | 2                | 600                                        |
| CS Series           |                    | DGTY5               | 40                       | 54                            | ±0.01                       | 12                                         | 2              | 30                            | 10               | 100                                        |
|                     |                    |                     |                          |                               |                             |                                            | 5              | 30                            | 8.1              | 250                                        |
|                     |                    |                     |                          |                               |                             |                                            | 10             | 15                            | 2.7              | 500                                        |
|                     |                    |                     |                          |                               |                             |                                            | 20             | 10                            | 1.4              | 1000                                       |

<sup>\*1</sup>:最高速度的使用條件有限制,請參閱各仕樣內頁的速度-荷重曲線圖。

The working condition of max. speed is restricted limited. Please refer to the curve graph of speed and loading in this catalog.

<sup>\*2</sup>:標準行程內的黑色數字,代表該行程內可使用的最高安全速度。若超過此速度,機械手可能有嚴重共振產生。

The number written in the column means the highest safe speed within stroke.  
If the speed is over the value shown in the chart , the vibration will be caused on the actuator.

|  | 標準行程及最高使用速度 <sup>*2</sup><br>Stroke(mm) & Maximum speed(mm/s) |    |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      | 頁數<br>Page |
|--|---------------------------------------------------------------|----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------------|
|  | 行程<br>Stroke                                                  | 50 | 100 | 150 | 200  | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |            |
|  |                                                               |    |     |     | 100  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      | 075        |
|  |                                                               |    |     |     | 300  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |            |
|  |                                                               |    |     |     | 600  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |            |
|  |                                                               |    |     |     | 100  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      | 079        |
|  |                                                               |    |     |     | 250  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |            |
|  |                                                               |    |     |     | 500  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |            |
|  |                                                               |    |     |     | 1000 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |            |

# DGTY5



## 螺桿驅動 Ball Screw Drive



最大行程  
Maximum Stroke

600mm

最高速度  
Maximum Speed

1000mm/s

馬達容量  
Motor Output

40W

滾珠螺桿  
Ball Screw

Ø 12mm

### 型號表示方式 Ordering Method

# DGTY5 - L5 - 100 - M - XC100 - 03 - N1 - A001

本體型號  
Model

特注式樣  
Customization Order No.

螺桿導程  
Ball Screw Lead

|    |      |
|----|------|
| 2  | 2mm  |
| 5  | 5mm  |
| 10 | 10mm |
| 20 | 20mm |

行程  
Stroke

50-600mm  
間隔50 50 mm Pitch

馬達位置  
Motor Position

M 馬達直結  
Motor Hidden In

對應控制器  
Corresponding Controller

XC100

電纜線長  
Cable Length

|    |     |
|----|-----|
| 01 | 1m  |
| 03 | 3m  |
| 05 | 5m  |
| 10 | 10m |

\*標配3m  
Standard: 3m

I/O線種類

Kind of I/O Cable

|    |                              |
|----|------------------------------|
| -  | 標準I/O彩虹排線<br>I/O Cable       |
| N1 | 隔離I/O線<br>Shielded I/O Cable |

\*標配1.5m  
Standard: 1.5m

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

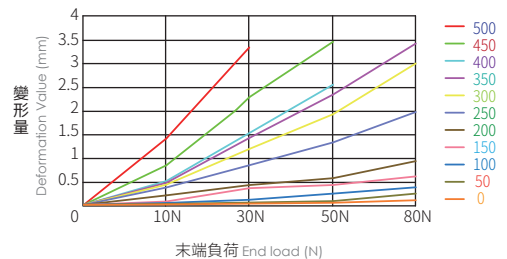
Toll-Free Number China

Taiwan

## 基本仕様 Specification

|             |                                   |                        |                            |      |      |       |
|-------------|-----------------------------------|------------------------|----------------------------|------|------|-------|
| 規格<br>Spec  | 位置重複精度 Repeatability (mm)         |                        | ±0.01                      |      |      |       |
|             | 螺桿導程 Ball Screw Lead (mm)         |                        | 2                          | 5    | 10   | 20    |
|             | 最高速度<br>Maximum Speed<br>(mm/s)※1 | 水平使用 Horizontal        | ≤100                       | ≤250 | ≤500 | ≤1000 |
|             |                                   | 垂直使用 Vertical          | ≤100                       | ≤250 | ≤500 | ≤1000 |
|             | 最大可搬重量<br>Maximum Payload         | 水平使用 Horizontal (kg)※2 | ≤30                        | ≤30  | ≤15  | ≤10   |
|             |                                   | 垂直使用 Vertical (kg)     | ≤10                        | ≤8.1 | ≤2.7 | ≤1.4  |
|             | 定格推力 Rated Thrust (N)             |                        | 1147                       | 459  | 229  | 115   |
|             | 標準行程 Stroke / Pitch (mm)          |                        | 50-600mm/50 間隔 50 mm Pitch |      |      |       |
| 部品<br>Parts | 馬達容量 Motor Output (W)             |                        | 40                         |      |      |       |
|             | 滾珠螺桿規格 Ball Screw Spec            |                        | C7 Ø 12mm                  |      |      |       |

## 出力軸變形量 Shaft Output Deformation Value

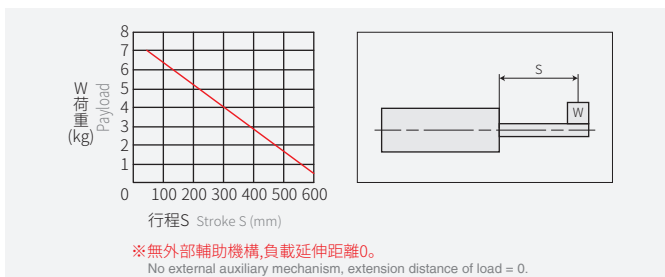


※此圖表為參考值。  
This form is only reference values.

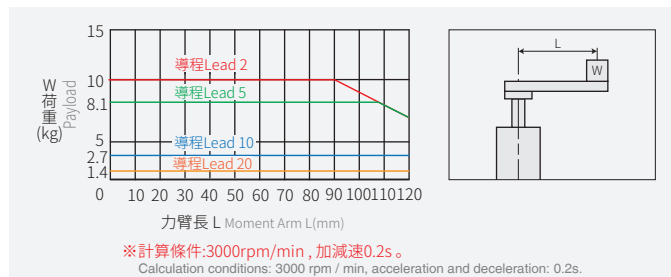
※1 此處最高速度為軟體移動速度設定為 100% 時。  
The maximum speed shown here is when software speed setting is 100%.

※2 此荷重條件外部需搭配輔助滑軌以承受徑向負載。  
If payload is near maximum, it requires to collocate externally with auxiliary guideway for bearing radial load.

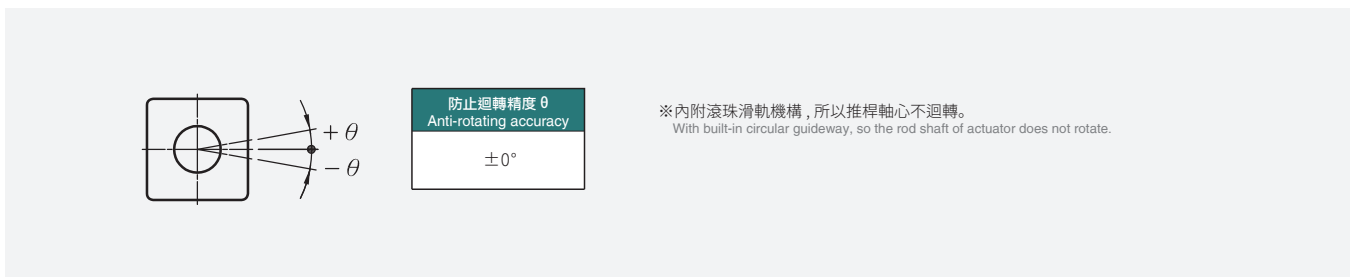
## 水平安裝荷重 Load In Horizontal Installation



## 垂直安裝負載 Load In Vertical Installation



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



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

| 外觀<br>Exterior | 控制器型號<br>Controller Model | 控制介面<br>Control Mode               | 特點<br>Features                                                                                                                                                               | 電氣規格<br>Electrical Spec.                                                                                                                                      | 詳細參閱<br>Reference Page |
|----------------|---------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
|                | XC100                     | Pulse控制<br>Pulse Control Mode      | Line driver 200k Hz<br>Open collector 60k Hz<br>同時只能使用一種。<br>Support Line driver and Open collector Max.pulse receiving speed 200k/60k Hz.                                   | 控制電路只能使用24V。<br>工作電壓DC24V, 額定電流 3A, 峰值電流8A。<br><br>The voltage of control circuit is 24V only.<br>Operating voltage DC24V, rated current 3A, peak current 8A. | P.167                  |
|                |                           | I/O控制<br>I/O Control Mode          | 利用I/O變化, 最多可以執行127個位置控制。<br>By I/O control, max. 127 positioning points, can be executed.                                                                                    |                                                                                                                                                               |                        |
|                |                           | 通訊控制<br>Communication Control Mode | 採Modbus的RS485通訊介面 (最大並接16台) 及一組mini USB (TOYO-Single專用)。<br>Use Modbus as the interface of RS485 (connect max. 16 controllers) and 1 set mini USB. (special for TOYO-Single) |                                                                                                                                                               |                        |

# DGTY5



## 螺桿驅動 Ball Screw Drive

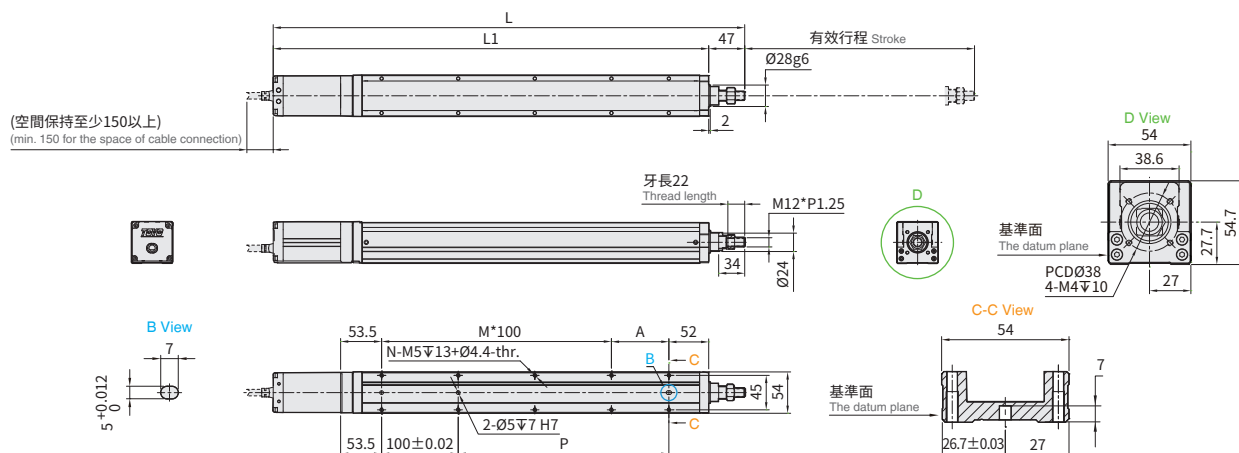


馬達直結 Motor Hidden In



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<br>Stroke | 50    | 100   | 150   | 200   | 250   | 300   | 350   | 400   | 450   | 500   | 550   | 600   |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L              | 365.5 | 415.5 | 465.5 | 515.5 | 565.5 | 615.5 | 665.5 | 715.5 | 765.5 | 815.5 | 865.5 | 915.5 |
| L1             | 318.5 | 368.5 | 418.5 | 468.5 | 518.5 | 568.5 | 618.5 | 668.5 | 718.5 | 768.5 | 818.5 | 868.5 |
| A              | 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     |
| N              | 6     | 6     | 8     | 8     | 10    | 10    | 12    | 12    | 14    | 14    | 16    | 16    |
| P              | 25    | 75    | 125   | 175   | 225   | 275   | 325   | 375   | 425   | 475   | 525   | 575   |
| *Weight(kg)    | 1.86  | 2     | 2.13  | 2.32  | 2.6   | 2.71  | 2.73  | 2.96  | 3.07  | 3.16  | 3.36  | 3.49  |

\*重量包含本體與馬達 \* Weight of model with motor.