

# Precision Planetary Reducer

## 精密行星減速機

More Compact  
結構更緊湊

+

**GHA**  
**SERIES**系列

+

Lower Backlash  
背隙更精密

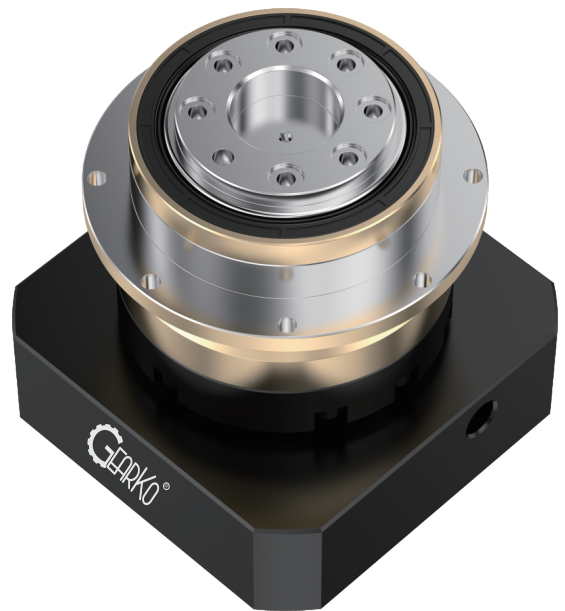
GHA Series provides an integral solution of servo motor and gearbox with higher precision & lower backlash. It is compact with higher efficiency as well. It can be customized as long as quantity justified.

GHA系列提供了伺服馬達和齒輪箱的整體解決方案，具有更高的精度和更低的背隙。它同時也更加緊湊且效率更高。只要有合理的數量需求，可以進行客制。



[www.gearko-tw.com](http://www.gearko-tw.com)

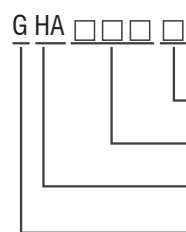
# DRIVES THE PRECISION



## Performance data 性能資料表

規格 Specification	段 Stage	減速比 Speed Ratio	框 Frame				
			GHA090	GHA110			
額定輸出力矩 Nominal Output Torque	1	4	135	295			
		5	160	335			
		7	140	310			
		10	105	240			
	2	20	135	295			
		25	160	335			
		35	140	310			
		40	125	270			
		50	160	335			
		70	140	310			
100	105	240					
急停扭矩 Emergent Stop Toruqe	Nm	1, 2	4-100	3 倍額定輸出力矩 3 times of nominal output torque			
最大輸出扭矩 Maximum Output Torque	Nm			1.8 倍額定輸出力矩 1.8 times of nominal output torque			
額定輸入轉速 Nominal Input Speed	rpm	1	4-10	3700	3700		
最大輸入轉速 Maximum Input Speed	rpm	1	4-10	4500	4500		
		2	20-100	7000	7000		
背隙 Backlash	arcmin	1	4-10	≤3			
		2	20-100	≤3			
效率 Efficiency	%	1	4-10	≥97			
		2	20-100	≥94			
扭轉剛性 Torsional Rigidity	Nm/arcmin	1, 2	4-100	40	92		
最大彎曲力矩 Maximum Bending Moment	N			280	480		
最大軸向力 Maximum Axial Force	N			3700	5800		
使用壽命 Service Life	hr			30,000			
使用溫度 Operating Temperature	°C			-20~90			
防護等級 Protection Class	-			IP65			
潤滑 Lubrication	-			合成潤滑油脂 Synthetic Grease			
安裝位置 Mounting Position	-			任意方向 Any Direction			
噪音值 Noise	dB			1	4-10	≤59	≤60
				2	20-100	≤59	≤60
重量 Weight	Kg	1	4-10	4.8	7		
		2	20-100	4.5	9		
轉動慣量 Moment of Inertia	1	4	0.51	2.87			
		5	0.47	2.71			
		7	0.45	2.62			
		10	0.44	2.57			
	2	20,25,35	0.13	0.47			
		40,50,70,100	0.13	0.44			

### Naming example 命名範例



The specification code is represented by numbers.

Round flange output and connection.

For parallel manipulator

As GearKo

規格代號，以數字表示

圓盤輸出，圓法蘭連接

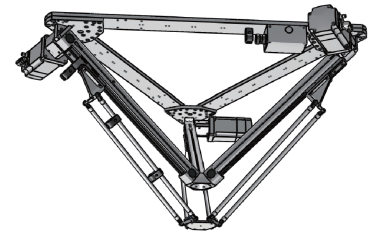
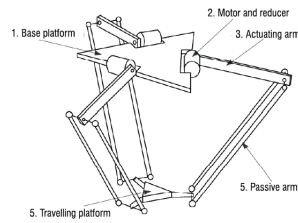
並聯式機器人專用

代表 GearKo 台灣格高

1. Speed ratio 減速比 ( $i = S_{in} / S_{out}$ )
2. When the output speed is 100 rpm, it acts on the center of the output shaft. 輸出轉速 100rpm 時，作用於輸出軸中心
3. For Continuous operation, the service life is no less than 10,000 hours. 連續運轉時，壽命為 10,000 小時
4. The noise value was measured based on the input rotational speed of 3000 rpm,  $i=10$ . 噪音值為輸入轉速 3000rpm,  $i=10$  所得

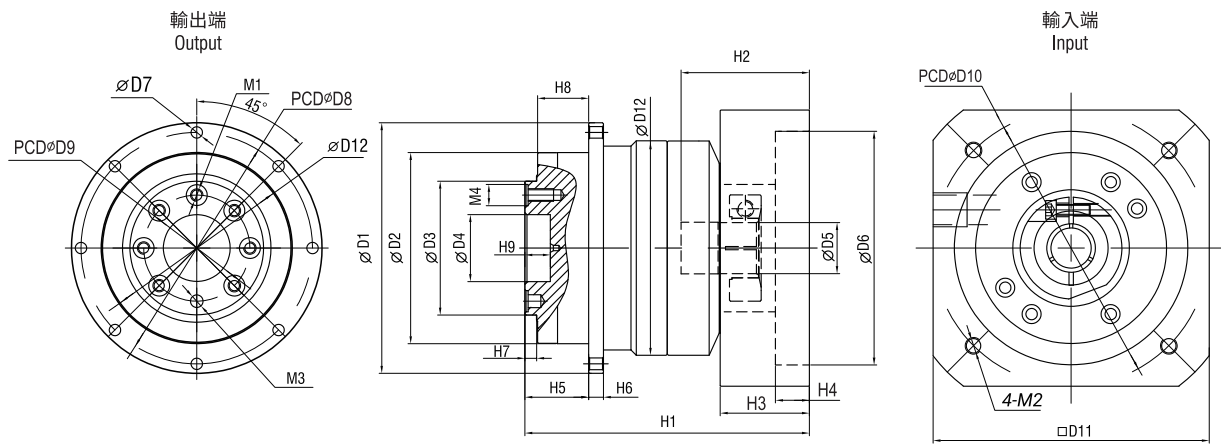
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering. 此型錄中所有產品型號及參數如有變更，恕不另行公告。訂購前請與我們確認。

- High torque  
高扭矩
- Low backlash  
低背隙
- Low noise  
低噪音
- Powerful torsional rigidity and moment of inertia  
強大的扭轉剛性和轉動慣量
- Special design for "Delta Robot"  
並聯式機器人專用



Structure of Delta Robot  
並聯式機器人結構

## Specification 規格尺寸表



型號 Model/ 單位 Unit:mm		GHA090	GHA110
D1		118	145
D2		90	110
D3		63	80
D4		31.5	40
D5	L1	24	24
	L2	24	19
D6	L1	110	110
	L2	50	70
D7		5.5	5.5
D8		109	135
D9		50	63
D10	L1	130	145
	L2	70	90
D11	L1	130	130
	L2	60	90
D12		101	124
M1		M6	M6
M2	L1	M8	M8
	L2	M4	M6
M3		6	6
M4		10	8
H1	L1	134	147.2
	L2	145	168
H2	L1	60.5	64
	L2	33.4	42
H3	L1	42	35
	L2	20	24
H4	L1	16	12
	L2	5	4
H5		30	29
H6		7	8
H7		5.5	5
H8		24.5	24
H9		12	12

GB

GBR

GD

GDR

GE

GER

GF

GCB

GCBR

GCE

GM

**GHA**

GA

GAE