

Precision Planetary Reducer

精密行星減速機

Universal type with complete specification
具備完整規格的通用型

+

GA/GAE
SERIES系列

+

Strong and durable
強壯且耐用

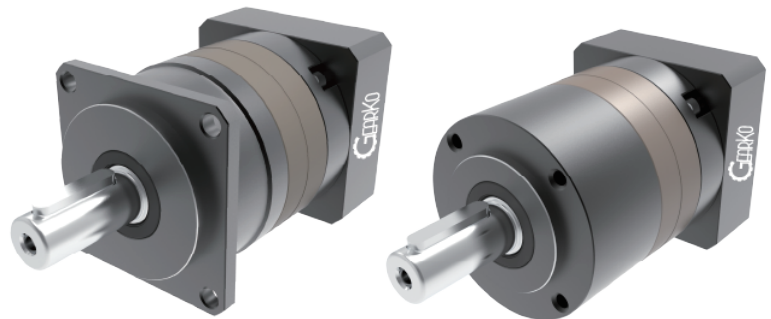
GA/GAE series planetary reducer is an universal type with complete specification, the input end are designed as quick release flange which can be matched with servo, stepping and any other motors.

GA/GAE系列行星減速器是一種具有完整規格的通用型號，其輸入端設計為快拆式法蘭，可與伺服、步進和其他任何馬達相匹配。



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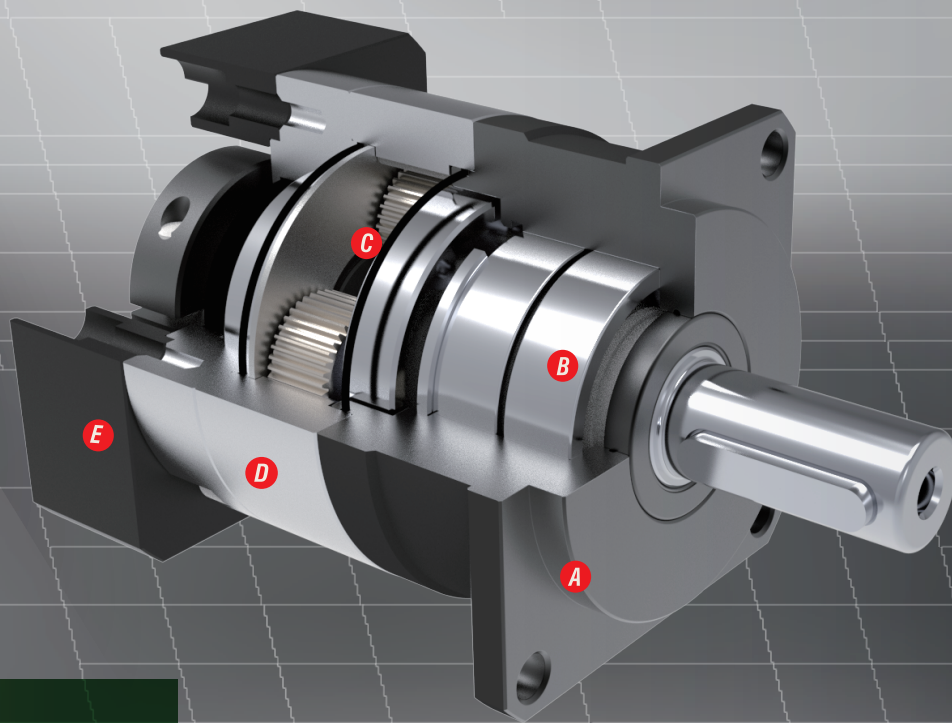
DRIVES THE PRECISION



GA/GAE SERIES

直齒減速機產品介紹

SPUR GEARBOX INTRODUCTION



- A** 出力法蘭：有通孔(GA)及鎖孔(GAE)系列兩種設計，可應用在各種不同場合
Output flanges are available in two designs: with through hole (GA) and with keyway (GAE) series, and can be applied in various different situations.
- B** 雙軸承設計：提高傳動效率，增強軸向剛度，增加穩定性
Dual-bearing design: improves transmission efficiency, enhances axial stiffness, and increases stability.
- C** 齒輪離子氮化：嚴格控制熱處理的參數，齒輪具有優異的耐磨性，齒面硬度可承受更大的負載
Gear ion nitriding: by strictly controlling the parameters of heat treatment, the gear has excellent wear resistance, and the tooth surface hardness can withstand larger loads.
- D** 內齒環：內齒環採用拉齒設計，其結構簡單，維護方便，且大量生產下仍可保持高加工精度
Internal gear: the internal gear adopts a tooth-pulling design, which has a simple structure, easy maintenance, and can maintain high processing accuracy even under mass production.
- E** 入力法蘭：快拆式設計，組裝便捷容易，尺寸齊全，適配市面上絕大多數的伺服電機和步進馬達
Input flange: quick-release design, easy to assemble and convenient, complete dimensions, compatible with the vast majority of servo motors and stepper motors on the market.

較高的穩定性
較長的使用壽命
較簡單的製造工藝

Higher stability
Longer service life
Simpler manufacturing process



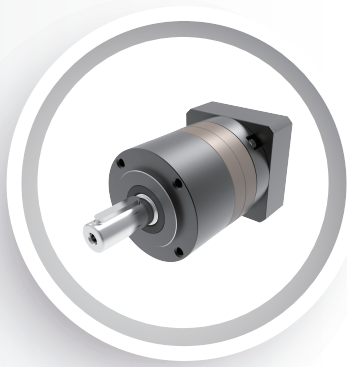
GA系列 / GA SERIES



直齒型：GA系列
特色：泛用型
方形出力端/通孔式安裝
背隙： ≤ 10 弧分
框號：42,62,90
噪音值：60-67dBA
IP等級：IP65

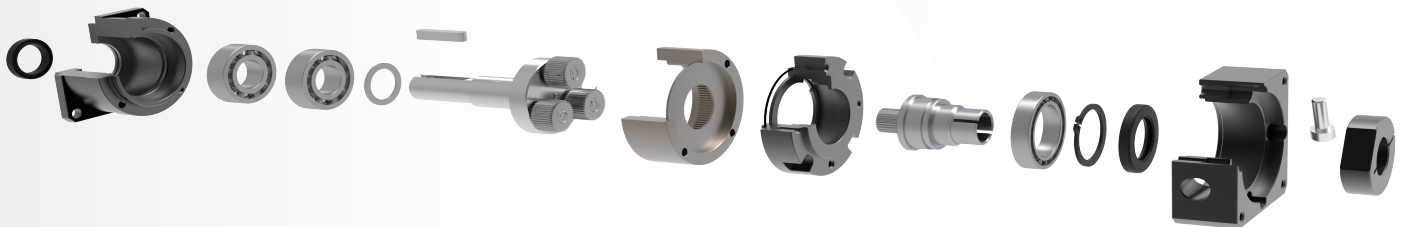
Spur Tooth Type : GA SERIES
Feature : Universal, square output
Backlash : ≤ 10 arcmin
Size : 42,62,90
Noise : 60-67dBA
ingress Protetion : IP65

GAE系列 / GAE SERIES



直齒型：GAE系列
特色：泛用型
圓形出力端/牙孔式安裝
背隙： ≤ 10 弧分
框號：40,60,80
噪音值：60-67dBA
IP等級：IP65

Spur Tooth Type : GAE SERIES
Feature : Universal, round output
Backlash : ≤ 10 arcmin
Size : 40,60,80
Noise : 60-67dBA
ingress Protetion : IP65



Choose spur gearboxes for a more efficient, longer-lasting, and more stable transmission at a lower cost!

選擇直齒減速機，享受更高效率、更長壽命、更穩定傳動，且價格更為便宜！

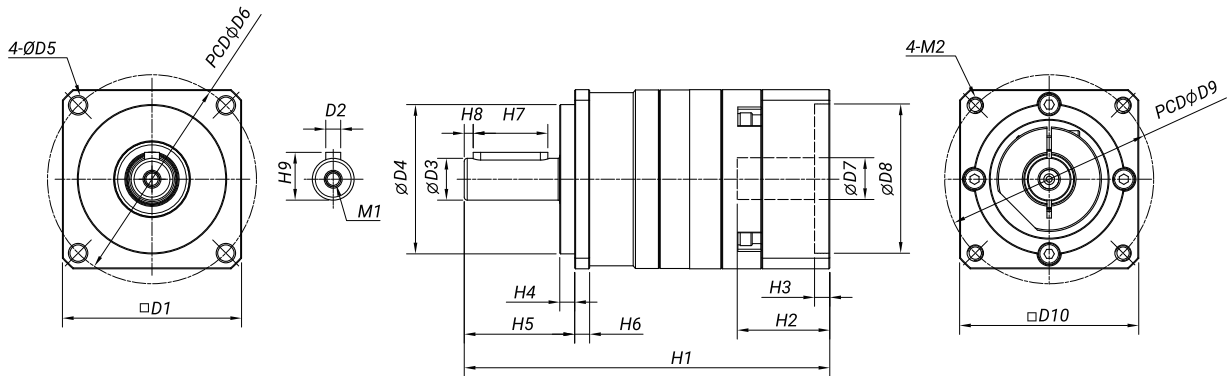
Performance data 性能資料表

規格 Specification		段 Stage	減速比 Speed Ratio	框 Frame				
				GA042	GA062	GA090		
額定輸出力矩 Nominal Output Torque	Nm	1	3	19	45	108		
			4	18	41	116		
			5	20	49	135		
			7	17	41	116		
			10	13	33	82		
		2	15	19	45	108		
			20	18	41	116		
			25	20	49	135		
			35	17	41	116		
			50	20	49	135		
急停扭矩 Emergent Stop Toruqe	Nm	1, 2	3-100	3 倍額定輸出力矩 3 times of nominal output torque				
				1.8 倍額定輸出力矩 1.8 times of nominal output torque				
最大輸出扭矩 Maximum Output Torque	Nm	1, 2	3-100	3000				
額定輸入轉速 Nominal Input Speed	rpm			6000				
最大輸入轉速 Maximum Input Speed	rpm				5000			
背隙 Backlash	arcmin	1	3-10	P0	-			
				P1	≤10			
		2	15-100	P0	-			
				P1	≤12			
效率 Efficiency	%	1	3-10	≥97				
		2	15-100	≥94				
扭轉剛性 Torsional Rigidity	Nm/arcmin	1, 2	3-100	3	7	14		
最大徑向力 Maximum Radial Force	N			400	730	1100		
最大軸向力 Maximum Axial Force	N			480	900	1320		
使用壽命 Service Life	hr			20,000				
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	3-10	≤60	≤63	≤65
				2	15-100	≤60	≤63	≤65
重量 Weight	Kg	1	3-10	0.5	1	3.2		
		2	15-100	0.6	1.2	4		

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。

Specification 規格尺寸表



型號 Model / 單位 Unit:mm		GA042	GA062	GA090
D1		42	60	90
D2		3	5	6
D3		10	14	20
D4		35	50	80
D5		4.5	5.5	6.5
D6		50	70	100
D7		8	14	19
D8		30	50	70
D9		46	70	90
D10		40	60	90
M1		M4	M5	M6
M2		M4	M5	M6
H1	L1	96.65	122.45	149.2
	L2	113.15	143.35	175.5
H2		26	31	41
H3		5.1	5.1	6.1
H4		2	5	3
H5		26	37	40
H6		4	N/A	N/A
H7		18	25	30
H8		2.5	3	4
H9		11.2	16	22.5

Moment of Inertia 轉動慣量

規格 Specification	段 Stage	減速比 Speed Ratio	框 Frame		
			GA042	GA062	GA090
轉動慣量 Moment of Inertia	1	3	0.03	0.16	0.61
		4	0.03	0.14	0.48
		5	0.03	0.13	0.47
		7	0.03	0.13	0.45
		10	0.03	0.13	0.44
	2	15,20,25,35	0.03	0.13	0.44
		50,70,100	0.03	0.13	0.43

GB

GBR

GD

GDR

GE

GER

GF

GCB

GCBR

GCE

GM

GHA

GA

GAE

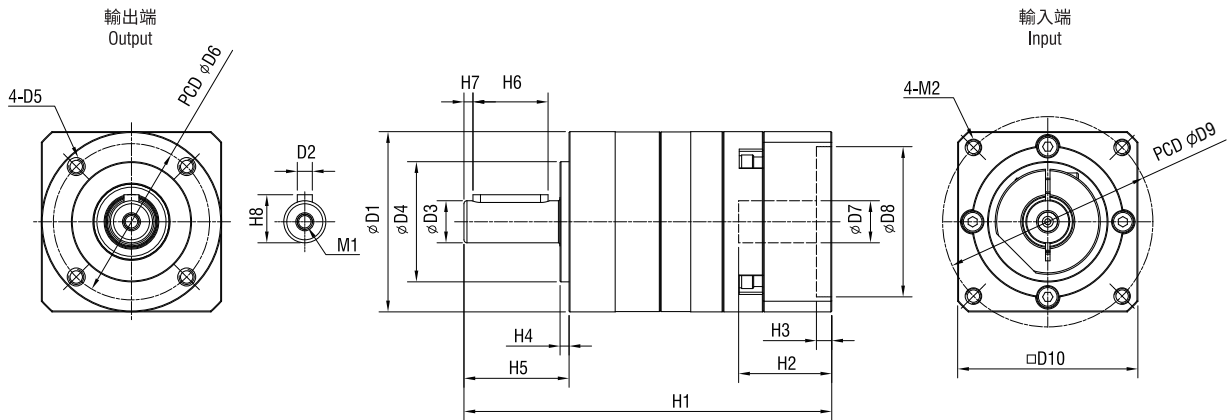
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規格 Specification		段 Stage	減速比 Speed Ratio	框 Frame				
				GAE040	GAE060	GAE080		
額定輸出力矩 Nominal Output Torque	Nm	1	3	19	45	108		
			4	18	41	116		
			5	20	49	135		
			7	17	41	116		
			10	13	33	82		
		2	15	19	45	108		
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急停扭矩 Emergent Stop Toruqe	Nm	1, 2	3-100	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			3000	3000	3000		
最大輸入轉速 Maximum Input Speed	rpm			6000	6000	5000		
背隙 Backlash	arcmin	1	3-10	P0	-			
				P1	≤10			
		2	15-100	P0	-			
				P1	≤12			
效率 Efficiency	%	1	3-10	≥97				
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噪音值 Noise	dB			1	3-10	≤60	≤63	≤65
				2	15-100	≤60	≤63	≤65
重量 Weight	Kg	1	3-10	0.5	1	2.9		
		2	15-100	0.6	1.4	3.7		

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D5		M4	M5	M6
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D7		8	14	19
D8		30	50	70
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		10	0.03	0.13	0.44
	2	15,20,25,35	0.03	0.13	0.44
		50,70,100	0.03	0.13	0.43

- GB
- GBR
- GD
- GDR
- GE
- GER
- GF
- GCB
- GCBR
- GCE
- GM
- GHA
- GA
- GAE**