

Precision Planetary Reducer

精密行星減速機

Enhanced Load Bearing Capacity
高承載軸承

+

GD/GDR/GDP
SERIES系列

+

Quiet and Stable Operation
運行安靜穩定

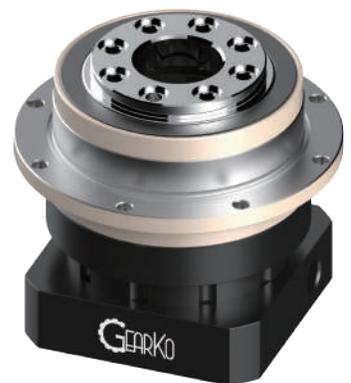
The GD/GDR/GDP series is engineered with innovative and advanced technologies to deliver superior planetary gearbox solutions. It excels across all functional aspects, offering outstanding load capacity, operational stability, and overall performance.

GD/GDR/GDP 系列以創新技術為核心，為各項傳動需求提供先進且高效的行星減速機解決方案。無論在負載能力、運行穩定性或整體性能表現上，皆展現卓越水準。



www.gearko-tw.com

DRIVES THE PRECISION



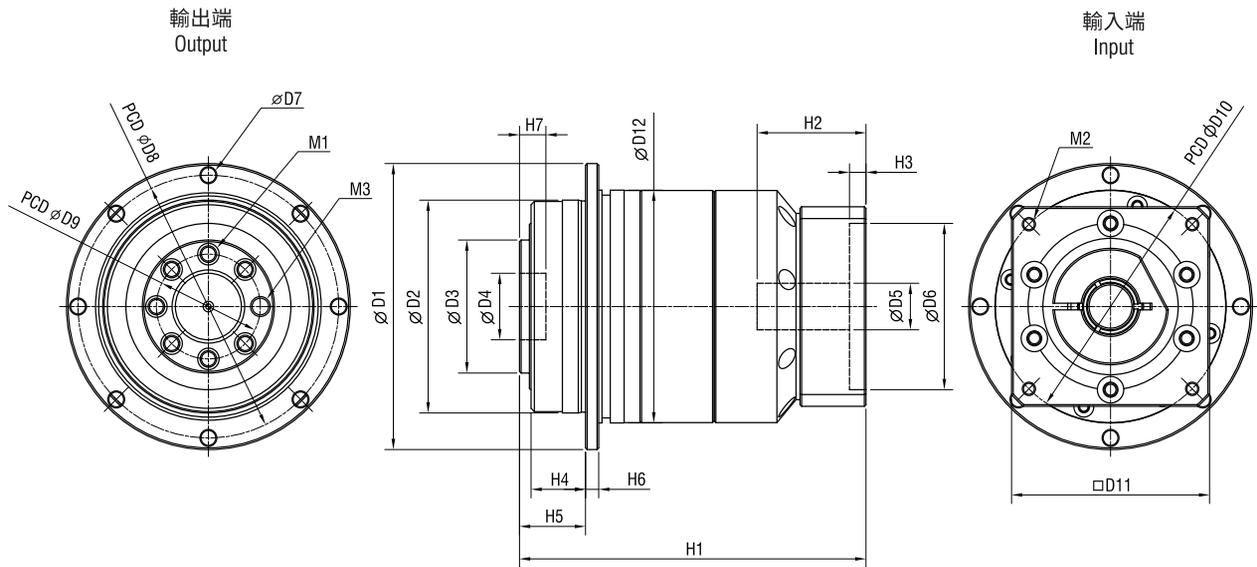
Performance data 性能資料表

規格 Specification	段 Stage	減速比 Speed Ratio	框 Frame									
			GD047	GD064	GD090	GD110	GD140	GD200	GD255			
額定輸出力矩 Nominal Output Torque	1	4	19	50	130	290	545	1050	1700			
		5	20	58	160	333	650	1200	2008			
		7	19	50	140	300	555	1100	1810			
		10	14	42	102	235	460	910	1550			
	2	20	19	50	130	290	545	1050	1700			
		25	20	58	160	333	650	1200	2008			
		35	19	50	140	300	555	1100	1810			
		40	17	48	123	260	560	1100	1700			
		50	20	58	160	333	650	1200	2008			
		70	19	50	140	300	555	1100	1810			
100	14	42	102	235	460	910	1550					
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			5000	5000	4000	4000	3000	3000	2000		
最大輸入轉速 Maximum Input Speed	rpm			10000	10000	8000	8000	6000	6000	4000		
背隙 Backlash	1	4-10	P0	≤1								
			P1	≤3								
	2	20-100	P0	≤3								
			P1	≤5								
效率 Efficiency	%	1	4-10	≥97								
		2	20-100	≥94								
扭轉剛性 Torsional Rigidity	Nm/arcmin	1, 2	4-100	3	13	31	82	151	440	1006		
最大彎曲力矩 Maximum Bending Moment	N			42.5	125	235	430	1300	3064	5900		
最大軸向力 Maximum Axial Force	N			450	1050	2850	2990	10590	16660	29430		
使用壽命 Service Life	hr			20,000	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	≤55	≤58	≤60	≤63	≤65	≤66	≤70
				2	20-100	≤55	≤58	≤60	≤63	≤65	≤66	≤70
重量 Weight	Kg	1	4-10	0.65	1.3	3.9	5.9	14.6	35.1	64.5		
		2	20-100	0.98	1.8	3.1	7.9	15.5	34.9	70.4		

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		GD047	GD064	GD090	GD110	GD140	GD200	GD255
D1		72	86	118	145	179	247	300
D2		47	64	90	110	140	200	255
D3		28	40	63	80	100	160	180
D4		12	20	31.5	40	50	80	100
D5	L1	8	14	19	24	35	35	55
	L2	8	14	14	19	22	35	42
D6	L1	30	50	70	110	114.3	114.3	200
	L2	30	50	50	70	110	114.3	180
D7		3.4	4.5	5.5	5.5	6.6	9	13.5
D8		67	79	109	135	168	233	280
D9		20	31.5	50	63	80	125	140
D10	L1	46	70	90	145	200	200	235
	L2	46	70	70	90	145	200	215
D11	L1	42	60	90	130	180	180	220
	L2	42	60	60	90	130	180	220
D12		54	70	95	120	152	212	255
M1		M3	M5	M6	M6	M8	M10	M16
M2	L1	M4	M4	M5	M8	M12	M12	M12
	L2	M4	M4	M4	M5	M8	M12	M12
M3		3	5	6	6	8	10	12
H1	L1	65	83	102.4	134	177	204	285.7
	L2	87.2	105.5	121.1	141.7	214.5	280	372
H2	L1	27.5	34	42.9	64	83.5	81.9	117.5
	L2	27.5	34	33.4	42.5	71	83	108
H3	L1	5	5	4	12	15	8	20
	L2	5	5	5	4	12	15	15
H4		16.5	17	24.5	24	32	42	54
H5		19.5	20	30	29	38	50	66
H6		4	4	7	8	10	15	22
H7		4	8	12	12	12	16	20

Moment of Inertia 轉動慣量

規格 Specification	段 Stage	減速比 Speed Ratio	框 Frame						
			GD047	GD064	GD090	GD110	GD140	GD200	GD255
轉動慣量 Moment of Inertia	1	4	0.03	0.14	0.14	2.87	7.54	25.03	58.31
		5	0.03	0.13	0.47	2.71	7.42	23.29	53.27
		7	0.03	0.13	0.45	2.62	7.14	22.48	50.97
		10	0.03	0.13	0.44	2.57	7.03	22.51	50.56
	2	20,25,35	0.03	0.13	0.13	0.47	2.71	7.42	23.29
		40,50,70,100	0.03	0.13	0.13	0.44	2.57	7.03	22.51

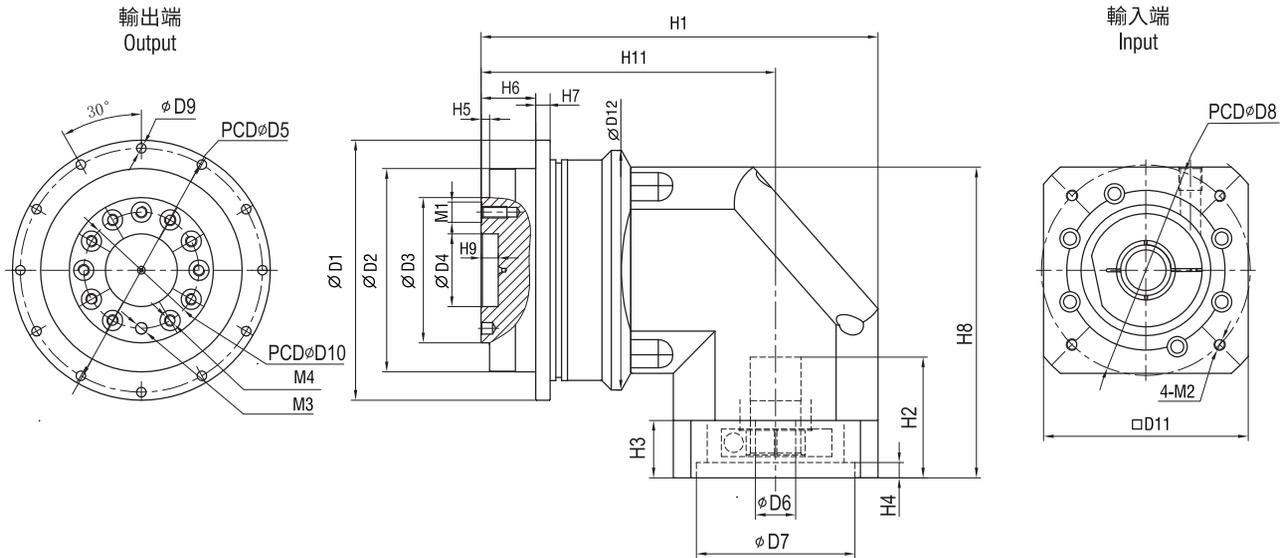
Performance data 性能資料表

規格 Specification		段 Stage	減速比 Speed Ratio	框 Frame					
				GDR064	GDR090	GDR110	GDR140		
額定輸出力矩 Nominal Output Torque	Nm	1	4	48	120	260	540		
			5	58	150	330	650		
			7	50	140	300	555		
			10	42	102	235	460		
			14	42	140	300	555		
			20	42	102	235	450		
		2	25	58	160	330	650		
			35	50	148	300	555		
			40	48	120	260	560		
			50	58	150	330	650		
			70	50	140	300	555		
			100	42	102	235	460		
			140	-	140	300	555		
			200	-	102	235	460		
急停扭矩 Emergent Stop Toruqe	Nm	1, 2	4-200	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			5000	4000	4000	3000		
最大輸入轉速 Maximum Input Speed	rpm			10000	8000	8000	6000		
背隙 Backlash	arcmin	1	4-20	P0	-				
				P1	≤4				
				P2	≤6				
		2	25-200	P0	-				
				P1	≤7				
				P2	≤9				
效率 Efficiency	%	1	4-20	≥95					
		2	25-200	≥92					
扭轉剛性 Torsional Rigidity	Nm/arcmin	1, 2	4-200	13	31	82	151		
最大徑向力 Maximum Radial Force	N			125	235	430	1300		
最大軸向力 Maximum Axial Force	N			1050	2850	2990	10590		
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	4-20	≤63	≤65	≤68	≤70
				2	25-200	≤63	≤65	≤68	≤70
重量 Weight	Kg	1	4-20	2.2	5	10.5	25		
		2	25-200	2.6	3.7	11	22.1		

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		GDR064	GDR090	GDR110	GDR140
D1		86	118	145	179
D2		64	90	110	140
D3		40	63	80	100
D4		20	31.5	40	50
D5		79	109	135	168
D6	L1	14	19	24	35
	L2	14	14	22	24
D7	L1	50	70	110	114.3
	L2	50	50	110	110
D8	L1	70	90	145	200
	L2	70	70	145	145
D9		4.5	5.5	5.5	6.6
D10		31.5	50	63	80
D11	L1	60	90	130	180
	L2	60	60	130	130
D12	L1	70	102	132	165
	L2	70	95	120	152
M1		6.5	10	10	14
M2	L1	M5	M6	M8	M12
	L2	M5	M5	M8	M8
M3		5	6	6	8
M4		M5	M6	M6	M8
H1	L1	125	170	214	275.5
	L2	135	151.5	200	272.5
H2	L1	36	49	68	97
	L2	36	36	72	74
H3	L1	34	38	35	53.5
	L2	34	34	61	42
H4	L1	6	6	12	15
	L2	6	6	10	16
H5		3	5.5	5	6
H6		20	30	29	38
H7		4	7	8	10
H8		109	145	190	239.5
H9		8	12	12	12

Moment of Inertia 轉動慣量

規格 Specification	段 Stage	減速比 Speed Ratio	框 Frame			
			GDR064	GDR090	GDR110	GDR140
轉動慣量 Moment of Inertia	1	4,5,7	0.35	2.25	6.84	23.4
		10	0.07	1.87	6.25	21.8
		14	0.07	0.87	6.25	21.8
		20	0.07	1.87	6.25	21.8
	2	25,35,40,50,70,100	0.09	0.35	2.25	6.84
		140,200	-	0.31	1.87	6.25

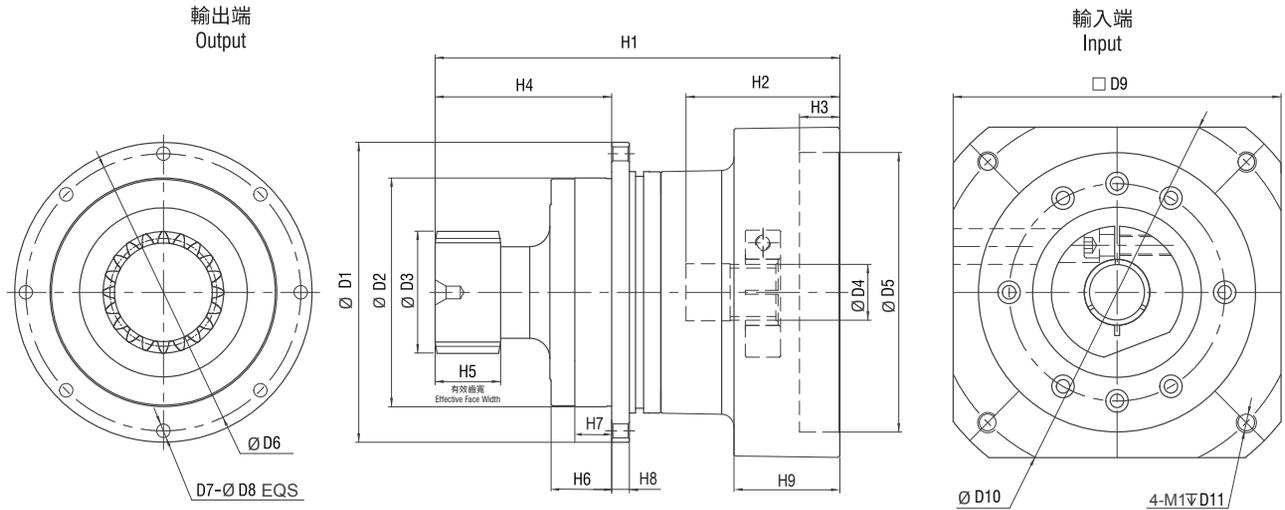
Performance data 性能資料表

規格 Specification		段 Stage	減速比 Speed Ratio	框 Frame				
				GDP090	GDP110	GDP140		
額定輸出力矩 Nominal Output Torque	Nm	1	4	-	-	545		
			5	162	335	650		
			7	142	305	555		
			10	-	-	460		
急停扭矩 Emergent Stop Torque	Nm	1	5, 7	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			4000	4000	3000		
最大輸入轉速 Maximum Input Speed	rpm			8000	8000	6000		
背隙 Backlash	arcmin	1	5, 7	P0	≤1	≤1	≤1	
				P1	≤3	≤3	≤3	
				P2	-	-	≤5	
效率 Efficiency	%	1	5, 7	≥97				
扭轉剛性 Torsional Rigidity	Nm/arcmin	1	5, 7	35	85	151		
最大彎曲力矩 Maximum Bending Moment	N			247	442	1300		
最大軸向力 Maximum Axial Force	N			2850	4072	10590		
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	5, 7	≤60	≤63	≤65
重量 Weight	Kg			1	5, 7	4	5.9	14.6
轉動慣量 Moment of Inertia	Nm	1	4	-	-	7.54		
			5	0.47	2.71	7.42		
			7	0.45	2.62	7.14		
			10	-	-	7.03		
輸出齒輪規格 Output Gear Specification	m	模數 Module	2	3				
	Z	齒數 Number of Teeth	20	16				
			22	20				
			25	22				
			26	-				
	-	旋向 Helix Hand	左旋 Left-Hand	左旋 Left-Hand				
β	螺旋角 Helix Angle	19.5283°	19.5283°					

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	GDP090-L1 2M20Z	GDP090-L1 2M22Z	GDP090-L1 2M25Z	GDP110-L1 2M20Z	GDP110-L1 2M22Z	GDP110-L1 2M25Z	GDP140-L1 3M16Z	GDP140-L1 3M20Z	GDP140-L1 3M22Z
D1	118	118	118	145	145	145	179	179	179
D2	90h7 ⁺⁰ _{-0.035}	90h7 ⁺⁰ _{-0.035}	90h7 ⁺⁰ _{-0.035}	110h7 ⁺⁰ _{-0.035}	110h7 ⁺⁰ _{-0.035}	110h7 ⁺⁰ _{-0.035}	140h7	140h7	140h7
D3	48	52.201	57	48	55.2	57	59.33	72.06	76.03
D4	22G7 ^{+0.028} _{+0.007}	35G7 ^{+0.034} _{+0.009}	35G7 ^{+0.034} _{+0.009}	35G7 ^{+0.034} _{+0.009}					
D5	110F7 ^{+0.071} _{+0.036}	114.3F7 ^{+0.071} _{+0.036}	114.3F7 ^{+0.071} _{+0.036}	114.3F7 ^{+0.071} _{+0.036}					
D6	109	109	109	135	135	135	168	168	168
D7	8	8	8	8	8	8	12	12	12
D8	5.5	5.5	5.5	5.5	5.5	5.5	6.5	6.5	6.5
D9	130	130	130	130	130	130	180	180	180
D10	145	145	145	145	145	145	200	200	200
D11	18	18	18	18	18	18	26	26	26
M1	M8	M8	M8	M8	M8	M8	M12	M12	M12
H1	160.5	160.5	156.5	175	175	170	229.5	229.5	229.5
H2	61	61	61	64	64	64	83.5	83.5	83.5
H3	16	16	16	12	12	12	15	15	15
H4	70	70	66	70	70	65	90.5	90.5	90.5
H5	26	26	26	26	26	26	31	31	31
H6	-	-	-	23	23	23	32	32	32
H7	14.6	14.6	14.6	-	-	-	14	14	14
H8	7	7	7	8	8	8	10	10	10
H9	-	-	-	35	35	35	53.5	53.5	53.5

Gear Parameters 齒輪參數

	模數 Module (m)	齒數 Number of Teeth (z)	螺旋角 Helix Angle (α)	壓力角 Pressure Angle (α)	變位係數 Profile Shift Coefficient (x)	分度圓 Pitch Circle (d)	齒輪精度 Gear Precision Class
GDP090, GDP110	2	20	19° 31' 42" LH	20°	0.4	42.441	DIN 4
GDP090, GDP110	2	22	19° 31' 42" LH	20°	0.4	46.686	DIN 4
GDP090, GDP110	2	25	19° 31' 42" LH	20°	-	53.052	DIN 4
GDP140	3	16	19° 31' 42" LH	20°	0.4	56.930	DIN 4
GDP140	3	20	19° 31' 42" LH	20°	0.4	63.662	DIN 4
GDP140	3	22	19° 31' 42" LH	20°	-	70.028	DIN 4