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。

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DRIVES THE PRECISION



GD Series
GD 系列

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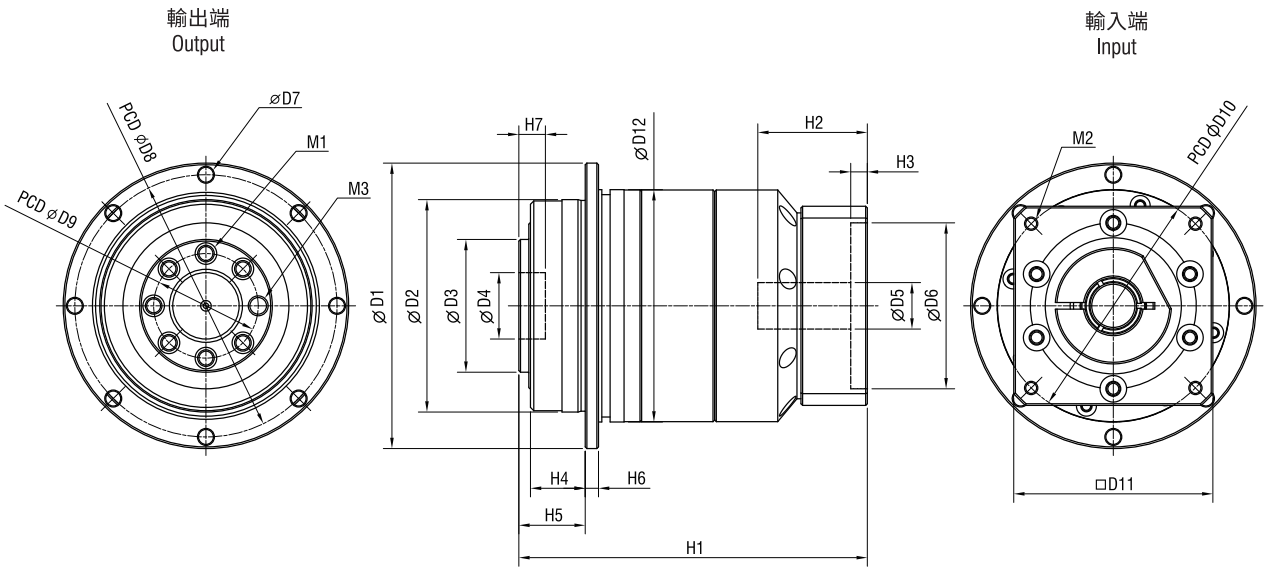
Performance data 性能資料表

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	Nm	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 Emergency Stop Torque	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	arcmin	1	4-10	P0	≤1						
				P1	≤3						
				P2	≤5						
		2	20-100	P0	≤3						
				P1	≤5						
				P2	≤7						
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	Nm				42.5	125	235	430	1300	3064	5900
最大軸向力 Maximum Axial Force	N				450	1050	2850	4072	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

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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	$Kg.cm^2$	1	4	0.03	0.14	0.51	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

GDR Series
GDR 系列

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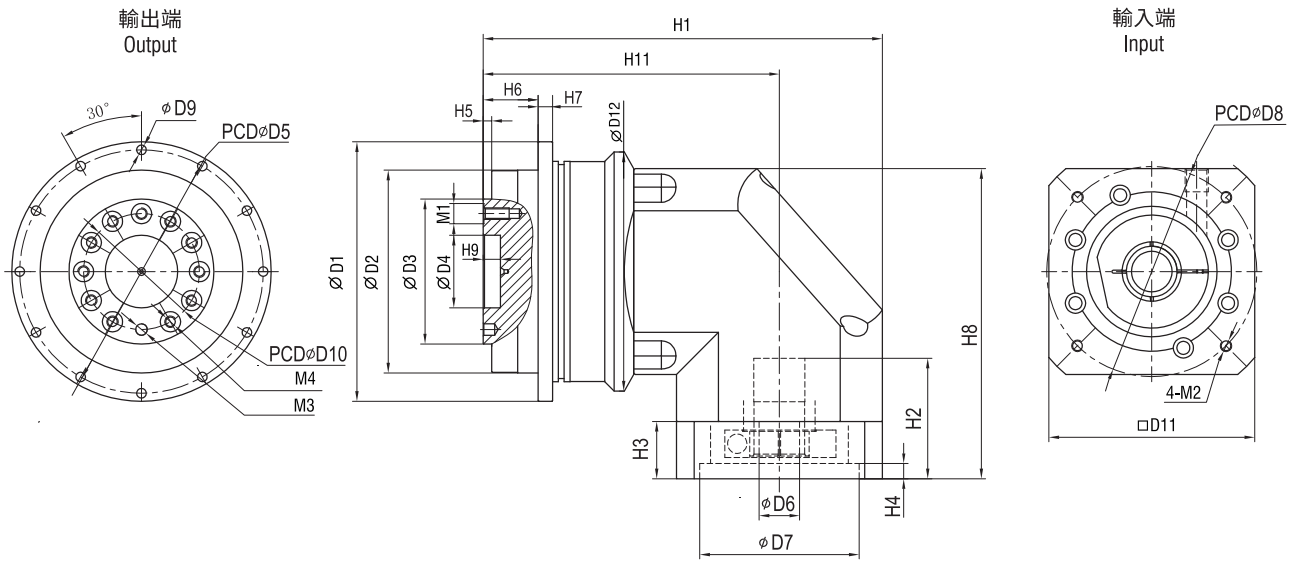
Performance data 性能資料表

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 Emergency Stop Torque	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	-	≤2		
				P1	≤4			
				P2	≤6			
		2	25-200	P0	-	≤4		
				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
最大彎曲力矩 Maximum Bending Moment	Nm				125	235	430	1300
最大軸向力 Maximum Axial Force	N				1050	2850	1段 2990 2段 4072	10590
使用壽命 Service Life	hr				30,000			
使用溫度 Operating Temperature	℃				-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

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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	Kg.cm²	1	4,5,7	0.35	2.25	6.84	23.4
			10	0.07	1.87	6.25	21.8
			14	0.07	1.87	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

GDP Series
GDP 系列

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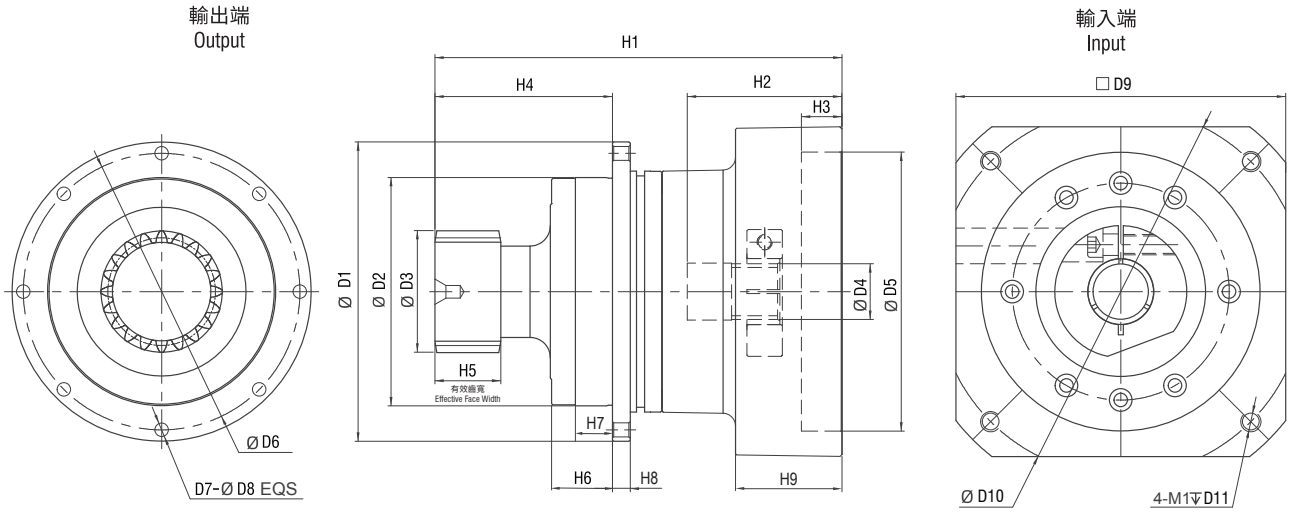
Performance data 性能資料表

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 Emergency 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	Nm				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	℃				-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	$Kg.cm^2$	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

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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	$22G7^{+0.028}_{+0.007}$	$22G7^{+0.028}_{+0.007}$	$22G7^{+0.028}_{+0.007}$	$22G7^{+0.028}_{+0.007}$	$22G7^{+0.028}_{+0.007}$	$22G7^{+0.028}_{+0.007}$	$35G7^{+0.034}_{+0.009}$	$35G7^{+0.034}_{+0.009}$	$35G7^{+0.034}_{+0.009}$
D5	$110F7^{+0.071}_{+0.036}$	$110F7^{+0.071}_{+0.036}$	$110F7^{+0.071}_{+0.036}$	$110F7^{+0.071}_{+0.036}$	$110F7^{+0.071}_{+0.036}$	$110F7^{+0.071}_{+0.036}$	$114.3F7^{+0.071}_{+0.036}$	$114.3F7^{+0.071}_{+0.036}$	$114.3F7^{+0.071}_{+0.036}$
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