

Precision Planetary Reducer

精密行星減速機

Precise & Efficient
精準 & 高效

+

GB/GBR
SERIES 系列

+

Versatile Applications
多用途應用

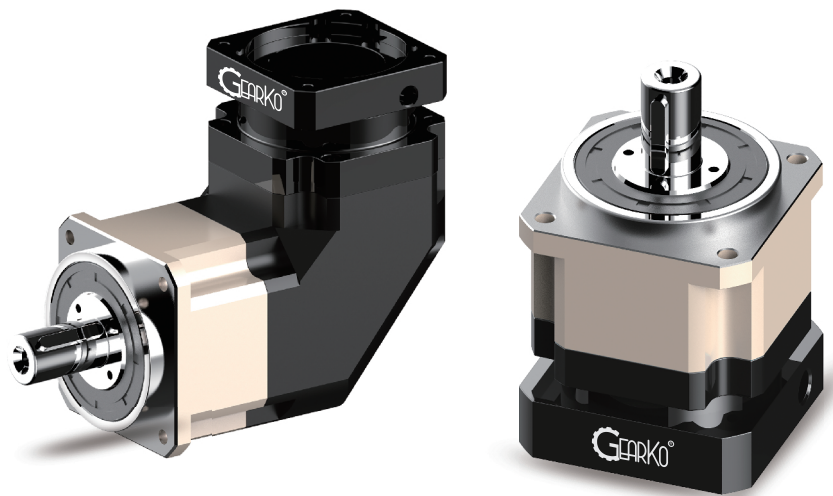
GB/GBR Series planetary reducer achieves maximum efficiency even at the highest speed and load. Robust structure and low backlash enable it to be applied in almost any shaft-output applications.

GB/GBR系列行星減速器在最高轉速和負載下實現最大的工作效率。堅固的結構和低回程間隙，使其適用於幾乎所有的輸出軸應用。



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DRIVES THE PRECISION



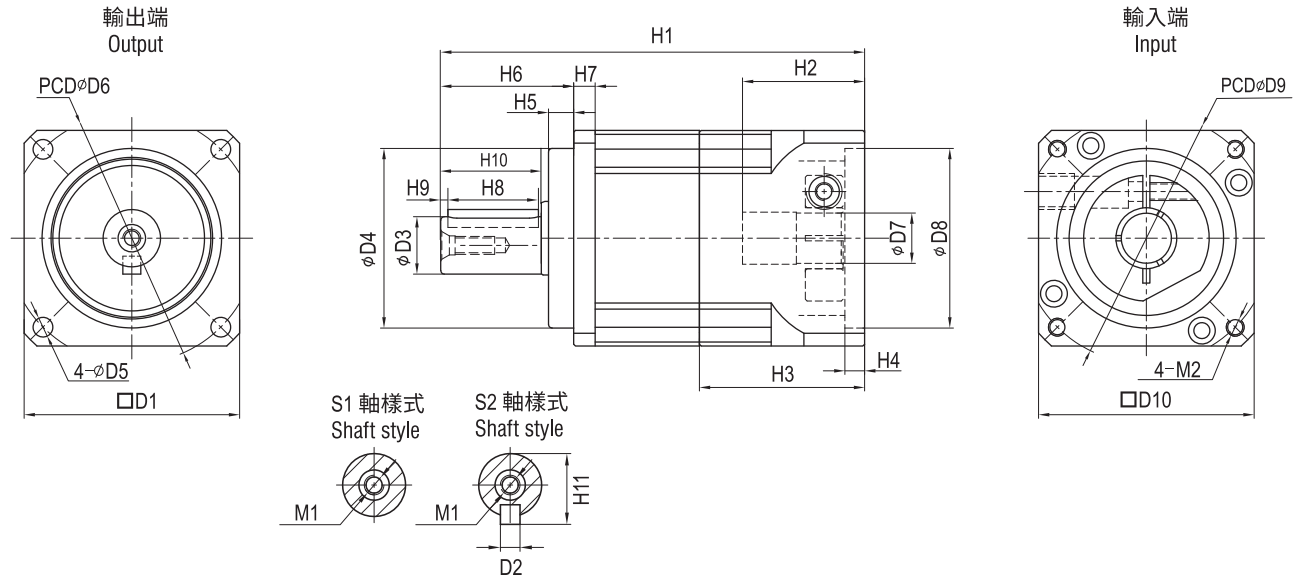
Performance data 性能資料表

規格 Specification	段 Stage	減速比 Speed Ratio	框 Frame									
			GB042	GB060	GB090	GB115	GB142	GB180	GB220			
額定輸出力矩 Nominal Output Torque	1	3	-	52	130	210	340	590	1150			
		4	19	50	140	290	545	1050	1700			
		5	20	58	160	333	650	1200	2008			
		6	19	55	148	310	600	1108	1900			
		7	19	50	140	300	555	1100	1810			
		8	17	45	123	260	500	1000	1600			
		10	14	42	102	235	460	910	1550			
		15	-	52	130	210	340	590	1150			
		20	19	50	140	290	545	1050	1700			
		25	20	58	160	333	650	1200	2008			
	2	30	19	55	148	310	600	1108	1900			
		35	19	50	140	300	555	1100	1810			
		40	17	45	123	260	500	1000	1600			
		50	20	58	160	333	650	1200	2008			
		60	19	55	148	310	600	1108	1900			
		70	19	50	140	300	555	1100	1810			
		80	17	45	123	260	500	1000	1600			
		100	14	42	102	235	460	910	1550			
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 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	3-10	P0	≤1							
				P1	≤3							
		2	15-100	P0	≤3							
				P1	≤5							
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	25	50	145	225		
最大徑向力 Maximum Radial Force	N			780	1530	3250	6700	9400	14500	50000		
最大軸向力 Maximum Axial Force	N			390	765	1625	3350	4700	7250	25000		
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 Noise	dB			1	3-10	≤55	≤58	≤60	≤63	≤65	≤66	≤70
				2	15-200	≤55	≤60	≤63	≤63	≤65	≤66	≤70
重量 Weight	Kg	1	3-10	0.5	1.3	3.6	8.5	16.5	27	51.5		
		2	15-200	0.7	1.9	4.5	9.5	16.4	34	63.5		

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		GB042	GB060	GB090	GB115	GB142	GB180	GB220
D1		42	60	90	115	142	180	220
D2		5	5	6	10	12	16	20
D3		13	16	22	32	40	55	75
D4		35	50	80	110	130	160	180
D5		3.4	5.5	7	9	11	13	17
D6		50	70	100	130	165	215	250
D7	L1	8	14	19	24	35	35	55
	L2	8	14	19	22	24	35	35
D8	L1	30	50	70	110	114.3	114.3	200
	L2	30	50	70	110	110	114.3	114.3
D9	L1	46	70	90	145	200	200	235
	L2	46	70	90	145	145	200	200
D10	L1	42	60	90	130	180	180	220
	L2	42	60	90	130	130	180	180
M1		M4	M5	M8	M12	M16	M20	M20
M2	L1	M4	M5	M5	M8	M12	M12	M10
	L2	M4	M5	M5	M8	M8	M12	M12
H1	L1	85.3	118	145	206	263	289	370
	L2	106.8	141	179.8	226	280	342.3	410
H2	L1	26.5	34	42.5	71	84	82	117.5
	L2	26	34.5	42.5	60.5	64.5	83.5	82
H3	L1	28.5	46	24	42	53.5	38	68
	L2	15.5	46	24	42	35	53.5	38
H4	L1	4	5.5	4	16	15	5	20
	L2	3.5	5.5	4	16	12	15	8
H5		5.5	7	10	12	15	20	30
H6		26	37	48	65	97	105	138
H7		4	6	10	12	15	20	25
H8		16	25.2	32	40	70.5	70.5	90
H9		2	2	3	5	4	6	7
H10		19.5	28	36.5	50.5	79	81.5	104
H11		15	18	24.5	35	43	58.7	79.5

Moment of Inertia 轉動慣量

規格 Specification	段 Stage	減速比 Speed Ratio	框 Frame						
			GB042	GB060	GB090	GB115	GB142	GB180	GB220
轉動慣量 Moment of Inertia	1	3	-	0.16	0.61	3.25	9.21	28.98	69.61
		4	0.03	0.14	0.48	2.74	7.54	23.67	54.37
		5	0.03	0.13	0.47	2.71	7.42	23.29	53.27
		6	0.03	0.13	0.45	2.65	7.25	22.75	51.72
		7	0.03	0.13	0.45	2.62	7.14	22.48	50.97
		8	0.03	0.13	0.44	2.58	7.07	22.59	50.84
	2	10	0.03	0.13	0.44	2.57	7.03	22.51	50.56
		15	-	0.13	0.47	0.47	2.71	7.42	23.29
		20,25,30,35	0.03	0.13	0.47	0.47	2.71	7.42	23.29
		40	0.03	0.13	0.44	0.47	2.71	7.42	23.29
		50,60,70,80,100	0.03	0.13	0.44	0.44	2.57	7.03	22.51

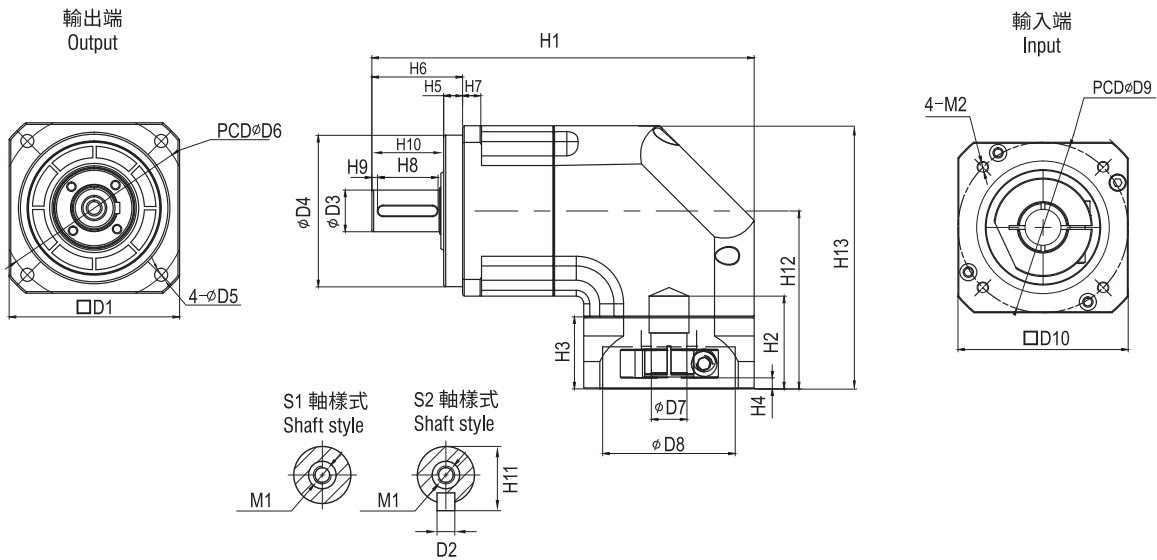
Performance data 性能資料表

規格 Specification	段 Stage	減速比 Speed Ratio	框 Frame								
			GBR042	GBR060	GBR090	GBR115	GBR142	GBR180			
額定輸出力矩 Nominal Output Torque	1	3	-	50	100	200	340	590			
		4	15	48	120	260	540	1040			
		5	18	58	150	330	650	1200			
		6	18	55	148	310	600	1108			
		7	19	50	140	300	555	1100			
		8	17	45	123	260	500	1000			
		10	14	42	102	235	460	910			
		12	-	55	148	310	600	1108			
		14	-	42	140	300	555	1100			
		16	-	45	123	260	500	1000			
	1, 2(042)	20	15	42	102	235	450	910			
	2	25	18	58	150	330	650	1200			
		30	18	55	148	310	600	1108			
		35	19	50	140	300	555	1100			
		40	17	45	120	260	500	1000			
		50	18	58	150	330	650	1200			
		60	18	55	148	310	600	1108			
		70	19	50	140	300	555	1100			
		80	17	45	123	260	500	1000			
		100	14	42	102	235	460	910			
120		-	55	148	310	600	1108				
140	-	50	140	300	555	1100					
160	-	45	123	260	500	1000					
200	-	42	102	235	460	910					
急停扭矩 Emergent Stop Torque	Nm	1, 2	3-200	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	5000	4000	4000	3000	3000		
最大輸入轉速 Maximum Input Speed	rpm			10000	10000	8000	8000	6000	6000		
背隙 Backlash	arcmin	1	3-20	P0	-						
				P1	≤4						
		2	20-200	P0	-						
				P1	≤7						
效率 Efficiency	%	1	3-20	≥95							
				2	20-200	≥92					
扭轉剛性 Torsional Rigidity	Nm/arcmin	1, 2	3-200			3	7	14	25	50	145
最大徑向力 Maximum Radial Force	N			780	1530	3250	6700	9400	14500		
最大軸向力 Maximum Axial Force	N			390	765	1625	3350	4700	7250		
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	3-20	≤61	≤63	≤65	≤68	≤70	≤72
				2	20-200	≤61	≤63	≤65	≤68	≤70	≤72
重量 Weight	Kg	1	3-20	0.7	2	6	13	25.2	46.5		
		2	20-200	0.9	2.5	6.3	12.5	21.4	43		

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
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D2		5	5	6	10	12	16
D3		13	16	22	32	40	55
D4		35	50	80	110	130	160
D5		3.4	5.5	7	9	11	13
D6		50	70	100	130	165	215
D7	L1	8	14	19	24	35	42
	L2	8	14	19	19	24	35
D8	L1	30	50	70	110	114.3	114.3
	L2	30	50	70	70	110	114.3
D9	L1	46	70	90	145	200	200
	L2	46	70	90	90	145	200
D10	L1	42	60	90	130	180	180
	L2	42	60	90	90	130	180
M1		M4	M5	M8	M12	M16	M20
M2	L1	M4	M5	M6	M8	M12	M12
	L2	M4	M5	M5	M5	M8	M12
H1	L1	103.8	147	202	264	339.5	416
	L2	125.8	170	236.8	264	345.5	419.8
H2	L1	28	36	49	63.7	97	89.7
	L2	28	36	49	49	74.5	97
H3	L1	25	34	38	50	53.5	38
	L2	25	34	38	38	42	53.5
H4	L1	4.5	6	6	10	15	8
	L2	4.5	6	6	5	16	15
H5		5.5	7	10	12	15	20
H6		26	37	48	65	97	105
H7		4	6	10	12	15	20
H8		16	25.2	32	40	70.5	70.5
H9		2	2	3	5	4	6
H10		19.5	28	36	41	79	82
H11		15	18	24.5	35	43	58.7

Moment of Inertia 轉動慣量

規格 Specification	段 Stage	減速比 Speed Ratio	框 Frame					
			GBR042	GBR060	GBR090	GBR115	GBR142	GBR180
轉動慣量 Moment of Inertia	1	3	-	0.35	2.25	6.84	23.4	68.9
		4,5,6,7,8	0.09	0.35	2.25	6.84	23.4	68.9
		10,12	0.09	0.07	2.25	6.25	21.8	65.6
		14,16	0.09	0.07	1.87	6.25	21.8	65.6
	1,2(042)	20	0.09	0.07	1.87	6.25	21.8	65.6
	2	25,30,35,40,50,60,70	0.09	0.09	2.25	2.25	6.84	23.4
		80,100	0.09	0.09	2.25	1.87	6.25	21.8
		120,140,160,200	-	0.09	1.87	1.87	6.25	21.8