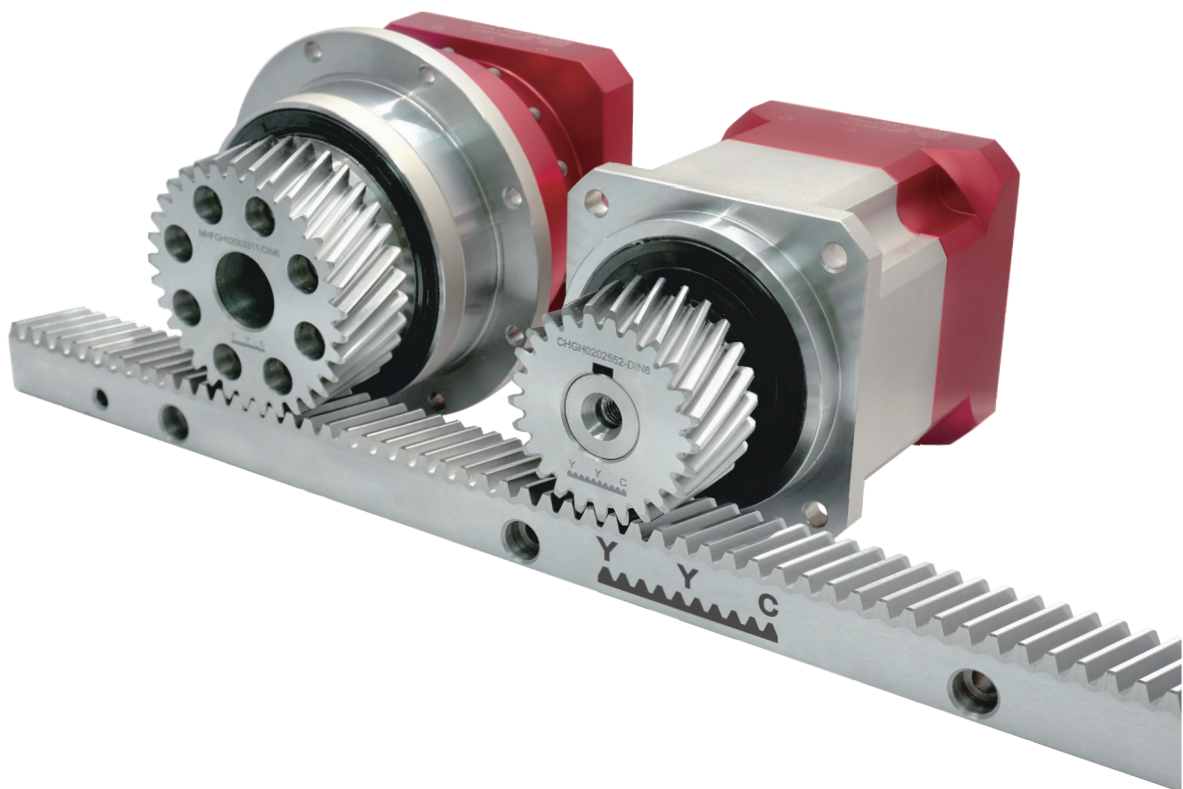


行星減速機

PLANETARY REDUCER



公司簡介

原億昌機械將近四十年的生產經驗，擁有 ISO 9001 認證，與經濟部工研院產學合作，因應目前全球智能製造的趨勢，提供傳動系列零配件與設備，包含齒條（排齒）、導軌齒條、齒輪、滾輪、行星減速機、蝸輪蝸桿減速機和消除減速機等產品。

廣大客群包含各行業領域例如：CNC 機台、工具母機、木工機、印刷機、切割機、龍門銑床、磨床、鑽床、彎管機、機器人手臂、自動化倉儲設備、自動上下料軌道、沙灘車、汽車、航空母艦、半導體設備廠、起重機以及工業 4.0 中常用到的第七軸等。

原億昌產品優良，於 2015 年榮獲台灣第 12 屆國家品牌玉山獎，傑出企業類；2016 年極度精密齒條齒輪組，榮獲第十三屆國家品牌玉山獎最佳產品獎，與金炬獎十大績優商品獎。

原億昌以自有品牌 YYC 行銷市場，“You drive, You Control!” 你驅動，你掌控！為企業標語，目標是客戶所使用的驅動零件品質卓越，效能皆在客戶的掌控之中，將產品定位於中高端市場，已經行銷近五十多個國家，提供更多客戶滿意，是我們持續努力的目標。

COMPANY PROFILE

Yuan Yi Chang Machinery has 40 years of experience, with ISO 9001 certificate and work projects with Industrial Technology Research Institute. Corresponding to smart manufacturing trend globally, YYC offers different series of transmission parts and equipment including Rack, Guideway Rack, Pinion, Roller, Planetary Reducers, Servo Worm Gearboxes, Backlash Free Reducers.

Our major clients include all kinds of industries and fields such as CNC machines, machine centers, wood-cutting machines, printing machines, cutting machines, gantry milling machines, grinding machines, drilling machines, bending machines, robotic arms, automatic storage equipment, automatic upload & unload track, ATV, aircraft carrier, semiconductor plant, cranes, including 7th axis application in Industry 4.0, and so on.

YYC has excellent quality capability. In 2015, we earned Best Enterprise of National Brand Yu-Shan Award. In 2016, our Ultra High Precision Rack and Pinion won Best Products of National Brand Yu-Shan Award and Golden Torch Prize.

Yuan Yi Chang has marketed by brand name “YYC” which means “You drive, You Control!” Every driven part with outstanding quality, so the performance is under customer’s control. Products are target on middle to high end markets. Currently, we are exporting nearly 50 countries. To have more customers’ satisfactions is our continuous goal.



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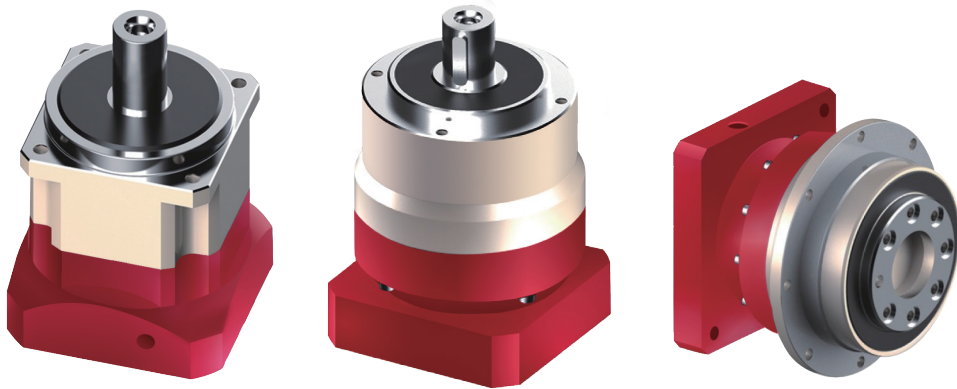
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行星減速機目錄

Contents of Planetary Reducer



型號 Code	主結構 Structure	機型 Type	型號 Code	減速比 Ratio	背隙等級 Backlash Level	頁碼 Page
HR	斜齒 Helical	標準型 Standard	60, 90, 115, 142, 180	L1: 3, 4, 5, 6, 7, 8, 10 L2: 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 100	P ₀ L1 ≤ 1, L2 ≤ 3 P ₁ L1 ≤ 3, L2 ≤ 5 P ₂ L1 ≤ 5, L2 ≤ 7	P.4
HCR	斜齒 Helical	圓型 Cylindrical	70, 90, 120, 155, 205	L1: 3, 4, 5, 6, 7, 8, 10 L2: 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 100	P ₁ : L1 ≤ 3, L2 ≤ 5 P ₂ : L1 ≤ 5, L2 ≤ 7	P.16
HDR	斜齒 Helical	盤型 Disk	64, 90, 110, 140, 200	L1: 4, 5, 7, 10 L2: 20, 25, 35, 40, 50, 70, 100	P ₀ L1 ≤ 1, L2 ≤ 3 P ₁ L1 ≤ 3, L2 ≤ 5 P ₂ L1 ≤ 5, L2 ≤ 7	P.28

行星減速機型號說明

Planetary Reducer Code Instruction

1st 主結構 Structure	2nd 機型 Type	3rd 品 名 Name	4th 型 號 Code	5th 減速比 Ratio	6th 出力軸鍵槽 Output Shaft Keyway	7th 背隙等級 Backlash Level	8th 馬達 Motor
H	C D	R	060~205	3~100	S1 S2	P ₀ P ₁ P ₂	N / A
H= 斜齒	C= 圓型 D= 盤型	減速機		L1=1 段 減速比 3, 4, 5, 6, 7, 8, 10 L2=2 段 減速比 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 100	S1 標準品 (有鍵槽) S2 實心軸 (無鍵槽)	P ₀ = 超精密 P ₁ = 精密 P ₂ = 標準	N / A
H=Helical	C=Cylindrical D=Disk	Reducer		L1=Level 1 Ratio 3, 4, 5, 6, 7, 8, 10 L2=Level 2 Ratio 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 100	S1: Standard, with Keyway S2: Solid Output, No Keyway	P ₀ = Super Precision P ₁ =Precision P ₂ =Standard	N / A



HR 斜齒標準型減速機 Helical Reducer



HR L1		Ratio 3~10
減速比	Ratio	3, 4, 5, 6, 7, 8, 10
超精密背隙	P ₀ Super Precision Backlash	$P_0 \leq 1$
精密背隙	P ₁ Precision Backlash	$P_1 \leq 3$
標準背隙	P ₂ Standard Backlash	$P_2 \leq 5$
HR L2		Ratio 15~100
減速比	Ratio	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 100
超精密背隙	P ₀ Super Precision Backlash	$P_0 \leq 3$
精密背隙	P ₁ Precision Backlash	$P_1 \leq 5$
標準背隙	P ₂ Standard Backlash	$P_2 \leq 7$

HR 系列

HR Series

規 格 Model No.	單 位 Unit	節 數 Stage	減速比 Ratio	60	90	115	142	180
額定輸出力矩 Nominal Output Torque	Nm	L1	3	55	130	208	342	588
			4	50	140	290	542	1040
			5	60	160	330	650	1200
			6	55	150	310	600	1100
			7	50	140	300	550	1100
			8	45	120	260	500	1000
		L2	10	40	100	230	450	900
			15	55	130	208	342	588
			20	50	140	290	542	1040
			25	60	160	330	650	1200
			30	55	150	310	600	1100
			35	50	140	300	550	1100
			40	45	120	260	500	1000
			50	60	160	330	650	1200
			60	55	150	310	600	1100
			70	50	140	300	550	1100
			80	45	120	260	500	1000
			100	40	100	230	450	900
最大輸入轉速 Max. Input Speed	rpm	L1/L2	3~100	10000	8000	8000	6000	6000
額定輸入轉速 Nominal Input Speed	rpm	L1/L2	3~100	5000	4000	4000	3000	3000
超精密背隙 P ₀ Super Precision Backlash	arc min	L1	3~10	≤ 1				
L2		15~100	≤ 3					
精密背隙 P ₁ Precision Backlash		L1	3~10	≤ 3				
L2		15~100	≤ 5					
標準背隙 P ₂ Standard Backlash		L1	3~10	≤ 5				
L2		15~100	≤ 7					
急停扭矩 Emergency Stop Torque	Nm	L1/L2	3~100	3 倍額定輸出力矩 / 3 Times of Nominal Output Torque				
最大輸出力矩 Max. Output Torque	Nm	L1/L2	3~100	3 倍額定輸出力矩 x 60% / 3 Times of Nominal Output Torque x 60%				
扭轉剛性 Torsional Rigidity	Nm/arc min	L1/L2	3~100	7	14	25	50	145
容許徑向力 Max. Radial Force	N	L1/L2	3~100	1530	3250	6700	9400	14500
容許軸向力 Max. Axial Force	N	L1/L2	3~100	765	1625	3350	4700	7250
使用壽命 Product Life	hr	L1/L2	3~100	20000				
使用溫度 Operation Temp	℃	L1/L2	3~100	-10℃ ~ 90℃				
效率 Efficiency	%	L1	3~10	≥ 97				
		L2	15~100	≥ 94				
潤滑 Lubrication	-	L1/L2	3~100	合成潤滑油 / Synthetic Lubrication Grease				
噪音值 Noise Level(2000 rpm)	dB	L1	3~10	≤ 58	≤ 63	≤ 60	≤ 65	≤ 66
		L2	15~100	≤ 58	≤ 63	≤ 60	≤ 65	≤ 66
防護等級 Degree of Gearbox Protection	IP	L1/L2	3~100	IP65				
安裝方向 Mounting Direction	-	L1/L2	3~100	任意方向 / Any Direction				
重量 Weight	Kg	L1	3~10	1.3	3.6	7.7	14.5	29
		L2	15~100	1.9	5.1	9	17.5	33



HR 斜齒標準型減速機 Helical Reducer

減速機轉動慣量

Reducer Moment of Inertia

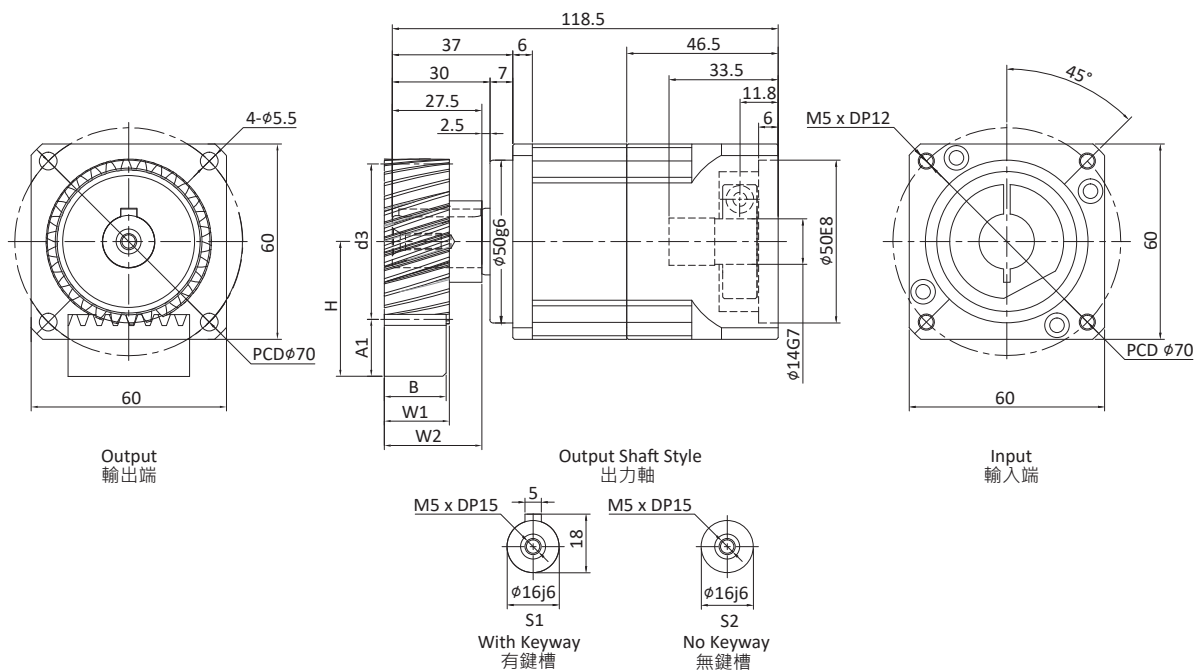
規 格 Model No.	單 位 Unit	節 數 Stage	減速比 Ratio	60	90	115	142	180
轉動慣量 Moments of Inertia	kg.cm ²	L1	3	0.16	0.61	3.25	9.21	28.98
			4	0.14	0.48	2.74	7.54	23.67
			5	0.13	0.47	2.71	7.42	23.29
			6	0.13	0.45	2.65	7.25	22.75
			7	0.13	0.45	2.62	7.14	22.48
			8	0.13	0.44	2.58	7.07	22.59
			10	0.13	0.44	2.57	7.03	22.51
		L2	15	0.13	0.13	0.47	2.71	7.42
			20	0.13	0.13	0.47	2.71	7.42
			25	0.13	0.13	0.47	2.71	7.42
			30	0.13	0.13	0.47	2.71	7.42
			35	0.13	0.13	0.47	2.71	7.42
			40	0.13	0.13	0.47	2.71	7.42
			50	0.13	0.13	0.44	2.57	7.03
			60	0.13	0.13	0.44	2.57	7.03
			70	0.13	0.13	0.44	2.57	7.03
			80	0.13	0.13	0.44	2.57	7.03
			100	0.13	0.13	0.44	2.57	7.03

HR 60 系列

HR 60 Series

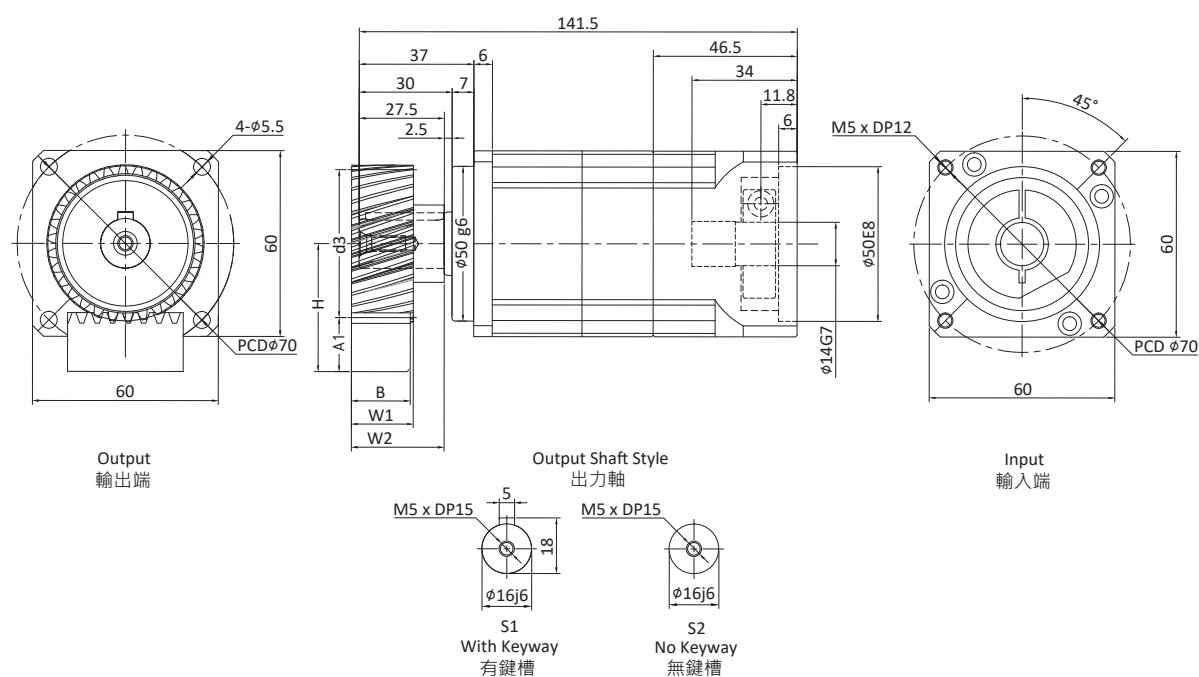
HR 60 L1 減速比 3~10

HR 60 L1 Ratio 3~10



HR 60 L2 減速比 15~100

HR 60 L2 Ratio 15~100



HR 60 組合建議

HR 60 Selection Guide

齒輪

Pinions

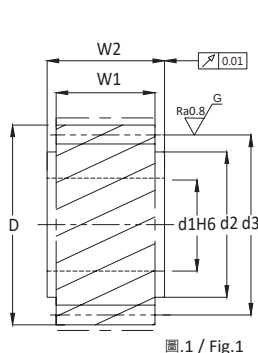


圖.1 / Fig.1

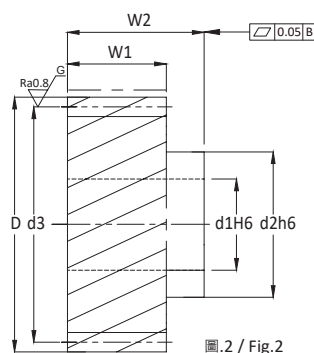
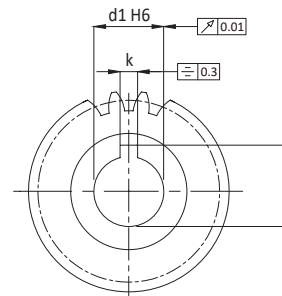


圖.2 / Fig.2



系列 MHGH-DIN6 斜齒齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
左旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後齒面研磨

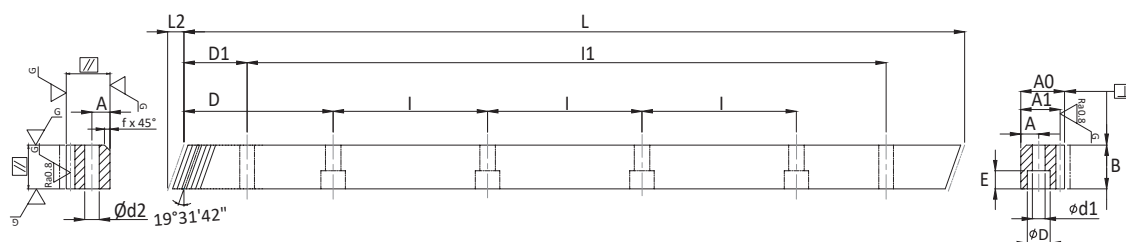
Series MHGH-DIN6 Helical Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Left Hand Angle 19°31'42"
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模數 Module	齒數 No. of Teeth	d1 ^{H6}	d2 ^{H6}	d3	D	W1	W2	k	h	H	F _{ta} kN	KG
MHGH0150205	2	-DIN6	1.5	20	16	25	31.83	34.83	20	30	5	18.3	33.415	4.48	0.11
MHGH0150206	2	-DIN6	1.5	20	16	24	31.83	34.83	20	50	*	*	33.415	4.48	0.15
MHGH0150221	2	-DIN6	1.5	22	16	25	35.01	38.01	20	30	5	18.3	35.005	5.56	0.14
MHGH0150222	2	-DIN6	1.5	22	16	24	35.01	38.01	20	50	*	*	35.005	5.56	0.18
MHGH0150252	2	-DIN6	1.5	25	16	25	39.79	42.79	20	30	5	18.3	37.395	6.37	0.18
MHGH0150253	2	-DIN6	1.5	25	16	24	39.79	42.79	20	50	*	*	37.395	6.37	0.22
MHGH0150301	2	-DIN6	1.5	30	16	25	47.75	50.75	20	30	5	18.3	41.375	7.12	0.27
MHGH0150302	2	-DIN6	1.5	30	16	24	47.75	50.75	20	50	*	*	41.375	7.12	0.31

齒條

Racks



系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p / 1000 \leq 0.036 \text{ mm}$
 $F_p / 2000 \leq 0.047 \text{ mm}$ ($\leq 0.024 / 1000 \text{ mm}$)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p / 1000 \leq 0.036 \text{ mm}$
 $F_p / 2000 \leq 0.047 \text{ mm}$ ($\leq 0.024 / 1000 \text{ mm}$)

型號 Code	模數 Module	L	L2	齒數 No. of Teeth	B	A0	A1	D	I	孔數 No. of Holes	A	Ød1	ØD	E	D1	I1	Ød2	f	F _{ta} kN	KG
CHTGH01510-DIN6	1.5	1000.00	6.70	200	19	19	17.5	62.5	125	8	8	7	11	7	31.7	936.60	5.7	2	4.84	2.6

※ H= 齒輪和齒條啮合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

單位 / Dimension : mm



HR 90 組合建議

HR 90 Selection Guide

齒輪

Pinions

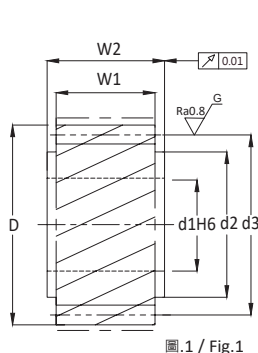


圖.1 / Fig.1

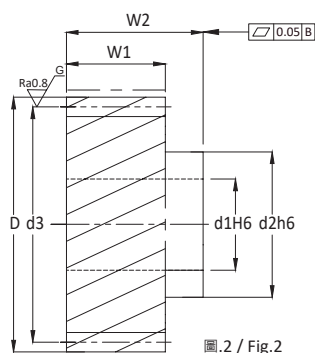
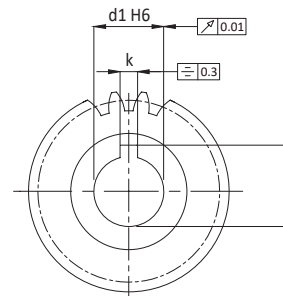


圖.2 / Fig.2

系列 MHGH-DIN6 斜齒齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
左旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後齒面研磨

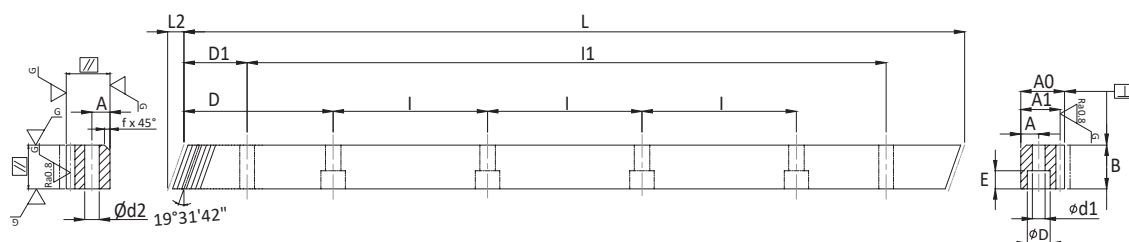
Series MHGH-DIN6 Helical Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Left Hand Angle 19°31'42"
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模數 Module	齒數 No. of Teeth	d1 ^{H6}	d2 ^{H6}	d3	D	W1	W2	k	h	H	F _{ta} kN	KG
MHGH0200207	2	-DIN6	2	20	22	35	42.44	46.44	25	40	6	24.8	43.220	8.36	0.26
MHGH0200208	2	-DIN6	2	20	22	30	42.44	46.44	25	60	*	*	43.220	8.36	0.29
MHGH0200225	2	-DIN6	2	22	22	35	46.69	50.69	25	40	6	24.8	45.345	9.27	0.32
MHGH0200226	2	-DIN6	2	22	22	35	46.69	50.69	25	60	*	*	45.345	9.27	0.35
MHGH0200257	2	-DIN6	2	25	22	35	53.05	57.05	25	40	6	24.8	48.525	10.62	0.42
MHGH0200258	2	-DIN6	2	25	22	30	53.05	57.05	25	60	*	*	48.525	10.62	0.45
MHGH0200308	2	-DIN6	2	30	22	35	63.66	67.66	25	40	6	24.8	53.830	11.87	0.61
MHGH0200309	2	-DIN6	2	30	22	30	63.66	67.66	25	60	*	*	53.830	11.87	0.64
MHGH0300207	2	-DIN6	3	20	22	35	63.66	69.66	30	40	6	24.8	57.830	15.06	0.69
MHGH0300208	2	-DIN6	3	20	22	30	63.66	69.66	30	65	*	*	57.830	15.06	0.74
MHGH0300226	2	-DIN6	3	22	22	35	70.03	76.03	30	40	6	24.8	61.015	16.68	0.85
MHGH0300227	2	-DIN6	3	22	22	30	70.03	76.03	30	65	*	*	61.015	16.68	0.90
MHGH03002511	2	-DIN6	3	25	22	35	79.58	85.58	30	40	6	24.8	65.790	20.37	1.11
MHGH03002512	2	-DIN6	3	25	22	30	79.58	85.58	30	65	*	*	65.790	20.37	1.17
MHGH0300301	2	-DIN6	3	30	22	35	95.49	101.49	30	40	6	24.8	73.745	21.37	1.62
MHGH0300302	2	-DIN6	3	30	22	30	95.49	101.49	30	65	*	*	73.745	21.37	1.67

齒條

Racks

系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p/1000 \leq 0.036$ mm
 $F_p/2000 \leq 0.047$ mm ($\leq 0.024/1000$ mm)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p/1000 \leq 0.036$ mm
 $F_p/2000 \leq 0.047$ mm ($\leq 0.024/1000$ mm)

型號 Code	模數 Module	L	L2	齒數 No. of Teeth	B	A0	A1	D	I	孔數 No. of Holes	A	ød1	øD	E	D1	I1	ød2	f	F _{ta} kN	KG
CHTGH02010-DIN6	2	1000.00	8.50	150	24	24	22.0	62.5	125	8	8	7	11	7	31.7	936.60	5.7	2	8.15	4.1
CHTGH03010-DIN6	3	1000.00	10.30	100	29	29	26.0	62.5	125	8	9	10	15	9	35.0	930.00	7.7	2	14.77	6.0

※ H= 齒輪和齒條啮合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

單位 / Dimension : mm



HR 115 組合建議

HR 115 Selection Guide

齒輪

Pinions

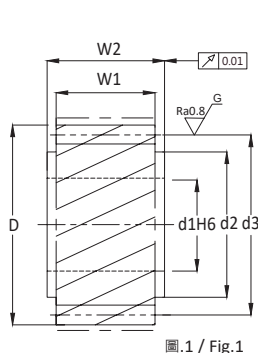


圖.1 / Fig.1

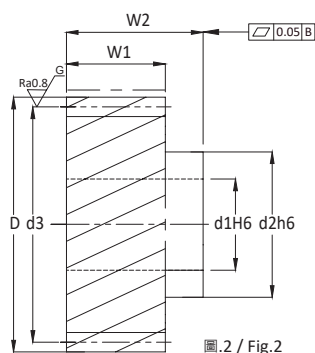
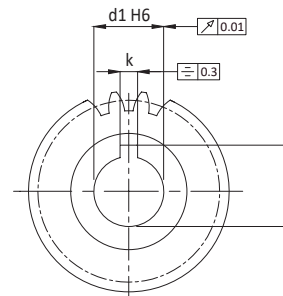


圖.2 / Fig.2



系列 MHGH-DIN6 斜齒齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
左旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後齒面研磨

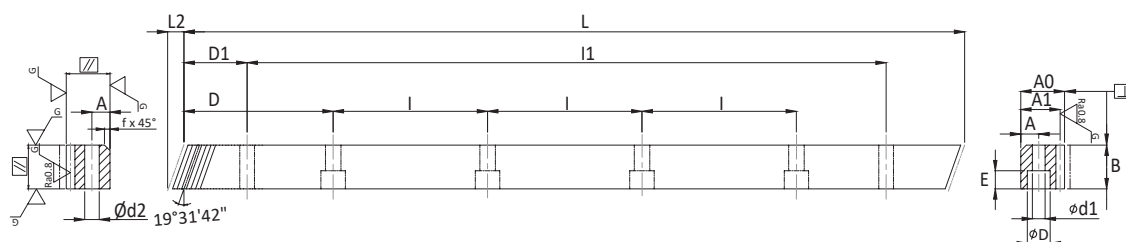
Series MHGH-DIN6 Helical Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Left Hand Angle 19°31'42"
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模數 Module	齒數 No. of Teeth	d1 ^{H6}	d2 ^{H6}	d3	D	W1	W2	k	h	H	F _{ta} kN	KG
MHGH0300209	2	-DIN6	3	20	32	50	63.66	69.66	30	60	10	35.3	57.830	15.06	0.81
MHGH03002010	2	-DIN6	3	20	32	44	63.66	69.66	30	70	*	*	57.830	15.06	0.78
MHGH0300228	2	-DIN6	3	22	32	50	70.03	76.03	30	60	10	35.3	61.015	16.68	0.96
MHGH0300229	2	-DIN6	3	22	32	44	70.03	76.03	30	70	*	*	61.015	16.68	0.93
MHGH03002513	2	-DIN6	3	25	32	50	79.58	85.58	30	60	10	35.3	65.790	20.37	1.23
MHGH03002514	2	-DIN6	3	25	32	44	79.58	85.58	30	70	*	*	65.790	20.37	1.20
MHGH0300303	2	-DIN6	3	30	32	50	95.49	101.49	30	60	10	35.3	73.745	21.37	1.74
MHGH0300304	2	-DIN6	3	30	32	44	95.49	101.49	30	70	*	*	73.745	21.37	1.71
MHGH0400203	2	-DIN6	4	20	32	50	84.88	92.88	40	60	10	35.3	77.440	26.78	1.67
MHGH0400204	2	-DIN6	4	20	32	44	84.88	92.88	40	80	*	*	77.440	26.78	1.73
MHGH0400223	2	-DIN6	4	22	32	50	93.37	101.37	40	60	10	35.3	81.685	29.66	2.04
MHGH0400224	2	-DIN6	4	22	32	44	93.37	101.37	40	80	*	*	81.685	29.66	2.10
MHGH0400254	2	-DIN6	4	25	32	50	106.10	114.10	40	60	10	35.3	88.050	36.22	2.66
MHGH0400255	2	-DIN6	4	25	32	44	106.10	114.10	40	80	*	*	88.050	36.22	2.72
MHGH0400301	2	-DIN6	4	30	32	50	127.32	135.32	40	60	10	35.3	98.660	38.00	3.88
MHGH0400302	2	-DIN6	4	30	32	44	127.32	135.32	40	80	*	*	98.660	38.00	3.94

齒條

Racks



系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p/1000 \leq 0.036 \text{ mm}$
 $F_p/2000 \leq 0.047 \text{ mm}$ ($\leq 0.024/1000 \text{ mm}$)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p/1000 \leq 0.036 \text{ mm}$
 $F_p/2000 \leq 0.047 \text{ mm}$ ($\leq 0.024/1000 \text{ mm}$)

型號 Code	模數 Module	L	L2	齒數 No. of Teeth	B	A0	A1	D	I	孔數 No. of Holes	A	ød1	øD	E	D1	I1	ød2	f	F _{ta} kN	KG
CHTGH03010-DIN6	3	1000.00	10.30	100	29	29	26.0	62.5	125	8	9	10	15	9	35.0	930.00	7.7	2	14.77	6.0
CHTGH04010-DIN6	4	1000.00	13.80	75	39	39	35.0	62.5	125	8	12	10	15	9	33.3	933.40	7.7	2	26.49	10.8

※ H= 齒輪和齒條啮合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

單位 / Dimension : mm

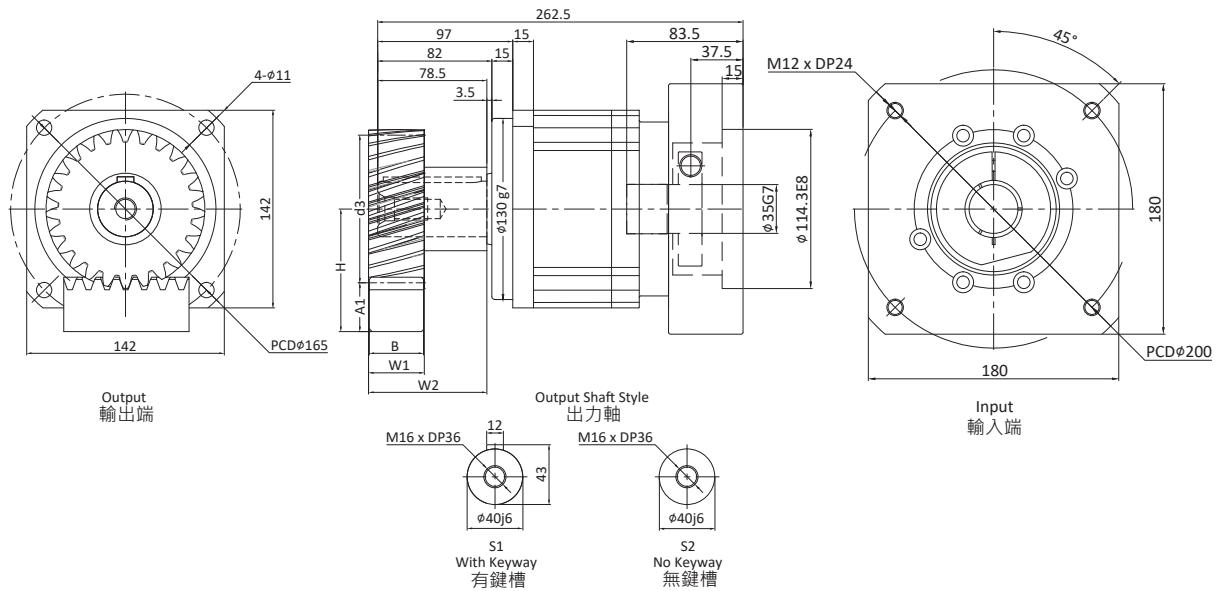


HR 142 系列

HR 142 Series

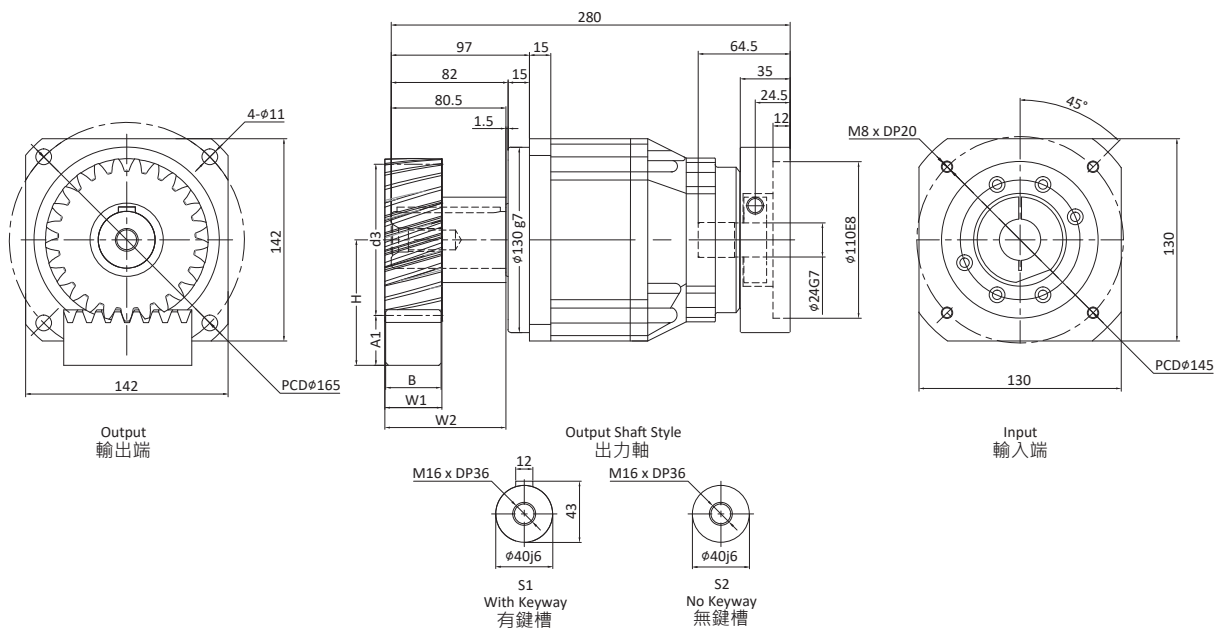
HR 142 L1 減速比 3~10

HR 142 L1 Ratio 3~10



HR 142 L2 減速比 15~100

HR 142 L2 Ratio 15~100



HR 142 組合建議

HR 142 Selection Guide

齒輪

Pinions

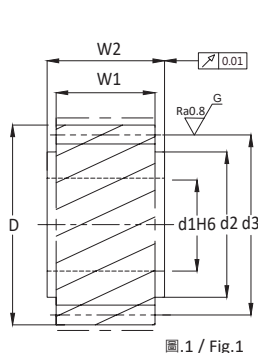


圖.1 / Fig.1

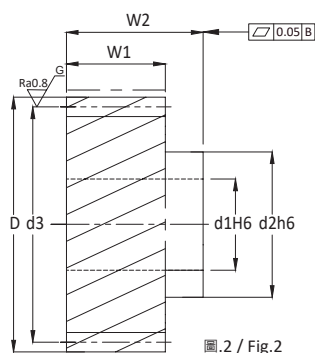
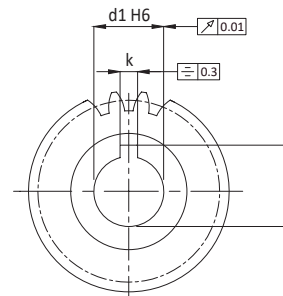


圖.2 / Fig.2



系列 MHGH-DIN6 斜齒齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
左旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後齒面研磨

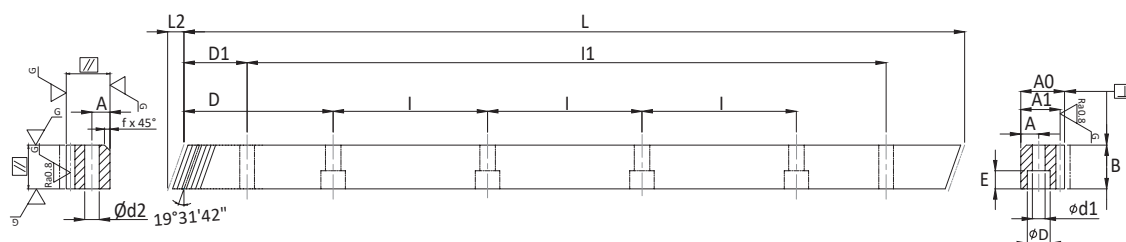
Series MHGH-DIN6 Helical Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Left Hand Angle 19°31'42"
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模數 Module	齒數 No. of Teeth	d1 ^{H6}	d2 ^{H6}	d3	D	W1	W2	k	h	H	F _{ta} kN	KG
MHGH0400205	2	-DIN6	4	20	40	60	84.88	92.88	40	85	12	43.3	77.440	26.78	1.89
MHGH0400206	2	-DIN6	4	20	40	50	84.88	92.88	40	85	*	*	77.440	26.78	1.58
MHGH0400225	2	-DIN6	4	22	40	60	93.37	101.37	40	85	12	43.3	81.685	29.66	2.26
MHGH0400226	2	-DIN6	4	22	40	50	93.37	101.37	40	85	*	*	81.685	29.66	1.95
MHGH0400256	2	-DIN6	4	25	40	60	106.10	114.10	40	85	12	43.3	88.050	36.22	2.88
MHGH0400257	2	-DIN6	4	25	40	50	106.10	114.10	40	85	*	*	88.050	36.22	2.58
MHGH0400303	2	-DIN6	4	30	40	60	127.32	135.32	40	85	12	43.3	98.660	38.00	4.10
MHGH0400304	2	-DIN6	4	30	40	50	127.32	135.32	40	85	*	*	98.660	38.00	3.80
MHGH0500201	2	-DIN6	5	20	40	60	106.10	116.10	50	85	12	43.3	87.050	41.84	3.34
MHGH0500202	2	-DIN6	5	20	40	50	106.10	116.10	50	90	*	*	87.050	41.84	3.16
MHGH0500221	2	-DIN6	5	22	40	60	116.71	126.71	50	85	12	43.3	92.355	46.34	4.06
MHGH0500222	2	-DIN6	5	22	40	50	116.71	126.71	50	90	*	*	92.355	46.34	3.88
MHGH0500251	2	-DIN6	5	25	40	60	132.63	142.63	50	85	12	43.3	100.315	56.58	5.28
MHGH0500252	2	-DIN6	5	25	40	50	132.63	142.63	50	90	*	*	100.315	56.58	5.10
MHGH0500301	2	-DIN6	5	30	40	60	159.16	169.16	50	85	12	43.3	113.580	59.37	7.66
MHGH0500302	2	-DIN6	5	30	40	50	159.16	169.16	50	90	*	*	113.580	59.37	7.48

齒條

Racks



系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p / 1000 \leq 0.036 \text{ mm}$
 $F_p / 2000 \leq 0.047 \text{ mm}$ ($\leq 0.024 / 1000 \text{ mm}$)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p / 1000 \leq 0.036 \text{ mm}$
 $F_p / 2000 \leq 0.047 \text{ mm}$ ($\leq 0.024 / 1000 \text{ mm}$)

型號 Code	模數 Module	L	L2	齒數 No. of Teeth	B	A0	A1	D	I	孔數 No. of Holes	A	Ød1	ØD	E	D1	I1	Ød2	f	F _{ta} kN	KG
CHTGH04010-DIN6	4	1000.00	13.80	75	39	39	35.0	62.5	125	8	12	10	15	9	33.3	933.40	7.7	2	26.49	10.8
CHTGH05010-DIN6	5	1000.00	17.40	60	49	39	34.0	62.5	125	8	12	14	20	13	37.5	925.00	11.7	3	41.60	13.6

※ H= 齒輪和齒條啮合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

單位 / Dimension : mm

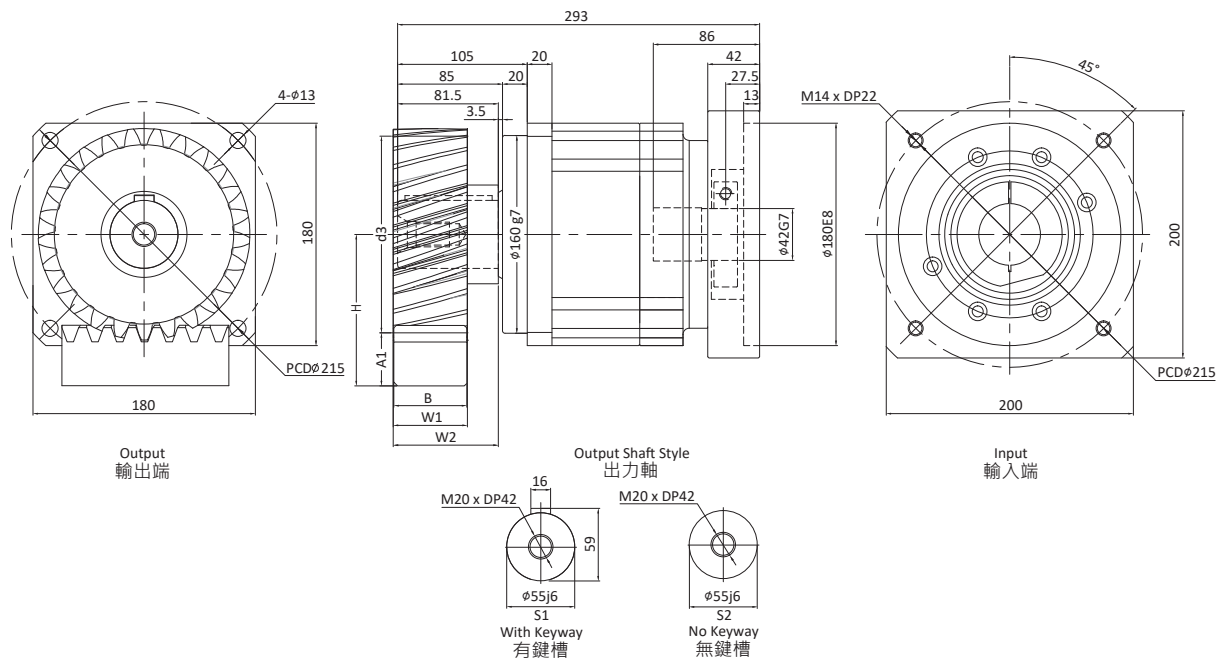


HR 180 系列

HR 180 Series

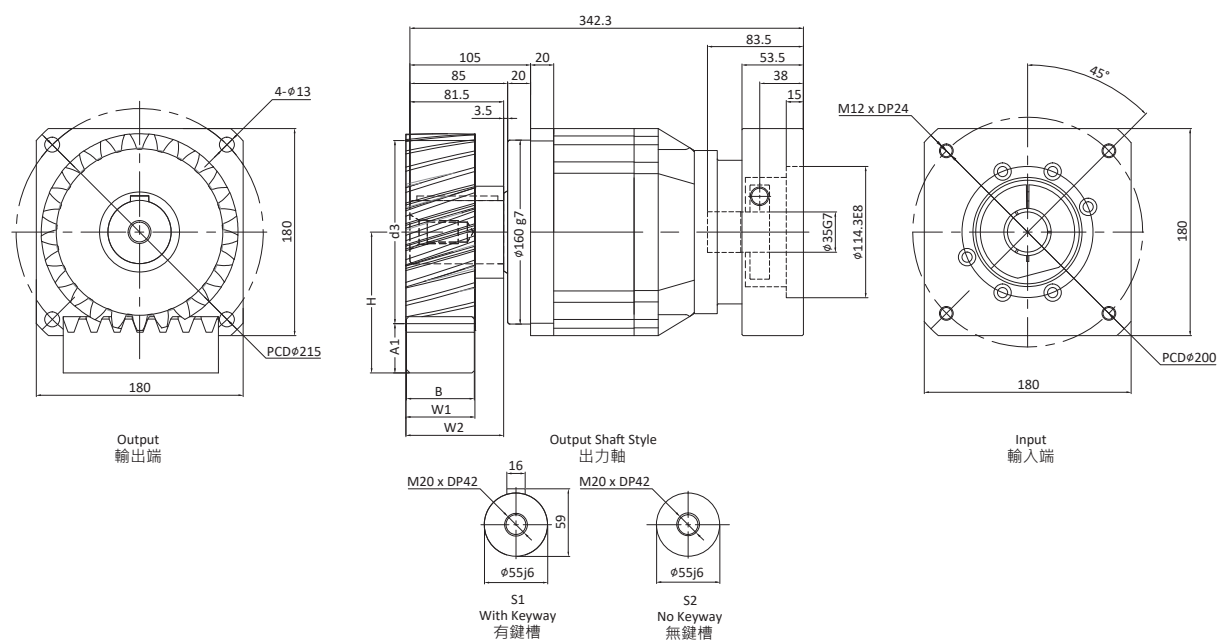
HR 180 L1 減速比 3~10

HR 180 L1 Ratio 3~10



HR 180 L2 減速比 15~100

HR 180 L2 Ratio 15~100



HR 180 組合建議

HR 180 Selection Guide

齒輪

Pinions

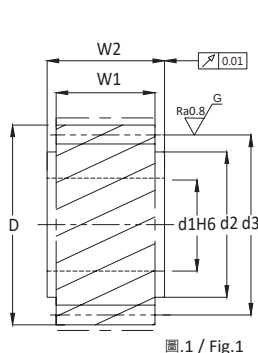


圖.1 / Fig.1

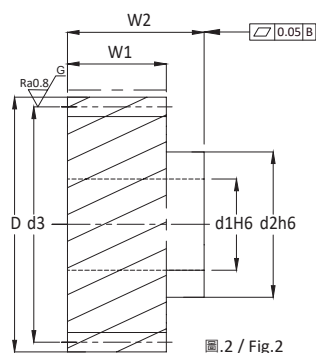
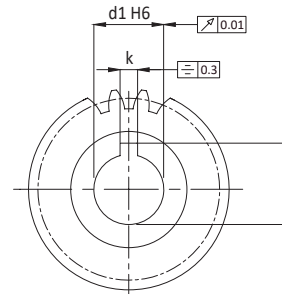


圖.2 / Fig.2

系列 MHGH-DIN6 斜齒齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
左旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後齒面研磨

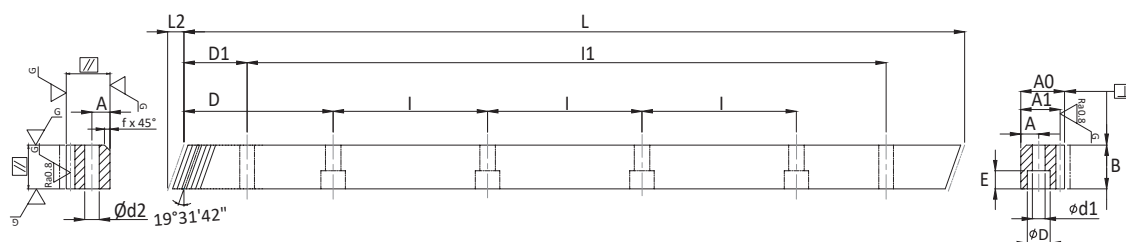
Series MHGH-DIN6 Helical Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Left Hand Angle 19°31'42"
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模數 Module	齒數 No. of Teeth	d1 ^{H6}	d2 ^{H6}	d3	D	W1	W2	k	h	H	F _{ta} kN	KG
MHGH0600203	2	-DIN6	6	20	55	80	127.32	139.32	60	85	16	59.3	106.660	60.25	5.28
MHGH0600204	2	-DIN6	6	20	55	68	127.32	139.32	60	105	*	*	106.660	60.25	5.25
MHGH0600221	2	-DIN6	6	22	55	80	140.06	152.06	60	85	16	59.3	113.030	66.74	6.53
MHGH0600222	2	-DIN6	6	22	55	68	140.06	152.06	60	105	*	*	113.030	66.74	6.50
MHGH0600253	2	-DIN6	6	25	55	80	159.16	171.16	60	85	16	59.3	122.580	81.49	8.64
MHGH0600254	2	-DIN6	6	25	55	68	159.16	171.16	60	105	*	*	122.580	81.49	8.61
MHGH0600301	2	-DIN6	6	30	55	80	190.99	212.99	60	85	16	59.3	138.495	85.49	12.74
MHGH0600302	2	-DIN6	6	30	55	68	190.99	212.99	60	105	*	*	138.495	85.49	12.71

齒條

Racks

系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p/1000 \leq 0.036 \text{ mm}$
 $F_p/2000 \leq 0.047 \text{ mm}$ ($\leq 0.024/1000 \text{ mm}$)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p/1000 \leq 0.036 \text{ mm}$
 $F_p/2000 \leq 0.047 \text{ mm}$ ($\leq 0.024/1000 \text{ mm}$)

型號 Code	模數 Module	L	L2	齒數 No. of Teeth	B	A0	A1	D	I	孔數 No. of Holes	A	ød1	øD	E	D1	I1	ød2	f	F _{ta} kN	KG
CHTGH06010-DIN6	6	1000.00	20.90	50	59	49	43.0	62.5	125	8	16	18	26	17	37.5	925.00	15.7	3	60.11	20.5

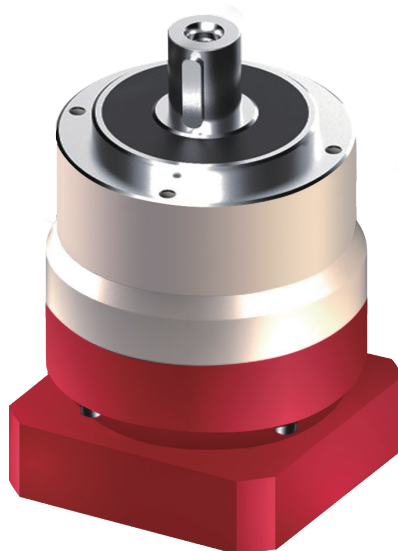
※ H= 齒輪和齒條啮合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

單位 / Dimension : mm



HCR
斜齒圓型減速機
Helical Cylindrical Reducer

HCR L1		Ratio 3~10
減速比	Ratio	3, 4, 5, 6, 7, 8, 10
精密背隙	P1 Precision Backlash	$P1 \leq 3$
標準背隙	P2 Standard Backlash	$P2 \leq 5$
HCR L2		Ratio 15~100
減速比	Ratio	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 100
精密背隙	P1 Precision Backlash	$P1 \leq 5$
標準背隙	P2 Standard Backlash	$P2 \leq 7$

HCR 系列

HCR Series

規 格 Model No.	單 位 Unit	節 數 Stage	減速比 Ratio	70	90	120	155	205
額定輸出力矩 Nominal Output Torque	Nm	L1	3	55	130	208	342	588
			4	50	140	290	542	1050
			5	60	160	330	650	1200
			6	55	150	310	600	1100
			7	50	140	300	550	1100
			8	45	120	260	500	1000
			10	40	100	230	450	900
		L2	15	55	130	208	342	588
			20	50	140	290	542	1050
			25	60	160	330	650	1200
			30	55	150	310	600	1100
			35	50	140	300	550	1100
			40	45	120	260	500	1000
			50	60	160	330	650	1200
			60	55	150	310	600	1100
			70	50	140	300	550	1100
			80	45	120	260	500	1000
			100	40	100	230	450	900
最大輸入轉速 Max. Input Speed	rpm	L1 / L2	3~100	10000	8000	8000	6000	6000
額定輸入轉速 Nominal Input Speed	rpm	L1 / L2	3~100	5000	4000	4000	3000	3000
精密背隙 P1 Precision Backlash		L1	3~10	≤ 3				
		L2	15~100	≤ 5				
標準背隙 P2 Standard Backlash		L1	3~10	≤ 5				
		L2	15~100	≤ 7				
急停扭矩 Emergency Stop Torque	Nm	L1/L2	3~100	3 倍額定輸出力矩 / 3 Times of Nominal Output Torque				
最大輸出力矩 Max. Output Torque	Nm	L1/L2	3~100	3 倍額定輸出力矩 x 60% / 3 Times of Nominal Output Torque x 60%				
扭轉剛性 Torsional Rigidity	Nm/arc min	L1 / L2	3~100	7	14	25	50	145
容許徑向力 Max. Radial Force	N	L1 / L2	3~100	765	1625	3350	4700	7250
容許軸向力 Max. Axial Force	N	L1 / L2	3~100	1377	2985	6100	8460	13050
使用壽命 Product Life	hr	L1 / L2	3~100	20000				
使用溫度 Operation Temp	°C	L1 / L2	3~100	-10°C ~ 90°C				
效率 Efficiency	%	L1	3~10	≥ 97				
		L2	15~100	≥ 94				
潤滑 Lubrication	-	L1 / L2	3~100	合成潤滑油 / Synthetic Lubrication Grease				
噪音值 Noise Level(2000 rpm)	dB	L1	3~10	≤ 58	≤ 60	≤ 63	≤ 65	≤ 67
		L2	15~100	≤ 58	≤ 60	≤ 63	≤ 65	≤ 67
防護等級 Degree of Gearbox Protection	IP	L1 / L2	3~100	IP65				
安裝方向 Mounting Direction	-	L1 / L2	3~100	任意方向 / Any Direction				
重量 Weight	Kg	L1	3~10	1.4	3.3	6.9	13	31
		L2	15~100	1.6	4.7	8.7	17	35



HCR 斜齒圓型減速機 Helical Cylindrical Reducer

減速機轉動慣量

Reducer Moment of Inertia

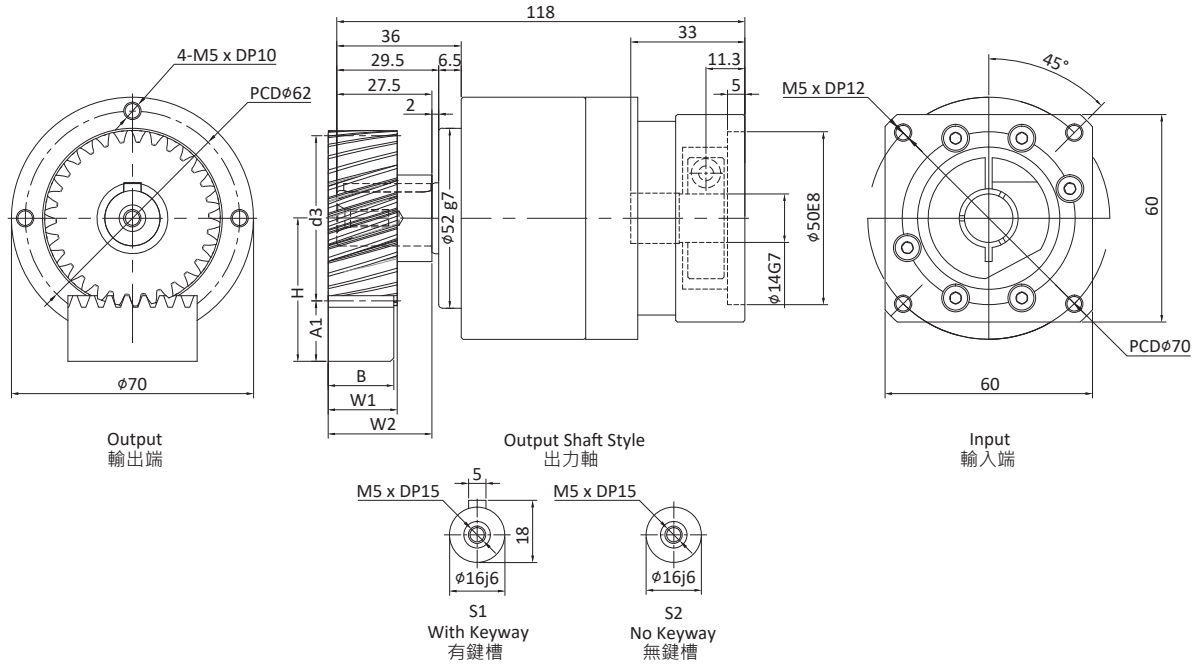
規 格 Model No.	單位 Unit	節 數 Stage	減速比 Ratio	70	90	120	155	205
轉動慣量 Moments of Inertia	kg.cm ²	L1	3	0.16	0.61	3.25	9.21	28.98
			4	0.14	0.48	2.74	7.54	23.67
			5	0.13	0.47	2.71	7.42	23.29
			6	0.13	0.45	2.65	7.25	22.75
			7	0.13	0.45	2.62	7.14	22.48
			8	0.13	0.44	2.58	7.07	22.59
			10	0.13	0.44	2.57	7.03	22.51
		L2	15	0.03	0.13	0.47	2.71	7.42
			20	0.03	0.13	0.47	2.71	7.42
			25	0.03	0.13	0.47	2.71	7.42
			30	0.03	0.13	0.47	2.71	7.42
			35	0.03	0.13	0.47	2.71	7.42
			40	0.03	0.13	0.47	2.71	7.42
			50	0.03	0.13	0.44	2.57	7.03
			60	0.03	0.13	0.44	2.57	7.03
			70	0.03	0.13	0.44	2.57	7.03
			80	0.03	0.13	0.44	2.57	7.03
			100	0.03	0.13	0.44	2.57	7.03

HCR 70 系列

HCR 70 Series

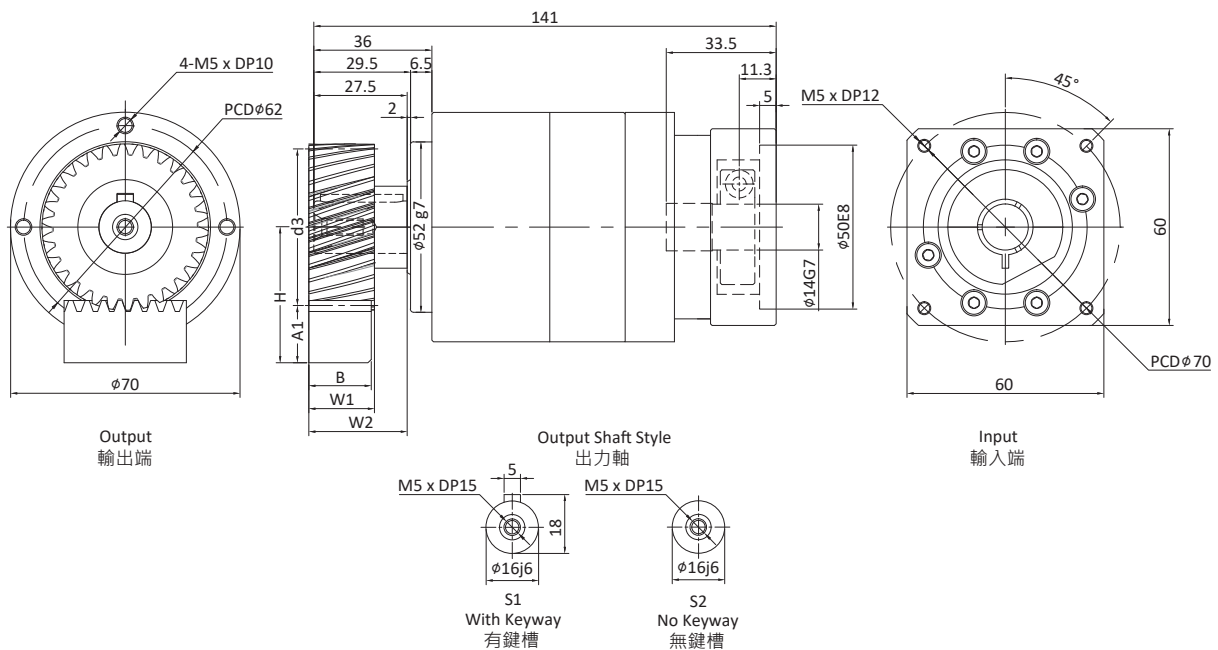
HCR 70 L1 減速比 3~10

HCR 70 L1 Ratio 3~10



HCR 70 L2 減速比 15~100

HCR 70 L2 Ratio 15~100



單位 / Dimension : mm

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ The drawings are subject to change without notice. Please contact our staff for confirmation.



HCR 70 組合建議

HCR 70 & Selection Guide

齒輪

Pinions

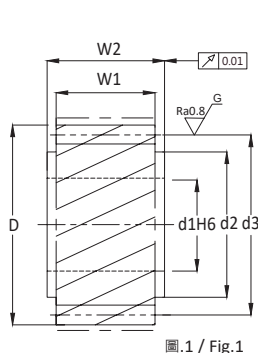


圖.1 / Fig.1

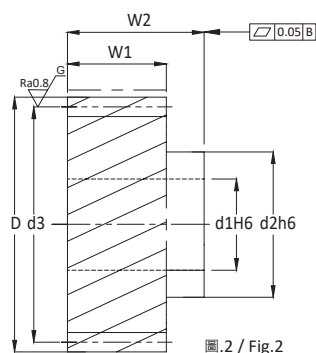
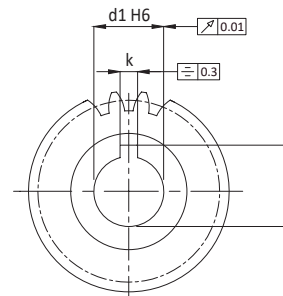


圖.2 / Fig.2



系列 MHGH-DIN6 斜齒齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
左旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後齒面研磨

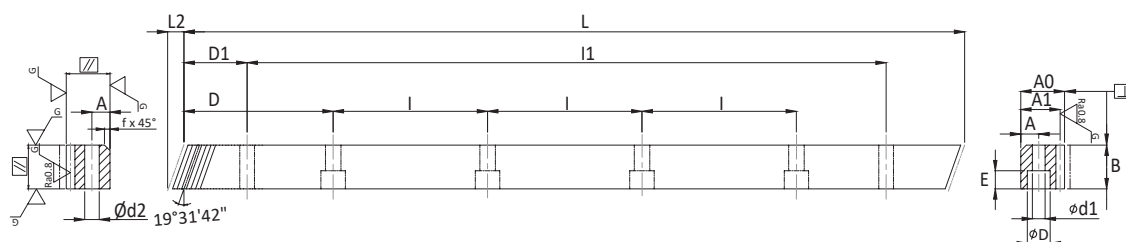
Series MHGH-DIN6 Helical Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Left Hand Angle 19°31'42"
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模數 Module	齒數 No. of Teeth	d1 ^{H6}	d2 ^{H6}	d3	D	W1	W2	k	h	H	F _{ta} kN	KG
MHGH0150205	2	-DIN6	1.5	20	16	25	31.83	34.83	20	30	5	18.3	33.415	4.48	0.11
MHGH0150206	2	-DIN6	1.5	20	16	24	31.83	34.83	20	50	*	*	33.415	4.48	0.15
MHGH0150221	2	-DIN6	1.5	22	16	25	35.01	38.01	20	30	5	18.3	35.005	5.56	0.14
MHGH0150222	2	-DIN6	1.5	22	16	24	35.01	38.01	20	50	*	*	35.005	5.56	0.18
MHGH0150252	2	-DIN6	1.5	25	16	25	39.79	42.79	20	30	5	18.3	37.395	6.37	0.18
MHGH0150253	2	-DIN6	1.5	25	16	24	39.79	42.79	20	50	*	*	37.395	6.37	0.22
MHGH0150301	2	-DIN6	1.5	30	16	25	47.75	50.75	20	30	5	18.3	41.375	7.12	0.27
MHGH0150302	2	-DIN6	1.5	30	16	24	47.75	50.75	20	50	*	*	41.375	7.12	0.31

齒條

Racks



系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p/1000 \leq 0.036$ mm
 $F_p/2000 \leq 0.047$ mm ($\leq 0.024/1000$ mm)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p/1000 \leq 0.036$ mm
 $F_p/2000 \leq 0.047$ mm ($\leq 0.024/1000$ mm)

型號 Code	模數 Module	L	L2	齒數 No. of Teeth	B	A0	A1	D	I	孔數 No. of Holes	A	Ød1	ØD	E	D1	I1	Ød2	f	F _{ta} kN	KG
CHTGH01510-DIN6	1.5	1000.00	6.70	200	19	19	17.5	62.5	125	8	8	7	11	7	31.7	936.60	5.7	2	4.84	2.6

※ H= 齒輪和齒條啮合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

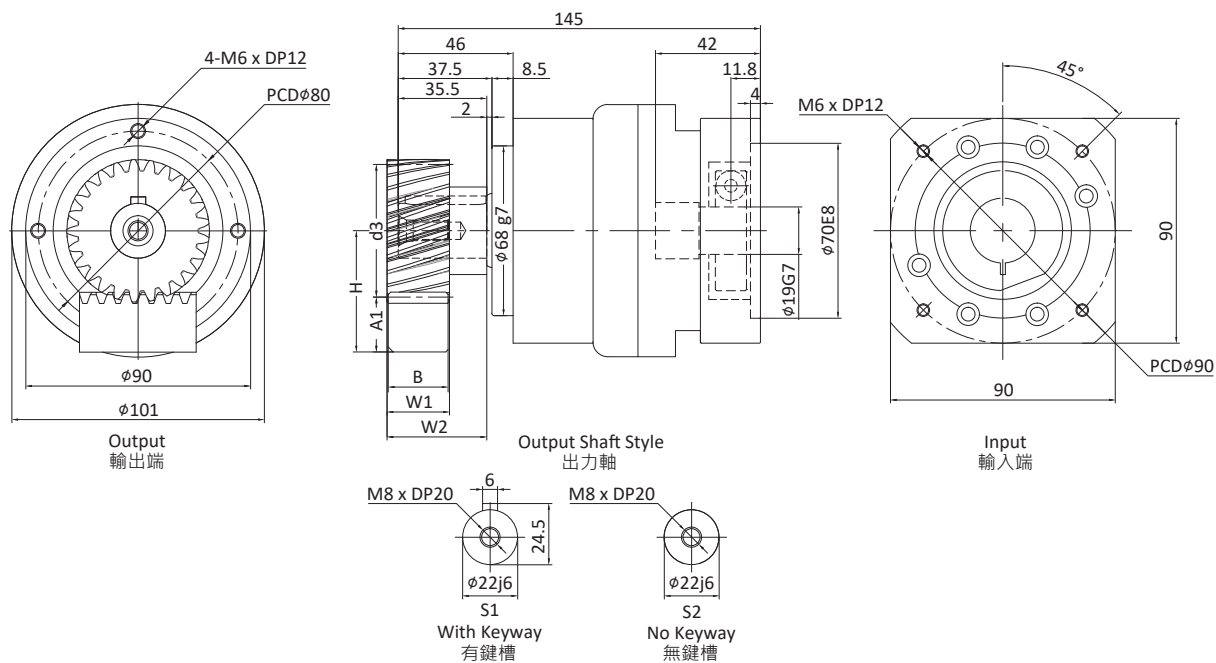
單位 / Dimension : mm

HCR 90 系列

HCR 90 Series

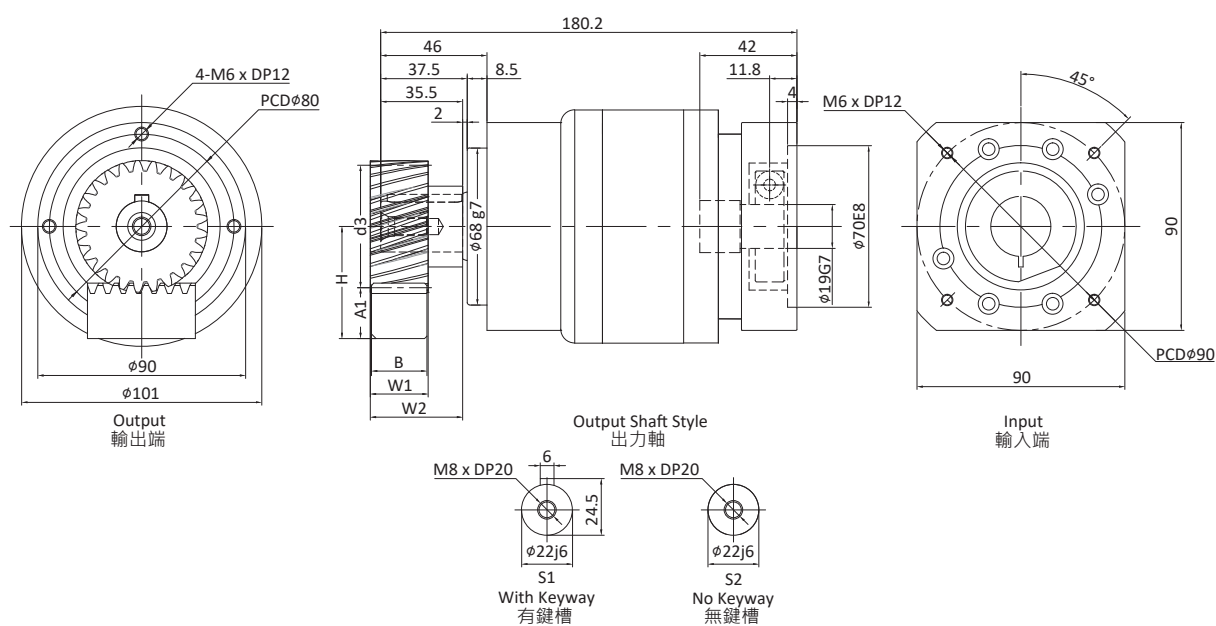
HCR 90 L1 減速比 3~10

HCR 90 L1 Ratio 3~10



HCR 90 L2 減速比 15~100

HCR 90 L2 Ratio 15~100



HCR 90 組合建議

HCR 90 & Selection Guide

齒輪

Pinions

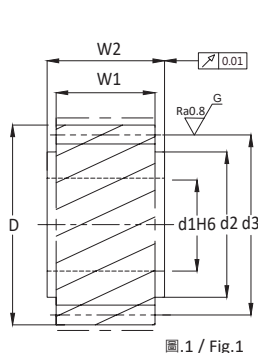


圖.1 / Fig.1

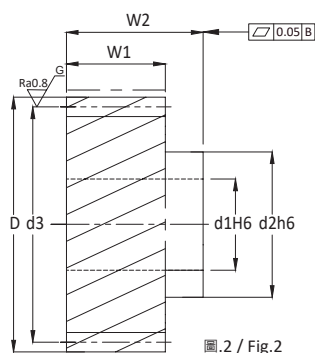
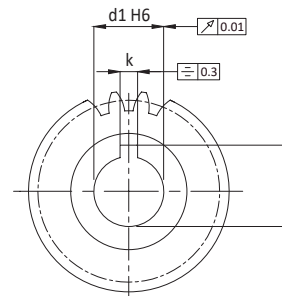


圖.2 / Fig.2



系列 MHGH-DIN6 斜齒齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
左旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後齒面研磨

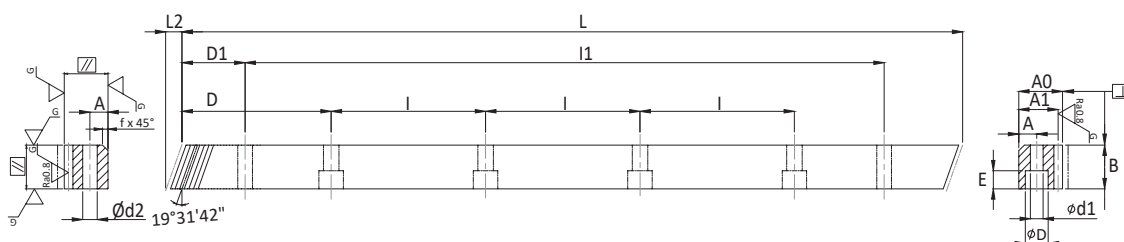
Series MHGH-DIN6 Helical Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Left Hand Angle 19°31'42"
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模數 Module	齒數 No. of Teeth	d1 ^{H6}	d2 ^{H6}	d3	D	W1	W2	k	h	H	F _{ta} kN	KG
MHGH0200207	2	-DIN6	2	20	22	35	42.44	46.44	25	40	6	24.8	43.220	8.36	0.26
MHGH0200208	2	-DIN6	2	20	22	30	42.44	46.44	25	60	*	*	43.220	8.36	0.29
MHGH0200225	2	-DIN6	2	22	22	35	46.69	50.69	25	40	6	24.8	45.345	9.27	0.32
MHGH0200226	2	-DIN6	2	22	22	35	46.69	50.69	25	60	*	*	45.345	9.27	0.35
MHGH0200257	2	-DIN6	2	25	22	35	53.05	57.05	25	40	6	24.8	48.525	10.62	0.42
MHGH0200258	2	-DIN6	2	25	22	30	53.05	57.05	25	60	*	*	48.525	10.62	0.45
MHGH0200308	2	-DIN6	2	30	22	35	63.66	67.66	25	40	6	24.8	53.830	11.87	0.61
MHGH0200309	2	-DIN6	2	30	22	30	63.66	67.66	25	60	*	*	53.830	11.87	0.64
MHGH0300207	2	-DIN6	3	20	22	35	63.66	69.66	30	40	6	24.8	57.830	15.06	0.69
MHGH0300208	2	-DIN6	3	20	22	30	63.66	69.66	30	65	*	*	57.830	15.06	0.74
MHGH0300226	2	-DIN6	3	22	22	35	70.03	76.03	30	40	6	24.8	61.015	16.68	0.85
MHGH0300227	2	-DIN6	3	22	22	30	70.03	76.03	30	65	*	*	61.015	16.68	0.90
MHGH03002511	2	-DIN6	3	25	22	35	79.58	85.58	30	40	6	24.8	65.790	20.37	1.11
MHGH03002512	2	-DIN6	3	25	22	30	79.58	85.58	30	65	*	*	65.790	20.37	1.17
MHGH0300301	2	-DIN6	3	30	22	35	95.49	101.49	30	40	6	24.8	73.745	21.37	1.62
MHGH0300302	2	-DIN6	3	30	22	30	95.49	101.49	30	65	*	*	73.745	21.37	1.67

齒條

Racks



系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p/1000 \leq 0.036 \text{ mm}$
 $F_p/2000 \leq 0.047 \text{ mm}$ ($\leq 0.024/1000 \text{ mm}$)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p/1000 \leq 0.036 \text{ mm}$
 $F_p/2000 \leq 0.047 \text{ mm}$ ($\leq 0.024/1000 \text{ mm}$)

型號 Code	模數 Module	L	L2	齒數 No. of Teeth	B	A0	A1	D	I	孔數 No. of Holes	A	ød1	øD	E	D1	I1	ød2	f	F _{ta} kN	KG
CHTGH02010-DIN6	2	1000.00	8.50	150	24	24	22.0	62.5	125	8	8	7	11	7	31.7	936.60	5.7	2	8.15	4.1
CHTGH03010-DIN6	3	1000.00	10.30	100	29	29	26.0	62.5	125	8	9	10	15	9	35.0	930.00	7.7	2	14.77	6.0

※ H= 齒輪和齒條啮合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

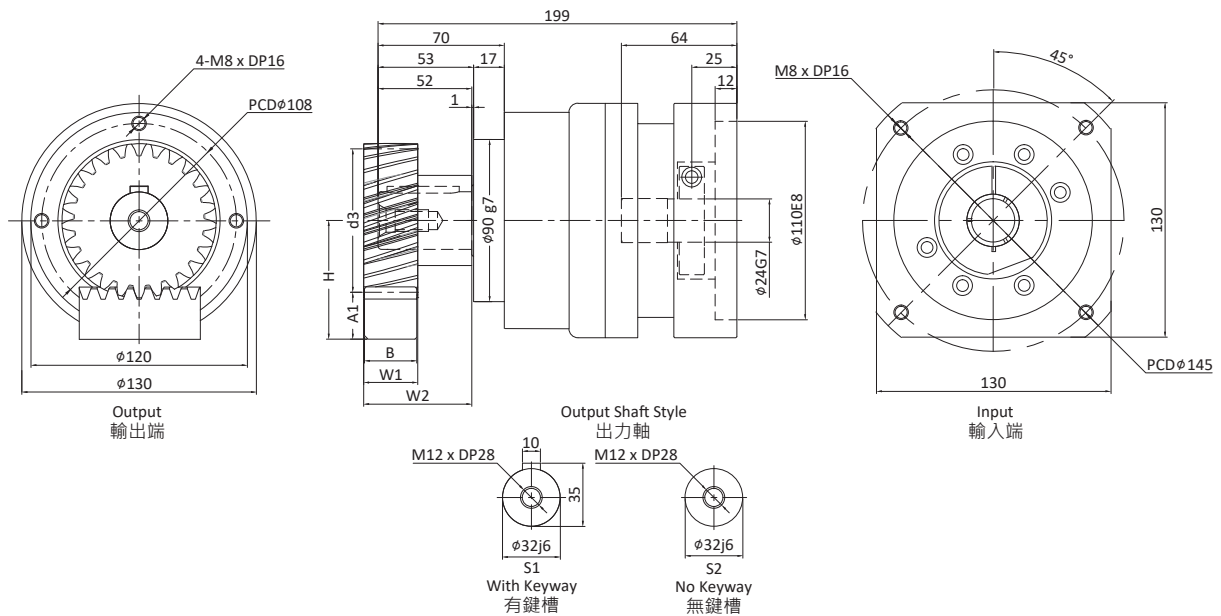
單位 / Dimension : mm

HCR 120 系列

HCR 120 Series

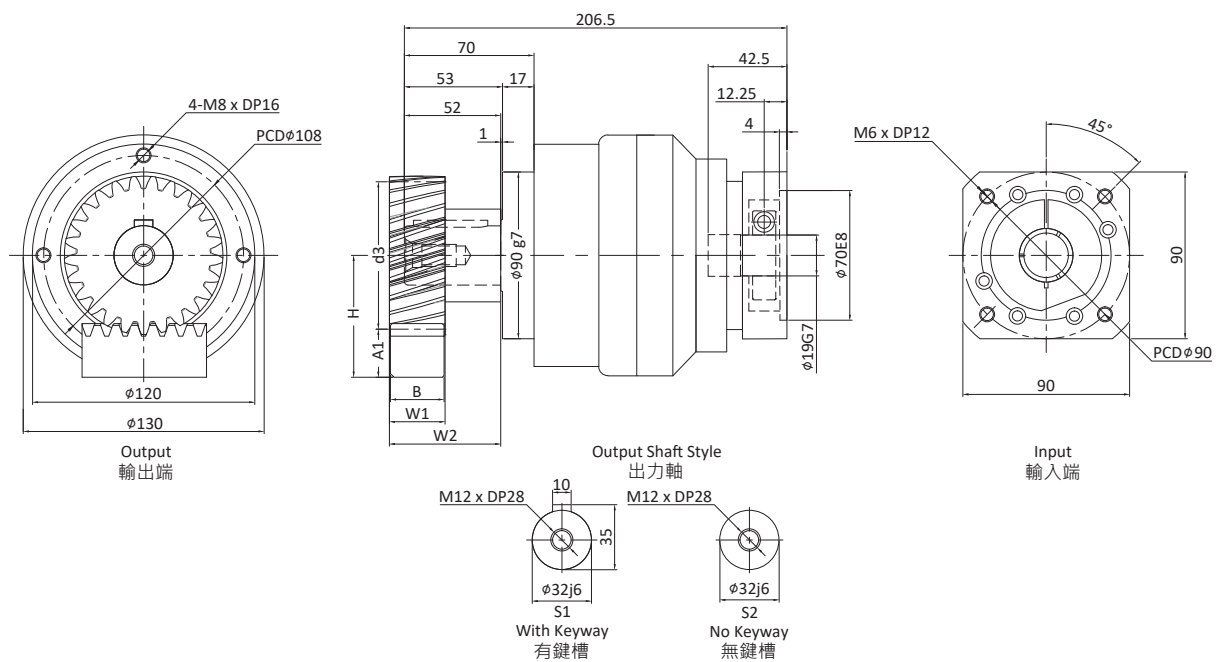
HCR 120 L1 減速比 3~10

HCR 120 L1 Ratio 3~10



HCR 120 L2 減速比 15~100

HCR 120 L2 Ratio 15~100



HCR 120 組合建議

HCR 120 Selection Guide

齒輪

Pinions

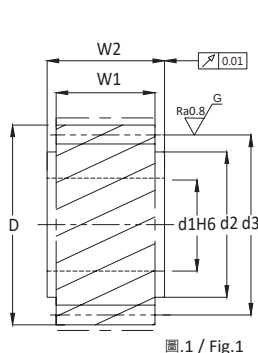


圖.1 / Fig.1

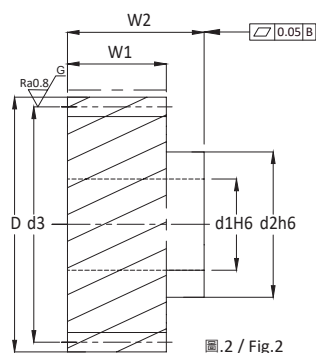
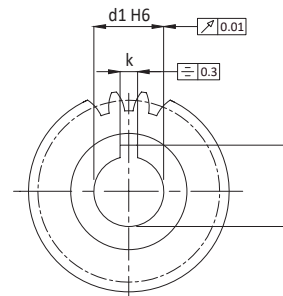


圖.2 / Fig.2

系列 MHGH-DIN6 斜齒齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
左旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後齒面研磨

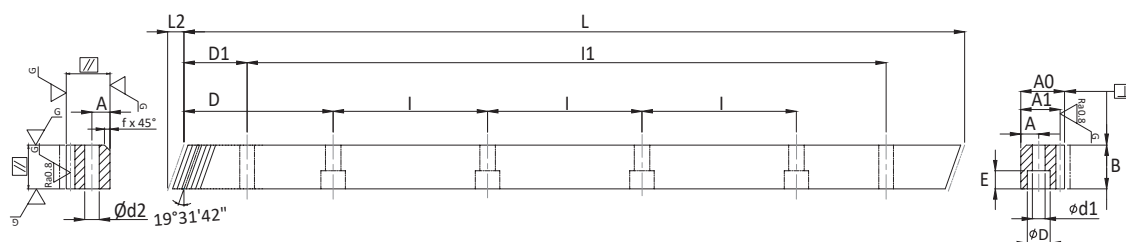
Series MHGH-DIN6 Helical Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Left Hand Angle 19°31'42"
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模數 Module	齒數 No. of Teeth	d1 ^{H6}	d2 ^{H6}	d3	D	W1	W2	k	h	H	F _{ta} kN	KG
MHGH0300209	2	-DIN6	3	20	32	50	63.66	69.66	30	60	10	35.3	57.830	15.06	0.81
MHGH03002010	2	-DIN6	3	20	32	44	63.66	69.66	30	70	*	*	57.830	15.06	0.78
MHGH0300228	2	-DIN6	3	22	32	50	70.03	76.03	30	60	10	35.3	61.015	16.68	0.96
MHGH0300229	2	-DIN6	3	22	32	44	70.03	76.03	30	70	*	*	61.015	16.68	0.93
MHGH03002513	2	-DIN6	3	25	32	50	79.58	85.58	30	60	10	35.3	65.790	20.37	1.23
MHGH03002514	2	-DIN6	3	25	32	44	79.58	85.58	30	70	*	*	65.790	20.37	1.20
MHGH0300303	2	-DIN6	3	30	32	50	95.49	101.49	30	60	10	35.3	73.745	21.37	1.74
MHGH0300304	2	-DIN6	3	30	32	44	95.49	101.49	30	70	*	*	73.745	21.37	1.71
MHGH0400203	2	-DIN6	4	20	32	50	84.88	92.88	40	60	10	35.3	77.440	26.78	1.67
MHGH0400204	2	-DIN6	4	20	32	44	84.88	92.88	40	80	*	*	77.440	26.78	1.73
MHGH0400223	2	-DIN6	4	22	32	50	93.37	101.37	40	60	10	35.3	81.685	29.66	2.04
MHGH0400224	2	-DIN6	4	22	32	44	93.37	101.37	40	80	*	*	81.685	29.66	2.10
MHGH0400254	2	-DIN6	4	25	32	50	106.10	114.10	40	60	10	35.3	88.050	36.22	2.66
MHGH0400255	2	-DIN6	4	25	32	44	106.10	114.10	40	80	*	*	88.050	36.22	2.72
MHGH0400301	2	-DIN6	4	30	32	50	127.32	135.32	40	60	10	35.3	98.660	38.00	3.88
MHGH0400302	2	-DIN6	4	30	32	44	127.32	135.32	40	80	*	*	98.660	38.00	3.94

齒條

Racks

系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p / 1000 \leq 0.036 \text{ mm}$
 $F_p / 2000 \leq 0.047 \text{ mm}$ ($\leq 0.024 / 1000 \text{ mm}$)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p / 1000 \leq 0.036 \text{ mm}$
 $F_p / 2000 \leq 0.047 \text{ mm}$ ($\leq 0.024 / 1000 \text{ mm}$)

型號 Code	模數 Module	L	L2	齒數 No. of Teeth	B	A0	A1	D	I	孔數 No. of Holes	A	Ød1	ØD	E	D1	I1	Ød2	f	F _{ta} kN	KG
CHTGH03010-DIN6	3	1000.00	10.30	100	29	29	26.0	62.5	125	8	9	10	15	9	35.0	930.00	7.7	2	14.77	6.0
CHTGH04010-DIN6	4	1000.00	13.80	75	39	39	35.0	62.5	125	8	12	10	15	9	33.3	933.40	7.7	2	26.49	10.8

※ H= 齒輪和齒條啮合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

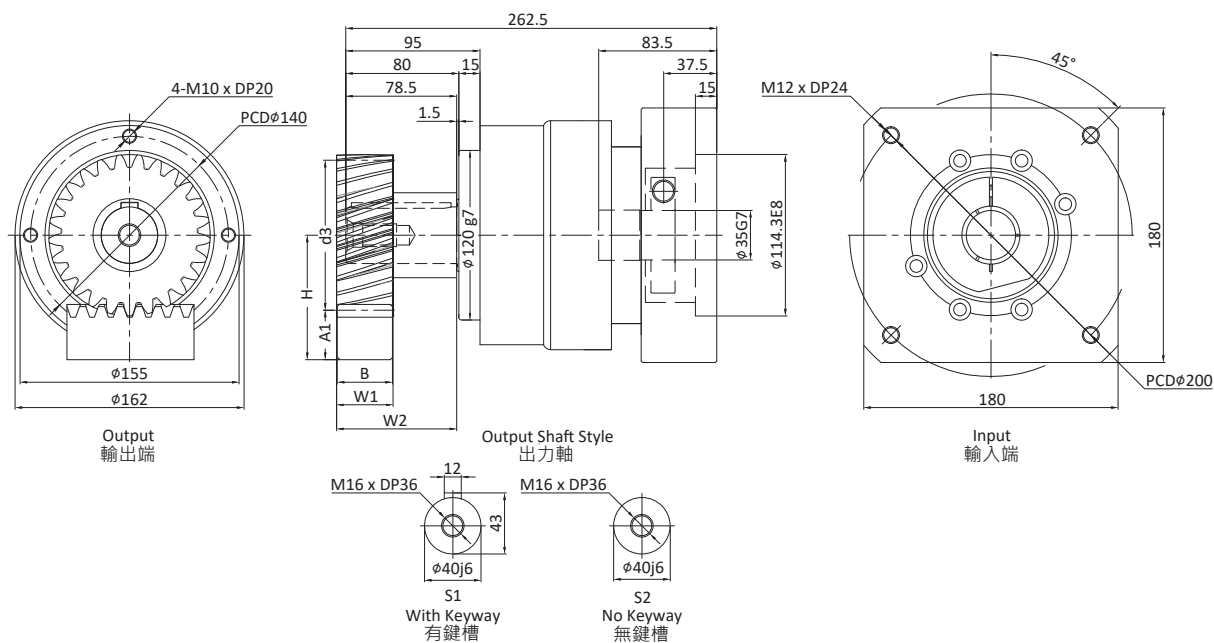
單位 / Dimension : mm

HCR 155 系列

HCR 155 Series

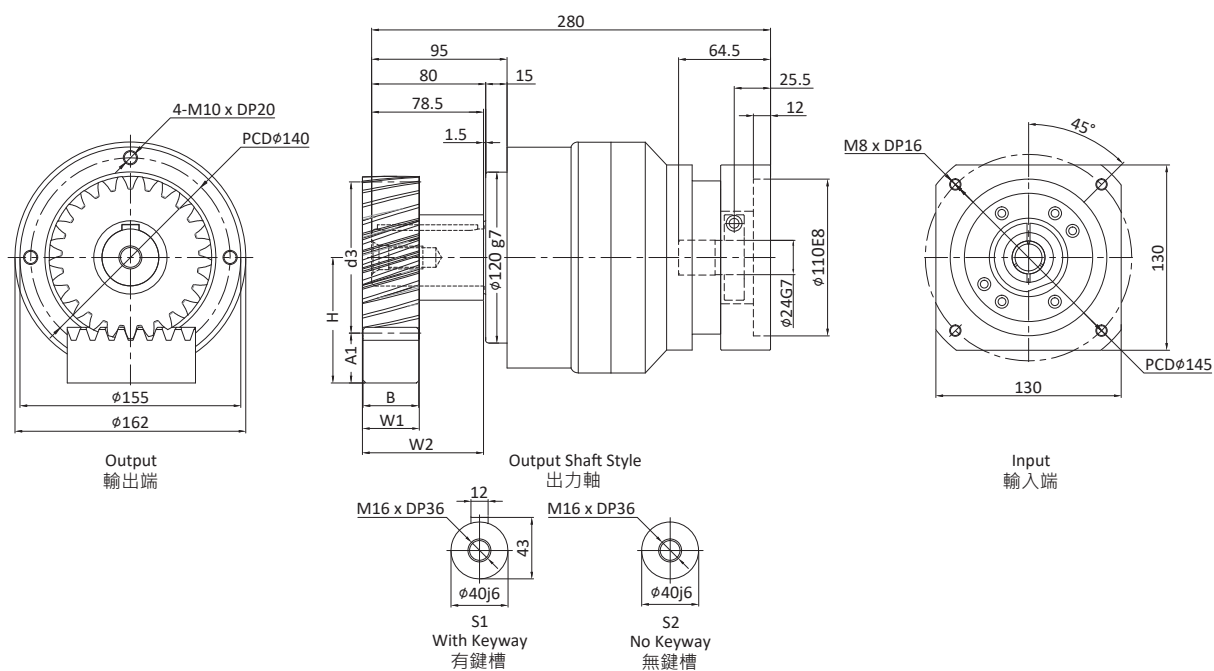
HCR 155 L1 減速比 3~10

HCR 155 L1 Ratio 3~10



HCR 155 L2 減速比 15~100

HCR 155 L2 Ratio 15~100



HCR 155 組合建議

HCR 155 Selection Guide

齒輪

Pinions

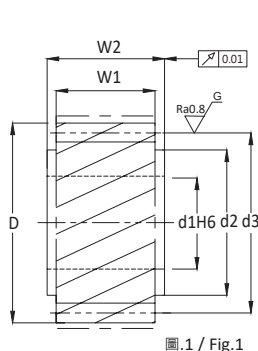


圖.1 / Fig.1

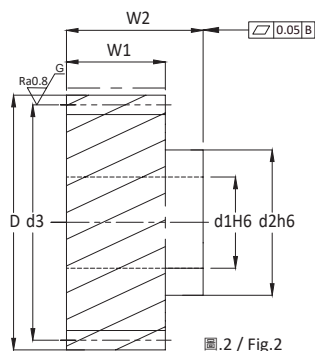
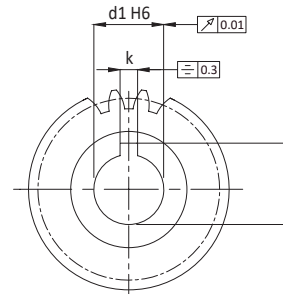


圖.2 / Fig.2



系列 MHGH-DIN6 斜齒齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
左旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後齒面研磨

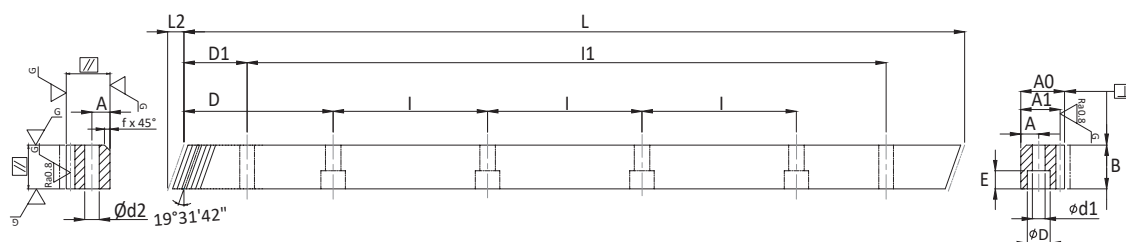
Series MHGH-DIN6 Helical Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Left Hand Angle 19°31'42"
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模數 Module	齒數 No. of Teeth	d1 ^{H6}	d2 ^{H6}	d3	D	W1	W2	k	h	H	F _{ta} kN	KG
MHGH0400205	2	-DIN6	4	20	40	60	84.88	92.88	40	85	12	43.3	77.440	26.78	1.89
MHGH0400206	2	-DIN6	4	20	40	50	84.88	92.88	40	85	*	*	77.440	26.78	1.58
MHGH0400225	2	-DIN6	4	22	40	60	93.37	101.37	40	85	12	43.3	81.685	29.66	2.26
MHGH0400226	2	-DIN6	4	22	40	50	93.37	101.37	40	85	*	*	81.685	29.66	1.95
MHGH0400256	2	-DIN6	4	25	40	60	106.10	114.10	40	85	12	43.3	88.050	36.22	2.88
MHGH0400257	2	-DIN6	4	25	40	50	106.10	114.10	40	85	*	*	88.050	36.22	2.58
MHGH0400303	2	-DIN6	4	30	40	60	127.32	135.32	40	85	12	43.3	98.660	38.00	4.10
MHGH0400304	2	-DIN6	4	30	40	50	127.32	135.32	40	85	*	*	98.660	38.00	3.80
MHGH0500201	2	-DIN6	5	20	40	60	106.10	116.10	50	85	12	43.3	87.050	41.84	3.34
MHGH0500202	2	-DIN6	5	20	40	50	106.10	116.10	50	90	*	*	87.050	41.84	3.16
MHGH0500221	2	-DIN6	5	22	40	60	116.71	126.71	50	85	12	43.3	92.355	46.34	4.06
MHGH0500222	2	-DIN6	5	22	40	50	116.71	126.71	50	90	*	*	92.355	46.34	3.88
MHGH0500251	2	-DIN6	5	25	40	60	132.63	142.63	50	85	12	43.3	100.315	56.58	5.28
MHGH0500252	2	-DIN6	5	25	40	50	132.63	142.63	50	90	*	*	100.315	56.58	5.10
MHGH0500301	2	-DIN6	5	30	40	60	159.16	169.16	50	85	12	43.3	113.580	59.37	7.66
MHGH0500302	2	-DIN6	5	30	40	50	159.16	169.16	50	90	*	*	113.580	59.37	7.48

齒條

Racks



系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p / 1000 \leq 0.036 \text{ mm}$
 $F_p / 2000 \leq 0.047 \text{ mm}$ ($\leq 0.024 / 1000 \text{ mm}$)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p / 1000 \leq 0.036 \text{ mm}$
 $F_p / 2000 \leq 0.047 \text{ mm}$ ($\leq 0.024 / 1000 \text{ mm}$)

型號 Code	模數 Module	L	L2	齒數 No. of Teeth	B	A0	A1	D	I	孔數 No. of Holes	A	Ød1	ØD	E	D1	I1	Ød2	f	F _{ta} kN	KG
CHTGH04010-DIN6	4	1000.00	13.80	75	39	39	35.0	62.5	125	8	12	10	15	9	33.3	933.40	7.7	2	26.49	10.8
CHTGH05010-DIN6	5	1000.00	17.40	60	49	39	34.0	62.5	125	8	12	14	20	13	37.5	925.00	11.7	3	41.60	13.6

※ H= 齒輪和齒條啮合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

單位 / Dimension : mm

HCR 205 組合建議

HCR 205 Selection Guide

齒輪

Pinions

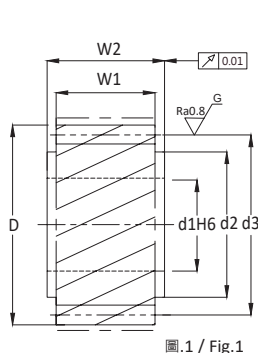


圖.1 / Fig.1

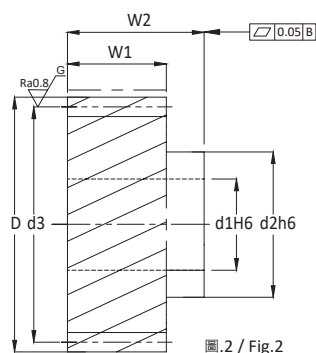
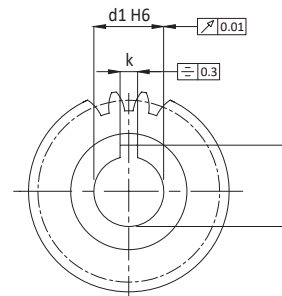


圖.2 / Fig.2



系列 MHGH-DIN6 斜齒齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
左旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後齒面研磨

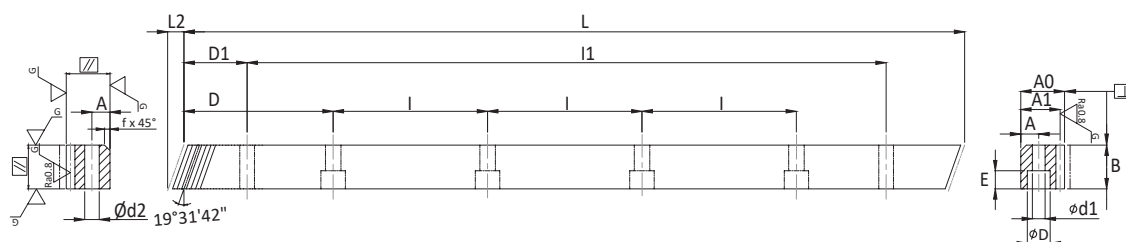
Series MHGH-DIN6 Helical Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Left Hand Angle 19°31'42"
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模數 Module	齒數 No. of Teeth	d1 ^{H6}	d2 ^{H6}	d3	D	W1	W2	k	h	H	F _{ta} kN	KG
MHGH0600203	2	-DIN6	6	20	55	80	127.32	139.32	60	85	16	59.3	106.660	60.25	5.28
MHGH0600204	2	-DIN6	6	20	55	68	127.32	139.32	60	105	*	*	106.660	60.25	5.25
MHGH0600221	2	-DIN6	6	22	55	80	140.06	152.06	60	85	16	59.3	113.030	66.74	6.53
MHGH0600222	2	-DIN6	6	22	55	68	140.06	152.06	60	105	*	*	113.030	66.74	6.50
MHGH0600253	2	-DIN6	6	25	55	80	159.16	171.16	60	85	16	59.3	122.580	81.49	8.64
MHGH0600254	2	-DIN6	6	25	55	68	159.16	171.16	60	105	*	*	122.580	81.49	8.61
MHGH0600301	2	-DIN6	6	30	55	80	190.99	212.99	60	85	16	59.3	138.495	85.49	12.74
MHGH0600302	2	-DIN6	6	30	55	68	190.99	212.99	60	105	*	*	138.495	85.49	12.71

齒條

Racks



系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p/1000 \leq 0.036 \text{ mm}$
 $F_p/2000 \leq 0.047 \text{ mm}$ ($\leq 0.024/1000 \text{ mm}$)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p/1000 \leq 0.036 \text{ mm}$
 $F_p/2000 \leq 0.047 \text{ mm}$ ($\leq 0.024/1000 \text{ mm}$)

型號 Code	模數 Module	L	L2	齒數 No. of Teeth	B	A0	A1	D	I	孔數 No. of Holes	A	ød1	øD	E	D1	I1	ød2	f	F _{ta} kN	KG
CHTGH06010-DIN6	6	1000.00	20.90	50	59	49	43.0	62.5	125	8	16	18	26	17	37.5	925.00	15.7	3	60.11	20.5

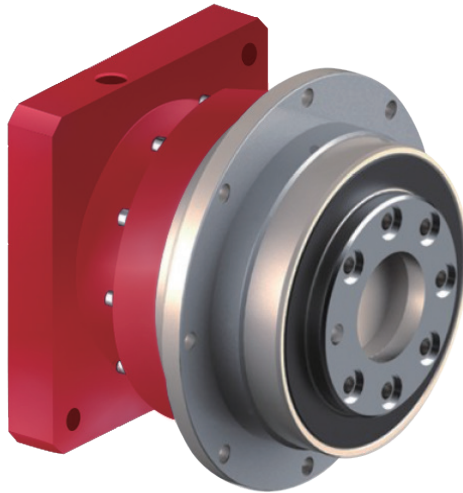
※ H= 齒輪和齒條啮合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

單位 / Dimension : mm



HDR L1		Ratio 4~10
減速比	Ratio	4, 5, 7, 10
超精密背隙	P0 Super Precision Backlash	$P_0 \leq 1$
精密背隙	P1 Precision Backlash	$P_1 \leq 3$
標準背隙	P2 Standard Backlash	$P_2 \leq 5$
HDR L2		Ratio 20~100
減速比	Ratio	20, 25, 35, 40, 50, 70, 100
超精密背隙	P0 Super Precision Backlash	$P_0 \leq 3$
精密背隙	P1 Precision Backlash	$P_1 \leq 5$
標準背隙	P2 Standard Backlash	$P_2 \leq 7$



HDR 系列

HDR Series

規 格 Model No.	單 位 Unit	節 數 Stage	減速比 Ratio	64	90	110	140	200
額定輸出力矩 Nominal Output Torque	Nm	L1	4	48	130	270	560	1100
			5	60	160	330	650	1200
			7	50	140	300	550	1100
			10	40	100	230	450	900
		L2	20	48	130	270	560	1100
			25	60	160	330	650	1200
			35	50	140	300	550	1100
			40	48	130	270	560	1100
			50	60	160	330	650	1200
			70	50	140	300	550	1100
			100	40	100	230	450	900
最大輸入轉速 Max. Input Speed	rpm	L1 / L2	4~100	10000	8000	8000	6000	6000
額定輸入轉速 Nominal Input Speed	rpm	L1 / L2	4~100	5000	4000	4000	3000	3000
超精密背隙 Po Super Precision Backlash	arc min	L1	4~10	≤ 1				
		L2	20~100	≤ 3				
精密背隙 P1 Precision Backlash		L1	4~10	≤ 3				
		L2	20~100	≤ 5				
標準背隙 P2 Standard Backlash		L1	4~10	≤ 5				
		L2	20~100	≤ 7				
急停扭矩 Emergency Stop Torque	Nm	L1/L2	4~100	3 倍額定輸出力矩 / 3 Times of Nominal Output Torque				
最大輸出力矩 Max. Output Torque	Nm	L1/L2	4~100	3 倍額定輸出力矩 x 60% / 3 Times of Nominal Output Torque x 60%				
扭轉剛性 Torsional Rigidity	Nm/arc min	L1 / L2	4~100	13	31	82	151	440
最大彎曲力矩 Max. Bending Torque	N	L1 / L2	4~100	125	235	430	1300	3064
容許軸向力 Max. Axial Force	N	L1 / L2	4~100	1050	2850	2990	10590	16660
使用壽命 Product Life	hr	L1 / L2	4~100	20000				
使用溫度 Operation Temp	°C	L1 / L2	4~100	-10°C ~ 90°C				
效率 Efficiency	%	L1	4~10	≥ 97	≥ 97	≥ 97	≥ 97	≥ 97
		L2	20~100	≥ 94	≥ 97	≥ 94	≥ 94	≥ 94
潤滑 Lubrication	-	L1 / L2	4~100	合成潤滑油 / Synthetic Lubrication Grease				
噪音值 Noise Level(2000 rpm)	dB	L1	4~10	≤ 58	≤ 63	≤ 60	≤ 65	≤ 66
		L2	20~100	≤ 58	≤ 63	≤ 60	≤ 65	≤ 66
防護等級 Degree of Gearbox Protection	IP	L1 / L2	4~100	IP65				
安裝方向 Mounting Direction	-	L1 / L2	4~100	任意方向 / Any Direction				
重量 Weight	Kg	L1	4~10	1.3	3	7.7	11.9	31.6
		L2	20~100	1.9	3.7	9	15.9	36.9



減速機轉動慣量

Reducer Moment of Inertia

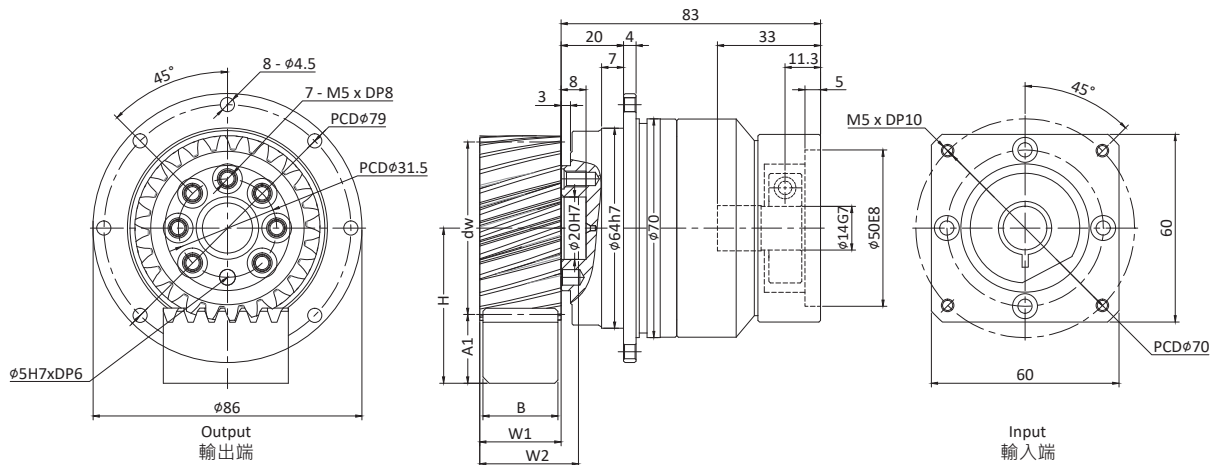
規 格 Model No.	單 位 Unit	節 數 Stage	減速比 Ratio	64	90	110	140	200
轉動慣量 Moments of Inertia	kg.cm ²	L1	4	0.14	0.51	2.87	7.54	25
			5	0.13	0.47	2.71	7.42	23.3
			7	0.13	0.45	2.62	7.14	22.4
			10	0.13	0.44	2.57	7.03	22.5
		L2	20	0.03	0.13	0.47	2.71	7.4
			25	0.03	0.13	0.47	2.71	7.4
			35	0.03	0.13	0.47	2.71	7.4
			40	0.03	0.13	0.44	2.57	7
			50	0.03	0.13	0.44	2.57	7
			70	0.03	0.13	0.44	2.57	7
			100	0.03	0.13	0.44	2.57	7

HDR 64 系列

HDR 64 Series

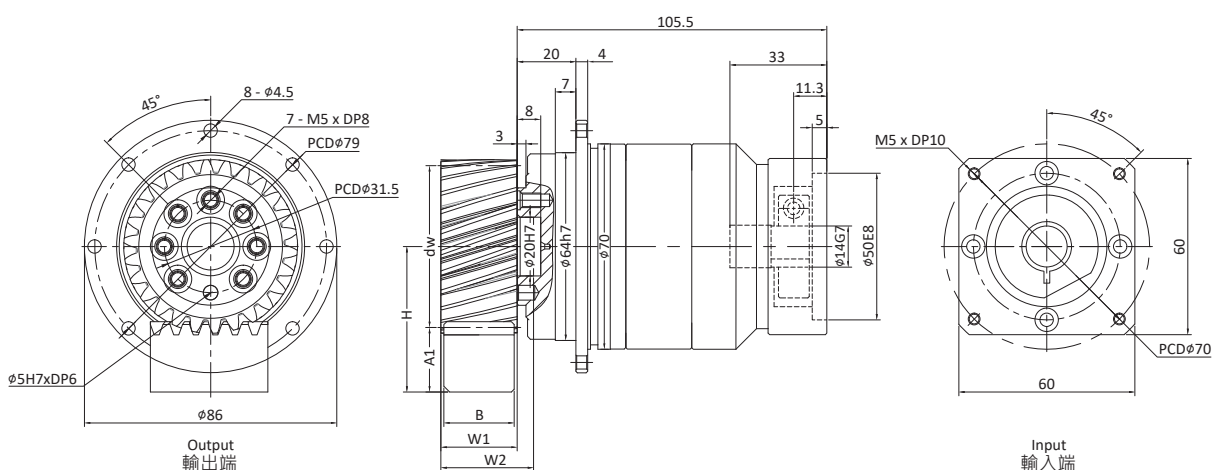
HDR 64 L1 減速比 4~10

HDR 64 L1 Ratio 4~10



HDR 64 L2 減速比 20~100

HDR 64 L2 Ratio 20~100



HDR 64 組合建議

HDR 64 Selection Guide

齒輪

Pinions

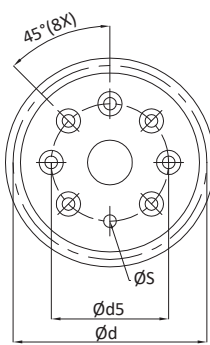


圖 1 / Fig.1

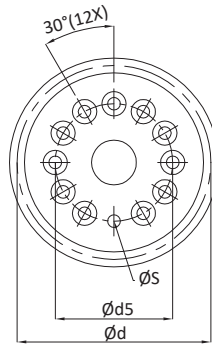


圖 2 / Fig.2

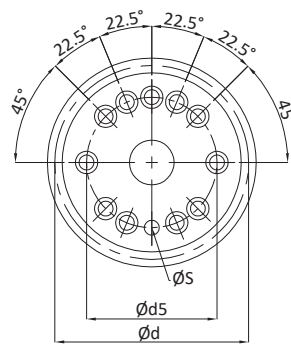
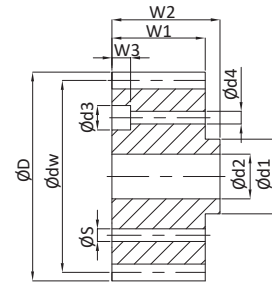


圖 3 / Fig.3



系列 MHFGH-DIN6 斜齒法蘭齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
硬度 HRC 50~55°
硬化處理後齒面研磨

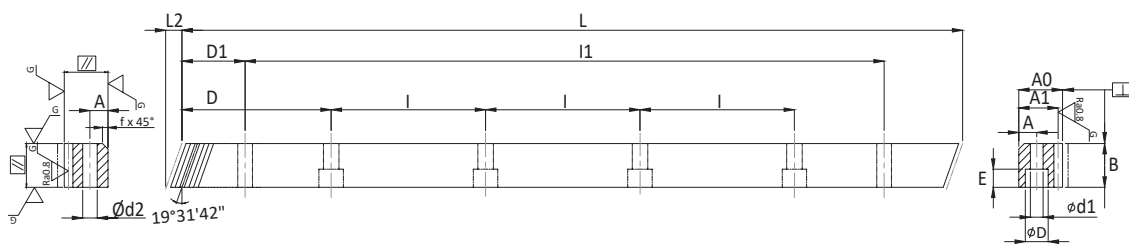
Series MHFGH-DIN6 Helical Flange Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模 數 Module	齒 數 No. of Teeth	x^0 轉位係數 Shift Coefficient	D	d 節圓直徑 Pitch Dia.	d^w 節線啮合直徑 Working Pitch Dia.	$d1^{H6}$	$d2^{H6}$	d3	d4	d5	W1	W2	W3	S^{H7}	H	F_{ta} kN	KG
MHFGH0200262	1	-DIN6	2	26	0.407	60.802	55.174	56.802	20	16	9.5	5.5	31.5	26	31	11	5	50.401	11.52	0.38
MHFGH0200272	1	-DIN6	2	27	0.000	61.296	57.296	57.296	20	16	9.5	5.5	31.5	26	31	11	5	50.648	11.99	0.42
MHFGH0200293	1	-DIN6	2	29	0.415	67.200	61.540	63.200	20	16	9.5	5.5	31.5	26	31	11	5	53.600	12.25	0.50
MHFGH0200352	1	-DIN6	2	35	0.382	79.800	74.272	75.800	20	16	9.5	5.5	31.5	26	31	11	5	59.900	12.78	0.77

齒條

Racks



系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p/1000 \leq 0.036$ mm
 $F_p/2000 \leq 0.047$ mm ($\leq 0.024/1000$ mm)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p/1000 \leq 0.036$ mm
 $F_p/2000 \leq 0.047$ mm ($\leq 0.024/1000$ mm)

型號 Code	模 數 Module	L	L2	齒 數 No. of Teeth	B	A0	A1	D	I	孔 數 No. of Holes	A	Ød1	ØD	E	D1	I1	Ød2	f	F_{ta} kN	KG
CHTGH02010-DIN6	2	1000.00	8.50	150	24	24	22.0	62.5	125	8	8	7	11	7	31.7	936.60	5.7	2	8.15	4.1

※ H= 齒輪和齒條啮合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

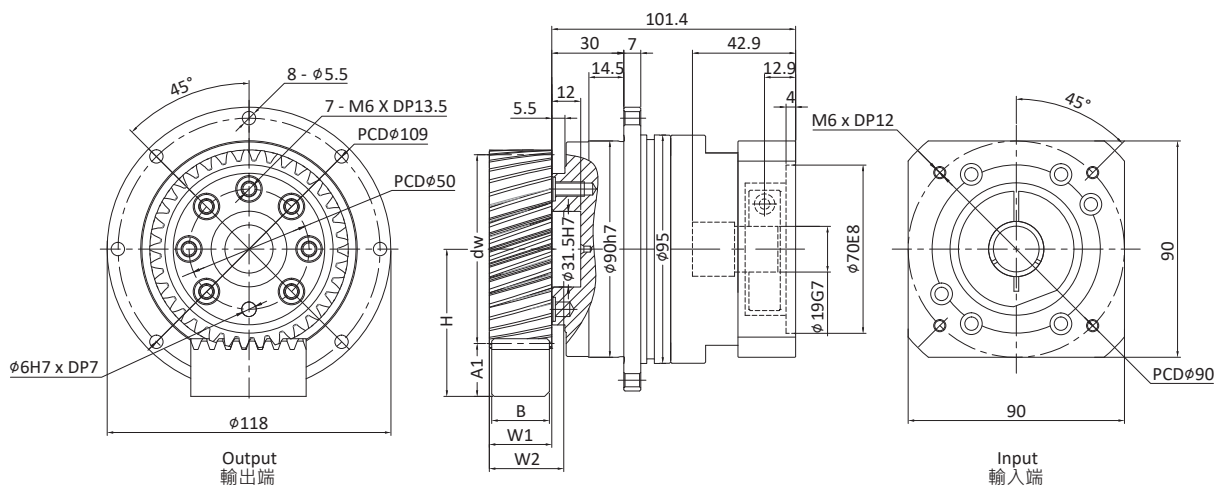
單位 / Dimension : mm

HDR 90 系列

HDR 90 Series

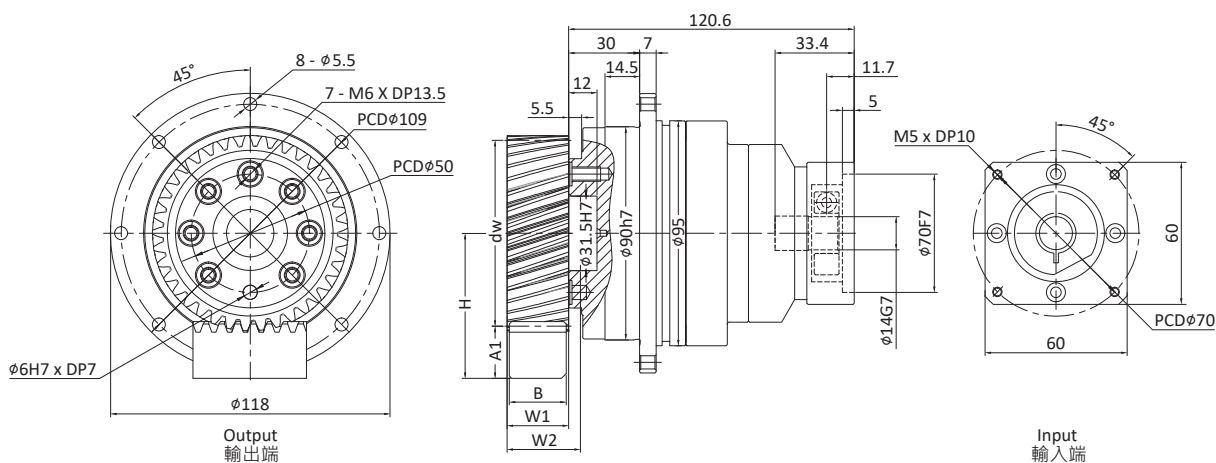
HDR 90 L1 減速比 4~10

HDR 90 L1 Ratio 4~10



HDR 90 L2 減速比 20~100

HDR 90 L2 Ratio 20~100



HDR 90 組合建議

HDR 90 Selection Guide

齒輪

Pinions

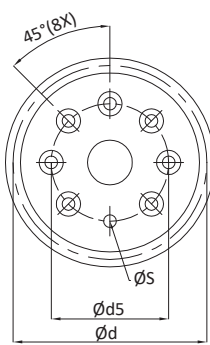


圖 1 / Fig.1

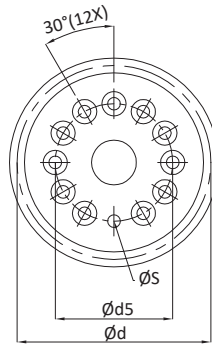


圖 2 / Fig.2

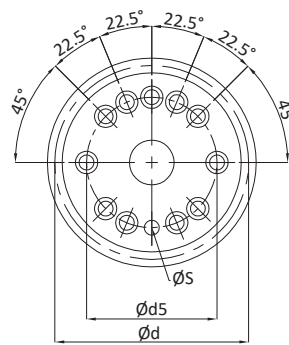
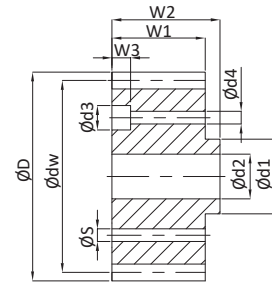


圖 3 / Fig.3



系列 MHFGH-DIN6 斜齒法蘭齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
硬度 HRC 50~55°
硬化處理後齒面研磨

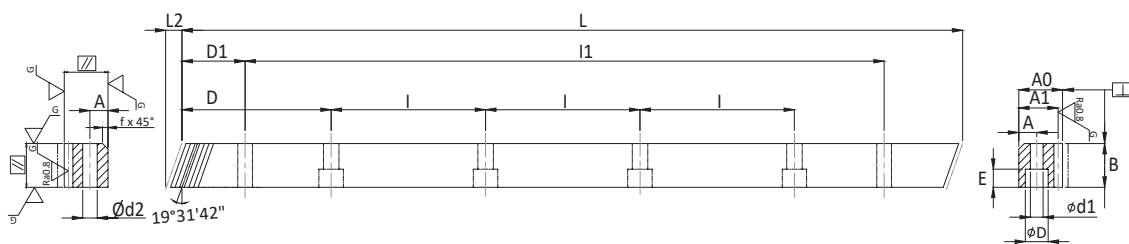
Series MHFGH-DIN6 Helical Flange Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模 數 Module	齒 數 No. of Teeth	x^0 轉位係數 Shift Coefficient	D	d 節圓直徑 Pitch Dia.	d^w 節線嚙合直徑 Working Pitch Dia.	$d1^{H6}$	$d2^{H6}$	d3	d4	d5	W1	W2	W3	S^{H7}	H	F_{ta} kN	KG
MHFGH0200332	1	-DIN6	2	33	0.393	75.599	70.028	71.600	31.5	20	11	6.6	50	26	31	11	6	57.800	12.62	0.67
MHFGH0200362	1	-DIN6	2	36	0.000	80.394	76.394	76.394	31.5	20	11	6.6	50	26	31	11	6	60.197	12.85	0.82
MHFGH0200373	1	-DIN6	2	37	0.421	84.200	78.517	80.200	31.5	20	11	6.6	50	26	31	11	6	62.100	12.93	0.85
MHFGH0300313	1	-DIN6	3	31	0.354	106.800	98.676	100.800	31.5	20	11	6.6	50	31	36	11	6	76.400	22.25	1.69

齒條

Racks



系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p/1000 \leq 0.036$ mm
 $F_p/2000 \leq 0.047$ mm ($\leq 0.024/1000$ mm)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p/1000 \leq 0.036$ mm
 $F_p/2000 \leq 0.047$ mm ($\leq 0.024/1000$ mm)

型號 Code	模 數 Module	L	L2	齒 數 No. of Teeth	B	A0	A1	D	I	孔 數 No. of Holes	A	Ød1	ØD	E	D1	I1	Ød2	f	F_{ta} kN	KG
CHTGH02010-DIN6	2	1000.00	8.50	150	24	24	22.0	62.5	125	8	8	7	11	7	31.7	936.60	5.7	2	8.15	4.1
CHTGH03010-DIN6	3	1000.00	10.30	100	29	29	26.0	62.5	125	8	9	10	15	9	35.0	930.00	7.7	2	14.77	6.0

※ H= 齒輪和齒條嚙合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

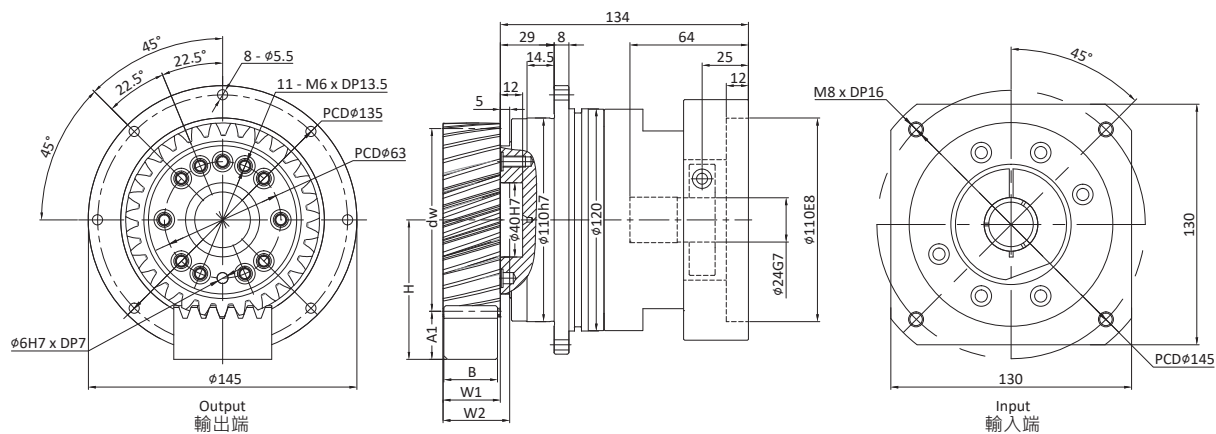
單位 / Dimension : mm

HDR 110 系列

HDR 110 Series

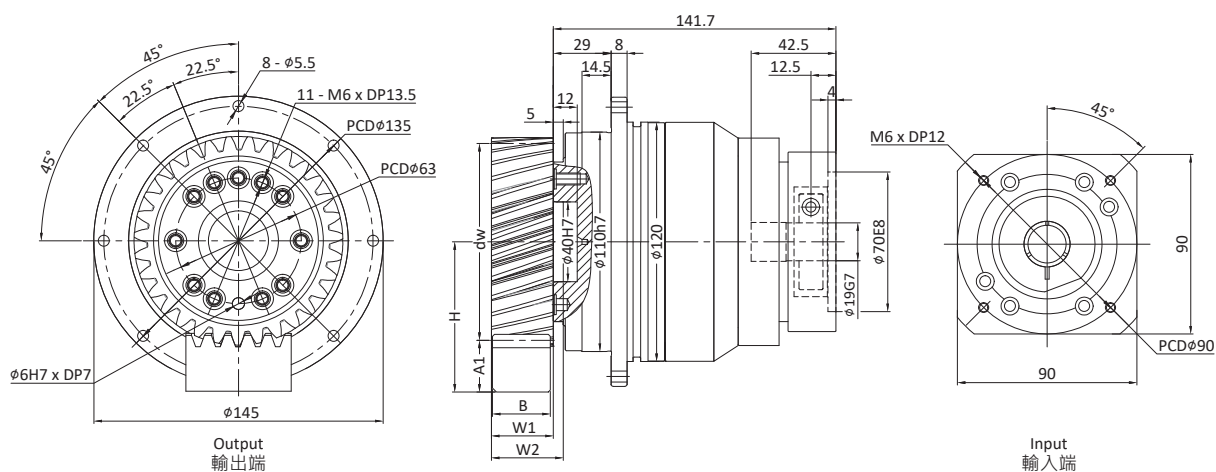
HDR 110 L1 減速比 4~10

HDR 110 L1 Ratio 4~10



HDR 110 L2 減速比 20~100

HDR 110 L2 Ratio 20~100



HDR 110 組合建議

HDR 110 Selection Guide

齒輪

Pinions

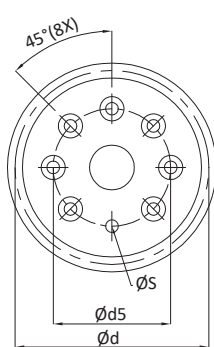


圖 1 / Fig.1

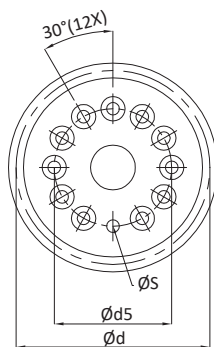


圖 2 / Fig.2

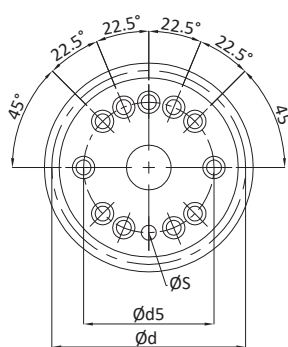
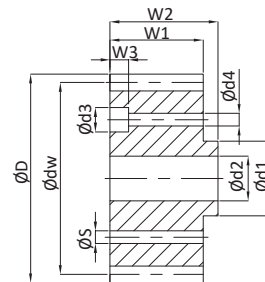


圖 3 / Fig.3



系列 MHFGH-DIN6 斜齒法蘭齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
硬度 HRC 50~55°
硬化處理後齒面研磨

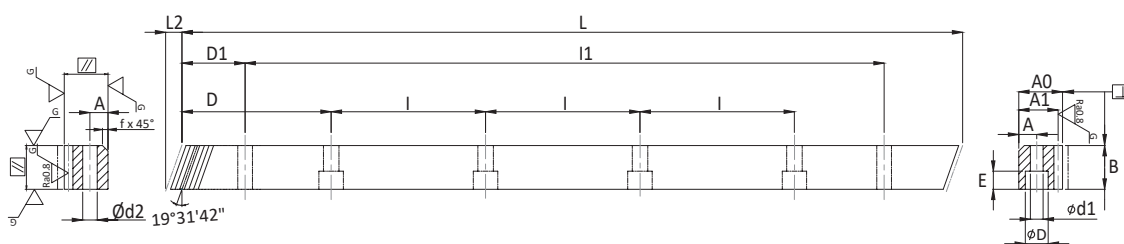
Series MHFGH-DIN6 Helical Flange Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模 數 Module	齒 數 No. of Teeth	x^0 轉位係數 Shift Coefficient	D	d 節圓直徑 Pitch Dia.	d^w 節線啮合直徑 Working Pitch Dia.	$d1^{H6}$	$d2^{H6}$	d3	d4	d5	W1	W2	W3	S^{H7}	H	F_{ta} kN	KG
MHFGH0300314	3	-DIN6	3	31	0.354	106.800	98.676	100.800	40	31.5	11	6.6	63	31	36	11	6	76.400	22.25	1.52
MHFGH0300352	3	-DIN6	3	35	0.365	119.598	111.409	113.598	40	31.5	11	6.6	63	31	36	11	6	82.799	22.86	2.02
MHFGH0300402	3	-DIN6	3	40	0.379	135.598	127.324	129.598	40	31.5	11	6.6	63	31	36	11	6	90.799	23.46	2.75

齒條

Racks



系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p/1000 \leq 0.036$ mm
 $F_p/2000 \leq 0.047$ mm ($\leq 0.024/1000$ mm)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p/1000 \leq 0.036$ mm
 $F_p/2000 \leq 0.047$ mm ($\leq 0.024/1000$ mm)

型號 Code	模 數 Module	L	L2	齒 數 No. of Teeth	B	A0	A1	D	I	孔 數 No. of Holes	A	Ød1	ØD	E	D1	I1	Ød2	f	F_{ta} kN	KG
CHTGH03010-DIN6	3	1000.00	10.30	100	29	29	26.0	62.5	125	8	9	10	15	9	35.0	930.00	7.7	2	14.77	6.0

※ H= 齒輪和齒條啮合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

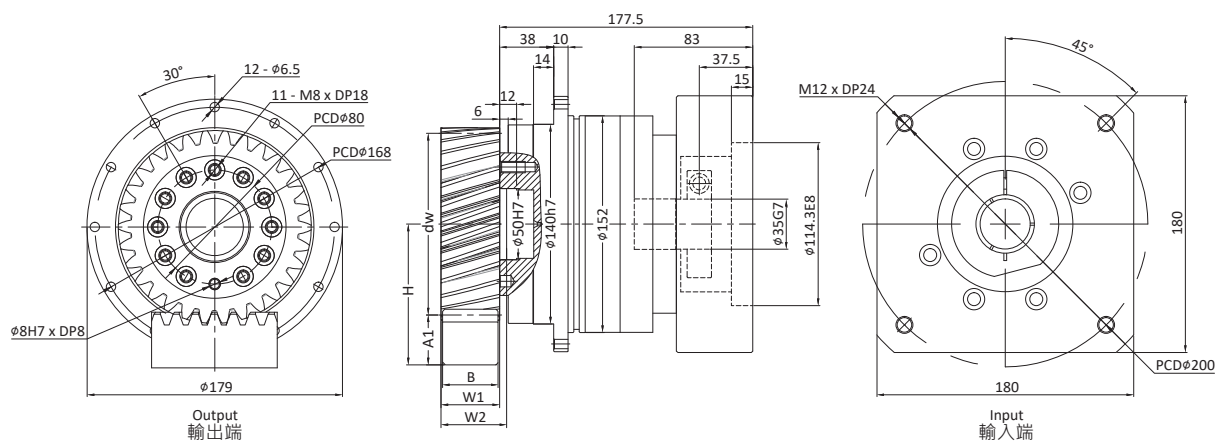
單位 / Dimension : mm

HDR 140 系列

HDR 140 Series

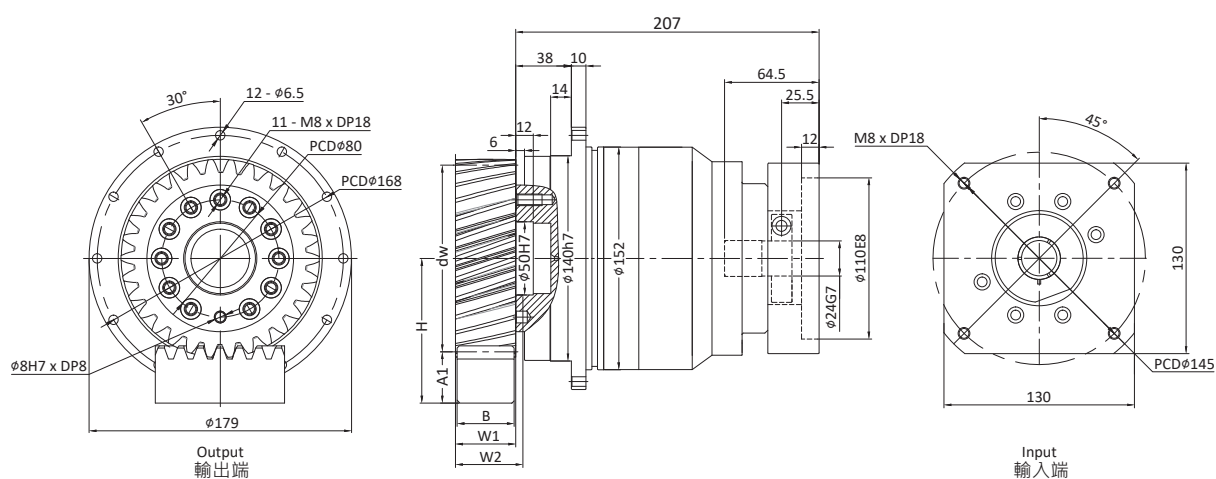
HDR 140 L1 減速比 4~10

HDR 140 L1 Ratio 4~10



HDR 140 L2 減速比 20~100

HDR 140 L2 Ratio 20~100



HDR 140 組合建議

HDR 140 Selection Guide

齒輪

Pinions

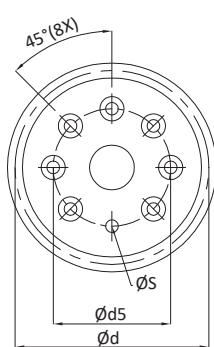


圖 1 / Fig.1

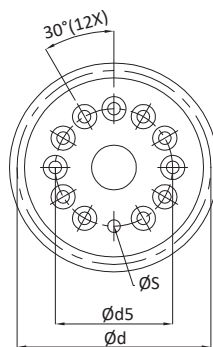


圖 2 / Fig.2

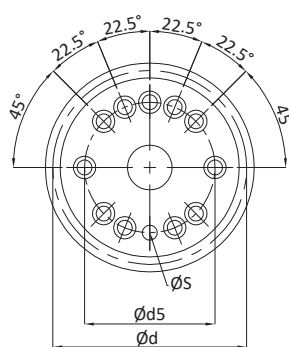
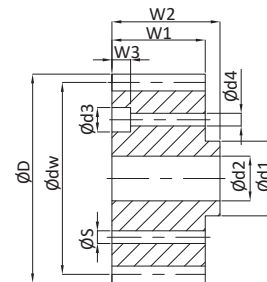


圖 3 / Fig.3



系列 MHFGH-DIN6 斜齒法蘭齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
硬度 HRC 50~55°
硬化處理後齒面研磨

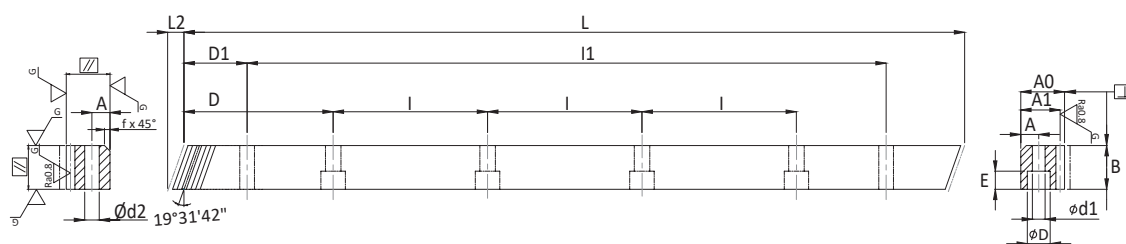
Series MHFGH-DIN6 Helical Flange Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模 數 Module	齒 數 No. of Teeth	x^0 轉位係數 Shift Coefficient	D	d 節圓直徑 Pitch Dia.	d^w 節線啮合直徑 Working Pitch Dia.	$d1^{H6}$	$d2^{H6}$	d3	d4	d5	W1	W2	W3	S^{H7}	H	F_{ta} kN	KG
MHFGH0300403	2	-DIN6	3	40	0.379	135.598	127.324	129.598	50	40	14	9	80	31	36	11	8	90.799	23.46	2.55
MHFGH0400303	2	-DIN6	4	30	0.000	135.324	127.324	127.234	50	40	14	9	80	41	46	16	8	98.662	38.95	3.40
MHFGH0500212	2	-DIN6	5	21	0.000	121.409	111.409	111.409	50	40	14	9	80	51	56	16	8	89.705	44.98	2.98

齒條

Racks



系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p/1000 \leq 0.036$ mm
 $F_p/2000 \leq 0.047$ mm ($\leq 0.024/1000$ mm)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p/1000 \leq 0.036$ mm
 $F_p/2000 \leq 0.047$ mm ($\leq 0.024/1000$ mm)

型號 Code	模 數 Module	L	L2	齒 數 No. of Teeth	B	A0	A1	D	I	孔 數 No. of Holes	A	Ød1	ØD	E	D1	I1	Ød2	f	F_{ta} kN	KG
CHTGH03010-DIN6	3	1000.00	10.30	100	29	29	26.0	62.5	125	8	9	10	15	9	35.0	930.00	7.7	2	14.77	6.0
CHTGH04010-DIN6	4	1000.00	13.80	75	39	39	35.0	62.5	125	8	12	10	15	9	33.3	933.40	7.7	2	26.49	10.8
CHTGH05010-DIN6	5	1000.00	17.40	60	49	39	34.0	62.5	125	8	12	14	20	13	37.5	925.00	11.7	3	41.60	13.6

※ H= 齒輪和齒條啮合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

單位 / Dimension : mm

HDR 200 組合建議

HDR 200 Selection Guide

齒輪

Pinions

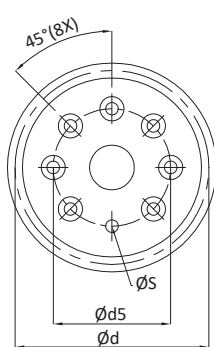


圖 1 / Fig.1

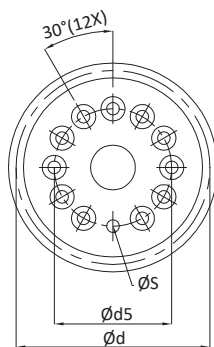


圖 2 / Fig.2

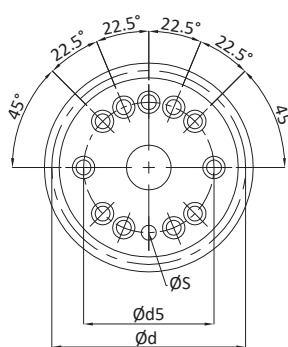
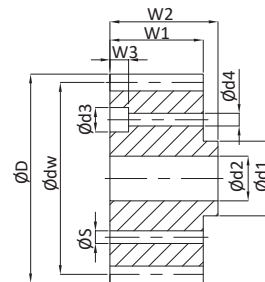


圖 3 / Fig.3



系列 MHFGH-DIN6 斜齒法蘭齒研齒輪
品質等級 DIN 6

材料 SCM415 / SCM440
硬度 HRC 50~55°
硬化處理後齒面研磨

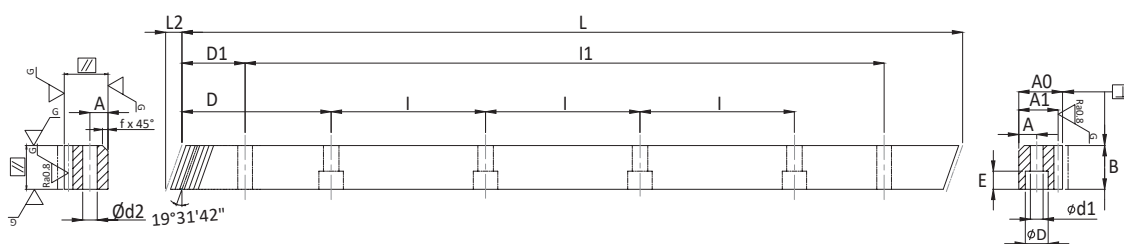
Series MHFGH-DIN6 Helical Flange Teeth Ground Pinions
Quality Grade DIN 6

Material SCM415 / SCM440
Hardness: HRC 50~55°
Teeth Ground after Hardening

型號 Code	圖 Fig.	DIN	模 數 Module	齒 數 No. of Teeth	x^0 轉位係數 Shift Coefficient	D	d 節圓直徑 Pitch Dia.	d^w 節線嚙合直徑 Working Pitch Dia.	$d1^{H6}$	$d2^{H6}$	d3	d4	d5	W1	W2	W3	S^{H7}	H	F_{ta} kN	KG
MHFGH0400382	2	-DIN6	4	38	0.240	171.197	161.277	163.197	80	60	17.5	11	125	41	46	16	10	116.639	40.98	5.17
MHFGH0500362	2	-DIN6	5	36	0.000	200.986	190.986	190.986	80	60	17.5	11	125	51	56	16	10	129.493	50.66	9.73

齒條

Racks



系列 CHTGH-DIN6 斜齒齒研齒條
品質等級 DIN 6

材料 S50C
右旋角 19°31'42"
硬度 HRC 50~55°
硬化處理後四面研磨與齒研
總齒距誤差: $F_p/1000 \leq 0.036$ mm
 $F_p/2000 \leq 0.047$ mm ($\leq 0.024/1000$ mm)

Series CHTGH-DIN6 Helical Teeth Ground Racks
Quality Grade DIN 6

Material S50C
Right Hand Angle 19°31'42"
Hardness HRC 50~55°
Ground on all sides after hardening.
Total Pitch Error: $F_p/1000 \leq 0.036$ mm
 $F_p/2000 \leq 0.047$ mm ($\leq 0.024/1000$ mm)

型號 Code	模 數 Module	L	L2	齒 數 No. of Teeth	B	A0	A1	D	I	孔 數 No. of Holes	A	Ød1	ØD	E	D1	I1	Ød2	f	F_{ta} kN	KG
CHTGH04010-DIN6	4	1000.00	13.80	75	39	39	35.0	62.5	125	8	12	10	15	9	33.3	933.40	7.7	2	26.49	10.8
CHTGH05010-DIN6	5	1000.00	17.40	60	49	39	34.0	62.5	125	8	12	14	20	13	37.5	925.00	11.7	3	41.60	13.6

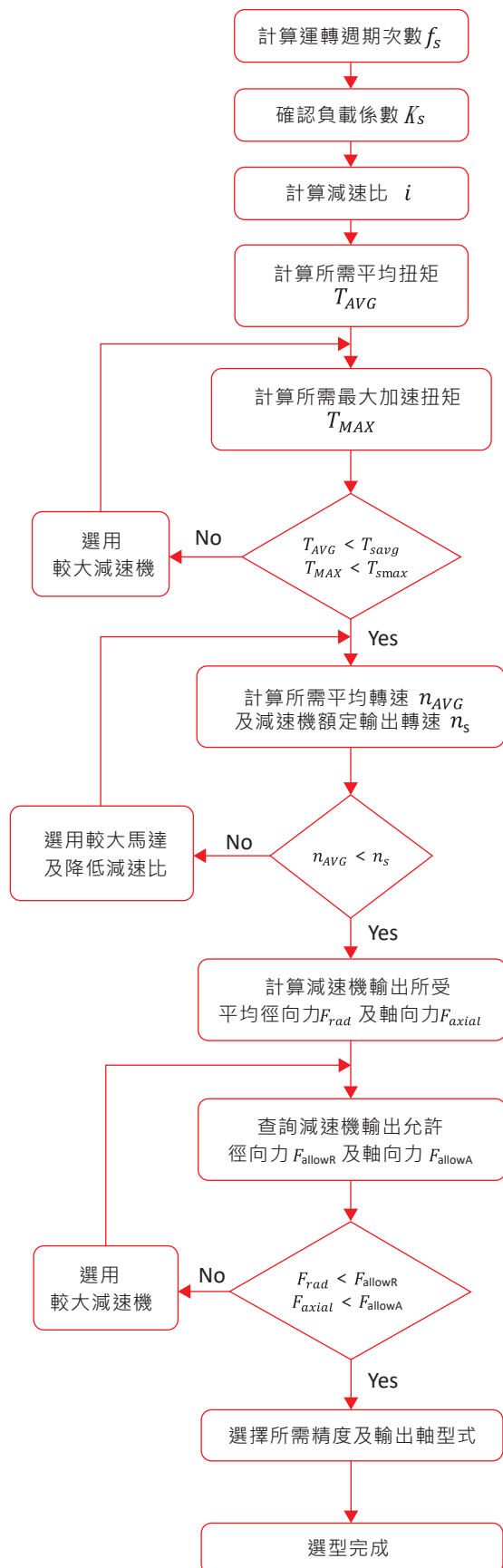
※ H= 齒輪和齒條嚙合中心距

※ 圖面更新恕不另行通知；如需圖面請洽業務人員。

※ H= Center Distance Of Gear Mesh

※ The drawings are subject to change without notice. Please contact our staff for confirmation.

單位 / Dimension : mm



$$f_s = \frac{1 \text{ 小時}}{\text{單一週期時間(小時)}}$$

K_s	1.0	1.1	1.3	1.6	1.8
f_s	0~1000	1000~1500	1500~2000	2000~3000	3000~5000

$$i = \frac{n_m}{n_{work}} \quad \begin{array}{l} n_m: \text{馬達額定輸出轉速} \\ n_{work}: \text{實際輸出轉速} \end{array}$$

$$T_{AVG} = \sqrt[3]{\frac{n_1 \cdot t_1 \cdot T_1^3 + n_2 \cdot t_2 \cdot T_2^3 + n_3 \cdot t_3 \cdot T_3^3}{n_1 \cdot t_1 + n_2 \cdot t_2 + n_3 \cdot t_3}}$$

$$T_{MAX} = T_m \cdot i \cdot K_s \cdot \eta \quad \begin{array}{l} T_m: \text{馬達輸出最大扭矩} \\ \eta: \text{減速機機械效率} \end{array}$$

T_{savg} : 減速機允許輸出額定扭矩

T_{smax} : 減速機允許輸出最大扭矩

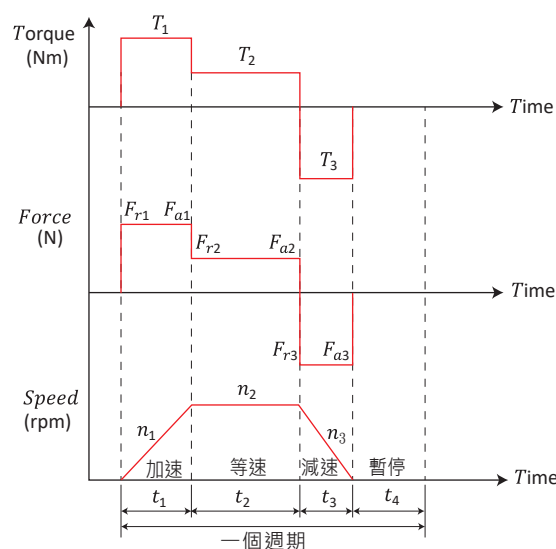
$$n_1 = n_3 = \frac{1}{2} \cdot n_2$$

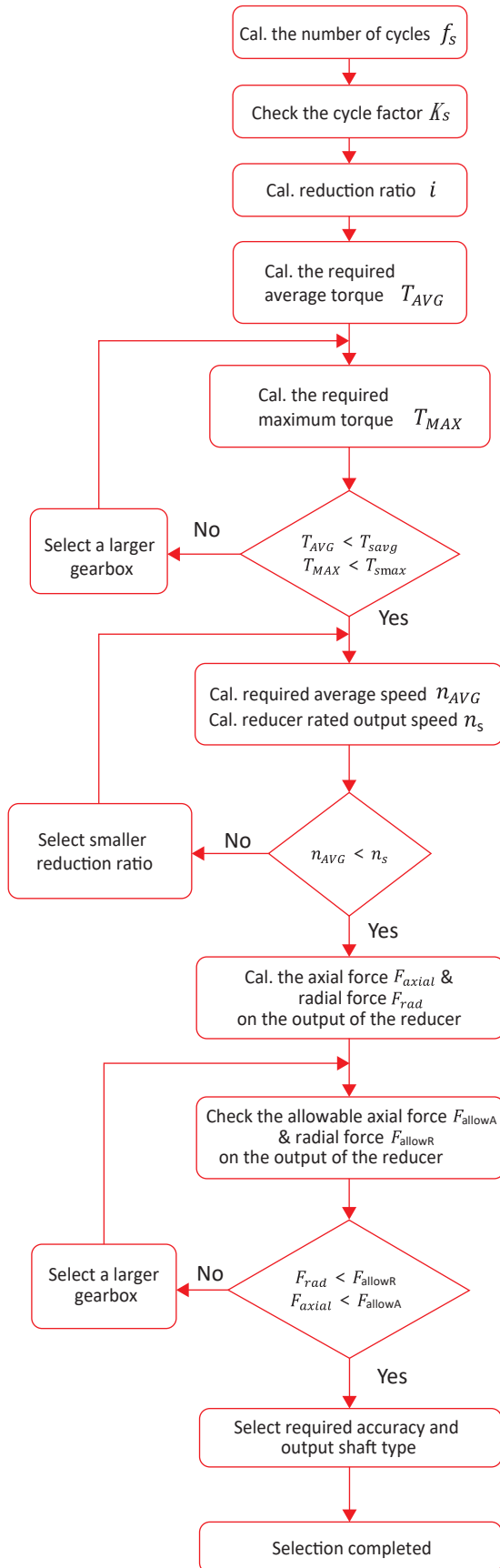
$$n_{AVG} = \frac{n_1 \cdot t_1 + n_2 \cdot t_2 + n_3 \cdot t_3}{t_1 + t_2 + t_3}$$

$$n_s = \frac{n_{allow}}{i} \quad n_{allow}: \text{減速機允許輸入額定轉速}$$

$$F_{rad} = \sqrt[3]{\frac{n_1 \cdot t_1 \cdot F_{r1}^3 + n_2 \cdot t_2 \cdot F_{r2}^3 + n_3 \cdot t_3 \cdot F_{r3}^3}{n_1 \cdot t_1 + n_2 \cdot t_2 + n_3 \cdot t_3}}$$

$$F_{axial} = \sqrt[3]{\frac{n_1 \cdot t_1 \cdot F_{a1}^3 + n_2 \cdot t_2 \cdot F_{a2}^3 + n_3 \cdot t_3 \cdot F_{a3}^3}{n_1 \cdot t_1 + n_2 \cdot t_2 + n_3 \cdot t_3}}$$





$$f_s = \frac{1 \text{ hour}}{\text{per cycle time (unit:hour)}}$$

K_s	1.0	1.1	1.3	1.6	1.8
f_s	0~1000	1000~1500	1500~2000	2000~3000	3000~5000

$$i = \frac{n_m}{n_{work}} \quad \begin{array}{l} n_m : \text{Motor rated speed} \\ n_{work} : \text{system output speed} \end{array}$$

$$T_{AVG} = \sqrt[3]{\frac{n_1 \cdot t_1 \cdot T_1^3 + n_2 \cdot t_2 \cdot T_2^3 + n_3 \cdot t_3 \cdot T_3^3}{n_1 \cdot t_1 + n_2 \cdot t_2 + n_3 \cdot t_3}}$$

$$T_{MAX} = T_m \cdot i \cdot K_s \cdot \eta \quad \begin{array}{l} T_m : \text{Max. motor output torque} \\ \eta : \text{Reducer mechanical efficiency} \end{array}$$

T_{savg} : Allowable rated torque of reducer

T_{smax} : Allowable max. rated torque of reducer

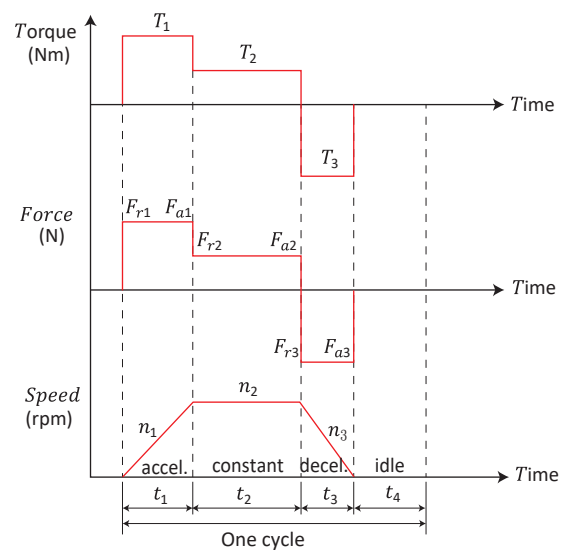
$$n_1 = n_3 = \frac{1}{2} \cdot n_2$$

$$n_{AVG} = \frac{n_1 \cdot t_1 + n_2 \cdot t_2 + n_3 \cdot t_3}{t_1 + t_2 + t_3}$$

$$n_s = \frac{n_{allow}}{i} \quad n_{allow} : \text{Allowable input rated speed of reducer}$$

$$F_{rad} = \sqrt[3]{\frac{n_1 \cdot t_1 \cdot F_{r1}^3 + n_2 \cdot t_2 \cdot F_{r2}^3 + n_3 \cdot t_3 \cdot F_{r3}^3}{n_1 \cdot t_1 + n_2 \cdot t_2 + n_3 \cdot t_3}}$$

$$F_{axial} = \sqrt[3]{\frac{n_1 \cdot t_1 \cdot F_{a1}^3 + n_2 \cdot t_2 \cdot F_{a2}^3 + n_3 \cdot t_3 \cdot F_{a3}^3}{n_1 \cdot t_1 + n_2 \cdot t_2 + n_3 \cdot t_3}}$$



公司名稱：_____

姓名：_____ 職稱：_____

郵件：_____

電話：_____

手機：_____

請填入應用參數

1. 輸入負載

負載方向 (水平 / 垂直)	
載重 Kgw	
最大加速度	
摩擦係數 [m/s ²]	
最大線速度 (m/min)	

2. 修正係數 (參考齒條型錄 p126)

負荷係數 (Ka)	
壽命係數 (KL)	

3. 馬達資料

馬達額定轉速 (rpm)	
馬達額定扭矩 (Nt-m)	

Company Name: _____

Name: _____ Title: _____

E-mail: _____

TEL: _____

Mobile: _____

Please Fill In.

1. Load Setting

Load Direction (Horizontal/Vertical)	
Load Kgw	
Maximum Acceleration	
Coefficient of Friction in Roll [m/s ²]	
Maximum Linear Velocity (m/min)	

2. Force Factor (Reference Racks Catalog p126)

Overload Factor (Ka)	
Life Factor (KL)	

3. Motor Setting

Rated Rotation Speed (rpm)	
Rated Torque (Nt-m)	

備忘錄

MEMO



SINCE 1980



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- ◆傳真: +886 4 23356732
- ◆<https://www.yycdrives.com>

Yuan Yi Chang Machinery Co., Ltd.

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Taichung City 41469, Taiwan
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- ◆E-mail: info@yycdrives.com