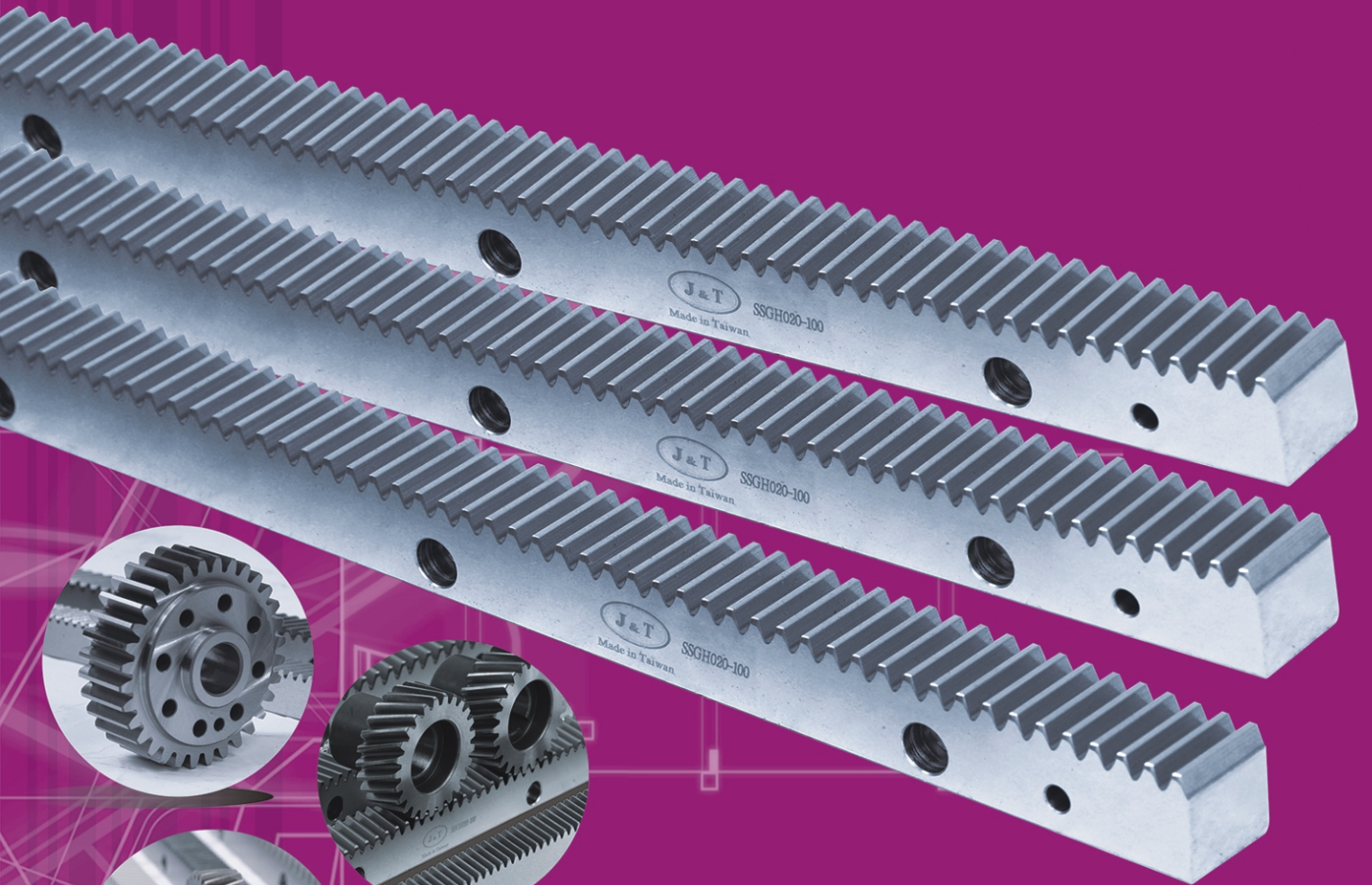




# 全球專業高精密研磨齒條製造商

GLOBAL PROFESSIONAL HIGH PRECISION GRINDING RACK MANUFACTURER



臺灣精特傳動科技有限公司

TAIWAN JINGTE TRANSMISSION TECHNOLOGY CO., LTD.



精特齒條  
JINGTE RACK

企業  
概況  
INTRODUCTION



臺灣精特傳動科技有限公司2008年于臺灣成立，并爲了提供更全方位快捷的服務，于2015年在福建晉江成立精特傳動科技晉江分公司。

本公司專業生產高精密機械傳動部件，憑借強大的技術開發團隊、完善的科學管理體系、雄厚的設備基礎，在生產中不斷開發出新的工藝，采用世界級高精度檢測儀器測量和檢驗產品，使得產品有穩定的質量保障，具有及時發現問題和解決問題的能力，可提供媲美亞特蘭大、YYC、KHK等同行的優良產品。精特齒條的質量、耐用度和精準度均能達到國際同等的精度要求，適用於所有的傳動行業設備，特別適用在工業機器人機械手、數控機床、木工雕刻機械、數控激光切割機、木工機械自動化裝備、石材切割機械等，已成爲業內具有強大競爭力的優秀企業。

本公司擁有20多臺專業齒條生產設備、齒條精度等級達到GB10095-88標準7級，爲了更好的適應市場的變化，針對高精密齒條需求的高端客戶，本公司于2015年引進德國CNC齒條研磨機，該設備生產的齒條精度能達到(JI S二級)5h25，滿足高端市場各種需求。

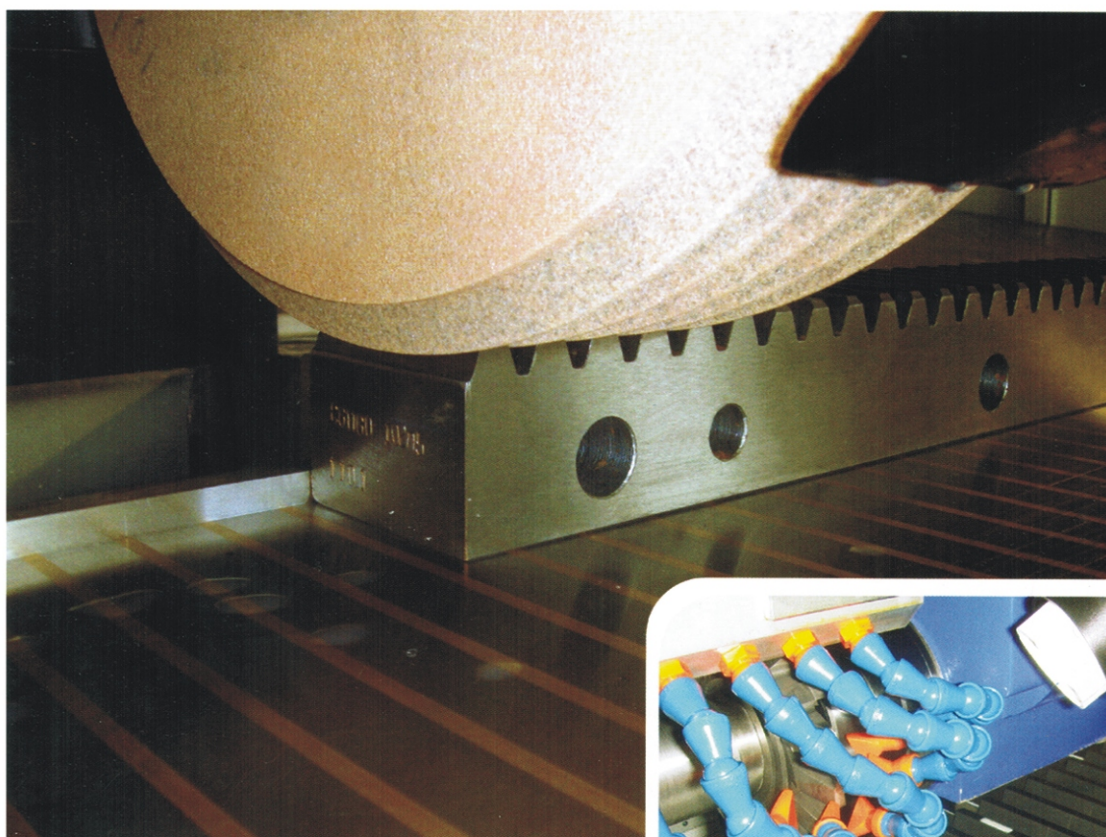
公司秉承“誠信爲本、質量第一、客戶至上”的經營理念服務于廣大的用戶，我們竭誠歡迎各界新老朋友、國內外客商光臨惠顧，廣泛交流經驗、實現互惠互利，共同發展。

Taiwan Jingtong Transmission technology Co.,Ltd was established in 2008 in Taiwan .In order to provide more comprehensive and efficient service ,we set up Fujian Jingtong Transmission Technology Co.,Ltd in 2015 at Jinjiang City,Fujian Province .

Our company specializes in production high-precision mechanical transmission components ,with strong technical development team,sound scientific management system and solid foundation equipment.In order to constantly develop new technology and product, we using the world -class high-precision measurement and testing equipment to test our products .Such products have a stable quality assurance .We have the ability to find problems and solve problems during the production .We can provide the product comparable with Atlanta,YYC,KHK and other peer quality products.The great quality ,stability and high precision of Jingtong rack ,can meet international equivalent accuracy requirement and apply to all transmission industrial equipments ,especially for the industrial like robot manipulator arm,CNC machine tools ,woodworking engraving machine ,CNC laser cutting machines ,woodworking machinery and automachine equipment ,stone cutting machinery .Our company proved to be the outstanding enterprise with strong competitiveness in those industrials that mentioned above.

Our company have more than 20 sets of specilized equipment for producing racks ,the pecision level of the rack reach GB10095-88 standard 7 ,in order to adapt to market changes better , and to meet the demanding for high-precision rack of high-end customers ,the company introduced the German CNC rack grinding machine in 2015.The accuracy of the racks produced by this equipment can reach the precision level of (JIS2) 5H25,have met the various needs of high-end market.

We adhering to “honest ,quality first ,customers first” business philosophy to serve our clients. We sincerely welcome old and new friends ,domestic and foreign merchants to visit us ,exchange and share experiance ,achive mutual benefit and common development.



● 德國齒條銑床和磨床  
Germany CNC grinding and milling machine



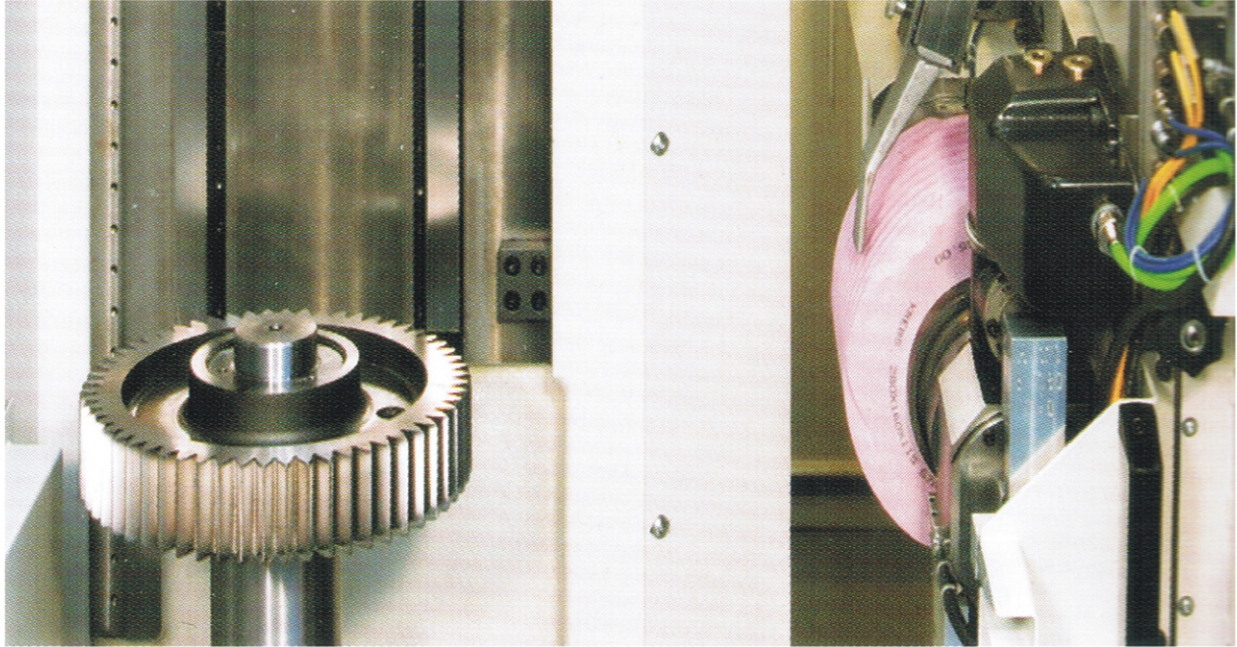
● 齒條滾齒  
Milling the rack tooth



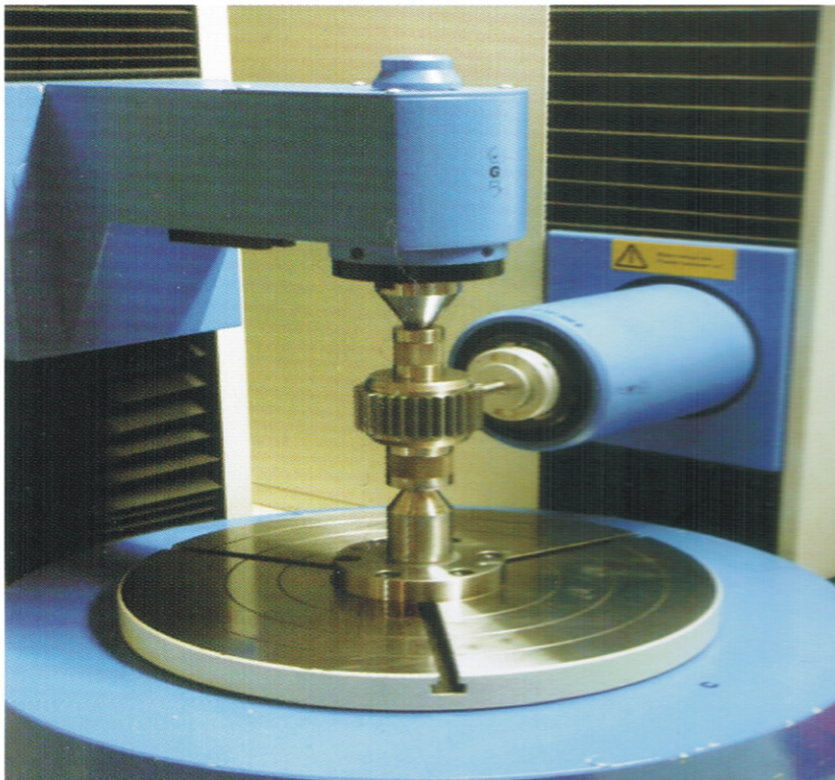
● 齒條磨齒  
Grinding the teeth of gear rack



● 齒條檢測  
Testing gear rack



● 齒輪磨齒  
Grinding the teeth of pinion

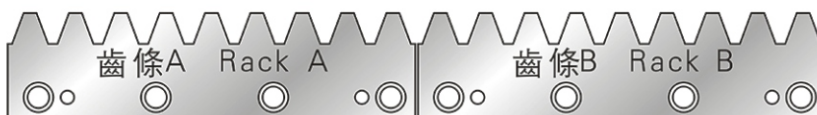


● 齒輪檢測  
Testing the pinion

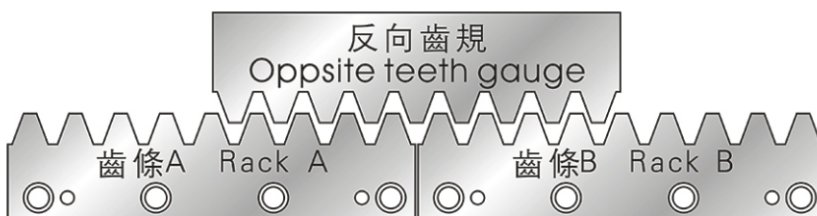
# 齒條安裝順序 Rack Assembly Steps

1. 將齒條A與齒條B安裝于基座。(齒條側面皆有和基座相對應之安裝孔)  
Install the rack A and rack B on the base.(The side of the rack and the base are corresponding to the installation hole.)
2. 安裝反向齒規，確認齒條與齒條間之齒距是否為正確?(如齒距有異常，請洽詢本廠之技術人員)  
Install the opposite teeth gauge to confirm that the pitch between the rack and the rack is correct.  
(If the tooth pitch is anomaly,plz contact our technical worker.)
3. 確認反向齒規安裝后齒距無誤后，將銷固定于齒條側面之固定銷孔。  
Mount the pin to the hole after confirming.

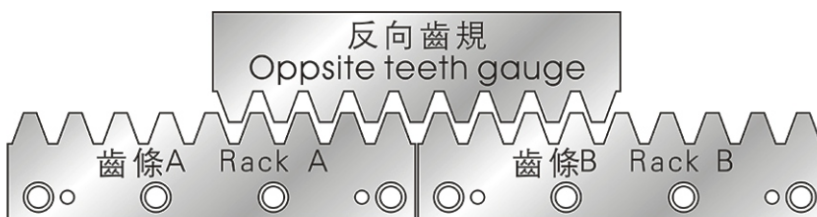
## 安裝順序1 Installation step 1



## 安裝順序2 Installation step 2



## 安裝順序3 Installation step 3



### 齒條型號說明 Rack Code Instruction

1st	2nd	3rd	4th	5th	6th	7th
材料 Material	齒型 Type	齒面處理 Teeth Treatment	硬度處理 Hardness	模數 Module	長度 Length	精度等級 Accuracy Grade
S	S	G	H	020	050/100	DIN
S=S45C	S=直齒 H=斜齒	F=精銑 G=齒研	Q=調質 H=硬化處理	M1.5~M10	050=500mm 100=1000mm	DIN5
R=42CrMo	S=Straight H=Helical	F=Milling G=Grinding	Q=Quenched H=Hardened			DIN6
						DIN7
						DIN8

### 齒輪型號說明 Pinion Code Instruction

1st	2nd	3rd	4th	5th	6th	7th	8th
材料 Material	齒型 Type	系列 Series	齒面處理 Teeth Treatment	硬度處理 Hardness	模數 Module	齒數 No. Of Teeth	精度等級 Accuracy Grade
20CrMnTi	S	L/D	G	H	020	Z	DIN
	S=直齒 H=斜齒	L=左旋 D=法蘭式	G=齒研	H=硬化處理	M1.5~M10	16~95	DIN6
	S=Straight H=Helical	L=left hand angle D=Flange	G=Grinding	H=Hardened			

備注：長度、鑽孔、材質、表面處理等特殊要求，皆可客制。

Remarks: Lengths, holes, materials, surface treatments and other special requirements all could be customized.



**精特齒條**  
JINGTE RACK

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Straight rack series(S45C) P9-P11

**直齒齒條系列(42CrMo)**

Straight rack series(42CrMo) P12-P14

**斜齒齒條系列(S45C)**

Helical rack series(S45C) P15-P17

**斜齒齒條系列(42CrMo)**

Helical rack series(42CrMo) P18-P20

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**應用行業** Applicable Industries

激光切割機

Laser Cutting Machine

CNC木工機床

CNC Woodworking Machine

工業機器人, 機械手

Industrial Robot, Machine Hand

自動化設備

Automation Equipment

石材切割機

Stone Cutting Machine

鋁型材加工中心

Aluminum Processing Center

數控彎管機

Bending Machine

印刷機

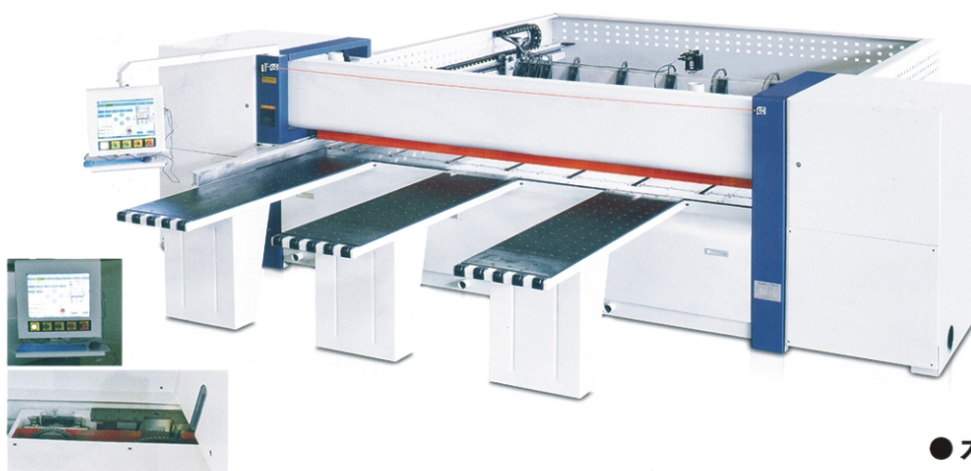
Printing Machine

CNC玻璃切割機

CNC Glass Cutting Machine

數控龍門銑床

CNC Plane Type Milling Machine



● 木工機械  
CNC woodworking machine



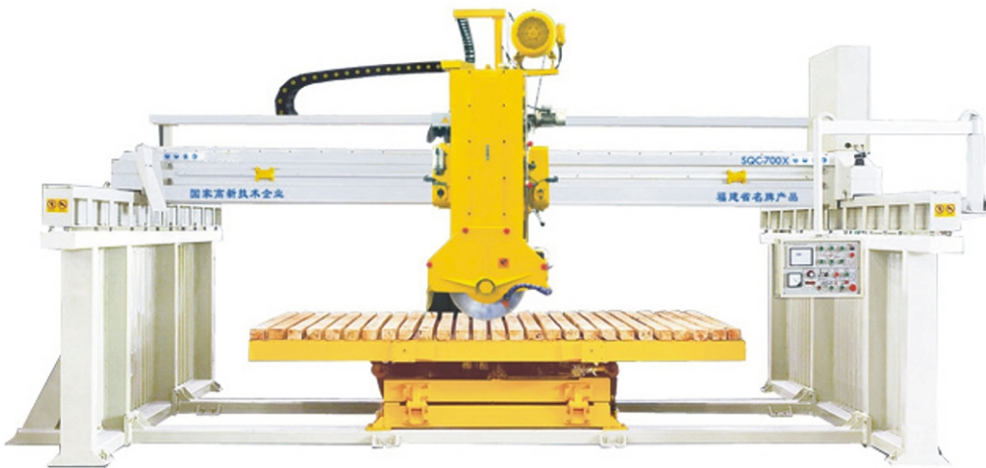
● 數控加工中心  
CNC machining center



● 激光切割機械  
Laser cutting machine



● 精密CNC+3軸龍門機械手  
CNC 3 axis Gantry multiarm  
mechanically manual



● 石材機械  
Marble cutter

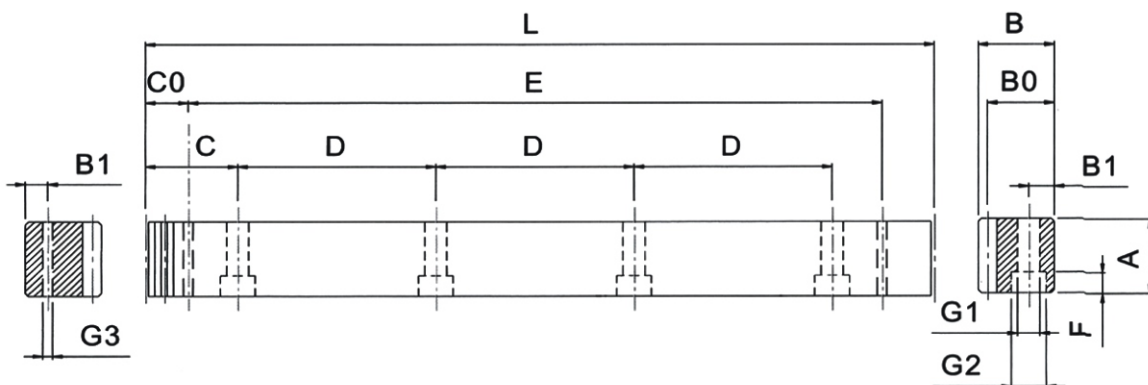


● 雕刻機  
Engraving machine



**SSGH** 規格 Specifications

精度等級 Precision grade	DIN 6	齒面硬度 Tooth hardness	50~55HRC
齒型 Gear teeth	直齒 Straight	表面處理 Surface treatment	研磨 Grinding
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	研磨 Grinding
材質 Material	S45C	熱處理 Heat treatment	齒面高週波熱處理 Tooth surface induction hardened



單位/Dimension: mm

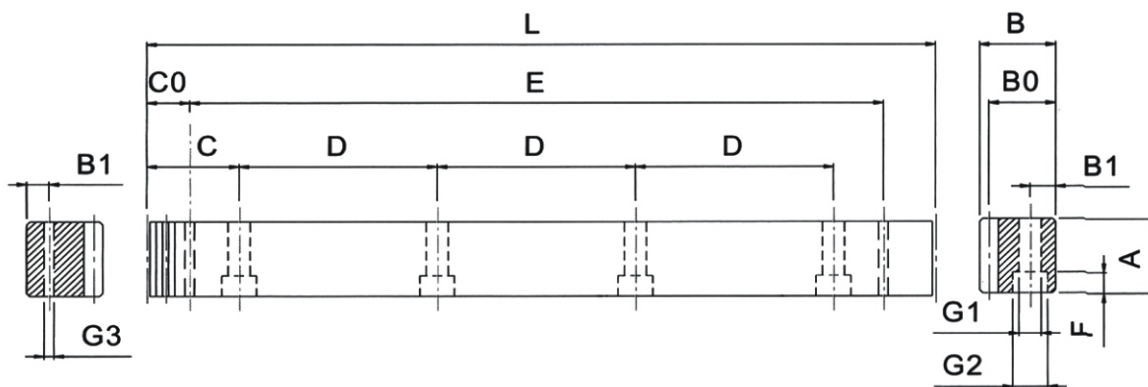
產品型號 Catalog NO.	L	齒數 Tooth NO.	A	B	B0	C	D	孔數 Hole NO.	B1	G1	G2	F	C0	E	G3	總齒距誤差 PitchError /300mm
SSGH015-050	499.51	106	17	17	15.5	62.44	124.88	4	7	6	9.5	7	29.0	441.5	5.7	0.021
SSGH015-100	999.03	212	17	17	15.5	62.44	124.88	8	7	6	9.5	7	29.0	941.0	5.7	0.021
SSGH020-050	502.64	80	24	24	22	62.83	125.66	4	8	7	11	7	31.3	440.1	5.7	0.022
SSGH020-100	1005.28	160	24	24	22	62.83	125.66	8	8	7	11	7	31.3	942.7	5.7	0.022
SSGH030-050	508.95	54	29	29	26	63.62	127.23	4	9	10	15	9	34.4	440.1	7.7	0.024
SSGH030-100	1017.9	108	29	29	26	63.62	127.23	8	9	10	15	9	34.4	949.1	7.7	0.024
SSGH040-050	502.64	40	39	39	35	62.83	125.66	4	12	10	15	9	37.5	427.7	7.7	0.025
SSGH040-100	1005.28	80	39	39	35	62.83	125.66	8	12	10	15	9	37.5	930.3	7.7	0.025
SSGH050-050	502.65	32	49	39	34	62.83	125.66	4	12	14	20	13	30.1	442.4	11.7	0.025
SSGH050-100	1005.31	64	49	39	34	62.83	125.66	8	12	14	20	13	30.1	945	11.7	0.025
SSGH060-050	508.95	27	59	49	43	63.62	127.23	4	16	18	26	17	31.4	446.1	15.7	0.026
SSGH060-100	1017.9	54	59	49	43	63.62	127.23	8	16	18	26	17	31.4	955.0	15.7	0.026
SSGH080-050	502.64	20	79	79	71	62.83	125.66	4	25	22	33	21	26.6	449.5	19.7	0.027
SSGH080-100	1005.28	40	79	79	71	62.83	125.66	8	25	22	33	21	26.6	952	19.7	0.027



SSFQ-G

規格 Specifications

精度等級 Precision grade	DIN 7	齒面硬度 Tooth hardness	15~20HRC
齒型 Gear teeth	直齒 Straight	表面處理 Surface treatment	研磨 Grinding
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	精切削 Finish cutting
材質 Material	S45C	熱處理 Heat treatment	調質熱處理 Quenched



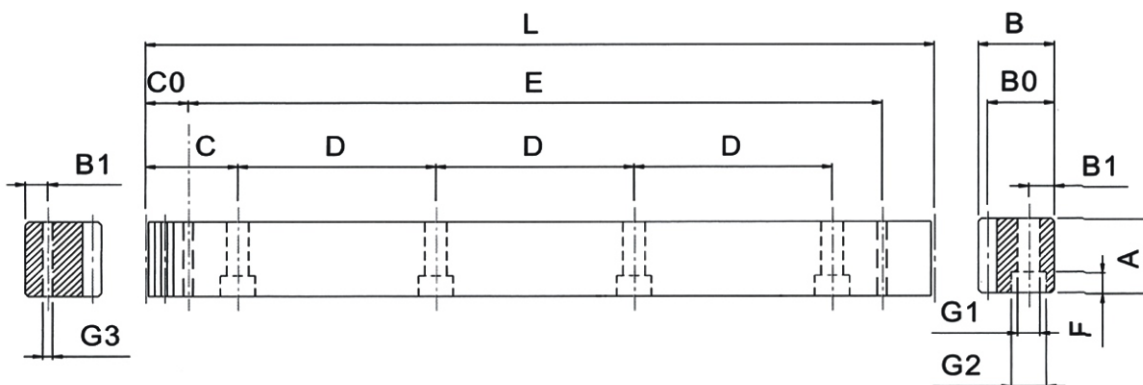
單位/Dimension: mm

產品型號 Catalog NO.	L	齒數 Tooth NO.	A	B	B0	C	D	孔數 Hole NO.	B1	G1	G2	F	C0	E	G3	總齒距誤差 PitchError /300mm
SSFQ015-050	499.51	106	17	17	15.5	62.44	124.88	4	7	6	9.5	7	29.0	441.5	5.7	0.042
SSFQ015-100	999.03	212	17	17	15.5	62.44	124.88	8	7	6	9.5	7	29.0	941.0	5.7	0.042
SSFQ020-050	502.64	80	25	24	22	62.83	125.66	4	8	7	11	7	31.3	440.1	5.7	0.044
SSFQ020-100	1005.28	160	25	24	22	62.83	125.66	8	8	7	11	7	31.3	942.7	5.7	0.044
SSFQ030-050	508.95	54	30	29	26	63.62	127.23	4	9	10	15	9	34.4	440.1	7.7	0.046
SSFQ030-100	1017.9	108	30	29	26	63.62	127.23	8	9	10	15	9	34.4	949.1	7.7	0.046
SSFQ040-050	502.64	40	40	39	35	62.83	125.66	4	12	10	15	9	37.5	427.7	7.7	0.048
SSFQ040-100	1005.28	80	40	39	35	62.83	125.66	8	12	10	15	9	37.5	930.3	7.7	0.048
SSFQ050-050	502.65	32	49	39	34	62.83	125.66	4	12	14	20	13	30.1	442.4	11.7	0.050
SSFQ050-100	1005.31	64	49	39	34	62.83	125.66	8	12	14	20	13	30.1	945	11.7	0.050
SSFQ060-050	508.95	27	59	49	43	63.62	127.23	4	16	18	26	17	31.4	446.1	15.7	0.055
SSFQ060-100	1017.9	54	59	49	43	63.62	127.23	8	16	18	26	17	31.4	955.0	15.7	0.055
SSFQ080-050	502.64	20	79	79	71	62.83	125.66	4	25	22	33	21	26.6	449.5	19.7	0.060
SSFQ080-100	1005.28	40	79	79	71	62.83	125.66	8	25	22	33	21	26.6	952	19.7	0.060



**SSFH-G** 規格 Specifications

精度等級 Precision grade	DIN 7	齒面硬度 Tooth hardness	50~55HRC
齒型 Gear teeth	直齒 Straight	表面處理 Surface treatment	研磨 Grinding
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	精切削 Finish cutting
材質 Material	S45C	熱處理 Heat treatment	齒面高週波熱處理 Tooth surface induction hardened



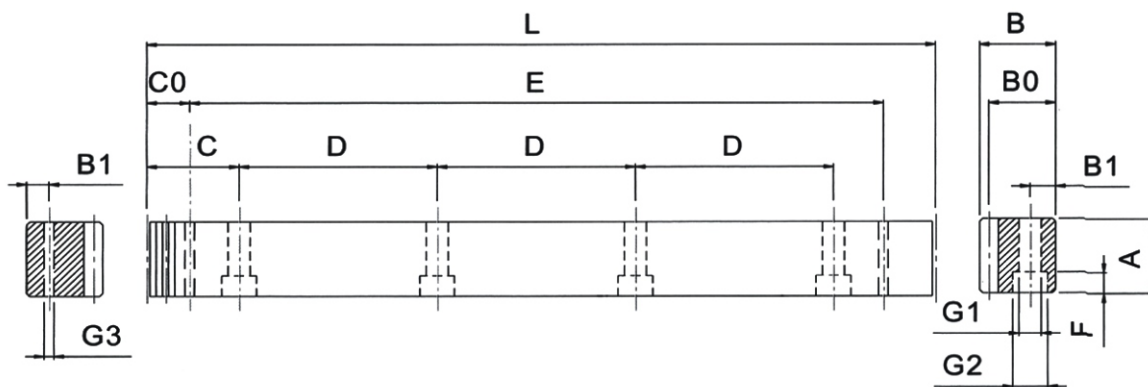
單位/Dimension: mm

產品型號 Catalog NO.	L	齒數 Tooth NO.	A	B	B0	C	D	孔數 Hole NO.	B1	G1	G2	F	C0	E	G3	總齒距誤差 PitchError /300mm
SSFH015-050	499.51	106	17	17	15.5	62.44	124.88	4	7	6	9.5	7	29.0	441.5	5.7	0.058
SSFH015-100	999.03	212	17	17	15.5	62.44	124.88	8	7	6	9.5	7	29.0	941.0	5.7	0.058
SSFH020-050	502.64	80	24	24	22	62.83	125.66	4	8	7	11	7	31.3	440.1	5.7	0.059
SSFH020-100	1005.28	160	24	24	22	62.83	125.66	8	8	7	11	7	31.3	942.7	5.7	0.061
SSFH030-050	508.95	54	29	29	26	63.62	127.23	4	9	10	15	9	34.4	440.1	7.7	0.065
SSFH030-100	1017.9	108	29	29	26	63.62	127.23	8	9	10	15	9	34.4	949.1	7.7	0.065
SSFH040-050	502.64	40	39	39	35	62.83	125.66	4	12	10	15	9	37.5	427.7	7.7	0.068
SSFH040-100	1005.28	80	39	39	35	62.83	125.66	8	12	10	15	9	37.5	930.3	7.7	0.068
SSFH050-050	502.65	32	49	39	34	62.83	125.66	4	12	14	20	13	30.1	442.4	11.7	0.070
SSFH050-100	1005.31	64	49	39	34	62.83	125.66	8	12	14	20	13	30.1	945	11.7	0.070
SSFH060-050	508.95	27	59	49	43	63.62	127.23	4	16	18	26	17	31.4	446.1	15.7	0.072
SSFH060-100	1017.9	54	59	49	43	63.62	127.23	8	16	18	26	17	31.4	955.0	15.7	0.072
SSFH080-050	502.64	20	79	79	71	62.83	125.66	4	25	22	33	21	26.6	449.5	19.7	0.075
SSFH080-100	1005.28	40	79	79	71	62.83	125.66	8	25	22	33	21	26.6	952	19.7	0.075



**RSGH-D** 規格 Specifications

精度等級 Precision grade	DIN 6	齒面硬度 Tooth hardness	50~55HRC
齒型 Gear teeth	直齒 Straight	表面處理 Surface treatment	研磨 Grinding
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	研磨 Grinding
材質 Material	42CrMo	熱處理 Heat treatment	齒面高週波熱處理 Tooth surface induction hardened



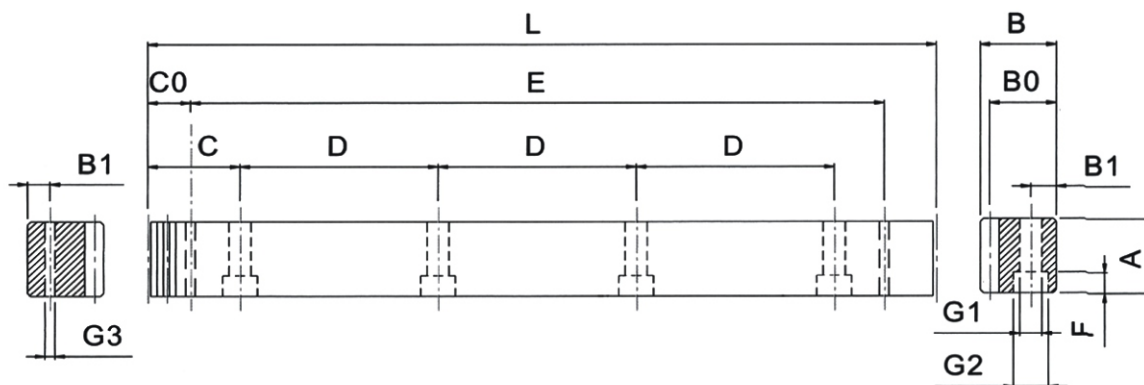
單位/Dimension: mm

產品型號 Catalog NO.	L	齒數 Tooth NO.	A	B	B0	C	D	孔數 Hole NO.	B1	G1	G2	F	C0	E	G3	總齒距誤差 Pitch Error /300mm
RSGH015-050	499.51	106	17	17	15.5	62.44	124.88	4	7	6	9.5	7	29.0	441.5	5.7	0.020
RSGH015-100	999.03	212	17	17	15.5	62.44	124.88	8	7	6	9.5	7	29.0	941.0	5.7	0.025
RSGH020-050	502.64	80	24	24	22	62.83	125.66	4	8	7	11	7	31.3	440.1	5.7	0.020
RSGH020-100	1005.28	160	24	24	22	62.83	125.66	8	8	7	11	7	31.3	942.7	5.7	0.025
RSGH030-050	508.95	54	29	29	26	63.62	127.23	4	9	10	15	9	34.4	440.1	7.7	0.022
RSGH030-100	1017.9	108	29	29	26	63.62	127.23	8	9	10	15	9	34.4	949.1	7.7	0.025
RSGH040-050	502.64	40	39	39	35	62.83	125.66	4	12	10	15	9	37.5	427.7	7.7	0.025
RSGH040-100	1005.28	80	39	39	35	62.83	125.66	8	12	10	15	9	37.5	930.3	7.7	0.025
RSGH050-050	502.65	32	49	39	34	62.83	125.66	4	12	14	20	13	30.1	442.4	11.7	0.025
RSGH050-100	1005.31	64	49	39	34	62.83	125.66	8	12	14	20	13	30.1	945	11.7	0.028
RSGH060-050	508.95	27	59	49	43	63.62	127.23	4	16	18	26	17	31.4	446.1	15.7	0.025
RSGH060-100	1017.9	54	59	49	43	63.62	127.23	8	16	18	26	17	31.4	955.0	15.7	0.028
RSGH080-050	502.64	20	79	79	71	62.83	125.66	4	25	22	33	21	26.6	449.5	19.7	0.030
RSGH080-100	1005.28	40	79	79	71	62.83	125.66	8	25	22	33	21	26.6	952	19.7	0.033



**RSFQ-G** 規格 Specifications

精度等級 Precision grade	DIN 7	齒面硬度 Tooth hardness	15~20HRC
齒型 Gear teeth	直齒 Straight	表面處理 Surface treatment	研磨 Grinding
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	精切削 Finish cutting
材質 Material	42CrMo	熱處理 Heat treatment	調質熱處理 Quenched



單位/Dimension: mm

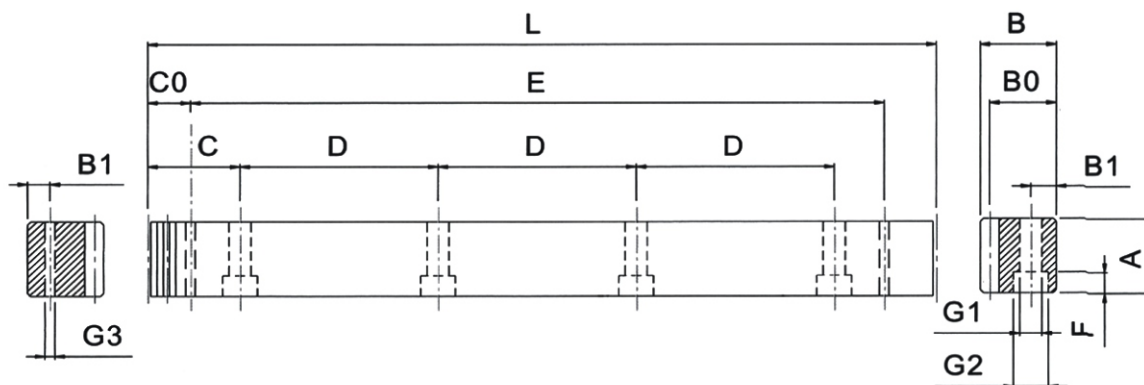
產品型號 Catalog NO.	L	齒數 Tooth NO.	A	B	B0	C	D	孔數 Hole NO.	B1	G1	G2	F	C0	E	G3	總齒距誤差 PitchError /300mm
RSFQ015-050	499.51	106	17	17	15.5	62.44	124.88	4	7	6	9.5	7	29.0	441.5	5.7	0.042
RSFQ015-100	999.03	212	17	17	15.5	62.44	124.88	8	7	6	9.5	7	29.0	941.0	5.7	0.042
RSFQ020-050	502.64	80	24	24	22	62.83	125.66	4	8	7	11	7	31.3	440.1	5.7	0.044
RSFQ020-100	1005.28	160	24	24	22	62.83	125.66	8	8	7	11	7	31.3	942.7	5.7	0.044
RSFQ030-050	508.95	54	29	29	26	63.62	127.23	4	9	10	15	9	34.4	440.1	7.7	0.046
RSFQ030-100	1017.9	108	29	29	26	63.62	127.23	8	9	10	15	9	34.4	949.1	7.7	0.046
RSFQ040-050	502.64	40	39	39	35	62.83	125.66	4	12	10	15	9	37.5	427.7	7.7	0.048
RSFQ040-100	1005.28	80	39	39	35	62.83	125.66	8	12	10	15	9	37.5	930.3	7.7	0.048
RSFQ050-050	502.65	32	49	39	34	62.83	125.66	4	12	14	20	13	30.1	442.4	11.7	0.050
RSFQ050-100	1005.31	64	49	39	34	62.83	125.66	8	12	14	20	13	30.1	945	11.7	0.050
RSFQ060-050	508.95	27	59	49	43	63.62	127.23	4	16	18	26	17	31.4	446.1	15.7	0.055
RSFQ060-100	1017.9	54	59	49	43	63.62	127.23	8	16	18	26	17	31.4	955.0	15.7	0.055
RSFQ080-050	502.64	20	79	79	71	62.83	125.66	4	25	22	33	21	26.6	449.5	19.7	0.060
RSFQ080-100	1005.28	40	79	79	71	62.83	125.66	8	25	22	33	21	26.6	952	19.7	0.060



RSFH-G

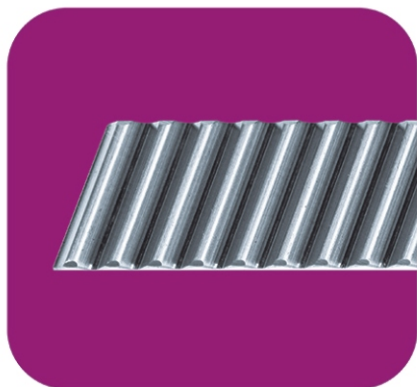
規格 Specifications

精度等級 Precision grade	DIN 7	齒面硬度 Tooth hardness	50~55HRC
齒型 Gear teeth	直齒 Straight	表面處理 Surface treatment	研磨 Grinding
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	精切削 Finish cutting
材質 Material	42CrMo	熱處理 Heat treatment	齒面高週波熱處理 Tooth surface induction hardened



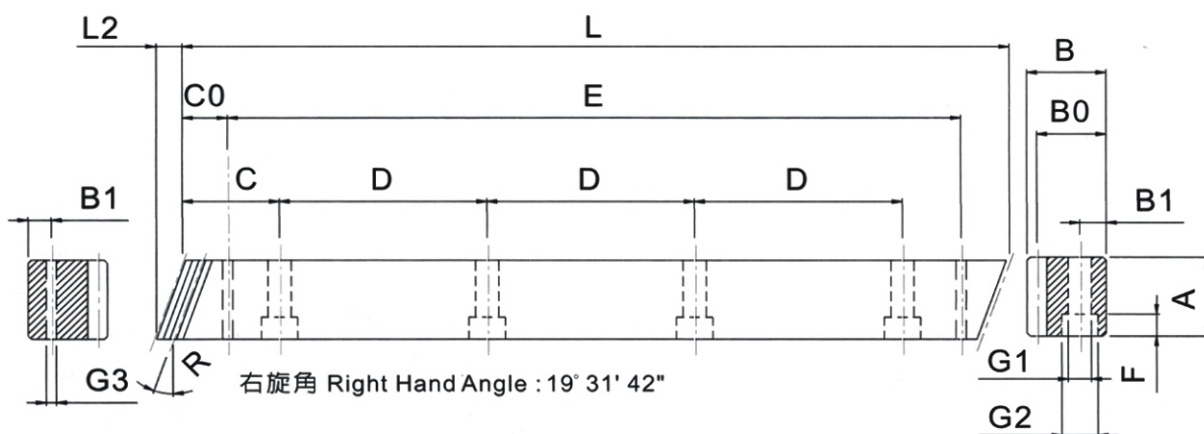
單位/Dimension: mm

產品型號 Catalog NO.	L	齒數 Tooth NO.	A	B	B0	C	D	孔數 Hole NO.	B1	G1	G2	F	C0	E	G3	總齒距誤差 Pitch Error /300mm
RSFH015-050	499.51	106	17	17	15.5	62.44	124.88	4	7	6	9.5	7	29.0	441.5	5.7	0.058
RSFH015-100	999.03	212	17	17	15.5	62.44	124.88	8	7	6	9.5	7	29.0	941.0	5.7	0.058
RSFH020-050	502.64	80	24	24	22	62.83	125.66	4	8	7	11	7	31.3	440.1	5.7	0.059
RSFH020-100	1005.28	160	24	24	22	62.83	125.66	8	8	7	11	7	31.3	942.7	5.7	0.061
RSFH030-050	508.95	54	29	29	26	63.62	127.23	4	9	10	15	9	34.4	440.1	7.7	0.065
RSFH030-100	1017.9	108	29	29	26	63.62	127.23	8	9	10	15	9	34.4	949.1	7.7	0.065
RSFH040-050	502.64	40	39	39	35	62.83	125.66	4	12	10	15	9	37.5	427.7	7.7	0.068
RSFH040-100	1005.28	80	39	39	35	62.83	125.66	8	12	10	15	9	37.5	930.3	7.7	0.068
RSFH050-050	502.65	32	49	39	34	62.83	125.66	4	12	14	20	13	30.1	442.4	11.7	0.070
RSFH050-100	1005.31	64	49	39	34	62.83	125.66	8	12	14	20	13	30.1	945	11.7	0.070
RSFH060-050	508.95	27	59	49	43	63.62	127.23	4	16	18	26	17	31.4	446.1	15.7	0.072
RSFH060-100	1017.9	54	59	49	43	63.62	127.23	8	16	18	26	17	31.4	955.0	15.7	0.072
RSFH080-050	502.64	20	79	79	71	62.83	125.66	4	25	22	33	21	26.6	449.5	19.7	0.075
RSFH080-100	1005.28	40	79	79	71	62.83	125.66	8	25	22	33	21	26.6	952	19.7	0.075



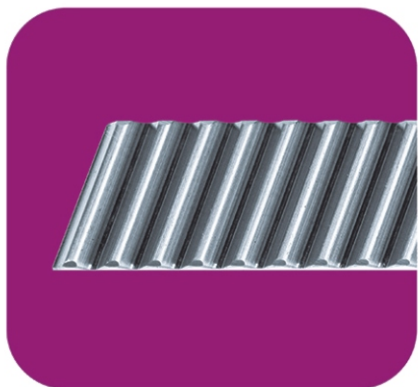
**SHGH** 規格 Specifications

精度等級 Precision grade	DIN 6	齒面硬度 Tooth hardness	50~55HRC
齒型 Gear teeth	斜齒 Helical	表面處理 Surface treatment	研磨 Grinding
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	研磨 Grinding
材質 Material	S45c	熱處理 Heat treatment	齒面高週波熱處理 Tooth surface induction hardened
右旋角 Right hand angle	19° 31' 42"		



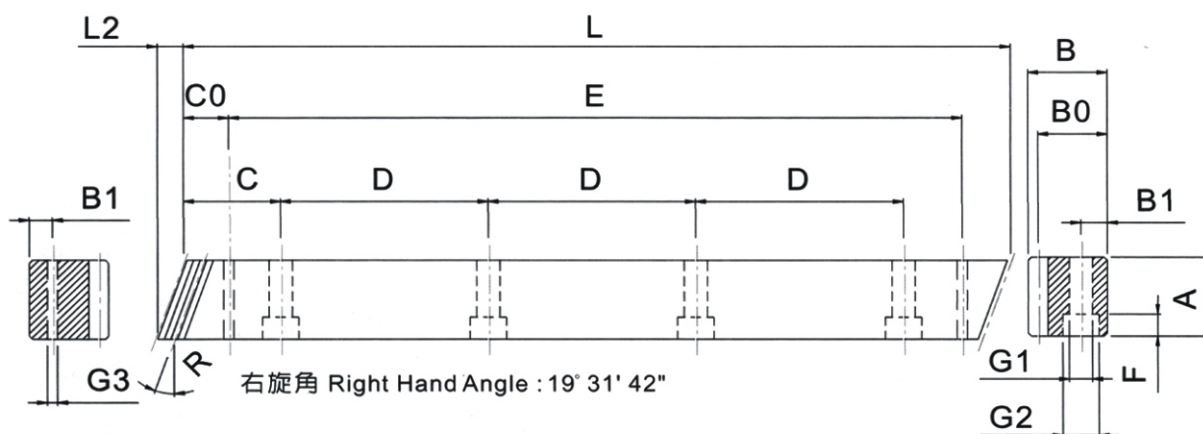
單位/Dimension: mm

產品型號 Catalog NO.	L	L2	齒數 Tooth NO.	A	B	B0	C	D	孔數 Hole NO.	B1	G1	G2	F	C0	E	G3	總齒距誤差 PitchError /300mm
SHGH015-050	500.00	6	100	17	17	15.5	62.50	125	4	7	6	9.5	7	31.7	436.6	5.7	0.021
SHGH015-100	1000.0	6	200	17	17	15.5	62.50	125	8	7	6	9.5	7	31.7	936.6	5.7	0.021
SHGH020-050	500.00	8.5	75	24	24	22	62.50	125	4	8	7	11	7	31.7	436.6	5.7	0.022
SHGH020-100	1000.0	8.5	150	24	24	22	62.50	125	8	8	7	11	7	31.7	936.6	5.7	0.022
SHGH030-050	500.00	10.3	50	29	29	26	62.50	125	4	9	10	15	9	35.0	430.0	7.7	0.024
SHGH030-100	1000.0	10.3	100	29	29	26	62.50	125	8	9	10	15	9	35.0	930.0	7.7	0.024
SHGH040-050	506.67	13.8	38	39	39	35	62.50	125	4	12	10	15	9	33.3	433.0	7.7	0.024
SHGH040-100	1000.0	13.8	75	39	39	35	62.50	125	8	12	10	15	9	33.3	933.4	7.7	0.024
SHGH050-050	500.00	17.4	30	49	39	34	62.50	125	4	12	14	20	13	37.5	425.0	11.7	0.025
SHGH050-100	1000.0	17.4	60	49	39	34	62.50	125	8	12	14	20	13	37.5	925.0	11.7	0.025
SHGH060-050	500.00	20.9	25	59	49	43	62.50	125	4	16	18	26	17	37.5	425.0	15.7	0.026
SHGH060-100	1000.0	20.9	50	59	49	43	62.50	125	8	16	18	26	17	37.5	925.0	15.7	0.026
SHGH080-050	480.00	28.0	18	79	79	71	60.00	120	4	25	22	33	21	120.0	240.0	17.7	0.027
SHGH080-100	960.00	28.0	36	79	79	71	60.00	120	8	25	22	33	21	120.0	720.0	17.7	0.027



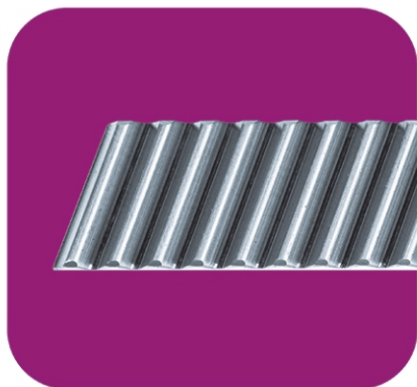
**SHFQ-G 規格 Specifications**

精度等級 Precision grade	DIN 7	齒面硬度 Tooth hardness	15~20HRC
齒型 Gear teeth	斜齒 Helical	表面處理 Surface treatment	研磨 Grinding
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	精切削 Finish cutting
材質 Material	S45c	熱處理 Heat treatment	調質熱處理 Quenched
右旋角 Right hand angle	19° 31' 42"		



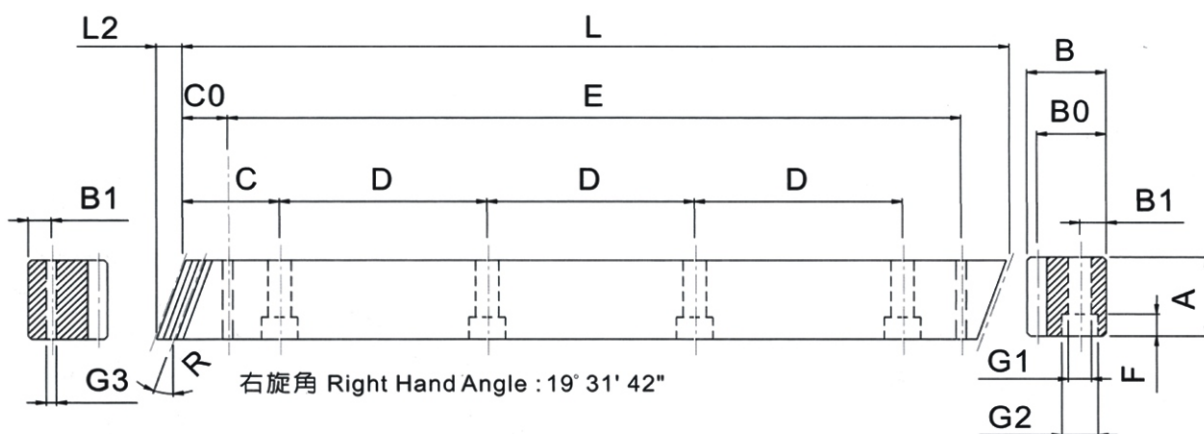
單位/Dimension: mm

產品型號 Catalog NO.	L	L2	齒數 Tooth NO.	A	B	B0	C	D	孔數 Hole NO.	B1	G1	G2	F	C0	E	G3	總齒距誤差 PitchError /300mm
SHFQ015-050	500.00	6	100	17	17	15.5	62.50	125	4	7	6	9.5	7	31.7	436.6	5.7	0.042
SHFQ015-100	1000.0	6	200	17	17	15.5	62.50	125	8	7	6	9.5	7	31.7	936.6	5.7	0.042
SHFQ020-050	500.00	8.9	75	25	24	22	62.50	125	4	8	7	11	7	31.7	436.6	5.7	0.044
SHFQ020-100	1000.0	8.9	150	25	24	22	62.50	125	8	8	7	11	7	31.7	936.6	5.7	0.044
SHFQ030-050	500.00	10.6	50	30	29	26	62.50	125	4	9	10	15	9	35.0	430.0	7.7	0.046
SHFQ030-100	1000.0	10.6	100	30	29	26	62.50	125	8	9	10	15	9	35.0	930.0	7.7	0.046
SHFQ040-050	506.67	14.2	38	40	39	35	62.50	125	4	12	10	15	9	33.3	433.0	7.7	0.048
SHFQ040-100	1000.0	14.2	75	40	39	35	62.50	125	8	12	10	15	9	33.3	933.4	7.7	0.048
SHFQ050-050	500.00	17.7	30	50	39	34	62.50	125	4	12	14	20	13	37.5	425.0	11.7	0.050
SHFQ050-100	1000.0	17.7	60	50	39	34	62.50	125	8	12	14	20	13	37.5	925.0	11.7	0.050
SHFQ060-050	500.00	20.9	25	59	49	43	62.50	125	4	16	18	26	17	37.5	425.0	15.7	0.055
SHFQ060-100	1000.0	20.9	50	59	49	43	62.50	125	8	16	18	26	17	37.5	925.0	15.7	0.055
SHFQ080-050	480.00	28.0	18	79	79	71	60.00	120	4	25	22	33	21	120.0	240.0	17.7	0.060
SHFQ080-100	960.00	28.0	36	79	79	71	60.00	120	8	25	22	33	21	120.0	720.0	17.7	0.060



**SHFH-G** 規格 Specifications

精度等級 Precision grade	DIN 7	齒面硬度 Tooth hardness	50~55HRC
齒型 Gear teeth	斜齒 Helical	表面處理 Surface treatment	研磨 Grinding
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	精切削 Finish cutting
材質 Material	S45c	熱處理 Heat treatment	齒面高週波熱處理 Tooth surface induction hardened
右旋角 Right hand angle	19° 31' 42"		



單位/Dimension: mm

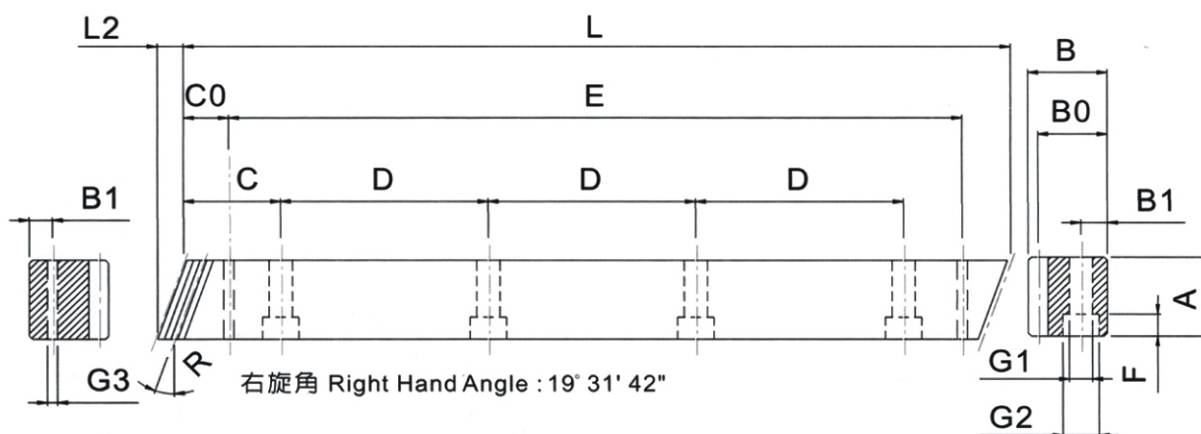
產品型號 Catalog NO.	L	L2	齒數 Tooth NO.	A	B	B0	C	D	孔數 Hole NO.	B1	G1	G2	F	C0	E	G3	總齒距誤差 PitchError /300mm
SHFH015-050	500.00	6	100	17	17	15.5	62.50	125	4	7	6	9.5	7	31.7	436.6	5.7	0.059
SHFH015-100	1000.0	6	200	17	17	15.5	62.50	125	8	7	6	9.5	7	31.7	936.6	5.7	0.059
SHFH020-050	500.00	9.2	75	24	24	22	62.50	125	4	8	7	11	7	31.7	436.6	5.7	0.061
SHFH020-100	1000.0	9.2	150	24	24	22	62.50	125	8	8	7	11	7	31.7	936.6	5.7	0.061
SHFH030-050	500.00	11.0	50	29	29	26	62.50	125	4	9	10	15	9	35.0	430.0	7.7	0.065
SHFH030-100	1000.0	11.0	100	29	29	26	62.50	125	8	9	10	15	9	35.0	930.0	7.7	0.065
SHFH040-050	506.67	14.5	38	39	39	35	62.50	125	4	12	10	15	9	33.3	433.0	7.7	0.068
SHFH040-100	1000.0	14.5	75	39	39	35	62.50	125	8	12	10	15	9	33.3	933.4	7.7	0.068
SHFH050-050	500.00	17.7	30	49	39	34	62.50	125	4	12	14	20	13	37.5	425.0	11.7	0.070
SHFH050-100	1000.0	17.7	60	49	39	34	62.50	125	8	12	14	20	13	37.5	925.0	11.7	0.070
SHFH060-050	500.00	21.3	25	59	49	43	62.50	125	4	16	18	26	17	37.5	425.0	15.7	0.072
SHFH060-100	1000.0	21.3	50	59	49	43	62.50	125	8	16	18	26	17	37.5	925.0	15.7	0.072
SHFH080-050	480.00	28.7	18	79	79	71	60.00	120	4	25	22	33	21	120.0	240.0	17.7	0.075
SHFH080-100	960.00	28.7	36	79	79	71	60.00	120	8	25	22	33	21	120.0	720.0	17.7	0.075



**RHGH**

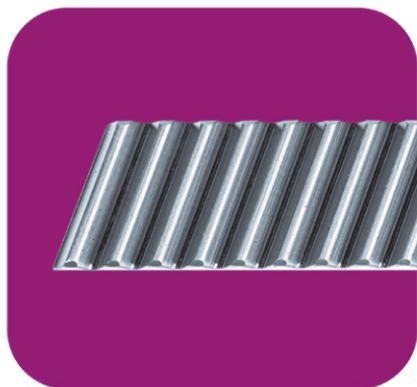
**規格 Specifications**

精度等級 Precision grade	DIN 6	齒面硬度 Tooth hardness	50~55HRC
齒型 Gear teeth	斜齒 Helical	表面處理 Surface treatment	研磨 Grinding
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	研磨 Grinding
材質 Material	42CrMo	熱處理 Heat treatment	齒面高週波熱處理 Tooth surface induction hardened
右旋角 Right hand angle	19° 31' 42"		



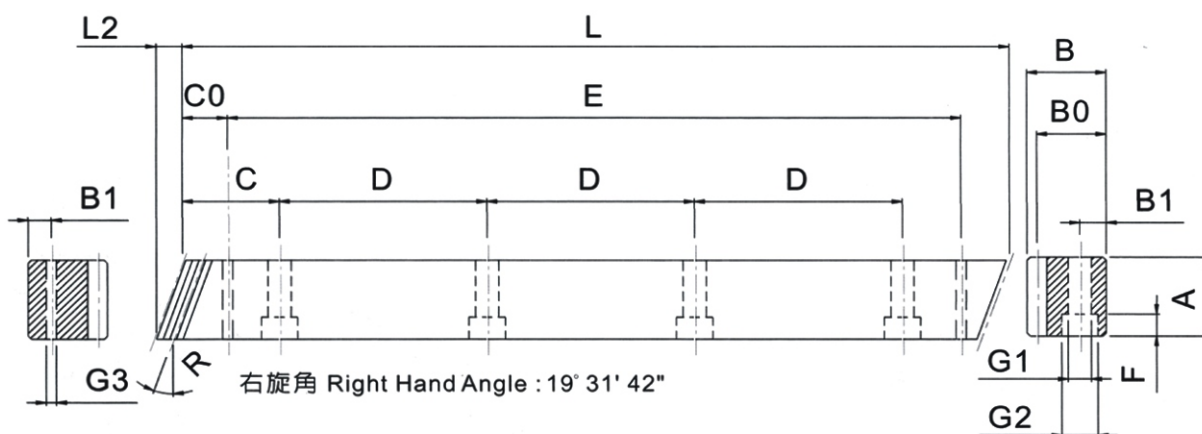
單位/Dimension: mm

產品型號 Catalog NO.	L	L2	齒數 Tooth NO.	A	B	B0	C	D	孔數 Hole NO.	B1	G1	G2	F	C0	E	G3	總齒距誤差 PitchError /300mm
RHGH015-050	500.00	6	100	17	17	15.5	62.50	125	4	7	6	9.5	7	31.7	436.6	5.7	0.021
RHGH015-100	1000.0	6	200	17	17	15.5	62.50	125	8	7	6	9.5	7	31.7	936.6	5.7	0.021
RHGH020-050	500.00	8.5	75	24	24	22	62.50	125	4	8	7	11	7	31.7	436.6	5.7	0.022
RHGH020-100	1000.0	8.5	150	24	24	22	62.50	125	8	8	7	11	7	31.7	936.6	5.7	0.022
RHGH030-050	500.00	10.3	50	29	29	26	62.50	125	4	9	10	15	9	35.0	430.0	7.7	0.024
RHGH030-100	1000.0	10.3	100	29	29	26	62.50	125	8	9	10	15	9	35.0	930.0	7.7	0.024
RHGH040-050	506.67	13.8	38	39	39	35	62.50	125	4	12	10	15	9	33.3	433.0	7.7	0.024
RHGH040-100	1000.0	13.8	75	39	39	35	62.50	125	8	12	10	15	9	33.3	933.4	7.7	0.024
RHGH050-050	500.00	17.4	30	49	39	34	62.50	125	4	12	14	20	13	37.5	425.0	11.7	0.025
RHGH050-100	1000.0	17.4	60	49	39	34	62.50	125	8	12	14	20	13	37.5	925.0	11.7	0.025
RHGH060-050	500.00	20.9	25	59	49	43	62.50	125	4	16	18	26	17	37.5	425.0	15.7	0.026
RHGH060-100	1000.0	20.9	50	59	49	43	62.50	125	8	16	18	26	17	37.5	925.0	15.7	0.026
RHGH080-050	480.00	28.0	18	79	79	71	60.00	120	4	25	22	33	21	120.0	240.0	17.7	0.027
RHGH080-100	960.00	28.0	36	79	79	71	60.00	120	8	25	22	33	21	120.0	720.0	17.7	0.027



**RHFQ-G** 規格 Specifications

精度等級 Precision grade	DIN 7	齒面硬度 Tooth hardness	15~20HRC
齒型 Gear teeth	斜齒 Helical	表面處理 Surface treatment	研磨 Grinding
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	精切削 Finish cutting
材質 Material	42CrMo	熱處理 Heat treatment	調質熱處理 Quenched
右旋角 Right hand angle	19° 31' 42"		



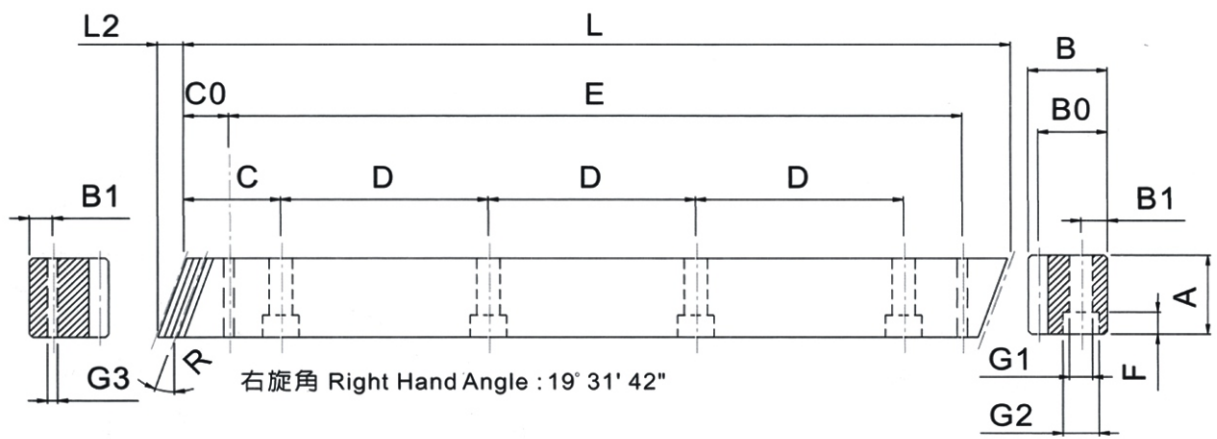
單位/Dimension: mm

產品型號 Catalog NO.	L	L2	齒數 Tooth NO.	A	B	B0	C	D	孔數 Hole NO.	B1	G1	G2	F	C0	E	G3	總齒距誤差 PitchError /300mm
RHFQ015-050	500.00	6	100	17	17	15.5	62.50	125	4	7	6	9.5	7	31.7	436.6	5.7	0.042
RHFQ015-100	1000.0	6	200	17	17	15.5	62.50	125	8	7	6	9.5	7	31.7	936.6	5.7	0.042
RHFQ020-050	500.00	8.9	75	25	24	22	62.50	125	4	8	7	11	7	31.7	436.6	5.7	0.044
RHFQ020-100	1000.0	8.9	150	25	24	22	62.50	125	8	8	7	11	7	31.7	936.6	5.7	0.044
RHFQ030-050	500.00	10.6	50	30	29	26	62.50	125	4	9	10	15	9	35.0	430.0	7.7	0.046
RHFQ030-100	1000.0	10.6	100	30	29	26	62.50	125	8	9	10	15	9	35.0	930.0	7.7	0.046
RHFQ040-050	506.67	14.2	38	40	39	35	62.50	125	4	12	10	15	9	33.3	433.0	7.7	0.048
RHFQ040-100	1000.0	14.2	75	40	39	35	62.50	125	8	12	10	15	9	33.3	933.4	7.7	0.048
RHFQ050-050	500.00	17.7	30	50	39	34	62.50	125	4	12	14	20	13	37.5	425.0	11.7	0.050
RHFQ050-100	1000.0	17.7	60	50	39	34	62.50	125	8	12	14	20	13	37.5	925.0	11.7	0.050
RHFQ060-050	500.00	20.9	25	59	49	43	62.50	125	4	16	18	26	17	37.5	425.0	15.7	0.055
RHFQ060-100	1000.0	20.9	50	59	49	43	62.50	125	8	16	18	26	17	37.5	925.0	15.7	0.055
RHFQ080-050	480.00	28.0	18	79	79	71	60.00	120	4	25	22	33	21	120.0	240.0	17.7	0.060
RHFQ080-100	960.00	28.0	36	79	79	71	60.00	120	8	25	22	33	21	120.0	720.0	17.7	0.060



**RHFH-G 規格 Specifications**

精度等級 Precision grade	DIN 8	齒面硬度 Tooth hardness	50~55HRC
齒型 Gear teeth	斜齒 Helical	表面處理 Surface treatment	研磨 Grinding
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	精切削 Finish cutting
材質 Material	42CrMo	熱處理 Heat treatment	齒面高週波熱處理 Tooth surface induction hardened
右旋角 Right hand angle	19° 31' 42"		



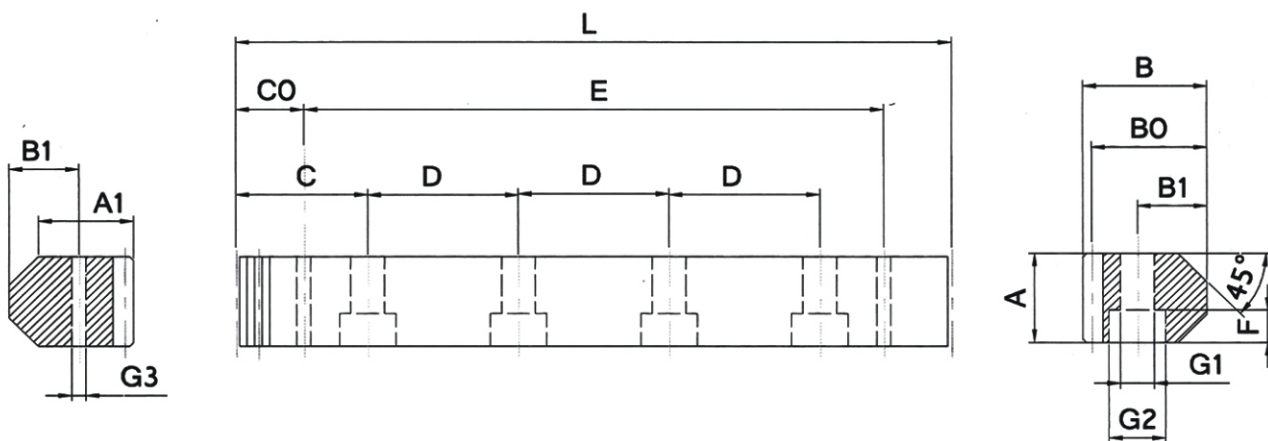
單位/Dimension: mm

產品型號 Catalog NO.	L	L2	齒數 Tooth NO.	A	B	B0	C	D	孔數 Hole NO.	B1	G1	G2	F	C0	E	G3	總齒距誤差 PitchError /300mm
RHFH015-050	500.00	6	100	17	17	15.5	62.50	125	4	7	6	9.5	7	31.7	436.6	5.7	0.059
RHFH015-100	1000.0	6	200	17	17	15.5	62.50	125	8	7	6	9.5	7	31.7	936.6	5.7	0.059
RHFH020-050	500.00	9.2	75	24	24	22	62.50	125	4	8	7	11	7	31.7	436.6	5.7	0.061
RHFH020-100	1000.0	9.2	150	24	24	22	62.50	125	8	8	7	11	7	31.7	936.6	5.7	0.061
RHFH030-050	500.00	11.0	50	29	29	26	62.50	125	4	9	10	15	9	35.0	430.0	7.7	0.065
RHFH030-100	1000.0	11.0	100	29	29	26	62.50	125	8	9	10	15	9	35.0	930.0	7.7	0.065
RHFH040-050	506.67	14.5	38	39	39	35	62.50	125	4	12	10	15	9	33.3	433.0	7.7	0.068
RHFH040-100	1000.0	14.5	75	39	39	35	62.50	125	8	12	10	15	9	33.3	933.4	7.7	0.068
RHFH050-050	500.00	17.7	30	49	39	34	62.50	125	4	12	14	20	13	37.5	425.0	11.7	0.070
RHFH050-100	1000.0	17.7	60	49	39	34	62.50	125	8	12	14	20	13	37.5	925.0	11.7	0.070
RHFH060-050	500.00	21.3	25	59	49	43	62.50	125	4	16	18	26	17	37.5	425.0	15.7	0.072
RHFH060-100	1000.0	21.3	50	59	49	43	62.50	125	8	16	18	26	17	37.5	925.0	15.7	0.072
RHFH080-050	480.00	28.7	18	79	79	71	60.00	120	4	25	22	33	21	120.0	240.0	17.7	0.075
RHFH080-100	960.00	28.7	36	79	79	71	60.00	120	8	25	22	33	21	120.0	720.0	17.7	0.075



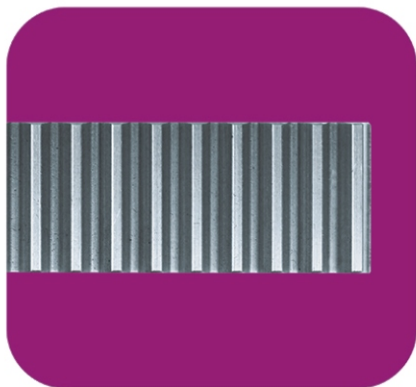
**SVGH** 規格 Specifications

精度等級 Precision grade	DIN 6	齒面硬度 Tooth hardness	50~55HRC
齒型 Gear teeth	直齒 Straight	表面處理 Surface treatment	研磨 Grinding
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	研磨 Grinding
材質 Material	S45C	熱處理 Heat treatment	齒面高週波熱處理 Tooth surface induction hardened



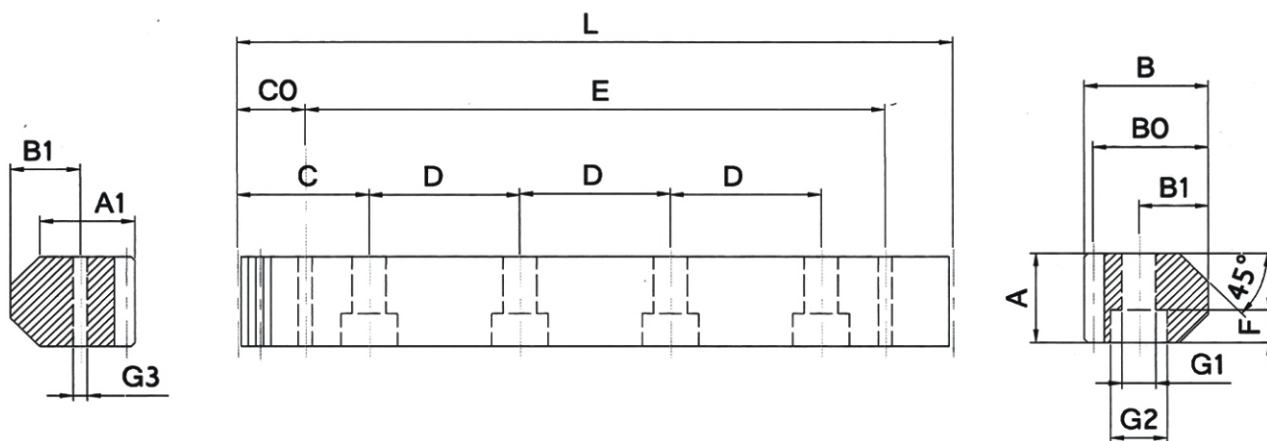
單位/Dimension: mm

產品型號 Catalog NO.	L	模數 (M)	A	B	B0	C	D	孔數 Hole NO.	B1	B2	G1	G2	F	C0	E	G3
SVGH015-050	500	1.5915	14.5	24.5	22.9	62.50	125	4	13	20	7	11	7	30	440	5.7
SVGH015-100	1000	1.5915	14.5	24.5	22.9	62.50	125	8	13	20	7	11	7	30	940	5.7
SVGH020-050	500	1.5915	19.5	29.5	27.9	62.50	125	4	15.5	23.5	9	15	9	30	440	5.7
SVGH020-100	1000	1.5915	19.5	29.5	27.9	62.50	125	8	15.5	23.5	9	15	9	30	940	5.7
SVGH025-050	502.5	2.3873	24.7	33	30.61	62.81	125.625	4	18.5	25.2	9	15	9	30	442.5	5.7
SVGH025-100	1005	2.3873	24.7	33	30.61	62.81	125.625	8	18.5	25.2	9	15	9	30	945	5.7
SVGH035-050	500	3.1831	34.6	46.6	43.41	62.50	125	4	28.6	36.7	11	18	11	30	440	7.7
SVGH035-100	1000	3.1831	34.6	46.6	43.41	62.50	125	8	28.6	36.7	11	18	11	30	940	7.7



SVFH-G 規格 Specifications

精度等級 Precision grade	DIN 8	齒面硬度 Tooth hardness	50~55HRC
齒型 Gear teeth	直齒 Straight	表面處理 Surface treatment	研磨 Grinding
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	精切削 Finish cutting
材質 Material	S45C	熱處理 Heat treatment	齒面高週波熱處理 Tooth surface induction hardened



單位/Dimension: mm

產品型號 Catalog NO.	L	模數 (M)	A	B	B0	C	D	孔數 Hole NO.	B1	B2	G1	G2	F	C0	E	G3
SVFH015-050	500	1.5915	14.5	24.5	22.9	62.50	125	4	13	20	7	11	7	30	440	5.7
SVFH015-100	1000	1.5915	14.5	24.5	22.9	62.50	125	8	13	20	7	11	7	30	940	5.7
SVFH020-050	500	1.5915	19.5	29.5	27.9	62.50	125	4	15.5	23.5	9	15	9	30	440	5.7
SVFH020-100	1000	1.5915	19.5	29.5	27.9	62.50	125	8	15.5	23.5	9	15	9	30	940	5.7
SVFH025-050	502.5	2.3873	24.7	33	30.61	62.81	125.625	4	18.5	25.2	9	15	9	30	442.5	7.7
SVFH025-100	1005	2.3873	24.7	33	30.61	62.81	125.625	8	18.5	25.2	9	15	9	30	945	7.7
SVFH035-050	500	3.1831	34.6	46.6	43.41	62.50	125	4	28.6	36.7	11	18	11	30	440	7.7
SVFH035-100	1000	3.1831	34.6	46.6	43.41	62.50	125	8	28.6	36.7	11	18	11	30	940	7.7

# SG16 Grinding Spur Gears

模數 Module 2

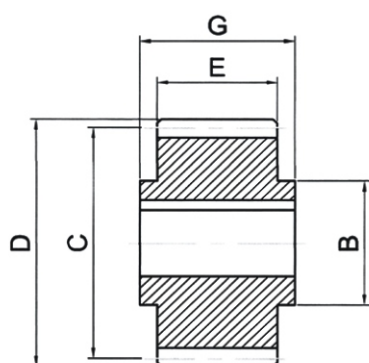


Fig.1

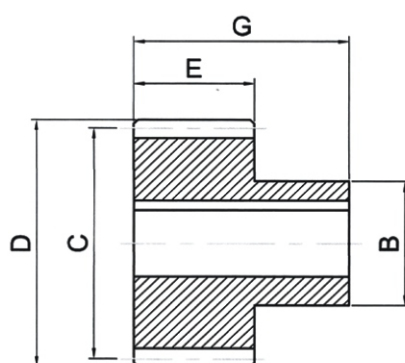
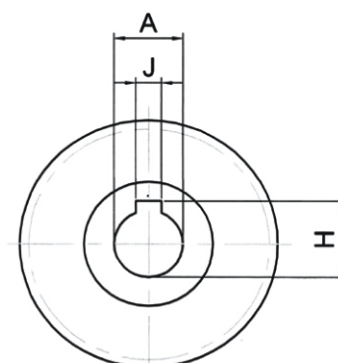


Fig. 2



模數 2 Module 2

單位/Dimension: mm

產品型號 Catalog NO.	圖號 Fig.	齒數 Z	內徑 Bore	轂徑 Hua dia	節圓直徑 Pitch dia	外徑 Out. dia	齒幅 Width	總長度 Length	J	H
			Ah7	B	C	D	E	G		
SG16-M2-16-15-1	1	16	15	25	32	36	28	30	5	17.3
SG16-M2-18-15-1	1	18	15	30	36	40	28	30	5	17.3
SG16-M2-18-20-1	1	18	20	25	36	40	28	30	6	22.8
SG16-M2-20-15-1	1	20	15	25	40	44	28	30	5	17.3
SG16-M2-20-20-1	1	20	20	30	40	44	28	30	6	22.8
SG16-M2-22-15-1	1	22	15	25	44	48	28	30	5	17.3
SG16-M2-22-25-1	1	22	25	36	44	48	28	30	8	28.3
SG16-M2-25-22-2	2	25	22	36	50	54	28	56	6	24.8
SG16-M2-25-30-1	1	25	30	45	50	54	28	30	8	33.3
SG16-M2-28-30-2	2	28	30	50	56	60	28	60	8	33.3
SG16-M2-28-35-1	1	28	35	48	56	60	28	30	10	38.3
SG16-M2-32-16-2	2	32	16	30	64	68	28	54	5	18.3
SG16-M2-32-22-2	2	32	22	36	64	68	28	56	6	24.8
SG16-M2-32-25-1	1	32	25	36	64	68	28	30	8	28.3
SG16-M2-32-32-2	2	32	32	55	64	68	28	65	10	35.3
SG16-M2-36-25-1	1	36	25	36	72	76	28	30	8	28.3
SG16-M2-36-40-2	2	36	40	62	72	76	28	65	12	43.3
SG16-M2-40-25-1	1	40	25	36	80	84	28	30	8	28.3
SG16-M2-40-32-2	2	40	32	55	80	84	28	65	10	35.3
SG16-M2-40-45-2	2	40	45	68	80	84	28	65	14	48.8



規格 Specifications

精度等級 Precision grade	DIN 6	齒面硬度 Tooth hardness	55~60HRC
齒型 Gear teeth	標準全齒深齒 Standard full depth	表面處理 Surface treatment	--
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	研磨 Grinding
材質 Material	20CrMnTi	齒研基準面 Datum reference	內徑 Bore
熱處理 Heat treatment	高週波 Induction hardened	追加工 Secondary operations	可 Possible except on the teeth

模數 3 Module 3

單位/Dimension: mm

產品型號 Catalog NO.	圖號 Fig.	齒數 Z	內徑 Bore	軛徑 Hua dia	節圓直徑 Pitch dia	外徑 Out dia	齒幅 Width	總長度 Length	J	H
			Ah7	B	C	D	E	G		
SG16-M3-18-25-1	1	18	25	36	54	60	28	30	8	28.3
SG16-M3-20-25-1	1	20	25	36	60	66	28	30	8	28.3
SG16-M3-20-35-1	1	20	35	48	60	66	28	30	10	38.3
SG16-M3-22-22-2	2	22	22	36	66	72	28	56	6	24.8
SG16-M3-22-25-2	2	22	25	44	66	72	28	60	8	28.3
SG16-M3-22-30-1	1	22	30	45	66	72	28	30	8	33.3
SG16-M3-22-32-2	2	22	32	55	66	72	28	65	10	35.3
SG16-M3-25-25-1	1	25	25	36	75	81	28	30	8	28.3
SG16-M3-25-40-2	2	25	40	62	75	81	28	65	12	43.3
SG16-M3-25-45-1	1	25	45	58	75	81	28	30	14	48.3
SG16-M3-28-22-2	2	28	22	36	84	90	28	56	6	24.8
SG16-M3-28-30-1	1	28	30	45	84	90	28	30	8	33.3
SG16-M3-28-32-2	2	28	32	55	84	90	28	65	10	35.3
SG16-M3-28-35-2	2	28	35	55	84	90	28	65	10	38.3
SG16-M3-28-45-2	2	28	45	68	84	90	28	65	14	48.8
SG16-M3-32-25-1	1	32	25	36	96	102	28	30	8	28.3
SG16-M3-32-40-2	2	32	40	62	96	102	28	65	12	43.3
SG16-M3-32-45-1	1	32	45	58	96	102	28	30	14	48.8
SG16-M3-36-35-1	1	36	35	48	108	114	28	30	10	38.3
SG16-M3-36-45-2	2	36	45	68	108	114	28	65	14	48.8

# SG16 Grinding Spur Gears

模數 Module 4

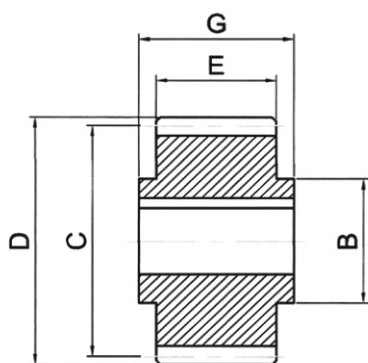


Fig.1

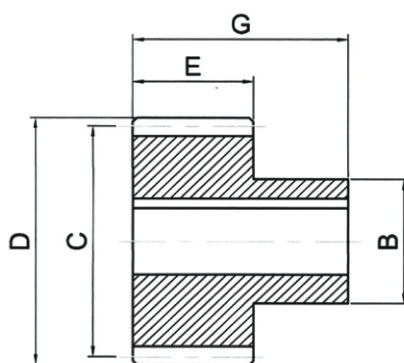
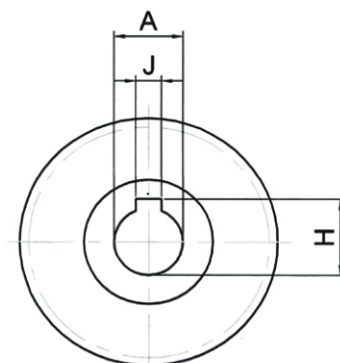


Fig. 2



模數 4 Module 4

單位/Dimension: mm

產品型號 Catalog NO.	圖號 Fig.	齒數 Z	內徑 Bore	軀徑 Hua dia	節圓直徑 Pitch dia	外徑 Out. dia	齒幅 Width	總長度 Length	J	H
			Ah7	B	C	D	E	G		
SG16-M4-20-32-2	2	20	32	55	80	88	40	75	10	35.3
SG16-M4-20-35-1	1	20	35	52	80	88	40	50	10	38.3
SG16-M4-20-40-2	2	20	40	62	80	88	40	75	12	43.3
SG16-M4-20-45-1	1	20	45	65	80	88	40	50	14	48.8
SG16-M4-22-35-1	1	22	35	52	88	96	40	50	10	38.3
SG16-M4-22-45-2	2	22	45	68	88	96	40	75	14	48.8
SG16-M4-25-32-2	2	25	32	55	100	108	40	75	10	35.3
SG16-M4-25-35-2	2	25	35	55	100	108	40	75	10	38.3
SG16-M4-25-40-2	2	25	40	62	100	108	40	75	12	43.3
SG16-M4-25-45-1	1	25	45	65	100	108	40	50	14	48.8
SG16-M4-25-55-2	2	25	55	80	100	108	40	80	16	59.3
SG16-M4-28-35-1	1	28	35	52	112	120	40	50	10	38.3
SG16-M4-28-45-2	2	28	45	68	112	120	40	75	14	48.8
SG16-M4-32-35-1	1	32	35	52	128	136	40	50	10	38.3
SG16-M4-32-45-1	1	32	45	65	128	136	40	50	14	48.8
SG16-M4-32-55-2	2	32	55	80	128	136	40	80	16	59.3
SG16-M4-32-75-2	2	32	75	110	128	136	40	100	20	80.4
SG16-M4-40-45-1	1	40	45	65	160	168	40	50	14	48.8
SG16-M4-40-60-1	1	40	60	80	160	168	40	50	18	64.4
SG16-M4-40-75-2	2	40	75	110	160	168	40	100	20	80.4



規格 Specifications

精度等級 Precision grade	DIN 6	齒面硬度 Tooth hardness	55~60HRC
齒型 Gear teeth	標準全齒深齒 Standard full depth	表面處理 Surface treatment	--
壓力角 Pressure angle	20°	齒面處理 Treatment of Tooth	研磨 Grinding
材質 Material	20CrMnTi	齒研基準面 Datum reference	內徑 Bore
熱處理 Heat treatment	高週波 Induction hardened	追加工 Secondary operations	可 Possible except on the teeth

模數 5 Module 5

單位/Dimension: mm

產品型號 Catalog NO.	圖號 Fig.	齒數 Z	內徑 Bore	殼徑 Hua dia	節圓直徑 Pitch dia	外徑 Out dia	齒幅 Width	總長度 Length	J	H
			Ah7	B	C	D	E	G		
SG16-M5-21-45-2	2	21	45	68	105	115	50	85	14	48.8
SG16-M5-21-55-2	2	21	55	80	105	115	50	90	16	59.3
SG16-M5-25-45-2	2	25	45	68	125	135	50	85	14	48.8
SG16-M5-25-55-2	2	25	55	80	125	135	50	90	16	59.3
SG16-M5-25-75-2	2	25	75	110	125	135	50	110	20	80.4

模數 6 Module 6

單位/Dimension: mm

產品型號 Catalog NO.	圖號 Fig.	齒數 Z	內徑 Bore	殼徑 Hua dia	節圓直徑 Pitch dia	外徑 Out dia	齒幅 Width	總長度 Length	J	H
			Ah7	B	C	D	E	G		
SG16-M6-21-55-2	2	21	55	80	126	138	60	100	16	59.3
SG16-M6-21-75-2	2	21	75	110	126	138	60	120	20	79.9
SG16-M6-25-55-2	2	25	55	80	150	162	60	100	16	59.3
SG16-M6-25-75-2	2	25	75	110	150	162	60	120	20	79.9

# HGL18 Grinding Spur Gears

模數 Module 2

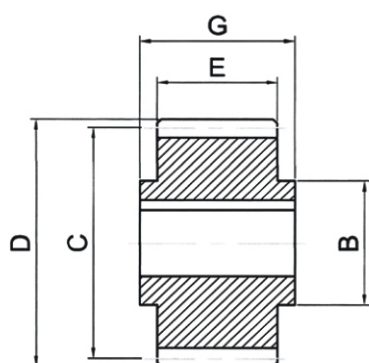


Fig.1

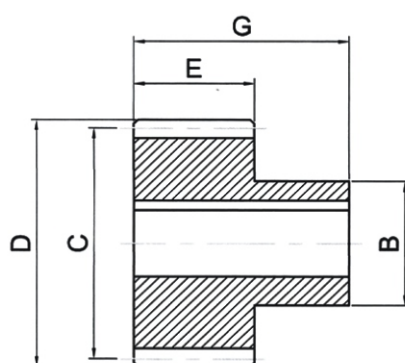
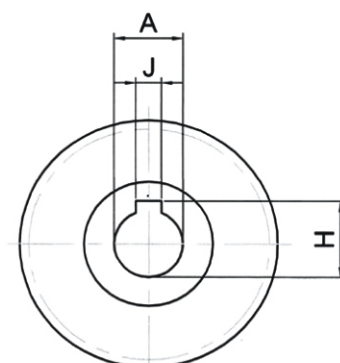


Fig. 2



模數 2 Module 2

單位/Dimension: mm

產品型號 Catalog NO.	圖號 Fig.	齒數 Z	內徑 Bore	軋徑 Hua dia	節圓直徑 Pitch dia	外徑 Out. dia	齒幅 Width	總長度 Length	J	H
			Ah7	B	C	D	E	G		
HGL18-M2-20-20-1	1	20	20	30	42.44	46.4	28	30	6	22.8
HGL18-M2-20-22-1	1	20	22	30	42.44	46.4	28	30	6	24.8
HGL18-M2-21-16-1	1	21	16	25	44.56	48.6	28	30	5	18.3
HGL18-M2-21-22-2	2	21	22	36	44.56	48.6	28	56	6	24.8
HGL18-M2-25-20-1	1	25	20	30	53.05	57.1	28	30	6	22.8
HGL18-M2-25-25-1	1	25	25	36	53.05	57.1	28	30	8	28.3
HGL18-M2-28-35-1	1	28	35	48	59.42	63.4	28	30	10	38.3
HGL18-M2-30-16-1	1	30	16	25	63.66	67.7	28	30	5	18.3
HGL18-M2-30-20-1	1	30	20	30	63.66	67.7	28	30	6	22.8
HGL18-M2-30-22-2	2	30	22	36	63.66	67.7	28	56	6	24.8
HGL18-M2-30-25-1	1	30	25	36	63.66	67.7	28	30	6	28.3
HGL18-M2-30-30-2	2	30	30	50	63.66	67.7	28	60	8	33.3
HGL18-M2-30-32-2	2	30	32	55	63.66	67.7	28	65	10	35.3
HGL18-M2-32-20-1	1	32	20	30	67.91	71.9	28	30	6	22.8
HGL18-M2-32-25-1	1	32	25	36	67.91	71.9	28	30	8	28.3
HGL18-M2-32-32-2	2	32	32	50	67.91	71.9	28	51	10	35.3
HGL18-M2-32-35-1	1	32	35	48	67.91	71.9	28	30	10	38.3
HGL18-M2-36-35-1	1	36	35	48	76.39	80.4	28	30	10	38.3
HGL18-M2-39-32-2	2	39	32	55	82.76	86.8	28	65	10	35.3
HGL18-M2-40-35-1	1	40	35	48	84.88	88.9	28	30	10	38.3



規格 Specifications

精度等級 Precision grade	DIN 6	齒面硬度 Tooth hardness	55~60HRC
齒型 Gear teeth	標準全齒深齒 Standard full depth	熱處理 Heat treatment	高週波 Induction hardened
壓力角 Pressure angle	20°	齒面精加工 Surface finish	研磨 Grinding
左旋角 Left hand angle	19.528°	齒研基準面 Datum reference	內徑 Bore
材質 Material	20CrMnTi	追加工 Secondary operations	可 Possible except on the teeth

模數 3 Module 3

單位/Dimension: mm

產品型號 Catalog NO.	圖號 Fig.	齒數 Z	內徑 Bore	殼徑 Hua dia	節圓直徑 Pitch dia	外徑 Out dia	齒幅 Width	總長度 Length	J	H
			Ah7	B	C	D	E	G		
HGL18-M3-20-22-2	2	20	22	36	63.66	69.7	28	56	6	24.8
HGL18-M3-20-25-2	2	20	25	44	63.66	69.7	28	60	8	28.3
HGL18-M3-20-30-1	1	20	30	45	63.66	69.7	28	30	8	33.3
HGL18-M3-20-30-2	2	20	30	50	63.66	69.7	28	60	8	33.3
HGL18-M3-20-32-2	2	20	32	55	63.66	69.7	28	65	10	35.3
HGL18-M3-20-35-1	1	20	35	48	63.66	69.7	28	30	10	38.3
HGL18-M3-22-25-1	1	22	25	36	70.03	76	28	30	8	28.3
HGL18-M3-22-30-1	1	22	30	45	70.03	76	28	30	8	33.3
HGL18-M3-22-35-1	1	22	35	48	70.03	76	28	30	10	38.3
HGL18-M3-25-22-2	2	25	22	36	79.58	85.6	28	56	6	24.8
HGL18-M3-25-25-1	1	25	25	36	79.58	85.6	28	30	8	28.3
HGL18-M3-25-25-2	2	25	25	44	79.58	85.6	28	60	8	28.3
HGL18-M3-25-30-1	1	25	30	45	79.58	85.6	28	30	8	33.3
HGL18-M3-25-30-2	2	25	30	50	79.58	85.6	28	60	8	33.3
HGL18-M3-25-32-2	2	25	32	55	79.58	85.6	28	65	10	35.3
HGL18-M3-25-35-1	1	25	35	48	79.58	85.6	28	30	10	38.3
HGL18-M3-25-40-1	1	25	40	70	79.58	85.6	28	50	12	43.3
HGL18-M3-25-40-2	2	25	40	70	79.58	85.6	28	70	12	43.3
HGL18-M3-30-32-2	2	30	32	55	95.5	101.5	28	60	10	35.3
HGL18-M3-30-40-2	2	30	40	70	95.5	101.5	28	70	12	45.3

# HGL18 Grinding Spur Gears

模數 Module 4

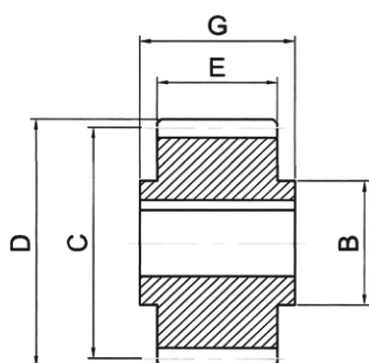


Fig.1

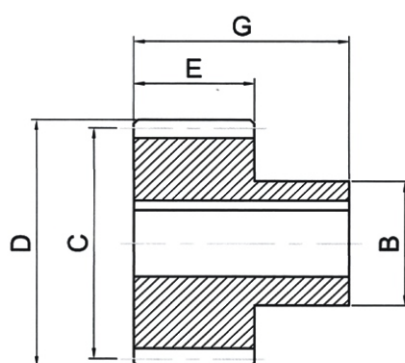
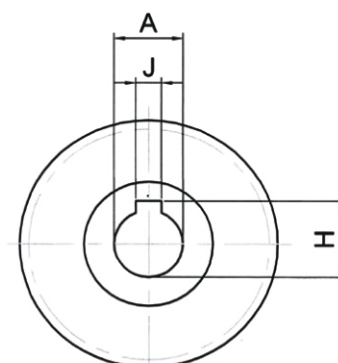


Fig. 2



模數 4 Module 4

單位/Dimension: mm

產品型號 Catalog NO.	圖號 Fig.	齒數 Z	內徑 Bore	軛徑 Hua dia	節圓直徑 Pitch dia	外徑 Out. dia	齒幅 Width	總長度 Length	J	H
			Ah7	B	C	D	E	G		
HGL18-M4-15-35-1	1	15	35	52	63.66	71.7	40	50	10	38.3
HGL18-M4-18-32-2	2	18	32	55	76.39	84.4	40	75	10	35.3
HGL18-M4-20-35-1	1	20	35	52	84.88	92.9	40	50	10	38.3
HGL18-M4-20-45-1	1	20	45	65	84.88	92.9	40	50	14	48.8
HGL18-M4-21-32-2	2	21	32	55	89.13	97.1	40	75	10	35.3
HGL18-M4-21-35-2	2	21	35	55	89.13	97.1	40	75	10	38.3
HGL18-M4-21-40-2	2	21	40	62	89.13	97.1	40	75	12	43.3
HGL18-M4-21-45-2	2	21	45	68	89.13	97.1	40	75	14	48.8
HGL18-M4-22-35-1	1	22	35	52	93.37	101.4	40	50	10	38.3
HGL18-M4-22-45-1	1	22	45	65	93.37	101.4	40	50	14	48.8
HGL18-M4-24-32-2	2	24	32	55	101.86	109.9	40	75	10	35.3
HGL18-M4-24-35-2	2	24	35	55	101.86	109.9	40	75	10	38.3
HGL18-M4-24-40-2	2	24	40	62	101.86	109.9	40	75	12	43.3
HGL18-M4-24-45-2	2	24	45	68	101.86	109.9	40	75	14	48.8
HGL18-M4-24-55-2	2	24	55	80	101.86	109.9	40	80	16	59.3
HGL18-M4-25-35-1	1	25	35	52	106.1	114.1	40	50	10	38.3
HGL18-M4-25-45-1	1	25	45	65	106.1	114.1	40	50	14	48.8
HGL18-M4-27-40-2	2	27	40	75	114.6	122.6	40	80	12	43.3
HGL18-M4-30-40-2	2	30	40	80	127.33	135.33	40	80	12	43.3
HGL18-M4-30-45-2	2	30	45	80	127.33	135.33	40	80	15	48.8



規格 Specifications

精度等級 Precision grade	DIN 6	齒面硬度 Tooth hardness	55~60HRC
齒型 Gear teeth	標準全齒深齒 Standard full depth	熱處理 Heat treatment	高週波 Induction hardened
壓力角 Pressure angle	20°	齒面精加工 Surface finish	研磨 Grinding
左旋角 Left hand angle	19.528°	齒研基準面 Datum reference	內徑 Bore
材質 Material	20CrMnTi	追加工 Secondary operations	可 Possible except on the teeth

模數 5 Module 5

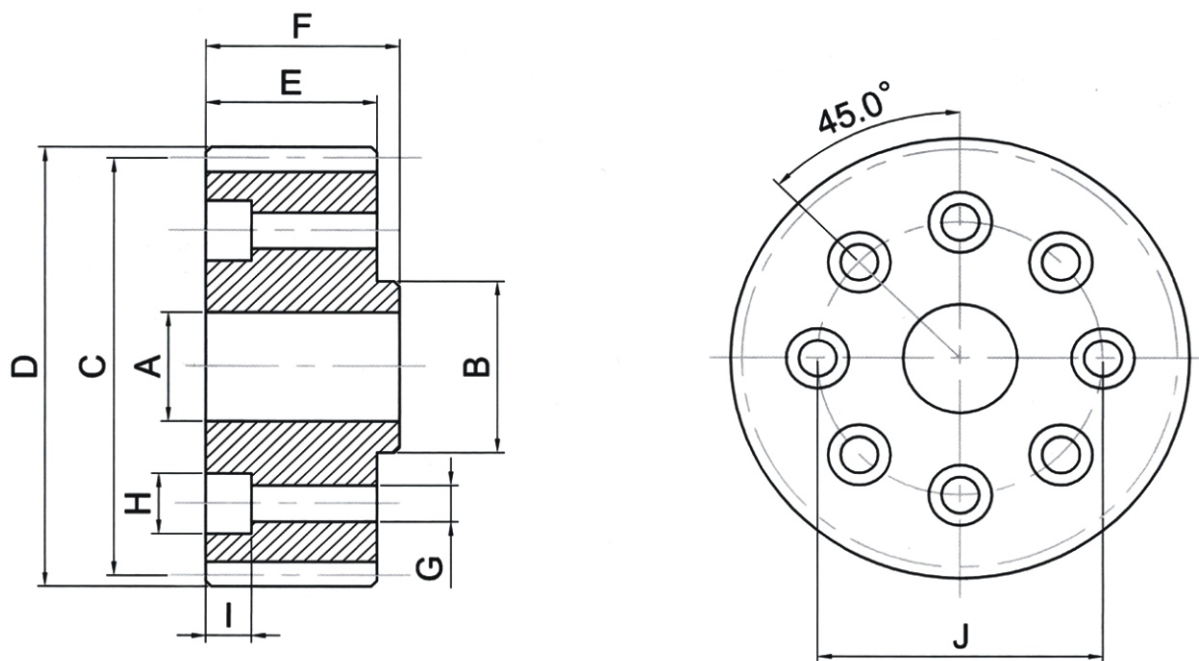
單位/Dimension: mm

產品型號 Catalog NO.	圖號 Fig.	齒數 Z	內徑 Bore	穀徑 Hua dia	節圓直徑 Pitch dia	外徑 Out dia	齒幅 Width	總長度 Length	J	H
			Ah7	B	C	D	E	G		
HGL18-M5-18-45-2	2	18	45	68	95.49	105.5	50	85	14	48.8
HGL18-M5-24-45-2	2	24	45	68	127.32	137.0	50	85	14	48.8
HGL18-M5-24-55-2	2	24	55	80	127.32	137.3	50	90	16	59.3
HGL18-M5-24-75-2	2	24	75	110	127.32	137.3	50	110	20	79.9

模數 6 Module 6

單位/Dimension: mm

產品型號 Catalog NO.	圖號 Fig.	齒數 Z	內徑 Bore	穀徑 Hua dia	節圓直徑 Pitch dia	外徑 Out dia	齒幅 Width	總長度 Length	J	H
			Ah7	B	C	D	E	G		
HGL18-M6-20-55-2	2	20	55	80	127.32	139.3	60	100	16	59.3
HGL18-M6-20-75-2	2	20	75	110	127.32	139.3	60	120	20	79.9
HGL18-M6-25-55-2	2	25	55	80	159.16	171.2	60	100	16	59.3
HGL18-M6-25-75-2	2	25	75	110	159.16	171.2	60	120	20	79.9



單位/Dimension: mm

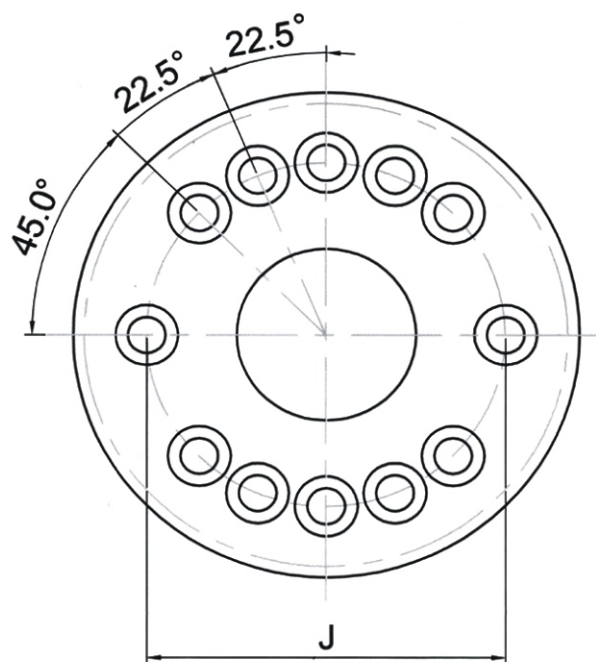
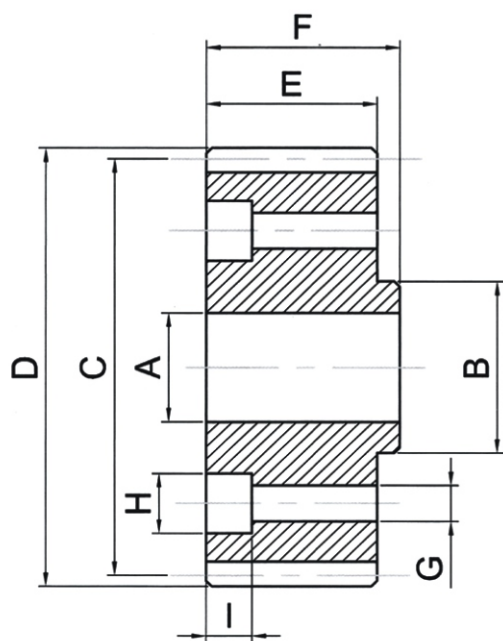
產品型號 Catalog NO.	模數 M	齒數 Z	內徑 Bore	殼徑 Hua dia	節圓直徑 Pitch dia	外徑 Out. dia	齒幅 Width	總長度 Length	G	H
			Ah6	Bh6	C	D	E	F		
HGD180-M2-26-15	2	26	15	20.0	55.20	60.50	26	29.0	5.5	10
HGD180-M2-27-15	2	27	15	20.0	57.29	61.29	30	33.5	5.5	10
HGD180-M2-29-15	2	29	15	20.0	61.54	66.50	26	29.0	5.5	10
HGD180-M2-35-15	2	35	15	20.0	74.30	79.50	26	29.0	5.5	10
HGD180-M2-29-20	2	29	20	25.0	61.54	67.00	26	30.0	6.6	11
HGD180-M2-33-20	2	33	20	31.5	70.00	75.00	26	30.0	6.6	11
HGD180-M2-36-20	2	36	20	31.5	76.39	80.39	30	34.0	6.6	11
HGD180-M2-37-20	2	37	20	31.5	78.50	83.50	26	30.0	6.6	11
HGD180-M3-31-20	3	31	20	31.5	98.70	106.50	31	35.5	6.6	11



### 規格 Specifications

精度等級 Precision grade	DIN 6	齒面硬度 Tooth hardness	55~60HRC
齒型 Gear teeth	標準全齒深齒 Standard full depth	熱處理 Heat treatment	高週波 Induction hardened
壓力角 Pressure angle	20°	齒面精加工 Surface finish	研磨 Grinding
左旋角 Left hand angle	19.528°	齒研基準面 Datum reference	軸徑 Bore
材質 Material	20CrMnTi	追加工 Secondary operations	可 Possible except on the teeth

I	J	周長 L	變位系數 X	重量 Kg	產品型號 Catalog NO.
12	31.5	173.33	0.4065	0.4	HGD180-M2-26-15
11	31.5	180.00	0	0.5	HGD180-M2-27-15
12	31.5	193.33	0.4150	0.5	HGD180-M2-29-15
12	31.5	233.33	0.3819	0.8	HGD180-M2-35-15
14	40.0	193.33	0.4150	0.5	HGD180-M2-29-20
14	50.0	220.00	0.3928	0.7	HGD180-M2-33-20
8	50.0	240.00	0	1.2	HGD180-M2-36-20
14	50.0	246.76	0.4209	0.9	HGD180-M2-37-20
9	50.0	310.00	0.3540	1.8	HGD180-M3-31-20



單位/Dimension: mm

產品型號 Catalog NO.	模數 M	齒數 Z	內徑	穀徑	節圓直徑	外徑	齒幅	總長度	G	H
			Bore	Hua dia	Pitch dia	Out. dia	Width	Length		
			Ah6	Bh6	C	D	E	F		
HGD280-M2-40-31.5	2	40	31.5	40	84.90	90	26	30	6.6	11
HGD280-M2-45-31.5	2	45	31.5	40	95.50	100	26	30	6.6	11
HGD280-M3-30-20	3	30	20	40	95.49	101.49	35	39	6.6	11



### 規格 Specifications

精度等級 Precision grade	DIN 6	齒面硬度 Tooth hardness	55~60HRC
齒型 Gear teeth	標準全齒深齒 Standard full depth	熱處理 Heat treatment	高週波 Induction hardened
壓力角 Pressure angle	20°	齒面精加工 Surface finish	研磨 Grinding
左旋角 Left hand angle	19.528°	齒研基準面 Datum reference	軸徑 Bore
材質 Material	20CrMnTi	追加工 Secondary operations	可 Possible except on the teeth

I	J	周長 L	變位系數 X	重量 Kg	產品型號 Catalog NO.
14	63	266.69	0.3792	1.0	HGD280-M2-40-31.5
14	63	300.00	0.3267	1.4	HGD280-M2-45-31.5
10	63	300.00	0	1.5	HGD280-M3-30-20

負載表中給出的數據基於均勻平滑的油脂充分潤滑情況下給出的。而實際應用中的情況是多種多樣的，因此要考慮適當的系數：SB,KA,LKHB和Fn（參看符號注釋）來配相應的工况。

The datas of the detail table are based on the condition fully and smooth lubricated. But the practical applications are varied. So the appropriate parameter need to be taken in account: SB,KA,LKHB and Fn(see symbol note)to match corresponding working condition.

### 切向力計算公式 Tangential force design formulas

$$a=V/tb \quad [KN]$$

$$Fu=(m.g+ma)/1000 \text{ (用於垂直軸 suitable for vertical axis)} \quad [KN]$$

$$Fu=(m.g.\mu.+m,a)/1000 \text{ (用於水平軸 suitable fo horizontal axis)} \quad [KN]$$

$$Fuzul+Fu Tab/(KA.SB.Fn.LKH\beta) \quad [KN]$$

條件 $Fu < Fu\ zul$ 必須滿足 The condition  $Fu < Fu\ zul$  must be satisfied

### 載荷系數 KA Loading coefficient KA

驅動 Driver	載荷類型取決於被驅動的部件 The loading types depend on the driven parts		
	均勻 Uniform	中等衝擊 Medium driven	較大衝擊 High driven
均勻 Uniform	1.00	1.25	1.75
輕微衝擊 Light driven	1.25	1.50	2.00
中等衝擊 Medium driven	1.50	1.75	2.25

### 安全系數 SB Safty factor SB

安全系數允許根據經驗數據計算（SB=1.1~1.4）

The safety factor can be calculated basing on the empirical data.(SB=1.1~1.4)

### 使用壽命系數 Fn Life factor Fn

考慮齒輪綫速度和潤滑情況。 Consider the pinion thread speed and lubrication.

潤滑 Lubrication		kontin.	每日 Every day	每月 Every month
齒輪總速度 Total pinion speed				
m/sec	m/min			
0.5	30	0.85	0.95	von 3 bis 10
1.0	60	0.95	1.10	
1.5	90	1.00	1.20	
2.0	120	1.05	1.30	
3.0	180	1.10	1.50	
5.0	300	1.25	1.90	

### 綫性負載分布系數 Lkhβ Linear load distribution coefficient Lkhβ

綫性負載分布系數考慮解除壓力，同時描述齒寬範圍內的負載分布。

The linear load distribution coefficient is considering of to release the pressure and discription the load coefficient at the range of tooth wide.

LKHβ=1.1軸承支撐

LKHβ=1.1 Bearing support

LKHβ=1.2輸出軸端是預載軸承

LKHβ=1.2 The output shaft end is preloading barings.

LKHβ=1.5輸出軸端為普通軸承

LKHβ=1.5 The output shaft end is the general bearings.

### 垂直運行

被移動質量	m=300kg
速度	v=1.08m/s
加速時間	tb=0.27s
重力加速度	g=9.81m/s <sup>2</sup>
負載系數	KA=1.2
使用壽命系數	fn=1.1 (連續潤滑)
安全系數	SB=1.2
綫性負載分布系數	LKHβ=1.2

### 計算過程

$a=v/tb$   $a=1.08/0.27=4m/s^2$   
 $F_u=(m.g+m.a)/1000$   
 $F_u=(300 \times 9.81+300 \times 4)/1000=4.1KN$   
 假設驅動力：齒條SHGH020-100 淬火磨削 斜齒  
 模2齒輪，20CrMnTi 滲碳淬火，20齒，容許最大驅  
 動力Fu Tab=11.5KN  
 $F_{uzul}=F_u Tab/(KA.SB.fn.LKH\beta)$   
 $F_{uzul}=11.5/(1.2 \times 1.2 \times 1.1 \times 1.2)=6.05KN$   
 條件  
 $F_{uzul}>F_u: 6.5KN>4.1KN$  滿足

### 結果

齒條：SHGH020-100  
 齒輪：HGL18-M2-20-20

### Vertical running

The mess be moved	m=300kg
Speed	v=1.08m/s
Acceleration time	tb=0.27s
Acceleration of gravity	g=9.81m/s <sup>2</sup>
Load cefficient	KA=1.2
Life factor	fn=1.1 (Continuous lubrication)
Safe factor	SB=1.2
Linear load distribution coefficient	LKHβ=1.2

### Calculate

$a=v/tb$   $a=1.08/0.27=4m/s^2$   
 $F_u=(m.g+m.a)/1000$   
 $F_u=(300 \times 9.81+300 \times 4)/1000=4.1KN$   
 Hypothetical driving force: Rack SHGH020-100  
 high iduction,2 module helical pinion,20CrMnTi  
 20 tooth,the maximum driving force allowed  
 $F_u Tab=11.5KN$   
 $F_{uzul}=F_u Tab/(KA.SB.fn.LKH\beta)$   
 $F_{uzul}=11.5/(1.2 \times 1.2 \times 1.1 \times 1.2)=6.05KN$   
 The condition  
 $F_{uzul}>F_u: 6.5KN>4.1KN$  Satisfied

### Result

Rack: SHGH020-100  
 Pinion: HGL18-M2-20-20

### 水平運行

被移動質量	m=820kg
速度	v=2m/s
加速時間	tb=1s
重力加速度	g=9.81m/s <sup>2</sup>
摩擦系數	μ=0.1
負載系數	KA=1.5
使用壽命系數	fn=1.05
安全系數	SB=1.2
總性負載分布系數	LKHβ=1.5

### 計算過程

$a=v/tb$   $a=2/1=2m/s^2$   
 $F_u=(m.g.u+m.a)/1000$   
 $F_u=(820 \times 9.81+820 \times 2)/1000=2.44KN$   
 假設驅動力：齒條SSFH030-100 淬火磨削 直齒  
 模3齒輪，20CrMnTi 滲碳淬火，20齒，容許最大驅  
 動力Fu Tab=11.5KN  
 $F_{uzul}=F_u Tab/(KA.SB.fn.LKH\beta)$   
 $F_{uzul}=11.5/(1.5 \times 1.2 \times 1.05 \times 1.5)=4.06KN$   
 條件  
 $F_{uzul}>F_u: 4.06KN>2.44KN$  滿足

### 結果

齒條：SSFH030-100  
 齒輪：SG16-M3-20-20

### Horizontal running

The mess be moved	m=820kg
Speed	v=2m/s
Acceleration time	tb=1s
Acceleration of gravity	g=9.81m/s <sup>2</sup>
Friction coefficient	μ=0.1
Load cefficient	KA=1.5
Life factor	fn=1.05
Safe factor	SB=1.2
Linear load distribution coefficient	LKHβ=1.5

### Calculate

$a=v/tb$   $a=2/1=2m/s^2$   
 $F_u=(m.g.u+m.a)/1000$   
 $F_u=(820 \times 9.81+820 \times 2)/1000=2.44KN$   
 Hypothetical driving force: Rack SSFH030-100  
 high iduction,3 module straight pinion,20CrMnTi  
 20 tooth,the maximum driving force allowed  
 $F_u Tab=11.5KN$   
 $F_{uzul}=F_u Tab/(KA.SB.fn.LKH\beta)$   
 $F_{uzul}=11.5/(1.5 \times 1.2 \times 1.05 \times 1.5)=4.06KN$   
 The condition  
 $F_{uzul}>F_u: 4.06KN>2.44KN$  Satisfied

### Result

Rack: SSFH030-100  
 Pinion: SG16-M3-20-20

## 齒輪齒條驅動最大容許驅動力 KN Maximum permissible drive of pinion and rack drive

在良好的油脂潤滑系統情況下，速度是1.5m/s，SB=1.0，以及綫性負載分布系數為1.0，齒輪材料為20CrMnTi，滲碳淬火。表中給出的數據是最佳條件下的最大推薦值。

Under the great condition of grease lubrication system, the speed is 1.5m/s, SB=1.0, the linear distribution coefficient is 1.0, the pinion material is 20CrMnTi, carburized and hardened. The data of the table below is the maximum recommended value under the best condition.

### 模數2.0 Module 2.0

齒輪齒數 Tooth quantity	直齒的最大驅動力(KN) Maximum driving force of straight teeth				斜齒的最大驅動力(KN) The Maximum driving force of helical teeth			
	節圓直徑 (mm) Pitch diameter	淬火調質齒條 Quenched rack	感應淬火齒條 Hardened rack	淬火磨削齒條 Grinding rack	節圓直徑 (mm) Pitch diameter	淬火調質齒條 Quenched rack	感應淬火齒條 Hardened rack	淬火磨削齒條 Grinding rack
		SSFQ	SSFH	SSGH		SHFQ	SHFH	SHGH
15	30	1.5	4	6	31.83	1.5	5	8
18	36	2	5	8	38.2	2	5	10
20	40	2	5.5	9	42.44	2.5	7	11.5
21	42	2	5.5	9.5	44.6	2.5	7.5	12
25	50	2.5	6.5	11.5	53.05	3	9	14.5
27	54	3	7	12	57.29	3.5	9	15
30	60	3.5	7	12.5	63.66	4	9.5	15
32	64	3.5	7	12.5	67.9	4	9.5	15.5
36	72	4	7	12.5	76.39	5	9.5	15.5
40	80	4.5	7	12.5	84.88	5	9.5	15.5

### 模數3.0 Module 3.0

齒輪齒數 Tooth quantity	直齒的最大驅動力(KN) Maximum driving force of straight teeth				斜齒的最大驅動力(KN) The Maximum driving force of helical teeth			
	節圓直徑 (mm) Pitch diameter	淬火調質齒條 Quenched rack	感應淬火齒條 Hardened rack	淬火磨削齒條 Grinding rack	節圓直徑 (mm) Pitch diameter	淬火調質齒條 Quenched rack	感應淬火齒條 Hardened rack	淬火磨削齒條 Grinding rack
		SSFQ	SSFH	SSGH		SHFQ	SHFH	SHGH
15	45	3	8.5	10.5	47.75	4	9	14.5
18	54	4.5	10.5	14	57.3	5	11	17.5
20	60	5	11.5	16	63.66	5.5	12	20
22	66	5.5	13	17.5	70.03	6.5	13.5	22
25	75	6.5	14.5	20	79.57	7.5	15.5	25.5
28	84	7	16	22.5	89.13	8	17	27.5
30	90	7.5	16	22.5	95.49	9	17.5	27.5
32	96	8	16	22.5	101.86	9.5	17.5	28
36	108	9.5	16.5	23	114.59	11	17.5	28.5
40	120	10.5	16.5	23.5	127.33	12	17.5	28.5

# 齒輪齒條驅動最大容許驅動力 KN Maximum permissible drive of pinion and rack drive

## 模數4.0 Module 4.0

齒輪齒數 Tooth quantity	直齒的最大驅動力(KN) Maximum driving force of straight teeth				斜齒的最大驅動力(KN) The Maximum driving force of helical teeth			
	節圓直徑 (mm) Pitch diameter	淬火調質齒條 Quenched rack	感應淬火齒條 Hardened rack	淬火磨削齒條 Grinding rack	節圓直徑 (mm) Pitch diameter	淬火調質齒條 Quenched rack	感應淬火齒條 Hardened rack	淬火磨削齒條 Grinding rack
		SSFQ	SSFH	SSGH		SHFQ	SHFH	SHGH
15	60	6	17	20	63.66	7.5	17	27.5
18	72	8	20	26.5	76.39	9	21	33.5
20	80	9	22.5	30	84.88	10.5	23.5	37
22	88	10	24.5	33	93.37	11.5	26	41
25	100	11.5	28	37.5	106.1	13	30	47
28	112	13	28.5	40.5	118.84	15	31	49.5
32	128	15	29	41	135.82	17	31.5	50.5
36	144	17	29.5	41.5	152.79	19.5	31.5	51
40	160	18.5	29.5	42	169.77	21.5	32	51.5

## 模數5.0 Module 5.0

齒輪齒數 Tooth quantity	直齒的最大驅動力(KN) Maximum driving force of straight teeth				斜齒的最大驅動力(KN) The Maximum driving force of helical teeth			
	節圓直徑 (mm) Pitch diameter	淬火調質齒條 Quenched rack	感應淬火齒條 Hardened rack	淬火磨削齒條 Grinding rack	節圓直徑 (mm) Pitch diameter	淬火調質齒條 Quenched rack	感應淬火齒條 Hardened rack	淬火磨削齒條 Grinding rack
		SSFQ	SSFH	SSGH		SHFQ	SHFH	SHGH
12	60	7	17.5	19	63.66	7.5	17.5	28
15	75	9.5	26.5	31.5	79.58	12	27	43
18	90	12.5	31.5	42	95.49	14.5	33	52.5
21	105	15	37	49.5	111.41	17	39	61.5
24	120	17	42.5	57.5	127.32	20	45	71
25	125	18	44	59.5	132.63	20.5	47	74.5
27	135	19.5	45	61	143.24	22.5	48	75.5
30	150	22	45.5	62	159.16	25	49	76

# 齒輪齒條驅動最大容許驅動力 KN Maximum permissible drive of pinion and rack drive

## 模數6.0 Module 6.0

齒輪齒數 Tooth quantity	直齒的最大驅動力(KN) Maximum driving force of straight teeth				斜齒的最大驅動力(KN) The Maximum driving force of helical teeth			
	節圓直徑 (mm) Pitch diameter	淬火調質齒條 Quenched rack	感應淬火齒條 Hardened rack	淬火磨削齒條 Grinding rack	節圓直徑 (mm) Pitch diameter	淬火調質齒條 Quenched rack	感應淬火齒條 Hardened rack	淬火磨削齒條 Grinding rack
		SSFQ	SSFH	SSGH		SHFQ	SHFH	SHGH
13	78	12	30	33.5	82.76	12	30	47
15	90	15.2	38	45.5	95.5	15.6	39	62.5
18	108	18.4	46	61	114.6	19	47.5	76
20	120	20.4	51	68	127.33	21.4	53.5	85
23	138	23.4	58.5	79	146.43	24.8	62	98.5
25	150	24.6	61.5	86	159.16	26.6	66.5	107
30	180	25.2	63	89	190.99	29.7	67.5	109

## 模數8.0 Module 8.0

齒輪齒數 Tooth quantity	直齒的最大驅動力(KN) Maximum driving force of straight teeth				斜齒的最大驅動力(KN) The Maximum driving force of helical teeth			
	節圓直徑 (mm) Pitch diameter	淬火調質齒條 Quenched rack	感應淬火齒條 Hardened rack	淬火磨削齒條 Grinding rack	節圓直徑 (mm) Pitch diameter	淬火調質齒條 Quenched rack	感應淬火齒條 Hardened rack	淬火磨削齒條 Grinding rack
		SSFQ	SSFH	SSGH		SHFQ	SHFH	SHGH
12	96	19.1	45.5	49.5	101.86	19.1	45.5	72.5
15	120	28.6	68	82	127.33	29.4	70	111.5
18	144	34.5	82	109	152.79	35.7	85	135.5
20	160	38.2	91	121.5	169.77	40.11	95.5	151.5
23	184	43.8	104.5	141	195.24	46.41	110.5	176
25	200	45.4	108	152.5	212.21	48.93	116.5	187
30	240	46.2	110	155.5	254.66	49.77	118.5	191

## 齒條和齒輪驅動系統精度 The system accuracy of pinion and rack drive

系統精度包括接距誤差和背隙，參考下表：The system accuracy includes gap error and backlash, refer to the following table:

系統精度等級 The system precision grade	齒條型號 Rack code	齒條精度等級 Rack precision grade	齒條節距誤差 mm/1000 Rack pitch error mm/1000	齒輪齒條背隙 mm Rack backlash mm
高精度 High precision	SSGH, SHGH	DIN6	0.036	0.02
中等精度 Medium precision	SHFH	DIN7	0.06	0.03
	SSFH	DIN8	0.08	0.04
	SHFQ SSFQ	DIN9	0.12	0.06

本樣冊所提供的相關信息僅供參考，可根據客戶需求做出相應改動。  
The information provided in this catalog is for reference only and can be changed according to customer requirements.

# 战略合作伙伴

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## 臺灣精特傳動科技有限公司

TAIWAN JINGTE TRANSMISSION TECHNOLOGY CO., LTD.



地址: 福建省泉州市晋江市安海鎮桐林工業區

電話: 13799879353 傳真: 0595-85709918

客服電話: 18859980168

網址: [www.jtcdkj.com](http://www.jtcdkj.com)

郵箱: [info@jtcdkj.com](mailto:info@jtcdkj.com)