



HELICAL GEAR REDUCERS

成大齒輪減速機



外型安裝尺寸與德國領導品牌相容

INSTALLATION DIMENSION ARE CONSISTENT WITH GERMAN MODEL





公司介紹 COMPANY PROFILE

1. 1960年本公司董事長陳茂正先生創設"成大機器廠"於高雄市自強二路，工廠取名"成大"乃本於其對母校成功大學機械系在機械專業知識教育養成之感恩及飲水思源之情。
2. 成大機器廠成立後，專門從事汽車船舶引擎曲軸之研磨再生，汽缸搪缸及柴油引擎校正等機械加工工程，當時為南台灣之翹楚，由於技術精良服務親切，開業後旋即聞名遐邇，生意蓬勃。
3. 1971年本於公司發展應有自主性產品，才能永續經營遂與日本減速機製造廠技術合作，開始生產製造自有品牌之成大齒輪減速機，發展至今，公司員工近90名，產品以自有之CHENTA品牌行銷全球。主要市場為台灣、亞洲、美洲及中東，至今已執台灣業界之牛耳。並在海外設立美國分公司及中國上海分公司。
4. 建廠以來，本公司即本著"結合一流人才，研發製造高品質的產品"為信念。產品政策以"品質保證" "交貨準確" "價格競爭" "生產合理" 及"行銷國際"為追求目標。
5. 累積40多年之機械製造經驗及誠信經營精神，本公司已自然形成一種優良的公司文化，此精神文化乃是公司最寶貴之資源，表諸文字即是"新" "實" "勤" "效"，乃創新、信實、勤快、效益，之意也。
6. 全體員工受此公司文化之薰陶，工作勤奮盡忠職守。在良好工作環境下，協力合作積極創新。使公司持續穩定發展，營造共同效益。
7. 本公司將在現有資源文化基礎上，繼續秉持敬業精神，以客戶至上的服務態度，精益求精，生產高品質具競爭價位之齒輪減速機回饋國內外客戶，與客戶攜手成長，以臻永續經營之目標。

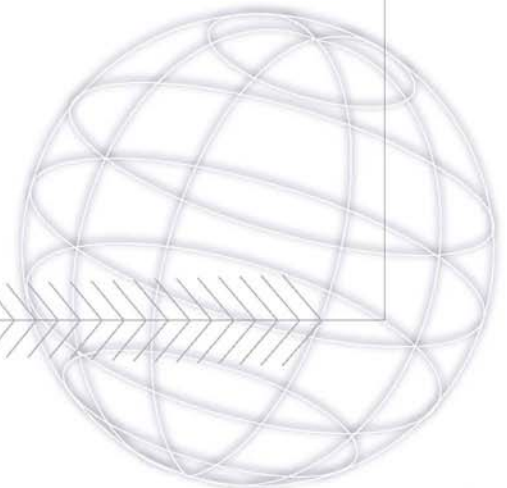
公司概要

公司名稱：成大精機工業股份有限公司
CHENTA PRECISION MACHINERY IND. INC.

成立：民國60年（1971年）

職工人數：90名

廠房面積：仁武廠7000m²
上海廠6800m²





COMPANY PROFILE

1. IN 1960, Mr. Mao Cheng Chen, president of the company, and two other colleagues in the department of Mechanical Engineering of the Tainan Engineering College (predecessor of Cheng Kung University) established a company called "Chen Ta Machinery Works". It was named "Chen Ta" in remembrance of, and also giving acknowledgement to, their alma mater, Cheng Kung University (called Chen Ta in short) from where Mr. Chen and his colleagues had received their specialized mechanical education.
2. Chen Ta Machinery Works specialized in machining jobs such as grinding/re-building of the crankshafts of automobile and vessel engines, cylinder overhaul, and diesel engine adjustment. Back then, she was the best of her field in southern Taiwan. Due to the excellent technique and the cordial service, the company name was soon well known and the business became prosperous.
3. In 1971, to support a long-term operation, the company needed her own products, so the technique cooperation between CHENTA and Japan reducer manufacturer began. From then on, CHENTA started manufacturing her own brand, "CHENTA GEAR REDUCERS". Now the company has about 90 employees, and her products have been marketing to the world under the name of "CHENTA". The major markets are in Taiwan, Asia, and America. In Taiwan, she remains at the top of the field and also established branch offices in America and in Shanghai (in China).
4. Since the beginning of the company, our conviction is to "Gather excellent human resource, and research and manufacture high quality products". Our product policy is targeting at "Guaranteed Quality", "On Time Delivery", "Competitive Prices", "Rational Production", and "International Marketing".
5. With more than 40 years of experience in mechanical manufacturing and honest operation, a fine culture has naturally grown inside the cooperation. This spirit is the most precious resource of our company. The motto of our company is based on "INNOVATION", "HONESTY", "DILIGENCE", and "EFFICIENCY".
6. Influenced gradually under such fine culture, all employees in CHENTA work hard and take responsibility. They cooperate with each other and innovate actively. With their efforts, CHENTA keep developing and growing up to fight for the mutual benefit.
7. To reach our long term operation goal, based on the company's existing cultural resources, we will: have high expertise in the field; serve our customers with respect; constantly improve ourselves; manufacture high quality and affordable speed reducers for customers throughout the world, all so that we can grow together with our customers.

COMPANY PROFILE

Company Name: CHENTA PRECISION MACHINERY IND. INC.

Established: 1971

Employee: 90 persons

Plant Sizes: Jen Wu Plant 7000m²

Shanghai Plant 6800m²

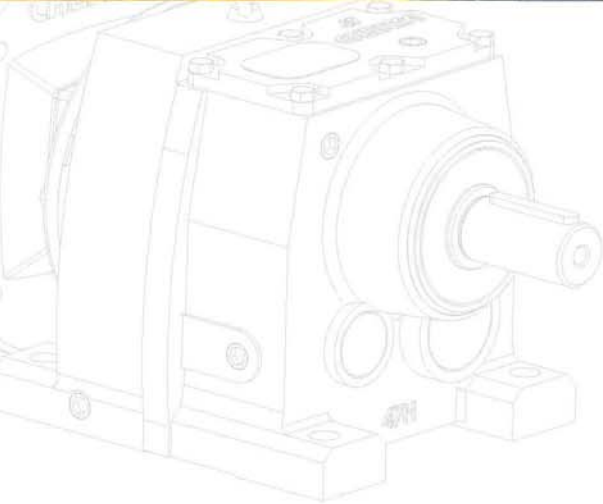
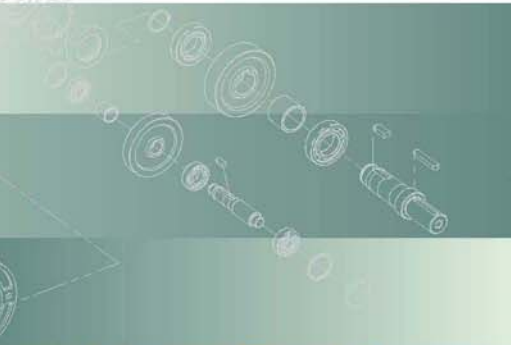
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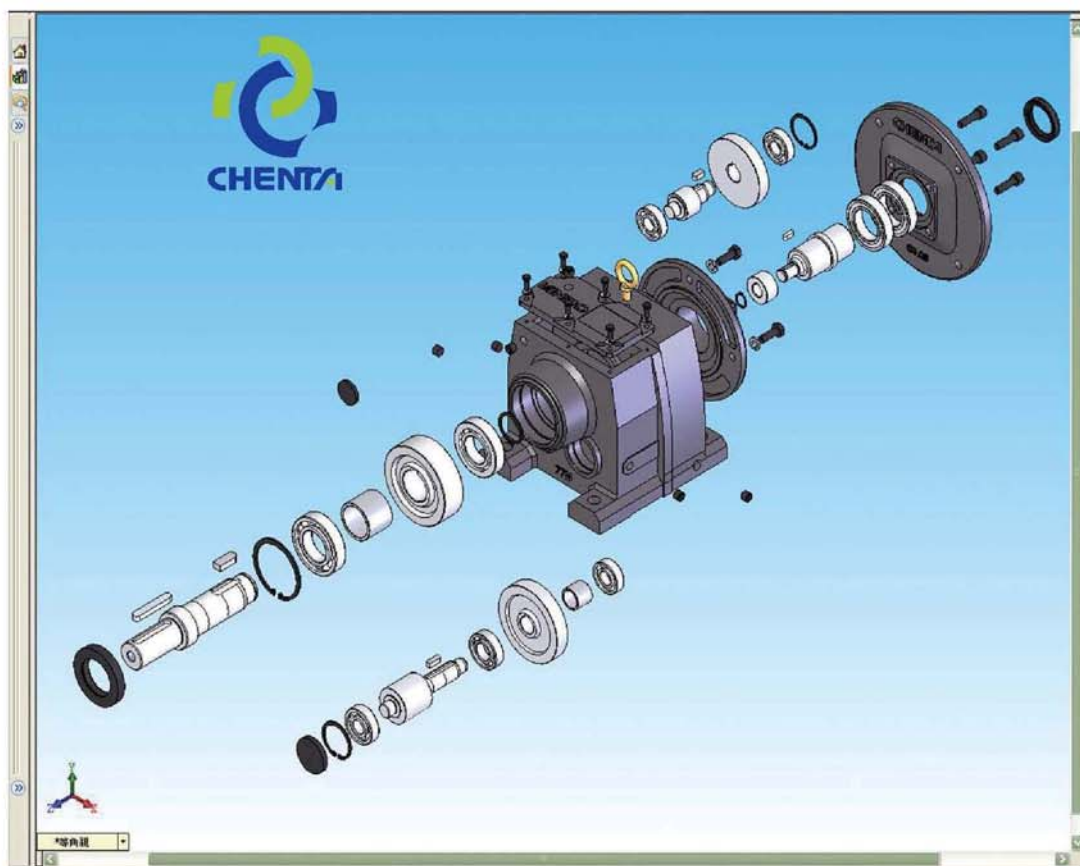
Process & Measure

加工及量測



本公司除了原有的標準2D繪圖軟體進行設計工作，也導入了3D 機械設計軟體。完整的3D能表現接近實際的外型，使客戶能了解產品的整體架構，進行更深入的討論修改時，能與客戶在溝通上更無障礙。在交期上，更能大大縮短設計、工程圖、設計修改的時間，以最短時間供應，協助客戶提升市場競爭力。另外，許多客戶也已經採用3D軟體進行機械設備的設計，使得市面上對3D的需求性日益提高。未來，3D運用會更加廣泛。

Besides standard 2D CAD drawing software, we also lead in 3D Mechanical design software to design our products. Complete 3D drawing simulates to the real-world condition to make customers get the whole structure of the product. For further discussion and amendment, it makes communicate more easily. As for delivery, it shortens the time for design, CAD drawing and amending. It helps get products to market fast; in the mean while, promote the competition on market. Furthermore, many customers also use 3D software for mechanical design and it makes the need for 3D become more and more. In the future, the use for 3D is becoming general.



新型臥、立式齒輪減速機 產品特點說明

Features



- 1) 根據德國國家標準(DIN)，專業設計之齒輪，高效率、高強度、低噪音。
- 2) 規格齊全可符合多樣化安裝方式，有立式、臥式、雙軸式、馬達直結式等。
- 3) 本體材質採灰口鑄鐵增加強韌性耐衝擊。
- 4) 為了提昇齒輪減速機的強度及使用壽命，減速比30:1以上均設計為三段式齒輪組；減速比5:1~25:1則有二段及三段可供選擇(請參考P24~P27)
- 5) 入力第一段齒軸 (Input Pinion)，有2只軸承支撐，運轉時穩定性高，有別於一般只採用單側一只軸承支撐之設計。
- 6) 入力法蘭採插入式聯結設計，可自行安裝IEC或NEMA規格之馬達。
- 7) 速比變化增加 1/5 ~ 1/120。
- 8) 可負載馬力範圍加大 1/4HP ~ 75HP。
- 9) 零件精加工更加靜音，傳動效率提高。
- 10) 外部安裝尺寸及軸心尺寸和德國製之SEW及Flender等廠牌之同型機種可以互相符合。
- 11) 結構外型美觀，堅固。

Features/

- 1) According to German Institute for Standardization (DIN) design - high efficiency, high strength, and low noise.
- 2) Complete specifications come out diverse installations.
- 3) Cast iron made housing strengthen the crash-against.
- 4) In order to improve the intensity and service life of gear reducer, the speed ratio of 30:1~120:1 are designed as three stages gear sets, and the speed ratio 5:1~25:1 have two stages and three stages at your choice (see P.24~P.27)
- 5) Differing from only 1 bearing support, our 2 bearings support Input Pinion come out steady rotation.
- 6) Motor's shaft Insert design on Input Flange make easily to install IEC or Nema Motor.
- 7) Wide range ratio from 1/5 to 1/120
- 8) Horsepower range from 1/4HP to 75HP
- 9) Gear parts with precise procession make gears rotation even quieter and more efficient.
- 10) Installation and shaft dimensions are compatible with German brand such as SEW and Flender.
- 11) Beautify the appearance and lighten the weight.



新型齒輪減速機之型號編碼說明 Numbering System

- M 螺旋齒輪 | HELICAL GEAR
- H 機型 | MODEL
- F 入力聯結方式 | INPUT TYPE
- 037 型號 | SIZE
- 005 速比 | RATIO
- QQ 法蘭框號/入力軸徑 | FLANGE FRAME/INPUT SHAFT

M H F 037 005 QQ



新型齒輪減速機之型號編碼說明 Numbering System

螺旋齒輪 Helical Gear	機型 Model	入力聯結方式 Input Type	型號 Size	速比 Ratio	法蘭框號/入力軸徑 Flange Frame/Input Shaft	馬達直結式欄位 Column only for Couple with Motor		
M	H	F	037	005	QQ	電壓 Voltage	頻率 HZ	極數 Pole
	MHF	P16	臥式入力法蘭 Type of Hollow-Bore Input with Flange (foot mounting)					
	MHD	P17	臥式雙軸 Type of Double Solid Shafts (foot mounting)					
	MHM	P18	臥式馬達直結 Type of Couple with Motor (foot mounting)					
	MVF/MWF	P19	立式入力法蘭 Type of Hollow-Bore Input with Flange (flange mounting)					
	MVD/MWD	P20	立式雙軸 Type of Double Solid Shafts (flange mounting)					
	MVM/MWM	P21	立式馬達直結 Type of Couple with Motor (flange mounting)					

機型 Model	入力聯結方式 Input Type
H 臥式 Foot Mounting	F 法蘭入力 IEC B5 Input Flange IEC B5
V 立式 標準出力法蘭-大 Flange Mounting - big flange	B 法蘭入力 IEC B14 Input Flange IEC B14
W 立式 標準出力法蘭-小 Flange Mounting - small flange	N 法蘭入力 NEMA Input Flange NEMA
	D 實心入力 Input Solid Shaft
	M 馬達直結 Couple with Motor

型號 Size	速比 Ratio
037 37	005 1/5
047 47	010 1/10
067 67	015 1/15
077 77	020 1/20
087 87	025 1/25
097 97	030 1/30
107 107	035 1/35
137 137	040 1/40
	045 1/45
	050 1/50
	055 1/55
	060 1/60
	065 1/65
	070 1/70
	080 1/80
	090 1/90
	100 1/100
	110 1/110
	120 1/120

法蘭框號/入力軸徑 Flange Frame/Input Shaft
QQ I.公制框號 IEC standard : 4-POLE
01 1/4HP =11
02 1/2HP =14
03 1HP =19
04 2HP =24
05 3HP =28
06 5HP =28
07 7.5/10HP =38
08 15/20HP =42
09 25/30HP =48
10 40HP =55
11 50/60HP =60
12 75HP =65
II.英制框號 NEMA standard
01 56C
02 143T
04 182/184T
06 213/215T
08 254/256T
III.實心入力軸徑 Input Shaft Diameter
16 =16
19 =19
24 =24
28 =28
38 =38
42 =42
48 =48
55 =55

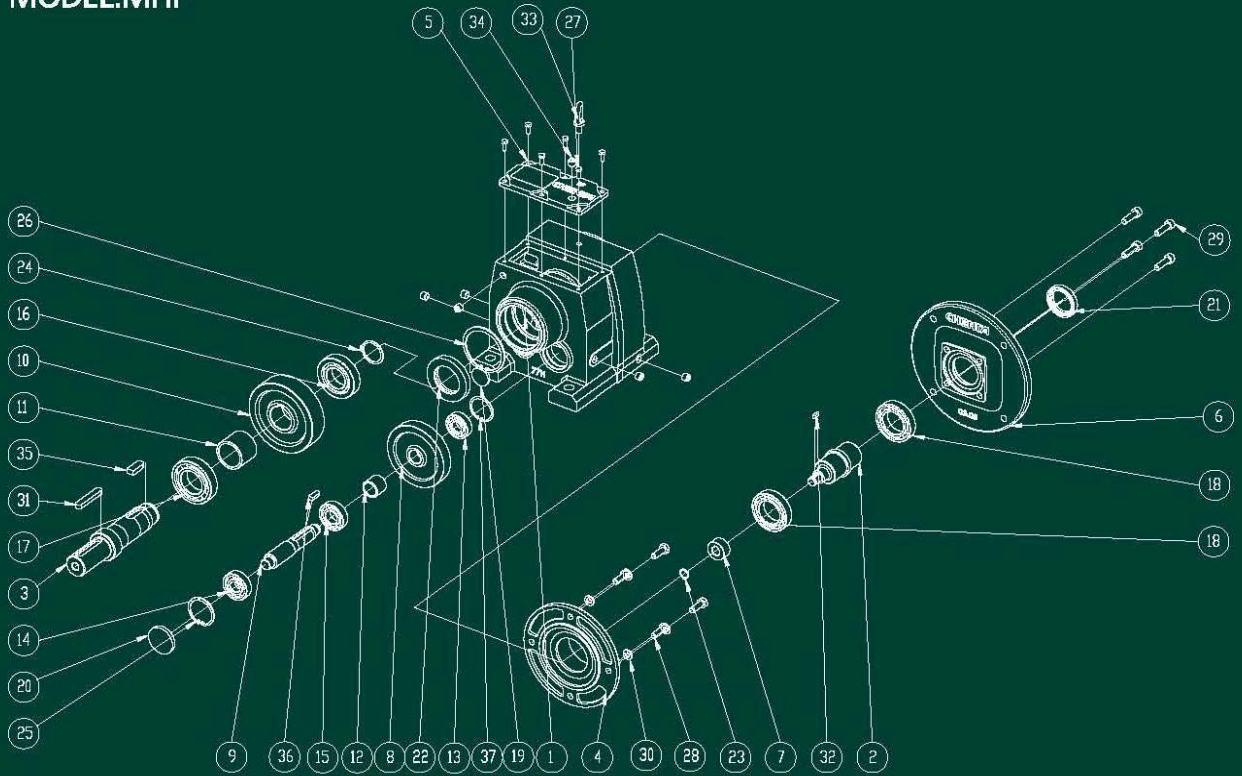
電壓 Voltage	頻率 HZ	極數 Pole
02 220/280	5 50HZ	2 2P
04 240/415	6 60HZ	4 4P
05 220/440		6 6P
06 220/230		8 8P
07 220/400		
08 230/440		
09 240/480		
10 120/208		
11 200/346		
12 208/220		
13 208/240		
14 380/660		

※選用馬達直結式請告知：馬達之電壓、頻率、極數、相數、防塵等級、是否加裝煞車
* Please specify Voltage, Hz, Pole, Phase, IP grade, Brake require or not if type of Couple with Motor needed.

*實際速比請參照24-27頁
*FOR ACTUAL RATIO, PLEASE REFER TO P.24-27
備註：本系列螺旋齒輪減速機其法蘭外型安裝尺寸，經設計和德國領導品牌SEW相尋
REMARK: THE MOUNTING DIMENSION IS COMPATIBLE WITH GERMAN BRAND SUCH AS "SEW".

零件分解圖 (二段) Basic Structure for 2 Stages

MODEL:MHF



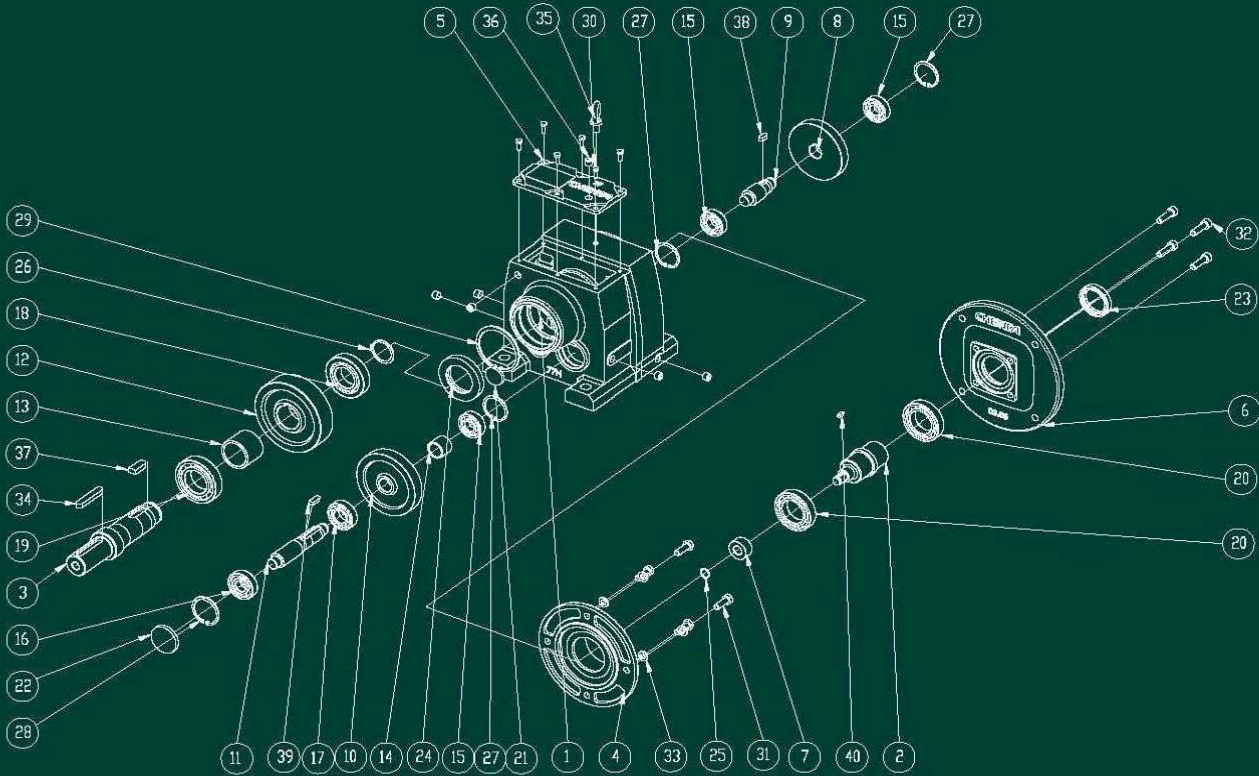
編號 ITEM	名稱 PARTS NAME	數量 QTY	編號 ITEM	名稱 PARTS NAME	數量 QTY	編號 ITEM	名稱 PARTS NAME	數量 QTY	編號 ITEM	名稱 PARTS NAME	數量 QTY
1	本體 housing	1	10	齒輪-G3 gear#3	1	19	油封 oil seal	1	28	六角頭螺絲 bolt	4
2	入力軸 input shaft	1	11	隔環 spacer	1	20	油封 oil seal	1	29	六角頭螺絲 bolt	4
3	出力軸 output shaft	1	12	隔環 spacer	1	21	油封 oil seal	1	30	華司 washer	1
4	入力蓋 input cover	1	13	軸承 bearing	1	22	油封 oil seal	1	31	雙圓鍵 key	1
5	天窗蓋 top cover	1	14	軸承 bearing	1	23	扣環 snap ring	1	32	雙圓鍵 key	1
6	入力法蘭 input flange	1	15	軸承 bearing	1	24	扣環 snap ring	1	33	吊鉤 eye-bolt	1
7	齒軸-P1 pinion#1	1	16	軸承 bearing	1	25	扣環 snap ring	1	34	塞頭 breather cap	6
8	齒輪-G1 gear#1	1	17	軸承 bearing	1	26	扣環 snap ring	1	35	平鍵 key	1
9	齒軸-P3 pinion#3	1	18	軸承 bearing	1	27	六角頭螺絲 bolt	6	36	平鍵 key	1
									37	扣環 snap ring	1

材質說明 MATERIAL GLANCE :

- 1 本體 HOUSING、蓋類 COVER、法蘭 FLANGE / 灰口鑄鐵 FC20
- 2 入力軸 INPUT SHAFT、出力軸 OUTPUT SHAFT / 鉻鉬合金鋼 SCM440
- 3 齒軸 PINION / 鉻鉬合金鋼 SCM415
- 4 齒輪 GEAR / 鉻鉬合金鋼 SCM440

零件分解圖 (三段) Basic Structure for 3 Stages

MODEL:MHF

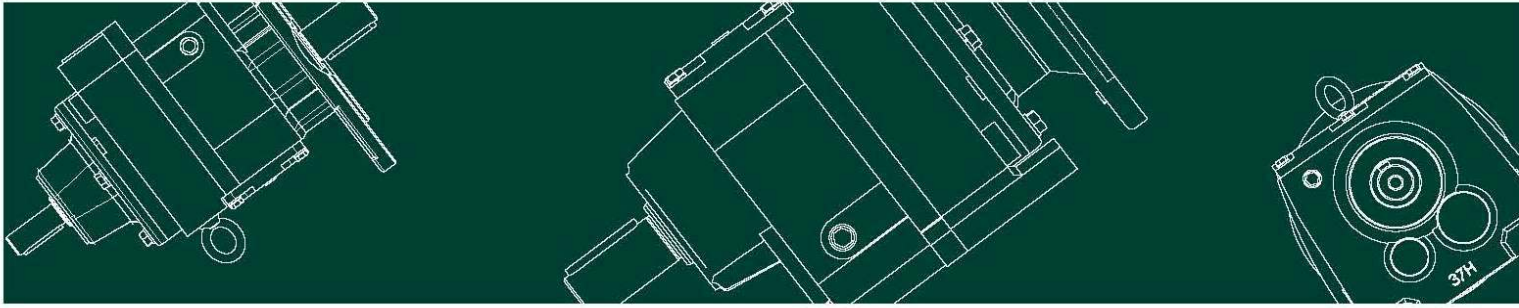


編號 ITEM	名稱 PARTS NAME	數量 QTY	編號 ITEM	名稱 PARTS NAME	數量 QTY	編號 ITEM	名稱 PARTS NAME	數量 QTY	編號 ITEM	名稱 PARTS NAME	數量 QTY
1	本體 housing	1	11	齒輪-P3 pinion#3	1	21	油封 oil seal	1	31	六角頭螺絲 bolt	4
2	入力軸 input shaft	1	12	齒輪-G3 gear#3	1	22	油封 oil seal	1	32	六角頭螺絲 bolt	4
3	出力軸 output shaft	1	13	隔環 spacer	1	23	油封 oil seal	1	33	華司 washer	4
4	入力蓋 input cover	1	14	隔環 spacer	1	24	油封 oil seal	1	34	雙圓鍵 key	1
5	天窗蓋 top cover	1	15	軸承 bearing	3	25	扣環 snap ring	1	35	吊鉤 eye-bolt	1
6	入力法蘭 input flange	1	16	軸承 bearing	1	26	扣環 snap ring	1	36	塞頭 breather cap	6
7	齒軸-P1 pinion#1	1	17	軸承 bearing	1	27	扣環 snap ring	2	37	平鍵 key	1
8	齒輪-G1 gear#1	1	18	軸承 bearing	1	28	扣環 snap ring	1	38	單圓鍵 key	1
9	齒軸-P2 pinion#2	1	19	軸承 bearing	1	29	扣環 snap ring	1	39	平鍵 key	1
10	齒輪-G2 gear#2	1	20	軸承 bearing	2	30	六角頭螺絲 bolt	6	40	平鍵 key	1

材質說明 MATERIAL GLANCE :

- 1 本體 HOUSING、蓋類 COVER、法蘭 FLANGE / 灰口鑄鐵 FC20
- 2 入力軸 INPUT SHAFT、出力軸 OUTPUT SHAFT / 鉻鉬合金鋼 SCM440
- 3 齒軸 PINION / 鉻鉬合金鋼 SCM415
- 4 齒輪 GEAR / 鉻鉬合金鋼 SCM440

馬力及型號之選定 Selection Table of HP & Size



馬力及型號之選定 Selection Table of HP & Size

公稱速比 Nominal Ratio	馬力數Horse Power (HP)																公稱速比 Nominal Ratio
	輸入轉速 INPUT 1750R.P.M																
	1/4	1/2	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	
120																	120
110																	110
100		47	77	87		97	107										100
90								107	137								90
80					87												80
70			67							137							70
60				77													60
55																	55
50		37	47			87	97		107		137						50
45																	45
40					77			97		107							40
35		37		67													35
30											107						30
25				47	67		87		97			107	137				25
20			37			77								137			20
15									97						137		15
10				37	47		87			97	97	107				137	10
5						47	77		87					107	107		5

舉例 Example :

馬力 power : 2HP

速比 ratio : 1/60

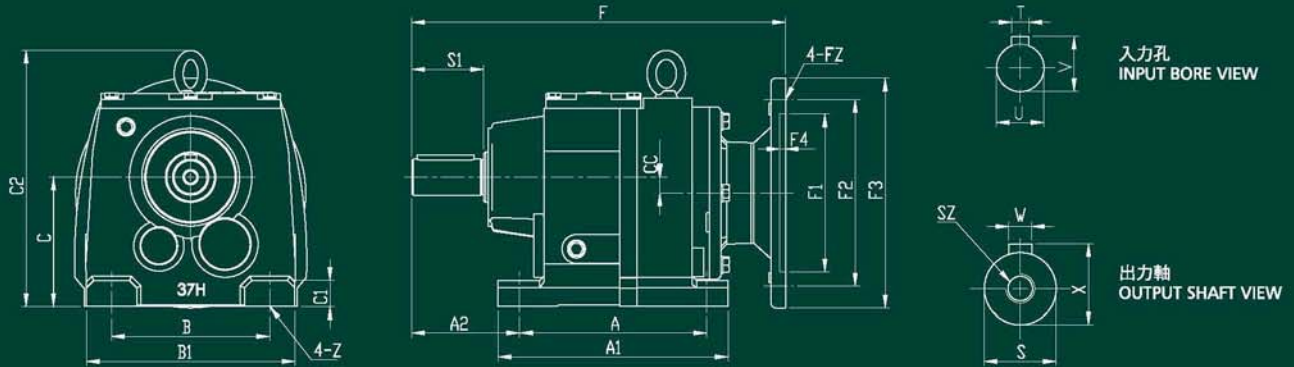
選用型號 Size : 77型

減速機重量表 Weight

		減速機重量表 Weight (Kg)																
機型 Model		37		47		67		77		87		97		107		137		
型號 Size	馬力 HP	段式(Stages)		段式(Stages)		段式(Stages)		段式(Stages)		段式(Stages)		段式(Stages)		段式(Stages)		段式(Stages)		
		2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	
臥式 腳架安裝 Foot Mounting	MHF	0.25/0.5	11.4	11.9	17.7	18.6	28.4	29.6										
		1/2	13.2	13.7	19.4	20.3	30.2	31.4	34.7	36.4	64.9	68.1						
		3/5			22.3	23.2	33.1	34.3	37.4	39.1	67.6	70.8	101.2	105.3				
		7.5/10							43.8	45.5	73.6	76.8	106.9	111.0	161.0	166.8		
		15/20									84.6	87.8	117.8	121.9	171.0	176.8	262.0	272.5
		25/30/40											126.9	131.0	181.0	186.8	271.0	281.5
		50/60													188.0	193.8	279.0	289.5
	75															297.0	307.5	
	MHD	16	10.4	11.0	14.4													
		19	10.8	11.3	16.9	17.8	29.6	30.8	33.9	35.6	64.4	67.6						
		24			17.1	18.0	29.8	31	81.8	83.5								
		28									64.7	67.9	98.0	102.1				
		38							39.3	41.0	69.0	72.2	102.2	106.3	157.0	162.8		
		42									77.2	80.4	110.2	114.3	164.0	169.8	254.0	264.5
		48											116.8	120.9	175.0	180.8	266.0	276.5
	55															273.0	283.5	
	MHM	0.25	14.3	15.0	20.5	21.4	31.3	32.5										
		0.5	16.3	17.0	22.5	23.4	33.3	34.5										
1		19.5	20.0	25.5	26.4	36.3	37.5	40.6	42.3									
2		25.5	26.0	31.5	32.4	42.3	43.5	46.6	48.3									
3				37.0	37.9	47.8	49	52.7	54.4	82.5	85.7	116.1	120.2					
5				45.0	45.9	55.8	57	60.7	62.4	90.5	93.7	124.1	128.2					
7.5								92.3	94.0	122.4	125.6	154.9	159.0	208.8	214.6			
10								102.3	104.0	132.4	135.6	164.9	169.0	218.8	224.6			
15										177.4	180.6	211.1	215.2	264.0	269.8	352.4	362.9	
20										197.4	200.6	231.1	235.2	284.0	289.8	372.4	382.9	
25/30												314.8	318.9	369.7	375.5	457.1	467.6	
40														429.7	435.5	517.1	527.6	
50/60													469.2	475.0	558.8	569.3		
立式 鉸座安裝 Flange Mounting	MVF MWF	0.25/0.5	13.3	13.9	19.0	19.9	31.2	32.4	36.7									
		1/2	15.1	15.7	20.7	21.5	33	34.2	42.6	44.3	74.3	77.5						
		3/5			23.6	24.4	35.9	37.1	45.3	47.0	77.0	80.2	121.6	125.7				
		7.5/10							51.7	53.4	83.0	86.2	127.3	131.4	176.2	182.0		
		15/20									94.0	97.2	138.2	142.3	186.2	192.0	296.5	307.0
		25/30/40											147.3	151.4	196.2	202.0	305.5	316.0
		50/60													203.2	209.0	313.5	324.0
	75															331.5	342.0	
	MVD MWD	16	12.4	13.0														
		19	12.7	13.3	18.2	19.0	32.4	33.6	41.8	43.5	73.8	77.0						
		24			18.4	19.2	32.6	33.8	89.7	91.4								
		28									74.1	77.3	118.4	122.5				
		38							47.2	48.9	78.4	81.6	122.6	126.7	172.2	178.0		
		42									86.6	89.8	130.6	134.7	179.2	185.0	288.5	299.0
		48											137.2	141.3	190.2	196.0	300.5	311.0
	55															307.5	318.0	
	MVM MWM	0.25	16.3	16.9	21.8	22.6	34.1	35.3										
		0.5	18.3	18.9	23.8	24.6	36.1	37.3										
		1	21.4	22.0	26.8	27.6	39.1	40.3	48.5	50.2								
		2	27.4	28.0	32.8	33.6	45.1	46.3	54.5	56.2								
		3			38.2	39.1	50.6	51.8	60.6	62.3	91.9	95.1	136.5	140.6				
		5			46.3	47.1	58.8	59.8	68.6	70.3	99.9	103.1	144.5	148.6				
		7.5							100.2	101.9	131.8	135.0	175.3	179.4	224.0	229.8		
		10							110.2	111.9	141.8	145.0	185.3	189.4	234.0	239.8		
15										186.8	190.0	231.5	235.6	279.2	285.0	386.9	397.4	
20										206.8	210.0	251.5	255.6	299.2	305.0	406.9	417.4	
25/30											335.2	339.3	384.9	390.7	491.6	502.1		
40													444.9	450.7	551.6	562.1		
50/60													484.4	490.2	593.3	603.8		



型式 MODEL / MHF 外型尺寸



MHF	A	A1	A2	B	B1	C	C1	C2	CC	Z	出力軸 OUTPUT SHAFT					Oil(φ)
											S	S1	W	X	SZ	
37	130	160	75	110	145	90	18	178	11	9	25k6	50	8	2	M10*20L	0.3
47	165	195	90	135	170	115	24	217	13.5	14	30k6	60	8	33	M10*20L	0.7
67	195	235	100	150	210	130	30	249	17	14	35k6	70	10	38	M12*24L	1.1
77	205	245	115	170	230	140	30	266	16	18	40k6	80	12	43	M16*32L	1.2
87	260	310	140	215	290	180	45	335	18	18	50k6	100	14	53.5	M16*32L	2.3
97	310	365	160	250	340	225	55	416	20	22	60m6	120	18	64	M16*32L	4.6
107	370	440	185	290	400	250	65	465	23	26	70m6	140	20	74.5	M20*40L	6
137	410	490	220	340	450	315	70	550	35	33	90m6	170	25	95	M24*48L	10

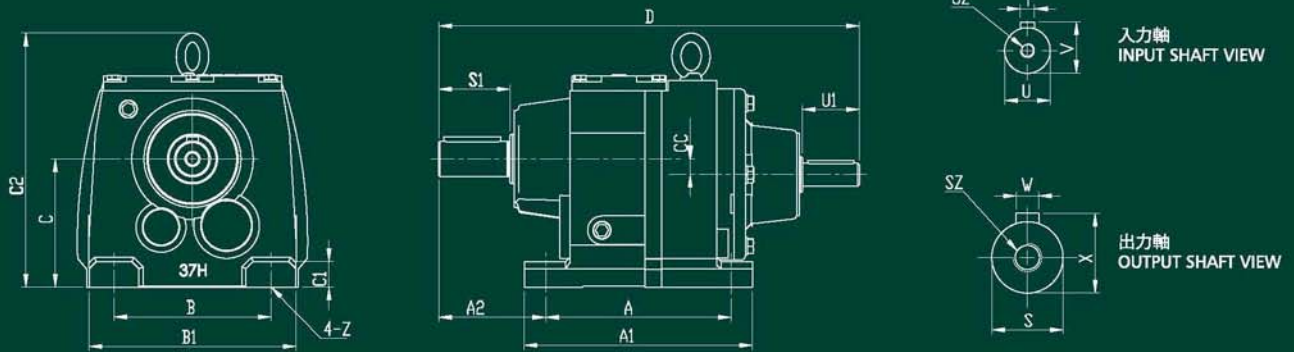
MHF	入力法蘭 MOUNTING FLANGE									
	HP	1/4	1/2	1	2	3	5	7.5	10	15
37	HP	1/4	1/2	1	2					
	F	260		278						
47	HP	1/2	1	2	3	5				
	F	287.5	305.5		322					
67	HP	1/2	1	2	3	5				
	F	325.5	343.5		360					
77	HP	1	2	3	5	7.5	10			
	F	361.5		378		426.5				
87	HP	2	3	5	7.5	10	15			
	F	421.5	438		486.5	522.5				
97	HP	5	7.5	10	15	20	25	30	40	
	F	502	546.5		582.5		591.5			
107	HP	7.5	10	15	20	25	30	40	50	60
	F	592		628		637		668		
137	HP	15	20	25	30	40	50	60	75	
	F	713		721		752		769		

HP	入力孔 INPUT BORE			入力法蘭 MOUNTING FLANGE				
	U	V	T	F1	F2	F3	F4	FZ
1/4	11	12.8	4	110	130	160	4	M8
1/2	14	16.3	5					
1	19	21.8	6	130	165	200	5	M10
2	24	27.3	8					
3	28	31.3	8	180	215	250	5	M12
5								
7.5	38	41.3	10	230	265	300	6	M12
10								
15	42	45.3	12	250	300	350	6	M16
20								
25	48	51.8	14	300	350	400	6	M16
30								
40	55	59.3	16	300	350	400	6	M16
50	60	64.4	18	350	400	450	6	M16
60								
75	65	69.4	18	450	500	550	6	M16

註: 1. 馬力及型號選定, 請參考P14.
 2. 減速機重量請參考P15.
 3. 輸入馬力及輸出扭力矩請參考P24~P27.

Unit:mm

型式 MODEL / MHD 外型尺寸



MHD	A	A1	A2	B	B1	C	C1	C2	CC	Z	出力軸 OUTPUT SHAFT					Oil(ℓ)
											S	S1	W	X	SZ	
37	130	160	75	110	145	90	18	178	11	9	25k6	50	8	28	M10*20L	0.3
47	165	195	90	135	170	115	24	217	13.5	14	30k6	60	8	33	M10*20L	0.7
67	195	235	100	150	210	130	30	249	17	14	35k6	70	10	38	M12*24L	1.1
77	205	245	115	170	230	140	30	266	16	18	40k6	80	12	43	M16*32L	1.2
87	260	310	140	215	290	180	45	335	18	18	50k6	100	14	53.5	M16*32L	2.3
97	310	365	160	250	340	225	55	416	20	22	60m6	120	18	64	M16*32L	4.6
107	370	440	185	290	400	250	65	465	23	26	70m6	140	20	74.5	M20*40L	6
137	410	490	220	340	450	315	70	550	35	33	90m6	170	25	95	M24*48L	10

MHD	入力軸 INPUT SHAFT				
	U	V	T	U1	UZ
37	U	16	19		
	D	295	29.5		
47	U	16	19	24	28
	D	322.5	325	325	370.5
67	U	19	19	24	
	D	374	387.5	398.5	
77	U	19	19*	24	38
	D	392	405.5	416.5	479.5
87	U	19	28	38	42
	D	465.5	486.5	539.5	612.5
97	U	28	38	42	48
	D	550.5	599.5	672.5	677.5
107	U	38	42	48	55
	D	645	718	723	747
137	U	42	48	48	55
	D	803	807	831	849

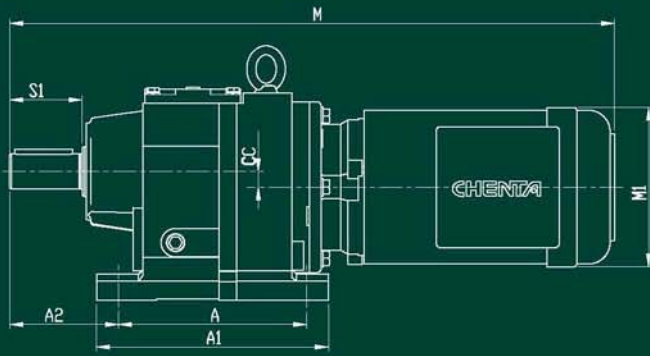
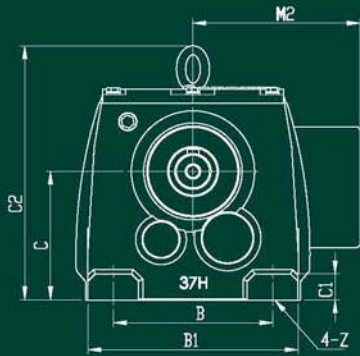
入力軸 INPUT SHAFT				
U	V	T	U1	UZ
16k6	18	5	40	M5*10L
19k6	21.5	6	40	M6*12L
24k6	27	8	50	M8*16L
28k6	31	8	60	M8*16L
38k6	41	10	80	M12*24L
42k6	45	12	110	M16*32L
48K6	51.5	14	110	M16*32L
55m6	59	16	110	M20*40L

- 註: 1. 19*, 請參考P25.
 2. 入力軸選用請參考P24-P27.
 3. 減速機重量請參考P15.
 4. 輸入馬力及輸出扭力矩請參考P24-P27.

Unit:mm



型式 MODEL / MHM 外型尺寸



出力軸
OUTPUT SHAFT VIEW

MHM	A	A1	A2	B	B1	C	C1	C2	CC	Z	出力軸 OUTPUT SHAFT					
											S	S1	W	X	SZ	Oil(φ)
37	130	160	75	110	145	90	18	178	11	9	25k6	50	8	28	M10*20L	0.3
47	165	195	90	135	170	115	24	217	13.5	14	30k6	60	8	33	M10*20L	0.7
67	195	235	100	150	210	130	30	249	17	14	35k6	70	10	38	M12*24L	1.1
77	205	245	115	170	230	140	30	266	16	18	40k6	80	12	43	M16*32L	1.2
87	260	310	140	215	290	180	45	335	18	18	50k6	100	14	53.5	M16*32L	2.3
97	310	365	160	250	340	225	55	416	20	22	60m6	120	18	64	M16*32L	4.6
107	370	440	185	290	400	250	65	465	23	26	70m6	140	20	74.5	M20*40L	6
137	410	490	220	340	450	315	70	550	35	33	90m6	170	25	95	M24*48L	10

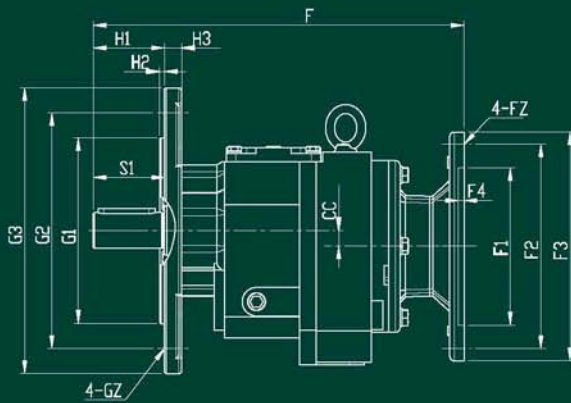
MHM	馬達尺寸 MOTOR DIMENSION									
	HP	M1	M2							
37	HP	1/4	1/2	1	2					
	M	418	444	468	510					
47	HP	1/4	1/2	1	2	3	5			
	M	445	471	495	538	577	627			
67	HP	1/2	1	2	3	5				
	M	509	533	575.5	615	665				
77	HP	1	2	3	5	7.5	10			
	M	551	593.5	633	682.5	726.5				
87	HP	3	5	7.5	10	15				
	M	693	743	787	825	894				
97	HP	3	5	7.5	10	15	20	35	30	
	M	757	806	847	885	954	998	1023		
107	HP	7.5	10	15	20	25	30	40	50	60
	M	892	930	999	1043	1069	1104	1179		
137	HP	15	20	25	30	40	50	60	75	
	M	1083	1127	1153	1188	1263				

馬達尺寸 MOTOR DIMENSION		
HP	M1	M2
1/4	112	116
1/2	132	106
1	156	132
2	175	142
3	192	160
5	219	173
7.5		
10	268	222
15		
20	334	248
25		
30	382	286
40		
50	420	332
60		
75	458	382

- 註: 1. 馬力及型號選定請參考P14.
 2. 減速機重量請參考P15.
 3. 輸入馬力及輸出扭力矩請參考P24~P27.

Unit:mm

型式 MODEL / MVF.MWF 外型尺寸



入力孔
INPUT BORE VIEW



出力軸
OUTPUT SHAFT VIEW

MVF / MWF		G1	G2	G3	GZ	H1	H2	H3	CC	出力軸 OUTPUT SHAFT					Oil(φ)
										S	S1	W	X	SZ	
37	MVF	130h7	165	200	11	50	3.5	12	11	25k6	50	8	28	M10*20L	1.05
	MWF	110h7	130	160	9		3.5	10							
47	MVF	130h7	165	200	11	60	3.5	12	13.5	30k6	60	8	33	M10*20L	1.65
	MWF	110h7	130	160	9		3.5	10							
67	MVF	180h7	215	250	13.5	70	4	15	17	35k6	70	10	38	M12*24L	3.6
	MWF	130h7	165	200	11		3	12							
77	MVF	230h7	265	300	14	80	4	21	16	40k6	80	12	43	M16*32L	4.1
	MWF	180h7	215	250	14		4	19							
87	MVF	250h7	300	350	18	100	5	21	18	50k6	100	14	53.5	M16*32L	7.7
	MWF	230h7	265	300	14		4	19							
97	MVF	350h7	400	450	18	120	5	25	20	60m6	120	18	64	M16*32L	14
	MWF	250h7	300	350	18		5	21							
107	MVF	350h7	400	450	18	140	5	25	23	70m6	140	20	74.5	M20*40L	19.2
	MWF	250h7	300	350	18		5	20							
137	MVF	450h7	500	550	18	170	5	28	35	90m6	170	25	95	M24*48L	32.5
	MWF	350h7	400	450	18		5	25							

MVF / MWF	入力法蘭 MOUNTING FLANGE								
37	HP	1/4	1/2	1	2				
	F	260		278					
47	HP	1/2	1	2	3	5			
	F	287.5	305.5	322					
67	HP	1/2	1	2	3	5			
	F	325.5	343.5	360					
77	HP	1	2	3	5	7.5	10		
	F	361.5		378		426.5			
87	HP	2	3	5	7.5	10	15		
	F	421.5	438	486.5		522.5			
97	HP	5	7.5	10	15	20	25	30	40
	F	502	546.5	582.5		591.5			
107	HP	7.5	10	15	20	25	30	40	50
	F	592		628		637		668	
137	HP	15	20	25	30	40	50	60	75
	F	713		721		752		769	

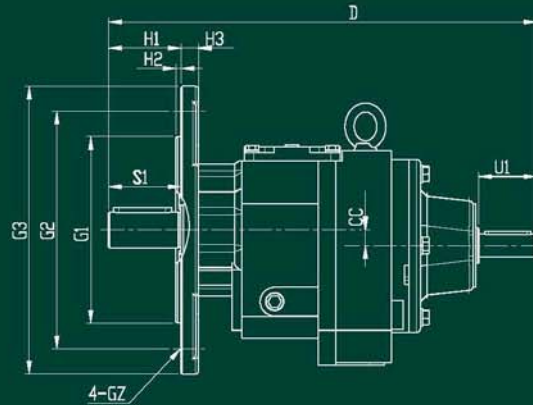
入力孔 INPUT BORE				入力法蘭 MOUNTING FLANGE				
HP	U	V	T	F1	F2	F3	F4	FZ
1/4	11	12.8	4	110	130	160	4	M8
1/2	14	16.3	5					
1	19	21.8	6	130	165	200	5	M10
2	24	27.3	8					
3	28	31.3	8	180	215	250	5	M12
5								
7.5	38	41.3	10	230	265	300	6	M12
10								
15	42	45.3	12	250	300	350	6	M16
20								
25	48	51.8	14	300	350	400	6	M16
30								
40	55	59.3	16	350	400	450	6	M16
50								
60	60	64.4	18	450	500	550	6	M16
75								
75	65	69.4	18	450	500	550	6	M16

- 註: 1. 馬力及型號選定請參考P14.
 2. 減速機重量請參考P15.
 3. 輸入馬力及輸出扭力矩請參考P24~P27.

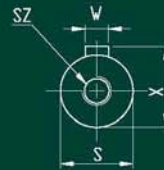
Unit:mm



型式 MODEL / MVD.MWD 外型尺寸



入力軸 INPUT SHAFT VIEW



出力軸 OUTPUT SHAFT VIEW

MVD / MWD		G1	G2	G3	GZ	H1	H2	H3	CC	出力軸 OUTPUT SHAFT					Oil(φ)
										S	S1	W	X	SZ	
37	MVD	130h7	165	200	11	50	3.5	12	11	25k6	50	8	28	M10*20L	1.05
	MWD	110h7	130	160	9		3.5	10							
47	MVD	130h7	165	200	11	60	3.5	12	13.5	30k6	60	8	33	M10*20L	1.65
	MWD	110h7	130	160	9		3.5	10							
67	MVD	180h7	215	250	13.5	70	4	15	17	35k6	70	10	38	M12*24L	3.6
	MWD	130h7	165	200	11										
77	MVD	230h7	265	300	14	80	4	21	16	40k6	80	12	43	M16*32L	4.1
	MWD	180h7	215	250	14		4	19							
87	MVD	250h7	300	350	18	100	5	21	18	50k6	100	14	53.5	M16*32L	7.7
	MWD	230h7	265	300	14		4	19							
97	MVD	350h7	400	450	18	120	5	25	20	60m6	120	18	64	M16*32L	14
	MWD	250h7	300	350	18		5	21							
107	MVD	350h7	400	450	18	140	5	25	23	70m6	140	20	74.5	M20*40L	19.2
	MWD	250h7	300	350	18		5	20							
137	MVD	450h7	500	550	18	170	5	28	35	90m6	170	25	95	M24*48L	32.5
	MWD	350h7	400	450	18		5	25							

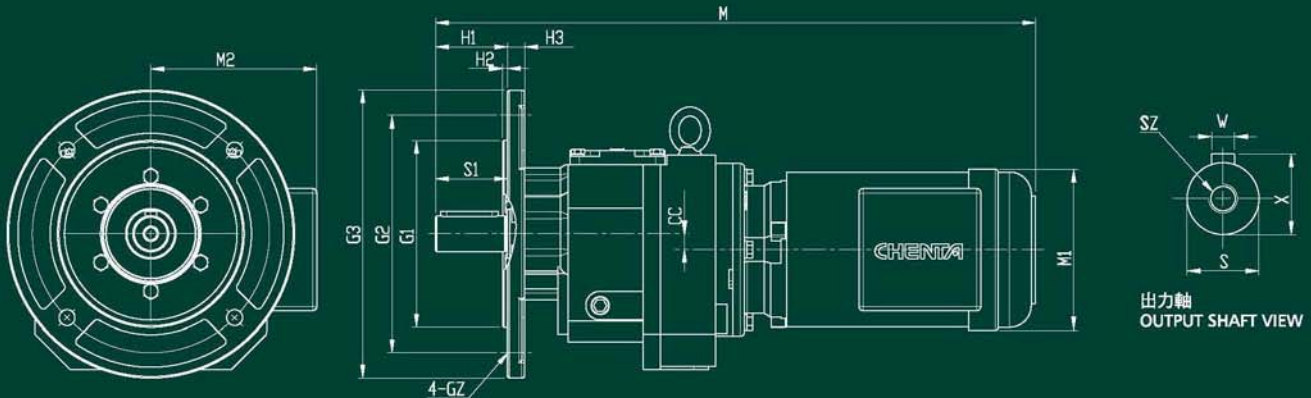
MVD/MWD	入力軸 INPUT SHAFT				
37	U	16	19		
	D	295	297.5		
47	U	16	19	24	28
	D	322.5	325	325	370.5
67	U	19	19	24	
	D	374	387.5	398.5	
77	U	19	19*	24	38
	D	392	405.5	416.5	479.5
87	U	19	28	38	42
	D	465.5	486.5	539.5	612.5
97	U	28	38	42	48
	D	550.5	599.5	672.5	677.5
107	U	38	42	48	55
	D	645	718	723	747
137	U	42	48	48	55
	D	803	807	831	849

入力軸 INPUT SHAFT				
U	V	T	U1	UZ
16k6	18	5	40	M5*10L
19k6	21.5	6	40	M6*12L
24k6	27	8	50	M8*16L
28k6	31	8	60	M8*16L
38k6	41	10	80	M12*24L
42k6	45	12	110	M16*32L
48k6	51.5	14	110	M16*32L
55m6	59	16	110	M20*40L

- 註: 1. 19*, 請參考P25.
 2. 入力軸選用請參考P24-P27.
 3. 減速機重量請參考P15.
 4. 輸入馬力及輸出扭力矩請參考P24-P27.

Unit:mm

型式 MODEL / MVM.MWM 外型尺寸



MVM / MWM		G1	G2	G3	GZ	H1	H2	H3	CC	出力軸 OUTPUT SHAFT					Oil(φ)
										S	S1	W	X	SZ	
37	MVM	130h7	165	200	11	50	3.5	12	11	25k6	50	8	28	M10*20L	1.05
	MWM	110h7	130	160	9		3.5	1							
47	MVM	130h7	165	200	11	60	3.5	12	13.5	30k6	60	8	33	M10*20L	1.65
	MWM	110h7	130	160	9		3.5	10							
67	MVM	180h7	215	250	13.5	70	4	15	17	35k6	70	10	38	M12*24L	3.6
	MWM	130h7	165	200	11		4	19							
77	MVM	230h7	265	300	14	80	4	21	16	40k6	80	12	43	M16*32L	4.1
	MWM	180h7	215	250	14		4	19							
87	MVM	250h7	300	350	18	100	5	21	18	50k6	100	14	53.5	M16*32L	7.7
	MWM	230h7	265	300	14		4	19							
97	MVM	350h7	400	450	18	120	5	25	20	60m6	120	18	64	M16*32L	14
	MWM	250h7	300	350	18		5	21							
107	MVM	350h7	400	450	18	140	5	25	23	70m6	140	20	74.5	M20*40L	19.2
	MWM	250h7	300	350	18		5	20							
137	MVM	450h7	500	550	18	170	5	28	35	90m6	170	25	95	M24*48L	32.5
	MWM	350h7	400	450	18		5	25							

MVM/MWM	馬達尺寸 MOTOR DIMENSION									
37	HP	1/4	1/2	1	2					
	M	418	444	468	510					
47	HP	1/4	1/2	1	2	3	5			
	M	445	471	495	538	577	627			
67	HP	1/2	1	2	3	5				
	M	509	533	575.5	615	664.5				
77	HP	1	2	3	5	7.5	10			
	M	551	593.5	633	682.5	726.5				
87	HP	3	5	7.5	10	15				
	M	693	743	787	825	894				
97	HP	3	5	7.5	10	15	20	25	30	
	M	757	806	847	885	954	998	1023		
107	HP	7.5	10	15	20	25	30	40	50	60
	M	892	930	999	1043	1069	1104	1179		
137	HP	15	20	25	30	40	50	60	75	
	M	1083	1127	1153	1188	1263				

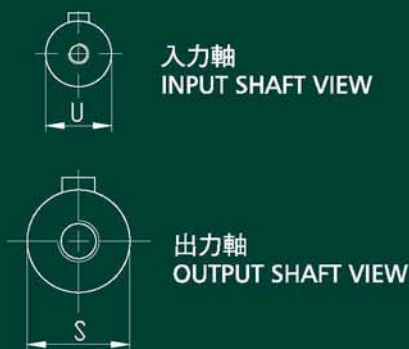
馬達尺寸 MOTOR DIMENSION		
HP	M1	M2
1/4	112	116
1/2	132	106
1	156	132
2	175	142
3	192	160
5	219	173
7.5		
10	268	222
15		
20	334	248
25		
30	382	286
40		
50	420	332
60		
75	458	382

註: 1. 馬力及型號選定請參考P14.
 2. 減速機重量請參考P15.
 3. 輸入馬力及輸出扭力矩請參考P24-P27.

Unit:mm

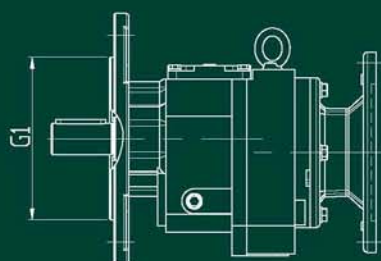
公差尺寸表 & 潤滑油選定 Tolerance & Lubricant Selection

公差尺寸表 Tolerance



單位 Unit: mm

出、入力軸 軸徑尺寸公差 OUTPUT & INPUT SHAFT		
DIAMETER	k6	m6
> ϕ 14~18	+0.012	+0.018
	+0.001	+0.007
> ϕ 18~30	+0.015	+0.021
	+0.002	+0.008
> ϕ 30~50	+0.018	+0.025
	+0.002	+0.009
> ϕ 50~80	+0.021	+0.030
	+0.002	+0.011
> ϕ 80~120	+0.025	+0.035
	+0.003	+0.013



出力法蘭 唇徑尺寸公差 FLANGE PILOT	
DIAMETER G1	h7
> ϕ 80~120	0
	-0.035
> ϕ 120~180	0
	-0.04
> ϕ 180~250	0
	-0.046
> ϕ 250~315	0
	-0.052
> ϕ 315~400	0
	-0.057
> ϕ 400~500	0
	-0.063

潤滑油選定表 Lubricant Selection

出力轉速 > 100 R.P.M., 使用中油國光牌 HD220 極壓機油或同級品
 output RPM > 100 R.P.M., please use CPC HD-220 E.P. lubricant or equivalent.
 出力轉速 < 100 R.P.M., 使用中油國光牌 HD320 極壓機油或同級品
 output RPM < 100 R.P.M., please use CPC HD-320 E.P. lubricant or equivalent.

■ 潤滑油選定參考表 Selection Table of Lubricant

標準負荷，入力轉速 600PRM 或以上 Standard Load, Input 600 RPM or more.

環境溫度 Temperature (°C)	中國石油 CPC	ISO VG	Mobil	Shell
-30 ~ -15	HD 100	VG 100	Mobilgear 627	Omala 100
-15 ~ -3	HD 150	VG 150	Mobilgear 629	Omala 150
-3 ~ 23	HD 220	VG 220	Mobilgear 630	Omala 220
23 ~ 40	HD 320	VG 320	Mobilgear 632	Omala 320
40 ~ 80	HD 460	VG 460	Mobilgear 634	Omala 460

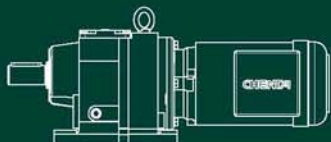
超重負荷，入力轉速 600RPM 或以上 Heavy Load, Input 600 RPM or more.

環境溫度 Temperature (°C)	中國石油 CPC	ISO VG	Mobil	Shell
-30 ~ -15	HD 150	VG 150	Mobilgear 629	Omala 150
-15 ~ -3	HD 220	VG 220	Mobilgear 630	Omala 220
-3 ~ 23	HD 320	VG 320	Mobilgear 632	Omala 320
23 ~ 40	HD 460	VG 460	Mobilgear 634	Omala 460
40 ~ 80	HD 680	VG 680	Mobilgear 636	Omala 680

安裝位置 Mounting Position

■臥式齒輪 (MOUNTING POSITION OF FOOT MOUNTING)

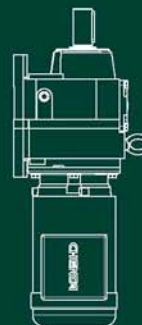
M1



M2



M3



M4



M5

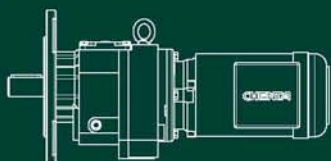


M6



■立式齒輪 (MOUNTING POSITION OF FLANGE MOUNTING)

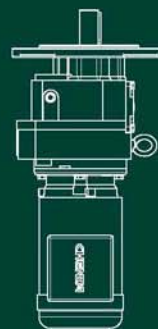
MA



MB

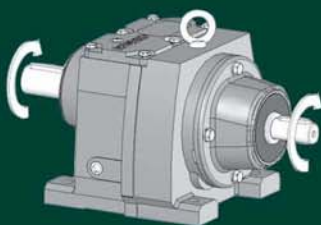


MC



- 請注意：安裝位置M2軸承需要特殊的潤滑方式。請詢問本公司的服務人員
NOTE : Please specify if position M2 is required . (Special Lubrication design on bearings .)

· 圖 1 / Picture 1

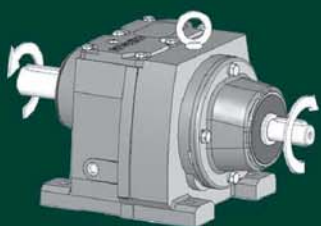


兩段減速

2 stage

旋轉方向：出力軸與入力軸旋轉方向相同方向(如圖1)
output shaft and input shaft rotate in the same direction.
(refer to Picture 1)

· 圖 2 / Picture 2



三段減速

3 stage

旋轉方向：出力軸與入力軸旋轉方向不同方向(如圖2)
output shaft and input shaft rotate in opposite directions.
(refer to Picture 2)



齒輪型 | 許可輸入馬力及輸出扭力矩一覽表

每日8-10小時連續運轉並在平均負荷

Applies for continuous service free from recurrent shock loading and does not exceed 10 hours per day.

SIZE:37型								段式 stage	操作係數 Service Factor: 1				實心入力軸徑 Input Shaft mm
公稱速比 Nominal ratio	實際速比 Actual ratio	入力馬力 Input HP	1750入力Input rpm		1450入力Input rpm		超吊荷重 OHL kg		可選用之入力馬力 available input Hp				
			出力轉速 Output rpm	出力扭矩 Output Torque kgm	出力轉速 Output rpm	出力扭矩 Output Torque kgm			1/4HP	1/2HP	1HP	2HP	
120	119.93	0.25	15	11.4	12	13.8	450					φ16	
110	106.18	0.3	16	12.1	14	14.7	450						
100	96.44	0.35	18	12.9	15	15.5	450						
90	91.47	0.5	19	17.4	16	21.0	450						
80	79.29	0.55	22	16.6	18	20.1	450						
70	69.57	0.62	25	16.4	21	19.8	439						
60	59.94	0.71	29	16.2	24	19.6	413						
55	57.20	0.83	31	18.1	25	21.8	403						
50	49.28	0.93	36	17.5	29	21.1	383						
45	46.07	0.95	38	16.7	31	20.1	372						
40	39.27	1.1	45	16.5	37	19.9	352						
35	32.51	1.4	54	17.3	45	20.9	327				φ19		
30	30.18	1.4	58	16.1	48	19.4	321						
25	24.81	1.6	71	15.1	58	18.3	296						
20	20.99	2.3	83	5.1	69	22.2	224						
25	24.50	1.1	71	10.6	59	12.8	311				φ16		
20	19.95	1.6	88	12.5	73	15.1	286						
15	15.75	2.1	111	13.0	92	15.7	255				φ19		
13	12.68	2.4	138	12.0	114	14.4	240						
10	10.42	2.5	168	10.2	139	12.4	224						
7	6.84	3.4	256	9.1	212	11.0	194						
5	4.88	3.5	359	6.7	297	8.1	179						

SIZE:47型								段式 stage	操作係數 Service Factor: 1					實心入力軸徑 Input Shaft mm
公稱速比 Nominal ratio	實際速比 Actual ratio	入力馬力 Input HP	1750入力Input rpm		1450入力Input rpm		超吊荷重 OHL kg		可選用之入力馬力 available input Hp					
			出力轉速 Output rpm	出力扭矩 Output Torque kgm	出力轉速 Output rpm	出力扭矩 Output Torque kgm			1/4HP	1/2HP	1HP	2HP	3HP	
120	120.20	0.5	15	27.5	12.06	27.65	459						φ16	
110	106.30	0.5	16	20.9	13.64	24.45	459							
100	102.47	0.5	17	19.5	14.15	23.57	459							
90	91.24	0.6	19	20.9	15.89	25.18	459							
80	84.26	0.65	21	20.9	17.21	25.19	459							
70	72.29	0.8	24	22.0	20.06	26.60	439							
60	60.16	1.1	29	25.2	24.10	30.44	413							
55	55.56	1.2	32	25.4	26.10	30.67	403							
50	49.45	1	35	18.8	29.32	22.74	383							
45	47.66	1.4	37	25.4	30.42	30.70	372							
40	39.26	1.8	45	26.9	36.93	32.51	352					φ19		
35	35.46	1.9	49	25.7	40.90	30.99	327							
30	30.44	2.1	57	24.4	47.64	29.40	321							
25	25.38	2.5	69	24.2	57.12	29.19	301							
20	22.30	3.3	78	28.1	65.02	33.85	270							
23	23.02	1.7	76	15.4	63.00	18.60	311					φ16		
20	20.36	1.8	86	14.4	71.23	17.40	286							
18	18.37	2	95	14.4	78.93	17.42	255					φ19		
15	14.27	3	123	16.8	101.59	20.31	240							
10	9.96	5	176	19.6	145.52	23.63	230							
7	6.79	6.7	258	17.9	213.62	21.57	194					φ24		
5	5.66	7	309	15.6	256.14	18.79	179							

■ 表示可選用之入力馬力

INPUT HORSEPOWER & OUTPUT TORQUE RATINGS

SIZE:67型															
公稱速比 Nominal ratio	實際速比 Actual ratio	入力馬力 Input HP	1750入力 Input rpm		1450入力 Input rpm		超吊荷重 OHL kg	段式 stage	操作係數 Service Factor: 1						
			出力轉速 Output rpm	出力扭矩 Output Torque kgm	出力轉速 Output rpm	出力扭矩 Output Torque kgm			可選用之入力馬力 available input Hp						實心入力軸徑 Input Shaft mm
									1/4HP	1/2HP	1HP	2HP	3HP	5HP	
120	123.20	0.56	14	28.2	12	31.7	699	3							φ19
110	105.60	0.65	17	28.2	14	31.6	699								
100	98.82	0.8	18	30.1	15	36.4	699								
90	84.70	1	21	32.3	17	39.0	699								
80	79.85	1.1	22	33.5	18	40.4	699								
70	68.44	1.2	26	31.3	21	37.8	663								
60	59.29	1.8	30	40.7	24	49.1	597								
55	55.61	1.5	31	31.8	26	38.4	612								
50	50.82	2.1	34	40.7	29	49.1	561								
45	46.13	1.7	38	29.9	31	36.1	577								
40	41.29	2.5	42	39.3	35	47.5	520								
35	34.25	2.9	51	37.8	42	45.7	490								
30	30.17	3.5	58	40.3	48	48.6	459								
25	25.51	4.3	68	41.8	57	50.5	342								
20	19.71	5.5	89	41.3	74	49.9	270								
15	16.34	6.2	107	38.6	89	46.6	245								
25	26.40	2.1	66	21.8	55	26.3	485		2						
20	18.79	3.2	93	23.6	77	28.5	423								
15	15.07	4.5	116	26.7	96	32.2	372								
13	12.53	5.1	140	26.4	116	30.3	362								
10	10.05	6.4	174	26.6	144	30.5	372								
8	7.46	7.7	234	23.8	194	27.3	286								
5	5.23	8.3	334	18.0	277	20.6	265								

SIZE:77型															
公稱速比 Nominal ratio	實際速比 Actual ratio	入力馬力 Input HP	1750入力 Input rpm		1450入力 Input rpm		超吊荷重 OHL kg	段式 stage	操作係數 Service Factor: 1						
			出力轉速 Output rpm	出力扭矩 Output Torque kgm	出力轉速 Output rpm	出力扭矩 Output Torque kgm			可選用之入力馬力 available input Hp					實心入力軸徑 Input Shaft mm	
									1HP	2HP	3HP	5HP	7-1/2HP		
120	116.13	1	15	44.3	12	53.4	837	3						φ19	
110	105.99	1	17	40.4	14	48.8	827								
100	101.24	1	17	38.6	14	46.6	811								
90	92.40	1.2	19	42.3	16	51.0	786								
80	79.23	1.3	22	39.3	18	47.4	735								
70	70.75	1.7	25	45.8	20	55.3	694								
60	63.05	2	28	48.1	23	58.0	663								
55	52.92	2.6	33	52.4	27	63.3	592								
50	50.25	2.8	35	53.6	29	64.7	592								
45	44.46	3.1	39	52.5	33	63.4	561								
40	40.81	3.2	43	49.8	36	60.1	541								
35	33.98	3.5	51	45.3	43	54.7	520								
30	31.94	3.8	55	46.3	45	55.8	500								
25	25.97	5.2	67	51.5	56	62.1	444								
20	20.33	6	80	46.5	71	56.1	413								
15	14.95	7.5	134	42.7	97	51.6	367								
25	24.05	3	73	28.4	60	34.2	490		2						
23	23.31	4	75	36.6	62	44.2	469								
20	21.27	4.5	82	37.6	68	45.4	449								
15	14.83	6.1	118	35.6	98	42.9	398								
13	13.54	7.2	129	38.3	107	46.2	378								
10	9.96	8.7	176	34.0	146	41.1	342								
7	6.65	9	263	23.5	218	28.4	306								
5	4.78	9.5	366	17.8	304	21.5	276								

■ 表示可選用之入力馬力



齒輪型 | 許可輸入馬力及輸出扭力矩一覽表

每日8-10小時連續運轉並在平均負荷

Applies for continuous service free from recurrent shock loading and does not exceed 10 hours per day.

SIZE:87型									操作係數 Service Factor: 1								
公稱速比 Nominal ratio	實際速比 Actual ratio	入力馬力 Input HP	1750入力input rpm		1450入力input rpm		超吊荷重 OHL kg	段式 stage	可選用之入力馬力 available input Hp						實心入力軸徑 Input Shaft mm		
			出力轉速 Output rpm	出力扭力矩 Output Torque kgm	出力轉速 Output rpm	出力扭力矩 Output Torque kgm			2HP	3HP	5HP	7-1/2HP	10HP	15HP			
120	117.17	3	15	131	12	162	1939	3								φ19	
110	107.20	3	16	120	14	148	1939										
100	100.70	3	17	113	14	139	1939										
90	92.13	3.5	19	123	16	148	1939										
80	80.06	5	22	153	18	184	1939										
70	72.13	5	24	137	20	166	1832										
60	61.99	5.5	28	130	23	157	1740										
55	57.74	5.2	30	114	25	138	1750										
50	50.35	5.3	35	102	29	123	1694										
45	45.12	6.2	39	107	32	129	1571										
40	38.78	6.4	45	95	37	114	1500										
35	34.47	8.5	51	112	42	135	1429										
30	29.90	8.8	59	100	49	121	1352										
25	27.50	8.7	64	91	53	110	1342									φ38	
20	21.56	13.3	81	109	67	132	1173										
23	22.83	4.5	77	40	64	49	1352	2							φ19		
20	19.83	7	88	55	73	66	1265									φ28	
18	18.15	7.8	96	56	80	67	1224									φ38	
15	15.29	12.1	114	73	95	88	1122										
10	10.37	20.7	169	84	140	102	954										
8	8.03	21	218	66	181	80	878									φ42	
5	5.02	23.8	348	47	289	57	760										

SIZE:97型									操作係數 Service Factor: 1								
公稱速比 Nominal ratio	實際速比 Actual ratio	入力馬力 Input HP	1750入力input rpm		1450入力input rpm		超吊荷重 OHL kg	段式 stage	可選用之入力馬力 available input Hp						實心入力軸徑 Input Shaft mm		
			出力轉速 Output rpm	出力扭力矩 Output Torque kgm	出力轉速 Output rpm	出力扭力矩 Output Torque kgm			3HP	5HP	7-1/2HP	10HP	15HP	20HP		25/30HP	
120	115.43	5	15	220	13	265	2296	3								φ28	
110	111.72	5	16	213	13	257	2296										
100	101.79	5	17	194	14	234	2296										
90	89.28	5	20	170	16	205	2296										
80	81.51	7.5	21	155	18	281	2245										
70	69.95	7.5	25	200	21	241	2056										
60	60.82	7.5	29	174	24	210	1985										
55	55.42	10	32	211	26	255	1842									φ38	
50	48.03	11.3	36	207	30	250	1724										
45	44.72	12.3	39	210	32	253	1673										
40	38.36	15	46	219	38	265	1556										
35	35.72	15.8	49	215	41	260	1515										
30	28.33	22.3	62	241	51	291	1301									φ42	
25	24.63	23.5	71	221	59	266	1260										
20	19.69	33	89	248	74	299	1092									φ48	
15	15.32	35	114	204	95	247	1046	2							φ28		
23	22.96	6.4	76	58	63	70	1536										
20	20.92	7.1	84	58	69	70	1480										
17	16.75	12	104	79	87	95	1342									φ38	
15	15.26	15	115	90	95	109	1270									φ42	
13	13.38	21.5	131	113	108	136	1184										
10	9.74	34.5	180	132	149	159	1010										
7	7.34	36	238	104	197	125	934								φ48		
5	5.42	37	323	79	267	95	857										

■ 表示可選用之入力馬力

INPUT HORSEPOWER & OUTPUT TORQUE RATINGS

SIZE:107型									操作係數 Service Factor: 1										
公稱速比 Nominal ratio	實際速比 Actual ratio	入力馬力 Input HP	1750入力 Input rpm		1450入力 Input rpm		超吊荷重 OHL kg	段式 stage	可選用之入力馬力 available input Hp							實心入力軸徑 Input Shaft mm			
			出力轉速 Output rpm	出力扭矩 Output Torque kgm	出力轉速 Output rpm	出力扭矩 Output Torque kgm			7-1/2HP	10HP	15HP	20HP	25HP	30HP	40HP		50/60HP		
120	115.50	10.5	15	434	13	558	2699	3										φ38	
110	106.76	10.5	16	401	14	516	2663												
100	103.02	11.5	17	424	14	545	2587												
90	86.50	12.5	20	387	17	497	2444												
80	79.95	12.5	22	358	18	460	2413												
70	68.27	13	26	318	21	408	2306												
60	62.90	16	28	360	23	463	2179											φ42	
55	53.71	17.5	33	337	27	432	2056												
50	53.00	20	33	380	27	488	2010												
45	44.50	22.5	39	359	33	461	1878												
40	39.52	25.5	44	361	37	464	1796												
35	34.23	27	51	331	42	425	1719											φ48	
30	29.23	31	60	324	50	417	1592												
25	25.52	34.5	69	315	57	405	1531												
20	21.79	42	86	328	67	421	1388												
15	13.09	44	126	206	111	265	1281												
25	24.40	24	72	221	59	278	1673	2									φ38		
20	21.77	24	80	197	67	248	1638												
15	14.38	34	122	184	101	232	1398												
10	10.44	63	168	248	139	312	1173												
5	4.50	66	389	112	322	141	959												

SIZE:137型									操作係數 Service Factor: 1										
公稱速比 Nominal ratio	實際速比 Actual ratio	入力馬力 Input HP	1750入力 Input rpm		1450入力 Input rpm		超吊荷重 OHL kg	段式 stage	可選用之入力馬力 available input Hp							實心入力軸徑 Input Shaft mm			
			出力轉速 Output rpm	出力扭矩 Output Torque kgm	出力轉速 Output rpm	出力扭矩 Output Torque kgm			15HP	20HP	25HP	30HP	40HP	50HP	60HP		75HP		
120	117.25	15	15	657	12	809	3561	3										φ42	
110	107.80	15	16	604	13	744	3485												
100	99.66	15	18	558	15	688	3449												
90	91.63	16	19	559	16	674	3337												
80	79.05	20	22	603	18	727	3092												
70	70.35	20	25	536	21	647	3036												
60	59.14	25	30	496	25	599	2878												
55	54.38	27.5	32	549	27	663	2709											φ48	
50	50.13	32	35	612	29	738	2520												
45	44.49	31	39	526	33	634	2520												
40	43.25	41	40	676	34	816	2281												
35	35.39	43	49	580	41	700	2199												
30	32.81	52.5	53	657	44	792	2031											φ55	
25	24.24	68	72	628	60	758	1689												
20	20.68	77	85	607	70	732	1587												
15	14.60	91	120	506	99	611	1459												
23	23.45	25	75	230	62	278	2265	2									φ42		
20	21.56	28	81	237	67	286	2184												
17	17.15	34	102	229	85	277	2000												
15	14.96	61	117	358	97	433	1765												
13	13.75	65	127	351	105	424	1709												
10	10.12	93	173	370	143	446	1485										φ55		
8	8.05	97	217	307	180	370	1398												
5	4.87	98	360	187	298	226	1235												

■ 表示可選用之入力馬力



操作需知 |

- 此操作需知是為了幫助您正確安裝及使用本減速機，為了防止問題產生，適當的安裝與操作是很重要的，而這個需知也包含了重要的保養建議。
- 在出貨前每一台成大減速機都經過檢驗及測試後才妥善包裝，不過當您收到貨品時請立刻檢查是否有短少或運輸損壞情形，若有，請記錄損壞或短少情形以便日後與運輸廠家求償，同時也請您通知成大公司貨品受損情形。

一、潤滑

1. 除非客人有特殊指定，否則成大公司會在每一台減速機出廠前根據安裝方式填加適當及適量之潤滑油，若客人欲自行填加潤滑油也請根據潤滑油建議表適當填加。

二、長期儲存

1. 如果減速機沒有立即安裝使用，請將它保存在乾燥安全處所，而減速機經過長時間儲放後再使用，請您再連絡成大公司，我們技術人員會告訴您應該使用前注意事項。

三、安裝附件於減速機軸心上

1. 注意！不可重擊軸心！重擊軸心可能造成軸承傷害導致軸承壽命縮短，我們建議用加熱方式安裝，附件只要加熱到80°C就可滑入軸心，如此可以減少軸承損傷的可能性。軸心尺寸公差請參照產品型錄。
2. 安裝軸心聯軸器時應該正確的對心及校正以避免震動及聯軸器異常磨耗等情形發生，並且讓軸心上的軸承免於提早損壞。
3. 為避免出力軸上之軸承受極度的負載，請參照型錄上的可承受懸吊荷重表，請不可超出限制，如果必須超出建議荷重或是合併有額外軸向及徑向負載，請聯絡我們的工程師，因此時正確的使用應該同時考慮速度、旋轉方向、安裝位置、較大外來的軸向和徑向荷重等合併之因素。

四、安裝與操作

1. 減速機安裝應考慮以下幾項因素：
 - * 環境溫度應低於40°C。
 - * 通暢的通風環境。
 - * 適當位置的油位旋塞、透氣注油旋塞與洩油旋塞。
 - * 保留適當的空間以便做設備上的檢修或更換。
2. 減速機應該安置在平坦防震且堅固的構造上，準確的對心是非常重要的，安裝在不平坦的平面上會造成減速機機殼的拉扯甚至破損。
3. 基座平坦度公差請勿超出以下建議：
 - * 77型或更小——0.1mm
 - * 87型或更大——0.2mm
4. 運輸過程中為防止減速機內潤滑油從透氣旋塞滲漏出來，出廠前我們會將透氣孔以紅色插梢堵住，請記得當您安裝好減速機運轉之前，一定要把透氣旋塞上的紅色插梢拔掉。
5. 安裝前請再次檢視其輸入馬力、減速比與銘牌相符，並檢查減速機輸出軸之旋轉方向與需求一致。

五、保養

警告！在電源移除之前不可拆卸或更換設備。

1. 潤滑油油位與品質應為平時保養重點，且根據使用頻率與環境狀況，潤滑油也必須依據建議表做換新動作。
2. 檢查聯軸器的同心度，鏈條或皮帶的鬆緊度，機座固定螺絲之緊度等是否均適當，並請保持設備的清潔。

CHENTA HELICAL GEAR REDUCERS

OPERATION MANUAL

- This operation manual is trying to help you install and use speed reducer correctly. To prevent problem occurred, proper installation and operation is very crucial. Certainly, this operation manual will also suggest you how to maintain in order to extend the life of speed reducer.
- Every CHENTA speed reducer is passed strict inspection and testing and well packaged before shipping. However when you receive speed reducer, please check immediately if there is any shortage or damage of the parts via transportation. This will be much helpful as evidence when you offer claim to the transportation carrier, meanwhile please also notice us for improving our transportation service with a qualified and responsible carrier. Also, we are eager to help to fix the problem for you and to reduce your inconvenience to the minimum.

I. Lubrication

1. Unless it's a special request from customer, every CHENTA speed reducer will be supplied with proper quantity lubricant according to different installation position before shipping. If customer prefers to fill in the lubricant oil by himself, please follow the instruction of operation manual in latter pages in this catalog.

II. Storage

1. If you won't install the speed reducer soon, please keep it out from humid place. And, please contact our service people if you want to install speed reducer for operation after storage. Our service people will inform you what should be noticed and checked in advance before operation.

III. Attachments the parts on reducer's shaft

1. Notice : Don't hit on shafts heavily. It will cause bearings damaged and shorten the life of bearings. We prefer to suggest use heating method, to heat the parts up to 80°C, it could easily slip in on the shafts and reduce the possibility of bearings damaged. As to the tolerance of shaft's diameter, please refer to the specification in catalog.
2. While install the coupling, make sure to check the alignment of coupling and shaft of speed reducer properly to eliminate the damage on bearings and reduce to vibration frequency and abnormal wear.
3. To avoid over load on the bearings of output shaft, please refer to the OHL (over hung loading) in catalog and don't exceed. If exceed or extra axial or radial loading, please contact our service engineer for consultation.
4. The actual application of following factors such as input and output speed, direction of rotation, installation site and over axial and radial loading should be careful to watch.

IV. Installation & Operation

1. The under lying factors should be taken into consideration:
 - * Ambient temperature below 40°C
 - * Location with good air ventilation
 - * Proper locations for oil plug, breather plug and drain plug
 - * Sufficient space for periodical inspection or maintenance of replacement
2. To install necessarily on a flat, stable and solid base for accurate alignment to prevent from the breakage of reducer's housing.
3. The suggested tolerance of flatness on base:
 - For size 77 or smaller, < 0.1 mm/m
 - For size 87 or bigger, < 0.2 mm/m
4. To avoid the lubricant splash out during the transportation, breather plug with red pin inserted into air breathing hole. Please remove the red pin before start-up.
5. Before installation, double check the input horsepower and ratio is the same as the punched name plate of reducer.

V. Maintenance

Be aware! The power should be off before removal or replacement of reducer.

1. Oil level and quality lubricant is key point of daily maintenance. Please refer to our suggestion to change the lubricant periodically according to the operation frequency site situation.
2. Check the alignment of coupling, the tightness of chain, and nuts and keep clean of reducer.



齒輪減速機

使用說明書

感謝您選用本公司的產品。在使用之前，請詳細參閱以下說明，以確保正確使用。

一、安裝

1. 減速機入力軸直接與馬達聯結時，應採彈性聯軸器；出力軸直接與設備聯結時，宜採用齒輪聯軸器。
2. 減速機應安裝在穩固的基礎座，且須注意空氣流通及換油時，注油及洩油之方便性。
3. 減速機入力軸及馬達出力軸之中心線必須對準確，誤差不得大於所用聯軸器之允許值。
4. 減速機安裝後，用手轉動需靈活，不可有卡死現象。
5. 減速機安裝好，使用前應先進行空負荷運轉，確定機器各部分都無異狀後，方可正式使用，如有故障應先排除。

二、潤滑

1. 新減速機使用時，於運轉500小時後，需更換新油，其後每使用2500小時需換油；但在使用過程中仍應定期檢查油的質、量，若油有雜質、老化、變質情況，必須隨時更換。
2. 減速機應使用固定品牌、規格之齒輪油，不應將不同品牌，規格或不同類型的油相混合使用。
3. 在換油過程中，應先將減速機內部清除乾淨，再注入新油。
4. 在使用期間，當發現油溫過高（超過80°C以上）時，以及有不正常的噪音等現象，應立即停止使用、檢查原因，等排除故障或更換潤滑油後，才可繼續使用。
5. 推薦用油：中國石油HD-320之極壓機油，或中國石油#90多效齒輪油。

三、維護

1. 減速機應定期檢修，發現異狀或有顯著磨損，必須立即採取有效措施制止，備用零件之材質、精度亦須照標準製造。更新零件後，應先進行空負荷運轉，確定正常後再正式使用。
2. 使用單位應建立合理的維護制度，對減速機的使用狀況及檢修中發現的問題，做仔細紀錄。

CHENTA HELICAL GEAR REDUCERS

I. INSTALLATION

1. Input shaft connects to motor directly, a flexible coupling prefer to apply according; output shaft connects to machine, it is better to use a gear coupling.
2. Install on a stable foundation and good air ventilation and the convenience of oil filling / draining should be considered.
3. The input shaft of the reducer and the motor shaft should be in alignment and the tolerance should fit the allowance.
4. After installation, please check input shaft by hand first to check whether running smoothly of nut.
5. Before start-up, no-load running test should be proceeded and any abnormal status occurred should be corrected immediately.

II. LUBRICATION

1. A new reducer needs replace oil in the beginning of 500 hrs operation; and then, each 2,500 hrs change again. Moreover, a regular oil checking is required and change necessarily.
2. Please change by equivalent specification of oil and don't mix with other brand of specification of oil.
3. Before changing oil, the inside of reducer should be flushed and drain out, then fill in new oil.
4. During operation, if the heat is over 80°C or any abnormal noise occurred, please shut down the reducer for checking immediately and start running only after the cause is resolved.
5. Lubricant recommendation: MOBIL gear 632, SHELL omala 320 or MOBIL mobilube HD80W-90, SHELL spirax E.P. 90.

III. MAINTENANCE

1. A regular maintenance is required and if found any worn out, corrective action should be taken. The accuracy of spare parts replaced should be exactly the same as the original standard and no-load running test in advance is required.
2. Build maintenance system and data collection of failure carefully for all problems been met.

齒輪減速機可能發生之異常狀況及改善方法

以下所列為一般性故障，如有特殊異常情形發生時，請與本公司聯絡，我們將提供正確之服務。

異常情況	原因	改善方法
一. 機體發熱	<ol style="list-style-type: none"> 1. 超過標準負荷運轉 2. 潤滑油加入過多或過少 3. 加入潤滑油不適當或不良 4. 油封唇部潤滑不足 	<ol style="list-style-type: none"> 1. 調整至正常負荷 2. 潤滑油應加至油位指示處 3. 更換適當之齒輪潤滑油 4. 塗抹少許油脂於油封唇處
二. 運轉時噪音	<ol style="list-style-type: none"> 1. 有規律噪音 { 齒面接觸不良 { 軸承損壞 2. 尖銳的金屬聲音 { 軸承間隙太小 { 潤滑油不足 3. 不規律噪音 { 異物掉入 { 軸承受損 	<ol style="list-style-type: none"> 1. { 修整齒接觸面 { 更換軸承 2. { 更換軸承 { 補足潤滑油 3. { 除去異物，更新潤滑油 { 更換軸承
三. 運轉時振動	<ol style="list-style-type: none"> 1. 齒輪磨損 2. 異物掉入 3. 軸承磨耗或受損 4. 螺絲鬆動 	<ol style="list-style-type: none"> 1. 更換齒輪 2. 除去異物，更新潤滑油 3. 更換軸承 4. 鎖緊螺絲
四. 漏油	<ol style="list-style-type: none"> 1. 油封損傷 2. 墊片破損 3. 排油栓未鎖牢 4. 蓋類或法蘭螺絲鬆脫 	<ol style="list-style-type: none"> 1. 更換油封 2. 更換墊片 3. 鎖緊排油栓塞 4. 鎖緊螺絲
五. 入力軸及出力軸無法轉動	<ol style="list-style-type: none"> 1. 齒輪嚙合面因高熱而粘合 2. 軸承已損壞 3. 有固形物(硬物)嚙入齒輪接合面 	<ol style="list-style-type: none"> 1. 依程度而判斷可調整或更換齒輪 2. 更換軸承 3. 除去硬物，清洗內部後更新潤滑油
六. 入力軸空轉，而無法帶動出力軸轉動	<ol style="list-style-type: none"> 1. 齒輪已磨耗 2. 齒輪與出力軸之配合鍵破損 3. 入力軸折斷 4. 出力軸折斷 	<ol style="list-style-type: none"> 1. 更換齒輪 2. 更換鍵 3. 更換入力軸 4. 更換出力軸
七. 齒輪磨耗較大	<ol style="list-style-type: none"> 1. 超過正常負荷 2. 潤滑油不良或不適當 3. 潤滑油不足 4. 運轉環境溫度過高 	<ol style="list-style-type: none"> 1. 調整適當負荷 2. 更換適當之潤滑油 3. 補充潤滑油 4. 改善通風環境

Cause & Trouble shooting for the general problem and Improvement

The following lists are general problem situations. In case other problem happen, please contact directly with us to get more information.

CAUSE	REASON	IMPROVEMENT
1. Overheat	<ol style="list-style-type: none"> 1. overload 2. lubricant oil overfill or shortage 3. improper lubricant oil 4. over friction on oil seal (lack of lubricant) 	<ol style="list-style-type: none"> 1. adjust to proper loading 2. Add lucricant to the level of oil gauge 3. change proper lubricant oil 4. Lip lubricant at oil seal
2. Noise	<ol style="list-style-type: none"> 1. consistant noise { improper gears contact; bearing damaged 2. screammng noise { bearing gap too small; lubricant oil shortage 3. consistant noise { some object insert; bearing damaged 	<ol style="list-style-type: none"> 1. { repair gears ; replace bearing 2. { replace bearing ; fill in lubricant oil 3. { remove debris & replace lubricant oil ; replace bearing
3. Vibration	<ol style="list-style-type: none"> 1. gear over-fricative 2. Debris inside 3. bearing worn-out or damaged 4. bolt loose 	<ol style="list-style-type: none"> 1. replace gear 2. remove debris & replace lubricant oil 3. replace bearing 4. tighten bolt
4. Oil Leakage	<ol style="list-style-type: none"> 1. oil seal damaged 2. gasket damaged 3. drain plug loose 4. covers or flange loose 	<ol style="list-style-type: none"> 1. replace oil seal 2. replace gasket 3. tighten drain plug 4. tighten the bolts
5. Input and Output Shaft Fail	<ol style="list-style-type: none"> 1. overheat cause gear-bound. 2. bearing damaged 3. some debris between gears 	<ol style="list-style-type: none"> 1. adjust or replace gears 2. replace bearing 3. remove debris; clean inside then replace lubricant oil
6. Input shaft fail to drive output shaft	<ol style="list-style-type: none"> 1. gear worn-out 2. the key connecting gear and output shaft damaged 3. input shaft broken 4. output shaft broken 	<ol style="list-style-type: none"> 1. replace gears 2. replace key 3. replace input shaft 4. replace output shaft
7. Gear Worn-out	<ol style="list-style-type: none"> 1. overload 2. improper lubricant oil 3. lubricant oil shortage 4. ambient temperature too high 	<ol style="list-style-type: none"> 1. adjust to proper loading 2. change proper lubricant oil 3. refill lubricant oil 4. ventilation improvement



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