

* 鋒樺科技伺服精密減速器產品 *

Fenghua Technology Servo Precision Reducer Products



行星式減速機
Planetary Gearbox

RV減速器
RV Reducer

諧波減速器
Harmonic Reducer



鋒樺傳動致力為您提供精品

專業研發生產各類精密行星齒輪傳動系列產品

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鋒樺傳動設備(上海)有限公司

台灣鋒樺科技有限公司

AT/ATF 通用型
universal type
AT065-AT280 series
ATF065-ATF280 series



PT/PAW 標準型
standard type
PT070A-PT180B series
PAW055A-PAW180A(B) series



90度直角精密減速機

90 Degree Right Angle Precision Gearbox

螺桿同步升降機

多種輸出軸型式減速比1/1~1/250
適用於伺服電機/步進電機
適用容量100W~15KW

Screw synchronous lift

Multiple output-shaft types Reduction ratio 1/1~1/250
Suitable for servo motor / stepper motor
Applicable capacity 100W~15KW



AAW 精密型
precision type
AAT(M)070AS-AAT(M)320AS series
AAW070AS-AAW320AS(BS) series



鋒樺傳動科技(江蘇)有限公司
鋒樺傳動設備(上海)有限公司
台灣鋒樺科技有限公司

Fenghua Transmission Technology (Jiangsu) Co.,Ltd.

3F 鋒樺[®] 公司簡介 Company Introduction

鋒樺傳動科技(江蘇)有限公司, 由專業製造齒輪工廠開始發展, 工廠同仁及研發團隊具有二十幾年齒輪製造研發及設計經驗, 工廠早期和臺灣行星減速器技術團隊合作, 成立行星減速器事業部, 合作研發行星齒輪減速機系列產品設計及製造工藝, 所生產的系列伺服專用精密減速器具低背隙(5~8arcmin)、低噪音(60dAB)、高效率(≥95%)之三大特性。產品可以搭配任意伺服工廠所生產伺服馬達、步進馬達, 高精度行星減速器具有降低轉速、高轉矩化、增加馬達轉子慣性, 提高剛性、縮短啓動與停止定位時間, 馬達功率小型化, 同時提高慣性負載的安定性與降低振動的功能。

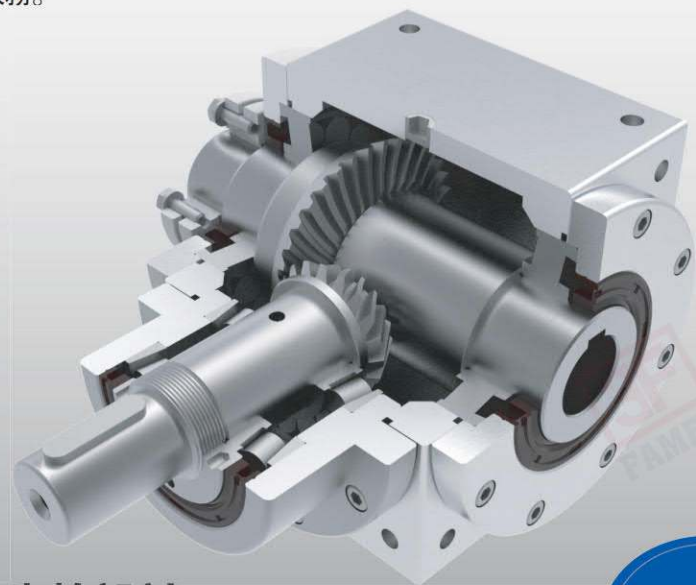
為提升產品升級、適應高精度等級產品適用範圍, 工廠後期產品優化升級, 全系列上綫-高精度斜齒行星減速器, 具有超低背隙(1~3arcmin)精度等級, 新開發產品可直接替換德國和日本品牌, 產品系列全部齊全, 尺寸和精度和日系德系減速器完全匹配, 在升級行星減速器產品同時, 工廠堅持以研發創新為企業發展方向, 陸續研發推出適用於自動化不同安裝和輸出需求的(90度精密直角減速器), 多關節機器人行業減速器(RV高精密擺錘針輪減速器)和美國天才發明家C.W.Musser創造發明的波動齒輪裝置原理發明(諧波減速器), 及(精密齒輪齒條)產品, 也可以非標定制減速器, 產品廣泛運用工具機(龍門機床), 激光切割機, 木工雕刻機, 3C自動化, 光伏設備, 鋰電池等新能源設備領域, 全伺服紙巾機械, 精度凹凸版印刷機, 精密塗布機, 伺服彎管機, 數控彈簧機等自動化程度較高設備等都有鋒樺減速器的使用。

工廠產品有匹配大量產品庫存, 希望協同伺服電機廠家及系統集成商, 扎根全球市場, 立志通過優良的產品, 服務於全球自動化行業和機器人領域, 為全球機器人事業和工業4.0方向服務。

Fenghua Transmission Technology (Jiangsu) Co., Ltd. is developed from a factory which professionally manufactures the gears. All staffs of factory and R & D team have more than 20 years' gear manufacturing and designing experience. The factory cooperated with Taiwan planetary gearbox technology team in the early period, and then established business department of the planetary gearbox, and developed the design and manufacturing process of product line of planetary gearbox series. The servo exclusive-used precision gearbox series the company produced are with three features of low backlash (5~8 arcmin), low noise (60dAB) and high efficiency (≥95%). Products can be compatible with servo motors and stepper motors produced by any servo factory. High precision planetary reducers features of reducing rotating speed, increasing torque greatly, increasing inertia of the motor rotor, improving rigidity, shortening the locating time of start and stop, miniaturizing the motor power and improving the stability of the inertia load and reducing the vibration at the same time.

In order to upgrade products, and adapt to the applicable range of high precision grade products, the factory launched the whole series of high precision helical planetary gearbox in late stage. With ultra-low backlash (1-3 arcmin) precision grade, the newly developed products can directly replace the sizes of the products produced by Germany and Japan. All product series are completed, and sizes and precision can perfectly match with that of Japanese and Germany. While upgrading planetary reducer products, the factory insists on the concept of R&D as the development direction of the company. Then the factory successively developed and launched 90 degree precision right angle gearboxes which are suitable for automation with different installation and output requirements, multi-joint robot industry reducers (RV high precision pin-wheel reducers), and harmonic reducers making use of the principle of the wave gear device invented by American genius inventor C. W. Musser, and precision gear & rack products. The factory can also customize the reducer. The products are widely used in tool machines (Planning Machine Tools), laser cutting machines, woodworking engraving machines, 3C automation, photovoltaic equipment, lithium battery and other fields of new energy equipment. And Fenghua gearboxes can also be found in fully servo paper towel machines, precision concave-convex printing machines, precision coating machines, servo pipe benders, CNC spring machines and other highly automated equipment.

The company matches a large stocks of products to coordinate with servo motor manufacturers and system integration traders, rooting in the domestic market, and determined to serve the domestic automatic industry and robotic field by excellent products and serve for the Chinese robot cause and Industrial 4.0 direction.



低噪音內螺旋齒輪設計
Low noise internal helical gear design

高精度客制化服務
High Precision
Customized Service

創新研發品質保證
Innovative R & D
Quality Assurance

專業加工二十年經驗
Professional Processing
20 Years of Experience



滾齒制程技術
Hobbing process technology



插齒制程技術
Gear shaping process technology



品質控制
Quality Control

產品應用行業 Product Application Industry

半導體液晶製造設備、機器人、機床等需要精密運動控制的前沿領域得到廣泛應用
Semiconductor liquid crystal manufacturing equipment, robots, machine tools, and other frontiers of precision motion control are widely used.

<p>機器人的行走軸 (齒條和小齒輪) The walking shaft of a robot (rack and pinion)</p> <p>FH精密減速機</p>	<p>機床的龍門機器人 Gantry robot of machine tool</p> <p>齒條&小齒輪 鏈條 皮帶 FH精密減速機</p>	<p>水平多關節機器人 Horizontal multi-joint robot</p> <p>FH精密減速機</p>	<p>晶圓搬運機器人 Wafer handling robot</p> <p>車輪 FH精密減速機</p>
<p>衝壓設備 (鉚接) Stamping equipment (riveting)</p> <p>FH精密減速機</p>	<p>彎管機 Pipe bending machine</p> <p>FH精密減速機</p>	<p>注塑成型取出機器人 Injection mold taken-out robot</p> <p>直驅機械臂 FH精密減速機</p>	<p>機床的轉塔刀架旋轉 Rotary tower knife frame rotation of machine tool</p> <p>FH精密減速機</p>
<p>機床的XY軸 The XY axis of machine tool</p> <p>齒條&小齒輪 FH精密減速機</p>	<p>分度工作臺驅動 Indexing table drive</p> <p>FH精密減速機</p>	<p>塗抹用輥驅動 Roller drive for daubing use</p> <p>FH精密減速機</p>	<p>裝載機用滑車 Pulley for loader use</p> <p>FH精密減速機</p>
<p>軸輸入型皮帶驅動 Shaft input belt drive</p> <p>FH精密減速機</p>	<p>液晶玻璃基板搬運機器人 Liquid crystal glass substrate handling robot</p> <p>FH精密減速機</p>	<p>拉力試驗機 Tensile testing machine</p> <p>FH精密減速機</p>	<p>頂棚行走式搬運車 Roof walking van</p> <p>車輪 軌道 FH精密減速機</p>

<p>無人搬運車 Unmanned vehicle</p> <p>車輪 FH精密減速機</p>	<p>高度工作用機器人 Robot for working in height</p> <p>FH精密減速機</p>	<p>卷起 Roll up</p> <p>FH精密減速機</p>
<p>旋轉 Rotate</p> <p>FH精密減速機</p>	<p>搬送 Transport</p> <p>FH精密減速機</p>	<p>角度 (定位) 控制 Angle (positioning) control</p> <p>FH精密減速機</p>
<p>兩軸控制 (XY工作臺) Two axis control (XY workbench)</p> <p>FH精密減速機</p>	<p>輥驅動 Roller drive</p> <p>FH精密減速機</p>	
<p>彎管機 Pipe bending machine</p> <p>FH精密減速機</p>	<p>衝壓 (鉚接) Punching (riveting)</p> <p>FH精密減速機</p>	<p>印刷電路板檢查裝置 Printed circuit board inspection device</p> <p>FH精密減速機</p>

產品目錄 CONTENTS

AT

軸輸入轉向器
Shaft Input Steering Gearbox

AT series



01-08

AT-F

法蘭輸入90度減速器
Flange Input 90 Degree Reducer

AT-F series



09-24

PAW-A(B)

標準型90度減速機
Standard Type 90 Degree Reducer

PAW-A(B) series



25-32

PT

標準型轉向器
Standard Type Steering Gearbox

PT series



33-37

AAW-AS(BS)

精密型90度減速機
Precision Type 90 Degree Reducer

AAW-AS(BS) series



39-47

AAW-BS

90度螺桿減速機
90 Degree Screw Reducer

AAW-BS series

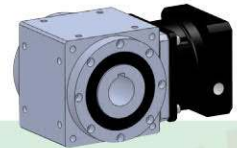


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AATM

精密型轉向器
Precision Type Steering Gearbox

AATM series



49-53

AAT

精密型轉向器
Precision Type Steering Gearbox

AAT series

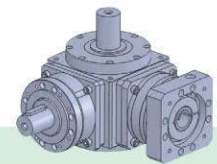


54-56

AATM-2AX

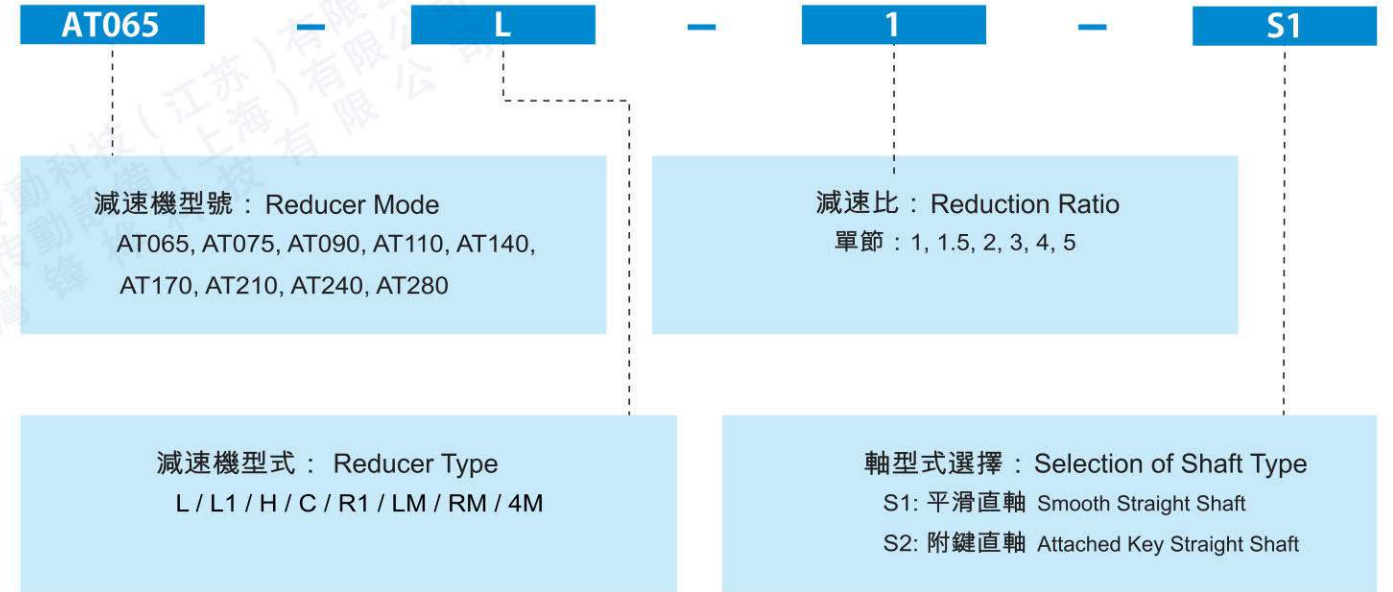
90度兩軸轉向器
90 Degree Two Shaft Steering Gearbox

AATM-2AX series

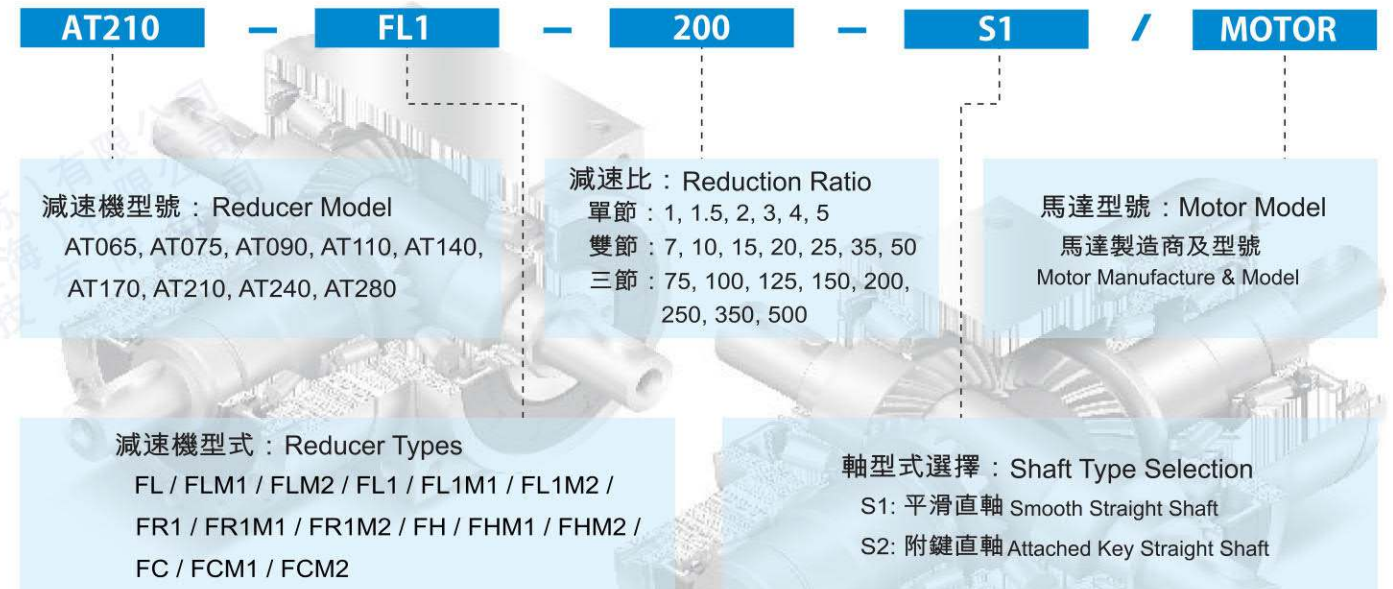


59-60

減速機的訂購 Purchase of Reducer



選用範例 Selection Example : AT065-L-1-S1

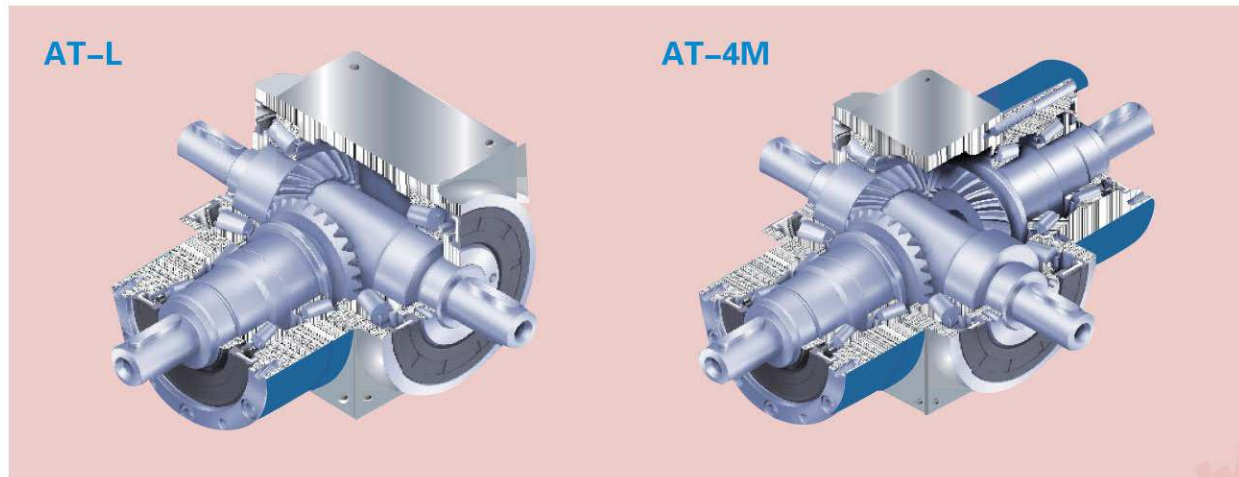


選用範例 Selection Example : AT210-FL1-200-S1 / SIEMENS 1FK6 032-6AK71

AT 雙軸出軸系列

產品特點

Double Output Shaft Series Product Features



- 一體化不銹鋼本體確保最大剛性與耐蝕性，多重精密加工表面易于組裝。
Integrated stainless steel body ensures maximum rigidity and corrosion resistance. Multiple precision machined surface for easy assembly.
- 採用頂級蝸綫傘齒輪的設計軟體，經最佳化設計接觸齒面負載均一容許高扭矩輸出，齒輪采高強度滲碳合金鋼，研磨精密度符合 DIN 5 級標準以內。
The adoption of the top spiral worm gear design software and the optimized design of contact tooth surface make the even load and allow high torque output. Gears are made of high strength carburizing alloy steel and the grinding precision is up to the standard of DIN 5 level.
- 多重不銹鋼輸出力軸的設計可以適用於各種工業上應用的需求。
Multiple stainless steel output and input shaft design can be applied to various of industrial applications needs.
- 高精度研磨的蝸綫傘齒輪組結合最佳化設計的行星式齒輪組可以達到500:1 的減速比。
The combination of high-precision grinded worm bevel gear set and the optimized the design of planetary gear set can make the reduction speed up to 500:1.
- 高扭矩低背隙的精簡結構設計適用於精密伺服的應用。
High torque and low backlash design of the compact structure is suitable for the application of precision servo.
- 專利的油封設計，免保養無需更換潤滑油，運轉壽命長。
Patented oil seal design, maintenance-free without replacing the lubrication oil, long operating life.

重量 Weight

減速機型 Model No.	節數 Stage	比數 ¹ Ratio	AT065	AT075	AT090	AT110	AT140	AT170	AT210	AT240	AT280	
L 系列 L Series	kg	1	2.6	4.2	6.8	11.6	19.8	34.8	66.2	98.1	155.7	
L1 系列 L1 Series		1	2.6	4.1	6.7	11.5	19.5	34.2	65.1	96.6	153.4	
H 系列 H Series		1	2.5	3.9	6.4	11.0	18.1	31.6	60.0	89.4	143.4	
C 系列 C Series		1	2.8	4.2	6.9	11.4	19.6	33.7	63.3	97.9	149.1	
R1 系列 R1 Series		1	2.6	4.1	6.7	11.5	19.5	34.2	65.1	96.6	153.4	
LM 系列 LM Series		1	1	3.5	5.6	9.0	15.2	24.1	42.4	81.4	122.0	190.9
RM 系列 RM Series		1	1	3.5	5.6	9.0	15.2	24.1	42.4	81.4	122.0	190.9
4M 系列 4M Series	1	1	3.5	5.6	9.1	15.4	24.8	42.6	82.5	123.5	193.3	

AT 雙軸出軸系列

產品規格

Double Output Shaft Series Product Specification

減速機性能資料 Files of Reducer Performance

規格 Specification	節數 Stage	比數 ¹ Ratio ^A	AT065 L	AT075 L	AT090 L	AT110 L	AT140 L	AT170 L	AT210 L	AT240 L	AT280 L
			AT065 L1	AT075 L1	AT090 L1	AT110 L1	AT140 L1	AT170 L1	AT210 L1	AT240 L1	AT280 L1
額定輸出力矩 T_{2N} Rated Output Torque	Nm	1	25	45	78	150	360	585	1,300	2,150	3,200
		1.5	25	45	78	150	360	585	1,300	2,150	3,200
		2	24	42	68	150	330	544	1,220	2,010	3,050
		3	18	33	54	120	270	450	1,020	1,650	2,850
		4	13	28	48	100	224	376	860	1,410	2,300
		5	12	25	40	85	196	320	740	1,210	2,000
最大加速力矩 T_{2s} Max.	Nm	1	1.5倍額定輸出力矩 1.5 Times of Rated Output Torque								
最大加速輸入轉速 n_{1s} Max.	rpm	1	7,500	6,500	5,500	4,500	3,500	3,000	2,200	2,000	1,700
背隙 [*] Backlash	arcmin	1	≤6	≤6	≤6	≤6	≤6	≤6	≤6	≤6	≤6
容許徑向力 F_{1r} ² Radial 輸入軸d1 Input d1	N	1	700	950	1,450	2,100	2,700	3,800	7,800	9,600	10,500
容許徑向力 F_{2r} ³ Radial 輸出軸d2 Output d2	N	1	900	1,100	1,700	2,700	4,800	6,600	11,500	16,000	18,000
容許軸向力 F_{1a} ² Axial 輸入軸d1 Input d1	N	1	350	425	725	1,050	1,350	1,900	3,900	4,800	5,250
容許軸向力 F_{2a} ³ Axial 輸出軸d2 Output d2	N	1	450	550	850	1,350	2,400	3,300	5,750	8,500	9,000
使用壽命 Service Life	hr	1	20,000*								
效率 η Efficiency	%	1	≥98%								
使用溫度 Operating Temp	°C	1	-10°C ~ 90°C								
潤滑 Lubrication			合成潤滑油 Fully Synthetic Grease								
噪音值 ($n=1500$ rpm, 無負載) dB(A)		1	≤68	≤70	≤74	≤76	≤77	≤78	≤80	≤82	≤83

1. 減速比 ($i=N_n/N_m$)
* 連續運轉降低使用壽命二分之一。
2. 作用於輸入軸中心位置 @ n_{1s}
3. 作用於輸出軸中心位置 @ n_{1s}
* 背隙值為在 2% 額定力矩 T_{2N} 的扭力下所測得

減速機轉動慣量 Rotary Inertia of Reducer

規格 Specification	節數 Stage	比數 ¹ Ratio ^A	AT065 L	AT075 L	AT090 L	AT110 L	AT140 L	AT170 L	AT210 L	AT240 L	AT280 L
			AT065 L1	AT075 L1	AT090 L1	AT110 L1	AT140 L1	AT170 L1	AT210 L1	AT240 L1	AT280 L1
轉動慣量 J_1 Rotary Inertia	kg · cm ²	1	0.51	1.30	3.16	7.70	23.57	58.99	195.40	369.34	799.12
		1.5	0.64	1.16	2.82	6.74	19.37	49.28	155.45	283.58	595.78
		2	0.44	1.11	2.70	6.31	17.75	45.35	140.24	249.74	511.76
		3	0.43	1.09	2.66	6.17	17.18	44.01	134.95	237.71	483.06
		4	0.43	1.09	2.65	6.13	17.06	43.70	133.58	234.72	476.26
		5	0.43	1.09	2.65	6.12	17.02	43.60	133.14	233.67	473.58

AT-L系列雙軸出軸型式

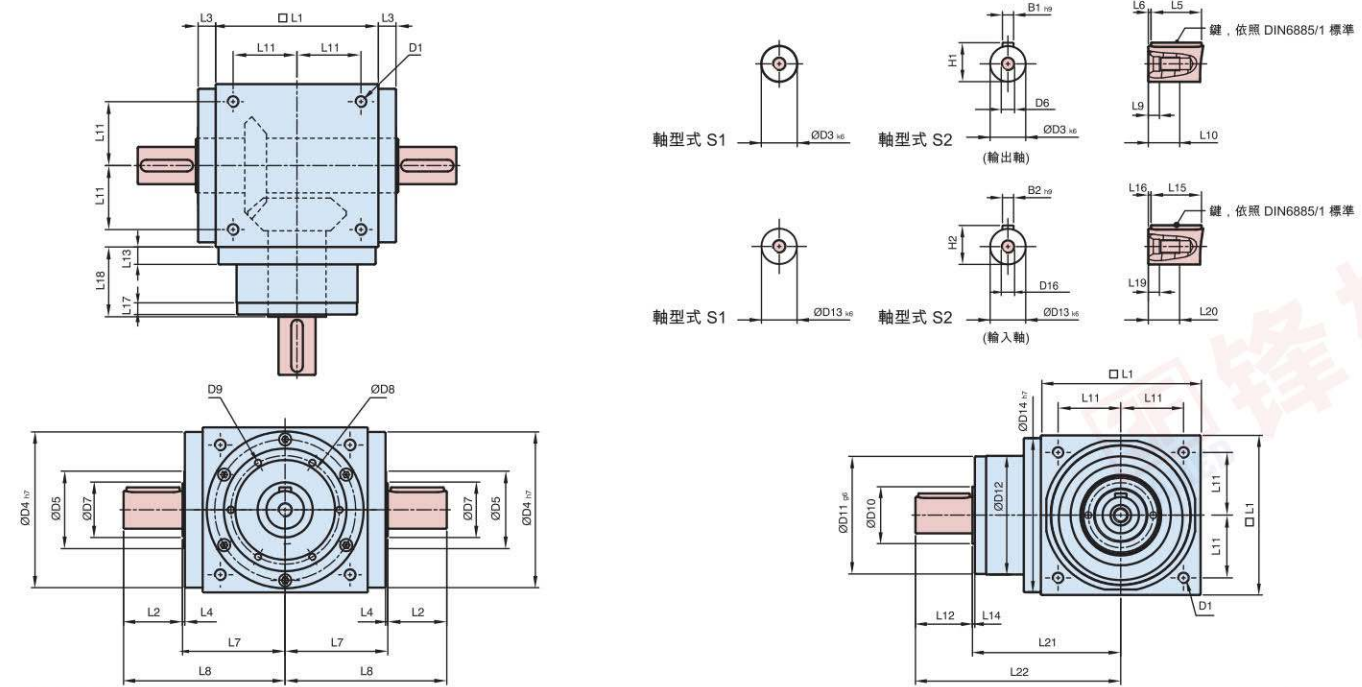
Double Output Shaft Type

尺寸 (單節 1-stage, 減速比ratio i=1~5)



Unit:mm

外形尺寸圖 Dimensions:



規格表 Specifications:

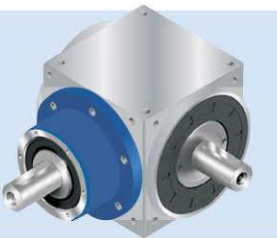
Unit:mm

尺寸 Sizes	AT065 L	AT075 L	AT090 L	AT110 L	AT140 L	AT170 L	AT210 L	AT240 L	AT280 L
D1	M4	M6	M6	M8	M10	M12	M16	M16	M16
D3 _{k6}	13	16	18	22	32	40	50	55	60
D4 _{h7}	63	73	88	108	135	165	205	235	275
D5	31	35	43	53	68	83	104	124	144
D6	M4	M5	M5	M8	M12	M16	M16	M16	M20
D7	21	22	28	33	47	55	75	85	110
D8	53	62	76	95	92	114	142	160	176
D9	4xM4xL7	4xM5xL8	4xM5xL8	6xM6xL10	6xM6xL10	6xM8xL12.5	6xM8xL12.5	6xM8xL12.5	6xM10xL15
D10	15.4	20.4	25.8	49.8	59.3	79.3	92.3	102.3	122.3
D11 _{g6}	62.9	72.9	87	107	103	127	158	178	198
D12	62	72	86	106	104	128	160	180	200
D13 _{k6}	13	16	18	22	32	40	50	55	60
D14 _{h7}	63	73	88	108	135	165	205	235	275
D16	M4	M5	M5	M8	M12	M16	M16	M16	M20
L1	65	75	90	110	140	170	210	240	280
L2	19.5	30	35	40	50	60	75	85	110
L3	13	14.5	15	15	15	15	20	25	25
L4	2	2	2	2	2	2	2	2	2
L5	16	25	28	32	45	50	70	80	100
L6	2	2.5	3.5	4	2.5	5	2.5	2.5	5
L7	47.5	54	62	72	87	102	127	147	167
L8	67	84	97	112	137	162	202	232	277
L9	4.5	4.8	4.8	7.2	10	12	12	12	15
L10	10	12.5	12.5	19	28	36	36	36	42
L11	27	30	36	44	55	67	85	95	110
L12	19.5	30	35	40	50	60	75	85	110
L13	13	15	15	15	15	15	20	25	25
L14	2	2	2	2	2	2	2	2	2
L15	16	25	28	32	45	50	70	80	100
L16	2	2.5	3.5	4	2.5	5	2.5	2.5	5
L17	6	8	8	8	10	10	10	10	10
L18	43	52.5	55	60	60	70	90	105	120
L19	4.5	4.8	4.8	7.2	10	12	12	12	15
L20	10	12.5	12.5	19	28	36	36	36	42
L21	75.5	90	100	115	130	155	195	225	260
L22	95	120	135	155	180	215	270	310	370
B1 _{h9}	5	5	6	6	10	12	14	16	18
B2 _{h9}	5	5	6	6	10	12	14	16	18
H1	15	18	20.5	24.5	35	43	53.5	59	64
H2	15	18	20.5	24.5	35	43	53.5	59	64

AT-L1 (左) / AT-R1 (右) 系列

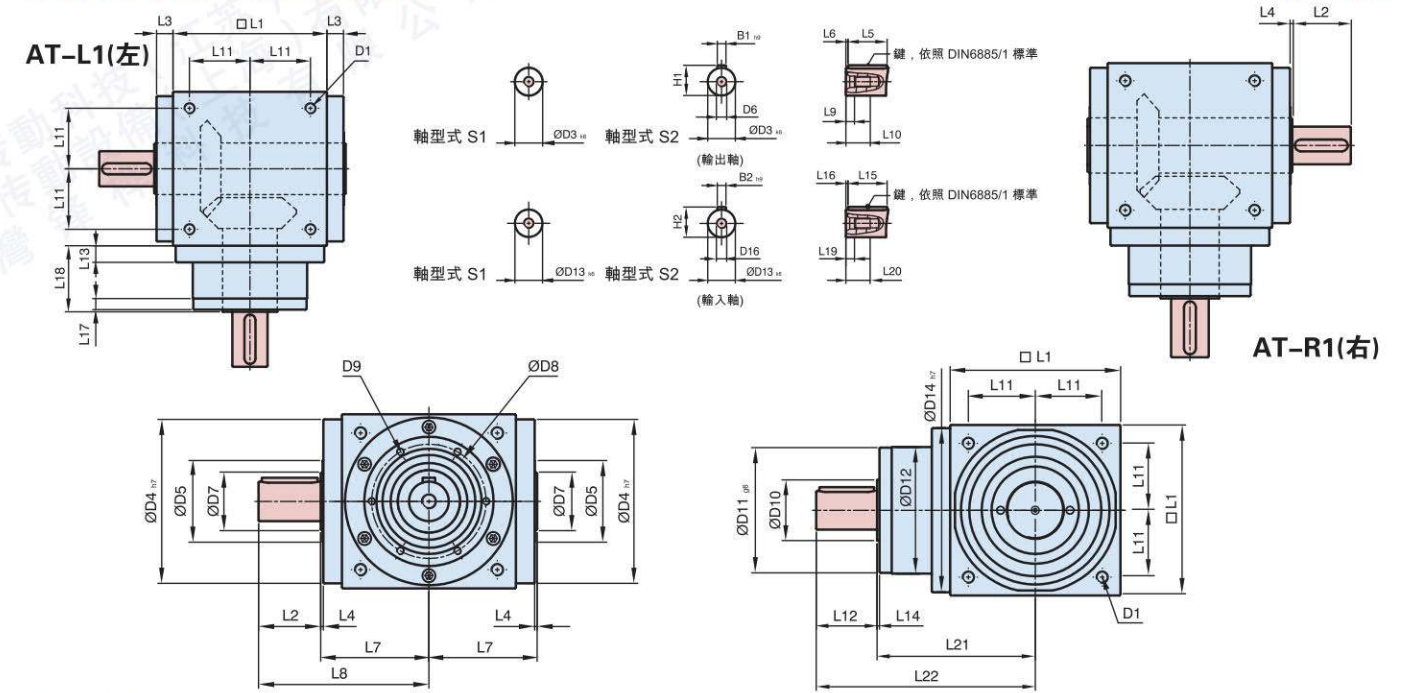
單邊出軸型式 Single-side Output Shaft Type

尺寸 (單節 1-stage, 減速比ratio i=1~5)



Unit:mm

外形尺寸圖 Dimensions:



規格表 Specifications:

Unit:mm

尺寸 Sizes	AT065 L1/R1	AT075 L1/R1	AT090 L1/R1	AT110 L1/R1	AT140 L1/R1	AT170 L1/R1	AT210 L1/R1	AT240 L1/R1	AT280 L1/R1
D1	M4	M6	M6	M8	M10	M12	M16	M16	M16
D3 _{k6}	13	16	18	22	32	40	50	55	60
D4 _{h7}	63	73	88	108	135	165	205	235	275
D5	31	35	43	53	68	83	104	124	144
D6	M4	M5	M5	M8	M12	M16	M16	M16	M20
D7	21	22	28	33	47	55	75	85	110
D8	53	62	76	95	92	114	142	160	176
D9	4xM4xL7	4xM5xL8	4xM5xL8	6xM6xL10	6xM6xL10	6xM8xL12.5	6xM8xL12.5	6xM8xL12.5	6xM10xL15
D10	15.4	20.4	25.8	49.8	59.3	79.3	92.3	102.3	122.3
D11 _{g6}	62.9	72.9	87	107	103	127	158	178	198
D12	62	72	86	106	104	128	160	180	200
D13 _{k6}	13	16	18	22	32	40	50	55	60
D14 _{h7}	63	73	88	108	135	165	205	235	275
D16	M4	M5	M5	M8	M12	M16	M16	M16	M20
L1	65	75	90	110	140	170	210	240	280
L2	19.5	30	35	40	50	60	75	85	110
L3	13	14.5	15	15	15	15	20	25	25
L4	2	2	2	2	2	2	2	2	2
L5	16	25	28	32	45	50	70	80	100
L6	2	2.5	3.5	4	2.5	5	2.5	2.5	5
L7	47.5	54	62	72	87	102	127	147	167
L8	67	84	97	112	137	162	202	232	277
L9	4.5	4.8	4.8	7.2	10	12	12	12	15
L10	10	12.5	12.5	19	28	36	36	36	42
L11	27	30	36	44	55	67	85	95	110
L12	19.5	30	35	40	50	60	75	85	110
L13	13	15	15	15	15	15	20	25	25
L14	2	2	2	2	2	2	2	2	2
L15	16	25	28	32	45	50	70	80	100
L16	2	2.5	3.5	4	2.5	5	2.5	2.5	5
L17	6	8	8	8	10	10	10	10	10
L18	43	52.5	55	60	60	70	90	105	120
L19	4.5	4.8	4.8	7.2	10	12	12	12	15
L20	10	12.5	12.5	19	28	36	36	36	42
L21	75.5	90	100	115	130	155	195	225	260
L22	95	120	135	155	180	215	270	310	370
B1 _{h9}	5	5	6	6	10	12	14	16	18
B2 _{h9}	5	5	6	6	10	12	14	16	18
H1	15	18	20.5	24.5	35	43	53.5	59	64
H2	15	18	20.5	24.5	35	43	53.5	59	64

AT-H系列孔輸入型式

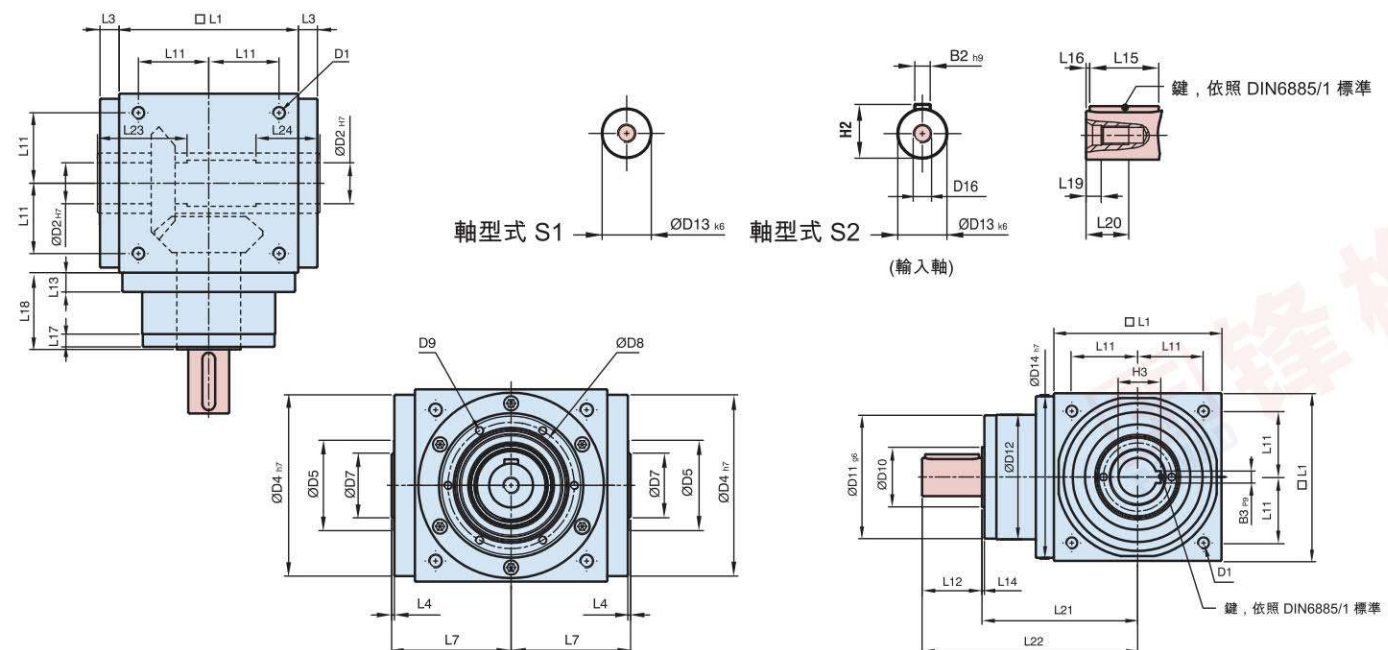
Hole Input Type

尺寸 (單節1-stage, 減速比ratio i=1~5)



Unit:mm

外形尺寸圖 Dimensions:



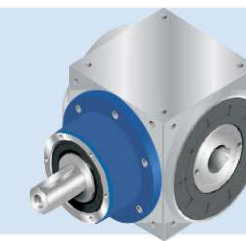
規格表 Specifications:

尺寸 Sizes	AT065 H	AT075 H	AT090 H	AT110 H	AT140 H	AT170 H	AT210 H	AT240 H	AT280 H
D1	M4	M6	M6	M8	M10	M12	M16	M16	M16
D2 H7	13	14	18	22	32	40	50	55	60
D4 h7	63	73	88	108	135	165	205	235	275
D5	31	35	43	53	68	83	104	124	144
D7	21	22	28	33	47	55	75	85	110
D8	53	62	76	95	92	114	142	160	176
D9	4xM4xL7	4xM5xL8	4xM5xL8	6xM6xL10	6xM6xL10	6xM8xL12.5	6xM8xL12.5	6xM8xL12.5	6xM10xL15
D10	15.4	20.4	25.8	35.8	49.8	59.3	79.3	92.3	102.3
D11 g6	62.9	72.9	87	107	103	127	158	178	198
D12	62	72	86	106	104	128	160	180	200
D13 k6	13	16	18	22	32	40	50	55	60
D14 h7	63	73	88	108	135	165	205	235	275
D16	M4	M5	M5	M8	M12	M16	M16	M16	M20
L1	65	75	90	110	140	170	210	240	280
L3	13	14.5	15	15	15	15	20	25	25
L4	2	2	2	2	2	2	2	2	2
L7	47.5	54	62	72	87	102	127	147	167
L11	27	30	36	44	55	67	85	95	110
L12	19.5	30	35	40	50	60	75	85	110
L13	13	15	15	15	15	15	20	25	25
L14	2	2	2	2	2	2	2	2	2
L15	16	25	28	32	45	50	70	80	100
L16	2	2.5	3.5	4	2.5	5	2.5	2.5	5
L17	6	8	8	8	10	10	10	10	10
L18	43	52.5	55	60	60	70	90	105	120
L19	4.5	4.8	4.8	7.2	10	12	12	12	15
L20	10	12.5	12.5	19	28	36	36	36	42
L21	75.5	90	100	115	130	155	195	225	260
L22	95	120	135	155	180	215	270	310	370
L23	40	47	52	53	70	80	95	115	115
L24	30	32	35	35	50	55	65	80	80
B2 h9	5	5	6	6	10	12	14	16	18
B3 P9	5	5	6	6	10	12	14	16	18
H2	15	18	20.5	24.5	35	43	53.5	59	64
H3	15.3	16.3	20.8	24.8	35.3	43.3	53.8	59.3	64.4

AT-C系列孔輸出帶抱箍型式

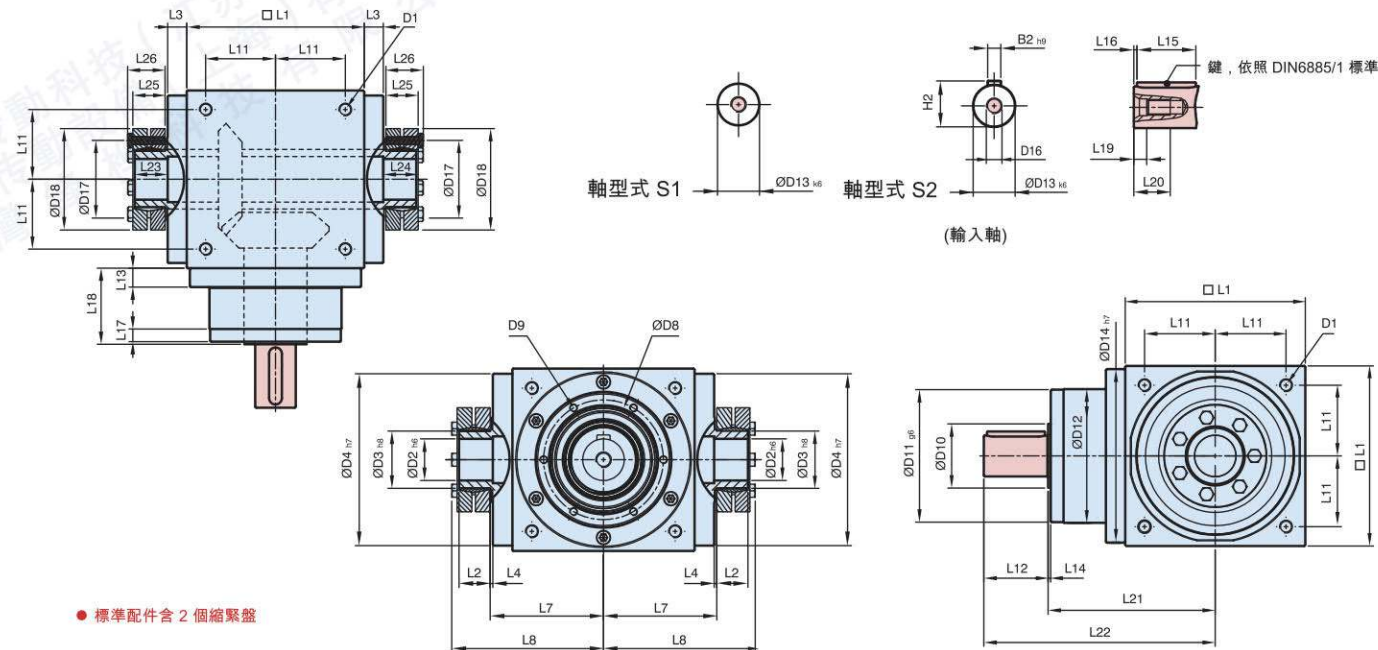
Hole Output Hoop Type

尺寸 (單節1-stage, 減速比ratio i=1~5)



Unit:mm

外形尺寸圖 Dimensions:



規格表 Specifications:

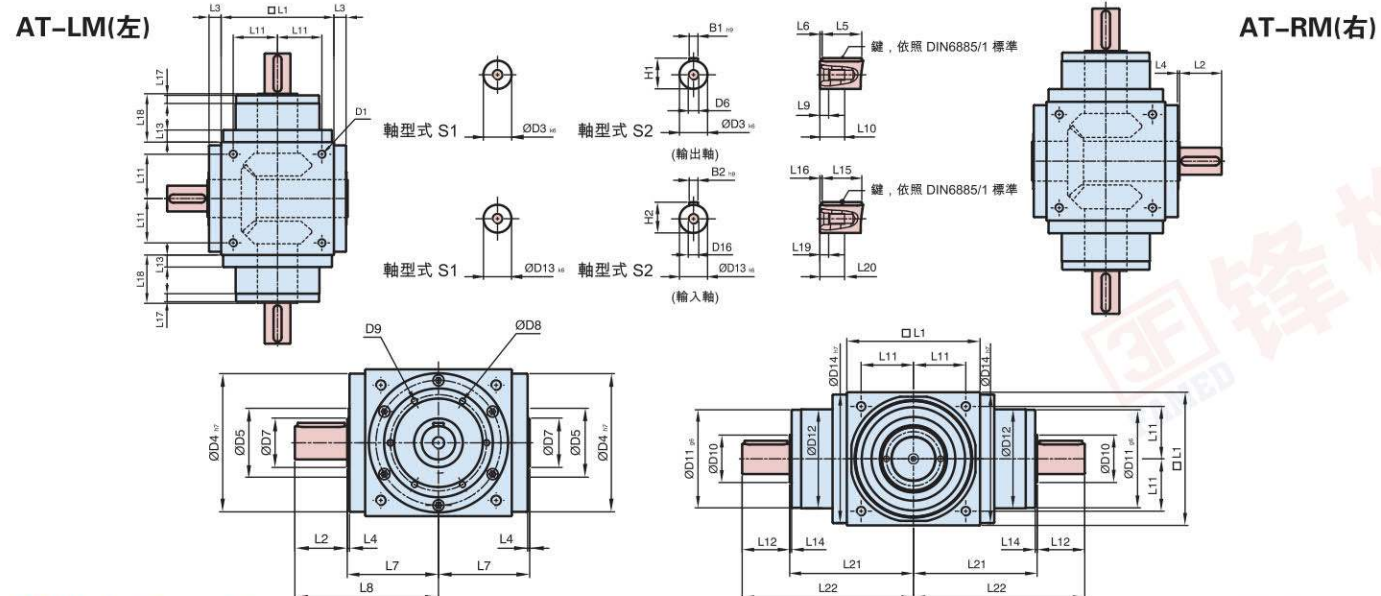
尺寸 Sizes	AT065 C	AT075 C	AT090 C	AT110 C	AT140 C	AT170 C	AT210 C	AT240 C	AT280 C
D1	M4	M6	M6	M8	M10	M12	M16	M16	M16
D2 H6	13	14	18	22	32	40	50	55	60
D3 h8	16	16	22	25	44	50	62	68	75
D4 h7	63	73	88	108	135	165	205	235	275
D8	53	62	76	95	92	114	142	160	176
D9	4xM4xL7	4xM5xL8	4xM5xL8	6xM6xL10	6xM6xL10	6xM8xL12.5	6xM8xL12.5	6xM8xL12.5	6xM10xL15
D10	15.4	20.4	25.8	35.8	49.8	59.3	79.3	92.3	102.3
D11 g6	62.9	72.9	87	107	103	127	158	178	198
D12	62	72	86	106	104	128	160	180	200
D13 k6	13	16	18	22	32	40	50	55	60
D14 h7	63	73	88	108	135	165	205	235	275
D16	M4	M5	M5	M8	M12	M16	M16	M16	M20
D17	26	26	36	38	61	70	86	86	100
D18	41	41	50	50	80	90	110	115	138
L1	65	75	90	110	140	170	210	240	280
L2	14	14	18	18	24	26	29	29	30.5
L3	13	14.5	15	15	15	15	20	25	25
L4	2	2	2	2	2	2	2	2	2
L7	47.5	54	62	72	87	102	127	147	167
L8	66	72.5	85	95	116.5	133.5	161.5	181.5	205
L11	27	30	36	44	55	67	85	95	110
L12	19.5	30	35	40	50	60	75	85	110
L13	13	15	15	15	15	15	20	25	25
L14	2	2	2	2	2	2	2	2	2
L15	16	25	28	32	45	50	70	80	100
L16	2	2.5	3.5	4	2.5	5	2.5	2.5	5
L17	6	8	8	8	10	10	10	10	10
L18	43	52.5	55	60	60	70	90	105	120
L19	4.5	4.8	4.8	7.2	10	12	12	12	15
L20	10	12.5	12.5	19	28	36	36	36	42
L21	75.5	90	100	115	130	155	195	225	260
L22	95	120	135	155	180	215	270	310	370
L23	15	15	20	20	26	28	31	31	32.5
L24	15	15	20	20	26	28	31	31	32.5
L25	15	15	19.5	19.5	25.5	27.5	30.5	30.5	32.5
L26	18.5	18.5	23	23	29.5	31.5	34.5	34.5	38
B2 h9	5	5	6	6	10	12	14	16	18
H2	15	18	20.5	24.5	35	43	53.5	59	64

AT-LM (左) / AT-RM(右)系列 雙出軸方向相反型式

Double Output Shaft Opposite Direction Type
尺寸(單節1-stage, 減速比ratio i=1)



外形尺寸圖 Dimensions:



規格表 Specifications:

尺寸 Sizes	AT065LM/RM	AT075LM/RM	AT090LM/RM	AT110LM/RM	AT140LM/RM	AT170LM/RM	AT210LM/RM	AT240LM/RM	AT280LM/RM
D1	M4	M6	M6	M8	M10	M12	M16	M16	M16
D3 k6	13	16	18	22	32	40	50	55	60
D4 h7	63	73	88	108	135	165	205	235	275
D5	31	35	43	53	68	83	104	124	144
D6	M4	M5	M5	M8	M12	M16	M16	M16	M20
D7	21	22	28	33	47	55	75	85	110
D8	53	62	76	95	92	114	142	160	176
D9	4xM4xL7	4xM5xL8	4xM5xL8	6xM6xL10	6xM6xL10	6xM8xL12.5	6xM8xL12.5	6xM8xL12.5	6xM10xL15
D10	15.4	20.4	25.8	35.8	49.8	59.3	79.3	92.3	102.3
D11 g6	62.9	72.9	87	107	103	127	158	178	198
D12	62	72	86	106	104	128	160	180	200
D13 k6	13	16	18	22	32	40	50	55	60
D14 h7	63	73	88	108	135	165	205	235	275
D16	M4	M5	M5	M8	M12	M16	M16	M16	M20
L1	65	75	90	110	140	170	210	240	280
L2	19.5	30	35	40	50	60	75	85	110
L3	13	14.5	15	15	15	15	20	25	25
L4	2	2	2	2	2	2	2	2	2
L5	16	25	28	32	45	50	70	80	100
L6	2	2.5	3.5	4	2.5	5	2.5	2.5	5
L7	47.5	54	62	72	87	102	127	147	167
L8	67	84	97	112	137	162	202	232	277
L9	4.5	4.8	4.8	7.2	10	12	12	12	15
L10	10	12.5	12.5	19	28	36	36	36	42
L11	27	30	36	44	55	67	85	95	110
L12	19.5	30	35	40	50	60	75	85	110
L13	13	15	15	15	15	15	20	25	25
L14	2	2	2	2	2	2	2	2	2
L15	16	25	28	32	45	50	70	80	100
L16	2	2.5	3.5	4	2.5	5	2.5	2.5	5
L17	6	8	8	8	10	10	10	10	10
L18	43	52.5	55	60	60	70	90	105	120
L19	4.5	4.8	4.8	7.2	10	12	12	12	15
L20	10	12.5	12.5	19	28	36	36	36	42
L21	75.5	90	100	115	130	155	195	225	260
L22	95	120	135	155	180	215	270	310	370
B1 h9	5	5	6	6	10	12	14	16	18
B2 h9	5	5	6	6	10	12	14	16	18
H1	15	18	20.5	24.5	35	43	53.5	59	64
H2	15	18	20.5	24.5	35	43	53.5	59	64

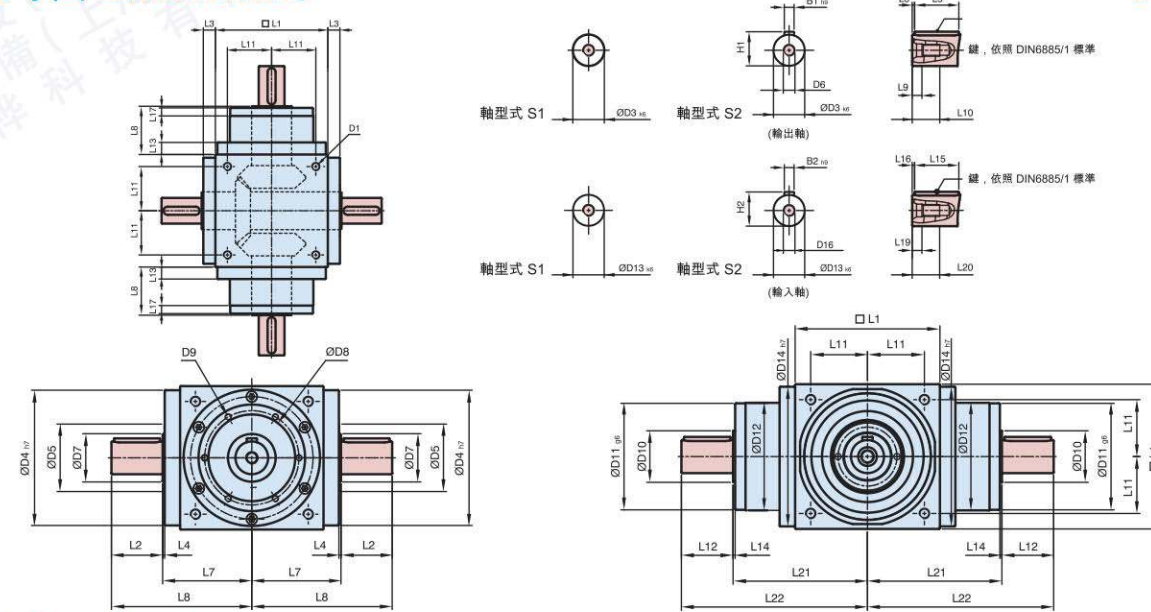
AT-4M系列

Series

尺寸(單節1-stage, 減速比ratio i=1)



外形尺寸圖 Dimensions:



規格表 Specifications:

尺寸 Sizes	AT065 4M	AT075 4M	AT090 4M	AT110 4M	AT140 4M	AT170 4M	AT210 4M	AT240 4M	AT280 4M
D1	M4	M6	M6	M8	M10	M12	M16	M16	M16
D3 k6	13	16	18	22	32	40	50	55	60
D4 h7	63	73	88	108	135	165	205	235	275
D5	31	35	43	53	68	83	104	124	144
D6	M4	M5	M5	M8	M12	M16	M16	M16	M20
D7	21	22	28	33	47	55	75	85	110
D8	53	62	76	95	92	114	142	160	176
D9	4xM4xL7	4xM5xL8	4xM5xL8	6xM6xL10	6xM6xL10	6xM8xL12.5	6xM8xL12.5	6xM8xL12.5	6xM10xL15
D10	15.4	20.4	25.8	35.8	49.8	59.3	79.3	92.3	102.3
D11 g6	62.9	72.9	87	107	103	127	158	178	198
D12	62	72	86	106	104	128	160	180	200
D13 k6	13	16	18	22	32	40	50	55	60
D14 h7	63	73	88	108	135	165	205	235	275
D16	M4	M5	M5	M8	M12	M16	M16	M16	M20
L1	65	75	90	110	140	170	210	240	280
L2	19.5	30	35	40	50	60	75	85	110
L3	13	14.5	15	15	15	15	20	25	25
L4	2	2	2	2	2	2	2	2	2
L5	16	25	28	32	45	50	70	80	100
L6	2	2.5	3.5	4	2.5	5	2.5	2.5	5
L7	47.5	54	62	72	87	102	127	147	167
L8	67	84	97	112	137	162	202	232	277
L9	4.5	4.8	4.8	7.2	10	12	12	12	15
L10	10	12.5	12.5	19	28	36	36	36	42
L11	27	30	36	44	55	67	85	95	110
L12	19.5	30	35	40	50	60	75	85	110
L13	13	15	15	15	15	15	20	25	25
L14	2	2	2	2	2	2	2	2	2
L15	16	25	28	32	45	50	70	80	100
L16	2	2.5	3.5	4	2.5	5	2.5	2.5	5
L17	6	8	8	8	10	10	10	10	10
L18	43	52.5	55	60	60	70	90	105	120
L19	4.5	4.8	4.8	7.2	10	12	12	12	15
L20	10	12.5	12.5	19	28	36	36	36	42
L21	75.5	90	100	115	130	155	195	225	260
L22	95	120	135	155	180	215	270	310	370
B1 h9	5	5	6	6	10	12	14	16	18
B2 h9	5	5	6	6	10	12	14	16	18
H1	15	18	20.5	24.5	35	43	53.5	59	64
H2	15	18	20.5	24.5	35	43	53.5	59	64

ATF 輸入法蘭型系列

Input Flange series 產品規格

減速機性能資料 Performance Files Reducer



規格 Specification	節數 Stages	比數 Ratio	AT065 FL	AT075 FL	AT090 FL	AT110 FL	AT140 FL	AT170 FL	AT210 FL	AT240 FL	AT280 FL			
			AT065 FL1	AT075 FL1	AT090 FL1	AT110 FL1	AT140 FL1	AT170 FL1	AT210 FL1	AT240 FL1	AT280 FL1			
額定輸出力矩 T_{2N} Rated output torque	1	1	25	45	78	150	360	585	1,300	2,150	3,200			
		1.5	25	45	78	150	360	585	1,300	2,150	3,200			
		2	24	42	68	150	330	544	1,220	2,010	3,050			
		3	18	33	54	120	270	450	1,020	1,650	2,850			
		4	13	28	48	100	224	376	860	1,410	2,300			
		5	12	25	40	85	196	320	740	1,210	2,000			
	2	7	12	12	33	91	91	91	195	358	358			
		10	24	28	68	150	208	208	430	846	846			
		15	18	33	54	120	270	312	645	1,269	1,269			
		20	13	28	48	100	224	376	860	1,410	1,692			
		25	12	25	40	85	196	320	740	1,210	2,000			
		35	12	25	40	85	196	320	740	1,210	1,790			
	3	50	12	25	40	85	196	320	740	1,210	1,465			
		75	-	-	-	120	210	312	585	1,269	1,269			
		100	-	-	-	100	224	376	780	1,410	1,692			
		125	-	-	-	85	196	320	740	1,210	2,000			
		150	-	-	-	120	135	312	390	975	975			
		200	-	-	-	100	180	376	520	1,300	1,300			
	最大加速力矩 T_{2a} Max. acceleration torque	Nm	1,2,3	1.5 倍額定輸出力矩 1.5 Times of Rated Output Torque										
			1	1~5	7,500	6,500	5,500	4,500	3,500	3,000	2,200	2,000	1,700	
			2	7~50	8,000	8,000	6,000	6,000	6,000	6,000	4,800	3,600	3,600	
	最大加速輸入轉速 n_{1B} Max. acceleration input speed	rpm	3	75~500	-	-	-	8,000	8,000	6,000	6,000	6,000	6,000	
			1	1~5	≤6	≤6	≤6	≤6	≤6	≤6	≤6	≤6	≤6	
			2	7~50	≤8	≤8	≤8	≤8	≤8	≤8	≤8	≤8	≤8	
背隙* Backlash	arcmin	3	75~500	-	-	-	≤10	≤10	≤10	≤10	≤10	≤10		
		容許徑向力 F_{2FB}^2 Permissible radial force 輸出軸d2 Output axis	N	1,2,3	1~500	900	1,100	1,700	2,700	4,800	6,600	11,500	16,000	18,000
		容許軸向力 F_{2aB}^2 Permissible axial force 輸出軸d2 Output axis		N	1,2,3	1~500	450	550	850	1,350	2,400	3,300	5,750	8,500
使用壽命 Service life	hr	1,2,3			1~500	20,000*								
效率 η Efficiency	%	1	1~5		≥98%									
使用溫度 Operating temperature	°C	2,3	7~500	≥94%										
		1,2,3	1~500	-10°C ~ 90°C										
潤滑 Lubrication	合成潤滑油脂 Fully Synthetic Grease													
噪音值 ($n=1500$ rpm, 無負載) Noise value (non-loaded)	dB (A)	1,2,3	1~500	≤71	≤72	≤76	≤77	≤78	≤79	≤81	≤83	≤84		

1. 減速比 ($i=N_1/N_{2a}$) Reduction Ratio
* 連續運轉降低使用壽命二分之一。

2. 作用於輸出軸中心位置 @ n_{1B}
* 背隙值為在 2% 額定力矩 T_{2N} 的扭力下所測得

ATF 輸入法蘭型系列

Input Flange Series 產品規格

減速機轉動慣量 Rotary inertia of reducer



規格 Specification	節數 Stage	比數 Ratio	AT065 FL	AT075 FL	AT090 FL	AT110 FL	AT140 FL	AT170 FL	AT210 FL	AT240 FL	AT280 FL
			AT065 FL1	AT075 FL1	AT090 FL1	AT110 FL1	AT140 FL1	AT170 FL1	AT210 FL1	AT240 FL1	AT280 FL1
轉動慣量 J Rotary inertia	1	1	0.51	1.30	3.14	7.62	23.54	59.09	195.96	365.38	787.63
		1.5	0.46	1.15	2.80	6.65	19.34	49.38	156.02	279.62	584.28
		2	0.44	1.10	2.68	6.23	17.72	45.44	140.80	245.78	500.26
		3	0.43	1.09	2.64	6.08	17.16	44.11	135.51	233.75	471.56
		4	0.43	1.08	2.63	6.05	17.03	43.79	134.14	230.77	464.76
		5	0.43	1.08	2.63	6.04	16.99	43.69	133.71	229.71	462.08
	2	7	0.15	0.15	0.50	2.79	2.79	2.79	9.91	29.26	29.26
		10	0.15	0.15	0.50	2.80	2.80	2.80	9.96	29.43	29.43
		15	0.15	0.15	0.50	2.80	2.80	2.80	9.96	29.43	29.43
		20	0.15	0.15	0.50	2.80	2.80	2.80	9.96	29.43	29.43
		25	0.15	0.15	0.50	2.80	2.80	2.80	9.96	29.43	29.43
		35	0.15	0.15	0.50	2.79	2.79	2.79	9.91	29.26	29.26
	3	50	0.15	0.15	0.50	2.79	2.79	2.79	9.89	29.20	29.20
		75	-	-	-	2.80	2.80	2.80	9.96	29.43	29.43
		100	-	-	-	2.80	2.80	2.80	9.96	29.43	29.43
		125	-	-	-	2.80	2.80	2.80	9.96	29.43	29.43
		150	-	-	-	2.79	2.79	2.79	9.89	29.20	29.20
		200	-	-	-	2.79	2.79	2.79	9.89	29.20	29.20
	500	250	-	-	-	2.79	2.79	2.79	9.89	29.20	29.20
		350	-	-	-	2.79	2.79	2.79	9.89	29.20	29.20
		500	-	-	-	2.79	2.79	2.79	9.89	29.20	29.20

重量 Weight

減速機型號 Reducer model	節數 Stage	比數 Ratio	AT065	AT075	AT090	AT110	AT140	AT170	AT210	AT240	AT280
FL 系列 FL Series	1	1~5	2.8	4.4	7.1	12.1	20.9	36.1	69.4	101.2	158.3
	2	7~50	3.2	4.8	8.1	14.3	24.2	38.5	74.1	112.4	171.0
	3	75~500	-	-	-	13.9	23.7	38.8	73.4	110.2	168.7
FL1 系列 FL1 Series	1	1~5	2.7	4.3	7.1	11.9	20.3	35.5	68.3	99.6	156.0
	2	7~50	3.2	4.8	8.0	14.2	23.9	37.9	73.0	110.8	168.6
	3	75~500	-	-	-	13.8	23.4	38.2	72.3	108.6	166.4
FH 系列 FH Series	1	1~5	2.6	4.1	6.7	11.4	18.9	32.9	63.2	92.5	146.0
	2	7~50	3.1	4.6	7.7	13.6	22.4	35.3	67.9	103.7	158.7
	3	75~500	-	-	-	13.3	21.9	35.6	67.2	101.5	156.5
FC 系列 FC Series	1	1~5	2.9	4.4	7.2	11.8	20.4	35.0	66.5	96.0	151.7
	2	7~50	3.3	4.9	8.2	14.1	24.1	37.4	71.2	107.2	164.4
	3	75~500	-	-	-	13.7	23.5	37.5	70.5	105.0	162.2
FR1 系列 FR1 Series	1	1~5	2.7	4.3	7.1	11.9	20.3	35.5	68.3	99.6	156.0
	2	7~50	3.2	4.8	8.0	14.2	23.9	37.9	73.0	110.8	168.6
	3	75~500	-	-	-	13.8	23.4	38.2	72.3	108.6	166.4

AT-FL系列雙出軸型式

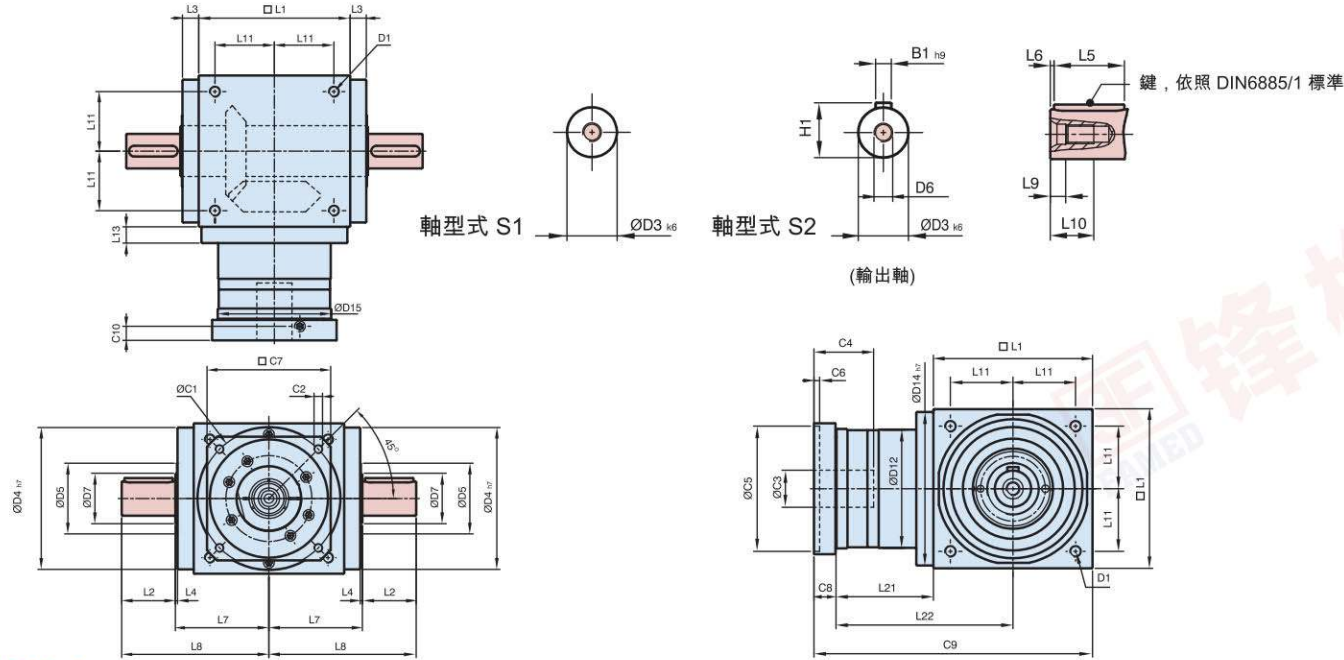
Double Output Shaft Type

尺寸 (單節 1-stage, 減速比ratio i=1~5)



Unit:mm

外形尺寸圖 Dimensions:



規格表 Specifications:

尺寸 Sizes	AT065 FL	AT075 FL	AT090 FL	AT110 FL	AT140 FL	AT170 FL	AT210 FL	AT240 FL	AT280 FL
D1	M4	M6	M6	M8	M10	M12	M16	M16	M16
D3 k6	13	16	18	22	32	40	50	55	60
D4 h7	63	73	88	108	135	165	205	235	275
D5	31	35	43	53	68	83	104	124	144
D6	M4	M5	M5	M8	M12	M16	M16	M16	M20
D7	21	22	28	33	47	55	75	85	110
D12	62	72	86	106	104	128	160	180	200
D14 h7	63	73	88	108	135	165	205	235	275
D15	62.9	72.9	87	107	105	127	158	178	198
L1	65	75	90	110	140	170	210	240	280
L2	19.5	30	35	40	50	60	75	85	110
L3	13	14.5	15	15	15	15	20	25	25
L4	2	2	2	2	2	2	2	2	2
L5	16	25	28	32	45	50	70	80	100
L6	2	2.5	3.5	4	2.5	5	2.5	2.5	5
L7	47.5	54	62	72	87	102	127	147	167
L8	67	84	97	112	137	162	202	232	277
L9	4.5	4.8	4.8	7.2	10	12	12	12	15
L10	10	12.5	12.5	19	28	36	36	36	42
L11	27	30	36	44	55	67	85	95	110
L13	13	15	15	15	15	15	20	25	25
L21	49	60.5	63	69.5	85.5	95	130	144.5	135
L22	81.5	98	108	124.5	155.5	180	235	264.5	275
C1 ³	46	70	100	100	130	165	215	215	235
C2 ³	M4	M5	M6	M6	M8	M10	M12	M12	M12
C3 ³	★ ≤11 / ≤12	★ ≤14 / ≤15.875 / ≤16	≤19	≤24	≤32	≤38	≤42	≤48	≤55
C4 ³	30	34	40	40	50	60	85	85	116
C5 ³	30	50	80	80	110	130	180	180	200
C6 ³	3.5	8	4	4	5	6	6	6	6
C7 ³	42	60	90	90	115	142	190	190	220
C8 ³	19.5	19	17	17	19.5	22.5	29	29	63
C9 ³	133.5	154.5	170	196.5	245	287.5	369	413.5	478
C10 ³	13.25	13.5	10.75	10.75	13	15	20.75	20.75	53.5
B1 h9	5	5	6	6	10	12	14	16	18
H1	15	18	20.5	24.5	35	43	53.5	59	64

3. C1-C10 是公制標準馬達連接板之尺寸, 請上網點選"減速機選用"找出正確之尺寸。

★ AT065 FLM1 提供 C3 ≤12 option ★ AT075 FLM1 提供 C3 ≤16 option ★ AT075 FLM2 提供 C3 ≤15 875 option

AT-FL系列雙出軸型式

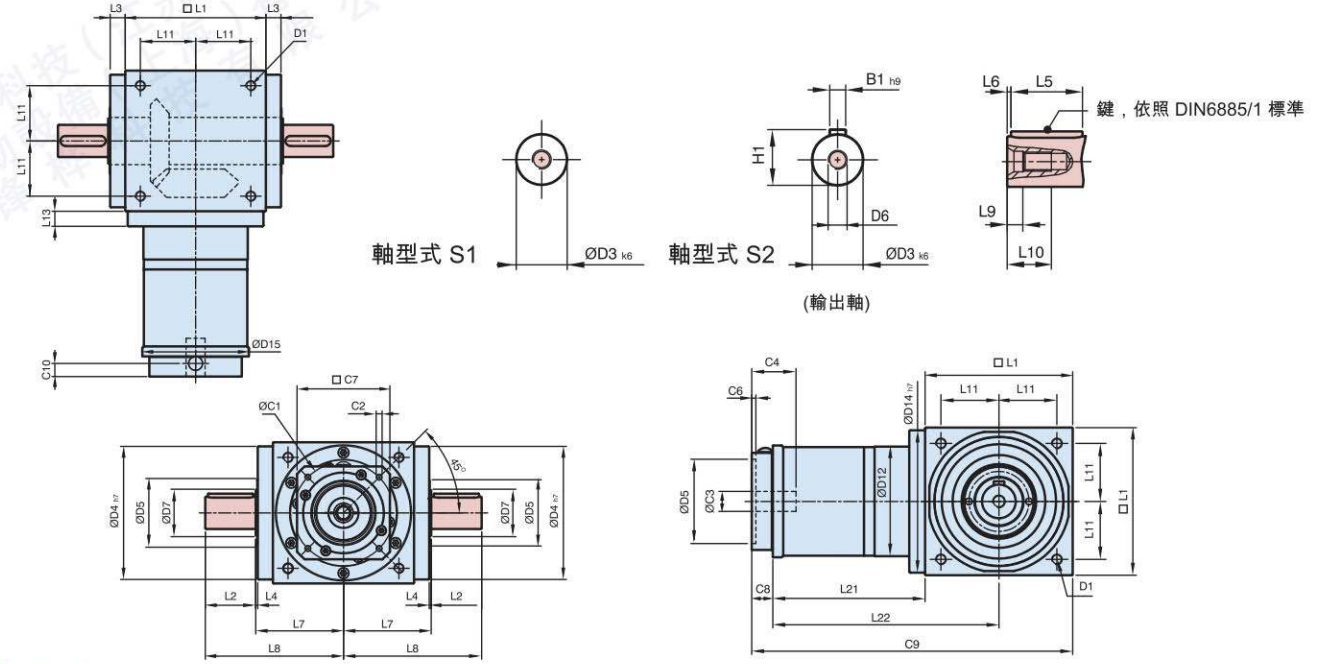
Double Output Shaft Type

尺寸 (雙節 2-stage, 減速比ratio i=7~50)



Unit:mm

外形尺寸圖 Dimensions:



規格表 Specifications:

尺寸 Sizes	AT065 FL	AT075 FL	AT090 FL	AT110 FL	AT140 FL	AT170 FL	AT210 FL	AT240 FL	AT280 FL
D1	M4	M6	M6	M8	M10	M12	M16	M16	M16
D3 k6	13	16	18	22	32	40	50	55	60
D4 h7	63	73	88	108	135	165	205	235	275
D5	31	35	43	53	68	83	104	124	144
D6	M4	M5	M5	M8	M12	M16	M16	M16	M20
D7	21	22	28	33	47	55	75	85	110
D12	62	72	86	106	104	128	160	180	200
D14 h7	63	73	88	108	135	165	205	235	275
D15	62.9	72.9	87	107	106	127	158	178	198
L1	65	75	90	110	140	170	210	240	280
L2	19.5	30	35	40	50	60	75	85	110
L3	13	14.5	15	15	15	15	20	25	25
L4	2	2	2	2	2	2	2	2	2
L5	16	25	28	32	45	50	70	80	100
L6	2	2.5	3.5	4	2.5	5	2.5	2.5	5
L7	47.5	54	62	72	87	102	127	147	167
L8	67	84	97	112	137	162	202	232	277
L9	4.5	4.8	4.8	7.2	10	12	12	12	15
L10	10	12.5	12.5	19	28	36	36	36	42
L11	27	30	36	44	55	67	85	95	110
L13	13	15	15	15	15	15	20	25	25
L21	75	84.5	99	122	144.5	157.5	206.5	239	248
L22	107.5	122	144	177	214.5	242.5	311.5	359	388
C1 ⁴	46	46	70	100	100	100	130	165	165
C2 ⁴	M4	M4	M5	M6	M6	M6	M8	M10	M10
C3 ⁴	≤12	≤12	≤16	≤24	≤24	≤24	≤32	≤38	≤38
C4 ⁴	30	30	34	40	40	40	50	60	60
C5 ⁴	30	30	50	80	80	80	110	130	130
C6 ⁴	3.5	3.5	8	4	4	4	5	6	6
C7 ⁴	42	42	60	92	92	92	115	142	142
C8 ⁴	21.5	21.5	21.5	20	20	20	24	31	31
C9 ⁴	161.5	181	210.5	252	304.5	347.5	440.5	510	559
C10 ⁴	14.5	14.5	15.5	13	13	13	16	21	21
B1 h9	5	5	6	6	10	12	14	16	18
H1	15	18	20.5	24.5	35	43	53.5	59	64

4. C1-C10 是公制標準馬達連接板之尺寸, 請上網點選"減速機選用"找出正確之尺寸。

AT-FL系列雙出軸型式

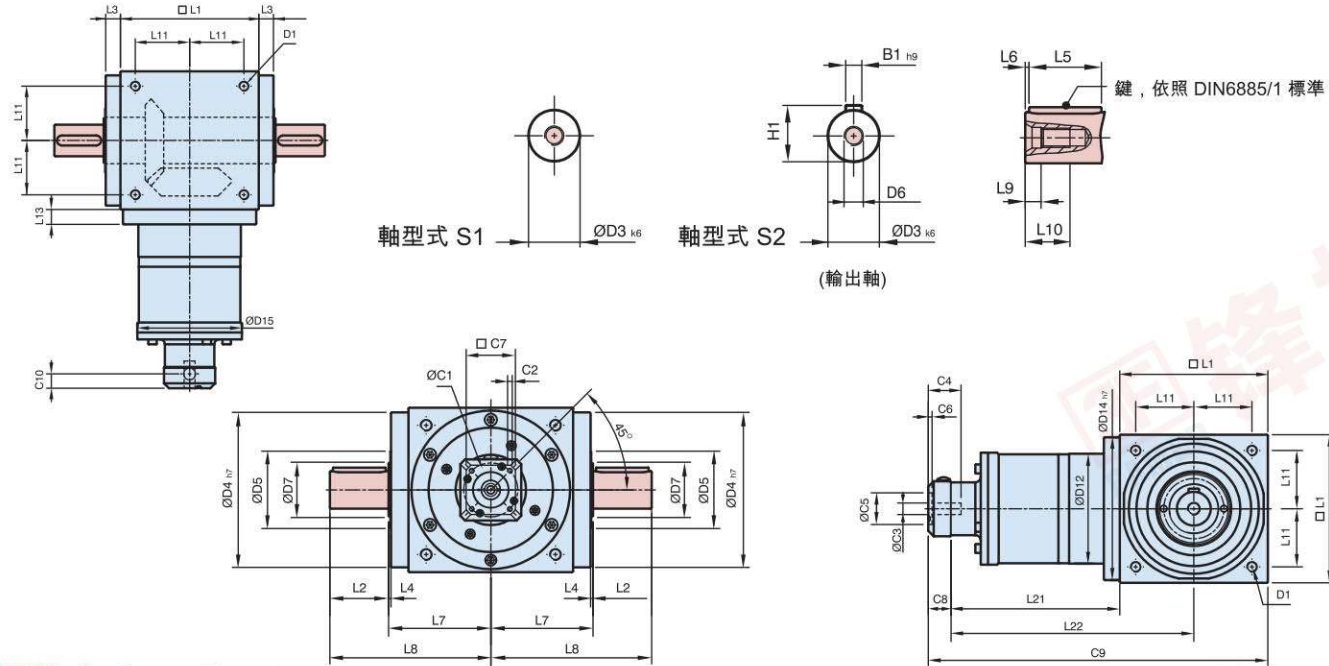
Double Output Shaft Type

尺寸 (三節 3-stage, 減速比ratio i=75~500)



Unit:mm

外形尺寸圖 Dimensions:



規格表 Specifications:

尺寸	AT110 FL	AT140 FL	AT170 FL	AT210 FL	AT240 FL	AT280 FL
D1	M8	M10	M12	M16	M16	M16
D3 _{k6}	22	32	40	50	55	60
D4 _{h7}	108	135	165	205	235	275
D5	53	68	83	104	124	144
D6	M8	M12	M16	M16	M16	M20
D7	33	47	55	75	85	110
D12	106	104	128	160	180	200
D14 _{h7}	108	135	165	205	235	275
D15	107	106	127	158	178	198
L1	110	140	170	210	240	280
L2	40	50	60	75	85	110
L3	15	15	15	20	25	25
L4	2	2	2	2	2	2
L5	32	45	50	70	80	100
L6	4	2.5	5	2.5	2.5	5
L7	72	87	102	127	147	167
L8	112	137	162	202	232	277
L9	7.2	10	12	12	12	15
L10	19	28	36	36	36	42
L11	44	55	67	85	95	110
L13	15	15	15	20	25	25
L21	136.5	159.5	183.5	226	269	278
L22	191.5	229.5	268.5	331	389	418
C1 ^s	46	46	70	70	100	100
C2 ^s	M4	M4	M5	M5	M6	M6
C3 ^s	≤12	≤12	≤16	≤16	≤24	≤24
C4 ^s	30	30	34	34	40	40
C5 ^s	30	30	50	50	80	80
C6 ^s	3.5	3.5	8	8	4	4
C7 ^s	42	42	60	60	92	92
C8 ^s	21.5	21.5	21.5	21.5	20	20
C9 ^s	268	321	375	457.5	529	578
C10 ^s	14.5	14.5	15.5	15.5	13	13
B1 _{h9}	6	10	12	14	16	18
H1	24.5	35	43	53.5	59	64

5. C1~C10 是公制標準馬達連接板之尺寸, 請上網點選"減速機選用"找出正確之尺寸。

AT-FL1 (左) / AT-FR1(右)系列

單出軸型式 Single Output Shaft Type

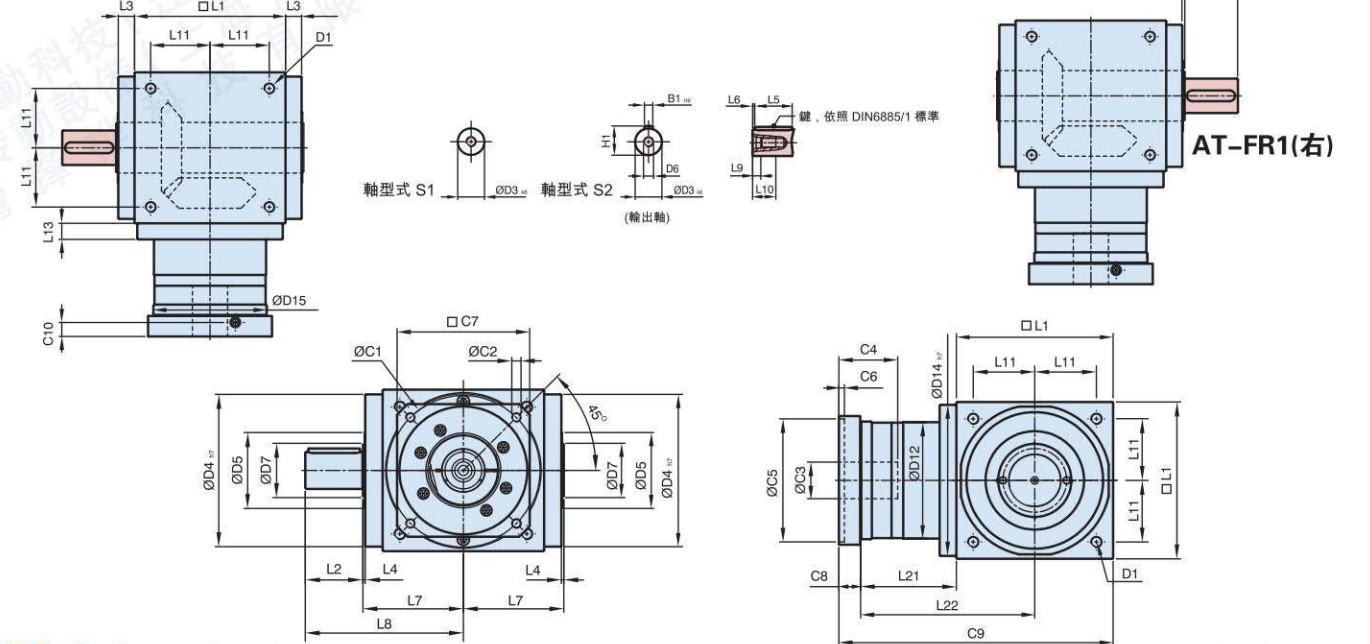
尺寸 (單節 1-stage, 減速比ratio i=1~5)



Unit:mm

外形尺寸圖 Dimensions:

AT-FL1(左)



規格表 Specifications:

尺寸	AT065 FL1/FR1	AT075 FL1/FR1	AT090 FL1/FR1	AT110 FL1/FR1	AT140 FL1/FR1	AT170 FL1/FR1	AT210 FL1/FR1	AT240 FL1/FR1	AT280 FL1/FR1
D1	M4	M6	M6	M8	M10	M12	M16	M16	M16
D3 _{k6}	13	16	18	22	32	40	50	55	60
D4 _{h7}	63	73	88	108	135	165	205	235	275
D5	31	35	43	53	68	83	104	124	144
D6	M4	M5	M5	M8	M12	M16	M16	M16	M20
D7	21	22	28	33	47	55	75	85	110
D12	62	72	86	106	104	128	160	180	200
D14 _{h7}	63	73	88	108	135	165	205	235	275
D15	62.9	72.9	87	107	105	127	158	178	198
L1	65	75	90	110	140	170	210	240	280
L2	19.5	30	35	40	50	60	75	85	110
L3	13	14.5	15	15	15	15	20	25	25
L4	2	2	2	2	2	2	2	2	2
L5	16	25	28	32	45	50	70	80	100
L6	2	2.5	3.5	4	2.5	5	2.5	2.5	5
L7	47.5	54	62	72	87	102	127	147	167
L8	67	84	97	112	137	162	202	232	277
L9	4.5	4.8	4.8	7.2	10	12	12	12	15
L10	10	12.5	12.5	19	28	36	36	36	42
L11	27	30	36	44	55	67	85	95	110
L13	13	15	15	15	15	15	20	25	25
L21	49	60.5	63	69.5	85.5	95	130	144.5	135
L22	81.5	98	108	124.5	155.5	180	235	264.5	275
C1 ^s	46	70	100	100	130	165	215	215	235
C2 ^s	M4	M5	M6	M6	M8	M10	M12	M12	M12
C3 ^s	★ ≤11 / ≤12	★ ≤14 / ≤15.875 / ≤16	≤19	≤24	≤32	≤38	≤42	≤48	≤55
C4 ^s	30	34	40	40	50	60	85	85	116
C5 ^s	30	50	80	80	110	130	180	180	200
C6 ^s	3.5	8	4	4	5	6	6	6	6
C7 ^s	42	60	90	90	115	142	190	190	220
C8 ^s	19.5	19	17	17	19.5	22.5	29	29	63
C9 ^s	133.5	154.5	170	196.5	245	287.5	369	413.5	478
C10 ^s	13.25	13.5	10.75	10.75	13	15	20.75	20.75	53.5
B1 _{h9}	5	5	6	6	10	12	14	16	18
H1	15	18	20.5	24.5	35	43	53.5	59	64

6. C1~C10 是公制標準馬達連接板之尺寸, 請上網點選"減速機選用"找出正確之尺寸。

★ AT065 FL1/FR1M1 提供 C3 ≤12 option. ★ AT075 FL1/FR1M1提供 C3 ≤16 option. ★ AT075 FL1/FR1M2提供 C3 ≤15.875 option.

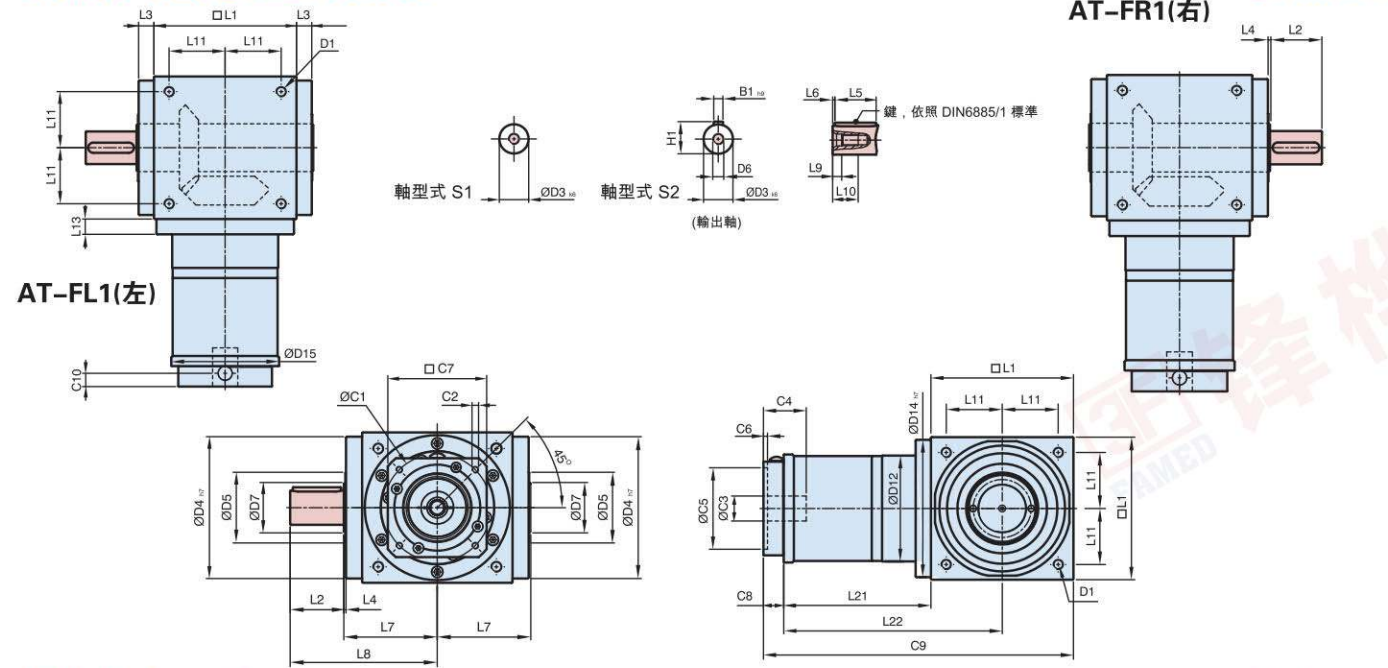
AT-FL1 (左) / AT-FR1(右)系列

單出軸型式 Single Output Shaft Type

尺寸 (雙節 2-stage, 減速比ratio i=7~50)



外形尺寸圖 Dimensions:



規格表 Specifications:

尺寸 Sizes	AT065 FL1/FR1	AT075 FL1/FR1	AT090 FL1/FR1	AT110 FL1/FR1	AT140 FL1/FR1	AT170 FL1/FR1	AT210 FL1/FR1	AT240 FL1/FR1	AT280 FL1/FR1
D1	M4	M6	M6	M8	M10	M12	M16	M16	M16
D3 k6	13	16	18	22	32	40	50	55	60
D4 h7	63	73	88	108	135	165	205	235	275
D5	31	35	43	53	68	83	104	124	144
D6	M4	M5	M5	M8	M12	M16	M16	M16	M20
D7	21	22	28	33	47	55	75	85	110
D12	62	72	86	106	104	128	160	180	200
D14 h7	63	73	88	108	135	165	205	235	275
D15	62.9	72.9	87	107	106	127	158	178	198
L1	65	75	90	110	140	170	210	240	280
L2	19.5	30	35	40	50	60	75	85	110
L3	13	14.5	15	15	15	15	20	25	25
L4	2	2	2	2	2	2	2	2	2
L5	16	25	28	32	45	50	70	80	100
L6	2	2.5	3.5	4	2.5	5	2.5	2.5	5
L7	47.5	54	62	72	87	102	127	147	167
L8	67	84	97	112	137	162	202	232	277
L9	4.5	4.8	4.8	7.2	10	12	12	12	15
L10	10	12.5	12.5	19	28	36	36	36	42
L11	27	30	36	44	55	67	85	95	110
L13	13	15	15	15	15	15	20	25	25
L21	75	84.5	99	122	144.5	157.5	206.5	239	248
L22	107.5	122	144	177	214.5	242.5	311.5	359	388
C1 ⁷	46	46	70	100	100	100	130	165	165
C2 ⁷	M4	M4	M5	M6	M6	M6	M8	M10	M10
C3 ⁷	≤12	≤12	≤16	≤24	≤24	≤24	≤32	≤38	≤38
C4 ⁷	30	30	34	40	40	40	50	60	60
C5 ⁷	30	30	50	80	80	80	110	130	130
C6 ⁷	3.5	3.5	8	4	4	4	5	6	6
C7 ⁷	42	42	60	92	92	92	115	142	142
C8 ⁷	21.5	21.5	21.5	20	20	20	24	31	31
C9 ⁷	161.5	181	210.5	252	304.5	347.5	440.5	510	559
C10 ⁷	14.55	14.5	15.5	13	13	13	16	21	21
B1 h9	5	5	6	6	10	12	14	16	18
H1	15	18	20.5	24.5	35	43	53.5	59	64

7. C1-C10 是公制標準馬達連接板之尺寸，請上網點選“減速機選用”找出正確之尺寸。

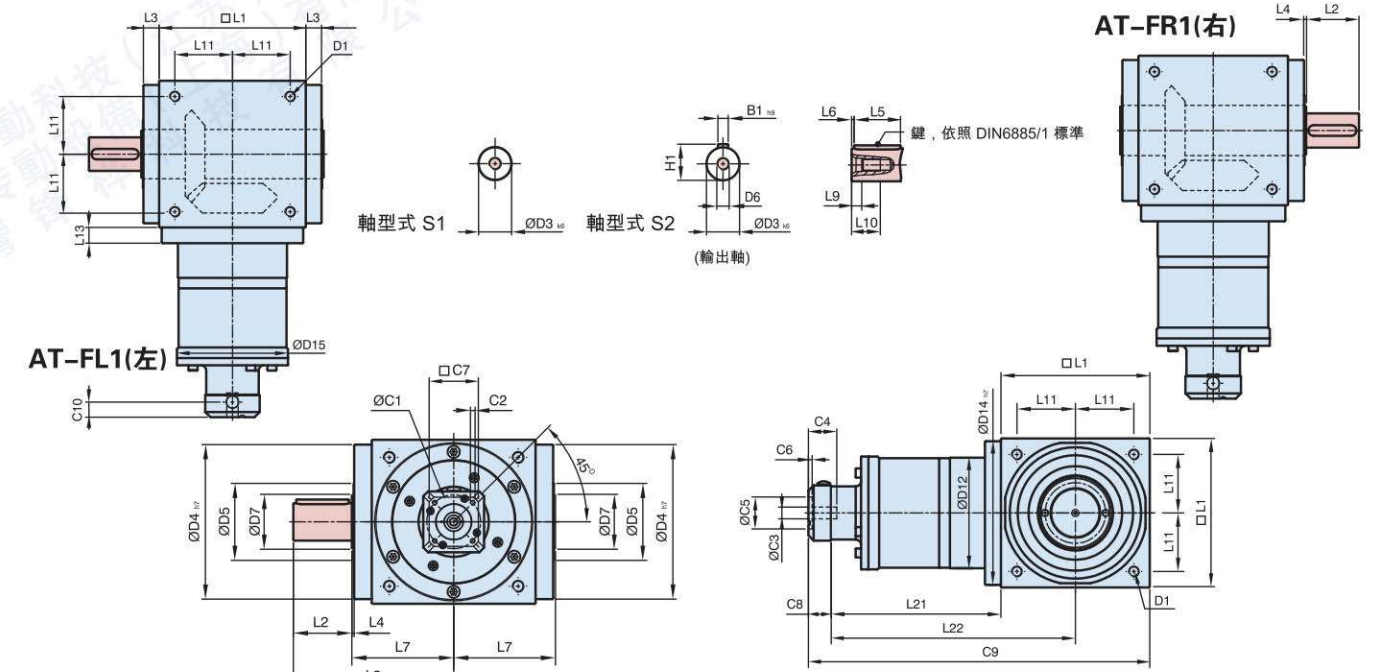
AT-FL1 (左) / AT-FR1(右)系列

單出軸型式 Single Output Shaft Type

尺寸 (三節 3-stage, 減速比ratio i=75~500)



外形尺寸圖 Dimensions:



規格表 Specifications:

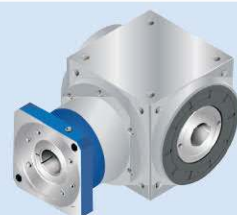
尺寸 Sizes	AT110 FL1/FR1	AT140 FL1/FR1	AT170 FL1/FR1	AT210 FL1/FR1	AT240 FL1/FR1	AT280 FL1/FR1
D1	M8	M10	M12	M16	M16	M16
D3 k6	22	32	40	50	55	60
D4 h7	108	135	165	205	235	275
D5	53	68	83	104	124	144
D6	M8	M12	M16	M16	M16	M20
D7	33	47	55	75	85	110
D12	106	104	128	160	180	200
D14 h7	108	135	165	205	235	275
D15	107	106	127	158	178	198
L1	110	140	170	210	240	280
L2	40	50	60	75	85	110
L3	15	15	15	20	25	25
L4	2	2	2	2	2	2
L5	32	45	50	70	80	100
L6	4	2.5	5	2.5	2.5	5
L7	72	87	102	127	147	167
L8	112	137	162	202	232	277
L9	7.2	10	12	12	12	15
L10	19	28	36	36	36	42
L11	44	55	67	85	95	110
L13	15	15	15	20	25	25
L21	136.5	159.5	183.5	226	269	278
L22	191.5	229.5	268.5	331	389	418
C1 ⁸	46	46	70	100	100	100
C2 ⁸	M4	M4	M5	M5	M6	M6
C3 ⁸	≤12	≤12	≤16	≤16	≤24	≤24
C4 ⁸	30	30	34	34	40	40
C5 ⁸	30	30	50	50	80	80
C6 ⁸	3.5	3.5	8	8	4	4
C7 ⁸	42	42	60	60	92	92
C8 ⁸	21.5	21.5	21.5	21.5	20	20
C9 ⁸	268	321	375	457.5	529	578
C10 ⁸	14.5	14.5	15.5	15.5	13	13
B1 h9	6	10	12	14	16	18
H1	24.5	35	43	53.5	59	64

8. C1-C10 是公制標準馬達連接板之尺寸，請上網點選“減速機選用”找出正確之尺寸。

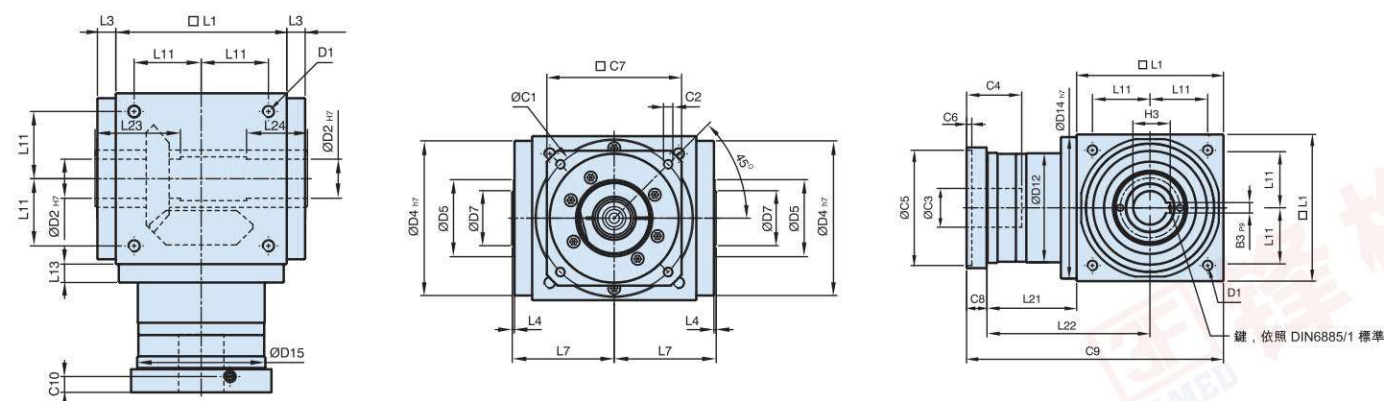
AF-FH系列孔輸出型式

Hole Output Type

尺寸 (單節 1-stage, 減速比ratio i=1~5)



外形尺寸圖 Dimensions:



Unit:mm

規格表 Specifications:

尺寸 Sizes	AT065FH	AT075FH	AT090FH	AT110FH	AT140FH	AT170FH	AT210FH	AT240FH	AT280FH
D1	M4	M6	M6	M8	M10	M12	M16	M16	M16
D2 _{H7}	13	14	18	22	32	40	50	55	60
D4 _{H7}	63	73	88	108	135	165	205	235	275
D5	31	35	43	53	68	83	104	124	144
D7	21	22	28	33	47	55	75	85	110
D12	62	72	86	106	104	128	160	180	200
D14 _{H7}	63	73	88	108	135	165	205	235	275
D15	62.9	72.9	87	107	105	127	158	178	198
L1	65	75	90	110	140	170	210	240	280
L3	13	14.5	15	15	15	15	20	25	25
L4	2	2	2	2	2	2	2	2	2
L7	47.5	54	62	72	87	102	127	147	167
L11	27	30	36	44	55	67	85	95	110
L13	13	15	15	15	15	15	20	25	25
L21	49	60.5	63	69.5	85.5	95	130	144.5	135
L22	81.5	98	108	124.5	155.5	180	235	264.5	275
L23	40	47	52	53	70	80	95	115	115
L24	30	32	35	35	50	55	65	80	80
C1 ⁹	46	70	100	100	130	165	215	215	235
C2 ⁹	M4	M5	M6	M6	M8	M10	M12	M12	M12
C3 ⁹	★ ≤11 / ≤12	★ ≤14 / ≤15.875 / ≤16	≤19	≤24	≤32	≤38	≤42	≤48	≤55
C4 ⁹	30	34	40	40	50	60	85	85	116
C5 ⁹	30	50	80	80	110	130	180	180	200
C6 ⁹	3.5	8	4	4	5	6	6	6	6
C7 ⁹	42	60	90	90	115	142	190	190	220
C8 ⁹	19.5	19	17	17	19.5	22.5	29	29	63
C9 ⁹	133.5	154.5	170	196.5	245	287.5	369	413.5	478
C10 ⁹	13.25	13.5	10.75	10.75	13	15	20.75	20.75	53.5
B3 _{P9}	5	5	6	6	10	12	14	16	18
H3	15.3	16.3	20.8	24.8	35.3	43.3	53.8	59.3	64.4

9. C1~C10 是公制標準馬達連接板之尺寸, 請上網點選“減速機選用”找出正確之尺寸。

★ AT065 FHM1 提供 C3 ≤12 option. ★ AT075 FHM1 提供 C3 ≤16 option. ★ AT075 FHM2 提供 C3 ≤15.875 option.

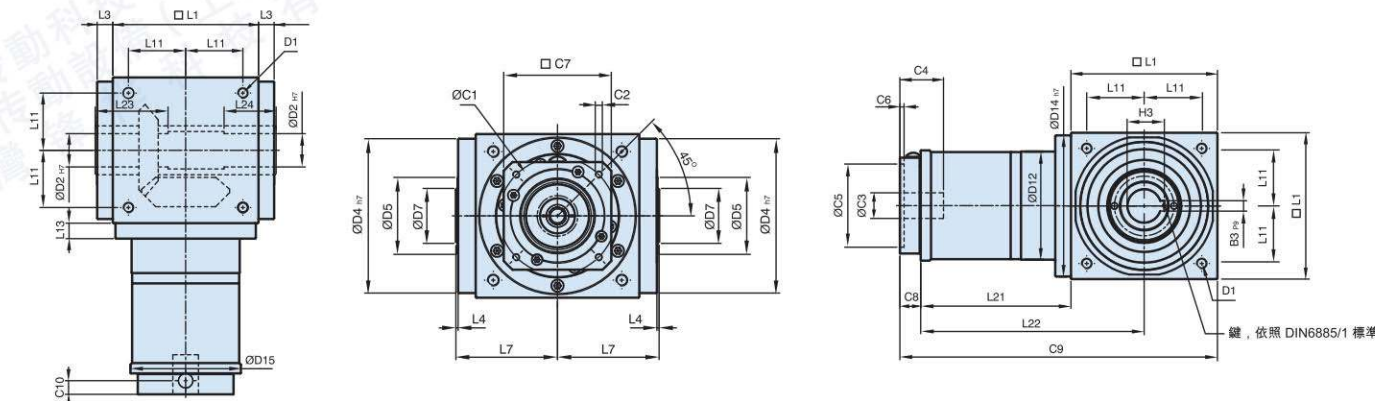
AF-FH系列孔輸出型式

Hole Output Type

尺寸 (雙節 2-stage, 減速比ratio i=7~50)



外形尺寸圖 Dimensions:



Unit:mm

規格表 Specifications:

尺寸 Sizes	AT065FH	AT075FH	AT090FH	AT110FH	AT140FH	AT170FH	AT210FH	AT240FH	AT280FH
D1	M4	M6	M6	M8	M10	M12	M16	M16	M16
D2 _{H7}	13	14	18	22	32	40	50	55	60
D4 _{H7}	63	73	88	108	135	165	205	235	275
D5	31	35	43	53	68	83	104	124	144
D7	21	22	28	33	47	55	75	85	110
D12	62	72	86	106	104	128	160	180	200
D14 _{H7}	63	73	88	108	135	165	205	235	275
D15	62.9	72.9	87	107	106	127	158	178	198
L1	65	75	90	110	140	170	210	240	280
L3	13	14.5	15	15	15	15	20	25	25
L4	2	2	2	2	2	2	2	2	2
L7	47.5	54	62	72	87	102	127	147	167
L11	27	30	36	44	55	67	85	95	110
L13	13	15	15	15	15	15	20	25	25
L21	75	84.5	99	122	144.5	157.5	206.5	239	248
L22	107.5	122	144	177	214.5	242.5	311.5	359	388
L23	40	47	52	53	70	80	95	115	115
L24	30	32	35	35	50	55	65	80	80
C1 ¹⁰	46	46	70	100	100	100	130	165	165
C2 ¹⁰	M4	M4	M5	M6	M6	M6	M8	M10	M10
C3 ¹⁰	≤12	≤12	≤16	≤24	≤24	≤24	≤32	≤38	≤38
C4 ¹⁰	30	30	34	40	40	40	50	60	60
C5 ¹⁰	30	30	50	80	80	80	110	130	130
C6 ¹⁰	3.5	3.5	8	4	4	4	5	6	6
C7 ¹⁰	42	42	60	92	92	92	115	142	142
C8 ¹⁰	21.5	21.5	21.5	20	20	20	24	31	31
C9 ¹⁰	161.5	181	210.5	252	304.5	347.5	440.5	510	559
C10 ¹⁰	14.5	14.5	15.5	13	13	13	16	21	21
B3 _{P9}	5	5	6	6	10	12	14	16	18
H3	15.3	16.3	20.8	24.8	35.3	43.3	53.8	59.3	64.4

10. C1~C10 是公制標準馬達連接板之尺寸, 請上網點選“減速機選用”找出正確之尺寸。

AT-FH系列孔輸出型式

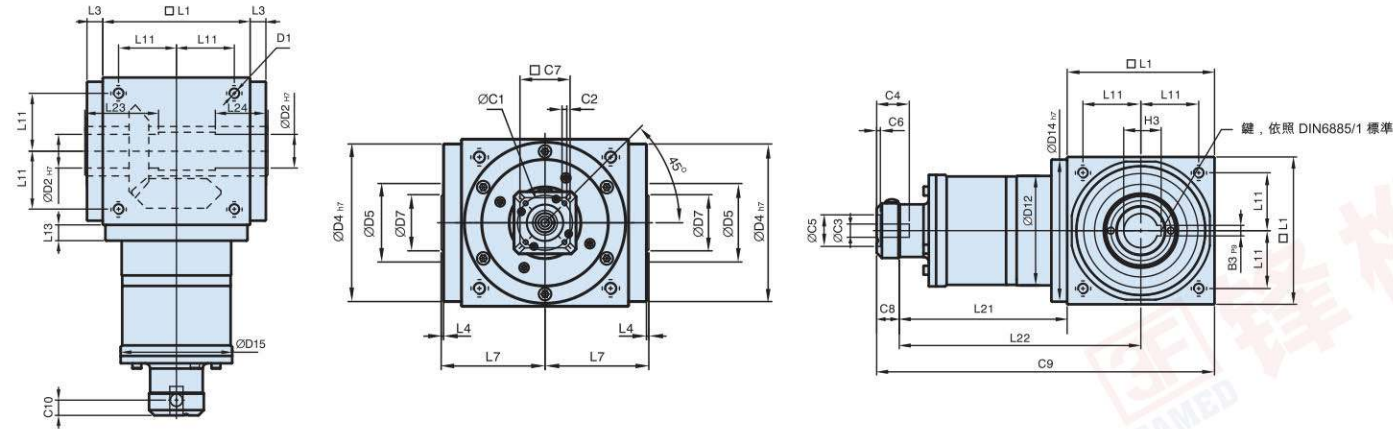
Hole Output Type

尺寸 (三節 3-stage, 減速比ratio i=75~500)



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

尺寸 Sizes	AT110FH	AT140FH	AT170FH	AT210FH	AT240FH	AT280FH
D1	M8	M10	M12	M16	M16	M16
D2 _{H7}	22	32	40	50	55	60
D4 _{H7}	108	135	165	205	235	275
D5	53	68	83	104	124	144
D7	33	47	55	75	85	110
D12	106	104	128	160	180	200
D14 _{H7}	108	135	165	205	235	275
D15	107	106	127	158	178	198
L1	110	140	170	210	240	280
L3	15	15	15	20	25	25
L4	2	2	2	2	2	2
L7	72	87	102	127	147	167
L11	44	55	67	85	95	110
L13	15	15	15	20	25	25
L21	136.5	159.5	183.5	226	269	278
L22	191.5	229.5	268.5	331	389	418
L23	53	70	80	95	115	115
L24	35	50	55	65	80	80
C1 ¹¹	46	46	70	70	100	100
C2 ¹¹	M4	M4	M5	M5	M6	M6
C3 ¹¹	≤12	≤12	≤16	≤16	≤24	≤24
C4 ¹¹	30	30	34	34	40	40
C5 ¹¹	30	30	50	50	80	80
C6 ¹¹	3.5	3.5	8	8	4	4
C7 ¹¹	42	42	60	60	92	92
C8 ¹¹	21.5	21.5	21.5	21.5	20	20
C9 ¹¹	268	321	375	457.5	529	578
C10 ¹¹	14.5	14.5	15.5	15.5	13	13
B3 _{P9}	6	10	12	14	16	18
H3	24.8	35.3	43.3	53.8	59.3	64.4

11. C1-C10 是公制標準馬達連接板之尺寸，請上網點選“減速機選用”找出正確之尺寸。

AT-FC系列孔輸出帶抱箍型式

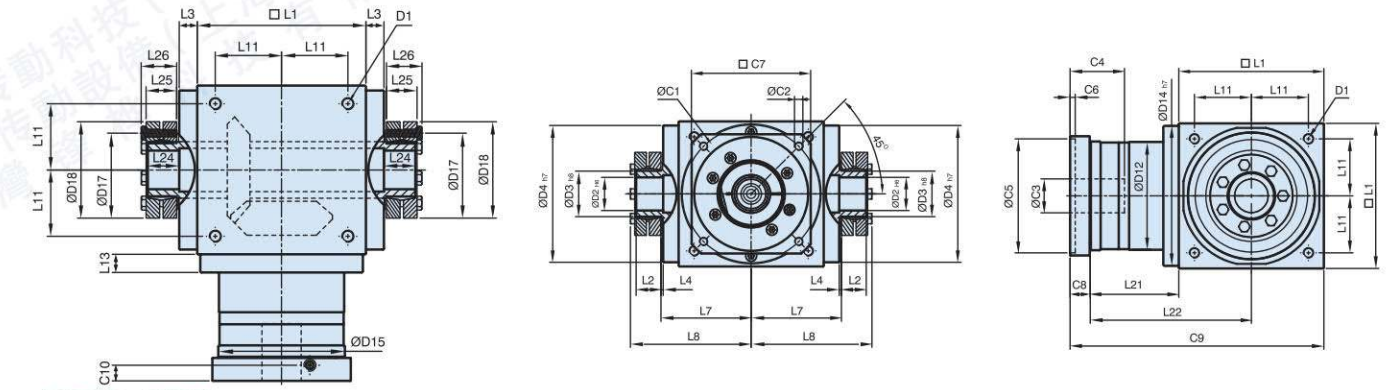
Hole Output Hoop Type

尺寸 (單節 1-stage, 減速比ratio i=1~5)



外形尺寸圖 Dimensions:

Unit:mm



●標準配件含 2 個縮緊盤

規格表 Specifications:

Unit:mm

尺寸 Sizes	AT065FC	AT075FC	AT090FC	AT110FC	AT140FC	AT170FC	AT210FC	AT240FC	AT280FC
D1	M4	M6	M6	M8	M10	M12	M16	M16	M16
D2 _{H6}	13	14	18	22	32	40	50	55	60
D3 _{H8}	16	16	22	25	44	50	62	68	75
D4 _{H7}	63	73	88	108	135	165	205	235	275
D12	62	72	86	106	104	128	160	180	200
D14 _{H7}	63	73	88	108	135	165	205	235	275
D15	62.9	72.9	87	107	105	130	158	178	198
D17	26	26	36	38	61	70	86	86	100
D18	41	41	50	50	80	90	110	115	138
L1	65	75	90	110	140	170	210	240	280
L2	14	14	18	18	24	26	29	29	30.5
L3	13	14.5	15	15	15	15	20	25	25
L4	2	2	2	2	2	2	2	2	2
L7	47.5	54	62	72	87	102	127	147	167
L8	66	72.5	85	95	116.5	113.5	161.5	181.5	205
L11	27	30	36	44	55	67	85	95	110
L13	13	15	15	15	15	15	20	25	25
L21	49	60.5	63	69.5	85.5	95	130	144.5	135
L22	81.5	98	108	124.5	155.5	180	235	264.5	275
L23	15	15	20	20	26	28	31	31	32.5
L24	15	15	20	20	26	28	31	31	32.5
L25	15	15	19.5	19.5	25.5	27.5	30.5	30.5	32.5
L26	18.5	18.5	23	23	29.5	31.5	34.5	34.5	38
C1 ¹²	46	70	100	100	130	165	215	215	235
C2 ¹²	M4	M5	M6	M6	M8	M10	M12	M12	M12
C3 ¹²	★≤11 / ≤12	★≤14 / ≤15.875 / ≤16	≤19	≤24	≤32	≤38	≤42	≤48	≤55
C4 ¹²	30	34	40	40	50	60	85	85	116
C5 ¹²	30	50	80	80	110	130	180	180	200
C6 ¹²	3.5	8	4	4	5	6	6	6	6
C7 ¹²	42	60	90	90	115	142	190	190	220
C8 ¹²	19.5	19	17	17	19.5	22.5	29	29	63
C9 ¹²	133.5	154.5	170	196.5	245	287.5	369	413.5	478
C10 ¹²	13.25	13.5	10.75	10.75	13	15	20.75	20.75	53.5

12. C1-C10 是公制標準馬達連接板之尺寸，請上網點選“減速機選用”找出正確之尺寸。

★AT065 FCM1 提供 C3 ≤12 option. ★AT075 FCM1 提供 C3 ≤16 option. ★AT075 FCM2 提供 C3 ≤15.875 option.

AT-FC系列孔輸出帶抱箍

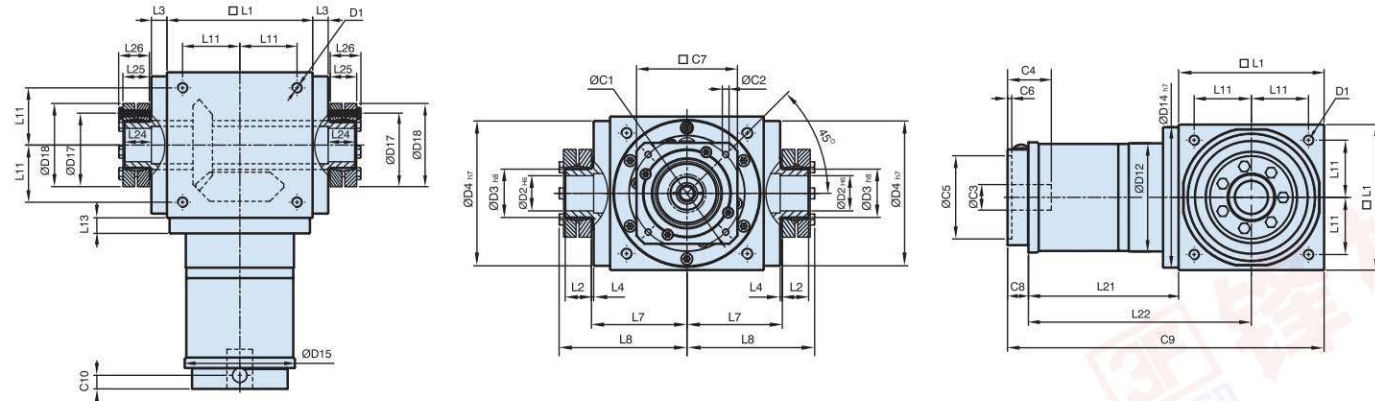
Hole Output Hoop Type

尺寸 (雙節 2-stage, 減速比ratio i=7~50)



外形尺寸圖 Dimensions:

Unit:mm



● 標準配件含 2 個縮緊盤

規格表 Specifications:

Unit:mm

尺寸 Sizes	AT065FC	AT075FC	AT090FC	AT110FC	AT140FC	AT170FC	AT210FC	AT240FC	AT280FC
D1	M4	M6	M6	M8	M10	M12	M16	M16	M16
D2 _{H6}	13	14	18	22	32	40	50	55	60
D3 _{H8}	16	16	22	25	44	50	62	68	75
D4 _{H7}	63	73	88	108	135	165	205	235	275
D12	62	72	86	106	104	128	160	180	200
D14 _{H7}	63	73	88	108	135	165	205	235	275
D15	62.9	72.9	87	107	106	127	158	178	198
D17	26	26	36	38	61	70	86	86	100
D18	41	41	50	50	80	90	110	115	138
L1	65	75	90	110	140	170	210	240	280
L2	14	14	18	18	24	26	29	29	30.5
L3	13	14.5	15	15	15	15	20	25	25
L4	2	2	2	2	2	2	2	2	2
L7	47.5	54	62	72	87	102	127	147	167
L8	66	72.5	85	95	116.5	133.5	161.5	181.5	205
L11	27	30	36	44	55	67	85	95	110
L13	13	15	15	15	15	15	20	25	25
L21	75	84.5	99	122	144.5	157.5	206.5	239	248
L22	107.5	122	144	177	214.5	242.5	311.5	359	388
L23	15	15	20	20	26	28	31	31	32.5
L24	15	15	20	20	26	28	31	31	32.5
L25	15	15	19.5	19.5	25.5	27.5	30.5	30.5	32.5
L26	18.5	18.5	23	23	29.5	31.5	34.5	34.5	38
C1 ¹³	46	46	70	100	100	100	130	165	165
C2 ¹³	M4	M4	M5	M6	M6	M6	M8	M10	M10
C3 ¹³	≤12	≤12	≤16	≤24	≤24	≤24	≤32	≤38	≤38
C4 ¹³	30	30	34	40	40	40	50	60	60
C5 ¹³	30	30	50	80	80	80	110	130	130
C6 ¹³	3.5	3.5	8	4	4	4	5	6	6
C7 ¹³	42	42	60	92	92	92	115	142	142
C8 ¹³	21.5	21.5	21.5	20	20	20	24	31	31
C9 ¹³	161.5	181	210.5	252	304.5	347.5	440.5	510	559
C10 ¹³	14.5	14.5	15.5	13	13	13	16	21	21

13. C1~C10 是公制標準馬達連接板之尺寸, 請上網點選"減速機選用"找出正確之尺寸。

AT-FC系列孔輸出帶抱箍

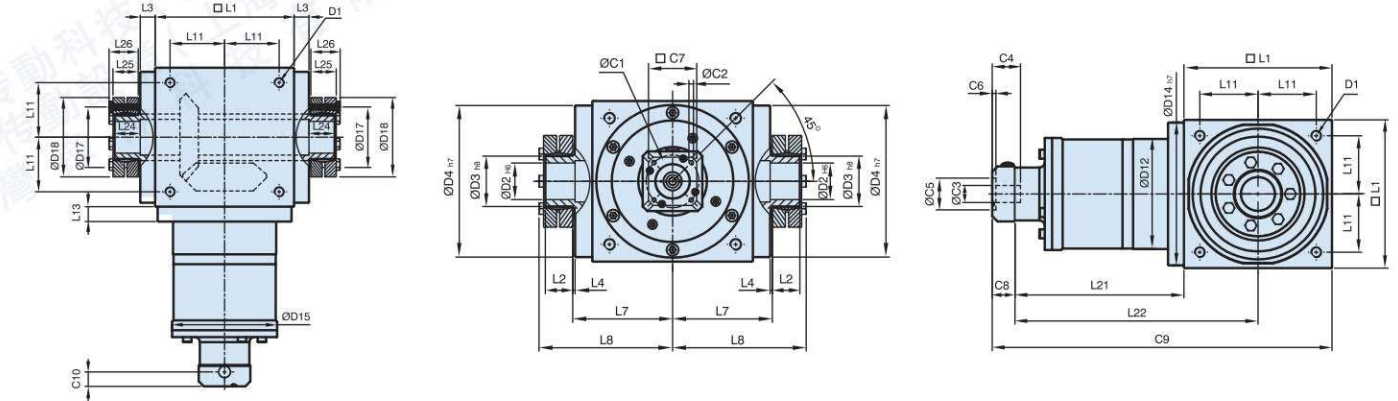
Hole Output Hoop Type

尺寸 (三節 3-stage, 減速比ratio i=75~500)



外形尺寸圖 Dimensions:

Unit:mm



● 標準配件含 2 個縮緊盤

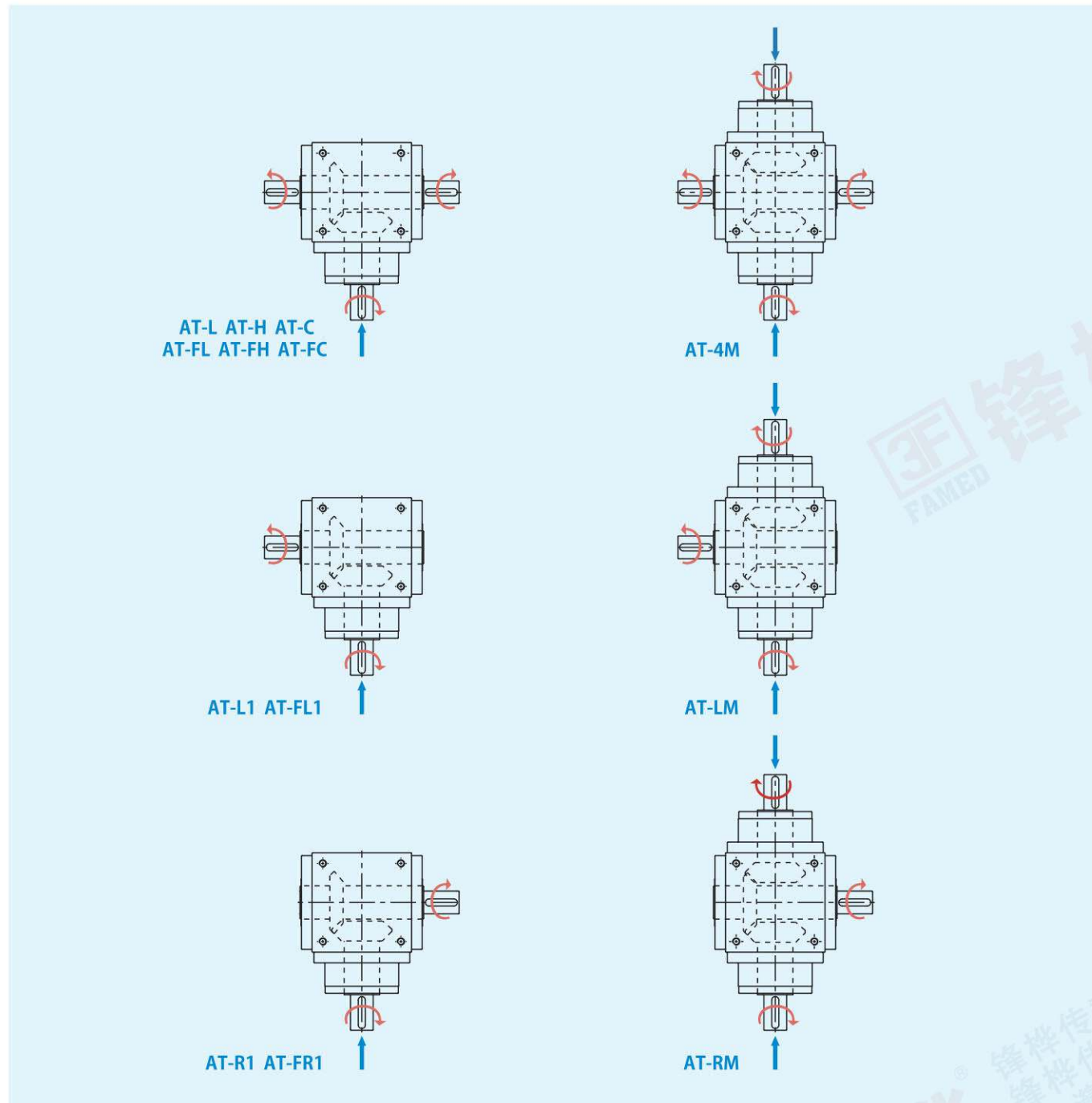
規格表 Specifications:

Unit:mm

尺寸 Sizes	AT110FC	AT140FC	AT170FC	AT210FC	AT240FC	AT280FC
D1	M8	M10	M12	M16	M16	M16
D2 _{H6}	22	32	40	50	55	60
D3 _{H8}	25	44	50	62	68	75
D4 _{H7}	108	135	165	205	235	275
D12	106	104	128	160	180	200
D14 _{H7}	108	135	165	205	235	275
D15	107	106	127	158	178	198
D17	38	61	70	86	86	100
D18	50	80	90	110	115	138
L1	110	140	170	210	240	280
L2	18	24	26	29	29	30.5
L3	15	15	15	20	25	25
L4	2	2	2	2	2	2
L7	72	87	102	127	147	167
L8	95	116.5	133.5	161.5	181.5	205
L11	44	55	67	85	95	110
L13	15	15	15	20	25	25
L21	136.5	159.5	183.5	226	269	278
L22	191.5	229.5	268.5	331	389	418
L23	20	26	28	31	31	32.5
L24	20	26	28	31	31	32.5
L25	19.5	25.5	27.5	30.5	30.5	32.5
L26	23	29.5	31.5	34.5	34.5	38
C1 ¹⁴	46	46	70	70	100	100
C2 ¹⁴	M4	M4	M5	M5	M6	M6
C3 ¹⁴	≤12	≤12	≤16	≤16	≤24	≤24
C4 ¹⁴	30	30	34	34	40	40
C5 ¹⁴	30	30	50	50	80	80
C6 ¹⁴	3.5	3.5	8	8	4	4
C7 ¹⁴	42	42	60	60	92	92
C8 ¹⁴	21.5	21.5	21.5	21.5	20	20
C9 ¹⁴	268	321	375	457.5	529	578
C10 ¹⁴	14.5	14.5	15.5	15.5	13	13

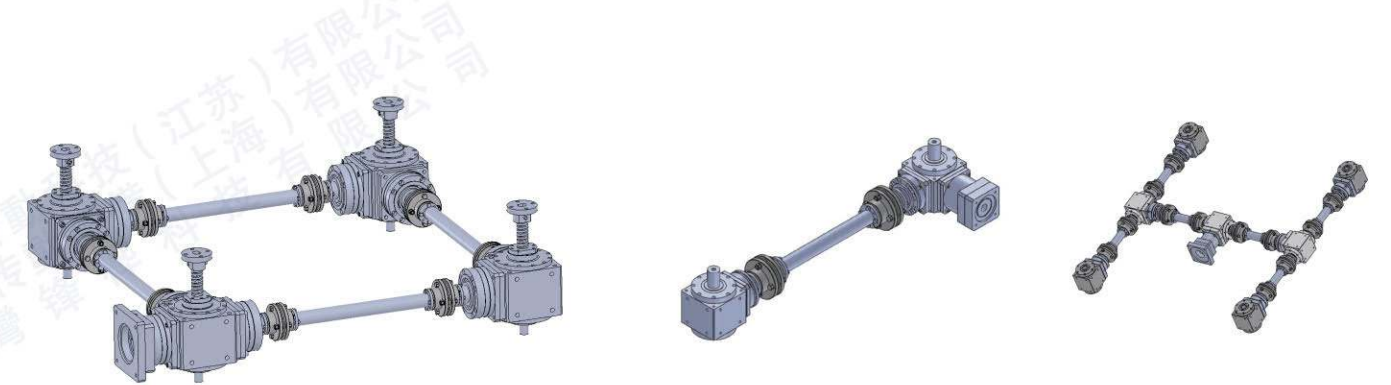
14. C1~C10 是公制標準馬達連接板之尺寸, 請上網點選"減速機選用"找出正確之尺寸。

轉向圖 Diagram of Rotate Direction



適用於多軸連動場合：

TFT-LCD 升降機構、各種升降、水平連動機構... 等機構



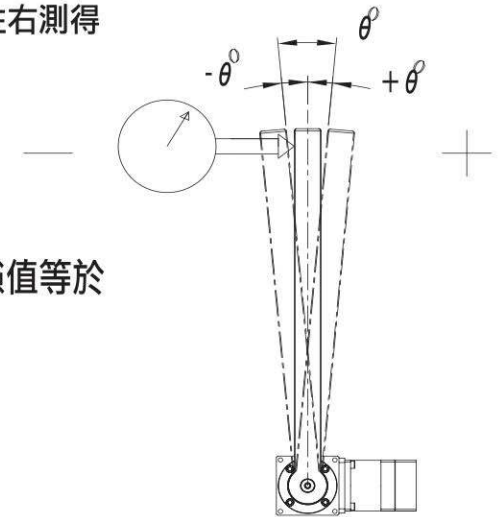
減速機-背隙測定值：

入力軸固定,出力軸施以微小力距(額定值的5%),測量棒往左再往右測得的 θ° ($+\theta^\circ$ 與 $-\theta^\circ$) 即為背隙。

背隙值的計算：

例:當 360° 裡最大 θ° 為 0.05° (3弧分),半徑500MM,背隙值等於 $(500 * 2 * \pi) \div (360 * 60) * 3 = 0.436\text{MM}$

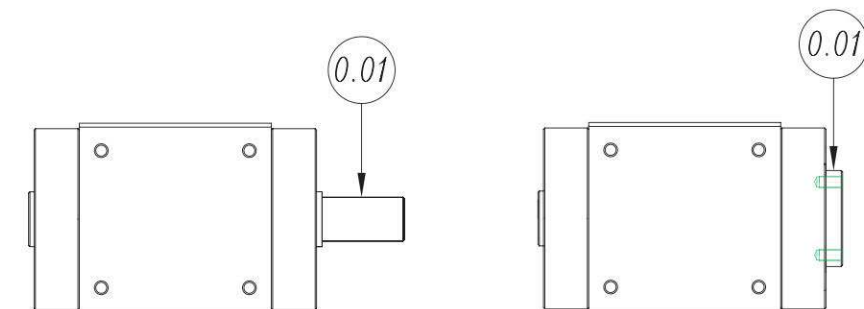
θ° 為 0.05° (3弧分) = 0.436MM (背隙值或齒隙)



減速機-出力軸偏擺與同心度

1. 輸出軸的偏擺與同心度的高低對其壽命有絕對的影響,出力軸偏擺過大易產生偏擺運動,對齒輪產生磨損壽命縮短。

2. 全系列使用NSK錐形滾柱軸承,軸偏擺要求 0.01MM 以內(測量時施以定格扭距的5%)。



縮緊盤附件選配 Selection of Shrink Disc Accessories

(單位: mm)

C / FC 系列	D1	D2	D3	H1	H2
SSD-d16xdw14	41	16	26	15	18.5
SSD-d22xdw18	50	22	36	19.5	23
SSD-d25xdw22	50	25	38	19.5	23
SSD-d44xdw32	80	44	61	25.5	29.5
SSD-d50xdw40	90	50	70	27.5	31.5
SSD-d62xdw50	110	62	86	30.5	34.5
SSD-d68xdw55	115	68	86	30.5	34.5
SSD-d75xdw60	138	75	100	32.5	38

PAW-A(B) / PT系列

90度精密減速機

90 Degree Precision Speed Reducer

多種輸出軸型式 減速機1:1-1:100

Multiple Output Shaft Type Reducer 1:1-1:100

適用之伺服馬達容量：0.1kw-15kw

Applicable Servo Motor Capacity: 0.1kw-15kw



中空軸+錐形迫緊環： 使用于大負荷場合
適用： 滾輪機構，輸送搬運機構，凸輪機構冶金面板翻轉機構，齒條齒輪機構等任何產業之機構。
 Hollow shaft + conical tightening ring: applied in heavy load situations.
 Application: roller mechanism, conveying and transporting mechanism, cam mechanism, LCD panel turnover mechanism, rack and gear mechanism and other industrial institutions.

中空軸旋轉法蘭： 適用于大負荷場合。
適用： 旋轉機構，CNC車床機械手臂之翻轉機構。
 Hollow shaft rotation flange: applied in heavy load situations.
 Application: rotary mechanism, Turnover mechanism of CNC lathe mechanical arm



中空軸(夾緊式)，單中空軸與雙中空軸。
適用： 輸送搬運機構。
 Hollow shaft (clamping type), single hollow shaft and double hollow shaft.
 Application: conveying and transporting mechanism.

中空軸夾緊式加鍵槽： 適用大負荷場合。
適用： 滾輪機構，輸送搬運機構，凸輪機構液晶面板翻轉機構，齒條齒輪機構
 Hollow shaft clamping type with keyway: suitable for heavy load occasions.
 Application: roller mechanism, conveying and transporting mechanism, cam mechanism, LCD panel turnover mechanism, rack and gear mechanism.

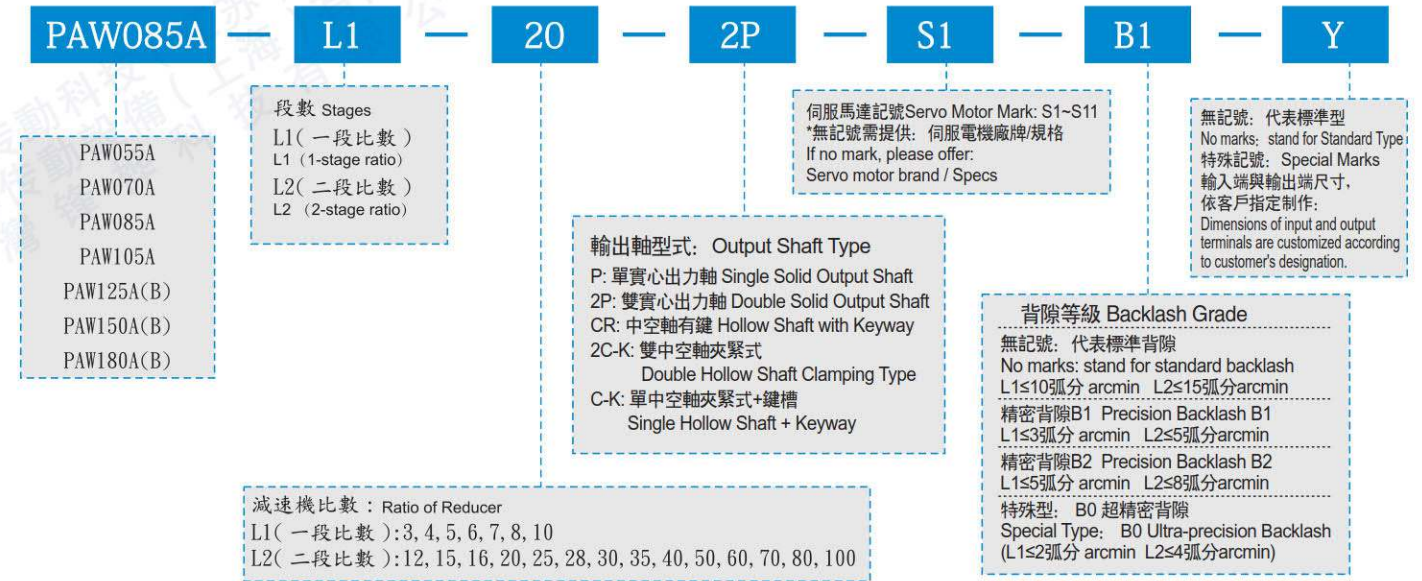


中空軸有鍵槽： 新型追加止付牙孔。
一般輸送機構。
 Hollow shaft with keyway: new type with socket set screws.
 General conveying mechanism.

轉向器
 Steering gear

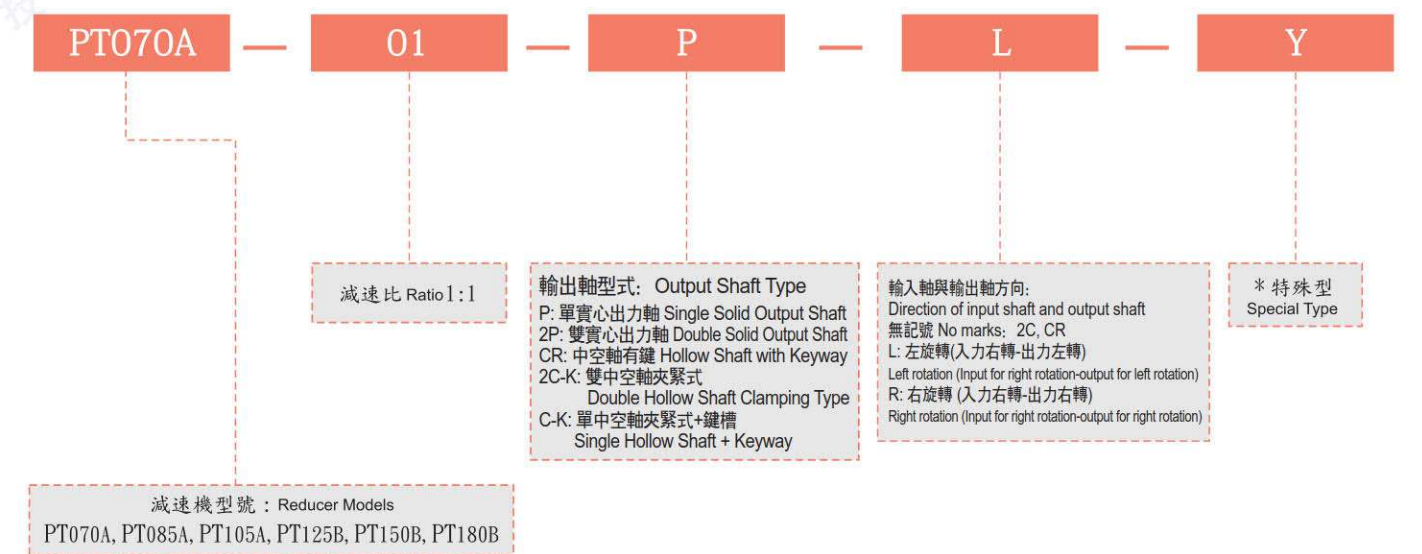
型號說明 Model Description

PAW-A(B)系列: PAW055A~PAW180A(B)



型號說明 Model Description

PT系列: PT070A~PT180B



PAW-A(B) / PT系列-性能参数表

Performance Parameters Table

規格 Specification	段數 Stages	減速比 (i) Ratio	PAW055A	PAW070A PT070A	PAW085A PT085A	PAW105A PT105A	PAW125A PT125B	PAW125B	PAW150A PT150B	PAW150B	PAW180A	PAW180B PT180B
額定輸出轉距(Nm) Rated Output Torque	一段 L1	1/1		30	40	100	230		400			600
		1/3	10	30	40	100	230	100	400	230	900	450
		1/4	15	30	50	150	250	160	500	330	1100	550
		1/5	15	30	50	150	250	160	500	330	1200	550
		1/6	14	30	42	120	230	160	500	290	1100	530
		1/7	14	30	42	120	230	160	500	290	1100	530
	二段 L2	1/10	10	30	40	100	230	100	400	230	900	450
		1/12	10	30	40	100	230	100	400	230	900	450
		1/15	10	30	40	100	230	100	400	230	900	450
		1/16	15	30	50	150	250	160	500	330	1200	550
		1/20	15	30	50	150	250	160	500	330	1200	550
		1/25	15	30	50	150	250	160	500	330	1200	550
		1/28	15	30	50	150	250	160	500	330	1100	550
		1/30	10	30	40	100	230	100	450	330	900	450
		1/35	15	30	50	150	250	160	500	330	1100	550
		1/40	15	30	50	150	250	160	500	330	1100	550
1/50	15	30	50	150	250	160	500	330	1100	550		
1/60	15	30	50	150	250	160	500	330	1100	550		
1/70	12	30	50	120	250	160	500	290	1100	550		
1/100	10	30	40	100	230	100	400	230	900	450		
最大輸出轉距 (Nm) Max. Output Torque	L1, L2	3~100	3倍額定輸出轉距 (Nm) 3 Times of Rated Output Torque									
輸入轉速 (rpm) Input Speed	L1, L2	3~100	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
標準背隙 (arc-min) Standard Backlash	L1	3~10	≤10	≤10	≤10	≤10	≤10	≤10	≤10	≤10	≤10	≤10
	L2	12~100	≤15	≤15	≤15	≤15	≤15	≤15	≤15	≤15	≤15	≤15
精密背隙 B2(arc-min) Precision Backlash	L1	3~10	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5
	L2	12~100	≤8	≤8	≤8	≤8	≤8	≤8	≤8	≤8	≤8	≤8
精密背隙 B1(arc-min) Precision Backlash	L1	3~10	≤3	≤3	≤3	≤3	≤3	≤3	≤3	≤3	≤3	≤3
	L2	12~100	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5
容許徑向力 (N) Radial	L1, L2	3~100	1100	3250	3250	5850	9100	9100	14300	14300	19500	19500
容許軸向力 (N) Axial	L1, L2	3~100	650	3250	3250	5850	9100	9100	14300	14300	19500	19500
效率 (%) Efficiency	L1	3~10	90%									
	L2	12~100	85%									
重量 (kg) Weight	L1	3~10	1.8	2.9	3.8	10.5	15.5	12.5	31	25.5	56.5	37.5
	L2	12~100	2.1	3.3	4.3	11.2	17	13.2	35.5	28.5	63.5	42.0
使用溫度 (C) Temperature	L1, L2	3~100	-10°C~+80°C									
潤滑油 Lubrication oil	L1, L2	3~100	全合成潤滑油 (COMPLEX HV2) Fully Synthetic Grease									
安裝方向 Installation Direction	L1, L2	3~100	任意方向 Any Installation Direction									
噪音值 (db) Noise value	L1, L2	3~100	≤68	≤68	≤68	≤68	≤70	≤70	≤72	≤72	≤74	≤74

*1/1, 入力轉速 ≤ 1500 RPM 以內。

* 入力軸與法蘭詳細尺寸 C1~C7, 如頁數 38P

PAW系列-2P雙出力軸型式

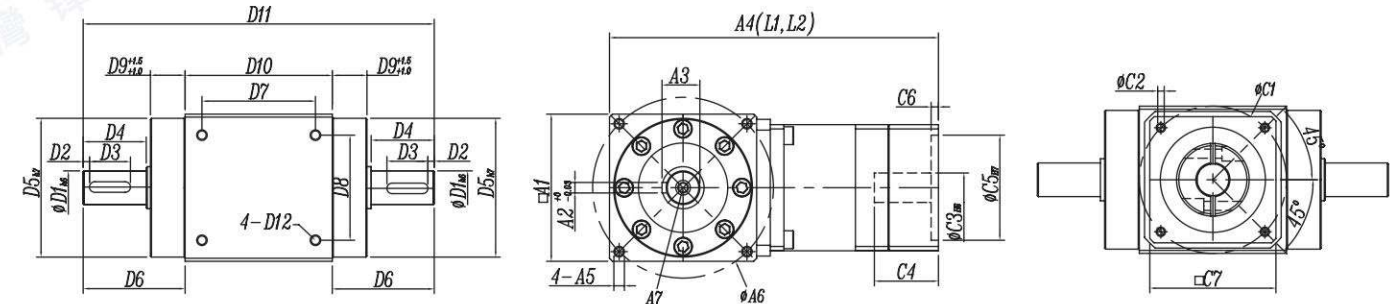
Double Output Shaft Type

*PAW055A~~PAW180A:減速比Ratio(1/3~~1/100)



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

規格	PAW055A	PAW070A	PAW085A	PAW105A	PAW125A	PAW125B	PAW150A	PAW150B	PAW180A	PAW180B
A1	55	70	85	105	125	125	150	150	180	180
A2	4	5	6	8	10	10	12	12	14	14
A3	14.5	18	22.5	31	35	35	43	43	53.5	53.5
A4 (L1單段)	127.5	157	173	223	281	247.5	368	312	403	368
A4 (L2雙段)	153	178	194	250	308.5	274.5	414	340	455	414
A5	M5-10L	M5-12L	M6-12L	M8-15L	M8-15L	M8-15L	M10-18L	M10-18L	M12-18L	M12-18L
A6	65	86	100	118	145	145	185	185	200	200
A7	M4	M5	M6	M8	M8	M8	M12	M12	M12	M12
D1	13	16	20	28	32	32	40	40	50	50
D2	3	3	3.5	3	3	3	3	3	3	3
D3	20	20	25	30	40	40	50	50	60	60
D4	26	30	35	40	50	50	63	63	73	73
D5	53.5	66	82	100	120	120	135	135	165	165
D6	40.25	48.5	52.5	60.5	71.5	71.5	85	85	96	96
D7	45	54	68	80	100	100	120	120	141.4	141.4
D8	34	50	52	60	80	80	100	100	141.4	141.4
D9	12.75	16.5	15.5	18.5	19.5	19.5	20	20	21	21
D10	55	70	85	105	125	125	150	150	180	180
D11	135.5	167	190	226	268	268	320	320	372	372
D12	M5-10L	M5-12L	M6-12L	M8-15L	M8-15L	M8-15L	M10-18L	M10-18L	M12-18L	M12-18L
C1	≤70	≤90	≤90	≤145	≤200	≤145	≤215	≤200	≤215	≤215
C2	≤M4	≤M6	≤M6	≤M8	≤M12	≤M8	≤M12	≤M12	≤M12	≤M12
C3	≤11	≤19	≤19	≤24	≤35	≤24	≤42	≤35	≤42	≤42
C4	≤30	≤41	≤41	≤62	≤80	≤62	≤116	≤80	≤116	≤116
C5	≤50	≤70	≤70	≤110	≤114.3	≤110	≤180	≤114.3	≤180	≤180
C6	≤3.5	≤5	≤5	≤7	≤7	≤7	≤7	≤7	≤7	≤7
C7	≤60	≤80	≤80	≤120	≤176	≤120	≤196	≤176	≤220	≤176

* 入力軸與法蘭詳細尺寸 C1~C7, 如頁數 38P

PAW系列-P單出力軸型式

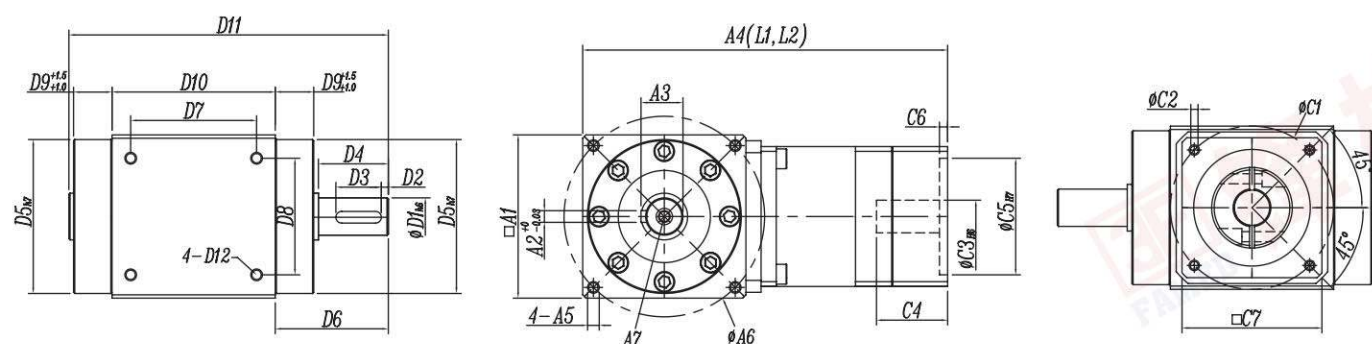
Single Output Shaft Type

*PAW070A~~PAW180A:減速比Ratio(1/3~~1/100)



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

規格	PAW055A	PAW070A	PAW085A	PAW105A	PAW125A	PAW125B	PAW150A	PAW150B	PAW180A	PAW180B
A1	55	70	85	105	125	125	150	150	180	180
A2	4	5	6	8	10	10	12	12	14	14
A3	14.5	18	22.5	31	35	35	43	43	53.5	53.5
A4 (L1單段)	127.5	157	173	223	281	247.5	368	312	403	368
A4 (L2雙段)	153	178	194	250	308.5	274.5	414	340	455	414
A5	M5-10L	M5-12L	M6-12L	M8-15L	M8-15L	M8-15L	M10-18L	M10-18L	M12-18L	M12-18L
A6	65	86	100	118	145	145	185	185	200	200
A7	M4	M5	M6	M8	M8	M8	M12	M12	M12	M12
D1	13	16	20	28	32	32	40	40	50	50
D2	3	3	3.5	3	3	3	3	3	3	3
D3	20	20	25	30	40	40	50	50	60	60
D4	26	30	35	40	50	50	63	63	73	73
D5	53.5	66	82	100	120	120	135	135	165	165
D6	40.25	48.5	52.5	60.5	71.5	71.5	85	85	96	96
D7	45	54	68	80	100	100	120	120	141.4	141.4
D8	34	50	52	60	80	80	100	100	141.4	141.4
D9	12.75	16.5	15.5	18.5	19.5	19.5	20	20	21	21
D10	55	70	85	105	125	125	150	150	180	180
D11	109.5	137	155	186	218	218	257	257	299	299
D12	M5-10L	M5-12L	M6-12L	M8-15L	M8-15L	M8-15L	M10-18L	M10-18L	M12-18L	M12-18L
C1	≤70	≤90	≤90	≤145	≤200	≤145	≤215	≤200	≤215	≤215
C2	≤M4	≤M6	≤M6	≤M8	≤M12	≤M8	≤M12	≤M12	≤M12	≤M12
C3	≤11	≤19	≤19	≤24	≤35	≤24	≤42	≤35	≤42	≤42
C4	≤30	≤41	≤41	≤62	≤80	≤62	≤116	≤80	≤116	≤116
C5	≤50	≤70	≤70	≤110	≤114.3	≤110	≤180	≤114.3	≤180	≤180
C6	≤3.5	≤5	≤5	≤7	≤7	≤7	≤7	≤7	≤7	≤7
C7	≤60	≤80	≤80	≤120	≤176	≤120	≤196	≤176	≤220	≤176

* 入力軸與法蘭詳細尺寸 C1~C7, 如頁數 38P

PAW系列-2C-K 雙中空軸帶鍵型式

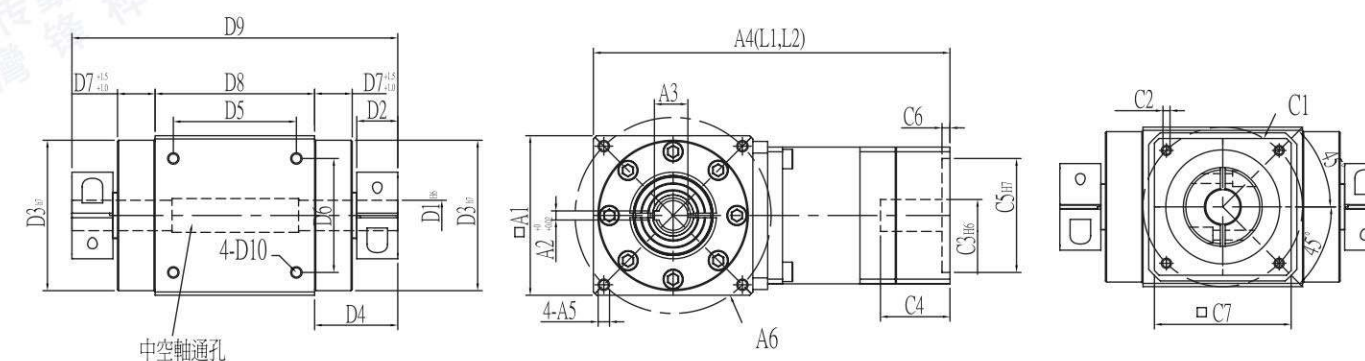
Double Hollow Shaft Key Groove Type

*PAW070A~~PAW180A:減速比Ratio(1/3~~1/100)



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

規格	PAW070A	PAW085A	PAW105A	PAW125A	PAW125B	PAW150A	PAW150B	PAW180A	PAW180B
A1	70	85	105	125	125	150	150	180	180
A2	4	5	6	8	8	10	10	14	14
A3	14.7	16.3	24.7	31.3	31.3	38.3	38.3	53.8	53.8
A4 (L1單段)	157	173	223	281	247.5	368	312	403	368
A4 (L2雙段)	178	194	250	308.5	274.5	414	340	455	414
A5	M5-12L	M6-12L	M8-15L	M8-15L	M8-15L	M10-18L	M10-18L	M12-18L	M12-18L
A6	86	100	118	145	145	185	185	200	200
D1	13	15	22	28	28	35	35	50	50
D2	18	24	25	24	24	33	33	36.5	36.5
D3	66	82	100	120	120	135	135	165	165
D4	36.5	41.5	45.5	45.5	45.5	55	55	59.5	59.5
D5	54	68	80	100	100	120	120	141.4	141.4
D6	50	52	60	80	80	100	100	141.4	141.4
D7	16.5	15.5	18.5	19.5	19.5	20	20	21	21
D8	70	85	105	125	125	150	150	180	180
D9	143	168	196	216	216	260	260	299	299
D10	M5-12L	M6-12L	M8-15L	M8-15L	M8-15L	M10-18L	M10-18L	M12-18L	M12-18L
C1	≤90	≤90	≤145	≤200	≤145	≤215	≤200	≤215	≤215
C2	≤M6	≤M6	≤M8	≤M12	≤M8	≤M12	≤M12	≤M12	≤M12
C3	≤19	≤19	≤24	≤35	≤24	≤42	≤35	≤42	≤42
C4	≤41	≤41	≤62	≤80	≤62	≤116	≤80	≤116	≤116
C5	≤70	≤70	≤110	≤114.3	≤110	≤180	≤114.3	≤180	≤180
C6	≤5	≤5	≤7	≤7	≤7	≤7	≤7	≤7	≤7
C7	≤80	≤80	≤120	≤176	≤120	≤196	≤176	≤220	≤176

* 入力軸與法蘭詳細尺寸 C1~C7, 如頁數 38P

PAW系列-C-K 單中空軸帶鍵型式

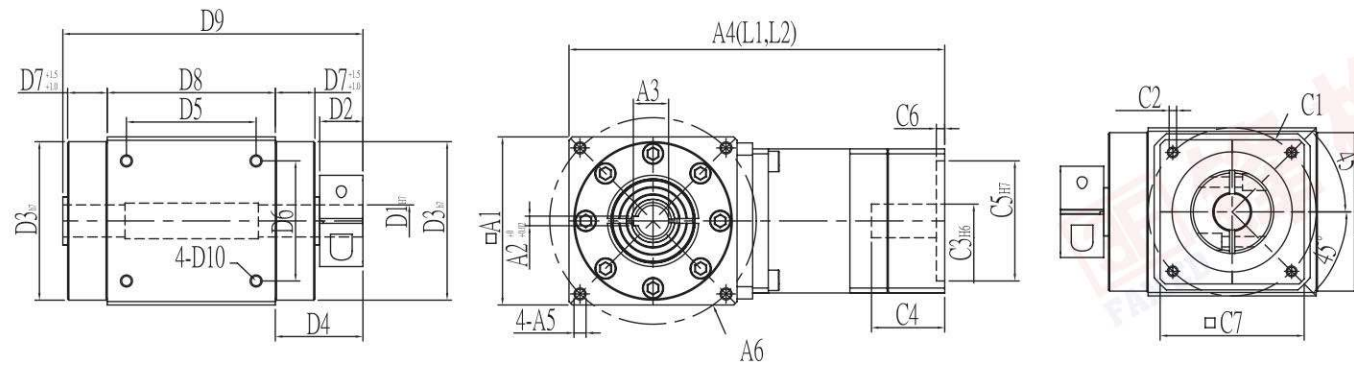
Single Hollow Shaft Key Groove Type

*PAW070A~~PAW180A減速比Ratio(1/3~~1/100)



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

規格	PAW070A	PAW085A	PAW105A	PAW125A	PAW125B	PAW150A	PAW150B	PAW180A	PAW180B
A1	70	85	105	125	125	150	150	180	180
A2	4	5	6	8	8	10	10	14	14
A3	14.7	16.3	24.7	31.3	31.3	38.3	38.3	53.8	53.8
A4 (L1單段)	157	173	223	281	247.5	368	312	403	368
A4 (L2雙段)	178	194	250	308.5	274.5	414	340	455	414
A5	M5-12L	M6-12L	M8-15L	M8-15L	M8-15L	M10-18L	M10-18L	M12-18L	M12-18L
A6	86	100	118	145	145	185	185	200	200
D1	13	15	22	28	28	35	35	50	50
D2	18	24	25	24	24	33	33	36.5	36.5
D3	66	82	100	120	120	135	135	165	165
D4	36.5	41.5	45.5	45.5	45.5	55	55	59.5	59.5
D5	54	68	80	100	100	120	120	141.4	141.4
D6	50	52	60	80	80	100	100	141.4	141.4
D7	16.5	15.5	18.5	19.5	19.5	20	20	21	21
D8	70	85	105	125	125	150	150	180	180
D9	125	144	171	192	192	227	227	262.5	262.5
D10	M5-12L	M6-12L	M8-15L	M8-15L	M8-15L	M10-18L	M10-18L	M12-18L	M12-18L
C1	≤90	≤90	≤145	≤200	≤145	≤215	≤200	≤215	≤215
C2	≤M6	≤M6	≤M8	≤M12	≤M8	≤M12	≤M12	≤M12	≤M12
C3	≤19	≤19	≤24	≤35	≤24	≤42	≤35	≤42	≤42
C4	≤41	≤41	≤62	≤80	≤62	≤116	≤80	≤116	≤116
C5	≤70	≤70	≤110	≤114.3	≤110	≤180	≤114.3	≤180	≤180
C6	≤5	≤5	≤7	≤7	≤7	≤7	≤7	≤7	≤7
C7	≤80	≤80	≤120	≤176	≤120	≤196	≤176	≤220	≤176

* 入力軸與法蘭詳細尺寸 C1~C7, 如頁數 38P

PAW系列-CR 中空軸帶鍵型式

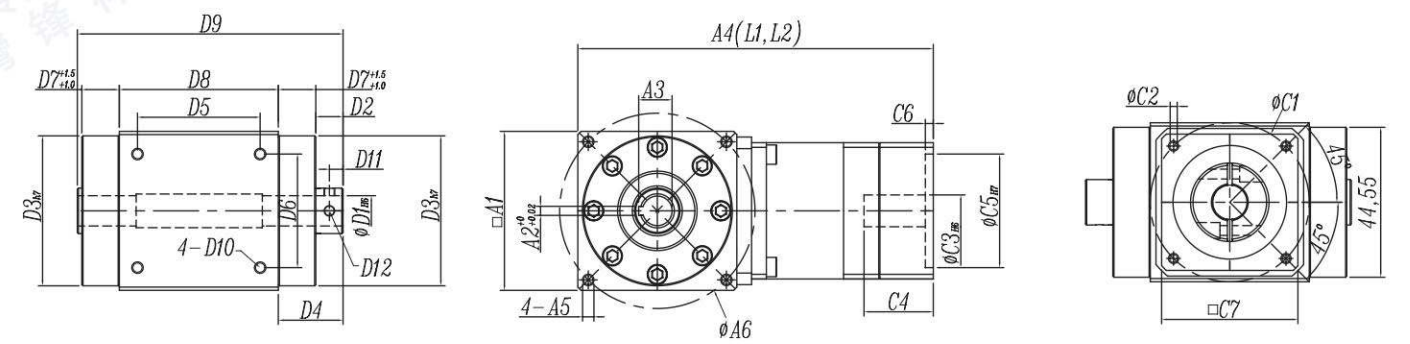
Hollow Shaft Key Groove Type

*PAW070A~~PAW180A:減速比Ratio(1/3~~1/100)



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

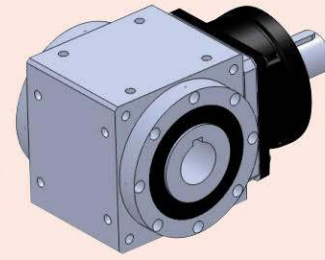
規格	PAW070A	PAW085A	PAW105A	PAW125A	PAW125B	PAW150A	PAW150B	PAW180A	PAW180B
A1	70	85	105	125	125	150	150	180	180
A2	4	5	6	8	8	10	10	14	14
A3	14.7	17.3	24.7	31.3	31.3	38.3	38.3	53.8	53.8
A4 (L1單段)	156.5	173	223	281	247.5	368	312	403	368
A4 (L2雙段)	177.5	194	250	308.5	274.5	414	340	455	414
A5	M5-12L	M6-12L	M8-15L	M8-15L	M8-15L	M10-18L	M10-18L	M12-18L	M12-18L
A6	86	100	118	145	145	185	185	200	200
D1	13	15	22	28	28	35	35	50	50
D2	10	10	10	12	12	14	14	18	18
D3	66	82	100	120	120	135	135	165	165
D4	26.5	25.5	28.5	31.5	31.5	34	34	39	39
D5	54	68	80	100	100	120	120	141.4	141.4
D6	50	52	60	80	80	100	100	141.4	141.4
D7	16.5	15.5	18.5	19.5	19.5	20	20	21	21
D8	70	85	105	125	125	150	150	180	180
D9	125	144	171	192	192	227	227	262.5	262.5
D10	M5-12L	M6-12L	M8-15L	M8-15L	M8-15L	M10-18L	M10-18L	M12-18L	M12-18L
D11	5	5	5	6	6	7	7	9	9
D12	2-M4	2-M4	2-M5	2-M6	2-M6	2-M8	2-M8	2-M12	2-M12
C1	≤90	≤90	≤145	≤200	≤145	≤215	≤200	≤215	≤215
C2	≤M6	≤M6	≤M8	≤M12	≤M8	≤M12	≤M12	≤M12	≤M12
C3	≤19	≤19	≤24	≤35	≤24	≤42	≤35	≤42	≤42
C4	≤41	≤41	≤62	≤80	≤62	≤116	≤80	≤116	≤116
C5	≤70	≤70	≤110	≤114.3	≤110	≤180	≤114.3	≤180	≤180
C6	≤5	≤5	≤7	≤7	≤7	≤7	≤7	≤7	≤7
C7	≤80	≤80	≤120	≤176	≤120	≤196	≤176	≤220	≤176

* 入力軸與法蘭詳細尺寸 C1~C7, 如頁數 38P

PT系列-CR中空軸帶鍵槽型式

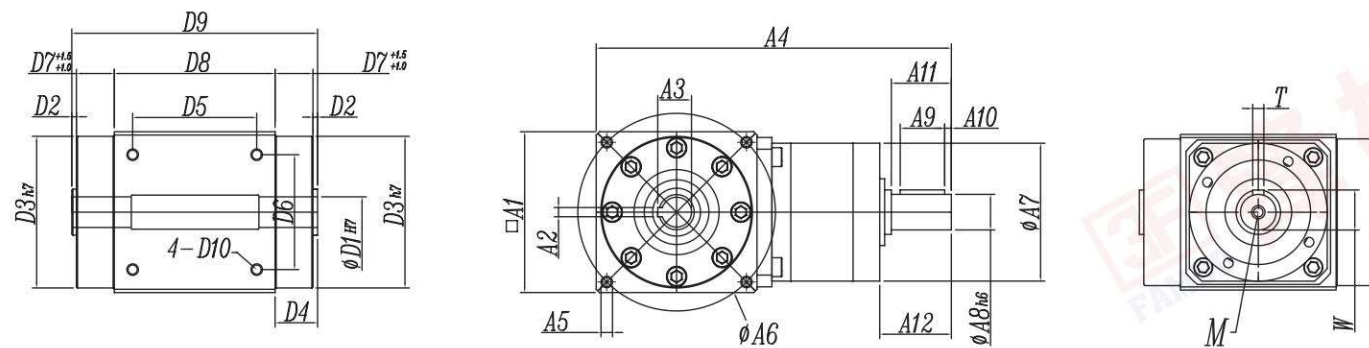
Hollow Shaft Key Groove Type

*轉向器Steering gear PT070A~~PT180B,速比 Ratio 1:1



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

規格	PT070A	PT085A	PT105A	PT125B	PT150B	PT180B
A1	70	85	105	125	150	180
A2	4	5	6	8	10	14
A3	14.7	17.3	24.7	31.3	38.3	53.8
A4	163.7	181.2	205	282.5	271.5	297
A5	4-M5-12L	4-M6-12L	4-M8-15L	4-M8-15L	4-M10-18L	4-M12-18L
A6	86	100	118	145	185	200
A7	62	62	90	120	142	142
A8	16	20	28	28	35	50
A9	20	20	30	30	40	60
A10	3	3	3	3	3	3
A11	27	27	34	34	45	65
A12	32.2	32.2	44	44	51.5	70
D1	13	15	22	28	35	50
D2	2	2	2	2	2	2
D3	66	82	100	120	135	165
D4	18.5	17.5	20.5	21.5	22	23
D5	54	68	80	100	120	141.4
D6	50	52	60	80	100	141.4
D7	16.5	15.5	18.5	19.5	20	21
D8	70	85	105	125	150	180
D9	107	120	146	168	194	226
D10	4-M5-12L	4-M6-12L	4-M8-15L	4-M8-15L	4-M10-18L	4-M12-18L
T	5	6	8	8	10	14
W	18	22.5	31	31	38	53.5
M	M5	M6	M8	M8	M10	M12

* 入力軸與法蘭詳細尺寸 C1~C7, 如頁數 38P

PT系列-2P雙出力軸型式

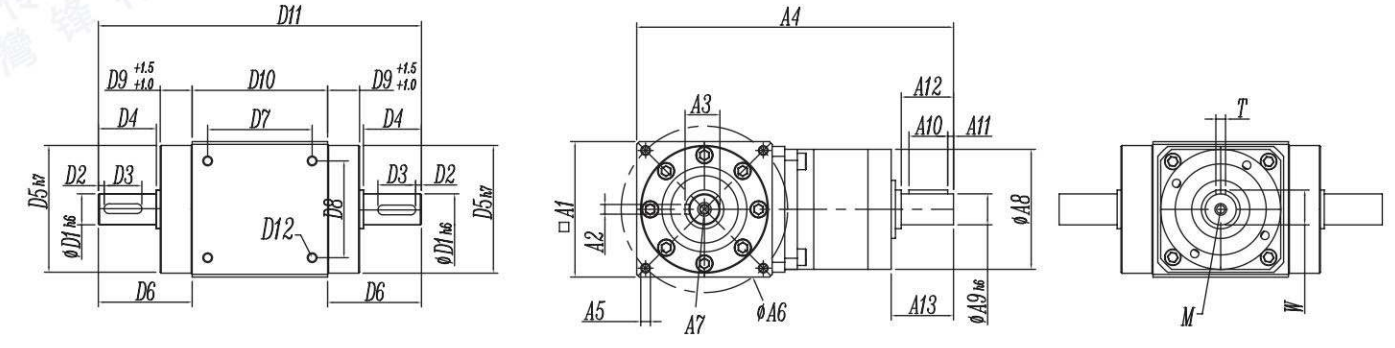
Double Output Shaft Type

*轉向器Steering gear PT070A~PT180B
減速Ratio比1:1



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

規格	PT070A	PT085A	PT105A	PT125B	PT150B	PT180B
A1	70	85	105	125	150	180
A2	5	6	8	10	12	14
A3	18	22.5	31	35	43	53.5
A4	163.7	181.2	204.5	223	282.5	311
A5	4-M5-12L	4-M6-12L	4-M8-15L	4-M8-15L	4-M10-18L	4-M12-18L
A6	86	100	118	145	185	200
A7	M5	M6	M8	M8	M12	M12
A8	62	62	95	95	120	142
A9	16	20	28	28	35	50
A10	20	20	30	30	40	60
A11	3	3	3	3	3	3
A12	27	27	34	34	45	65
A13	32.2	32.2	44	44	51.5	70
D1	16	20	28	32	40	50
D2	3	3.5	3	3	3	3
D3	20	25	30	40	50	60
D4	30	35	40	50	63	73
D5	66	82	100	120	135	165
D6	48.5	52.5	60.5	71.5	85	96
D7	54	68	80	100	120	141.4
D8	50	52	60	80	100	141.4
D9	16.5	15.5	18.5	19.5	20	21
D10	70	85	105	125	150	180
D11	167	190	226	268	320	372
D12	4-M5-12L	4-M6-12L	4-M8-15L	4-M8-15L	4-M10-18L	4-M12-18L
T	5	6	8	8	10	14
W	18	22.5	31	31	38	53.5
M	M5	M6	M8	M8	M10	M12

* 入力軸與法蘭詳細尺寸 C1~C7, 如頁數 38P

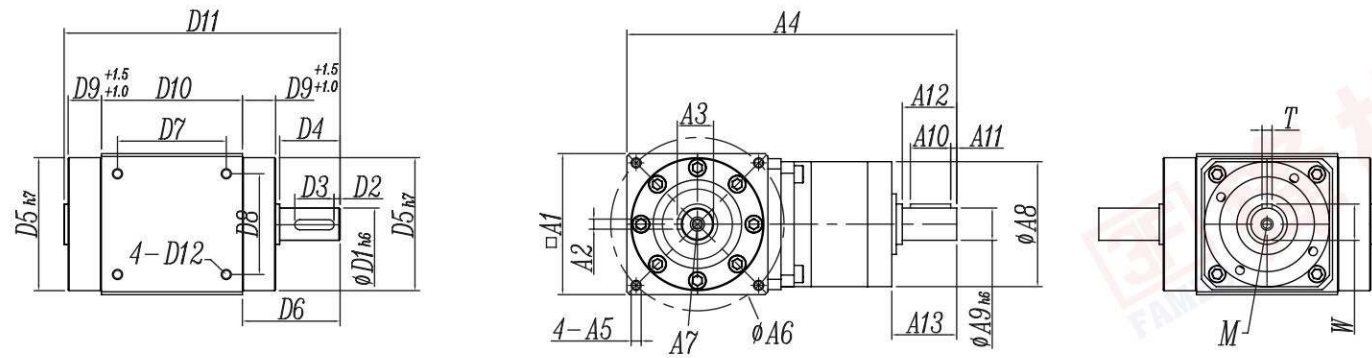
PT系列-P單出力軸型式

Single Output Shaft Type

*轉向器PT070A~~PT180B,減速比Ratio1:1



外形尺寸圖 Dimensions:



Unit:mm

規格表 Specifications:

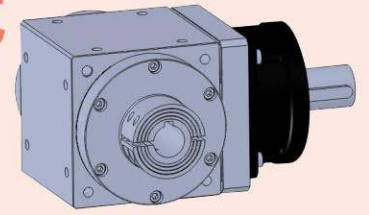
規格	PT070B	PT085B	PT105B	PT125B	PT150B	PT180B
A1	70	85	105	125	150	180
A2	5	6	8	10	12	14
A3	18	22.5	31	35	43	53.5
A4	163.7	181.2	204.5	223	282.5	311
A5	4-M5-12L	4-M6-12L	4-M8-15L	4-M8-15L	4-M10-18L	4-M12-18L
A6	86	100	118	145	185	200
A7	M5	M6	M8	M8	M12	M12
A8	62	62	95	95	120	142
A9	16	20	28	28	35	50
A10	20	20	30	30	40	60
A11	3	3	3	3	3	3
A12	27	27	34	34	45	65
A13	32.2	32.2	44	44	51.5	70
D1	16	20	28	32	40	50
D2	3	3.5	3	3	3	3
D3	20	25	30	40	50	60
D4	30	35	40	50	63	73
D5	66	82	100	120	135	165
D6	48.5	52.5	60.5	71.5	85	96
D7	54	68	80	100	120	141.4
D8	50	52	60	80	100	141.4
D9	16.5	15.5	18.5	19.5	20	21
D10	70	85	105	125	150	180
D11	137	155	186	218	257	299
D12	M5-12L	M6-12L	M8-15L	M8-15L	M10-18L	M12-18L
T	5	6	8	8	10	14
W	18	22.5	31	31	38	53.5
M	M5	M6	M8	M8	M10	M12

* 入力軸與法蘭詳細尺寸 C1~C7, 如頁數 38P

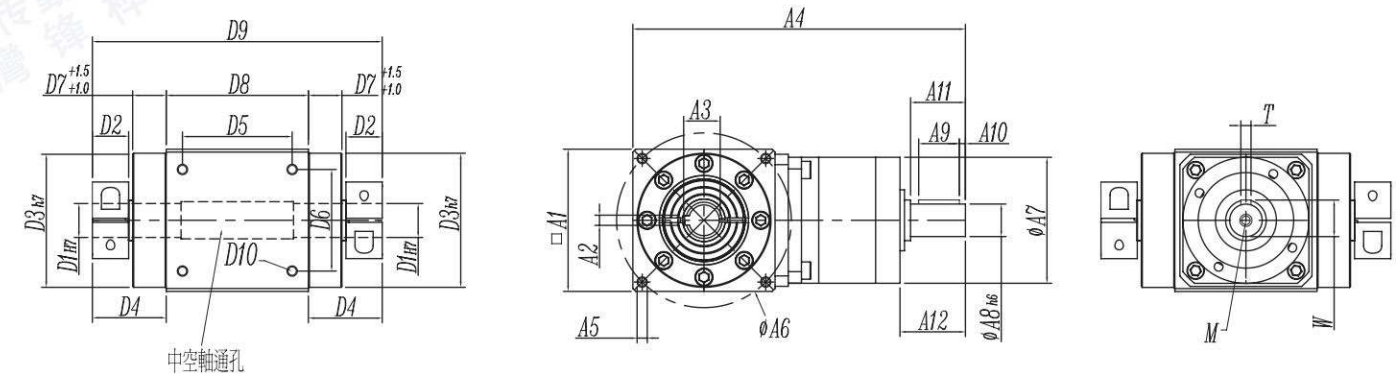
PT系列-2C-K雙中空軸帶鍵槽型式

Double Hollow Shaft Key Groove Type

*轉向器PT070A~PT180B,減速比Ratio1:1



外形尺寸圖 Dimensions:



Unit:mm

規格表 Specifications:

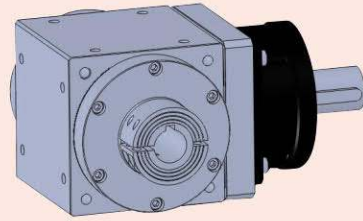
規格	PT070A	PT085A	PT105A	PT125B	PT150B	PT180B
A1	70	85	105	125	150	180
A2	4	5	6	8	10	14
A3	14.7	17.3	24.7	31.3	38.3	53.5
A4	163.7	181.2	204.5	223	282.5	311
A5	4-M5-12L	4-M6-12L	4-M8-15L	4-M8-15L	4-M10-18L	4-M12-18L
A6	86	100	118	145	185	200
A7	62	62	95	95	120	142
A8	16	20	28	28	35	50
A9	20	20	30	30	40	60
A10	3	3	3	3	3	3
A11	27	27	34	34	45	65
A12	32.2	32.2	44	44	51.5	70
D1	13	15	22	28	35	50
D2	18	24	25	24	33	36.5
D3	66	82	100	120	135	165
D4	36.5	41.5	45.5	45.5	55	59.5
D5	54	68	80	100	120	141.4
D6	50	52	60	80	100	141.4
D7	16.5	15.5	18.5	19.5	20	21
D8	70	85	105	125	150	180
D9	107	120	146	168	194	226
D10	4-M5-12L	4-M6-12L	4-M8-15L	4-M8-15L	4-M10-18L	4-M12-18L
T	5	6	8	8	10	14
W	18	22.5	31	31	38	53.5
M	M5	M6	M8	M8	M10	M12

* 入力軸與法蘭詳細尺寸 C1~C7, 如頁數 38P

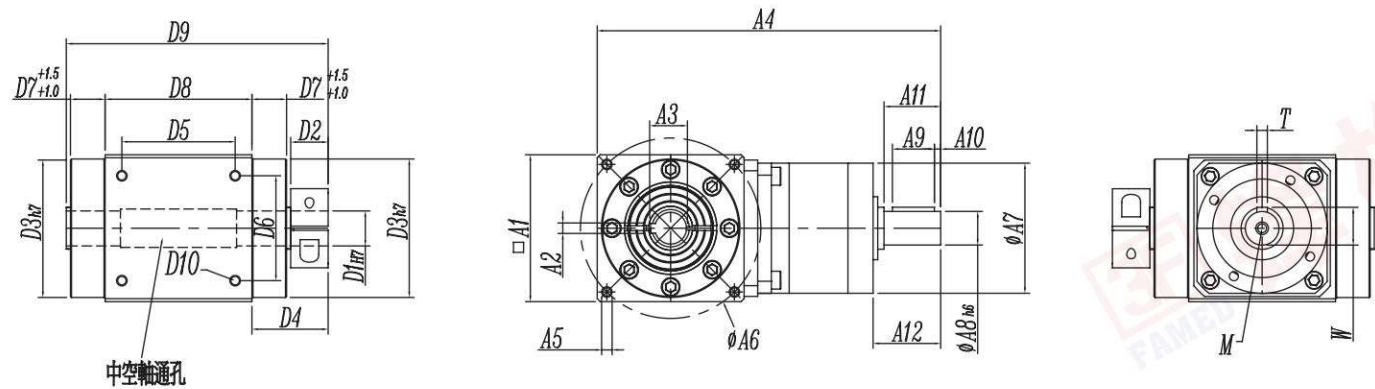
PT系列-C-K單中空軸帶鍵槽型式

Single Hollow Shaft Key Groove Type

*轉向器PT070A~PT180B,減速比Ratio1:1



外形尺寸圖 Dimensions



Unit:mm

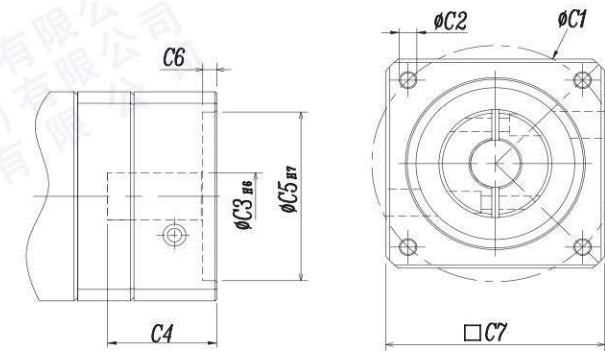
規格表 Specifications:

規格	PT070A	PT085A	PT105A	PT125B	PT150B	PT180B
A1	70	85	105	125	150	180
A2	4	5	6	8	10	14
A3	14.7	17.3	24.7	31.3	38.3	53.5
A4	163.7	181.2	204.5	223	282.5	311
A5	4-M5-12L	4-M6-12L	4-M8-15L	4-M8-15L	4-M10-18L	4-M12-18L
A6	86	100	118	145	185	200
A7	62	62	95	95	120	142
A8	16	20	28	28	35	50
A9	20	20	30	30	40	60
A10	3	3	3	3	3	3
A11	27	27	34	34	45	65
A12	32.2	32.2	44	44	51.5	70
D1	13	15	22	28	35	50
D2	18	24	25	24	33	36.5
D3	66	82	100	120	135	165
D4	36.5	41.5	45.5	45.5	55	59.5
D5	54	68	80	100	120	141.4
D6	50	52	60	80	100	141.4
D7	16.5	15.5	18.5	19.5	20	21
D8	70	85	105	125	150	180
D9	89	96	121	144	161	189.5
D10	4-M5-12L	4-M6-12L	4-M8-15L	4-M8-15L	4-M10-18L	4-M12-18L
T	5	6	8	8	10	14
W	18	22.5	31	31	38	53.5
M	M5	M6	M8	M8	M10	M12

* 入力軸與法蘭詳細尺寸 C1~C7, 如頁數 38P

PAW-A(B) / PT系列 series

入力端詳細尺寸圖 Detailed Sizes Diagram of Input End



* 入力軸與法蘭詳細尺寸C1~C7.

* 馬達記號是指不同廠牌的入力端尺寸.

* 特製品: 可依客戶指定製作入力法蘭尺寸.

型號	PAW055A										PAW070A/PAW085A										PAW105A									
尺寸	馬達記號										馬達記號										馬達記號									
C1	45	46	45	46	70	70	70	90	90	66.7	70	70	70	90	90	90	90	100	145	145	145									
C2	M3	M4	M3	M4	M4	M4	M5	M5	M6	M4	M3	M4	M5	M5	M6	M6	M6	M6	M8	M8	M8									
C3 H6	8	8	8	8	11	14	14	14	14	6.35	11	14	14	14	16	19	16	19	22	24										
C4	29	29	31	31	31	31	31	31	31	41	41	41	41	41	41	41	41	58	58	58										
C5 H7	30	30	30	30	50	50	50	70	70	38.1	50	50	50	70	70	70	80	110	110	110										
C6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	5	5	5	5	5	5	5	5	5	5	5										
C7	42	42	62	62	62	62	62	62	62	90	90	90	90	90	90	90	130	130	130											

型號	PAW125A/PAW150B										PAW150A/PAW180B							
尺寸	馬達記號										馬達記號							
C1	90	90	100	115	115	130	145	145	145	145	115	115	145	145	145	145	200	165
C2	M6	M6	M6	M6	M8	M8	M8	M8	M8	M8	M6	M8	M8	M8	M8	M8	M12	M10
C3 H6	16	19	16	24	24	19	19	22	24	28	24	24	19	22	24	28	35	32
C4	54	54	54	54	54	62	62	62	62	63	60	60	65	65	65	65	81	65
C5 H7	70	70	80	95	95	110	110	110	110	110	95	95	110	110	110	110	114.3	130
C6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
C7	120	120	120	120	120	120	120	120	120	120	142	142	142	142	142	142	176	142

型號	PAW180A										
尺寸	馬達記號										
C1	145	145	145	115	200	200	165	215	235	235	265
C2	M8	M8	M8	M6	M12	M12	M10	M12	M12	M12	M10
C3 H6	19	22	24	28	35	42	32	38	42	55	55
C4	75	75	75	75	81	81	81	116	116	116	116
C5 H7	110	110	110	110	114.3	114.3	130	180	200	200	230
C6	10	10	10	10	10	10	10	10	10	10	10
C7	180	180	180	180	180	180	180	192	220	220	220

* 入力軸與法蘭詳細尺寸 C1~C7, 如頁數 38P

AAW-AS(BS) / AAT(M)系列

90度精密減速機

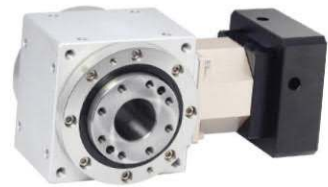
90 Degree Precision Speed Reducer

多種輸出軸型式、減速比：1:2~1:500

Multiple Output Shaft Type Reduction Ratio 1:2-1:500

適用之伺服馬達容量：0.1kw~45kw

Applicable Servo Motor Capacity : 0.1kw-45kw



大型中空軸旋轉法蘭：適用於大負荷場合。
TFT-LCD面板翻轉，旋轉機構，機械手臂底座旋轉，擺臂旋轉，分度旋轉等機構。
Large hollow shaft rotation flange: suitable for heavy load occasions.
TFT-LCD panel turnover, rotation mechanism, mechanical arm base rotation, swing arm rotation, indexing rotation and other mechanisms.



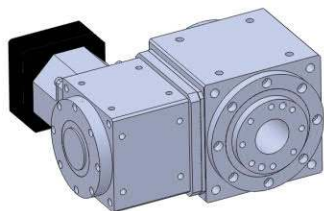
中空軸迫緊環：適用於大負荷場合。
滾輪機構，凸輪機構，輸送搬運等機構。
Hollow shaft tightening ring: suitable for heavy load occasions.
Roller mechanism, cam mechanism, conveying and transporting mechanism.



出口軸型：適用於大負荷場合。
聯軸機構，皮帶輸送等機構。
Output shaft type: applied in heavy load occasions.
Coupling mechanism, belt conveyor and other mechanisms.



螺絲減速機：適用於直線運動場合。
垂直，水平之直線運動等機構。
Screw welding reducer: suitable for linear motion occasions.
Vertical, horizontal linear motion and other mechanisms.



中空旋轉平臺：適用於大負荷場合。
TFT-LCD面板翻轉，分度盤等機構。
Hollow rotation platform: suitable for heavy load occasions.
TFT-LCD panel turnover, indexing plate and other mechanisms.



轉向器
Steering gear

AAW-AS(BS) / AAT(M)系列-性能表:

Performance table

規格 Specification	段數 Stage	減速比 (i) Ratio	AAW070AS	AAW080AS	AAW110AS	AAW135AS	AAW135BS	AAW165AS	AAW165BS	AAW200AS	AAW200BS	AAW320AS	AAW320BS
			AAT080AS AATM080AS AAW080AS-HR	AAT110AS AATM110AS AAW110AS-HR	AAT135AS AATM135AS AAW135AS-HR	AAT165AS AATM165AS		AAT165BS AATM165BS-HR	AAT200BS AATM200BS AAW200BS-HR		AAT320AS AATM320AS-HR		
額定輸出 轉距 (Nm) Rated Output Torque	一段 1-stage L1	1/2, 1/3, 1/5, 1/10	30	80	250	450		800		2000		3500	
		1/6		80	200	400	280	700	600	1500	1000	3500	2000
		1/8		85	250	450	320	800	660	1850	1100	4000	2300
		1/10		85	250	450	320	800	660	1850	1100	4000	2300
		1/12		80	225	435	320	750	660	1850	1100		2300
		1/14		80	215	425	280	750	600	1750	1000	3500	2200
	二段 2-stage L2	1/16		80	210	415	270	700	600	1700	1000		
		1/20	30	70	200	400	240	700	460	1650	900	3000	1900
		1/30	30	80	200	400	280	700	600	1500	1000	3500	2000
		1/32		85	250	450	320	800	660	1850	1100	4000	2300
		1/40	30	85	250	450	320	800	660	1850	1100	4000	2300
		1/50	30	85	250	450	320	800	660	1850	1100	4000	2300
		1/56		85	250	450	320	800	660	1850	1100	3500	2300
		1/60		80	200	400	280	700	600	1500	1000	3500	2000
		1/70	30	85	250	450	320	800	660	1850	1100	3500	2200
		1/80		85	250	450	320	800	660	1850	1100	3500	2300
		1/100	30	85	250	450	320	800	660	1850	1100	3500	2300
		1/120		80	225	435	290	750	630	1750	1050		2200
1/140		80	215	425	280	750	630	1750	1000	3200	2100		
1/160		80	210	415	270	700	600	1700	950				
1/200	30	70	200	400	240	700	460	1700	900	3000	1900		
最大輸出 轉距 (Nm) Max Output Torque	L1, L2	3~100	2.5倍額定輸出轉距 (Nm) 2.5 Times of Rated Output Torque										
輸入轉速 (rpm) Input Speed	L1, L2	3~100	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
標準背隙 (arc-min) Standard Backlash	L1	3~10	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5
	L2	12~100	≤8	≤8	≤8	≤8	≤8	≤8	≤8	≤8	≤8	≤8	≤8
精密背隙 B2(arc-min) Precision Backlash	L1	3~10	≤3	≤3	≤3	≤3	≤3	≤3	≤3	≤3	≤3	≤3	≤3
	L2	12~100	≤4	≤4	≤4	≤4	≤4	≤4	≤4	≤4	≤4	≤4	≤4
精密背隙 B1(arc-min) Precision Backlash	L1	3~10	≤2	≤2	≤2	≤2	≤2	≤2	≤2	≤2	≤2	≤2	≤2
	L2	12~100	≤3	≤3	≤3	≤3	≤3	≤3	≤3	≤3	≤3	≤3	≤3
精密背隙 B0(arc-min) Precision Backlash	L1	3~10	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1
	L1	3~10	≤2	≤2	≤2	≤2	≤2	≤2	≤2	≤2	≤2	≤2	≤2
容許徑向力 (N) Allowable Radial Force	L1, L2	3~100	2800	3900	5500	9800	9800	16500	16500	24100	24100	32600	32600
容許軸向力 (N) Allowable Axial Force	L1, L2	3~100	2800	3900	5500	9800	9800	16500	16500	24100	24100	32600	32600
效率 (%) Efficiency	L1	3~10	90%										
	L2	12~100	85%										
重量 (kg) Weight	L1	3~10	2.5	4.3	7.8	20.8	15.5	35.5	28.5	55	40.5	300	270
	L2	12~100	3.8	6.3	9.2	24.3	18.2	40.5	31.2	65.5	48.5	330	290
使用溫度 (°C) Operating Temperature	L1, L2	3~100	-10°C~+80°C										
潤滑油 Lubricant	L1, L2	3~100	全合成潤滑油 (COMPLEX HV2) Fully Synthetic Grease										
安裝方向 Installation Direction	L1, L2	3~100	任意方向 Any Installation Direction										
噪音值 (db) Noise Level	L1, L2	3~100	≤65	≤68	≤68	≤68	≤68	≤70	≤70	≤72	≤72	≤72	≤72

*1/2, 入力轉速需 ≤2000 RPM以內.

*1/3, 入力轉速需 ≤3000 RPM以內.

*入力軸與法蘭詳細尺寸C1~C7, 如頁數 57P

型號說明 Model Description



AAW系列: AAW070AS~AAW320AS(BS)

AAW080AS — L1 — 20 — RF — S1 — B1 — Y

段數 Stages
L1 (一段比數)
L1 (1-stage ratio)
L2 (二段比數)
L2 (2-stage ratio)

伺服馬達記號 Servo Motor Mark: S1-S11
*無記號需提供: 伺服電機廠牌/規格
If no mark, please offer:
Servo motor brand / Specs

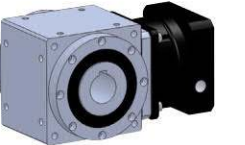
無記號: 代表標準型
No marks:
stand for Standard Type
特殊記號: Special Mark:
輸入端與輸出端尺寸依
客戶指定制作
Input and output dimensions
are customized according
to customer's request.

- AAW070AS
- AAW080AS
- AAW110AS
- AAW135AS(BS)
- AAW165AS(BS)
- AAW200AS(BS)
- AAW320AS(BS)

輸出軸型式: Output Shaft Type
P: 單實心出力軸 Single Solid Output Shaft
2P: 雙實心出力軸 Double Solid Output Shaft
CR: 中空軸帶鍵槽 Hollow Shaft with Keyway
RF: 中空軸旋轉法蘭 Hollow Rotating Flange
RF-K: 中空軸旋轉法蘭+鍵槽
Hollow shaft Rotating Flange + Keyway
RFHP: 中空軸+錐形迫緊環
Hollow Shaft with Conical Tight Ring
HR: 中空旋轉平臺 Hollow Rotary Actuator
BS: 滾珠螺桿型 Ball Screw Type

背隙等級 Backlash Grade (AAW070AS-320AS)
無記號: 代表標準背隙
No Marks: stands for standard backlash
L1≤5弧分 L2≤8 弧分 L1≤5 arcmin L2≤8 arcmin
精密背隙B1 Precision Backlash B1
L1≤2弧分 L2≤3 弧分 L1≤2 arcmin L2≤3 arcmin
精密背隙B2 Precision Backlash B2
L1≤3 弧分 L2≤4 弧分 L1≤3 arcmin L2≤4 arcmin
*特殊型: B0超精密背隙
Special type: B0 Ultra-precision Backlash
(L1≤1 弧分 L2≤2 弧分) (L1≤1 arcmin L2≤2 arcmin)

減速機比數 Ratio of Reducer : AAW070AS~AAW320AS(BS)
L1 (一段比數): 2, 3, 5, 6, 8, 9, 10, 12, 15, 16, 18, 20, 21, 24, 30
L2 (二段比數): 24, 32, 36, 40, 42, 45, 48, 50, 56, 60, 63, 70, 75, 80, 84, 90, 100, 105, 120, 140, 150, 160, 180, 200, 210, 240, 300
P. S: AAW070AS(1/3, 1/5, 1/10, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/70, 1/100)



型號說明 Model Description

AAT系列: AAT(M)070AS~AAT(M)320AS

AAT080AS — 2 — P — L — S

減速比: Reduction Ratio
2, 3, 5, 7, 10
*開發中減速比: 5, 7, 10

輸出軸型式: Output shaft type
P: 單出力軸 Single output shaft 2P: 雙出力軸 Double output shaft
CR: 中空軸有鍵 Hollow shaft with keyway RF: 中空旋轉法蘭 Hollow rotating flange
RFHP: 中空軸迫緊環 Hollow shaft tight ring
*特殊型 RFC: 中空軸夾緊式帶鍵槽
Special Type RFC: hollow shaft clamping with keyway

入力尺寸記號: Input sizes mark
S1-S11: 入力尺寸記號 Input sizes mark
注: Note
1.無記號需注記伺服電機廠牌規格
Factory brand specs of servo motor
shall be noted if no marks
2.RT無此記號
RT no such marks

輸入軸與輸出軸方向: Direction of input shaft and output shaft
無記號 No marks: 2C, CR
L: 左旋轉(入力右轉-出力左轉)
Left rotation (Input for right rotation-output for left rotation)
R: 右旋轉(入力右轉-出力右轉)
Right rotation (Input for right rotation-output for right rotation)

減速機型號: Reducer Model
AAT080AS, AAT110AS, AAT135AS, AAT165AS, AAT200BS
AATM070AS, AATM080AS, AATM110AS, AATM135AS, AATM165AS, AATM200BS, AATM320AS
AATM080AS-2AX, AATM110AS-2AX, AATM135AS-2AX, AATM165AS-2AX, AATM200BS-2AX

AAW-A(B)S系列-RF 大中空軸旋轉法蘭型式

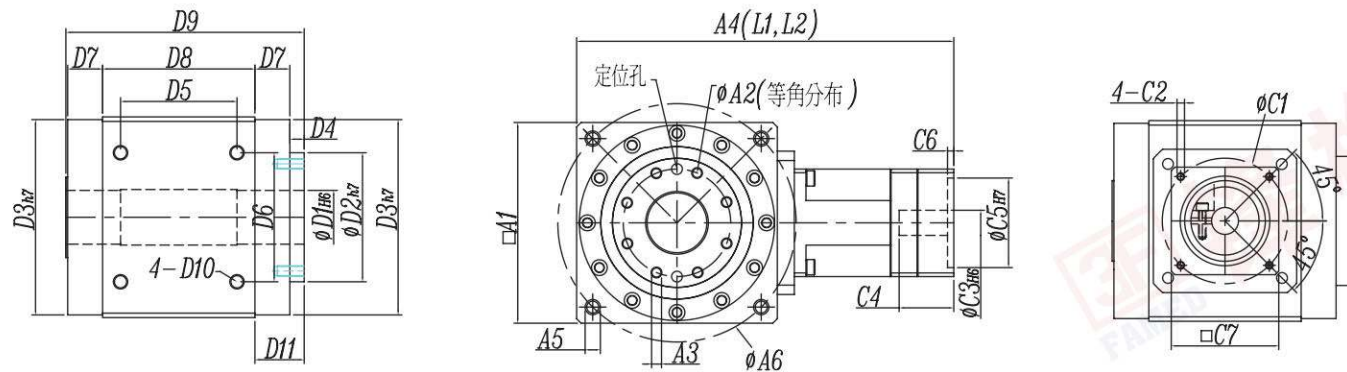
Big Hollow Shaft Rotary Flange Type

*AAW070AS~~AAW320AS:減速比Ratio(1/2~~1/500)



外形尺寸圖 Dimensions:

Unit:mm



P.S:A6(可選擇通孔)

規格表 Specifications:

Unit:mm

規格	AAW070AS	AAW080AS	AAW110AS	AAW135AS	AAW135BS	AAW165AS	AAW165BS	AAW200AS	AAW200BS	AAW320AS	AAW320BS
A1	70	80	110	138	135	168	165	200	200	320	320
A2	30	36	50	70	70	95	95	124	124	193	193
A3	6-M5-10L	8-M5-10L	8-M5-15L	8-M8-15L	8-M8-15L	8-M8-15L	8-M8-15L	12-M8-15L	12-M8-15L	12-M14-25L	12-M14-18L
A4 (L1單段)	160/168	175/167	226/224	303/290	252/250	359/343	334/321	397/413	423/407	671	539
A4 (L2雙段)	183/199	206/190	268/255	362/331	290/277	434/389	393/356	487/464	469/424	741	590
A5	4-M5-10L	4-M6-12L	4-M8-15L	4-M10-18L	4-M10-18L	4-M12-20L	4-M12-20L	4-M16-30L	4-M16-30L	4-M20-35L	4-M20-30L
A6	75	93	130	160	160	193	193	240	240	380	380
D1	16	20	30	40	40	55	55	80	80	110	110
D2	38	45	65	85	85	110	110	140	140	220	220
D3	60	78	106	133	133	163	163	195	195	306	306
D4	8.25	7	9.5	9.5	9.5	17	17	22	22	17.5	17.5
D5	42.43	49.5	68	86	78	106	100	141	129	170	170
D6	42.43	49.5	65	83	83	105	105	130	130	220	220
D7	6.25	13	15	10	19	13	19	8.5	22	30	30
D8	70	67	90	120	102	142	130	182	155	236	236
D9	92.25	102	131.5	151.5	151.5	187	187	223	223	316.5	316.5
D10	4-M5-10L	4-M6-12L	4-M8-15L	4-M10-18L	4-M10-18L	4-M14-16L	4-M14-16L	4-M14-20L	4-M14-20L	6-M20-35L	6-M20-35L
D11	14.5	20	24.5	19.5	28.5	30	36	30.5	44	47.5	47.5
C1	≤70	≤90	≤145	≤200	≤145	≤215	≤200	≤215	≤215	≤400	≤265
C2	≤M5	≤M6	≤M8	≤M12	≤M8	≤M12	≤M12	≤M12	≤M12	≤M18	≤M14
C3	≤14	≤19	≤24	≤35	≤24	≤42	≤35	≤42	≤42	≤60	≤55
C4	≤31	≤41	≤62	≤80	≤62	≤116	≤80	≤116	≤116	≤145	≤116
C5	≤50	≤70	≤110	≤114.3	≤110	≤180	≤114.3	≤180	≤180	≤300	≤230
C6	≤3.5	≤3.5	≤7	≤7	≤7	≤7	≤7	≤7	≤7	≤7	≤7
C7	≤62	≤80	≤120	≤180	≤120	≤200	≤180	≤200	≤200	≤350	≤250

*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

AAW-A(B)S系列-RFHP 大中空軸迫緊環型式

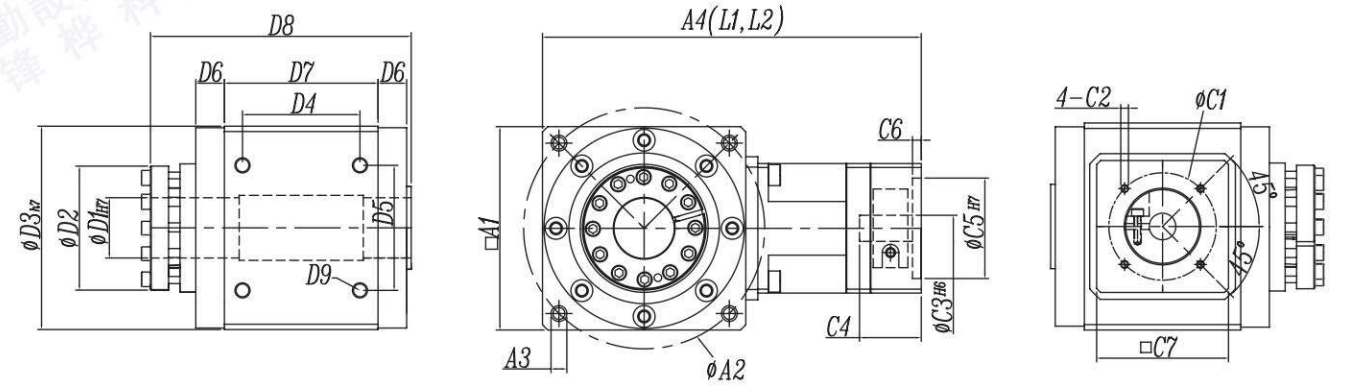
Big Hollow Shaft Tight Ring Type

*AAW070AS~~AAW320A(B)S:減速比Ratio(1/2~~1/500)



外形尺寸圖 Dimensions:

Unit:mm



P.S:A2(可選擇通孔)

規格表 Specifications:

Unit:mm

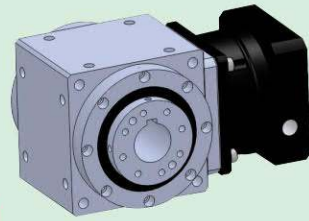
規格	AAW080AS	AAW110AS	AAW135AS	AAW135BS	AAW165AS	AAW165BS	AAW200AS	AAW200BS	AAW320AS	AAW320BS
A1	80	110	138	135	168	165	200	200	320	320
A2	93	130	160	160	193	193	240	240	380	380
A3	4-M6-12L	4-M8-15L	4-M10-18L	4-M10-18L	4-M12-20L	4-M12-20L	4-M16-30L	4-M16-30L	4-M20-35L	4-M20-35L
A4 (L1單段)	175/167	226/224	303/290	252/250	359/343	334/321	397/413	423/407	671	539
A4 (L2雙段)	206/190	268/255	362/331	290/277	434/389	393/356	487/464	469/424	741	590
D1	20	30	40	40	55	55	65	65	105	105
D2	45	65	85	85	110	110	140	140	220	220
D3	78	106	133	133	163	163	195	195	306	306
D4	49.5	68	86	78	106	100	141	129	175	175
D5	49.5	65	83	83	105	105	130	130	220	220
D6	13	15	10	19	13	19	8.5	22	30	30
D7	67	90	120	102	142	130	182	155	236	236
D8	113	144.5	173.5	173.5	206	206	243.5	243.5	337	337
D9	4-M6-12L	4-M8-15L	4-M10-18L	4-M10-18L	4-M14-16L	4-M14-16L	4-M14-20L	4-M14-20L	6-M20-30L	6-M20-30L
C1	≤90	≤145	≤200	≤145	≤215	≤200	≤215	≤215	≤400	≤265
C2	≤M6	≤M8	≤M12	≤M8	≤M12	≤M12	≤M12	≤M12	≤M18	≤M14
C3	≤19	≤24	≤35	≤24	≤42	≤35	≤42	≤42	≤60	≤55
C4	≤41	≤62	≤80	≤62	≤116	≤80	≤116	≤116	≤145	≤116
C5	≤70	≤110	≤114.3	≤110	≤180	≤114.3	≤180	≤180	≤300	≤230
C6	≤3.5	≤7	≤7	≤7	≤7	≤7	≤7	≤7	≤7	≤7
C7	≤80	≤120	≤180	≤120	≤200	≤180	≤200	≤200	≤350	≤250

*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

AAW-A(B)S系列- RFK 法蘭帶鍵型式

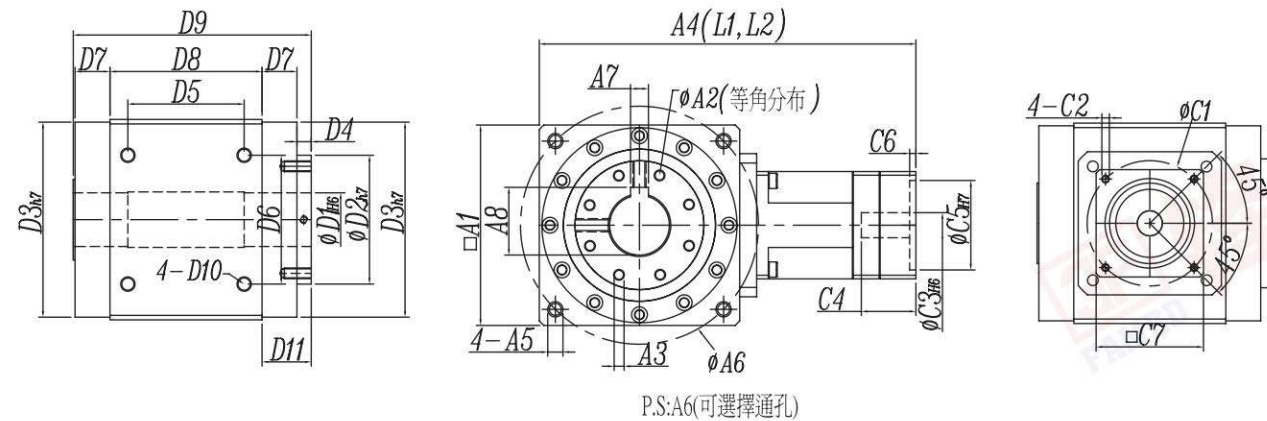
Flange With Key Groove Type

*AAW070AS~~AAW200A(B)S:減速比Ratio(1/2~~1/500)



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

規格	AAW070AS	AAW080AS	AAW110AS	AAW135AS	AAW135BS	AAW165AS	AAW165BS	AAW200AS	AAW200BS
A1	70	80	110	138	135	168	165	200	200
A2	30	36	50	70	70	95	95	124	124
A3	6-M5-10L	8-M5-10L	8-M5-15L	8-M8-15L	8-M8-15L	8-M8-15L	8-M8-15L	12-M8-15L	12-M8-15L
A4 (L1單段)	160/168	175/167	226/224	303/290	252/250	359/343	334/321	397/413	423/407
A4 (L2雙段)	183/199	206/190	264/250	362/331	290/277	434/389	393/356	487/464	469/424
A5	4-M5-10L	4-M6-12L	4-M8-15L	4-M10-18L	4-M10-18L	4-M12-20L	4-M12-20L	4-M14-25L	4-M14-25L
A6	75	93	130	160	160	193	193	240	240
A7	5	6	8	12	12	14	14	18	18
A8	18	22.8	33.3	43.3	43.3	59.1	59.1	84.7	84.7
D1	16	20	30	40	40	55	55	80	80
D2	38	45	65	85	85	110	110	140	140
D3	60	78	106	133	133	163	163	195	195
D4	8.25	7	9.5	9.5	9.5	17	17	22	22
D5	42.43	49.5	68	86	78	106	100	141	129
D6	42.43	49.5	65	83	83	105	105	130	130
D7	6.25	13	15	10	19	13	19	8.5	22
D8	70	67	90	120	102	142	130	182	155
D9	92.25	102	131.5	151.5	151.5	187	187	223	223
D10	4-M5-10L	M6-12L	M8-15L	M10-18L	M10-18L	M14-16L	M14-16L	M14-20L	M14-20L
D11	14.5	20	24.5	19.5	28.5	30	36	30.5	44
C1	≤70	≤90	≤145	≤200	≤145	≤215	≤200	≤215	≤215
C2	≤M5	≤M6	≤M8	≤M12	≤M8	≤M12	≤M12	≤M12	≤M12
C3	≤14	≤19	≤24	≤35	≤24	≤42	≤35	≤42	≤42
C4	≤31	≤41	≤62	≤80	≤62	≤116	≤80	≤116	≤116
C5	≤50	≤70	≤110	≤114.3	≤110	≤180	≤114.3	≤180	≤180
C6	≤3.5	≤3.5	≤7	≤7	≤7	≤7	≤7	≤7	≤7
C7	≤62	≤80	≤120	≤180	≤120	≤200	≤180	≤200	≤200

*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

AAW-A(B)S系列-2P 雙出力軸型式

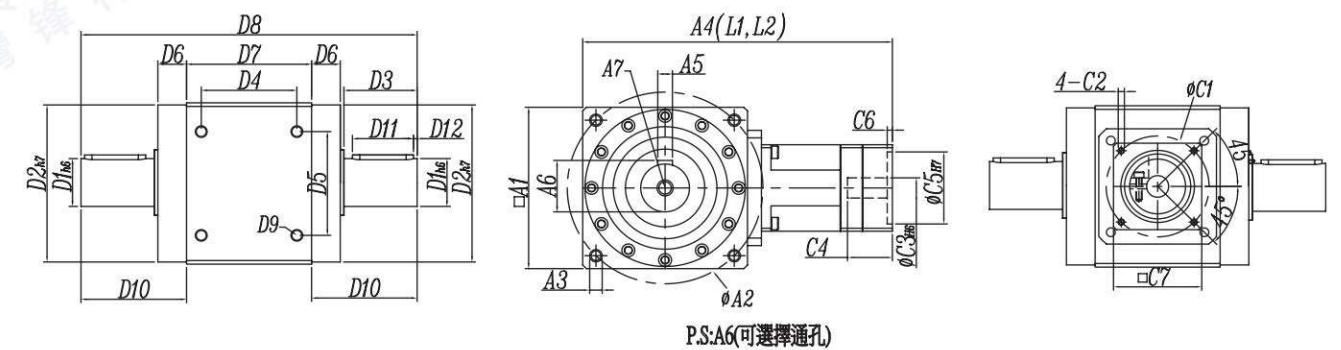
Double Output Shaft Type

*AAW080AS~~AAW200A(B)S:減速比Ratio(1/2~~1/500)



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

規格	AAW080AS	AAW110AS	AAW135AS	AAW135BS	AAW165AS	AAW165BS	AAW200AS	AAW200BS
A1	80	110	138	135	168	165	200	200
A2	93	130	160	160	193	193	240	240
A3	4-M6-12L	4-M8-15L	4-M10-18L	4-M10-18L	4-M12-20L	4-M12-20L	4-M16-30L	4-M16-30L
A4 (L1單段)	175/167	226/224	303/290	252/250	359/343	334/321	397/413	423/407
A4 (L2雙段)	206/190	268/255	362/331	290/277	434/389	393/356	487/464	469/424
A5	6	8	12	12	16	16	20	20
A6	22.5	33	43	43	59	59	79.5	79.5
A7	M6	M8	M12	M12	M16	M16	M20	M20
D1	20	30	40	40	55	55	75	75
D2	78	106	133	133	163	163	195	195
D3	35	45	55	55	80	80	100	100
D4	49.5	68	86	78	106	100	141	129
D5	49.5	65	83	83	105	105	130	130
D6	13	15	10	19	13	19	8.5	22
D7	67	90	120	102	142	130	182	155
D8	166.5	214	256	256	332	332	402	402
D9	M6-12L	M8-15L	M10-18L	M10-18L	M14-16L	M14-16L	M14-20L	M14-20L
D10	49.75	62	68	68	95	95	110	110
D11	25	35	45	45	70	70	90	90
D12	5	5	5	5	3	3	5	5
C1	≤90	≤145	≤200	≤145	≤215	≤200	≤215	≤215
C2	≤M6	≤M8	≤M12	≤M8	≤M12	≤M12	≤M12	≤M12
C3	≤19	≤24	≤35	≤24	≤42	≤35	≤42	≤42
C4	≤41	≤62	≤80	≤62	≤116	≤80	≤116	≤116
C5	≤70	≤110	≤114.3	≤110	≤180	≤114.3	≤180	≤180
C6	≤3.5	≤7	≤7	≤7	≤7	≤7	≤7	≤7
C7	≤80	≤120	≤180	≤120	≤200	≤180	≤200	≤200

*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

AAW-A(B)S系列-P系列

單出力軸型式

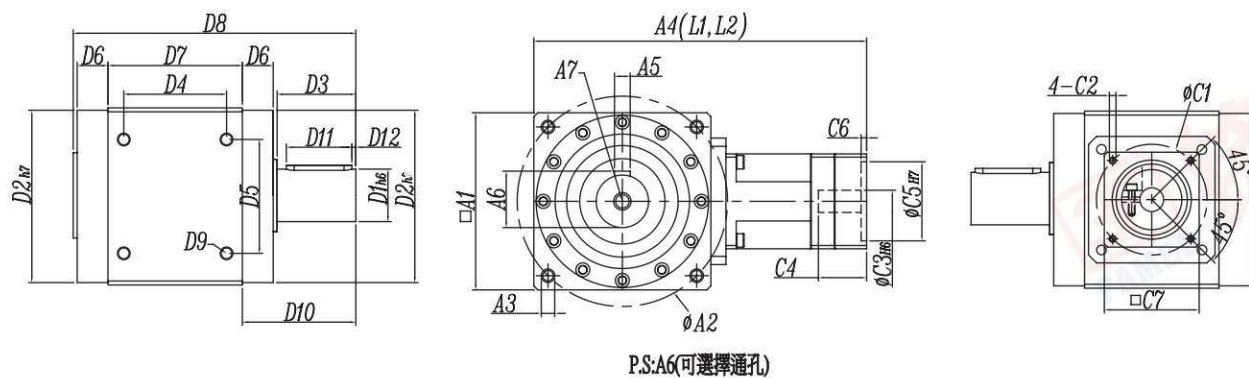
Single Output Shaft Type

*AAW080AS~~AAW200A(B)S:減速比Ratio(1/2~~1/500)



外形尺寸圖 Dimensions:

Unit:mm



P.S:A6(可選擇通孔)

規格表 Specifications:

Unit:mm

規格	AAW080AS	AAW110AS	AAW135AS	AAW135BS	AAW165AS	AAW165BS	AAW200AS	AAW200BS	AAW320AS	AAW320BS
A1	80	110	138	135	168	165	200	200	320	320
A2	93	130	160	160	193	193	240	240	380	380
A3	4-M6-12L	4-M8-15L	4-M10-18L	4-M10-18L	4-M12-20L	4-M12-20L	4-M16-30L	4-M16-30L	4-M20-35L	4-M20-35L
A4 (L1單段)	175/167	226/224	303/290	252/250	359/343	334/321	397/413	423/407	671	539
A4 (L2雙段)	206/190	268/255	362/331	290/277	434/389	393/356	487/464	469/424	741	590
A5	6	8	12	12	16	16	20	20	32	32
A6	22.5	33	43	43	59	59	79.5	79.5	127	127
A7	M6	M8	M12	M12	M16	M16	M20	M20	M20	M20
D1	20	30	40	40	55	55	75	75	120	120
D2	78	106	133	133	163	163	195	195	306	306
D3	35	45	55	55	80	80	100	100	150	150
D4	49.5	68	86	78	106	100	141	129	170	170
D5	49.5	65	83	83	105	105	130	130	220	220
D6	13	15	10	19	13	19	8.5	22	30	30
D7	67	90	120	102	142	130	182	155	236	236
D8	131.5	169	201	201	252	252	302	302	452	452
D9	M6-12L	M8-15L	M10-18L	M10-18L	M14-16L	M14-16L	M14-20L	M14-20L	6-M20-30L	6-M20-30L
D10	49.75	62	68	68	95	95	110	110	183	183
D11	25	35	45	45	70	70	90	90	120	120
D12	5	5	5	5	3	3	5	5	15	15
C1	≤90	≤145	≤200	≤145	≤215	≤200	≤215	≤215	≤350	≤215
C2	≤M6	≤M8	≤M12	≤M8	≤M12	≤M12	≤M12	≤M12	≤M18	≤M12
C3	≤19	≤24	≤35	≤24	≤42	≤35	≤42	≤42	≤60	≤42
C4	≤41	≤62	≤80	≤62	≤116	≤80	≤116	≤116	≤135	≤116
C5	≤70	≤110	≤114.3	≤110	≤180	≤114.3	≤180	≤180	≤250	≤180
C6	≤3.5	≤7	≤7	≤7	≤7	≤7	≤7	≤7	≤7	≤7
C7	≤80	≤120	≤180	≤120	≤200	≤180	≤200	≤200	≤300	≤200

*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

螺桿減速機 Screw Reducer

AAW080AS~~200AS-L1(2)-□-BS-S□

*BS :螺桿代號 Screw Code

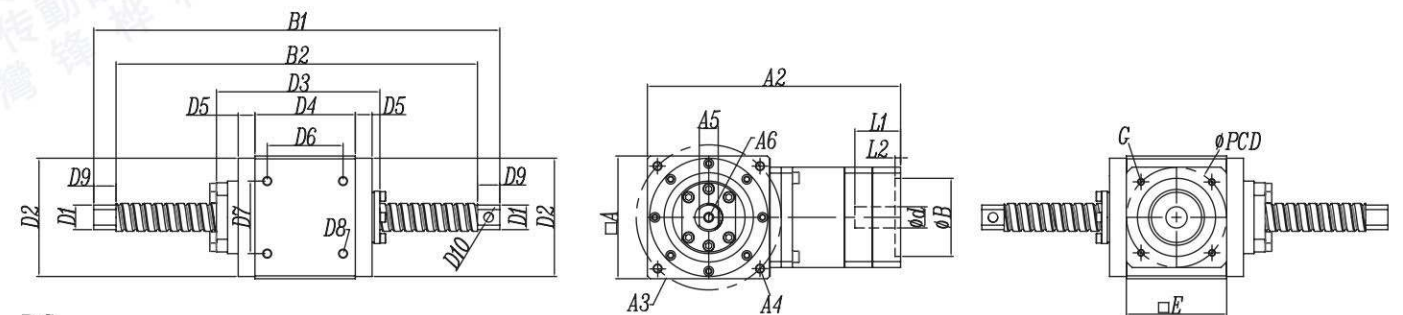
*L1(2)-□:齒輪比 Gear Ratio

*S□:S1~S11(入力端尺寸記號) Input End Size Mark



外形尺寸圖 Dimensions:

Unit:mm



P.S:

1. 螺桿長度 B1(B2) 依客戶指定製作
2. 二 軸端之尺寸依客戶指定而製作
3. A4尺寸(可選擇通孔)

規格表 Specifications:

Unit:mm

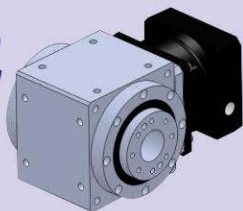
規格	AAW080AS-BS	AAW110AS-BS	AAW135AS-BS	AAW135BS-BS	AAW165AS-BS	AAW165BS-BS	AAW200AS-BS	AAW200BS-BS
□A1	80	110	138	138	168	168	200	200
A2	157.7	192.5	244.5	244.5	278	278	312	312
A3	93	130	160	160	193	193	240	240
A4	4-M6-12L	4-M8-15L	4-M10-18L	4-M10-18L	4-M12-20L	4-M12-20L	4-M16-30L	4-M16-30L
A5	12	17	22	22	33	33	43	43
A6	M6	M8	M10	M10	M12	M12	M16	M16
φD1H7	16	25	32	32	40	40	50	50
φD2H7	78	106	133	133	163	163	195	195
D3 (±3mm)	125	158	184	184	223	223	263	263
D4	67	90	120	120	142	142	182	155
D5	13	15	10	10	13	13	8.5	22
D6	49.5	68	86	86	106	106	141	129
D7	49.5	65	83	83	105	105	130	130
D8	4-M6-12L	4-M8-15L	4-M10-18L	4-M10-18L	4-M14-16L	4-M14-16L	4-M14-25L	4-M14-25L
D9	15	20	25	25	35	35	50	50
D10	6.5	8.5	10.5	10.5	14.5	14.5	20.5	20.5
φdH6	≤19	≤24	≤35	≤35	≤42	≤42	≤42	≤42
φBH7	≤70	≤110	≤114.3	≤114.3	≤180	≤180	≤180	≤180
L1	≤41	≤60	≤80	≤80	≤116	≤116	≤116	≤116
L2	≤5	≤6	≤6	≤6	≤6	≤6	≤6	≤6
PCD	≤90	≤145	≤200	≤200	≤235	≤235	≤235	≤235
G	≤4-M6	≤4-M8	≤4-M12	≤4-M12	≤4-M12	≤4-M12	≤4-M12	≤4-M12
□E	≤80	≤120	≤176	≤176	≤200	≤200	≤200	≤200

*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

AATM系列-RF大中空軸旋轉法蘭型式

Big Hollow Shaft Rotary Flange Type

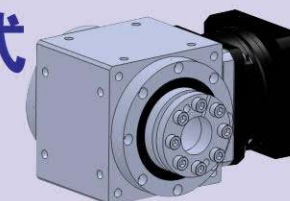
*AATM070AS~~AATM320AS:減速比Ratio(1/2~1/10)



AATM系列-RFHP中空軸迫緊環形式

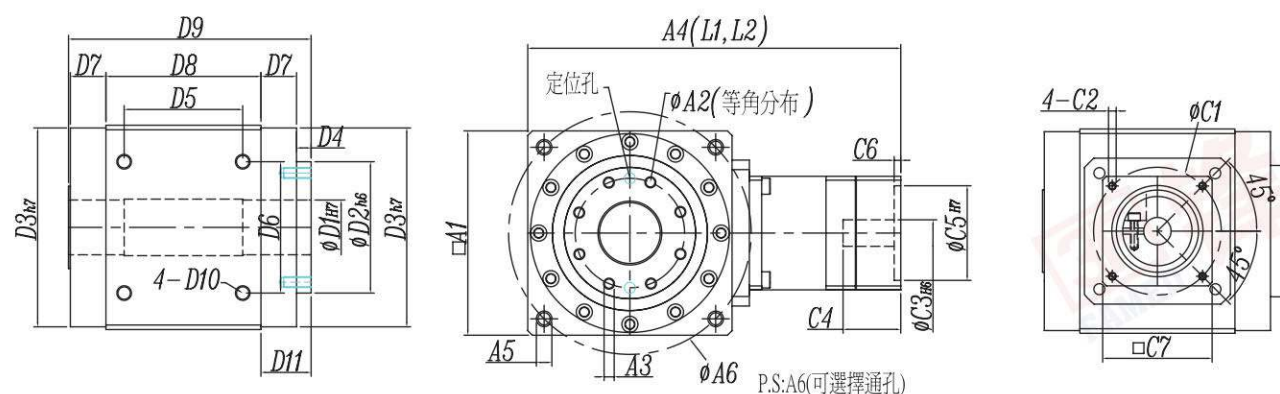
Hollow Shaft Tight Ring Type

*AATM080AS~AATM320AS,減速比Ratio(1/2~1/10)



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

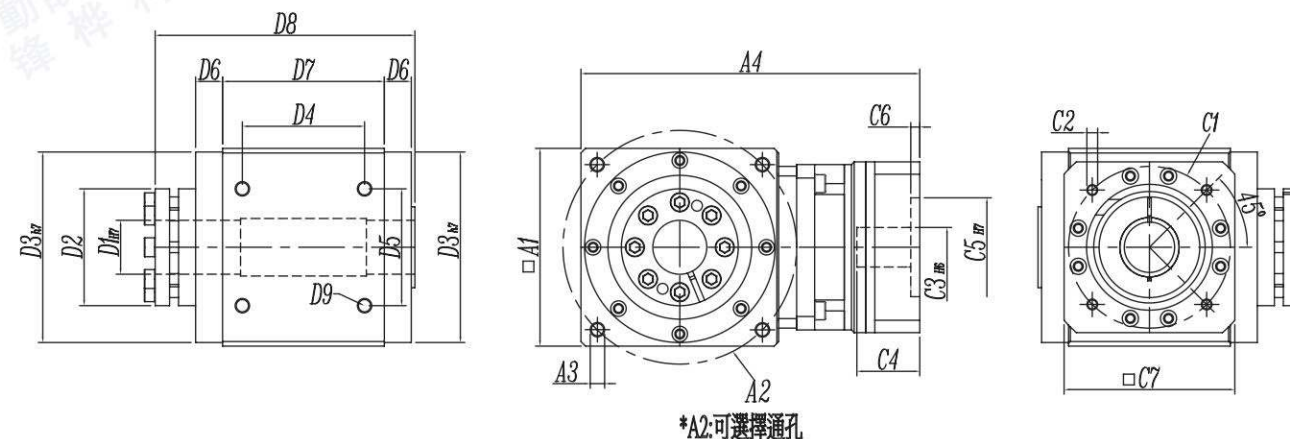
Unit:mm

規格	AATM070AS	AATM080AS	AATM110AS	AATM135AS	AATM165AS	AATM200BS	AATM320AS
A1	70	80	110	138	168	200	320
A2	30	36	50	70	95	124	193
A3	6-M5-10L	8-M5-10L	8-M5-15L	8-M8-15L	8-M8-15L	12-M8-15L	12-M14-25L
A4	146.5	157.7	192.5	244.5	278	312	491.5
A5	4-M5-10L	4-M6-12L	4-M8-15L	4-M10-18L	4-M12-20L	4-M16-30L	4-M20-35L
A6	75	93	130	160	193	240	380
D1	16	20	30	40	55	80	110
D2	38	45	65	85	110	140	220
D3	60	78	106	133	163	195	306
D4	8.25	7	9.5	9.5	17	22	17.5
D5	42.43	49.5	68	86	106	129	170
D6	42.43	49.5	65	83	105	130	220
D7	6.25	13	15	10	13	22	30
D8	70	67	90	120	142	155	236
D9	92.25	102	131.5	151.5	187	223	316.5
D10	4-M5-10L	4-M6-12L	4-M8-15L	4-M10-18L	4-M14-16L	4-M14-20L	6-M20-30L
D11	14.5	20	24.5	19.5	30	44	47.5
C1	≤70	≤90	≤145	≤200	≤215	≤215	≤450
C2	≤M5	≤M6	≤M8	≤M12	≤M12	≤M12	≤M18
C3	≤14	≤19	≤24	≤35	≤42	≤42	≤65
C4	≤31	≤41	≤62	≤80	≤116	≤116	≤135
C5	≤50	≤70	≤110	≤114.3	≤180	≤180	≤350
C6	≤3.5	≤3.5	≤7	≤7	≤7	≤7	≤7
C7	≤62	≤80	≤120	≤180	≤200	≤200	≤400

*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

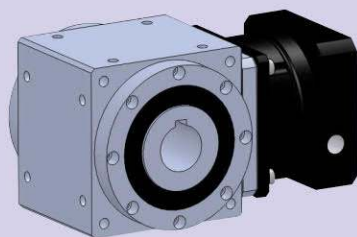
規格	AATM080AS	AATM110AS	AATM135AS	AATM165AS	AATM200BS	AATM320AS
A1	80	110	138	168	200	320
A2	93	130	160	193	240	380
A3	4-M6-12L	4-M8-12L	4-M10-15L	4-M12-18L	4-M16-30L	4-M20-35L
A4	157.7	192.5	244.5	278	312	491.5
D1	20	30	40	55	65	105
D2	45	65	85	110	140	170
D3	78	106	133	163	195	306
D4	49.5	68	86	106	129	170
D5	49.5	65	83	105	130	220
D6	13	15	10	13	22	30
D7	67	90	120	142	155	236
D8	113	144.5	173.5	206	243.5	302
D9	4-M6-12L	4-M8-15L	4-M10-18L	4-M14-16L	4-M14-25L	4-M20-30L
C1	≤90	≤145	≤145	≤200	≤215	≤450
C2	≤M6	≤M8	≤M8	≤M12	≤M12	≤M18
C3	≤19	≤24	≤24	≤35	≤42	≤65
C4	≤41	≤62	≤62	≤80	≤116	≤135
C5	≤70	≤110	≤110	≤114.3	≤180	≤350
C6	≤5	≤7	≤7	≤7	≤7	≤7
C7	≤80	≤120	≤120	≤176	≤196	≤400

*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

AATM系列-CR中空軸帶鍵槽型式

Hollow Shaft Key Groove Type

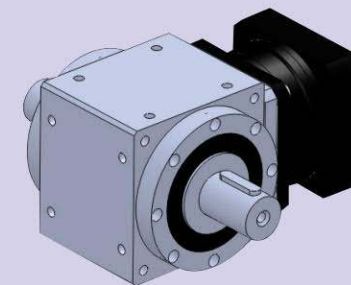
*AATM080AS~AATM200BS,減速比Ratio(1/2~1/10)



AATM系列-2P雙出力軸型式

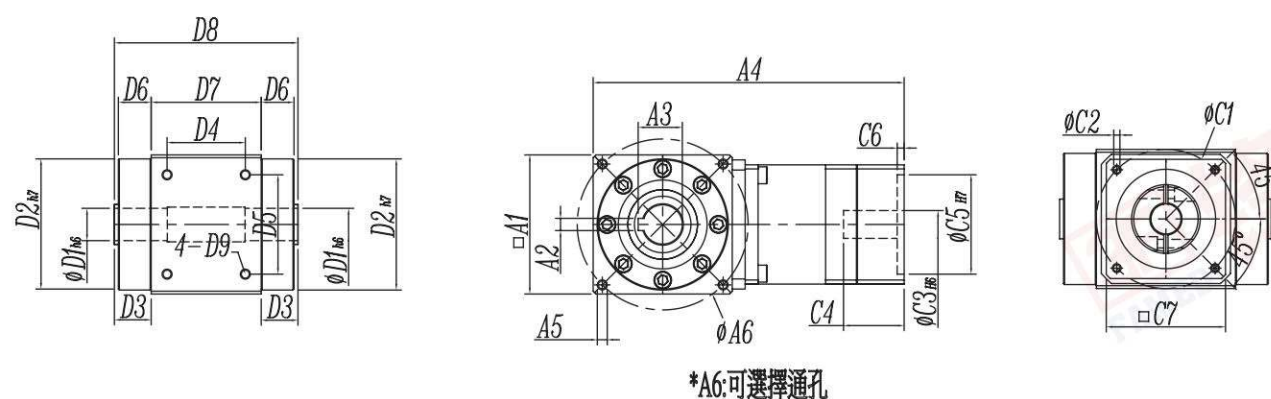
Double Output Shaft Type

*AATM080AS~AATM200BS,減速比Ratio(1/2~1/10)



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

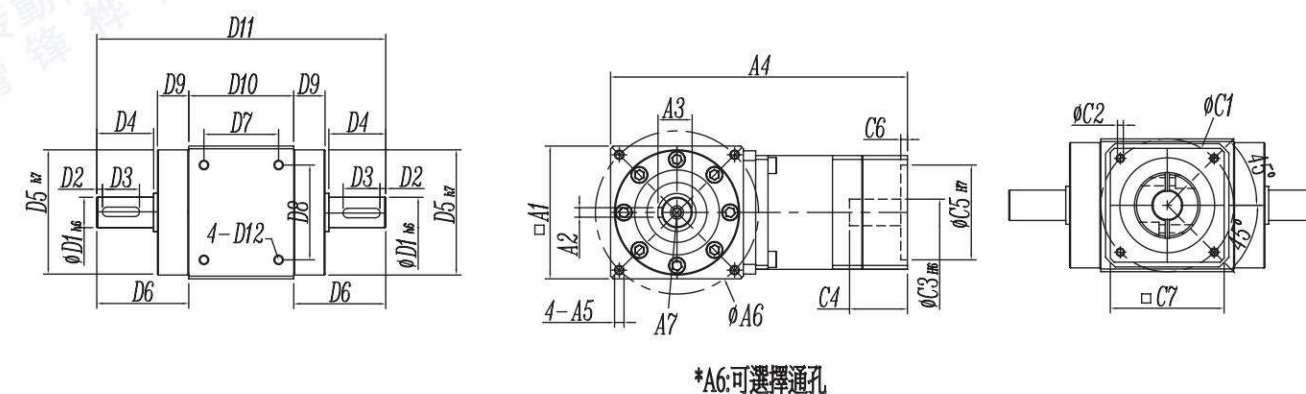
Unit:mm

規格	AATM080AS	AATM110AS	AATM135AS	AATM165AS	AATM200BS
A1	80	110	138	168	200
A2	6	8	12	14	18
A3	22.7	33.3	43.3	58.8	84.4
A4	157.7	192.5	244.5	278	312
A5	4-M6-12L	4-M8-12L	4-M10-15L	4-M12-18L	4-M16-30L
A6	93	130	160	193	240
A7					
D1	20	30	40	55	75
D2	78	106	133	163	195
D3	14.25	17	13	15	23.5
D4	49.5	68	86	106	129
D5	49.5	65	83	105	130
D6	13	15	10	13	22
D7	67	90	120	142	155
D8	96.5	124	146	170	202
D9	4-M6-12L	4-M8-15L	4-M10-18L	4-M14-16L	4-M14-25L
D10					
D11					
D12					
C1	≤90	≤145	≤145	≤200	≤215
C2	≤M6	≤M8	≤M8	≤M12	≤M12
C3	≤19	≤24	≤24	≤35	≤42
C4	≤41	≤62	≤62	≤80	≤116
C5	≤70	≤110	≤110	≤114.3	≤180
C6	≤5	≤7	≤7	≤7	≤7
C7	≤80	≤120	≤120	≤176	≤196

*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

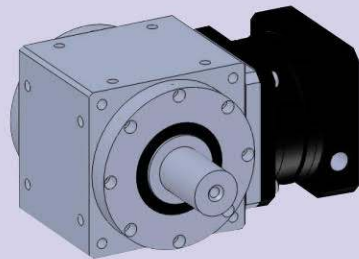
規格	AATM080AS	AATM110AS	AATM135AS	AATM165AS	AATM200BS
A1	80	110	138	168	200
A2	6	8	12	16	20
A3	22.5	33	43	59	79.5
A4	157.7	192.5	244.5	278	312
A5	4-M6-12L	4-M8-12L	4-M10-15L	4-M12-18L	4-M16-30L
A6	93	130	160	193	240
A7	M6	M8	M12	M16	M20
D1	20	30	40	55	75
D2	5	5	5	3	5
D3	25	35	45	70	90
D4	35	45	55	80	100
D5	78	106	133	163	195
D6	49.75	62	68	95	123.5
D7	49.5	68	86	106	129
D8	49.5	65	83	105	130
D9	13	15	10	13	22
D10	67	90	102	130	155
D11	166.5	214	256	332	402
D12	4-M6-12L	4-M8-15L	4-M10-18L	4-M14-16L	4-M14-25L
C1	≤90	≤145	≤145	≤200	≤215
C2	≤M6	≤M8	≤M8	≤M12	≤M12
C3	≤19	≤24	≤24	≤35	≤42
C4	≤41	≤62	≤62	≤80	≤116
C5	≤70	≤110	≤110	≤114.3	≤180
C6	≤5	≤7	≤7	≤7	≤7
C7	≤80	≤120	≤120	≤176	≤196

*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

AATM系列-P單出力軸型式

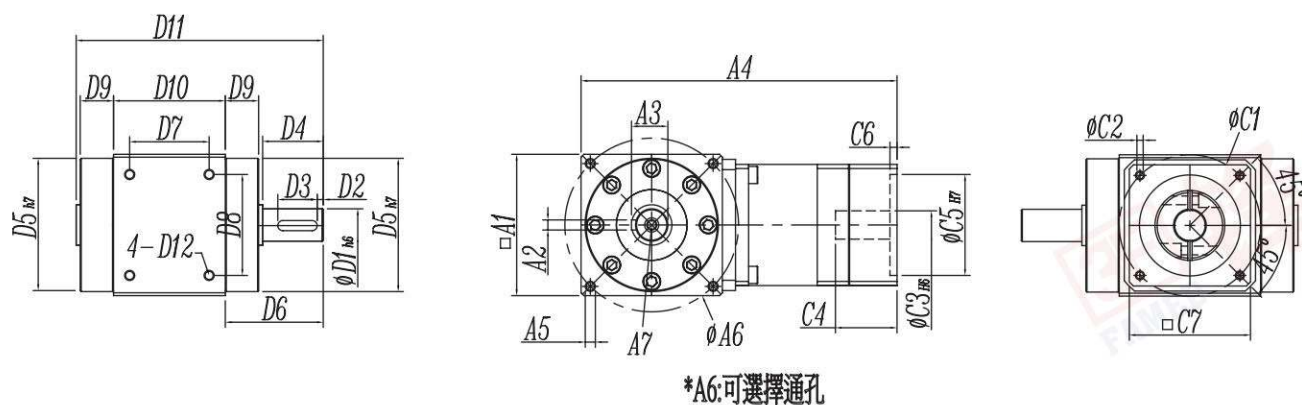
Single Output Shaft Type

*AATM080~AATM320AS,減速比Ratio(1/2~1/10)



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

規格	AATM080AS	AATM110AS	AATM135AS	AATM165AS	AATM200BS	AATM320AS
A1	80	110	138	168	200	320
A2	6	8	12	16	20	32
A3	22.5	33	43	59	79.5	127
A4	157.7	192.5	244.5	278	312	491.5
A5	4-M6-12L	4-M8-12L	4-M10-15L	4-M12-18L	4-M16-30L	4-M20-35L
A6	93	130	160	193	240	380
A7	M6	M8	M12	M16	M20	M20
D1	20	30	40	55	75	120
D2	5	5	5	3	5	15
D3	25	35	45	70	90	120
D4	35	45	55	80	100	150
D5	78	106	133	163	195	306
D6	49.75	62	68	95	123.5	183
D7	49.5	68	86	106	129	170
D8	49.5	65	83	105	130	220
D9	13	15	10	13	22	30
D10	67	90	120	142	155	155
D11	131.5	169	201	252	302	365
D12	4-M6-12L	4-M8-15L	4-M10-18L	4-M14-16L	4-M14-25L	4-M20-30L
C1	≤90	≤145	≤145	≤200	≤215	≤450
C2	≤M6	≤M8	≤M8	≤M12	≤M12	≤M18
C3	≤19	≤24	≤24	≤35	≤42	≤65
C4	≤41	≤62	≤62	≤80	≤116	≤135
C5	≤70	≤110	≤110	≤114.3	≤180	≤350
C6	≤5	≤7	≤7	≤7	≤7	≤7
C7	≤80	≤120	≤120	≤176	≤196	≤400

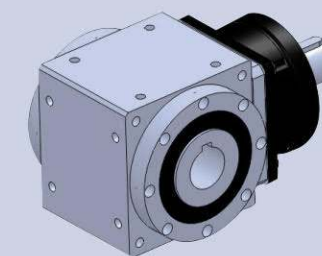
*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

AAT系列-CR中空軸帶鍵槽型式

Hollow Shaft Key Groove Type

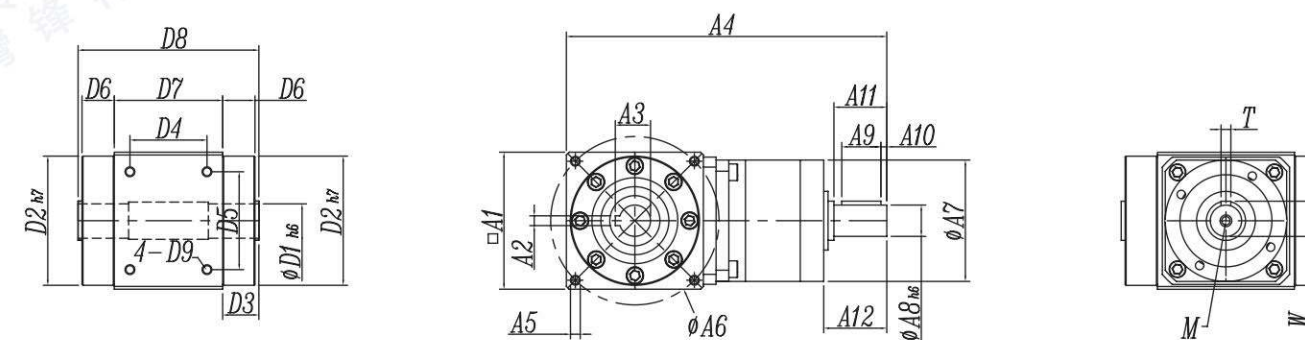
*轉向器AAT080AS~AAT200BS,速比Ratio(1/2,1/3)

*訂製品速比Ratio of Customized Product(1/5,1/10)



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

規格	AAT080AS	AAT110AS	AAT135AS	AAT165AS	AAT200BS
A1	80	110	138	168	200
A2	6	8	12	14	18
A3	22.7	33.3	43.3	58.8	84.4
A4	173.9	208.5	259.5	317	355
A5	4-M6-12L	4-M8-15L	4-M10-18L	4-M12-20L	4-M16-30L
A6	93	130	160	193	240
A7	62	95	120	142	142
A8	20	28	35	50	50
A9	20	30	40	50	50
A10	3	3	3	3	3
A11	27	34	45	65	65
A12	32.2	41	51.5	70	70
D1	20	30	40	55	75
D2	78	106	133	163	195
D3	14.75	17	13	15	23.5
D4	49.5	68	86	106	141
D5	49.5	65	83	105	130
D6	13	15	10	13	22
D7	67	90	120	142	155
D8	96.5	124	146	172	202
D9	4-M6-12L	4-M8-12L	4-M10-18L	4-M14-16L	4-M14-25L
T	6	8	10	14	14
W	22.5	31	38	53.5	53.5
M	M6	M8	M8	M12	M12

*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

AAT-系列-2P雙出力軸型式

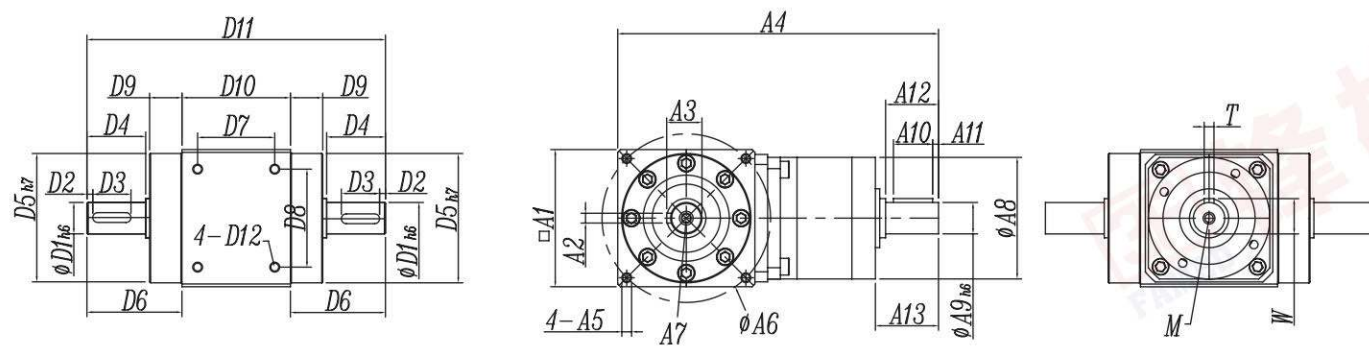
Double Output Shaft Type

*轉向器AAT080AS~AAT200BS,速比Ratio(1/2,1/3)
*訂製品速比Ratio of Customized Product (1/5,1/10)



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

Unit:mm

規格	AAT080AS	AAT110AS	AAT135AS	AAT165AS	AAT200BS
A1	80	110	138	168	200
A2	6	8	12	16	20
A3	22.5	33	43	59	79.5
A4	173.9	208.5	259.5	317	355
A5	4-M6-12L	4-M8-15L	4-M10-18L	4-M12-20L	4-M16-30L
A6	93	130	160	193	240
A7	M6	M8	M12	M16	M20
A8	62	95	120	142	142
A9	20	28	35	50	50
A10	20	30	40	60	60
A11	3	3	3	3	3
A12	27	40	45	65	65
A13	32.2	44	51.5	70	70
D1	20	30	40	55	75
D2	5	5	5	5	5
D3	25	35	45	70	90
D4	35	45	55	80	100
D5	78	106	133	163	195
D6	49.75	62	68	95	123.5
D7	49.5	68	86	106	141
D8	49.5	65	83	105	130
D9	13	15	10	13	22
D10	67	90	120	142	155
D11	166.5	214	256	332	402
D12	4-M6-12L	4-M8-12L	4-M10-18L	4-M14-16L	4-M14-25L
T	6	8	10	14	14
W	22.5	31	38	53.5	53.5
M	M6	M8	M8	M12	M12

*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

AAT系列-P單出力軸型式

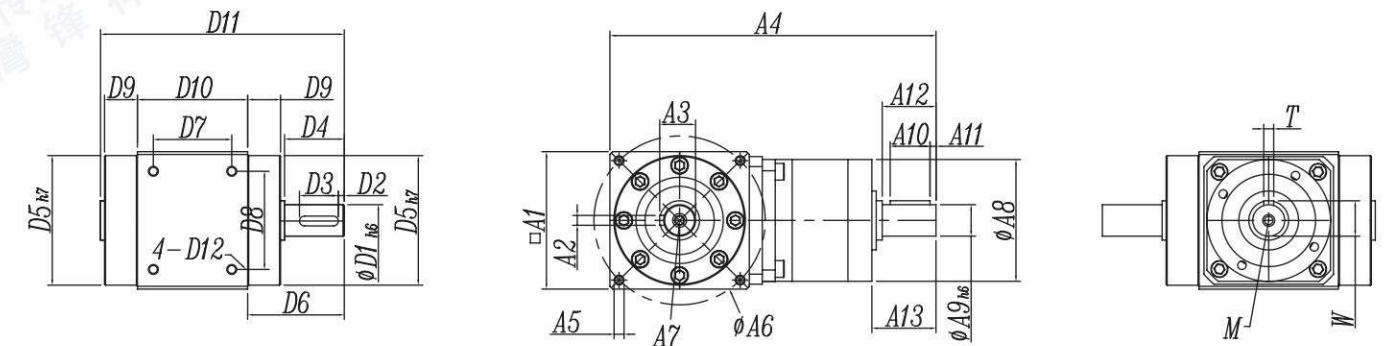
Single Output Shaft Type

*轉向器AAT080AS~AAT200BS,速比Ratio(1/2,1/3)
*訂製品速比Ratio of Customized Product (1/5,1/10)



外形尺寸圖 Dimensions:

Unit:mm



規格表 Specifications:

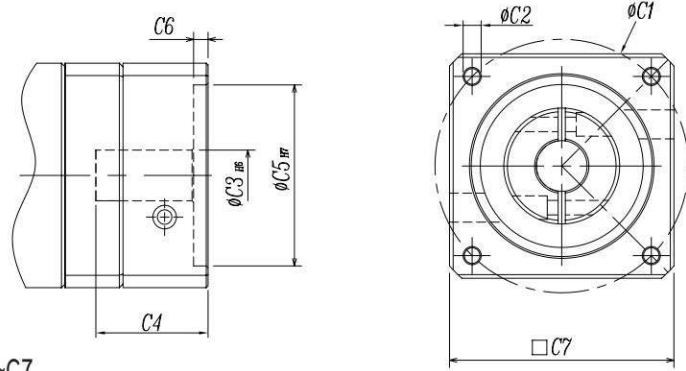
Unit:mm

規格	AAT080AS [®]	AAT110AS [®]	AAT135AS [®]	AAT165AS [®]	AAT200BS [®]
A1	80	110	135	165	200
A2	6	8	12	16	20
A3	22.5	33	43	59	79.5
A4	173.9	208.5	222	317	355
A5	4-M6-12L	4-M8-15L	4-M10-18L	4-M12-20L	4-M16-30L
A6	93	130	160	193	240
A7	M6	M8	M12	M16	M20
A8	62	95	120	142	142
A9	20	28	35	50	50
A10	20	30	40	60	60
A11	3	3	3	3	3
A12	27	40	45	65	65
A13	32.2	44	51.5	75	70
D1	20	30	40	55	75
D2	5	5	5	5	5
D3	25	35	45	70	90
D4	35	45	55	80	100
D5	78	106	133	163	195
D6	49.75	62	68	95	110
D7	49.5	68	86	106	141
D8	49.5	65	83	105	130
D9	13	15	10	13	22
D10	67	90	120	142	155
D11	131.5	169	201	252	302
D12	4-M6-12L	4-M8-12L	4-M10-18L	4-M14-16L	4-M14-25L
T	6	8	10	14	14
W	22.5	31	38	53.5	53.5
M	M6	M8	M8	M12	M12

*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

AAW-AS(BS) / AAT(M)系列

入力端詳細尺寸圖 Detailed Sizes Diagram of Input End



*入力軸與法蘭詳細尺寸C1~C7.

*馬達記號是指不同廠牌の入力端尺寸.

*特製品:可依客戶指定製作入力法蘭尺寸.

型號	AAW070AS/AATM080AS/AAW080AS								AATM110AS/AAW110AS/AAW135BS										
尺寸	S1	S2	S3	S4	S5	S6	S7	S8	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11
C1	45	46	70	70	70	90	90	66.7	70	70	70	90	90	90	90	100	145	145	145
C2	M3	M4	M4	M4	M5	M5	M6	M4	M4	M4	M5	M5	M6	M6	M6	M6	M8	M8	M8
C3 H6	8	8	11	14	14	14	14	6.35	11	14	14	14	14	16	19	16	19	22	24
C4	31	31	31	31	31	31	31	31	41	41	41	41	41	41	41	41	58	58	58
C5 H7	30	30	50	50	50	70	70	38.1	50	50	50	70	70	70	70	80	110	110	110
C6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	5	5	5	5	5	5	5	5	5	5	5
C7	62	62	62	62	62	80	80	62	90	90	90	90	90	90	90	90	130	130	130

型號	AATM135AS/AAW135AS/AAW165BS								AATM165AS/AAW165AS/AATM200BS/AAW200BS									
尺寸	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18
C1	90	90	100	115	115	130	145	145	145	145	115	115	145	145	145	145	200	165
C2	M6	M6	M6	M6	M8	M8	M8	M8	M8	M8	M6	M8	M8	M8	M8	M8	M12	M10
C3 H6	16	19	16	24	24	19	19	22	24	28	24	24	19	22	24	28	35	32
C4	54	54	54	54	54	62	62	62	62	63	60	60	65	65	65	65	81	65
C5 H7	70	70	80	95	95	110	110	110	110	110	95	95	110	110	110	110	114.3	130
C6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
C7	120	120	120	120	120	120	120	120	120	120	142	142	142	142	142	142	176	142

型號	AAW200AS/AAW320BS							AAW320AS									
尺寸	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17
C1	145	145	145	115	200	200	165	215	235	235	265	200	200	215	215	235	265
C2	M8	M8	M8	M6	M12	M12	M10	M12	M12	M12	M10	M12	M12	M12	M12	M12	M12
C3 H6	19	22	24	28	35	42	32	38	42	55	55	35	42	38	42	55	55
C4	75	75	75	75	81	81	81	116	116	116	116	116	116	116	116	116	116
C5 H7	110	110	110	110	114.3	114.3	130	180	200	200	230	114.3	114.3	180	180	200	230
C6	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
C7	180	180	180	180	180	180	180	192	220	220	250	220	220	220	220	200	250

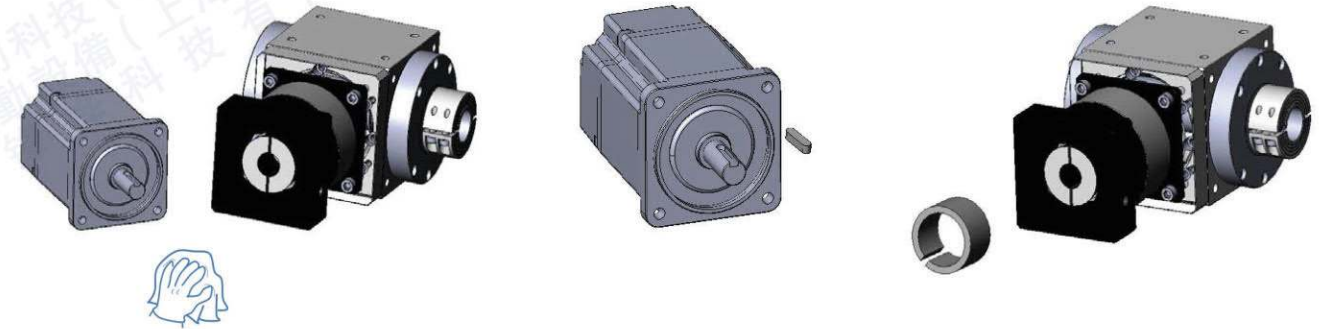
*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

減速機與馬達安裝說明書 Installation Instruction of Reducer & Motor

Step 1: 確認馬達減速機規格, 並將馬達及減速機之安裝面擦試幹淨。
Step 1: Confirm the specs of the motor and reducer, and wipe the mounting surface of the motor and reducer clean.

Step 2: 取下馬達上原先之鍵。
Step 2: Remove the original key on the motor.

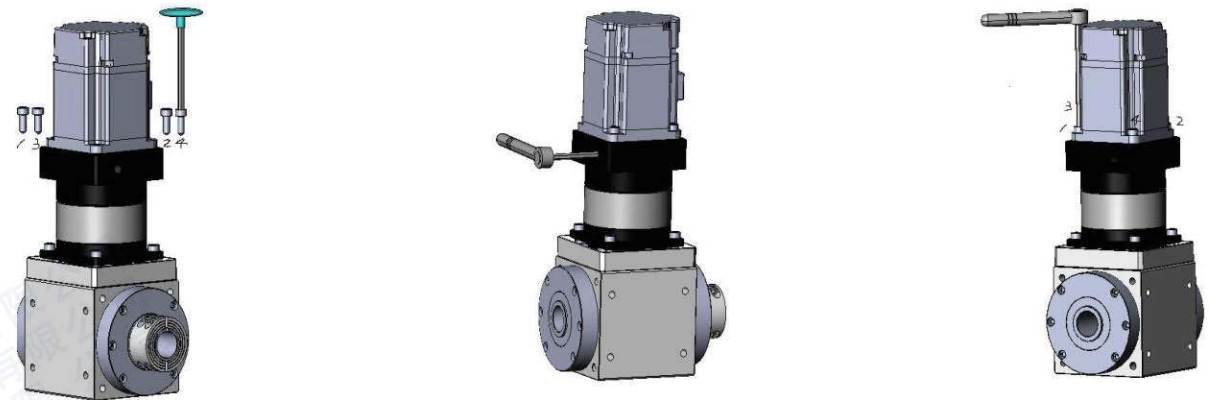
Step 3: 如有需要請加上軸袖套。
Step 3: Add sleeves if necessary.



Step 4: 直立式的裝入馬達, 以螺絲扭力值表(表一)建議扭力值之5%, 依1~4的順序, 用扳手將附墊片之螺絲輕輕鎖上。
Step 4: Vertically mount motor with the recommended torsion value of 5% in the screw torsion value table (Table 1), according to the order of 1-4, the screw with gasket is lightly locked with a wrench.

Step 5: 將馬達與減速機直立擺設, 參照表二建議的扭力值, 以扭力扳手將埋栓鎖緊。
Step 5: Put the motor and reducer vertically. Refer to the recommended torsion value in Table 2 and lock the embedding bolt with a torsion wrench.

Step 6: 將馬達與減速機直立擺設, 以螺絲扭力表(表一)建議的扭力值, 依1~4的順序, 用扭力扳手將螺絲鎖緊。
Step 6: Put the motor and reducer vertically, and lock the screw with the recommended torsion value of the screw torsion table (Table 1) according to the order of 1-4.



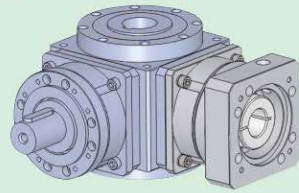
螺絲尺寸	馬達鎖緊螺絲扭力建議表						
	六角頭尺寸 [mm]	強度 8.8 螺絲之鎖緊力		強度 10.9 螺絲之鎖緊力		強度 12.9 螺絲之鎖緊力	
		[Nm]	[In-lbs]	[Nm]	[In-lbs]	[Nm]	[In-lbs]
M3×0.5P	2.5	1.3	12	1.8	16	2.1	19
M4×0.7P	3	3	27	4.1	37	4.9	44
M5×0.8P	4	6.1	55	8.2	73	9.8	87
M6×1P	5	11	98	14	124	17	151
M8×1.25P	6	25	222	34	302	41	364
M10×1.5P	8	49	434	67	594	80	709
M12×1.75P	10	85	753	116	1028	139	1232
M14×2P	12	137	1214	186	1648	223	1976
M16×2P	14	210	1860	286	2534	343	3038

AATM080AS~~200BS-2AX-□-CR-S□

*2AX:2軸型式

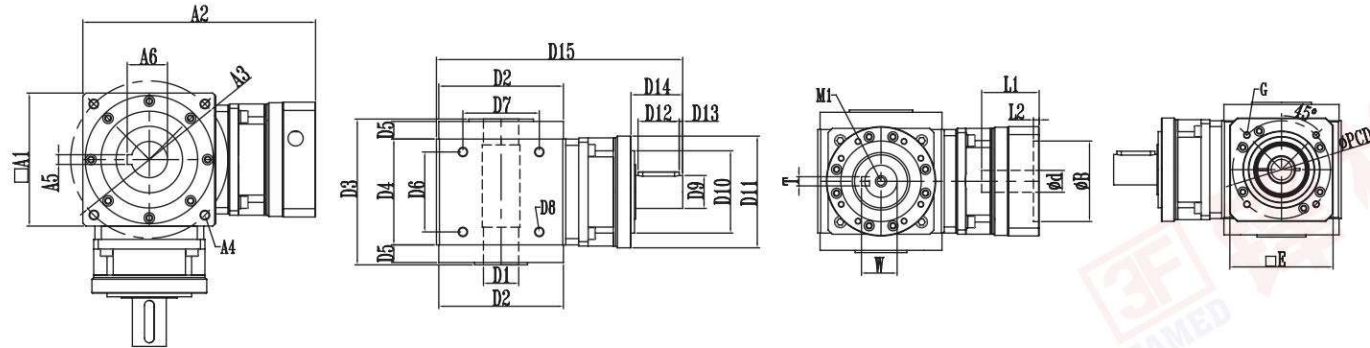
*□:減速比(1/2,1/3),客製品(1/5,1/10)

*S□:S1~S11(入力端尺寸記號)



外形尺寸圖 Dimensions:

Unit:mm



AATM080AS~~200BS-2AX-□-CR-S□:尺寸表

規格	AATM080AS-2AX	AATM110AS-2AX	AATM135AS-2AX	AATM165AS-2AX	AATM200BS-2AX
□A1	80	110	138	168	200
A2	157.7	192.5	244.5	278	312
A3	93	130	160	193	240
A4	4-M6-12L	4-M8-15L	4-M10-18L	4-M12-20L	4-M16-30L
A5	6	8	12	14	16
A6	22.7	33.3	43.3	58.8	74.3
φD1 H7	20	30	40	55	70
φD2 h7	78	106	133	163	195
D3	96	124	146	172	202
D4	67	90	120	142	155
D5	13	15	10	13	22
D6	49.5	68	86	106	129
D7	49.5	65	83	105	130
D8	4-M6-12L	4-M8-15L	4-M10-18L	4-M14-16L	4-M14-25L
φD9 h8	20	28	35	50	50
φD10		70	110	110	110
φD11	62	95	120	142	142
D12	20	35	40	60	60
D13	3	3	3	3	3
D14	32.2	44	51.5	75	75
D15	173.9	209.5	259.5	317	355
T	6	8	12	14	14
W	22.5	31	43.3	53.5	53.5
M1	M6	M8	M10	M12	M12
φd H6	≤19	≤24	≤35	≤42	≤42
φB H7	≤70	≤110	≤114.3	≤180	≤180
L1	≤41	≤60	≤80	≤116	≤116
L2	≤5	≤6	≤6	≤6	≤6
PCD	≤90	≤145	≤200	≤235	≤235
G	≤4-M6	≤4-M8	≤4-M12	≤4-M12	≤4-M12
□E	≤80	≤120	≤176	≤200	≤200

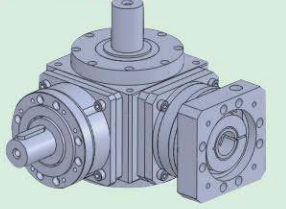
*入力軸與法蘭詳細尺寸C1~C7,如頁數57P

AATM080AS~~200BS-2AX-□-CR-S□

*2AX:2軸型式

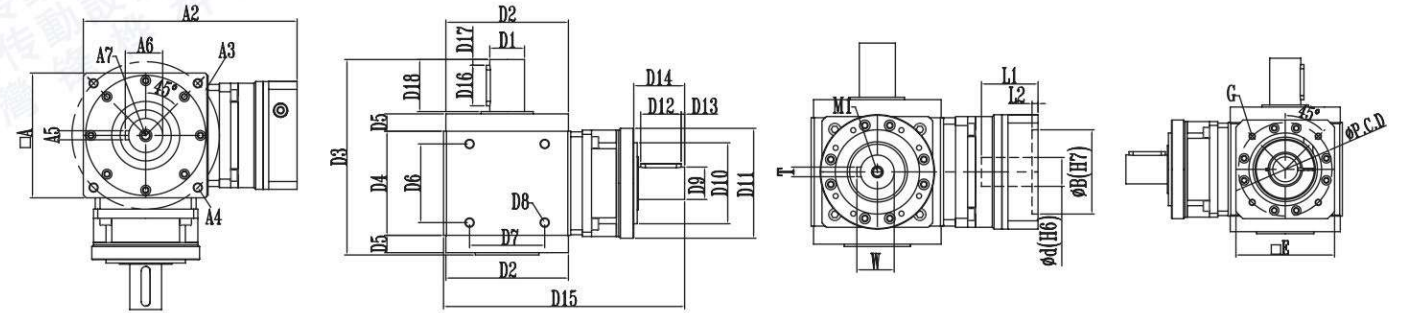
*□:減速比(1/2,1/3),客製品(1/5,1/10)

*S□:S1~S11(入力端尺寸記號)



外形尺寸圖 Dimensions:

Unit:mm



AATM080AS~~200BS-2AX-□-P-S□:尺寸表

規格	AATM080AS-2AX	AATM110AS-2AX	AATM135AS-2AX	AATM165AS-2AX	AATM200BS-2AX
□A1	80	110	138	168	200
A2	157.7	192.5	244.5	278	312
A3	93	130	160	193	240
A4	4-M6-12L	4-M8-15L	4-M10-18L	4-M12-20L	4-M16-30L
A5	6	8	12	16	20
A6	22.5	33	43	59	79.5
φD1 H7	20	30	40	55	75
φD2 h7	78	106	133	163	195
D3	131.5	169	201	252	302
D4	67	90	120	142	155
D5	13	15	10	13	22
D6	49.5	68	86	106	129
D7	49.5	65	83	105	130
D8	4-M6-12L	4-M8-15L	4-M10-18L	4-M14-16L	4-M14-25L
φD9 h8	20	28	35	50	50
φD10		70	110	110	110
φD11	62	95	120	142	142
D12	20	35	40	60	60
D13	3	3	3	3	3
D14	32.2	44	51.5	75	75
D15	173.9	209.5	222	317	355
D16	25	35	45	70	90
D17	2	5	5	3	5
D18	35	45	55	80	100
T	6	8	12	14	14
W	22.5	31	43.3	53.5	53.5
M1	M6	M8	M10	M12	M12
φd H6	≤19	≤24	≤35	≤42	≤42
φB H7	≤70	≤110	≤114.3	≤180	≤180
L1	≤41	≤60	≤80	≤116	≤116
L2	≤5	≤6	≤6	≤6	≤6
PCD	≤90	≤145	≤200	≤235	≤235
G	≤4-M6	≤4-M8	≤4-M12	≤4-M12	≤4-M12
□E	≤80	≤120	≤176	≤200	≤200

*入力軸與法蘭詳細尺寸C1~C7,如頁數57P