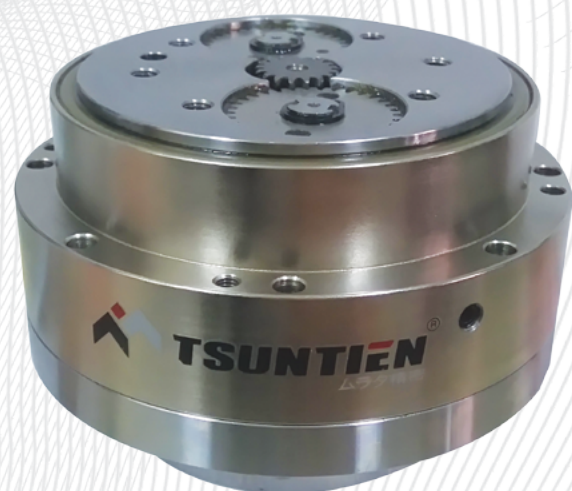


TTRAD-E 系列

TTRAD-E SERIES



Overview

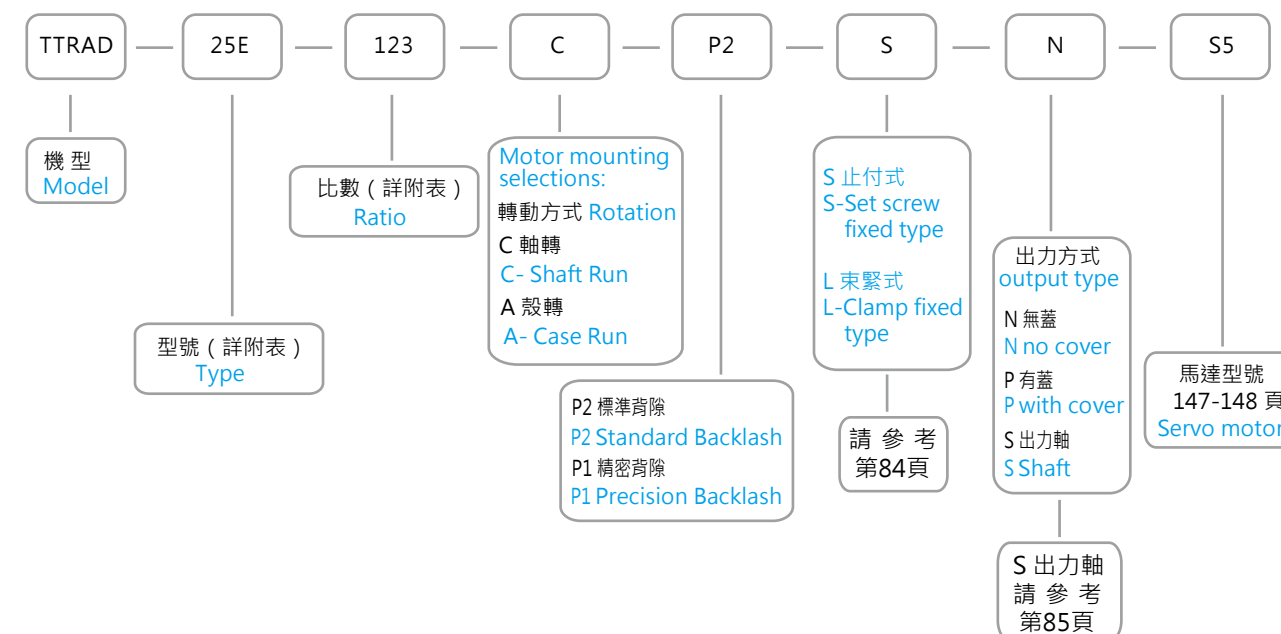
- Type : TTRAD-7E ~ TTRAD-700E
- Backlash : $\leq 1-3$ Arc.min
- Ratio : 1/61 ~ 1/421
- Capacity : 0.2KW ~ 22KW
- Rotation : Shaft Run or Case Run
- Rated output torque : 83NM ~ 7500NM

- 型 式 : TTRAD-7E ~ TTRAD-700E
- 背 隙 : $\leq 1-3$ 弧分
- 減速比 : 1/61 ~ 1/421
- 容 量 : 0.2KW ~ 22KW
- 轉動方式 : 軸轉動 or 殼轉動
- 額定輸出扭矩 : 83NM ~ 7500NM

TTRAD-E 訂購說明 TTRAD-E ORDERING INSTRUCTIONS

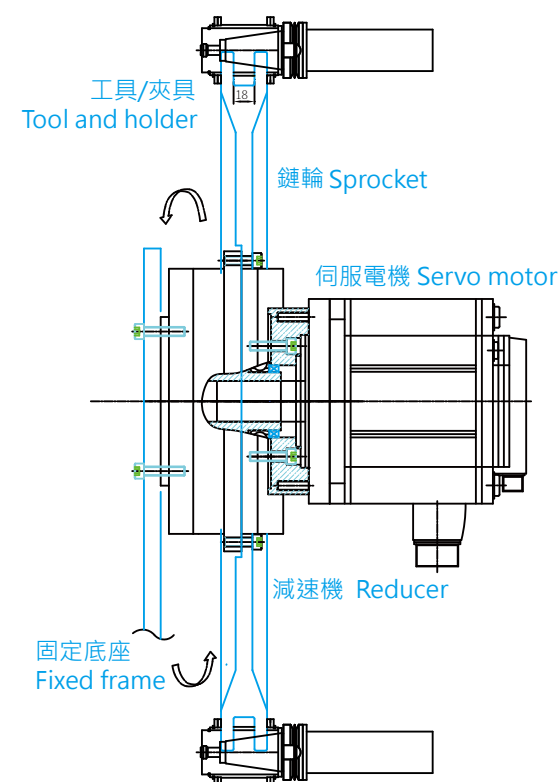
● 機型代碼 ORDERING CODE EXAMPLE :

(型號和比數請參考後面附表 For the type and ratio, please refer to technical specifications table.)

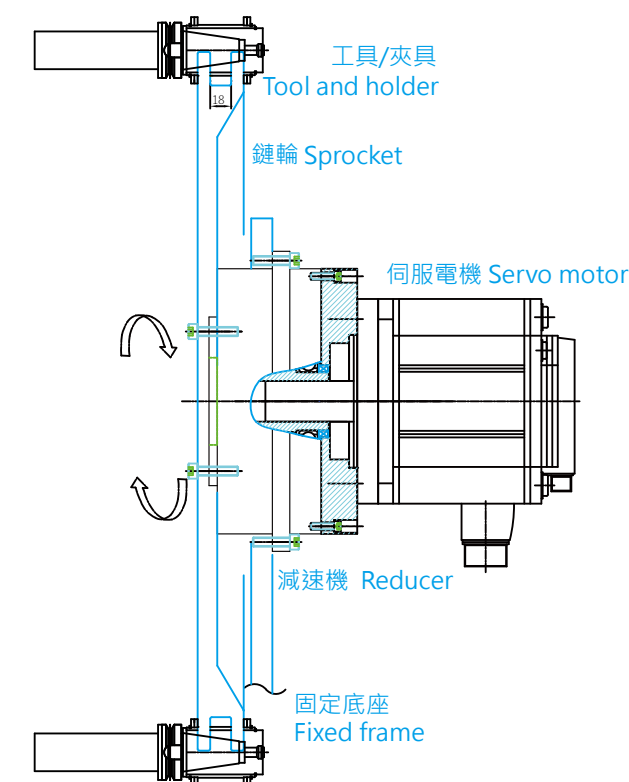


● 轉動方式說明 ROTATION CONFIGURATIONS :

外殼轉動型 CASE RUN TYPE



心軸轉動型 SHAFT RUN TYPE



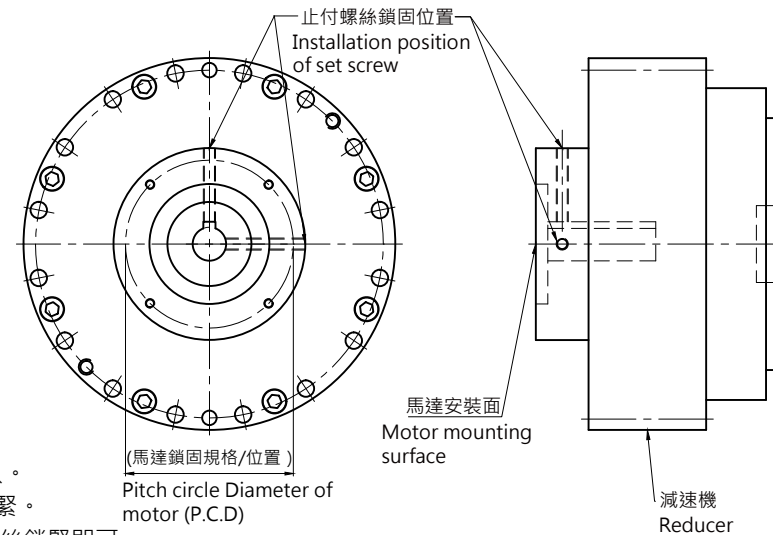
■ 安裝方式選項 MOTOR MOUNTING SELECTIONS:

● S-止付式

S-Set screw fixed type

- 1.馬達軸心鍵與減速機入力軸鍵槽對齊置入。
- 2.馬達與減速機結合後將馬達上4根螺絲鎖緊。
- 3.使用T 型板手將減速機入力軸內的止付螺絲鎖緊即可。

- 1.Place motor shaft key and reducer input shaft key way in a straight line, and insert motor shaft into reducer input shaft.
- 2.After connection of motor and reducer, tighten four screws into hex-socket cap screw holes.
- 3.Fix the set screw on reducer input shaft by T-type spanner.

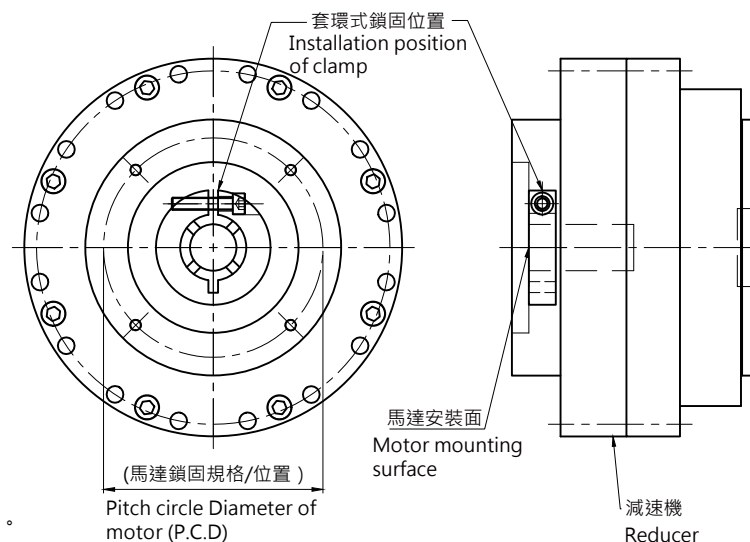


● L-束緊式:

L-Clamp fixed type

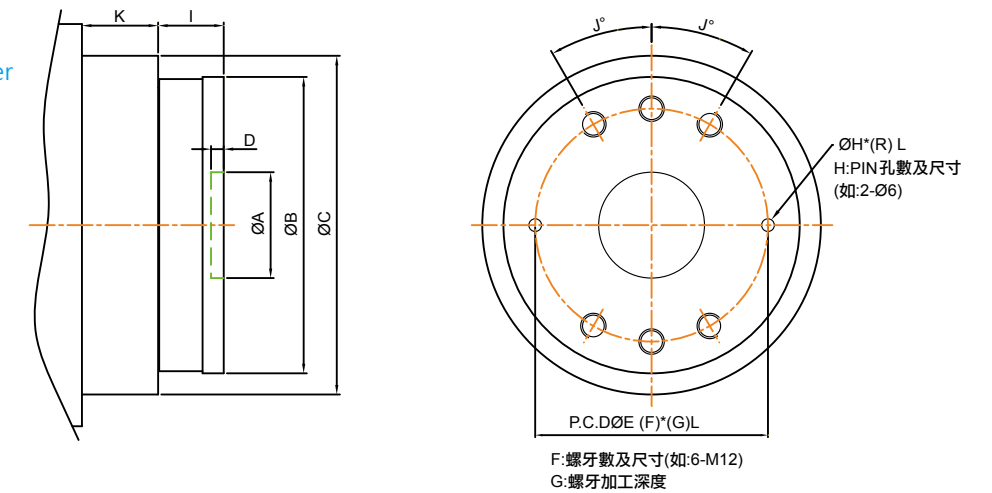
- 1.馬達軸心鍵與減速機入力軸鍵槽對齊置入。
- 2.馬達與減速機結合後，將馬達上4 根螺絲鎖緊。
- 3.使用T 型板手將入力軸束緊環鎖緊即可。

- 1.Place motor shaft key and reducer input shaft key way in a straight line, and insert motor shaft into reducer input shaft.
- 2.After connection of motor and reducer, tighten four screws into hex-socket cap screw holes.
- 3.Tighten the clamp of reducer input shaft by T-type spanner.



出力方式：P-有蓋

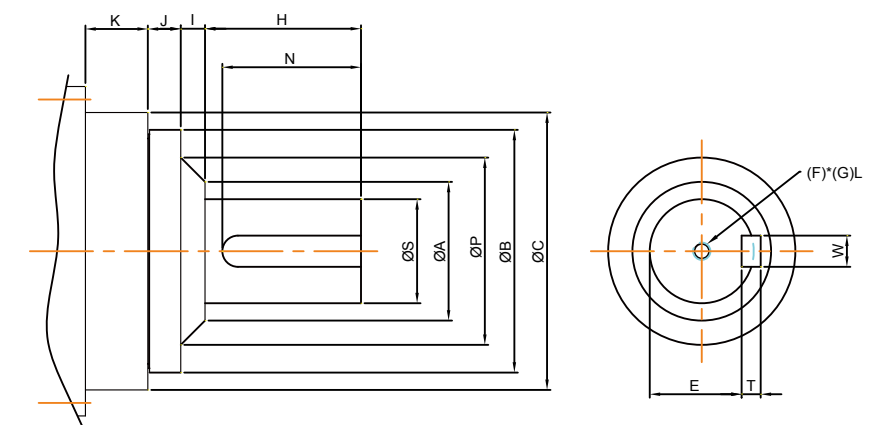
Output type : P-with cover



Model TTRAD	A	B	C	D	E	F	G	H	R	I	K	J
7E	28	100	106	4	80	6-M8	12	1-Φ6	6	17	21	25
25E	40	110	130	6	90	4-M10	15	2-Φ6	10	21.5	25	30
45E	50	140	160	6	110	6-M12	18	2-Φ6	10	31	36	30
135E	80	180	228	6	142	9-M12	18	1-Φ8	15	25	47.5	20
165E	100	210	240	8	145	6-M16	24	1-Φ8	20	30	51	11
325E	130	250	284	8	224	9-M16	24	1-Φ8	15	36	63.5	20
450E	155	295	328	10	250	9-M16	24	1-Φ10	15	45	64	25

出力方式：S-出力軸

Output type : S-Shaft



Model TTRAD	K	J	I	H	N	A	P	B	C	S	W	T	E	F	G
7E	21	12	5	35	30	40	50	86	106	28	8	7	24	M8	15
25E	25	12	5	55	49	54	64	105	130	38	10	8	33	M8	15
45E	36	15	5	90	80	80	90	135	160	60	18	11	53	M10	18
135E	47.5	25	10	90	80	80	100	145	228	60	18	11	53	M10	18
165E	51	25	10	105	95	90	115	204	240	70	20	12	62.5	M12	24
325E	63.5	30	10	130	120	110	140	245	284	90	25	14	81	M16	30
450E	64	35	10	165	155	120	175	275	328	100	28	16	90	M20	40

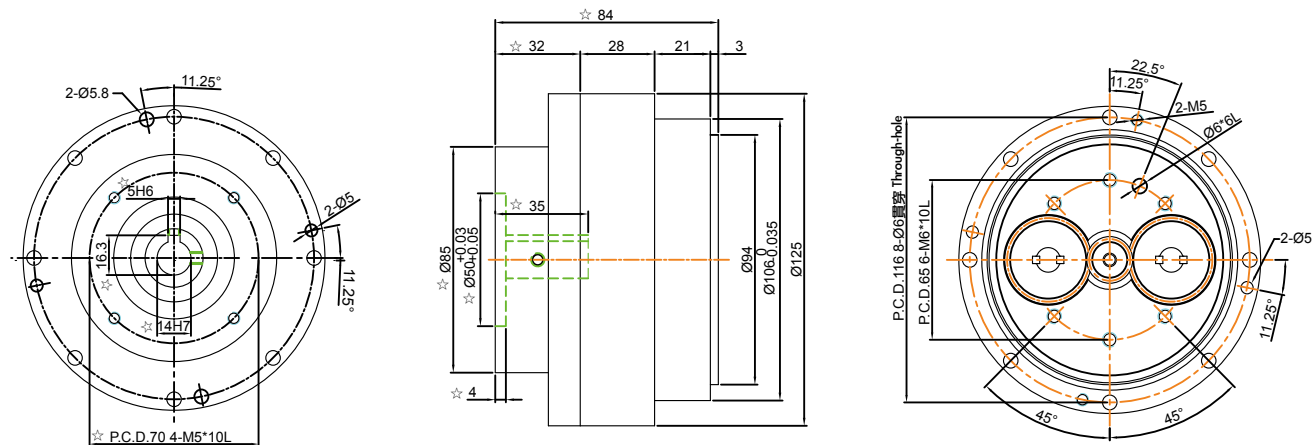
TTRAD-E 性能表 TTRAD-E TECHNICAL SPECIFICATION TABLE

TTRAD-E Technical Specification Table								TTRAD-E Technical Specification Table									
Specification 規 格		TTRAD-7E		TTRAD-25E		TTRAD-45E		TTRAD-135E		TTRAD-165E		TTRAD-325E		TTRAD-450E		TTRAD-700E	
Rotation 轉動方式		Shaft Run 軸轉動	Case Run 殼轉動	Shaft Run 軸轉動	Case Run 殼轉動	Shaft Run 軸轉動	Case Run 殼轉動	Shaft Run 軸轉動	Case Run 殼轉動	Shaft Run 軸轉動	Case Run 殼轉動	Shaft Run 軸轉動	Case Run 殼轉動	Shaft Run 軸轉動	Case Run 殼轉動	Shaft Run 軸轉動	Case Run 殼轉動
Ratio 減速比		61	60	61	60	79	78	103	102	103	102	103	102	154	153	181	180
		83	82	73	72	91	90	123	122	123	122	121	120	181	180	241	240
		103	102	83	82	124	123	161	160	161	160	161	160	241	240	301	300
		121	120	103	102	181	180	201	200	201	200	201	200	301	300	361	360
		—	—	123	122	241	240	241	240	241	240	241	240	361	360	421	420
Rated Output Torque 額定輸出扭矩	Nm kgf-m	83 (8.46)		245 (25)		460 (46.8)		1400 (136)		1615 (165)		3595 (366)		5100 (520)		7500 (765)	
Acceleration & Braking Torque 加速和制動扭矩	Nm kgf-m	136 (14)		515 (52)		1158 (118)		2083 (212)		4043 (412)		7963 (812)		11025 (1125)		22500 (2295)	
Instantaneous Max. Allowable Torque 瞬時最大容許轉矩	Nm kgf-m	415 (42)		1000 (102)		2300 (234.4)		4155 (423.5)		8075 (823)		17975 (1830)		25500 (2600)		37500 (3826)	
Rated Input Speed 額定輸入轉速	Nr (rpm)	1500		1500		1500		1500		1500		1500		1500		1500	
Rated Lifetime 額定壽命	Hr	6000		6000		6000		6000		6000		6000		6000		6000	
Allowable Max. Input Speed 瞬時容許最高輸入轉速	Nmax (rpm)	3000		2500		2500		2000		2000		2000		2000		2000	
Tilting Stiffness 傾斜鋼度	Nm/arc.min kgf-m/arc.min	117 (12)		372 (38)		931 (95)		1176 (120)		2940 (300)		4900 (500)		7448 (760)		11500 (1170)	
Torsional Stiffness 扭轉鋼度	Nm/arc.min kgf-m/arc.min	20 (2)		49 (5)		108 (11)		196 (20)		392 (40)		980 (100)		1176 (120)		1450 (148)	
Max.Lost Motion 最大無效行程	(arc.min)	<2.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0	
Angular Transmission Error 扭轉傳輸中角度偏移量	ATE (arc.sec)	80		40		40		40		40		40		40		50	
Backlash 背除	Standard Backlash 標準背除	(arc.min)		<3.0		<3.0		<3.0		<3.0		<3.0		<3.0		<3.0	
	Precision Backlash 精密背除																
Maximum Tilting Moment 最大傾斜力矩	Nm kgf-m	392 (40)		1764 (180)		3332 (340)		4312 (440)		7840 (800)		14112 (1440)		17640 (1800)		25950 (2645)	
Rated Radial Force 額定徑向力	Nm	196		882		1666		2156		3920		7056		8820		11025	
Max. Axial Force 最大軸向推力	N	1470		3920		5194		7840		14700		19600		24500		35000	
(I=GD ² /4)		1.42×10 ⁻⁶		0.37×10 ⁻⁵		1.12×10 ⁻⁵		2.4×10 ⁻⁵		1.0×10 ⁻⁴		1.68×10 ⁻⁴		3.8×10 ⁻⁴		4.75×10 ⁻⁴	
		1.20×10 ⁻⁶		0.29×10 ⁻⁵		1.02×10 ⁻⁵		2.2×10 ⁻⁵		0.9×10 ⁻⁴		1.6×10 ⁻⁴		3.68×10 ⁻⁴		4.6×10 ⁻⁴	
		0.9×10 ⁻⁶		0.24×10 ⁻⁵		0.8×10 ⁻⁵		2.0×10 ⁻⁵		0.8×10 ⁻⁴		1.58×10 ⁻⁴		3.5×10 ⁻⁴		4.5×10 ⁻⁴	
		—		—		0.7×10 ⁻⁵		1.8×10 ⁻⁵		0.7×10 ⁻⁴		1.54×10 ⁻⁴		2.3×10 ⁻⁴		2.9×10 ⁻⁴	
		—		—		—		—		0.6×10 ⁻⁴		—		—		2.9×10 ⁻⁴	
Weight 重量	KG	5.5		12		18.5		36		50		76		107		215	

PS:需要上述速比之外的減速比時，請洽詢本公司，電機轉速超出額定輸入轉速時，運轉噪音將會提高，請注意
減速機容許負載使用表面溫度需低於70℃。
Please contact us for other ratio selections.Please be noted that the noise will be increased when the
input speed (RPM:revolution per minute)of motor is higher than rated input speed; the operating
temperature and motor service temperature should be under 70℃.

TTRAD-E 尺寸圖 DRAWING & DIMENSION

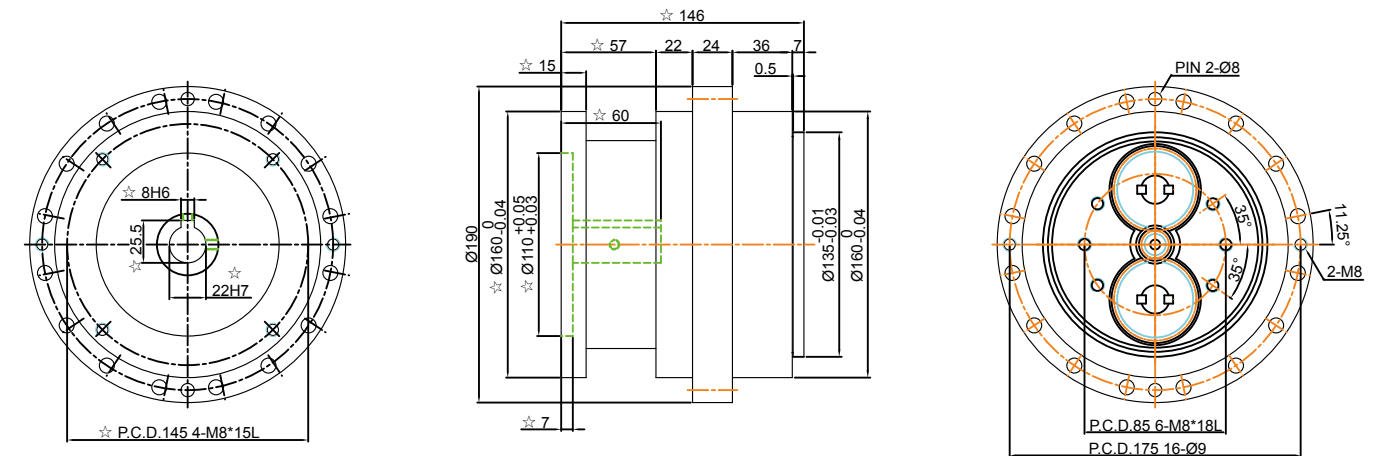
TTRAD-7E-□-C---N



1. ☆ 會隨伺服馬達不同有所變更
2. 本機軸心可從Φ11~Φ19
3. 此圖為軸心轉動·殼轉動圖請洽詢本公司

1. "☆" The dimensions modify with motor specification.
2. Output shaft diameter: Φ11~Φ19 mm.
3. This drawing is model of shaft rotation, for case run drawing, please contact us.

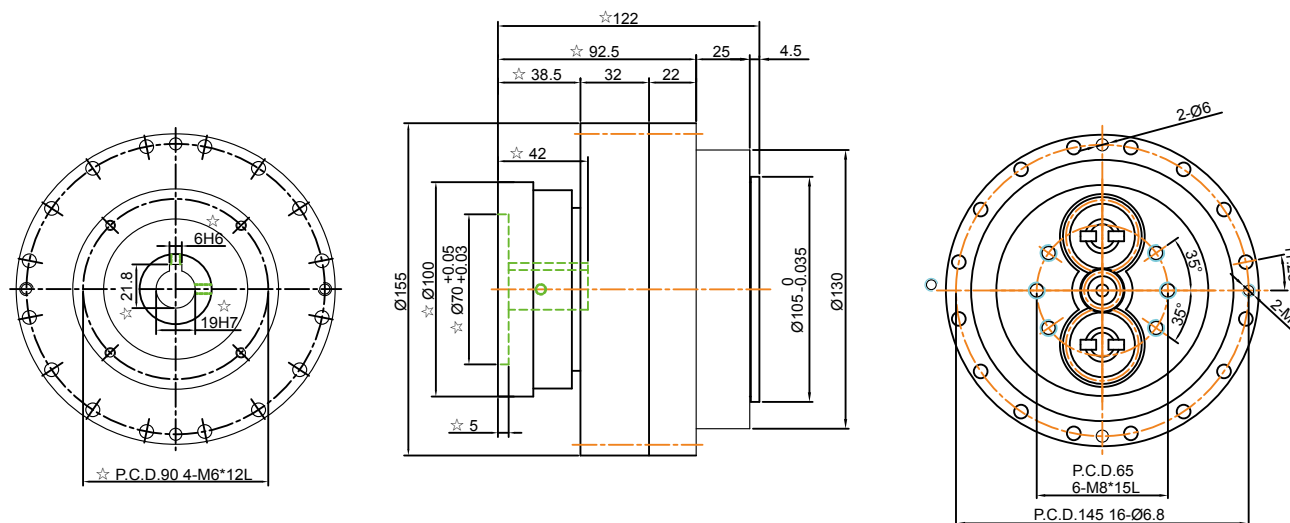
TTRAD-45E-□-C---N



1. ☆ 會隨伺服馬達不同有所變更
2. 本機軸心可從Φ14~Φ28
3. 此圖為軸心轉動·殼轉動圖請洽詢本公司

1. "☆" The dimensions modify with motor specification.
2. Output shaft diameter: Φ14~Φ28 mm.
3. This drawing is model of shaft rotation, for case run drawing, please contact us.

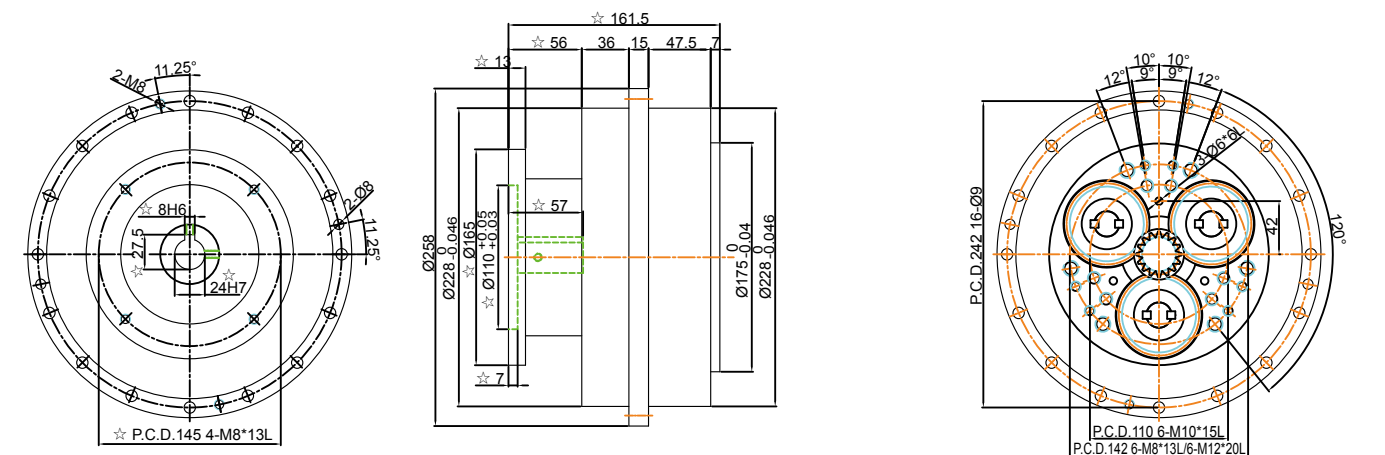
TTRAD-25E-□-C---N



1. ☆ 會隨伺服馬達不同有所變更
2. 本機軸心可從Φ11~Φ24
3. 此圖為軸心轉動·殼轉動圖請洽詢本公司

1. "☆" The dimensions modify with motor specification.
2. Output shaft diameter: Φ11~Φ24 mm.
3. This drawing is model of shaft rotation, for case run drawing, please contact us.

TTRAD-135E-□-C---N

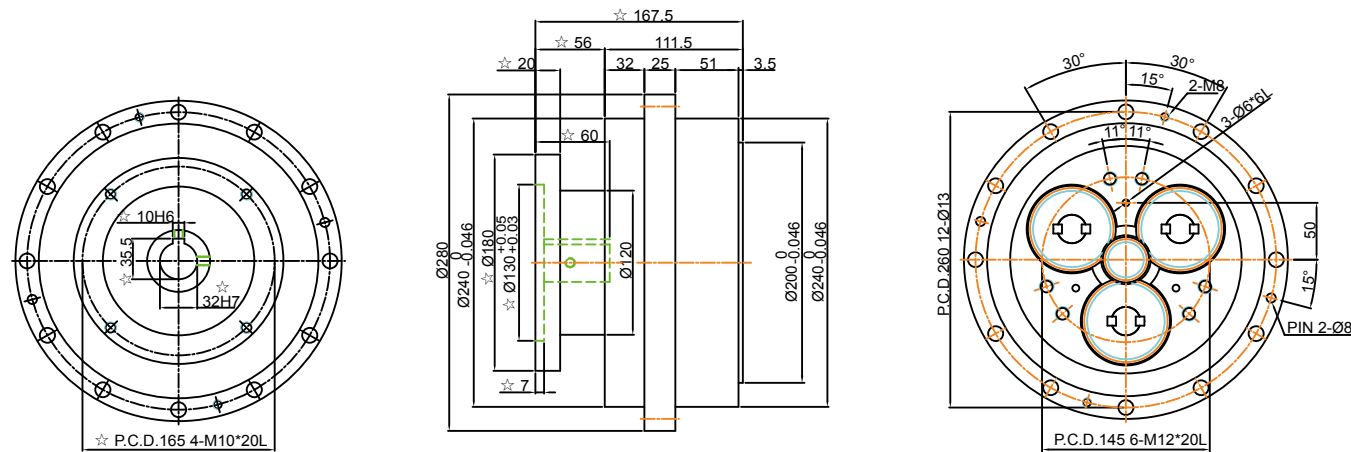


1. ☆ 會隨伺服馬達不同有所變更
2. 本機軸心可從Φ19~Φ35
3. 此圖為軸心轉動·殼轉動圖請洽詢本公司

1. "☆" The dimensions modify with motor specification.
2. Output shaft diameter: Φ19~Φ35 mm.
3. This drawing is model of shaft rotation, for case run drawing, please contact us.

TTRAD-E 尺寸圖 DRAWING & DIMENSION

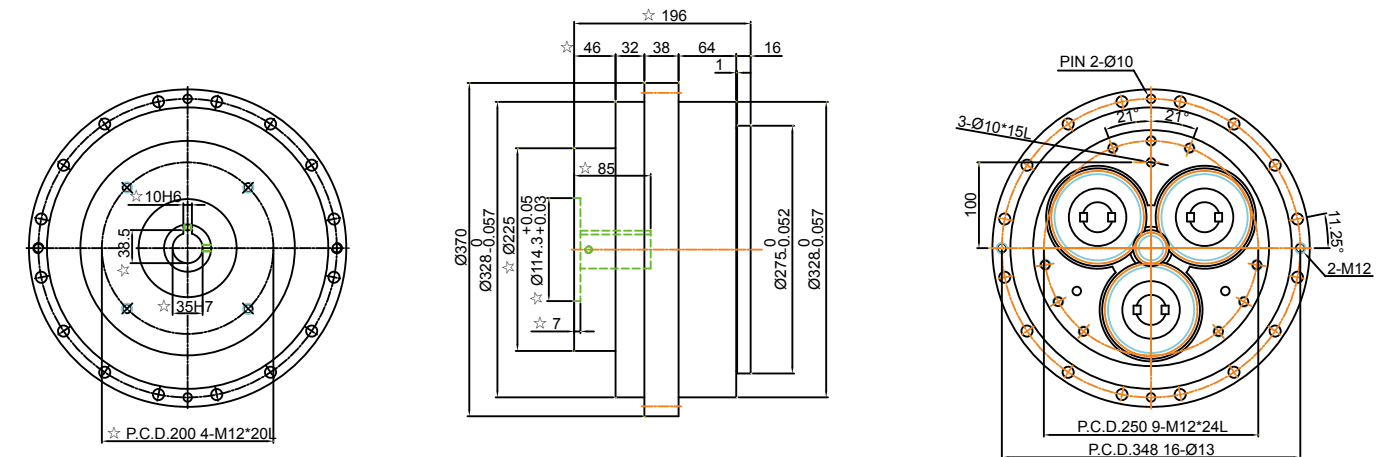
TTRAD-165E-□-C---N



1. ☆ 會隨伺服馬達不同有所變更
2. 本機軸心可從Φ22 ~ Φ42
3. 此圖為軸心轉動，殼轉動圖請洽詢本公司

1. "☆" The dimensions modify with motor specification.
2. Output shaft diameter: Φ22~Φ42 mm.
3. This drawing is model of shaft rotation, for case run drawing, please contact us.

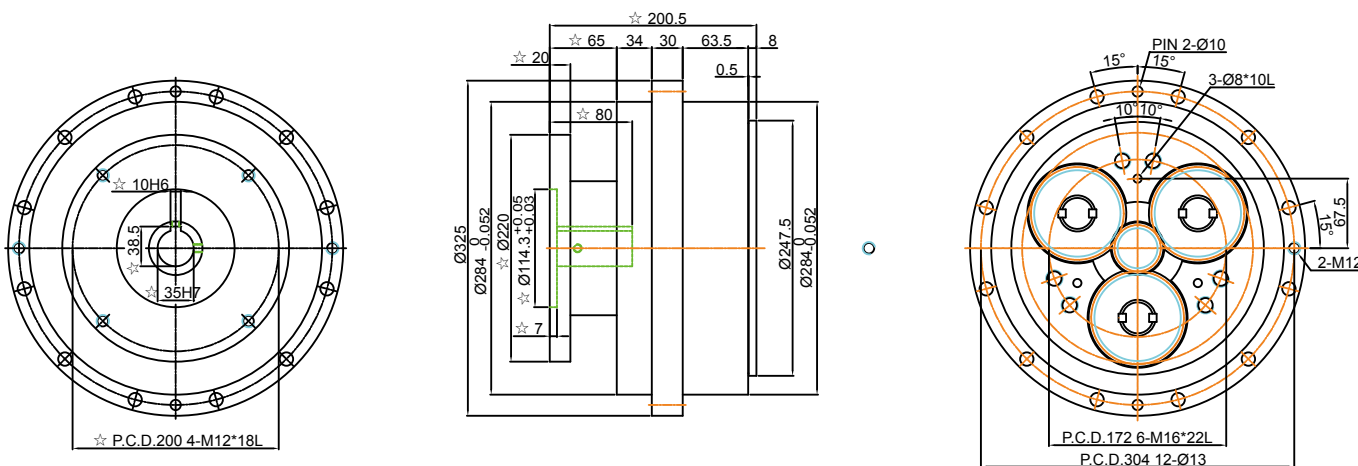
TTRAD-450E-□-C---N



1. ☆ 會隨伺服馬達不同有所變更
2. 本機軸心可從Φ35 ~ Φ60
3. 此圖為軸心轉動，殼轉動圖請洽詢本公司

1. "☆" The dimensions modify with motor specification.
2. Output shaft diameter: Φ35~Φ60 mm.
3. This drawing is model of shaft rotation, for case run drawing, please contact us.

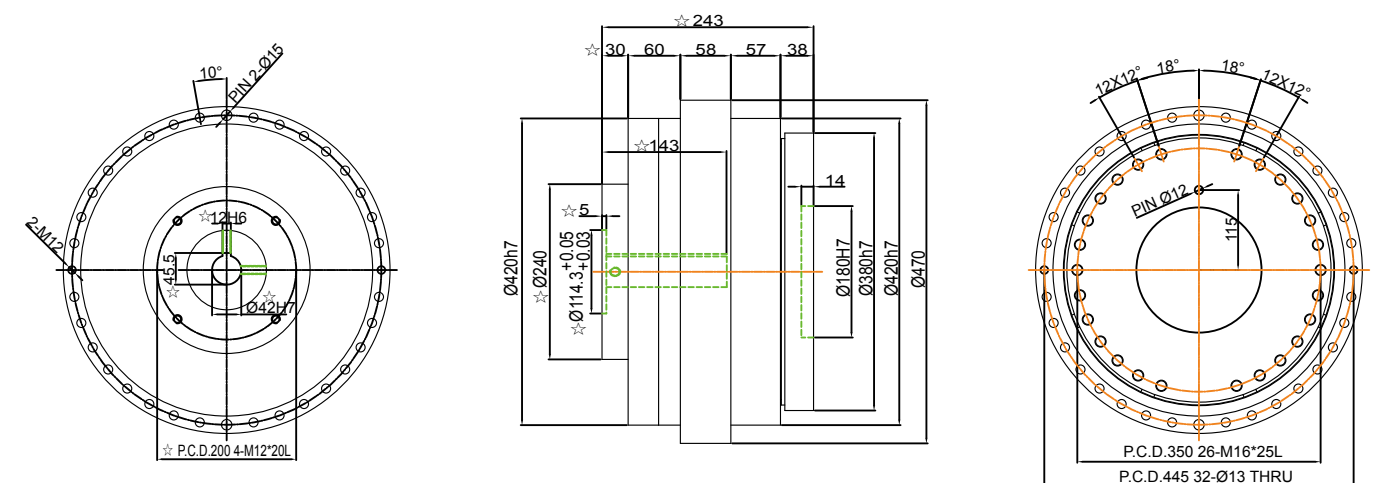
TTRAD-325E-□-C---N



1. ☆ 會隨伺服馬達不同有所變更
2. 本機軸心可從Φ24 ~ Φ42
3. 此圖為軸心轉動，殼轉動圖請洽詢本公司

1. "☆" The dimensions modify with motor specification.
2. Output shaft diameter: Φ24~Φ42 mm.
3. This drawing is model of shaft rotation, for case run drawing, please contact us.

TTRAD-700E-□-C---P



1. ☆ 會隨伺服馬達不同有所變更
2. 本機軸心可從Φ35 ~ Φ60
3. 此圖為軸心轉動，殼轉動圖請洽詢本公司

1. "☆" The dimensions modify with motor specification.
2. Output shaft diameter: Φ35~Φ60 mm.
3. This drawing is model of shaft rotation, for case run drawing, please contact us.