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Gumptious Technology Co., Ltd. is an innovated company specializes in the R&D and manufacture of various types of servo gearboxes. Founded in 2001, in less than a decade, GTC has quickly become one of the leading brands in the motion control industry and the leader of developing revolutionary gear technology. Our major clients are the makers of display panel, LED, DRAM, solar panel, PCB, semiconductor, industrial automation and robot etc.

At GTC, we have numerous patents. Our feature patented products include the very popular backlash-free Right-angle Gearbox (WS series), highly accurate Hollow Rotary Actuator (NT series), extremely efficient Planetary Gearhead (GNP series), highly compacted SB Planetary Drive, and our latest developed backlash-free Ball Reducer. Our products are designed to work with any servomotors and stepper motors from 10w to 22kw on the market.

GTC' s products are widely used in automated machinery, semiconductor and PCB manufacturing, CNC, inverter plasma cutter, and many high-tech industries and research facilities.

GTC has sophisticated manufacturing equipments and produces exceptionally high quality products. We also design and manufacture customized gearboxes to fit our clients' requirements and to minimize their expense. The prime ideology at GTC is to help you enhance your productivities. Our products have achieved in aesthetics, safety, high quality and efficiency. Making GTC your first choice, we guarantee to make your work much more effortless.



有限公司
ogy Co., Ltd



GNP多枚行星減速機
GNP / Planetary Gearhead



GNP多枚行星減速機
GNP / Planetary Gearhead



SRBF 少齒差行星減速機
SRBF Planetary Drive



PIS 推引器
PIS Power Base



NT中空旋轉平台
NT Hollow Rotating Platform



NT中空旋轉平台
NT Hollow Rotating Platform



NT中空旋轉平台
NT Hollow Rotating Platform



NT+WS雙軸極座標機械手臂
NT+WS Biaxial and coordin ates Robot



WS轉向機
WS Gearbox



WS轉向機
WS Gearbox



WS轉向機
WS Gearbox



WS轉向機
WS Gearbox



new SBRU球體減速機
SBRU Ball Reducer



new SBRU球體減速機
SBRU Ball Reduce



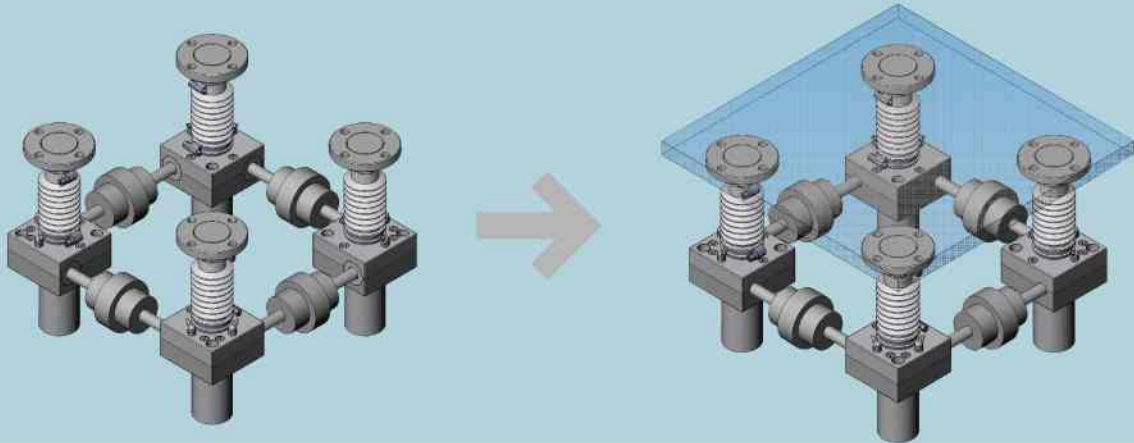
new SBRU球體減速機
SBRU Ball Reduce



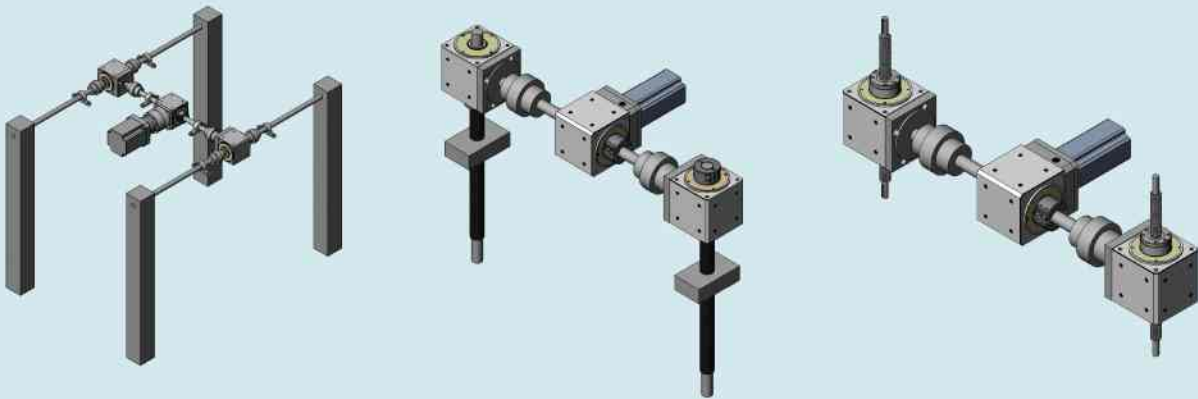
new SBRU球體減速機
SBRU Ball Reduce

應用範例 Application Example

PIS推引器 PIS Power Base

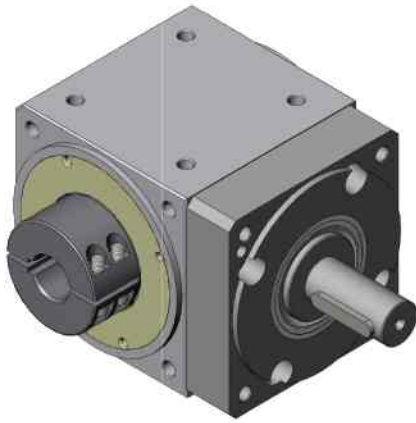


WS 應用 Application in WS

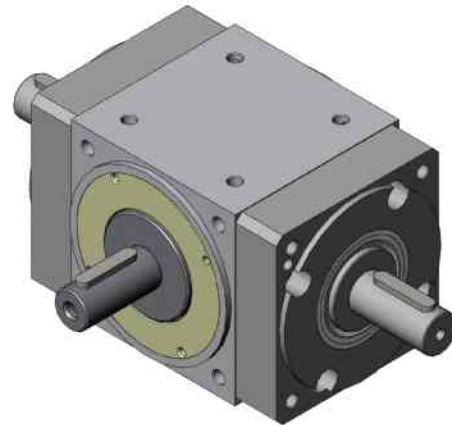


WS 應用 Application in WS

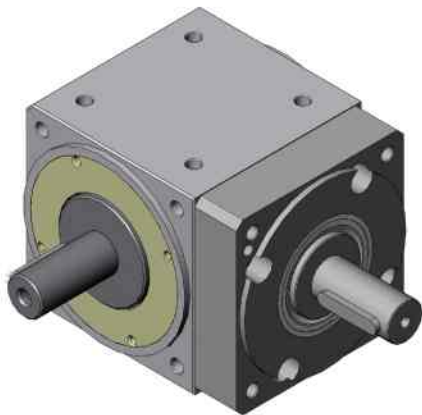




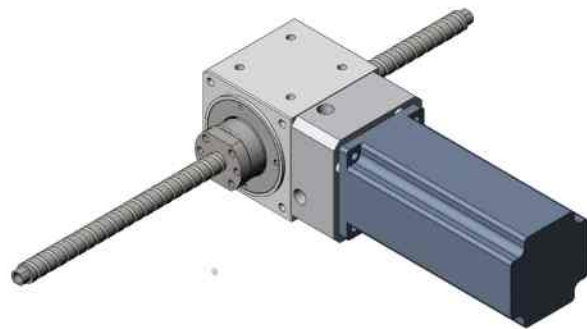
WS系列 / 入力實心出力中空
WS / Input solid hollow and output



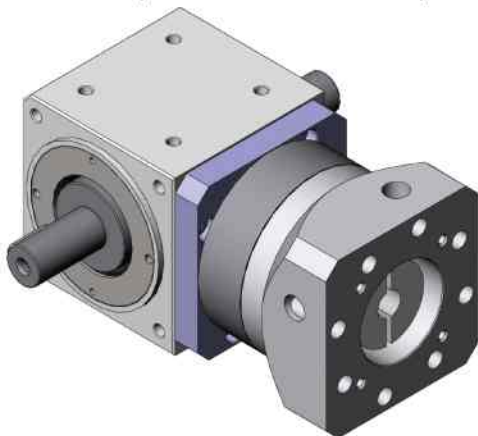
WS系列 / 一入二出
WS / One into the two



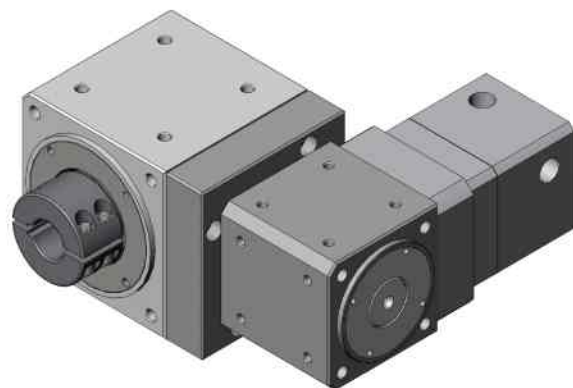
WS系列 / 入力實心出力實心
WS / Input solid and solid output



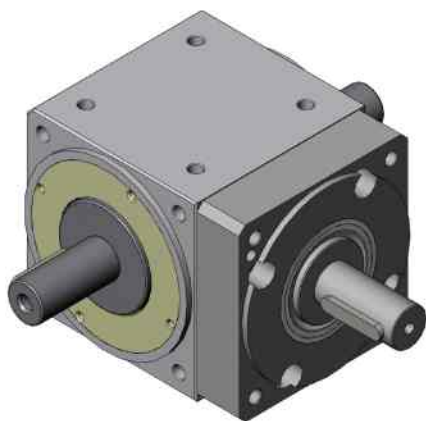
WS系列 / 螺桿應用
WS / Application in screw



WS系列 / 雙皮帶輪轉傳動
WS / Turn drive of two leather belts

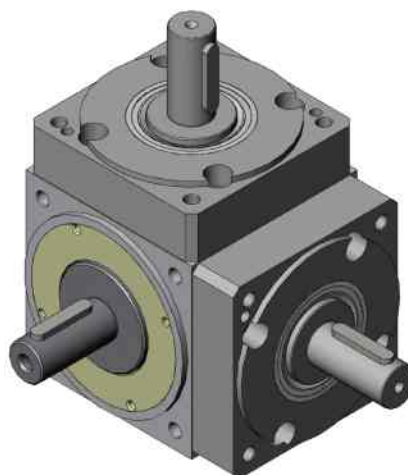


WS系列 / 馬達與出力端平行
WS / Motor and parallel are parallelism



WS系列 / 一入二出

WS / One into the two



WS系列 / 一入二出

WS / One into the two



WS系列 / 轉盤應用

WS / Application in turntable



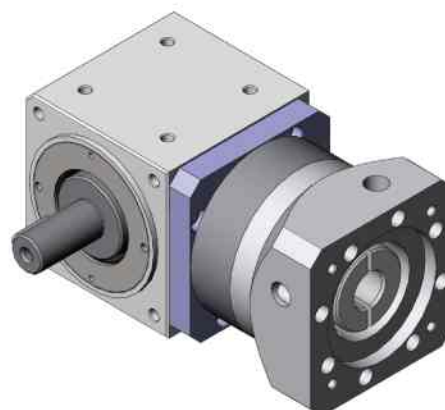
WS系列 / 出力法蘭面

WS / The flange of output



WS系列 / SENSOR應用

WS / Application in SENSOR



WS系列 / 出力實心

WS / Output solid

伺服電機：在訂貨時應告知工廠，伺服電機所需銜接法蘭及軸的尺寸。

Servomotor: Please advise the all dimensions of the pilot and output shaft when you make an order.

90度轉向減速機 Right Angle Gear Reducer

90° 轉向機 Right Angle Gear Reducer



WS

系列名稱
Series name

070

外型尺寸
(Square profile)

F

出力軸心規格
F(中空軸)
SF(實心軸)

010

減速比3~1000比
Reduction ration
1/3~1/1000

A

配合減速機
規格
The specification
of reducer

ØS

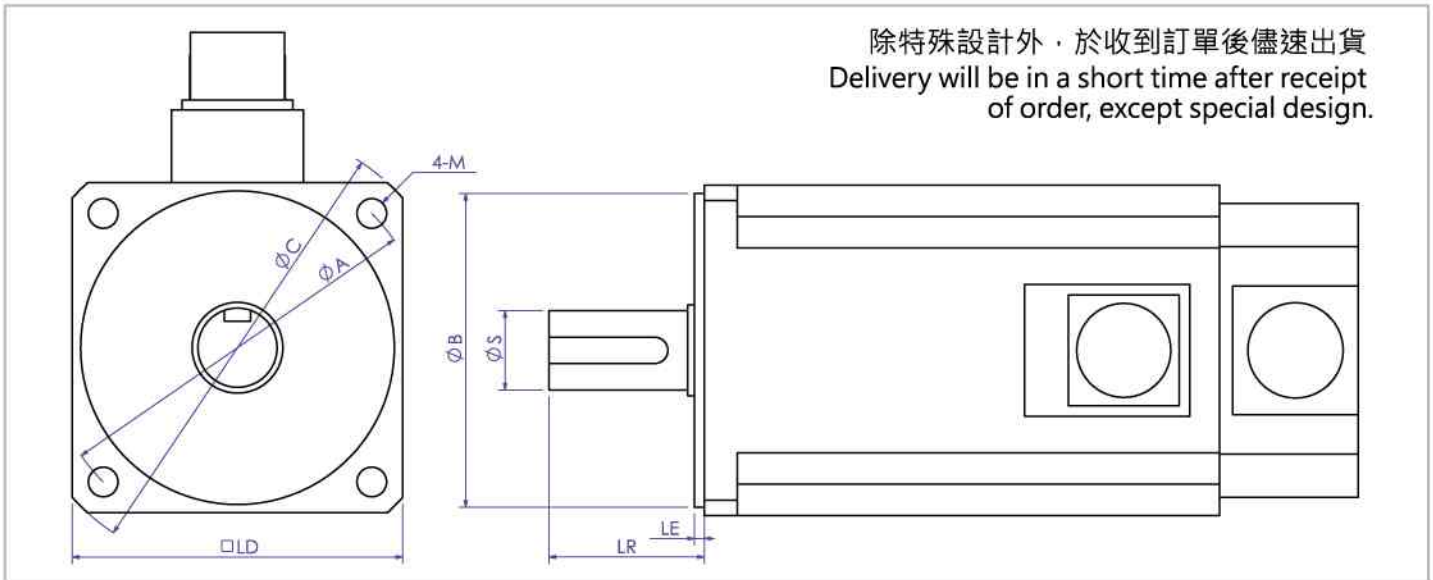
B

參考圖1-1
(refer drawing 1-1)

A

WS070	70X70mm
WS090	92X92mm

WS150	142X142mm
WS180	182X182mm
WS120	115X115mm



除特殊設計外，於收到訂單後儘速出貨
Delivery will be in a short time after receipt of order, except special design.

減速機的安裝：減速機本體是一個非常精密的產品，所以在安裝上必須小心，嚴禁碰撞或是以鐵鎚敲打軸心或是任一部位。
Installation of gear box: The gearbox is a high precision product; hence it must be careful in installation, and forbid knocking at the shaft and any part of the gearbox.

WS 系列 WS series

特長 Feature

- 1.可調整至零背隙。 Backlash free
- 2.出力轉矩： Torque capacity: 1.25 – 42kgf*m (12.2Nm – 411Nm)
- 3.機械輸出軸為中空貫穿軸，機箱外殼有五面固定基座法蘭。
Hollow output shaft design for various applications and 5 mounting surfaces for flexible installations.
- 4.背隙值可任意調整，可適用軸向低荷重間歇性運動。
Adjustable backlash and suitable low load and intermitted motion.

安裝注意事項

- 90度中空轉向器安裝時軸心必須完全貫穿。
It must be run through installing in right-angle Hollow Gearbox.
- WS系列未貫穿時，許用安裝誤差：
The WS can install in deviation when running through yet :
 - (1) 偏擺不能大於0.5。
The deflection can't greater than 0.5
 - (2) 偏心率不能大於0.01mm
The Eccentricity can't greater than 0.01mm



90° 轉向機 Right Angle Gear Reducer

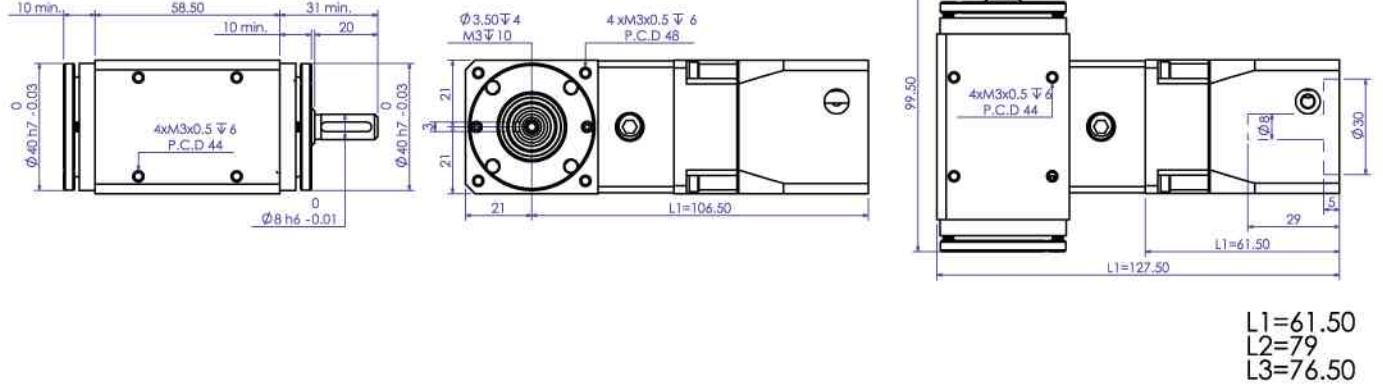
規格Specification

減速比 Ratio Table of Gear Reducer
WS系列減速比1:2 (WS Series Ratio 1:2)®特定規格1:1

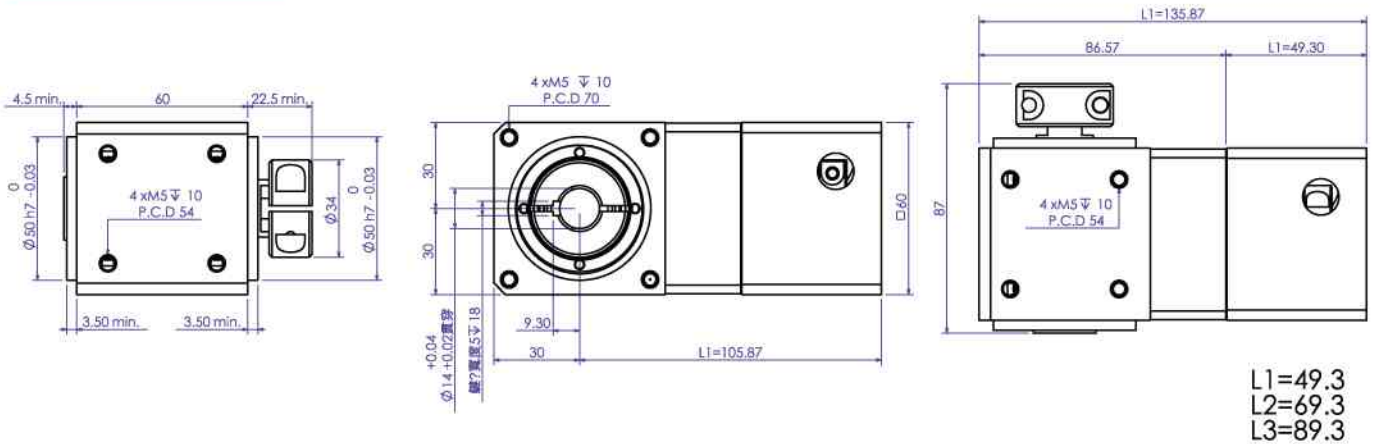
說明Description	WS42	WS60	WS70F	WS90F	WS120F	WS150F	WS180F
連續出力轉矩(kgf*m/Nm) Continuous Output Torque	0.42/4.1	0.67/6.5	1/9.8	2/19.6	4/39	9/88	14/137
最大出力轉矩(kgf*m/Nm) Max. Torque of Load	1.25/12.2	2/19.6	3/29.4	6/58.8	12/117	27/264	42/411
破壞轉矩值(kgf*m/Nm) Breaking Torque	2.5/24.5	4/39.2	6/58.8	12/117.6	24/235	54/529	84/823
許用輸入轉速(r/min) Permissible Input RPM	1500	1500	1200	1000	800	800	500
慣性矩(單一速比)(kg*cm ²) Gear Reducer Inertia	0.035	0.04	0.05	0.23	0.8	1.72	2.12
許用徑向最大荷重(kgf) Permissible Axis Max. Load	25	50	86	140	250	350	550
重量(kg) Weight	0.6	1.1	1.2	3.4	7.4	13	41
重量L1(kg) Weight	0.9	1.7	2.1	5.7	12.5	17	52.1
重量L2(kg) Weight	1.0	2.0	2.4	6.8	14.3	17.8	52.8
重量L3(kg) Weight	1.2	2.3	2.7	7.9	15.4	18.9	53

伺服電機：在訂貨時應告知工廠，伺服電機所需銜接法蘭及軸的尺寸。
Servomotor: Please advise the all dimensions of the pilot and output shaft when you make an order.

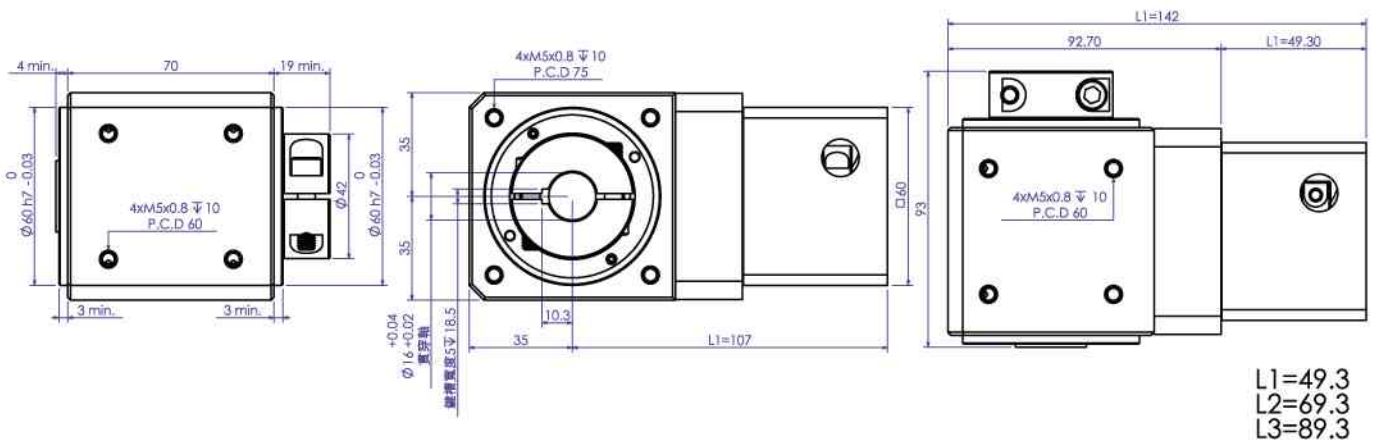
WS42



WS60



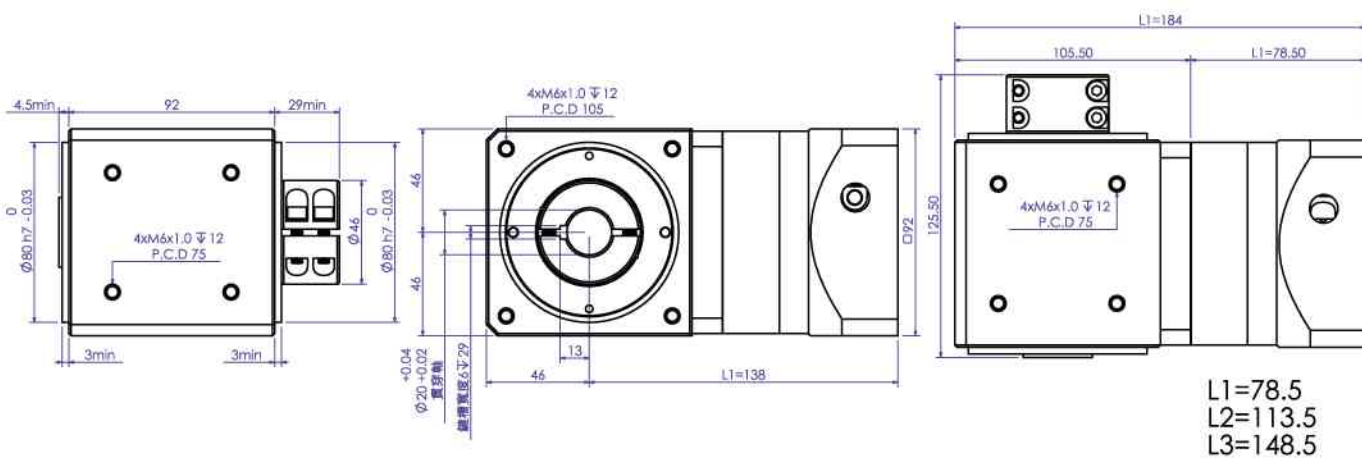
WS70F



本公司保有尺寸變更權利，並不另行通知，訂貨前請再度確認。

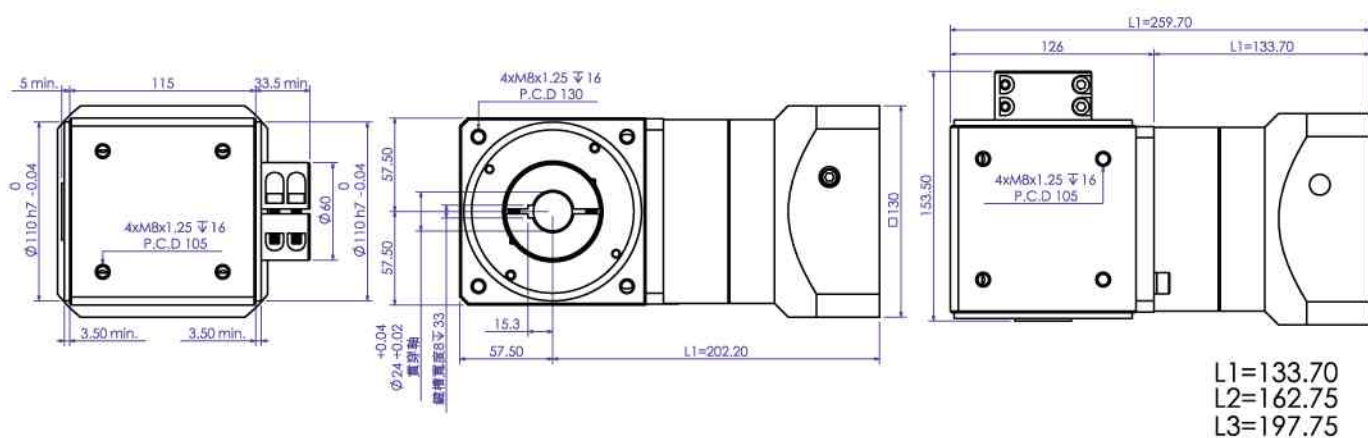
Dimension can be modified without notice for improvement of products so please Contact us before you order.

WS90F



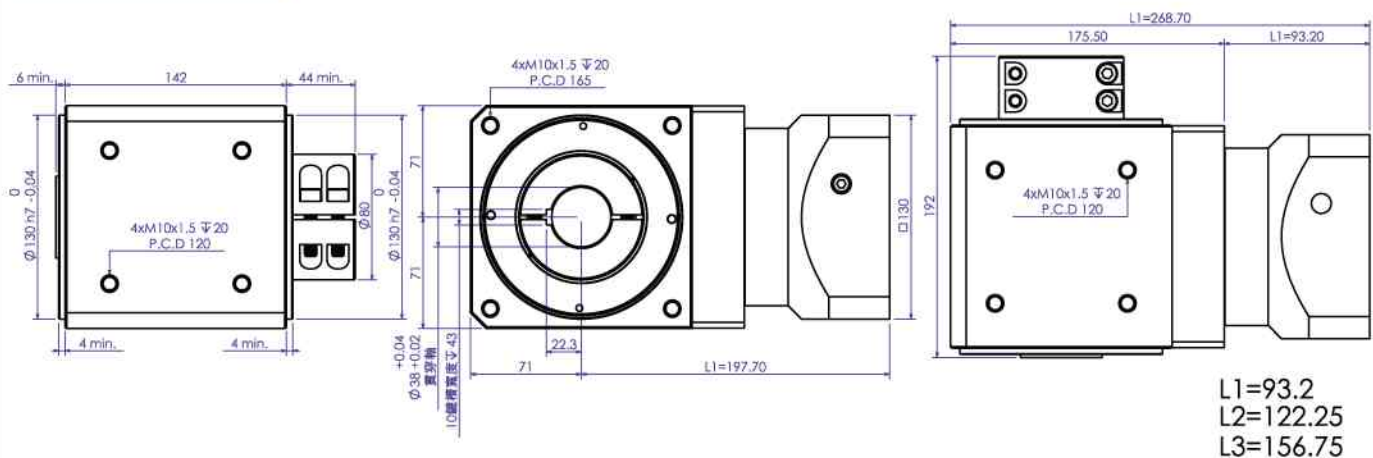
L1=78.5
L2=113.5
L3=148.5

WS120F



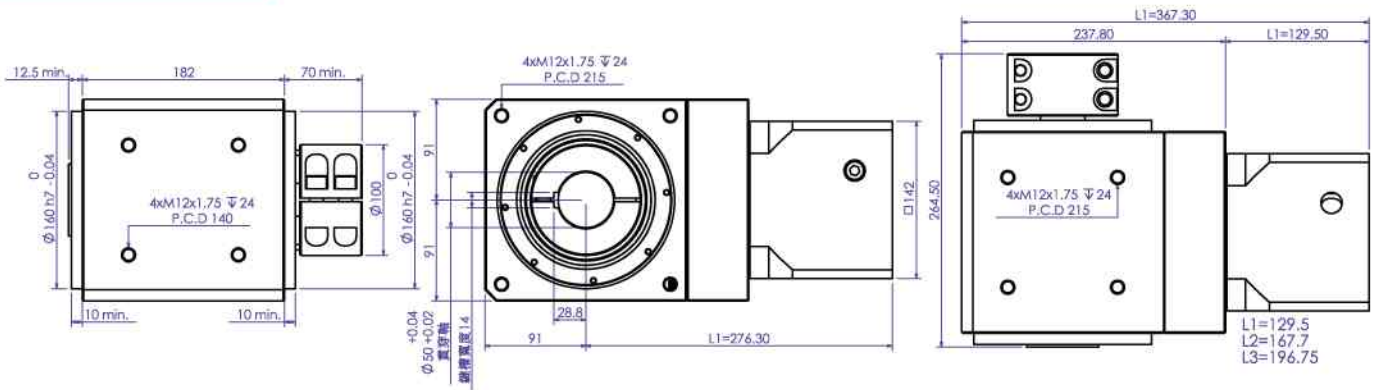
L1=133.70
L2=162.75
L3=197.75

WS150F

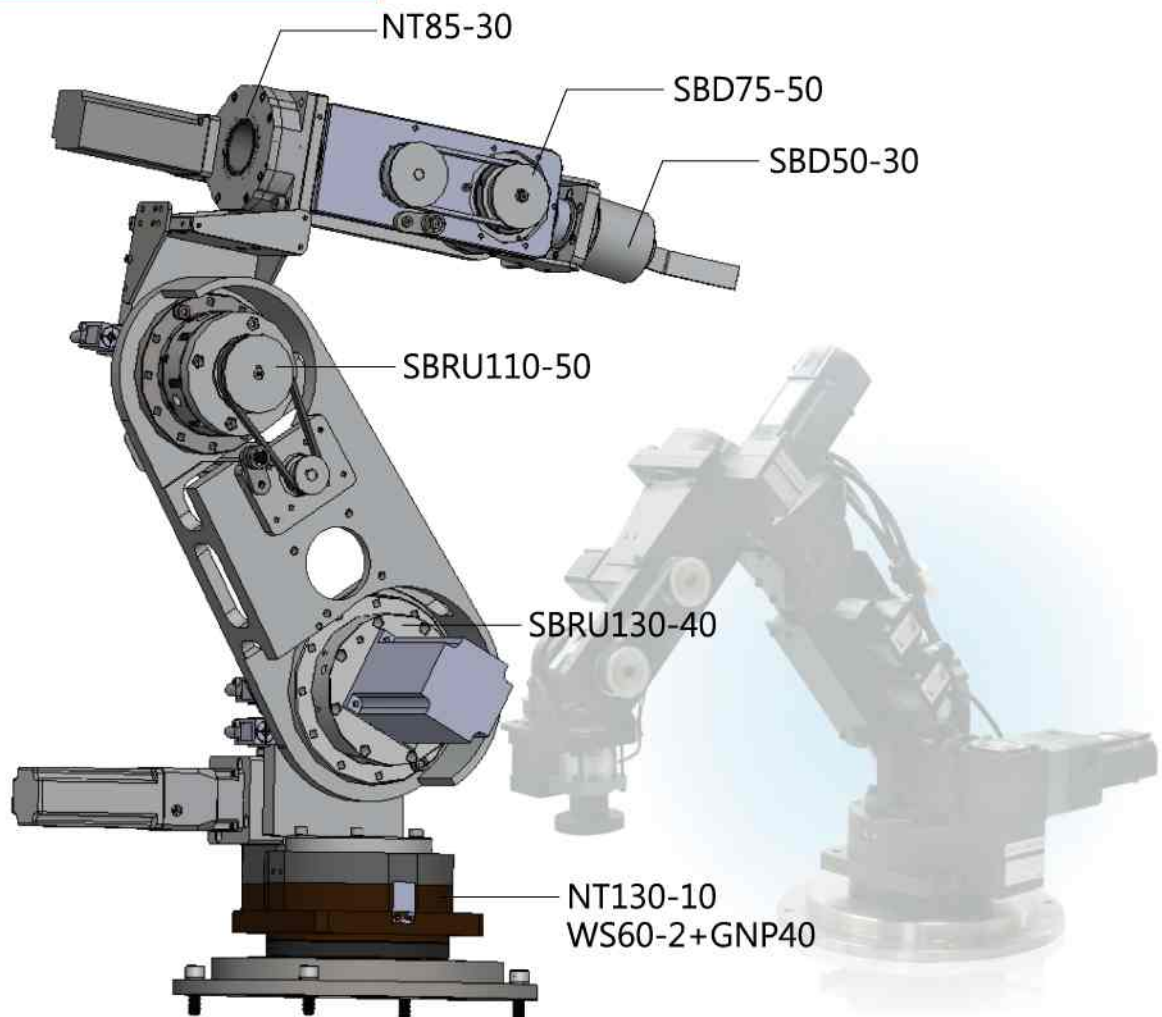


L1=93.2
L2=122.25
L3=156.75

WS180F



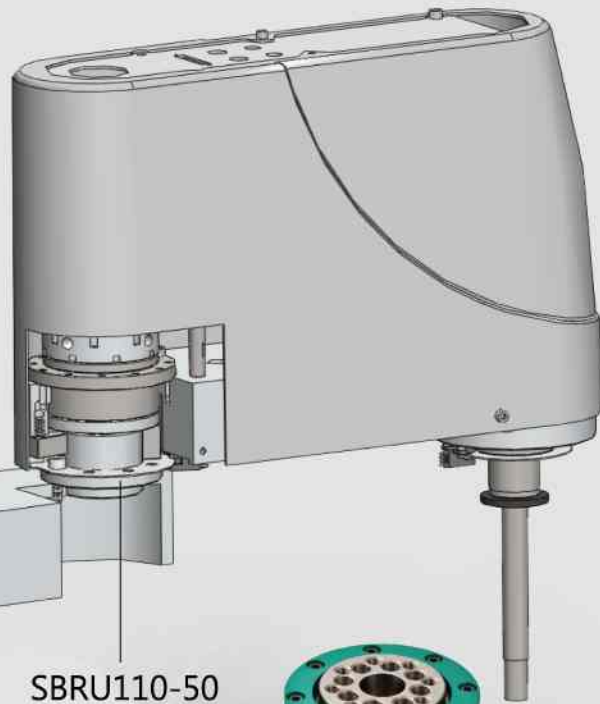
機械手臂 (六軸) 6 Axle Robot



機械手臂 (四軸) 4 Axle Robot



SBRU130-40



SBRU110-50



SBRU130-40

多枚行星減速機

Planetary Gear Reducer



GNP

系列名稱
Series name

060

外型尺寸
(Square profile)

L1

段數
L1-單段
L2-雙段
L3-三段

減速比3~1000比
(Reduction ratio
1/3~1/1000)

005

出力側規格
The specification
of output side

A

ØS

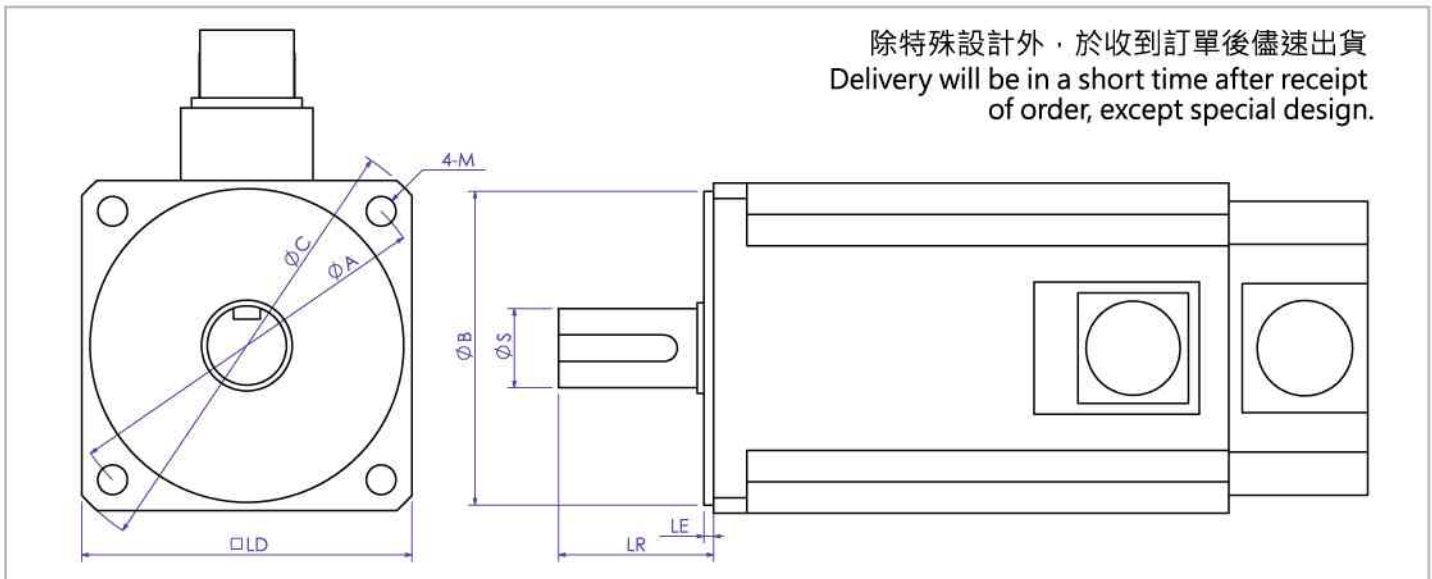
參考圖1-1
(refer drawing 1-1)

B

A

040	42X42mm
060	60X60mm
090	92X92mm

120	115X115mm
150	142X142mm
180	180X180mm



除特殊設計外，於收到訂單後儘速出貨
Delivery will be in a short time after receipt
of order, except special design.

減速機的安裝：減速機本體是一個非常精密的產品，所以在安裝上必須小心，嚴禁碰撞或是以鐵鎚敲打軸心或是任一部位。
Installation of gear box: The gearbox is a high precision product; hence it must be careful in installation, and forbid knocking at the shaft and any part of the gearbox.

GNP系列 GNP series

特長 Feature

- 1.精度出廠值為2~5弧分。(GNP40除外) EX Work precision 5min~arc.(Except. GNP40)
- 2.正整數比。Integral Gear Ratio.
- 3.適合於各廠牌伺服電機。Suitable for combination with any kind of servomotor.
- 4.密封式設計，不必換油，安裝方便。
Total enclosed design, lubricant refilling is not necessary. Easy installing and combination.
- 5.高轉矩，低慣性矩。High rating torque and low inertia.
- 6.另有長軸設計，適用齒排傳動，減化機構。
Besides, the design of long shaft is suitable to driven by rack, and simplify the mechanism.

規格Specification

GNP40L1單一規格最輕的減速機 GNP40L1, the lightest model of all gearheds

說明Description / 型號Models	減速比 Ratio	GNP40	GNP60	GNP90	GNP120	GNP150	GVM-C
"連續出力轉矩 Continuous Output Torque(kgf*m / Nm)"	3	—	1.5/14.7	6.5/63.7	13/127.4	25/245	—
	4	1/9.8	2/19.6	7.5/73.5	15/147	43/421.4	—
	5	1.1/10.78	2.1/20.58	8/8.4	17.3/169.54	45/441	—
	7	1/9.8	1.9/18.62	7/68.6	13/127.4	38/372.4	—
	9	—	—	—	12/117.6	—	4.8/47.04
	10	0.9/8.82	1.7/16.66	6/58.8	8/78.4	28/274.4	—
"最大出力轉矩Max. Torque(kgf*m / Nm)"	3~10	3倍額定輸出轉矩 Three Times Rated Output Torque					
"慣性矩(單一速比)Gear Reducer Inertia(kg*cm ²)"	-	0.049	0.127	1.247	2.274	1	0.26
"出力容許徑向力Permissible Radial Force(kgf)"	-	70	110	353	465	626	155
"入力孔徑Input Shaft Diameter(mm)"	-	5~8	6.35~14	11~24	19~35	20~38	8~16
"重量 L1Weight L1(kg)"	3~10	0.3	0.9	3.3	6.8	13.8	2
"重量 L2Weight L2(kg)"	9~100	0.4	1.2	4.5	7.7	14	
"重量 L3Weight L3(kg)"	100~1000	0.6	1.5	5.5	8.8	15	

減速比

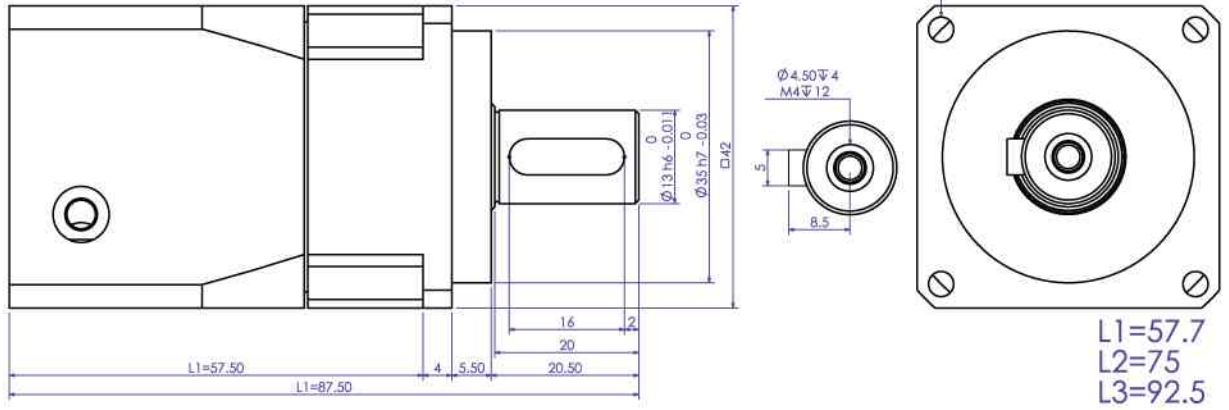
Ratio Table of Gear Reducer

段數(Stage No.)	L 1	L 2
GNP40	4,5,7,10	12,15,16,20,21,25,28,30,35,40,49,50,70
GNP60	3,4,5,7,10	9,12,15,16,20,21,25,28,30,35,40,49,50,70,100
GNP90	3,4,5,7,10	9,12,16,15,20,21,25,28,30,35,40,49,50,70,100
GNP120	3,4,5,7,9,10	9,12,15,16,20,21,25,27,28,30,35,36,40,45,49,50,63,70,81,90,100
GNP150	3,4,5,7,10	9,12,15,16,20,21,25,27,28,30,35,36,40,45,49,50,63,70,90,100

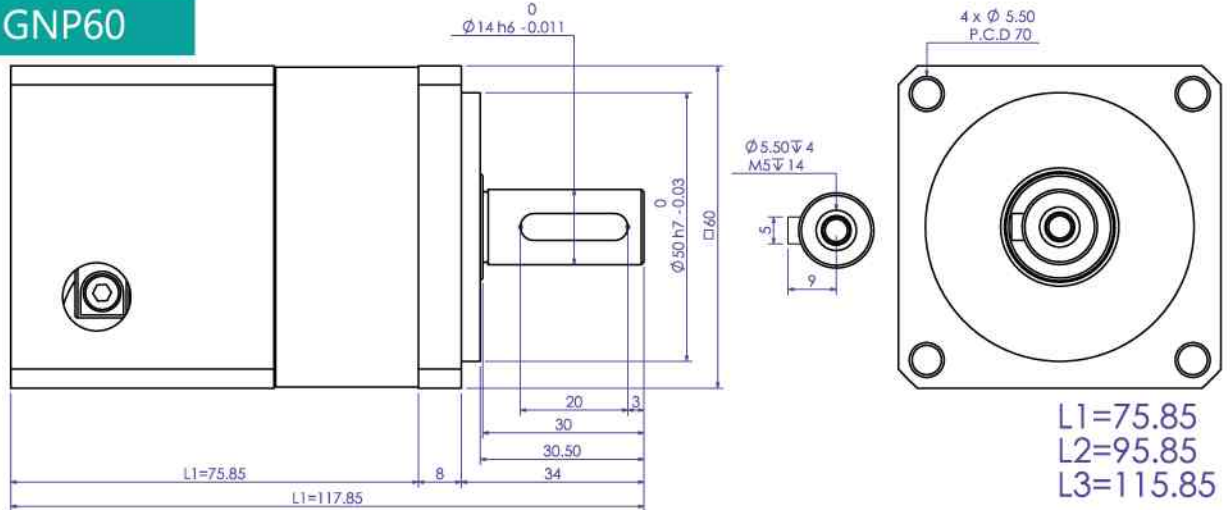
伺服電機：在訂貨時應告知工廠，伺服電機所需銜接法蘭及軸的尺寸。

Servomotor: Please advise the all dimensions of the pilot and output shaft when you make an order.

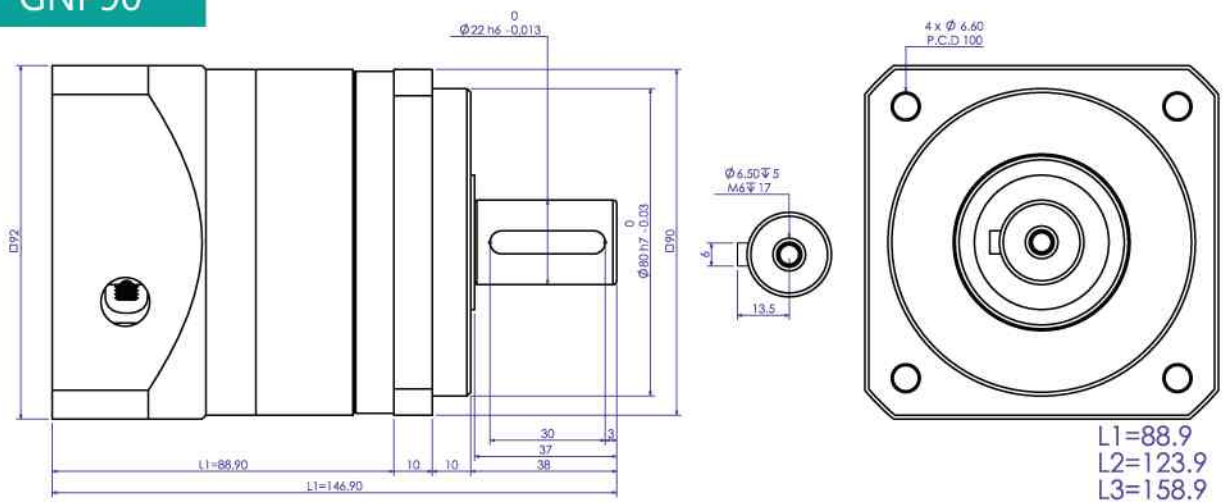
GNP40



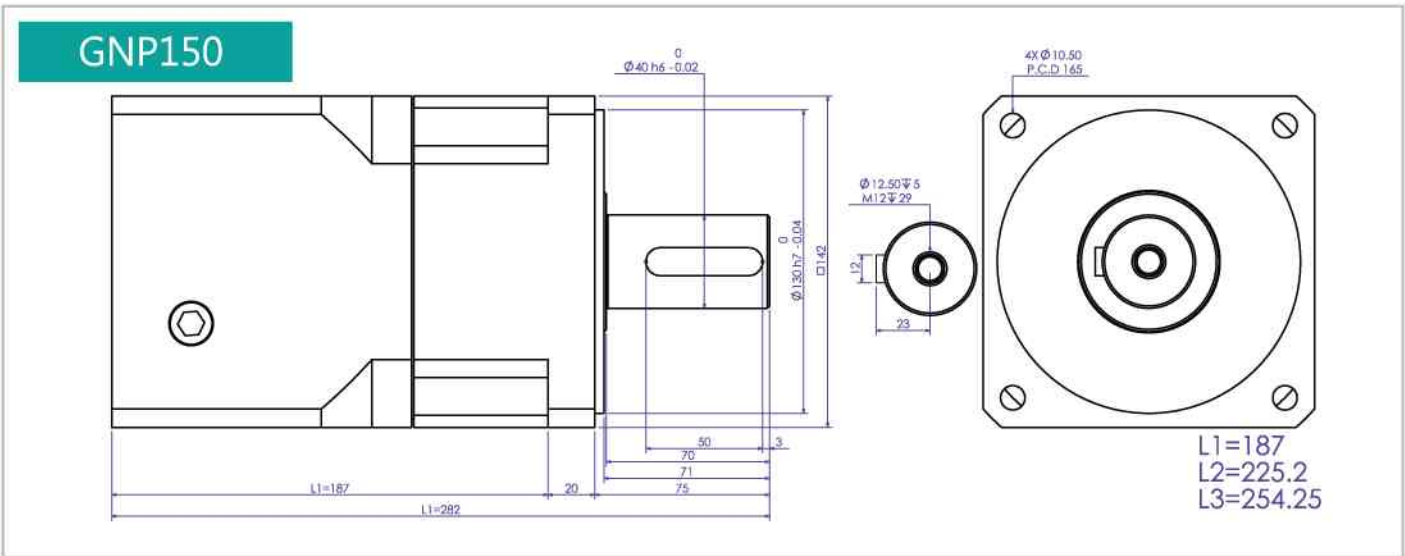
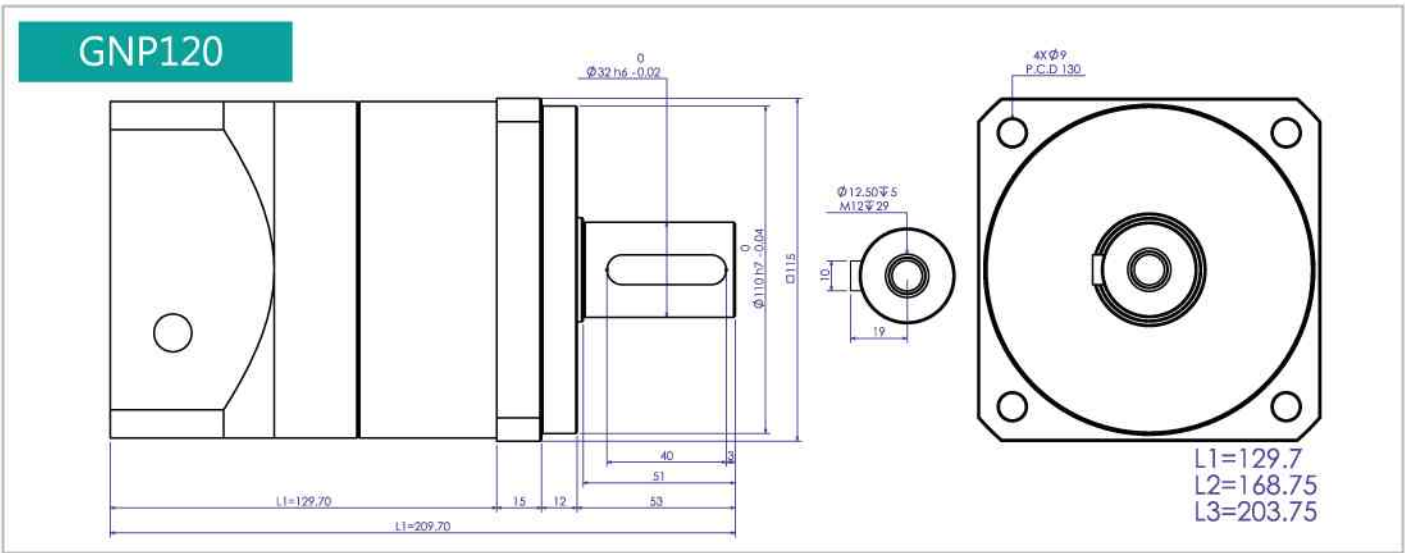
GNP60



GNP90



尺寸圖 Profile Dimensions



多枚行星減速機
Planetary Gear Reducer



本公司保有尺寸變更權利，並不另行通知，訂貨前請再度確認。
 Dimension can be modified without notice for improvement of products so please Contact us before you order.

中空旋轉平台 減速器NT系列

Hollow and Rotary Platform for a Gear Reducer



NT 系列 NT series

特長 Feature

1. 直接連結：簡易設計提升信賴性
Direct attachment with simple and reliable design.
2. 大口徑中空旋轉平台：簡潔的配線及配管
Large hollow rotary table for concise wiring and piping.
3. 定位精準高
Accurate and fast positioning. Able to quickly position inertial load.
4. 短時間定位：可在短時間內實現貫性負載的定位
Repeat origin returns easily. Save you the trouble of designing and perchance new parts.
5. 簡單原點回歸：省卻設計與零件採購的麻煩
Zero Return Easily : Not Troubled about Designing and Purchasing the Parts.

規格 Specification

說明Description / 型號Models	NT60	NT85	NT130	NT230	NTP200
連續出力轉矩 Continuous Torque (kgf*m/Nm)	0.07/0.72	0.11/1.078	1.4/13.72	3.7/36.2	3/29.4
最大出力軸矩 Max. Torque (kgf*m/Nm)	0.21/2.1	0.33/3.234	4.3/42.14	11.2/109.7	6/58.8
破壞轉矩值 Breaking point (kgf*m/Nm)	0.63/6.7	0.9/8.82	10.7/104.86	22.4/219.5	12/117.6
許用輸入轉速(r/min) Permissible Input Rotation (rpm)	3000	3000	3000	3000	3000
背隙(min-arc) Backlash (min-arc)	5	±15sec	±15sec	±15sec	±15sec
慣性矩(單一速比)(kg*cm ²) Gear Reducer Inertia	0.05	0.02	0.2	2.3	0.43
許用徑向最大荷量(kgf) Max. Load (kgf)	30	50	200	835	625
重量 Weight (kg)	0.6	1.9	5.2	13.2	10.6

NT60減速比1:10 (NT60 Series Reduction Ratio 1:10)

NT85減速比1:30 (NT85 Series Reduction Ratio 1:30)

NT130減速比1:10 (NT130 Series Reduction Ratio 1:10)

NT230減速比1:10 (NT230 Series Reduction Ratio 1:10)

NTP200減速比1:7 (NTP200 Series Reduction Ratio 1:7)

註 NT85出力軸螺絲長度請勿超過9.5mm

The depth of screw with in 9.5mm in NT85

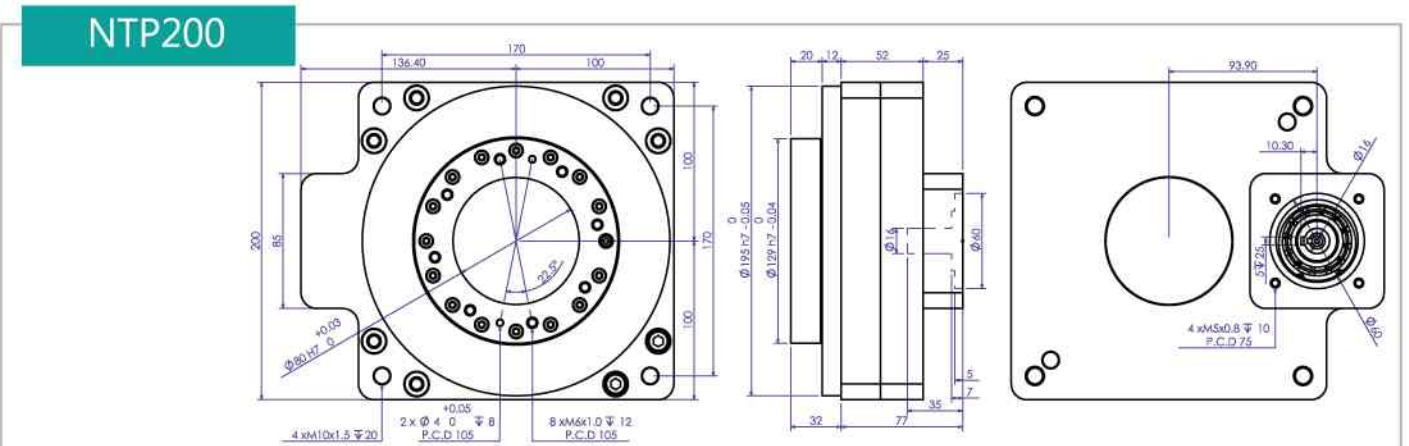
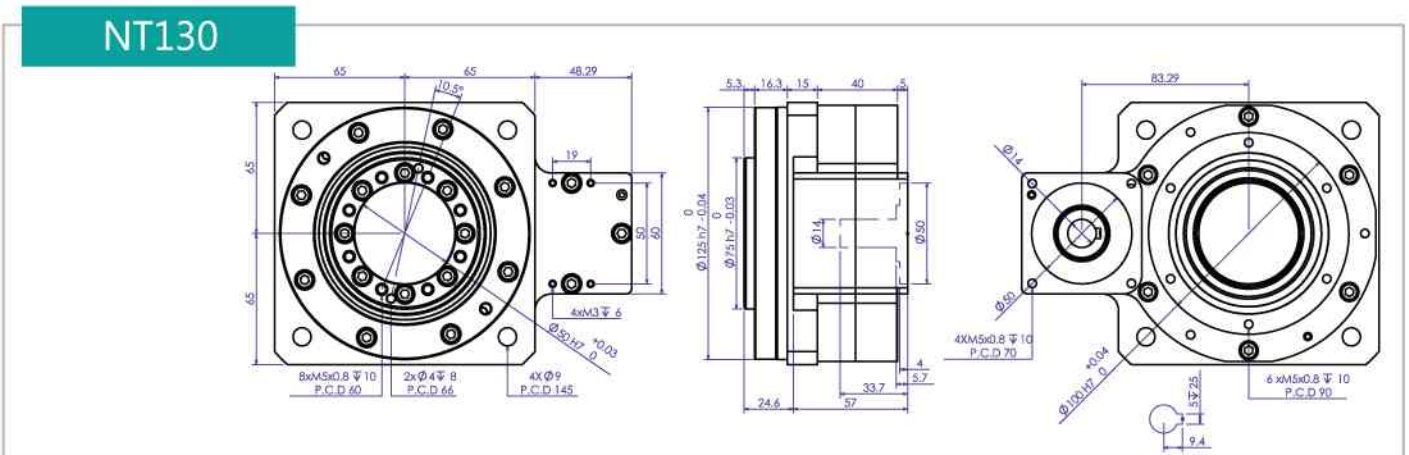
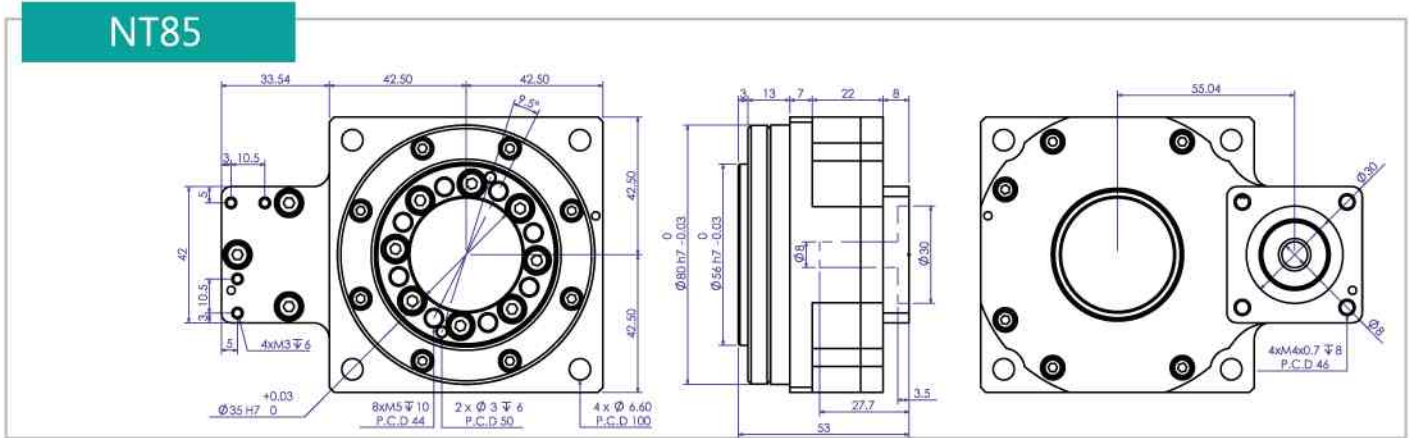
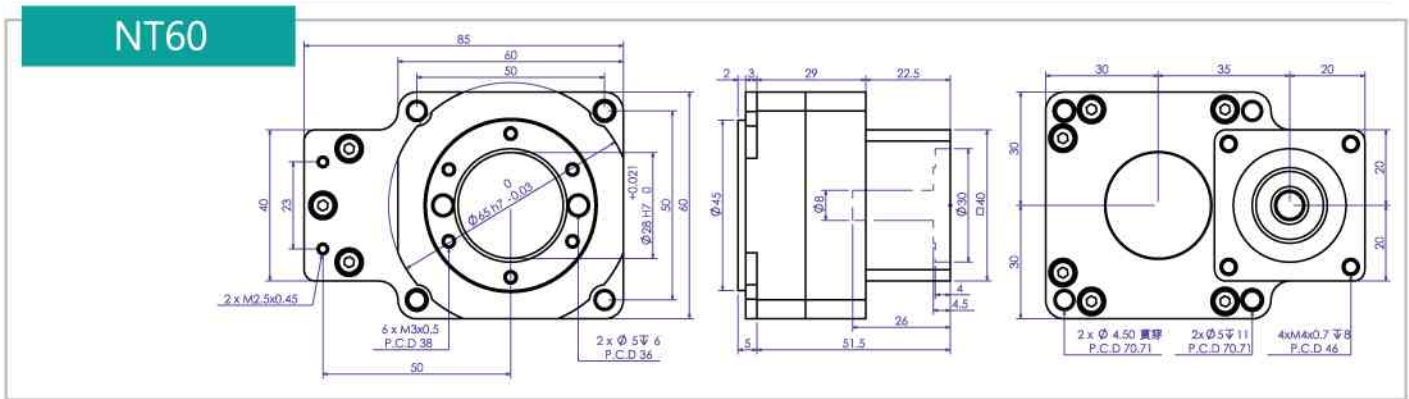
減速機的安裝：減速機本體是一個非常精密的產品，所以在安裝上必須小心，嚴禁碰撞或是以鐵鎚敲打軸心或是任一部位。

Installation of gear box: The gearbox is a high precision product, hence it must be careful in installation, and forbid knocking at the shaft and any part of the gearbox.

伺服電機：在訂貨時應告知工廠，伺服電機所需銜接法蘭及軸的尺寸。

Servomotor: Please advise the all dimensions of the pilot and output shaft when you make an order.

尺寸圖 Profile Dimensions



中空旋轉平台減速機
Hollow and Rotary Platform for a Gear Reducer

本公司保有尺寸變更權利，並不另行通知，訂貨前請再度確認。

Dimension can be modified without notice for improvement of products so please Contact us before you order.

球體減速機

Ball Reduce



SBRU 系列 SBRU series

特長 Feature

1. 無背隙、定位精度高：減速器中心部份採用滾珠取代齒輪而達到無背隙、極精準的反覆定位精度。
Backlash free with highly precise positioning: By replacing gears with steel balls, we have achieved repeated accurate positioning with 0 backlash.
2. 優越的剛性表現：球體減速器是以結構上彼此銜接的軌道中運作，並非以滾珠摩擦傳導，因此不會發生打滑的現象。
Excellent rigidity in performance: The Ball Reducer is structured to have steel balls rolling on their routes, but not with transmitted friction; therefore, it won't result in slipping incidence.
3. 超低軸向尺寸，節省空間：球體減速器使用軸向安裝，可減少體積空間。解決安裝空間不足的問題。
Compact size; designed to save space: Flexible and unrestricted installment. The solution for limited and confined space.
4. 低頻低噪音：滾珠接觸式傳動，運轉時只有滾珠轉動聲音，達到低噪音。
Whisper quiet: Only the sound of the rolling balls can be heard, achieving a low noise operation.
5. 密封式設計，不需換油，安裝方便：採用特殊潤滑油，因此無須換油及補充。此外，球體減速器並無安裝方向的限制，安裝方便。
Sealed shut design, self-lubricated and easy to install: Custom lubrication applied; maintenance free.
6. 經濟化的價格：在價格方便非常實惠合理，為您創造更多利潤空間。
Economical of the price: The price is really reasonable, and creating more profits to you.
7. 適用於各廠牌伺服電機：只需提供您使用的伺服電機規格，我們即可為您量身打造適合您的減速器。
Designed to work with any servomotors: You provide your requirements, the rest we'll take care of.

減速機的安裝：減速機本體是一個非常精密的產品，所以在安裝上必須小心，嚴禁碰撞或是以鐵鎚敲打軸心或是任一部位。

Installation of gear box: The gearbox is a high precision product; hence it must be careful in installation, and forbid knocking at the shaft and any part of the gearbox.

伺服電機：在訂貨時應告知工廠，伺服電機所需銜接法蘭及軸的尺寸。

Servomotor: Please advise the all dimensions of the pilot and output shaft when you make an order.

規格 Specification

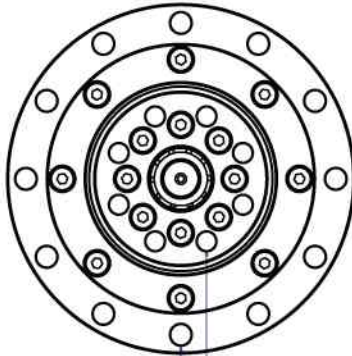
說明Description / 型號Models	減速比 Ratio	SBRU110	SBRU125	SBRU130	SBRU200	SBEE50	SBEE70	SBEE90
連續出力轉矩 Continuous Output Torque (kgf*m / Nm)	10	—	—	—	—	1.43/14.01	3.22/31.55	4/3.92
	15	—	—	—	—	—	2.11/20.68	2.78/27.24
	20	—	4.35/42.63	—	—	—	1.57/15.39	3.93/38.51
	30	—	3.17/31.06	—	9.33/91.43	1.16/11.37	2.19/21.46	1.8/17.64
	40	—	2.5/24.5	2.5/24.5	14.4/141.12	—	1.64/16.07	2.88/28.22
	42	—	—	—	10/98	—	—	—
	50	1.96/19.21	3.57/34.99	—	10.64/104.27	—	—	3.47/34
最大出力轉矩 Max. Torque(kgf*m / Nm)	10~50	3倍額定輸出轉矩 Three Times Rated Output Torque						
破壞轉矩值 Breaking point(kgf*m / Nm)	10~50	6倍額定輸出轉矩 Six Times Rated Output Torque						
慣性矩(單一速比)(kg*cm ²) Gear Reducer Inertia	10~50	0.42	0.64	0.56	0.26	0.06	0.14	0.92
許用輸入轉速(r/min) Permissible Input Rotation (rpm)	10~50	3000						
容許徑向力 Permissible Radial Force(kgf)	10~50	50	170	170	200	20	40	80
入力孔徑 Input Shaft Diameter(mm)	10~50	14	14	14	19、22、24	8	14	14~19
入力軸徑 DSSolid Input Shaft Diameter(mm)	10~50	X	X	X	X	X	X	X
重量 Weight(kg)	10~50	2.5	3.9	4.3	12.65	0.46	3.4	4.3

說明Description / 型號Models	減速比 Ratio	SBRE50	SBDE70	SBDE90	SBPE50	SBPE70	SBPE90
連續出力轉矩 Continuous Output Torque (kgf*m / Nm)	10	1.43/14.01	3.22/31.55	4/3.92	1.43/14.01	3.22/31.55	4/3.92
	15	—	2.11/20.68	2.78/27.24	—	2.11/20.68	2.78/27.24
	20	—	1.57/15.39	3.93/38.51	—	1.57/15.39	3.93/38.51
	30	1.16/11.37	2.19/21.46	1.8/17.64	1.16/11.37	2.19/21.46	1.8/17.64
	40	—	1.64/16.07	2.88/28.22	—	1.64/16.07	2.88/28.22
	42	—	—	—	—	—	—
	50	—	—	3.47/34	—	—	3.47/34
最大出力轉矩 Max. Torque(kgf*m / Nm)	10~50	3倍額定輸出轉矩 Three Times Rated Output Torque					
破壞轉矩值 Breaking point(kgf*m / Nm)	10~50	6倍額定輸出轉矩 Six Times Rated Output Torque					
慣性矩(單一速比)(kg*cm ²) Gear Reducer Inertia	10~50	0.06	0.14	0.92	0.06	0.14	0.92
許用輸入轉速(r/min) Permissible Input Rotation (rpm)	10~50	3000					
容許徑向力 Permissible Radial Force(kgf)	10~50	25	40	108	20	40	80
入力孔徑 Input Shaft Diameter(mm)	10~50	X	14	14~19	8	14	16~19
入力軸徑 DSSolid Input Shaft Diameter(mm)	10~50	8	X	X	X	X	X
重量 Weight(kg)	10~50	0.46	3.4	4.3	0.46	3.4	4.3

註：SBRU110出力軸螺絲長度請勿超過10.5mm The depth of screw within 10.5mm in SBRU110.
SBRU130出力軸螺絲長度請勿超過13.5mm The depth of screw within 13.5mm in SBRU130.
SBRU系列U為交叉式滾紙軸承 Use cross roller bearing.

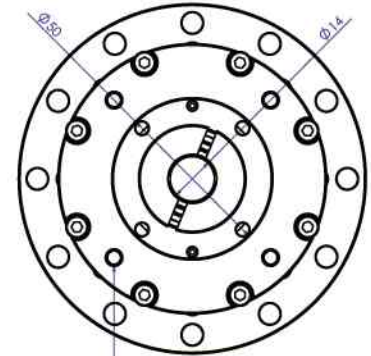
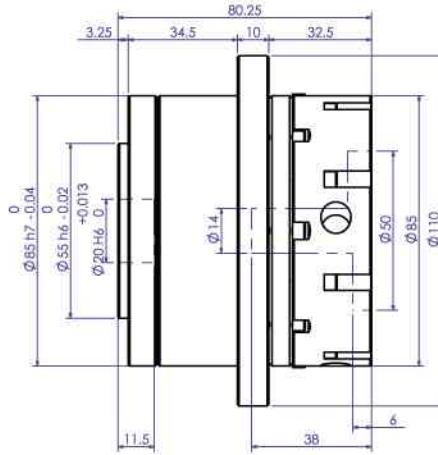
伺服電機：在訂貨時應告知工廠，伺服電機所需銜接法蘭及軸的尺寸。
Servomotor: Please advise the all dimensions of the pilot and output shaft when you make an order.

SBRU110



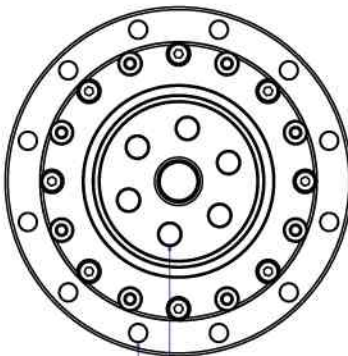
12 x ϕ 6.60
P.C.D 98

8 x M6x1.0 ∇ 11.5
P.C.D 42.5



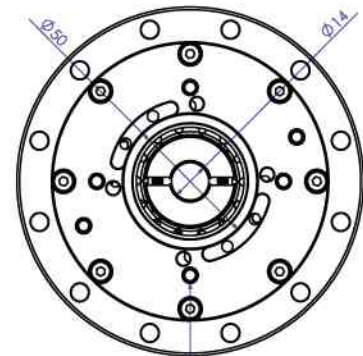
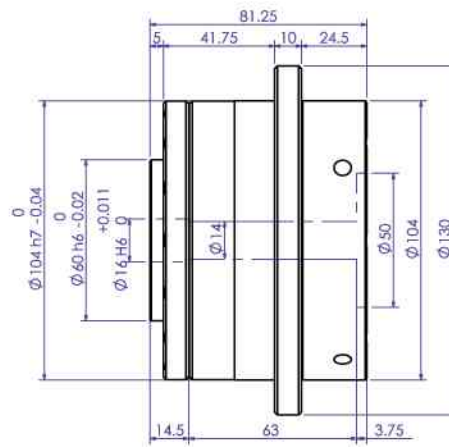
4 x M5x0.8 ∇ 10
P.C.D 70

SBRU130



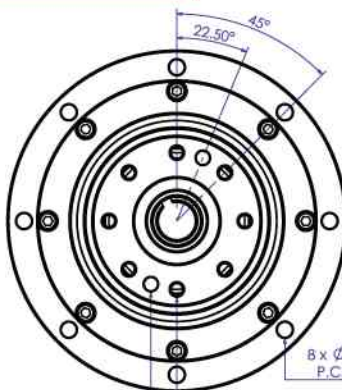
12 x ϕ 6.60
P.C.D 117

6 x M8x1.25 ∇ 14.5
P.C.D 40



4 x M5x0.8 ∇ 10
P.C.D 70

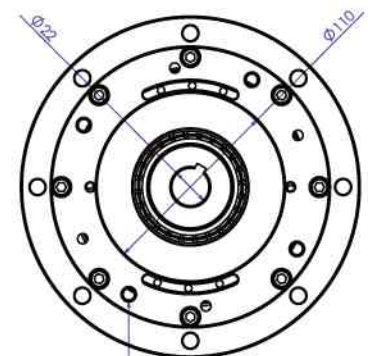
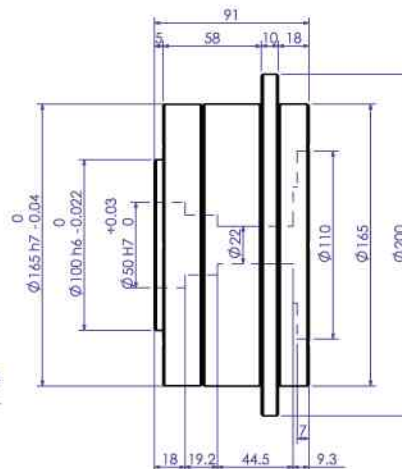
SBRU200



2X ϕ 8 ∇ 8
P.C.D 80

8 x M8x1.25 ∇ 14
P.C.D 80

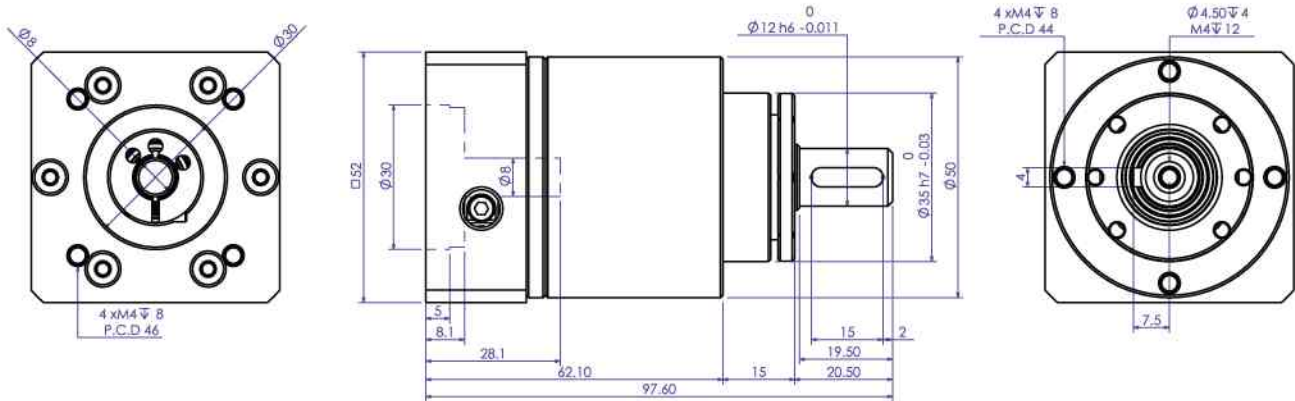
8 x ϕ 9 貫穿
P.C.D 180



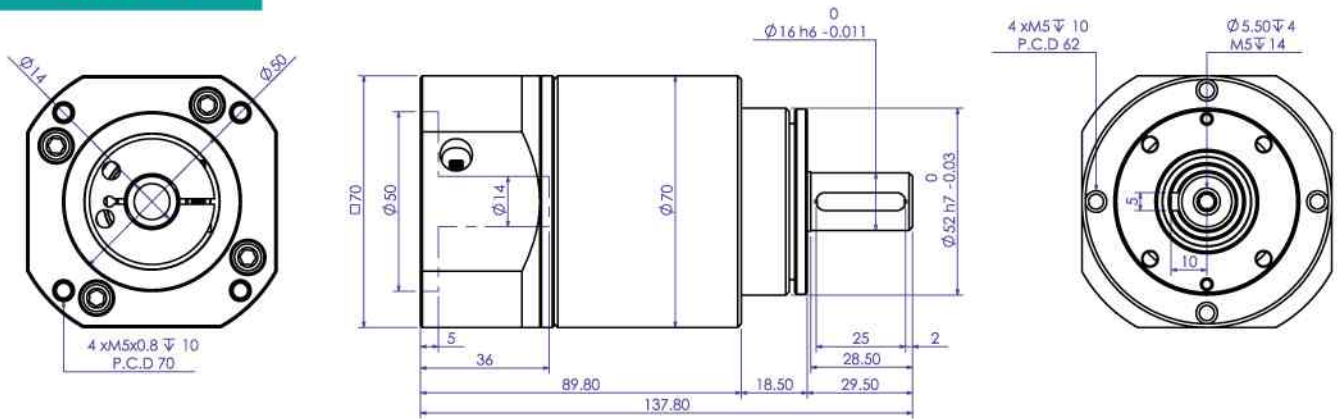
4 x M8x1.25 ∇ 12
P.C.D 145

尺寸圖 Profile Dimensions

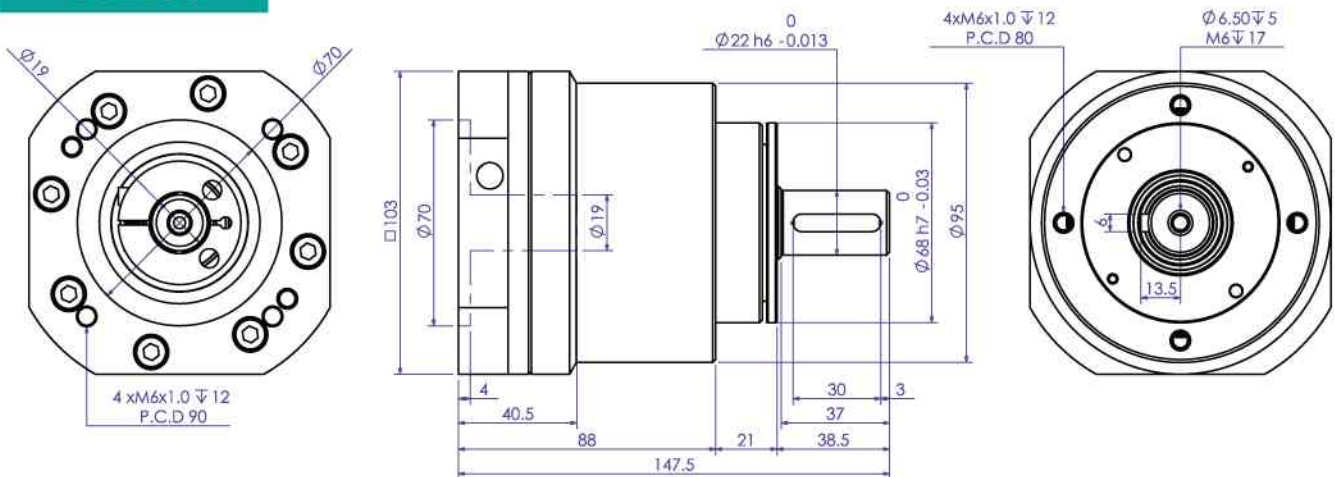
SBEE50



SBEE70



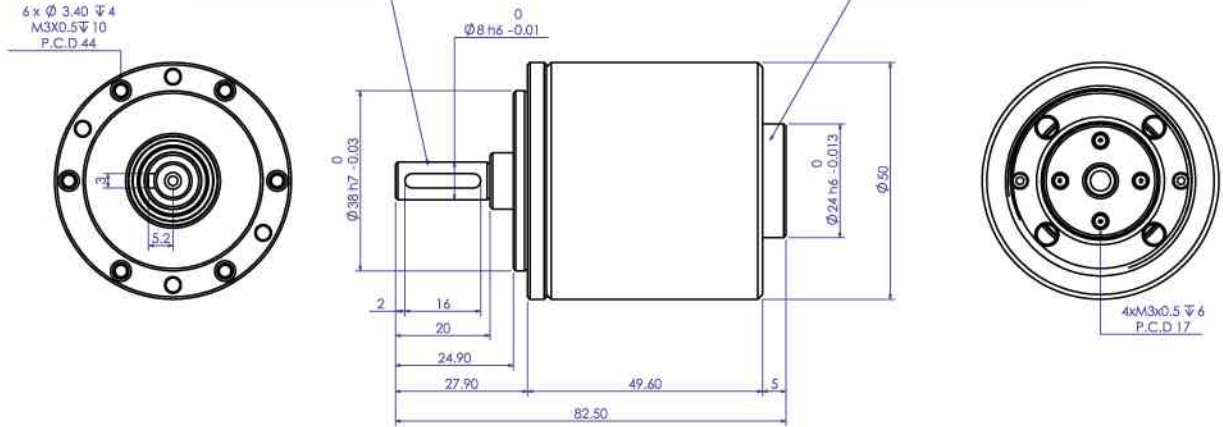
SBEE90



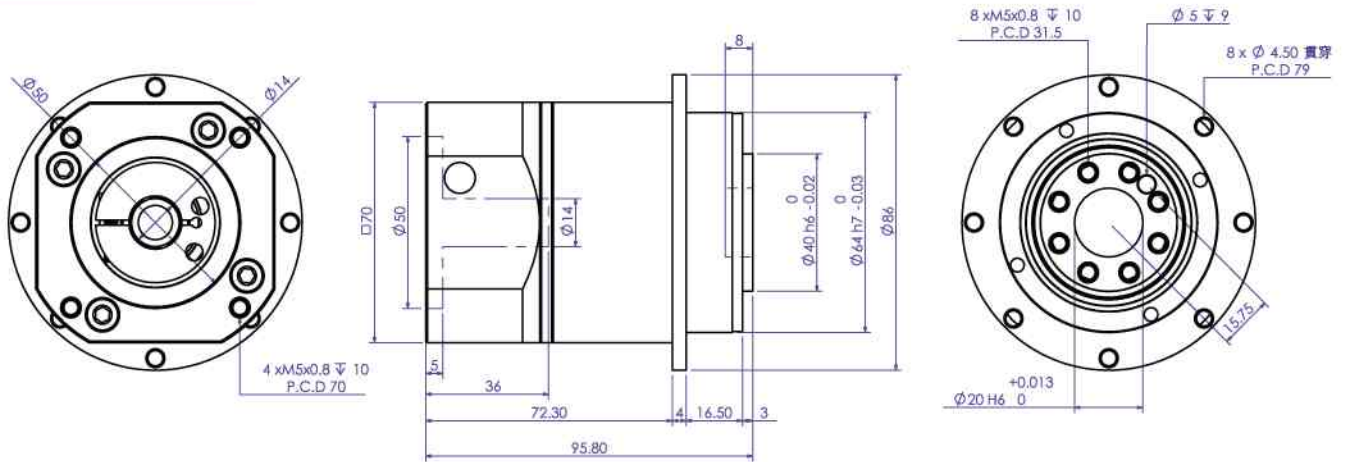
SBRE50

輸入軸 INPUT

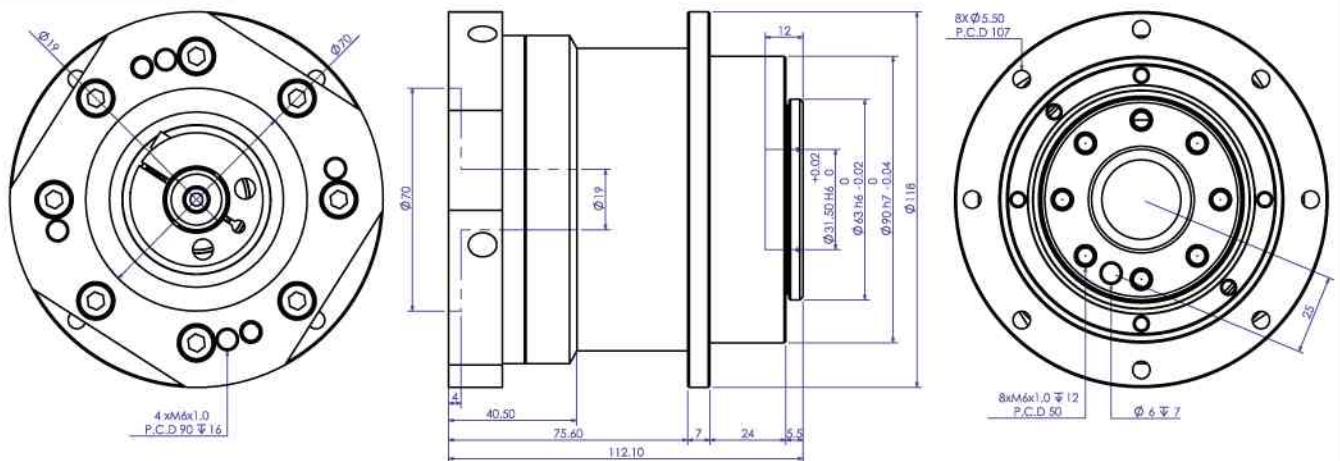
輸出軸 OUTPUT



SBDE70



SBDE90

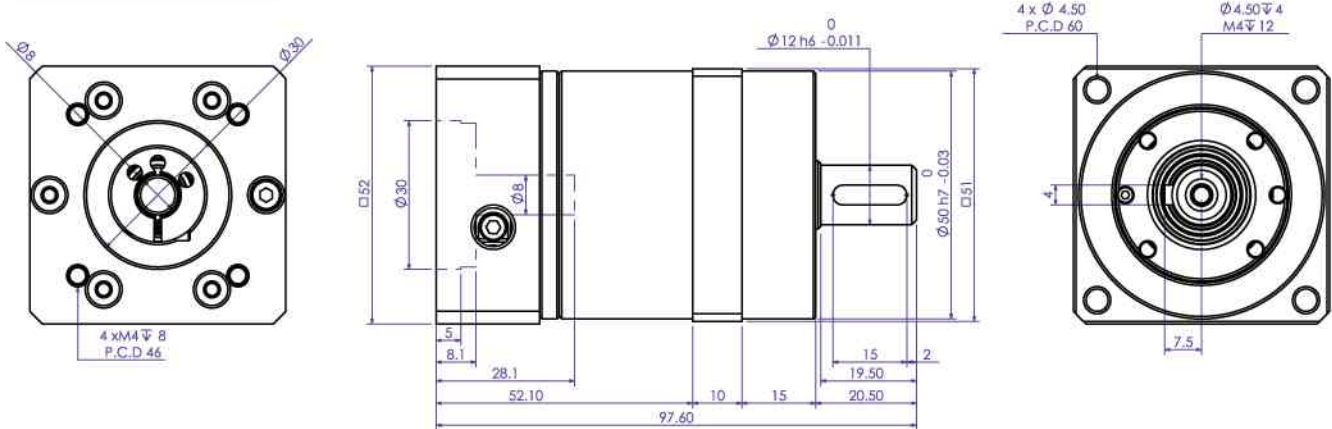


本公司保有尺寸變更權利，並不另行通知，訂貨前請再度確認。

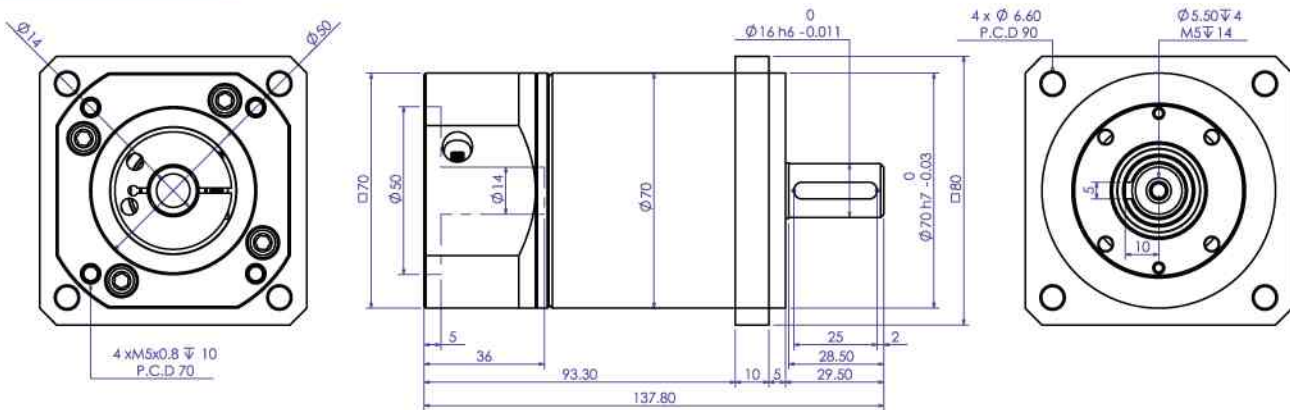
Dimension can be modified without notice for improvement of products so please Contact us before you order.

尺寸圖 Profile Dimensions

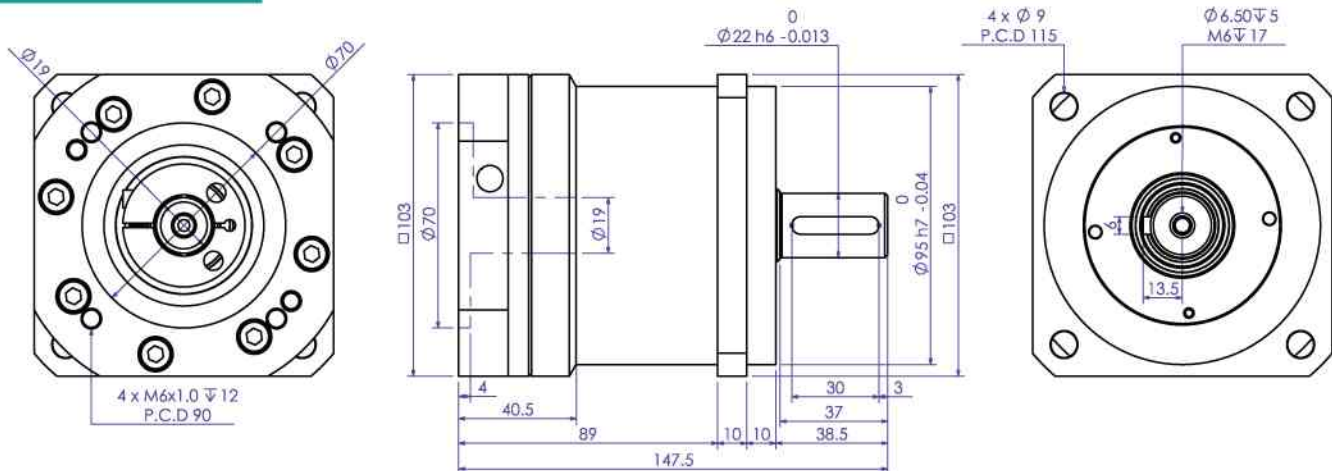
SBPE50



SBPE70



SBPE90





推引器 PIS Power Base

PIS-500FCJ-40ST/CAP

規格

Specification

有效長度

Effective Length

有套管

Contain the Cases

特長 Feature

1. 速度快：高速移動快，每秒可移動 4 000mm/s
Fast movement; travel 4000mm/s
2. 反應快：應達靈敏，組裝容易，可二機組或四機組同動
Fast response to commands; easy to install. Can be operated in combinations of 2 or 4 units.
3. 效率高：採直線運動，軸不會自轉
High efficiency: Linear motion while shaft remains steady.

500	有效長度 Effective Length	四隻連動最大推力 Max. thrust in group of four.
	40mm	500kgf
60mm	500kgf	
170mm	420kgf	
270mm	400kgf	
370mm	300kgf	
470mm	180kgf	

1. 模數1.5，齒數18齒
Module is 1.5, the number of gear teeth is 18.
2. 60mm單一機體，使用最大推力300kgf
The effective length of one power base is 60mm, the Max. thrust is 300kgf.
3. 單一齒數使用最大接觸次數為5*10⁷
Surface contact of a single cog is 5*10⁷
4. 工作節圓直徑27mm，圓周有效長度84.82mm
The operating pitch diameter is 27mm, permissible circumference is 84.82mm.

900	有效長度 Effective Length	四隻連動最大推力 Max. thrust in group of four.
	60mm	800kgf
170mm	700kgf	
270mm	600kgf	
370mm	500kgf	
470mm	400kgf	

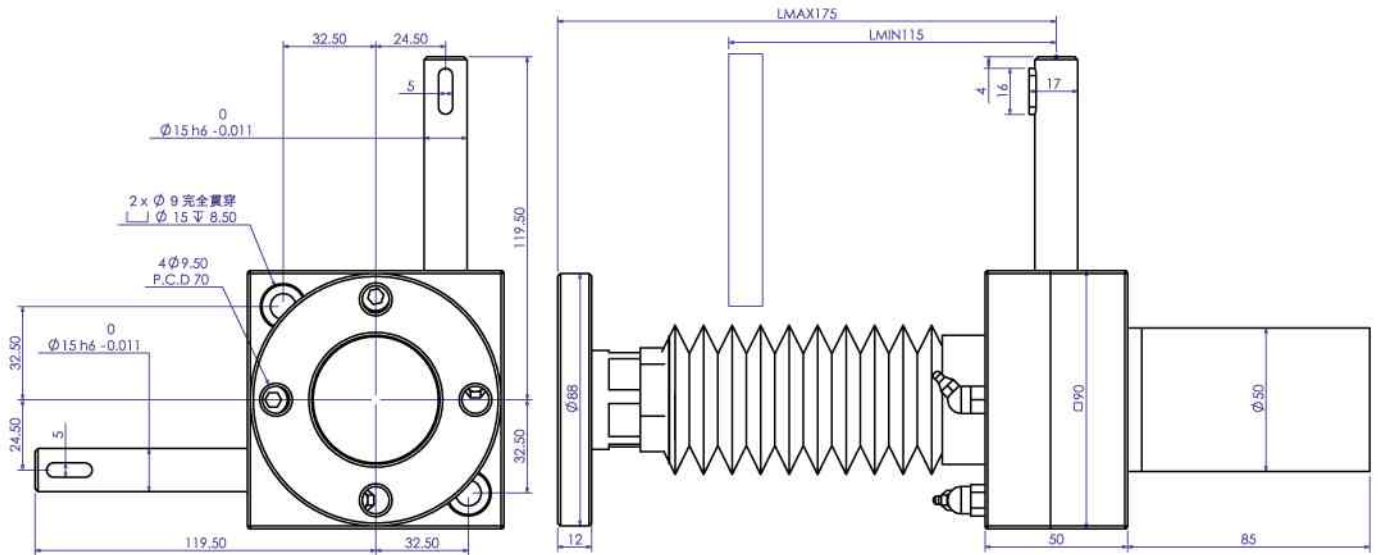
1. 模數2.0，齒數20齒
Module is 2.0, the number of gear teeth is 20.
2. 60mm單一機體，使用最大推力400kgf
The effective length of one power base is 60mm, the Max. thrust is 400kgf.
3. 單一齒數使用最大接觸次數為5*10⁷
Surface contact of a single cog is 5*10⁷
4. 工作節圓直徑40mm，圓周有效長度125.66mm
The operating pitch diameter is 40mm, permissible circumference is 125.66mm.

伺服電機：在訂貨時應告知工廠，伺服電機所需銜接法蘭及軸的尺寸。

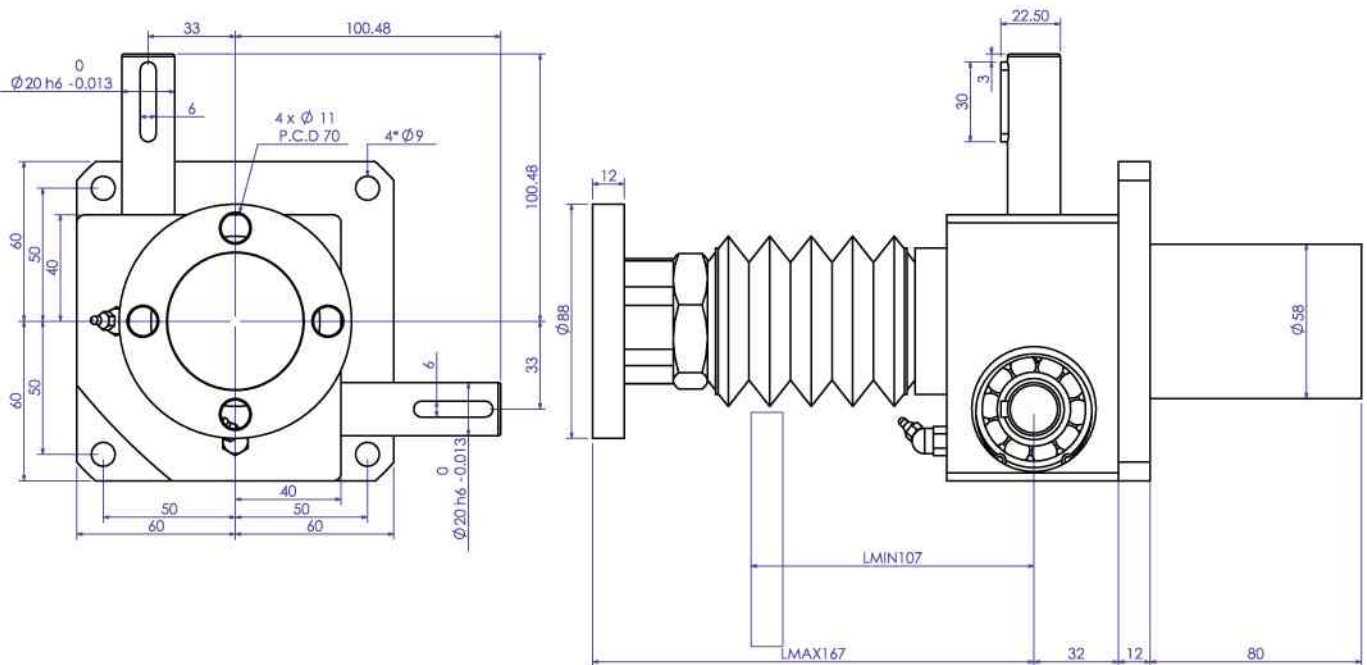
Servomotor: Please advise the all dimensions of the pilot and output shaft when you make an order.

尺寸圖 Profile Dimensions

推引器500-60 Power Base 500-60



推引器900-60 Power Base 900-60



推引器 PIS Power Base



SPB少齒差行星減速機

SPB Planetary Drive

SPB 系列 SPB series

特長 Feature

1. 精度出廠值為30弧秒
Precision: 30arc-sec
2. 出力轉矩1.0~5.5kgf*m(9.8Nm~53.9Nm)。
Torque capacity: 1.0- 5.5kgf*m (9.8Nm - 53.9 Nm)
3. 機械輸出特性：介於諧波齒輪與擺線針輪之間。
The mechanical output feature is between harmonic drive and cycle drive.
4. 尺寸特性：所有減速機構中，最精巧的一類
The sizes are some of the most compact of all gearboxes.

規格Specification

說明Description / 型號Models	SPB40	SPB60	SPB90
連續出力轉矩 Continuous Torque(kgf*m/Nm)	0.3/2.94	1.8/17.64	1.8/17.64
最大出力轉矩 Max. Torque (kgf*m/NM) (kgf*m/Nm)	1.0/9.8	3.1/30.38	5.5/53.9
破壞轉矩值 Breaking Point (kgf*m/NM) (kgf*m/Nm)	1.6/15.68	3.6/35	8.2/80.36
許用輸入轉速 Permissible Input Rotation (r/min)	4500	3000	3000
背隙 Backlash (arc-min)	0.5	0.5	0.5
慣性矩(單一速比)(kg*cm ²) Gear Reducer Inertia	0.015	0.24	0.46
剛性 Rigidity (Nm/arc-min)	3	10	15
重量 Weight (kg)	0.27	1.1	3.3

* 減速比 RATIO TABLE OF GEAR REDUCER

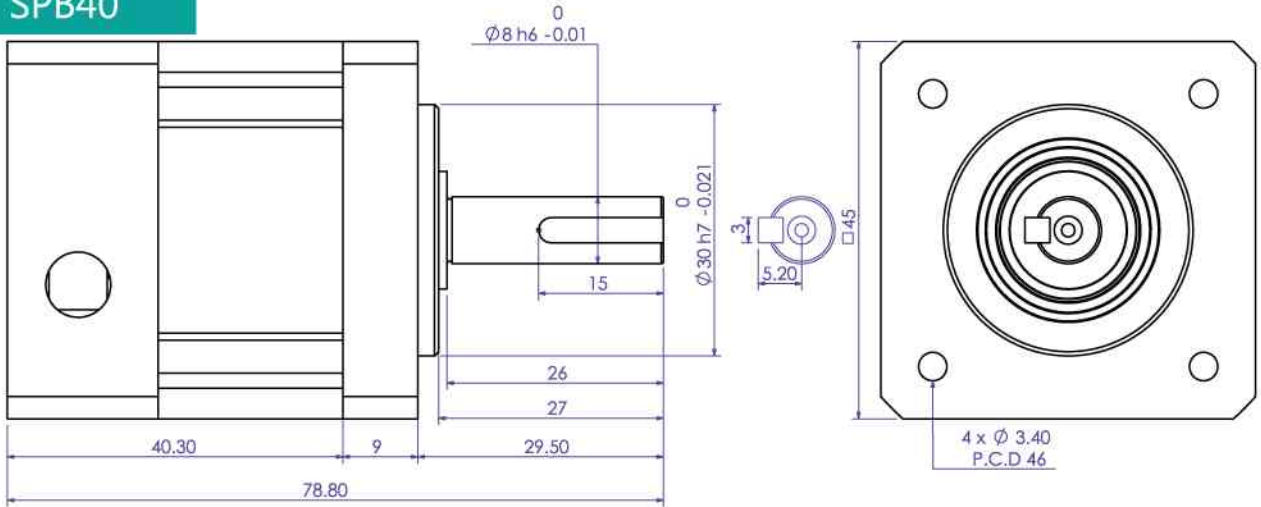
SPB系列 減速比1:20~1:100 (SPB series reduction ratios: 1:20 - 1:100)

減速機的安裝：減速機本體是一個非常精密的產品，所以在安裝上必須小心，嚴禁碰撞或是以鐵鎚敲打軸心或是任一部位。

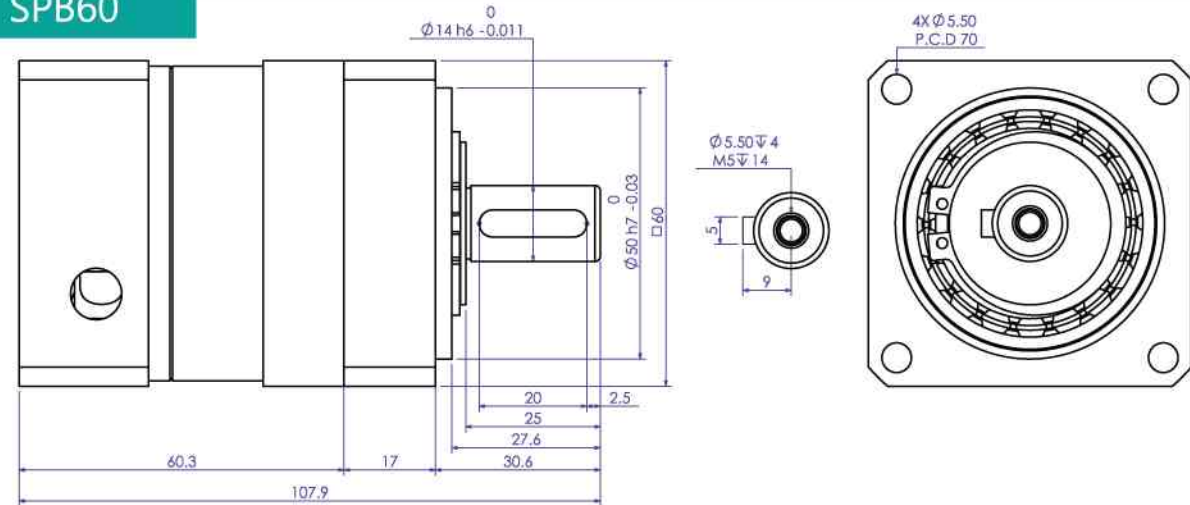
Installation of gear box: The gearbox is a high precision product; hence it must be careful in installation, and forbid knocking at the shaft and any part of the gearbox.

尺寸圖 Profile Dimensions

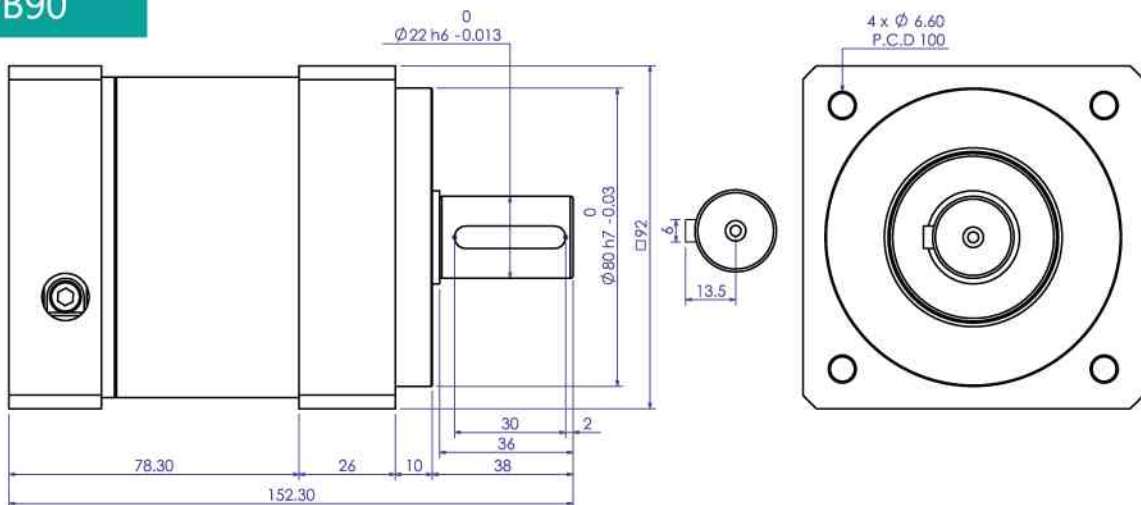
SPB40



SPB60



SPB90



少齒差行星減速機- 交叉式滾子軸承系列 Planetary Drive- cross roller bearing



SRB 系列 SRB series

特長 Feature

1. 高精度，低噪音。
High precision; low noise
2. 採用交叉式滾子軸承。
Use cross roller bearing
3. 高減速比，單級可達1:10000
High reduction ratio with almost zero backlash. Can reduce speed down to as low as 1:10000
4. 尺寸特性：所有減速機構，最精巧的一類。
The sizes are some of the most compact of all gearboxes

規格 Specification

說明 Description / 型號 Models	SPR250	SDBF80	SRB150FA
連續出力轉矩 Continuous Torque (kgf*m/NM)	10/98	5.03/49.29	6.94/68.07
最大出力轉矩 Max. Torque (kgf*m/NM)	30/294	15.09/147.88	20.84/204.23
破壞轉矩值 Breaking Point (kgf*m/NM)	60/588	30.18/295.76	41.69/408.57
許用輸入轉速 Permissible Input Rotation (r/min)	3000	3000	3000
背隙 Backlash (arc-min)	≥1	≥1	0.25
慣性矩(單一速比)(kg*cm ²) Gear Reducer Inertia	0.322	0.189	2.932
重量 Weight (kg)	20.5	3.6	5.3
減速比 Ratio table of gear reducer	25	800	90

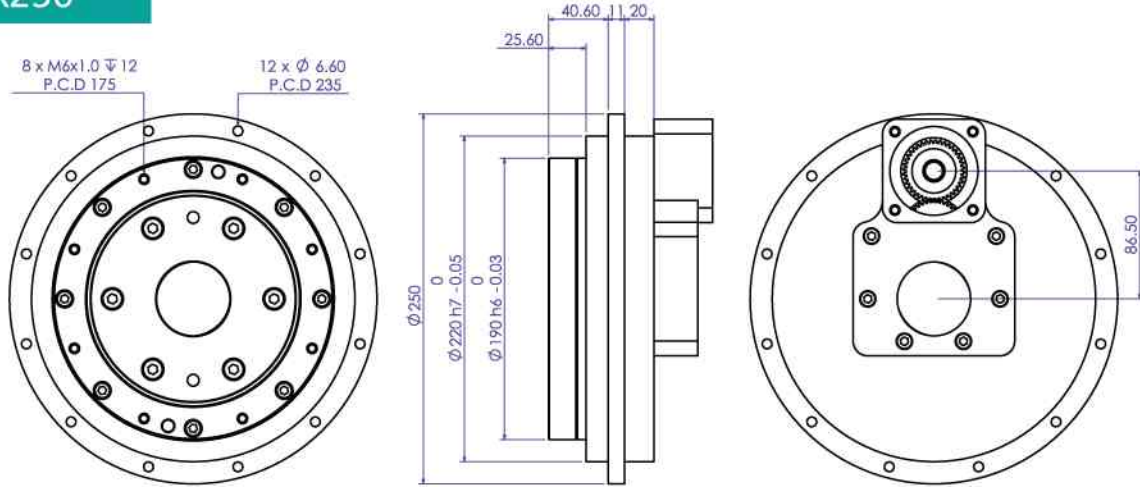
* 尚可另行訂製減速機比數

減速機的安裝：減速機本體是一個非常精密的產品，所以在安裝上必須小心，嚴禁碰撞或是以鐵鎚敲打軸心或是任一部位。

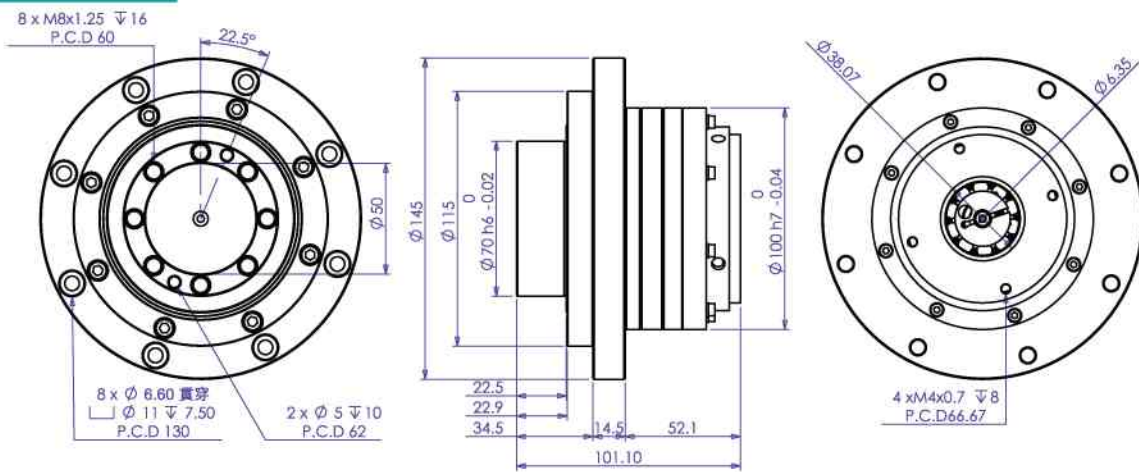
Installation of gear box: The gearbox is a high precision product; hence it must be careful in installation, and forbid knocking at the shaft and any part of the gearbox.

尺寸圖 Profile Dimensions

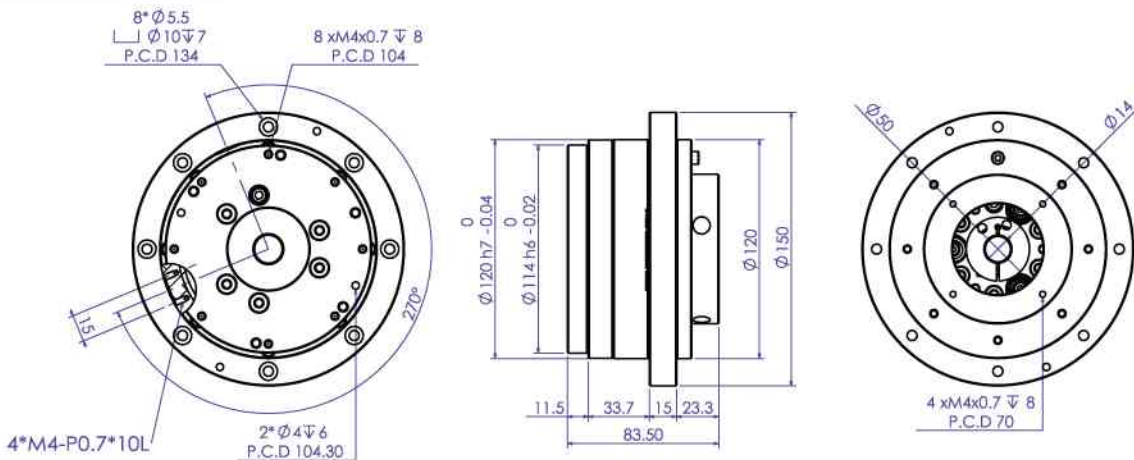
SPR250



SDBF80



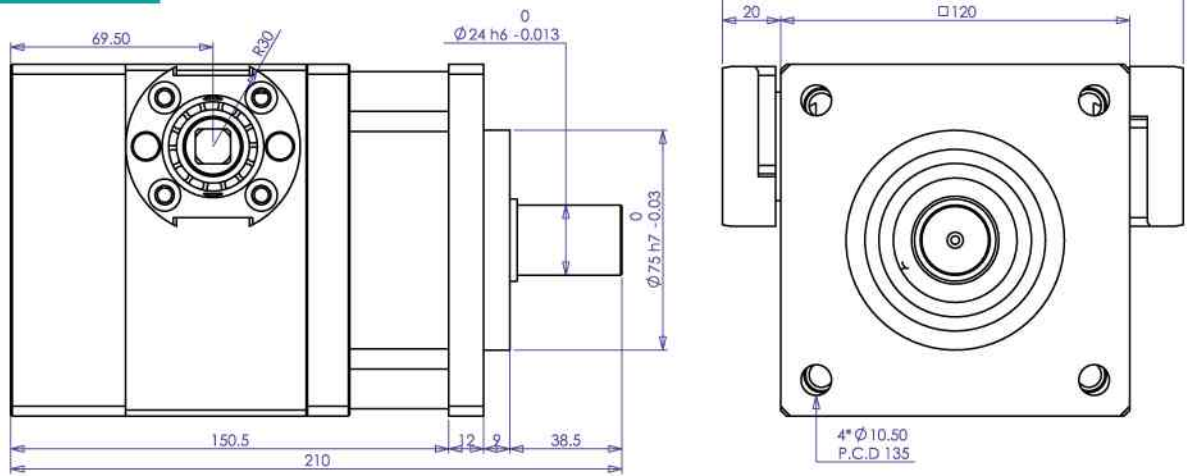
SPB150FA



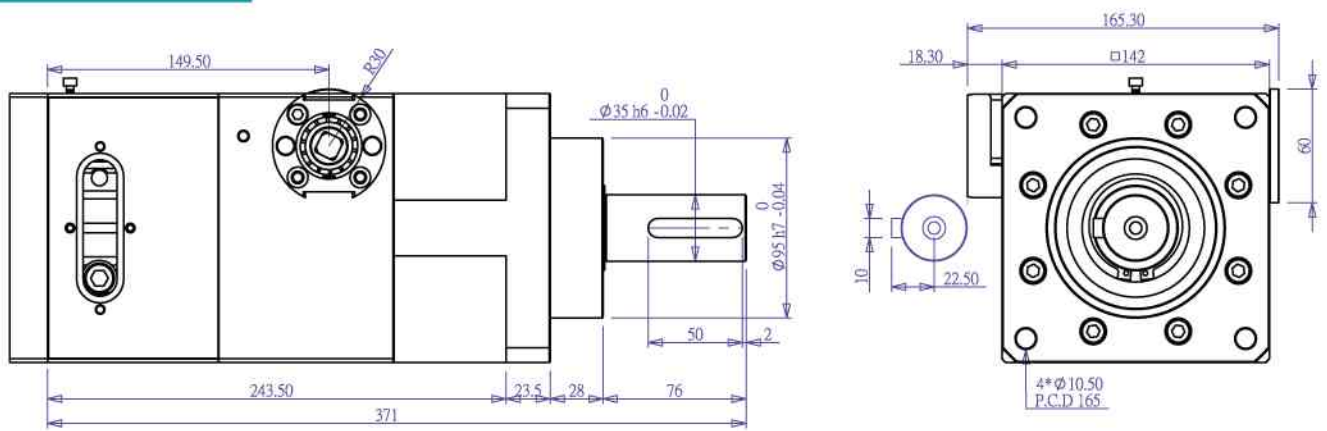
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Dimension can be modified without notice for improvement of products so please Contact us before you order.

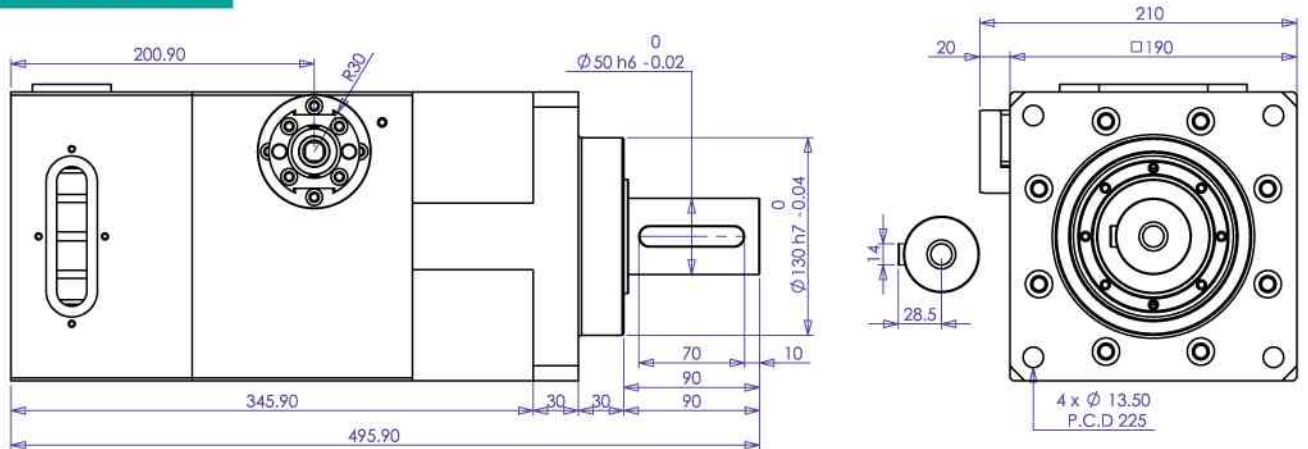
MF120MS



MF150MS



SPB C190-25



本公司保有尺寸變更權利，並不另行通知，訂貨前請再度確認。

Dimension can be modified without notice for improvement of products so please Contact us before you order.

減速機選用盡量選用接近理想減速比：

Choose an applicable reduction ratio：

$$\text{減速比} = \frac{\text{伺服電機轉速}}{\text{減速機出力軸轉速}}$$

Reduction ratio = $\frac{\text{RPM servomotor}}{\text{RPM gear reducer output}}$

扭力計算[√]：對減速機的壽命而言，承受扭力計算非常重要，並且要注意加減速的最大轉矩值(TP)，是否超過減速機之最大負載扭力。

CALCULATION OF REQUIRED TORQUE:

The lifetime of gear reducer depends on calculation of required torque. Also please notice peak torque happened in accelerating or decelerating should be less then the maximum load of gear reducer.

參考用計算公式 calculating formula for reference

$$TP = ((GD^2_L + GD^2_a + GD^2_M) * N / (375 * t) \pm TL) / R$$

TP 所需啟動轉矩，亦是減速機必須承受之瞬間轉矩。

Min. troque required at moment of starting, that gear reducer should bear against peak torque at moment.

GD²_M 為電機本身轉子飛輪效應矩。
Rotary inertia of motor rotor.

GD²_L 為負載之飛輪效應矩，經減速機等化到電機轉子。
The rotary inertia of load reflected motor rotor.

GD²_a 為減速機之飛輪效應矩等化到電機轉子
Rotary inertia of motor rotor.

R 為電機至減速機出力側總減速比。
Total reduction ratio.

$$R = \frac{\text{RPM (motor)}}{\text{RPM (load)}}$$

T_L 為負載之靜態轉矩等化到電機轉子。
The static torque of load reflected to motor rotor.

$$T_L = \frac{T \text{ load}}{(R * \text{EFF}) \text{ EFF} = \text{effciency}}$$

T 設定所需之加速或減速時間。
The time required in accelerate/decelerate.

N 為電機工作轉速。
Motor rotor speed RPM.

+ 為加速。
The time required in accelerate/decelerate.

- 為減速。
The time required in accelerate/decelerate.