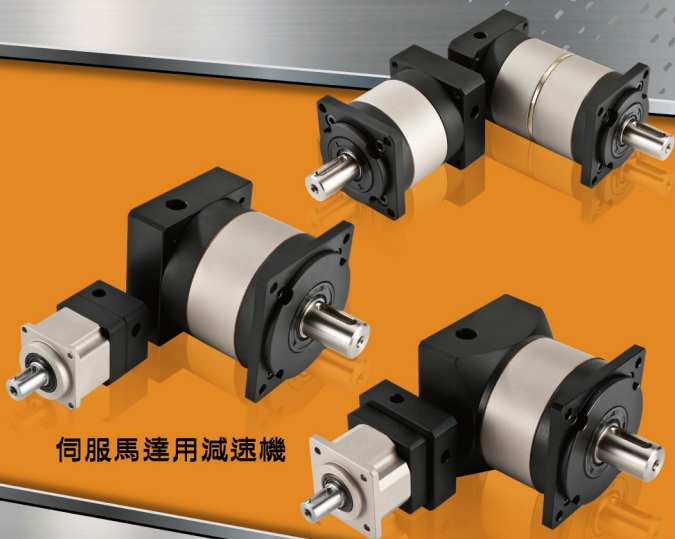


Y Y C



HIGH PRECISION PLANETARY REDUCER



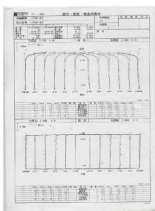
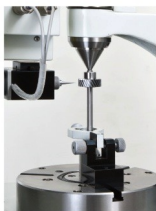
伺服馬達用減速機



Innovative R&D/Quality Guaranteed

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齒形、齒筋檢驗表
Inspection Report of Gear Profile / Lead

Automation Machining Equipment



SUNMAX REDUCER CO., LTD.

產品技術 Product Technology

PF系列行星式減速機擁有二項多國專利之潤滑結構，運用在內螺旋齒輪結構，確保最高效率輸出。

專利 1:降低行星齒輪運轉所產生的軸向推力。

專利 2:增加潤滑,降低磨擦阻力與噪音。

Two multinational patents has been obtained on the lubrication structure of PF series planetary reducers to ensure the highest output value.

Patent 1: To reduce axial thrust bearing from the running of gears.

Patent 2: To reduce frictional resistance and noise level.



馬達連接板模組化設計/Modularized motor adapter design

馬達連接板和軸套採用模組化設計，適用於任何廠牌、形式的伺服馬達。
Motor adapter and bushing module are modularized designed, which applied to any brands, types of servomotors.



特殊的表面處理/Particular surface treatment

齒輪箱表面利用無電解鍍處理，馬達連接板採黑色陽極處理，提高環境的耐受性和抗腐蝕能力。
Electroless Nickel deposition treatment and black anodizing treatment are employed to gear box surface and motor adapter module respectively. The tolerance to the environment and resistant to corrosion are enhanced.



合成複合皂基潤滑油脂/Synthetic complex soap grease

使用合成複合皂基潤滑油脂，長效潤滑不漏油、防鏽、低噪音、低磨耗。
Adopting synthetic complex soap grease to have longterm lubrication, leak-proof, antirust, low noise and low friction manufacturing process.



一體式結構/Integrated structure

行星臂架與輸出軸採一體式的結構設計，確保最大耐扭力剛性及穩定性。
Integrated design of planet carrier and output shaft ensures the maximum torque stiffness and stability.



表面穩定的氣體氮化/Plasma nitriding heat treatment

齒輪材料選用鎢鉬鉕合金鋼，經調質熱處理至基材硬度25HRC，在利用氣體氮化設備將齒輪表面之硬度氮化至600HV，以獲得最佳的耐磨耗和耐衝擊韌性。
To gain the best abrasion performance and impact resistance, Chromium Molybdenum Vanadium Alloy steel is selected as raw material. Accompany with quenching and tempering heat treatment process, the core hardness is increased to 25 HRC. Accompany with plasma nitriding heat treatment process, the surface hardness is increased to 600 HV.

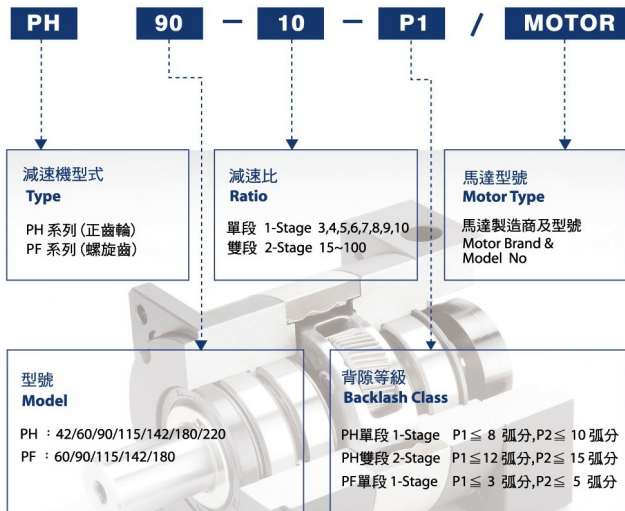


螺旋齒輪設計/Helical gear design

減速機採用螺旋齒輪設計，其齒形嚙合率為一般正齒輪的35%以上，具有運轉平順、高輸出扭矩和低背隙的特性。

Adopting helical gear design, the contact ratio of planetary reducer is 35% higher than vertical one. Smooth running, high output torque and low backlash are distinguished features.

範例:PH90-10-P1 / MOTOR

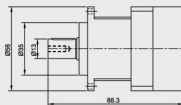
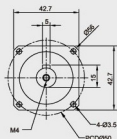


**High Precision
Customized Manufacturing**

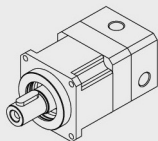
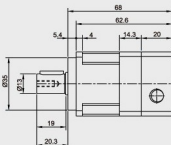


PH42-L1

Single Stage Type



ROTATE 45°VIEW



規格 SPECIFICATIONS

單節式 Single Stage:

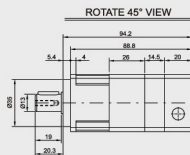
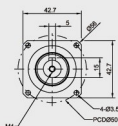
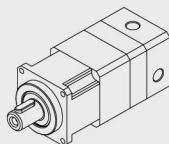
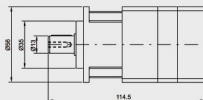
減速比 Gear Ratio	3, 4, 5, 7, 10
最高輸入轉速 Max. Input Speed	6000rpm
額定輸入轉速 Nominal Input Speed	3000rpm
效率 Efficiency	≥ 95%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	10.19Nm/arcmin
使用溫度 Operating Temp.	- 10°C ~ +90°C
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	57dB/1m
精密背隙 High Precision Backlash P1	≤ 8 arcmin
標準背隙 Standard Backlash P2	≤ 10 arcmin
最大徑向力 Max. Radial Load	820N
最大軸向力 Max. Axial Load	411N
重量 Weight	0.9KG

減速比 Gear Ratio	3	4	5	7	10
額定輸出力矩 Nominal Output Torque N . m	14	12	14	12	9



PH42-L2

Double Stage Type



規格 SPECIFICATIONS

雙節式 Double Stage:

減速比 Gear Ratio	15, 16, 20, 25, 30, 35, 40, 50, 70, 100
最高輸入轉速 Max. Input Speed	6000rpm
額定輸入轉速 Nominal Input Speed	3000rpm
效率 Efficiency	≥ 90%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	10.19Nm/arcmin
使用溫度 Operating Temp.	- 10°C ~ +90°C
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	57dB/1m
精密背隙 High Precision Backlash P1	≤ 12 arcmin
標準背隙 Standard Backlash P2	≤ 15 arcmin
最大徑向力 Max. Radial Load	820N
最大軸向力 Max. Axial Load	410N
重量 Weight	1.5KG

減速比 Gear Ratio	15	16	20	25	30	35	40	50	70	100
額定輸出力矩 Nominal Output Torque N . m	14	12	12	14	14	12	12	14	12	9

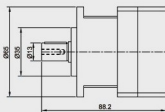
* 連續運轉10,000小時 / 10,000 Hours Continuous Operation

* 噪音值(輸入:3000rpm; 無負載下所得)/Noise Level (Input: 3000 rpm; No Load)

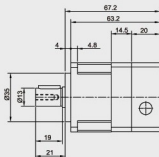
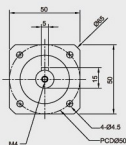
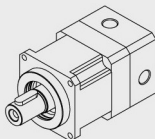
* 連接板視馬達尺寸製作 Connection plate is adjustable to motor sizes

PH50-L1

Single Stage Type



ROTATE 45°VIEW



規格 SPECIFICATIONS

單節式 Single Stage:

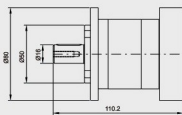
減速比 Gear Ratio	3, 4, 5, 7, 10
最高輸入轉速 Max. Input Speed	6000rpm
額定輸入轉速 Nominal Input Speed	3000rpm
效率 Efficiency	≥ 95%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	10.19Nm/arcm
使用溫度 Operating Temp.	- 10℃ ~ + 90℃
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	57dB/1m
精密背隙 High Precision Backlash P1	≤ 8 arcmin
標準背隙 Standard Backlash P2	≤ 10 arcmin
最大徑向力 Max. Radial Load	820N
最大軸向力 Max. Axial Load	411N
重量 Weight	1.2KG

減速比 Gear Ratio	3	4	5	7	10
額定輸出力矩 Nominal Output Torque N . m	14	12	14	12	9

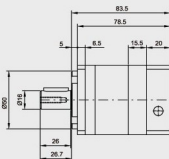
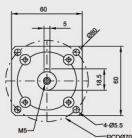
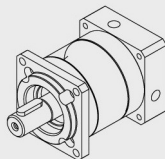


PH60-L1

Single Stage Type



ROTATE 45°VIEW



規格 SPECIFICATIONS

單節式 Single Stage:

減速比 Gear Ratio	3, 4, 5, 7, 10
最高輸入轉速 Max. Input Speed	6000rpm
額定輸入轉速 Nominal Input Speed	3000rpm
效率 Efficiency	≥ 95%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	27.93Nm/arcmin
使用溫度 Operating Temp.	- 10°C ~ +90°C
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	65dB/1m
精密背隙 High Precision Backlash P1	≤ 8 arcmin
標準背隙 Standard Backlash P2	≤ 10 arcmin
最大徑向力 Max. Radial Load	1379N
最大軸向力 Max. Axial Load	679N
重量 Weight	2.0KG

減速比 Gear Ratio	3	4	5	7	10
額定輸出力矩 Nominal Output Torque N . m	40	32	38	32	27

* 連續運轉10,000小時 / 10,000 Hours Continuous Operation

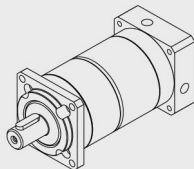
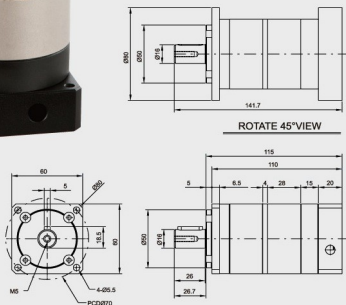
* 噪音值(輸入:3000rpm; 無負載下所得)/Noise Level (Input: 3000 rpm; No Load)

* 連接板視馬達尺寸製作 Connection plate is adjustable to motor sizes



PH60-L2

Double Stage Type



規格 SPECIFICATIONS

雙節式 Double Stage:

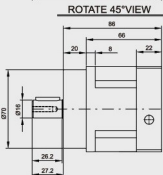
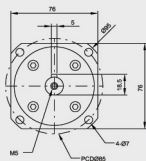
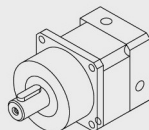
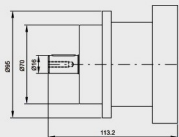
減速比 Gear Ratio	15, 16, 20, 25, 30, 35, 40, 50, 70, 100
最高輸入轉速 Max. Input Speed	6000rpm
額定輸入轉速 Nominal Input Speed	3000rpm
效率 Efficiency	≥ 90%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	27.93Nm/arcmin
使用溫度 Operating Temp.	- 10℃ ~ + 90℃
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	65dB/1m
精密背隙 High Precision Backlash P1	≤ 12 arcmin
標準背隙 Standard Backlash	≤ 15 arcmin
最大徑向力 Max. Radial Load	1910N
最大軸向力 Max. Axial Load	956N
重量 Weight	3.5KG

減速比 Gear Ratio	15	16	20	25	30	35	40	50	70	100
額定輸出力矩 Nominal Output Torque N . m	39	32	32	39	39	33	31	39	33	25



PH75-L1

Single Stage Type



規格 SPECIFICATIONS

單節式 Single Stage:

減速比 Gear Ratio	3, 4, 5, 7, 10
最高輸入轉速 Max. Input Speed	6000rpm
額定輸入轉速 Nominal Input Speed	3000rpm
效率 Efficiency	≥ 95%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	27.93Nm/arcmin
使用溫度 Operating Temp.	- 10°C ~ +90°C
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	57dB/1m
精密背隙 High Precision Backlash P1	≤ 8 arcmin
標準背隙 Standard Backlash P2	≤ 10 arcmin
最大徑向力 Max. Radial Load	1910N
最大軸向力 Max. Axial Load	956N
重量 Weight	2.2KG

減速比 Gear Ratio	3	4	5	7	10
額定輸出力矩 Nominal Output Torque N . m	40	32	38	32	27

* 連續運轉10,000小時 / 10,000 Hours Continuous Operation

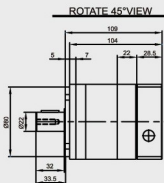
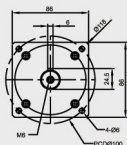
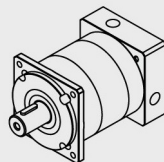
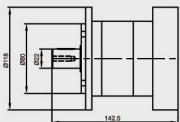
* 噪音值(輸入:3000rpm ; 無負載下所得)/Noise Level (Input: 3000 rpm ; No Load)

* 連接板視馬達尺寸製作 Connection plate is adjustable to motor sizes



PH90-L1

Single Stage Type



規格 SPECIFICATIONS

單節式 Single Stage:

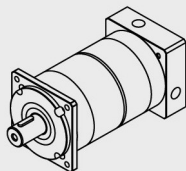
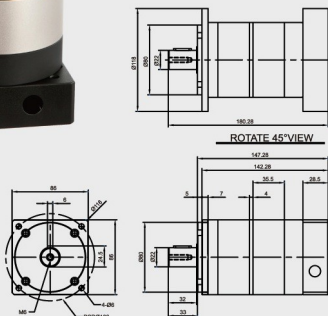
減速比 Gear Ratio	3, 4, 5, 7, 10
最高輸入轉速 Max. Input Speed	6000rpm
額定輸入轉速 Nominal Input Speed	3000rpm
效率 Efficiency	≥ 95%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	73.50Nm/arcmin
使用溫度 Operating Temp.	- 10℃ ~ +90℃
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	65dB/1m
精密背隙 High Precision Backlash P1	≤ 8 arcmin
標準背隙 Standard Backlash P2	≤ 10 arcmin
最大徑向力 Max. Radial Load	2060N
最大軸向力 Max. Axial Load	1030N
重量 Weight	4.0KG

減速比 Gear Ratio	3	4	5	7	10
額定輸出力矩 Nominal Output Torque N . m	104	85	104	91	65



PH90-L2

Double Stage Type



規格 SPECIFICATIONS

雙節式 Double Stage:

減速比 Gear Ratio	15, 16, 20, 25, 30, 35, 40, 50, 70, 100
最高輸入轉速 Max. Input Speed	6000rpm
額定輸入轉速 Nominal Input Speed	3000rpm
效率 Efficiency	≥ 90%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	73.50Nm/arcmin
使用溫度 Operating Temp.	~ 10°C ~ +90°C
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	65dB/1m
精密背隙 High Precision Backlash P1	≤ 12 arcmin
標準背隙 Standard Backlash P2	≤ 15 arcmin
最大徑向力 Max. Radial Load	2060N
最大軸向力 Max. Axial Load	1030N
重量 Weight	5.5KG

減速比 Gear Ratio	15	16	20	25	30	35	40	50	70	100
額定輸出力矩 Nominal Output Torque N.m	104	85	86	104	104	91	95	104	91	65

* 連續運轉10,000小時 / 10,000 Hours Continuous Operation

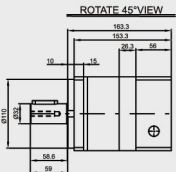
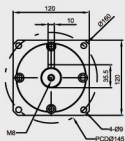
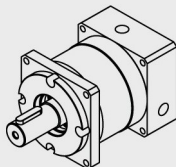
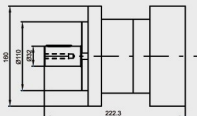
* 噪音值(輸入:3000rpm; 無負載下所得)/Noise Level (Input: 3000 rpm; No Load)

* 連接板視馬達尺寸製作 Connection plate is adjustable to motor sizes



PH115-L1

Single Stage Type



規格 SPECIFICATIONS

單節式 Single Stage:

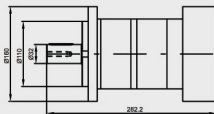
減速比 Gear Ratio	3, 4, 5, 7, 10
最高輸入轉速 Max. Input Speed	5000rpm
額定輸入轉速 Nominal Input Speed	2500rpm
效率 Efficiency	≥ 95%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	151.90Nm/arcmin
使用溫度 Operating Temp.	- 10°C ~ + 90°C
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	68dB/1m
精密背隙 High Precision Backlash P1	≤ 8 arcmin
標準背隙 Standard Backlash P2	≤ 10 arcmin
最大徑向力 Max. Radial Load	4146N
最大軸向力 Max. Axial Load	2082N
重量 Weight	11KG

減速比 Gear Ratio	3	4	5	7	10
額定輸出力矩 Nominal Output Torque N . m	215	178	216	196	149

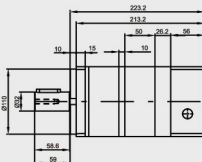
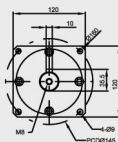
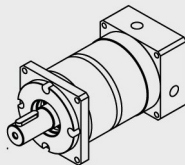


PH115-L2

Double Stage Type



ROTATE 45°VIEW



規格 SPECIFICATIONS

雙節式 Double Stage:

減速比 Gear Ratio	15, 16, 20, 25, 30, 35, 40, 50, 70, 100
最高輸入轉速 Max. Input Speed	5000rpm
額定輸入轉速 Nominal Input Speed	2500rpm
效率 Efficiency	≥ 90%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	151.90Nm/arcmin
使用溫度 Operating Temp.	- 10°C ~ + 90°C
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	68dB/1m
精密背隙 High Precision Backlash P1	≤ 12 arcmin
標準背隙 Standard Backlash P2	≤ 15 arcmin
最大徑向力 Max. Radial Load	4160N
最大軸向力 Max. Axial Load	2080N
重量 Weight	15KG

減速比 Gear Ratio	15	16	20	25	30	35	40	50	70	100
額定輸出力矩 Nominal Output Torque N . m	215	176	178	216	214	195	177	214	195	150

* 連續運轉10,000小時 / 10,000 Hours Continuous Operation

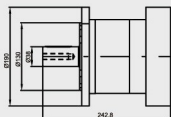
* 噪音值(輸入:3000rpm; 無負載下所得)/Noise Level (Input: 3000 rpm ; No Load)

* 連接板視馬達尺寸製作 Connection plate is adjustable to motor sizes

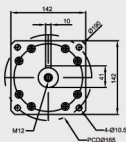
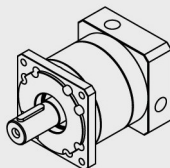
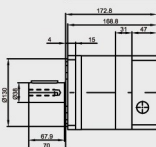


PH142-L1

Single Stage Type



ROTATE 45° VIEW



規格 SPECIFICATIONS

單節式 Single Stage:

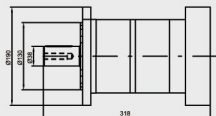
減速比 Gear Ratio	3, 4, 5, 7, 10
最高輸入轉速 Max. Input Speed	4000rpm
額定輸入轉速 Nominal Input Speed	2000rpm
效率 Efficiency	≥ 95%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	294.00Nm/arcmin
使用溫度 Operating Temp.	- 10℃ ~ +90℃
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	68dB/1m
精密背隙 High Precision Backlash P1	≤ 8 arcmin
標準背隙 Standard Backlash P2	≤ 10 arcmin
最大徑向力 Max. Radial Load	6450N
最大軸向力 Max. Axial Load	3226N
重量 Weight	12KG

減速比 Gear Ratio	3	4	5	7	10
額定輸出力矩 Nominal Output Torque N . m	422	363	425	360	295

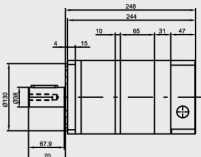
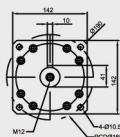
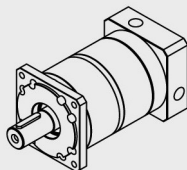


PH142-L2

Double Stage Type



ROTATE 45°VIEW



規格 SPECIFICATIONS

雙節式 Double Stage:

減速比 Gear Ratio	15, 16, 20, 25, 30, 35, 40, 50, 70, 100
最高輸入轉速 Max. Input Speed	4000rpm
額定輸入轉速 Nominal Input Speed	2000rpm
效率 Efficiency	≥ 90%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	294.00Nm/arcmin
使用溫度 Operating Temp.	- 10℃ ~ + 90℃
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	68dB/1m
精密背隙 High Precision Backlash P1	≤ 12 arcmin
標準背隙 Standard Backlash P2	≤ 15 arcmin
最大徑向力 Max. Radial Load	6450N
最大軸向力 Max. Axial Load	3226N
重量 Weight	19.5KG

減速比 Gear Ratio	15	16	20	25	30	35	40	50	70	100
額定輸出力矩 Nominal Output Torque N . m	424	365	365	423	423	358	365	424	360	294

* 連續運轉10,000小時 / 10,000 Hours Continuous Operation

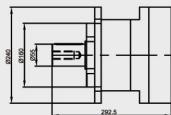
* 噪音值(輸入:3000rpm; 無負載下所得)/Noise Level (Input: 3000 rpm ; No Load)

* 連接板視馬達尺寸製作 Connection plate is adjustable to motor sizes

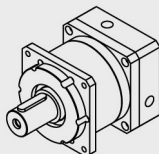
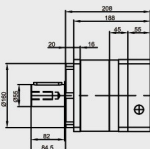
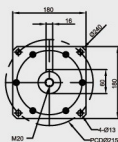


PH180-L1

Single Stage Type



ROTATE 45°VIEW

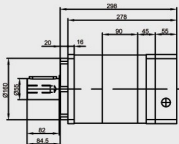
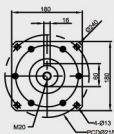
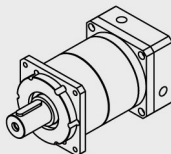


規格 SPECIFICATIONS

單節式 Single Stage:

減速比 Gear Ratio	3, 4, 5, 7, 10
最高輸入轉速 Max. Input Speed	4000rpm
額定輸入轉速 Nominal Input Speed	2000rpm
效率 Efficiency	≥ 95%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	558.60Nm/arcmin
使用溫度 Operating Temp.	- 10°C ~ + 90°C
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	70dB/1m
精密背隙 High Precision Backlash P1	≤ 8 arcmin
標準背隙 Standard Backlash P2	≤ 10 arcmin
最大徑向力 Max. Radial Load	8015N
最大軸向力 Max. Axial Load	4371N
重量 Weight	25KG

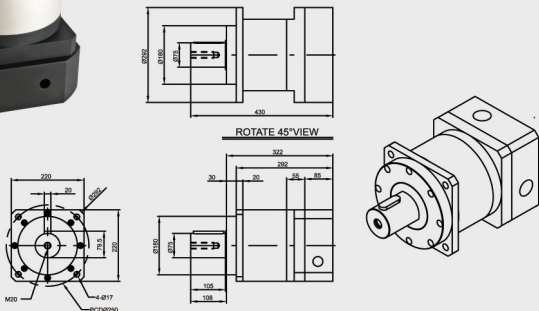
減速比 Gear Ratio	3	4	5	7	10
額定輸出力矩 Nominal Output Torque N . m	1180	1090	1180	1092	780





PH220-L1

Single Stage Type

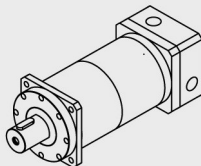


規格 SPECIFICATIONS

單節式 Single Stage:

減速比 Gear Ratio	3, 4, 5, 7, 10
最高輸入轉速 Max. Input Speed	4000rpm
額定輸入轉速 Nominal Input Speed	2000rpm
效率 Efficiency	≥ 95%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	1,078.00Nm/arcmin
使用溫度 Operating Temp.	- 10°C ~ +90°C
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	70dB/1m
精密背隙 High Precision Backlash P1	≤ 8 arcmin
標準背隙 Standard Backlash P2	≤ 10 arcmin
最大徑向力 Max. Radial Load	9820N
最大軸向力 Max. Axial Load	5639N
重量 Weight	62KG

減速比 Gear Ratio	3	4	5	7	10
額定輸出力矩 Nominal Output Torque N . m	1681	1573	1681	1573	1197



減速比 Gear Ratio	15, 16, 20, 25, 30, 35, 40, 50, 70, 100
最高輸入轉速 Max. Input Speed	4000rpm
額定輸入轉速 Nominal Input Speed	2000rpm
效率 Efficiency	≥ 90%
使用壽命 Service Life	20,000小時 / 20,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	1,078.00Nm/arcm
使用溫度 Operating Temp.	- 10℃ ~ + 90℃
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	70dB/1m
精密背隙 High Precision Backlash P1	≤ 12 arcmin
標準背隙 Standard Backlash P2	≤ 15 arcmin
最大徑向力 Max. Radial Load	9820N
最大軸向力 Max. Axial Load	5639N
重量 Weight	80KG

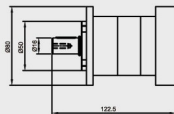
減速比 Gear Ratio	15	16	20	25	30	35	40	50	70	100
額定輸出力矩 Nominal Output Torque N . m	1162	1103	1195	1167	1195	1172	1120	1167	1195	1033

* 連接板視馬達尺寸製作 Connection plate is adjustable to motor sizes

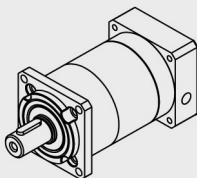
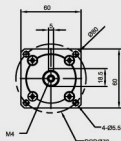
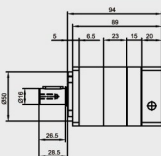


PF60

Single Stage Type



ROTATE 45° VIEW



規格 SPECIFICATIONS

單節式 Single Stage:

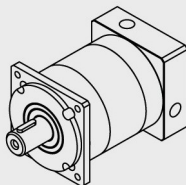
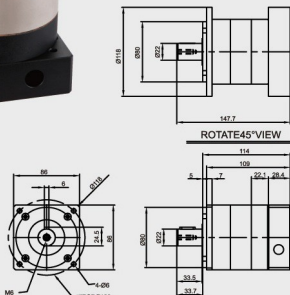
減速比 Gear Ratio	3, 4, 5, 7, 10
最高輸入轉速 Max. Input Speed	10000rpm
額定輸入轉速 Nominal Input Speed	5000rpm
效率 Efficiency	≥ 97%
使用壽命 Service Life	30,000小時 / 30,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	13Nm/arcmin
使用溫度 Operating Temp.	- 10°C ~ +90°C
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	57dB/1m
精密背隙 High Precision Backlash P1	≤ 3 arcmin
標準背隙 Standard Backlash P2	≤ 5 arcmin
最大徑向力 Max. Radial Load	1910N
最大軸向力 Max. Axial Load	956N
重量 Weight	2KG

減速比 Gear Ratio	3	4	5	7	10
額定輸出力矩 Nominal Output Torque N . m	57	54	64	51	43



PF90

Single Stage Type



規格 SPECIFICATIONS

單節式 Single Stage:

減速比 Gear Ratio	3, 4, 5, 7, 10
最高輸入轉速 Max. Input Speed	8000rpm
額定輸入轉速 Nominal Input Speed	4000rpm
效率 Efficiency	≥ 97%
使用壽命 Service Life	30,000小時 / 30,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	31Nm/arcmin
使用溫度 Operating Temp.	- 10℃ ~ +90℃
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	60dB/1m
精密背隙 High Precision Backlash P1	≤ 3 arcmin
標準背隙 Standard Backlash P2	≤ 5 arcmin
最大徑向力 Max. Radial Load	2993N
最大軸向力 Max. Axial Load	1323N
重量 Weight	4KG

減速比 Gear Ratio	3	4	5	7	10
額定輸出力矩 Nominal Output Torque N . m	130	140	162	138	102

*連續運轉15,000小時 / 15,000 Hours Continuous Operation

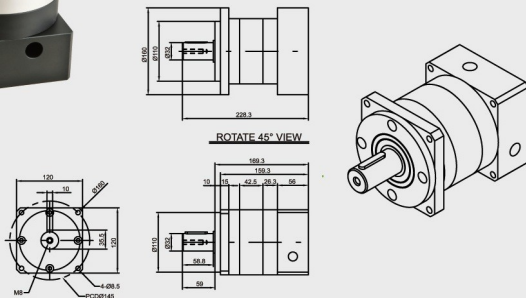
*噪音值(輸入3000rpm；無負載下所得)/Noise Level (Input: 3000 rpm；No Load)

*連接板視馬達尺寸製作 Connection plate is adjustable to motor sizes



PF115

Single Stage Type

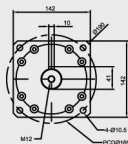
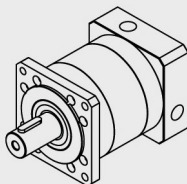


規格 SPECIFICATIONS

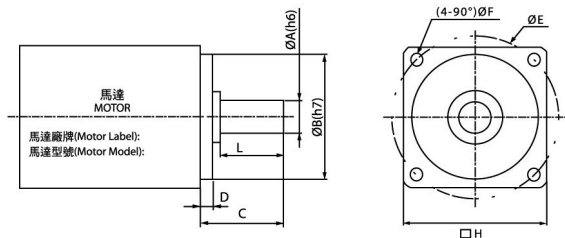
單節式 Single Stage:

減速比 Gear Ratio	3, 4, 5, 7, 10
最高輸入轉速 Max. Input Speed	8000rpm
額定輸入轉速 Nominal Input Speed	4000rpm
效率 Efficiency	≥ 97%
使用壽命 Service Life	30,000小時 / 30,000 hours
最大輸出力矩 Max. Output Torque	2.5倍額定輸出力矩 / 2.5 Times Of Nominal Output Torque
安裝方向 Mounting Position	任意方向 / Any Direction
扭轉剛性 Torsional Rigidity	82Nm/arcmin
使用溫度 Operating Temp.	-10°C ~ +90°C
急停扭矩 Emergency Stop Torque	三倍額定輸出力矩 / 3 Times Of Nominal Output Torque
潤滑 Lubrication	合成複合皂基潤滑油脂 / Synthetic Complex Soap Grease
最大加速扭矩 Max. Acceleration Torque	60%急停扭矩 / 60%Emergency Stop Torque
噪音值 Noise Level	62dB/1m
精密背隙 High Precision Backlash P1	≤ 3 arcmin
標準背隙 Standard Backlash P2	≤ 5 arcmin
最大徑向力 Max. Radial Load	6100N
最大軸向力 Max. Axial Load	2982N
重量 Weight	11KG

減速比 Gear Ratio	3	4	5	7	10
額定輸出力矩 Nominal Output Torque N . m	209	287	337	289	228



客戶馬達規格 CUSTOMER SPEC FORM



搭配馬達廠牌 (Motor Label):

馬達型號 (Motor Model):

馬達軸外徑 Motor Shaft Dia.	馬達凸緣外徑 Flange Dia.	馬達軸長度 Motor Shaft Length	馬達凸緣高度 Flange Height	螺絲孔中心距 PCD of Bore	螺絲孔直徑 Bore Dia.	馬達面尺寸 Flange Square	馬達軸有效長 Actual Length of Motor Shaft
$\phi A (h6)$	$\phi B (h7)$	C	D	ϕE	ϕF	H	L

行星減速機訂購編號

減速機型 TYPE	型號 MODEL	速比 RATIO	背隙等級 BACKLASH CLASS	馬達型號 MOTOR TYPE

公司名稱 Company Name/		聯絡人 Contact Person/	
地址 Address/			
電話 Tel/	傳真 Fax/	電子信箱 E-Mail/	
備註 Remarks/			

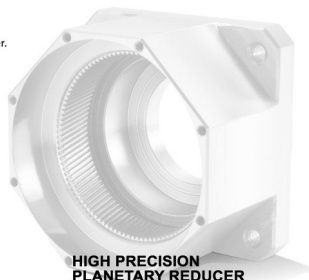
減速機選用參考表 Reducer Selection Table

減速機選用參考表依據伺服馬達輸出功率選擇
Reducer Select of Table (by power of servo-motor)

馬達功率 POWER	減速機型號 MODEL	減速比 RATIO															
		3	4	5	7	10	15	16	20	25	30	35	40	50	70	100	
50W~100W	42	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
	50	◎	◎	◎	◎	◎											
50W~400W	60	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
	75	◎	◎	◎	◎	◎											
200W~1.3KW	90	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
500W~1.5KW	115	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
0.75KW~3.5KW	142	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
1.2KW~5.5KW	180	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
1.5KW~7.5KW	220	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	

備註 Remark :

1. 可依馬達輸出功率選用該減速比有"◎"記號之減速機型號。
Ratio with mark"◎" can be choice by motor output power.
2. 當應用於扭矩或慣性較大時，需選用較大減速機型號。
For larger moment inertia and torque, need upgrade to bigger reducer.



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