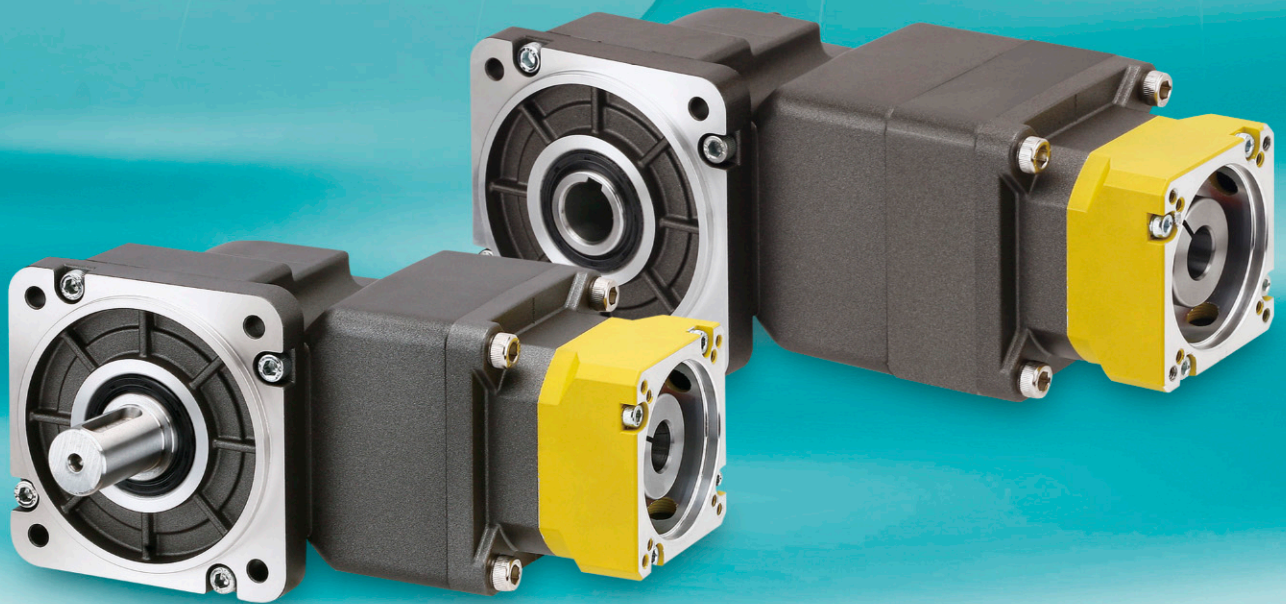


# TPG<sup>®</sup>

MOTORS & DRIVES

[www.tpg-tw.com](http://www.tpg-tw.com)

- 信頼性ある製品 TECHNOLOGY
- 卓越したの性能 PERFECTION
- 保証したの品質 GUARANTEE



**PD/PG** 減速機系列

精密行星式減速機

**PLANETARY SERVO REDUCERS**

**阪神電機**

**TPG MOTORS & DRIVES**

TPG made planetary gear box contains one or two planet sets, which is great selection for servo motor, automation motor...etc.

PD/PG type is right angle gear box, ratio from 9 to 135, 2 & 3 stage available.

TPG 阪神電機持續進步開創各式減速機，以滿足不同產業之期望，推出行星式齒輪減速機，可依產業需求連結各式伺服馬達，主軸馬達等。

PD/PG系列為直角軸齒輪減速機，比數從9-135，提供二段式或三段式齒輪箱結構。

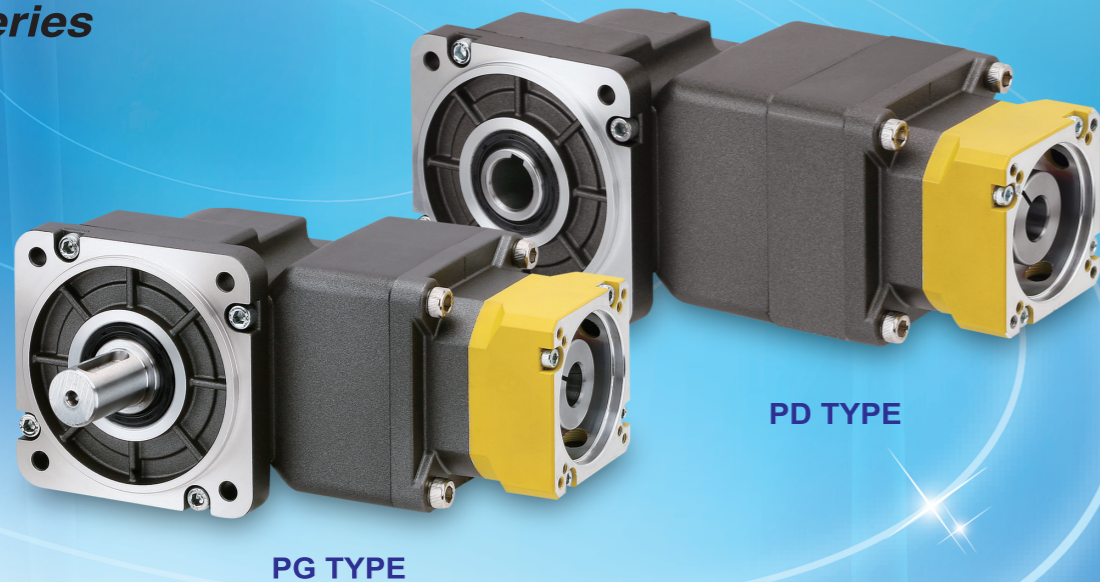
**Advantages:**

- Offer more accuracies than traditional gear box
- Supply high power density, durable and long lifetime
- Larger reduction in small space.
- 3% mechanical loss only, save energy and create more efficiency
- Average load distribution increase more rotational stiffness
- Multiple assortment combinations can be added in
- Special bearing installed in the end of output shaft to reduce the vibration occurred while motor running
- Alum. Die cast house offer impact size and nice shape design.
- Flexible flange or frame can be jointed with different brand servo motors.
- High quality Chrome alloy material gear with special heat treatment to enforce the torque ability.
- Wide range gear ratio applies to more different operations in the same gear box body.

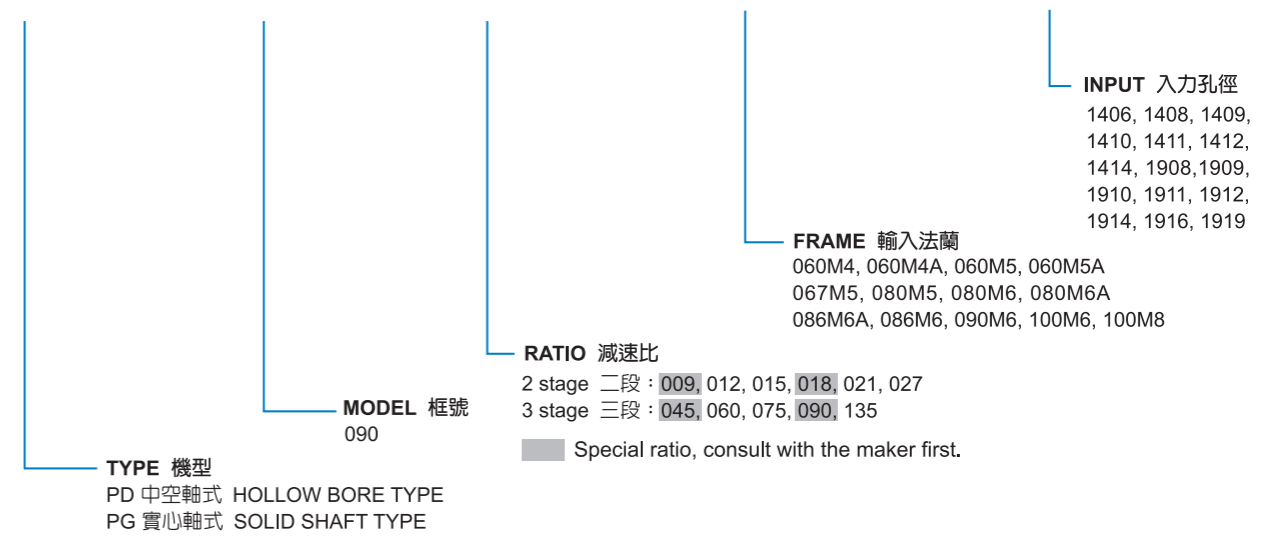
**特性:**

1. 提供更精細的齒輪準確性。
2. 壓鑄鋁合金機體，密度堅實且美觀大方，耐用長壽。
3. 在有限的空間裡可提供與一般傳統減速機相當的比數。
4. 負載可被平均分攤，因而增加齒輪的剛度。
5. 提供複合多功能的選配。
6. 出力軸安裝特殊軸承，有效減小馬達運轉時所產生的振動。
7. 可選用多款連接法蘭，以搭配不同廠家的伺服馬達。
8. 高品質合金鋼齒輪材質經熱處理加工後，扭力值更為加強。
9. 一段、二段齒輪箱的組合，加大減速比範圍。

**PD/PG Series**



PD/PG - 090 - 009 - 060M4 - 1414

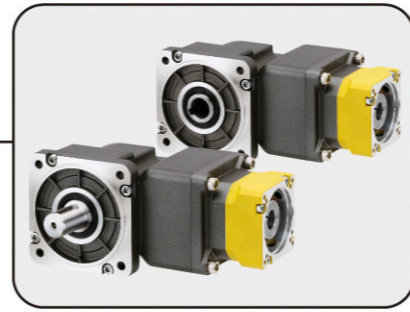


適用馬達馬力 Available Power Visit Ratio

Motor Rated Output (W)	減速比 Ratio										
	9	12	15	18	21	27	45	60	75	90	135
50											●
100							●	●	●	●	
150				●	●	●	●				
200				●	●	●					
400	●	●	●								
500	●										
600	●										

輸出額定轉速 Concentric Shaft Series Specification

Maximum Input Speed 6000 RPM 最大輸入轉速	減速比 Ratio										
	9	12	15	18	21	27	45	60	75	90	135
Nominal Output Torque (Nm) 額定轉矩	20	20	20	24	30	30	30	30	30	30	30



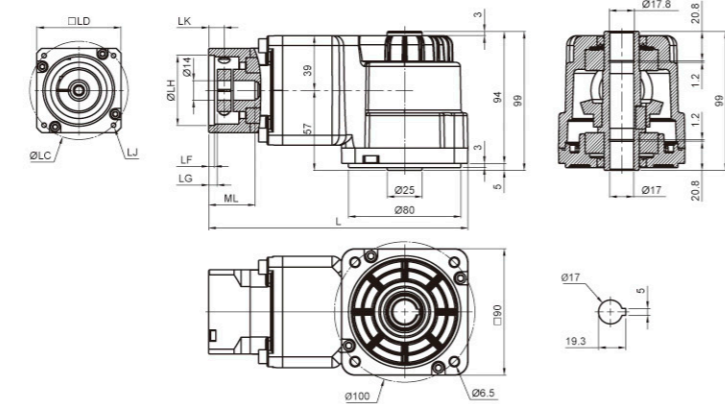
輸入法蘭尺寸表 Input Frame Dimension

尺寸表 Dimension

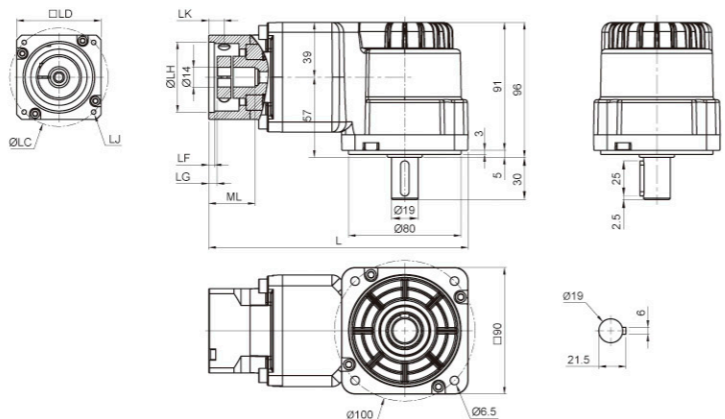
mm

Frame Type	LC	LH	LD	LJ	L	LK	LF	LG	ML
060M4	60	50	60	M4xP0.7	140.5	11	4	5	32
	70	50	60	M4xP0.7	140.5	11	4	5	32
060M4A	63	40	60	M4xP0.7	140.5	11	4	5	32
060M5	70	50	60	M5xP0.8	140.5	11	4	5	32
060M5A	70	50	60	M5xP0.8	144.5	15	6	9	36
067M5	75	60	67	M5xP0.8	140.5	11	4	5	32
080M5	90	70	80	M5xP0.8	140.5	11	4	5	32
080M6	90	70	80	M6xP1.0	145.5	16	9	10	37
080M6A	90	70	80	M6xP1.0	140.5	11	4	5	32
086M6	95	80	86	M6xP1.0	140.5	11	4	5	32
086M6A	100	80	86	M6xP1.0	140.5	11	4	5	32
090M6	104	83	90	M6xP1.0	140.5	11	4	5	32
100M6	115	95	100	M6xP1.0	140.5	11	4	5	32
100M8	115	95	100	M8xP1.25	140.5	11	4	5	32

PD-090 TYPE 2 - STAGE  
Ratio: 9, 12, 15, 18, 21, 27

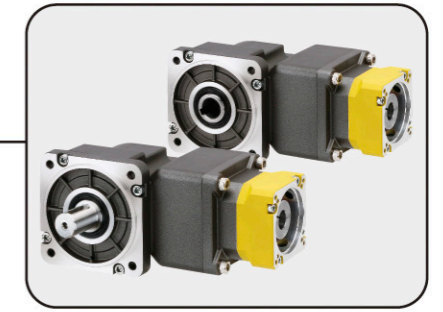


PG-090 TYPE 2 - STAGE  
Ratio: 9, 12, 15, 18, 21, 27



(1) 出廠標準輸入孔孔徑為14，若需其它規格孔徑請另行註明，需加裝軸套。  
(2) 特殊規格要求請告知。

(1) Factory standard input dia. is 14mm, others must be added bush.  
(2) Tailor spec. request available.



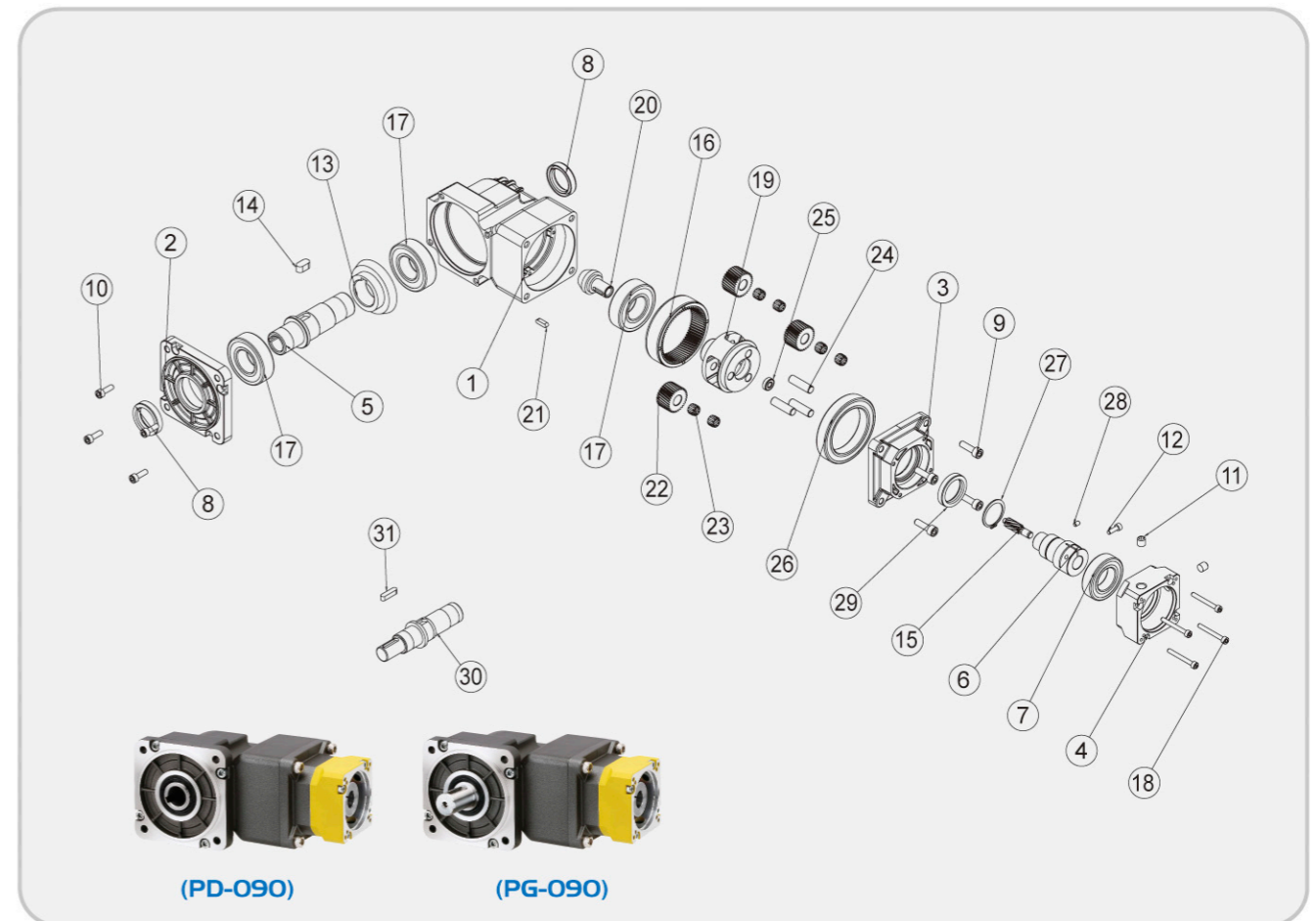
PD-090 TYPE  
PG-090 TYPE

2 - STAGE

Ratio: 9, 12, 15, 18, 21, 27

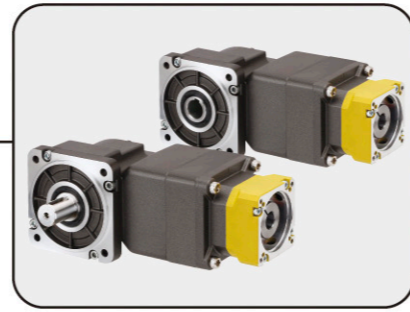
零件組 Explosion Drawing

No.	品名	No.	品名	No.	品名
1	齒輪箱 Gear house	12	套筒螺絲 Socket screw	23	滾針軸承 Needle bearing
2	齒輪箱前蓋 Front gear box cover	13	大傘齒輪 Big bevel gear	24	直梢 Pin
3	齒輪箱蓋 Gear box cover	14	雙圓鍵 Key	25	軸承 Bearing
4	輸入法蘭 Input flange	15	一段軸 1 st stage shaft	26	軸承 Bearing
5	出力軸 (PD-090) Output shaft	16	內齒輪 Internal gear	27	扣環 O ring
6	入力軸 Input shaft	17	軸承 Bearing	28	止附螺絲 Screw
7	軸承 Bearing	18	套筒螺絲 Socket screw	29	油封 Oil seal
8	油封 Oil seal	19	連接軸 Coupling	30	實心出力軸 (PG-090) Solid output shaft
9	套筒螺絲 Socket screw	20	傘齒輪 Bevel gear	31	雙圓鍵 (PG-090) Key
10	套筒螺絲 Socket screw	21	雙圓鍵 Key		
11	止附螺絲 Screw	22	行星齒 Planet gear		



(PD-090)

(PG-090)



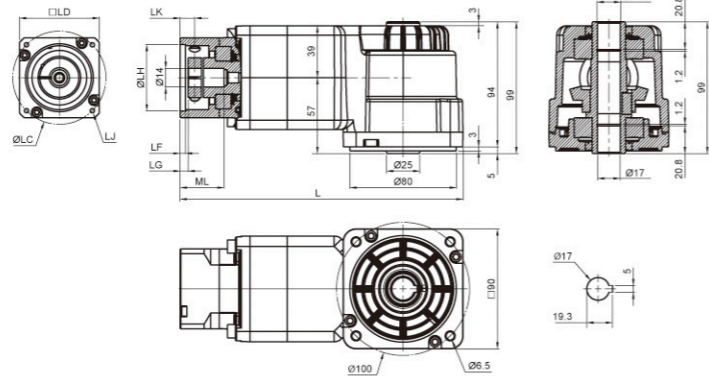
輸入法蘭尺寸表 Input Frame Dimension

尺寸表 Dimension

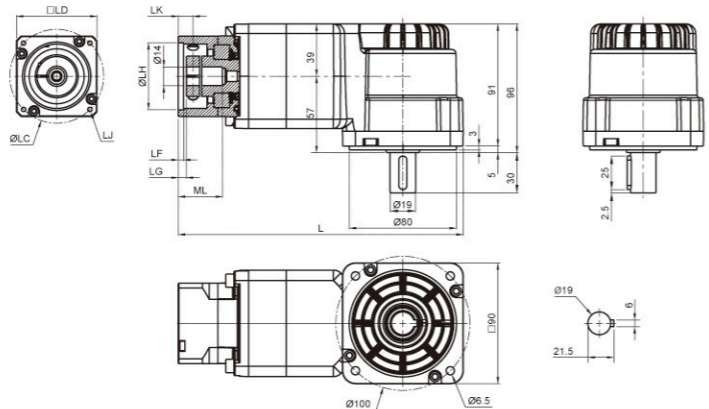
mm

Frame Type	LC	LH	LD	LJ	L	LK	LF	LG	ML
060M4	60	50	60	M4xP0.7	168.5	11	4	5	32
	70	50	60	M4xP0.7	168.5	11	4	5	32
060M4A	63	40	60	M4xP0.7	168.5	11	4	5	32
060M5	70	50	60	M5xP0.8	168.5	11	4	5	32
060M5A	70	50	60	M5xP0.8	172.5	15	6	9	36
067M5	75	60	67	M5xP0.8	168.5	11	4	5	32
080M5	90	70	80	M5xP0.8	168.5	11	4	5	32
080M6	90	70	80	M6xP1.0	173.5	16	9	10	37
080M6A	90	70	80	M6xP1.0	168.5	11	4	5	32
086M6	95	80	86	M6xP1.0	168.5	11	4	5	32
086M6A	100	80	86	M6xP1.0	168.5	11	4	5	32
090M6	104	83	90	M6xP1.0	168.5	11	4	5	32
100M6	115	95	100	M6xP1.0	168.5	11	4	5	32
100M8	115	95	100	M8xP1.25	168.5	11	4	5	32

PD-090 TYPE 3 - STAGE  
Ratio: 45, 60, 70, 90, 135

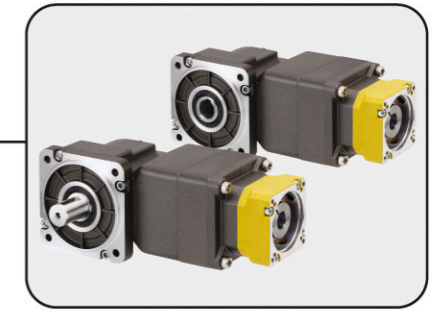


PG-090 TYPE 3 - STAGE  
Ratio: 45, 60, 70, 90, 135



(1) 出廠標準輸入孔徑為14，若需其它規格孔徑請另行註明，需加裝軸套。  
(2) 特殊規格要求請告知。

(1) Factory standard input dia. is 14mm, others must be added bush.  
(2) Tailor spec. request available.

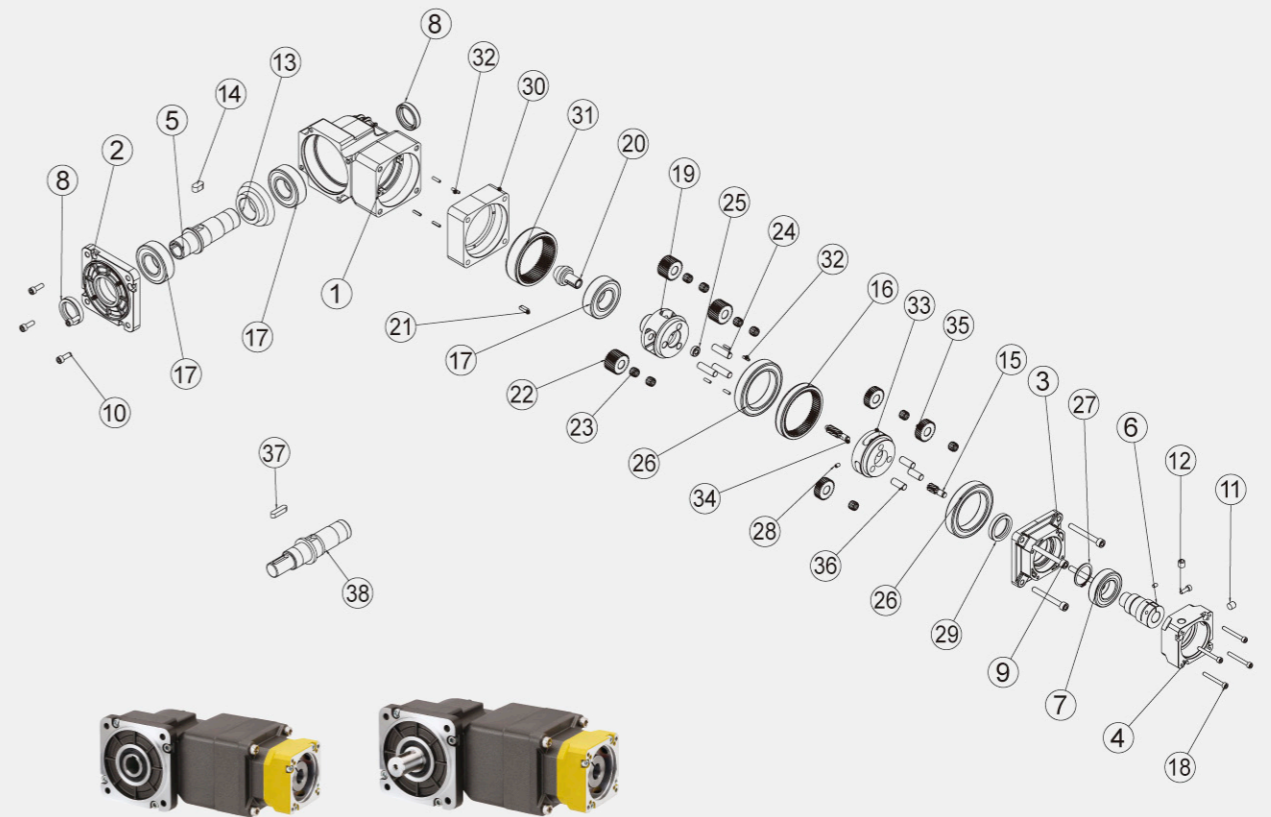


PD-090 TYPE  
PG-090 TYPE

3 - STAGE  
Ratio: 45, 60, 70, 90, 135

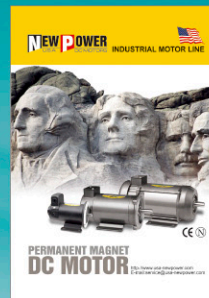
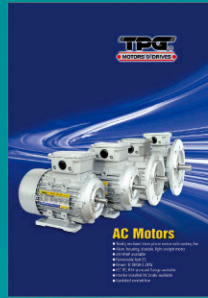
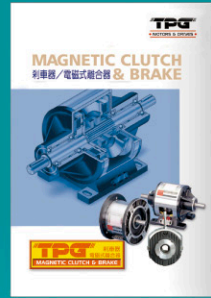
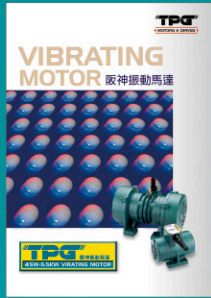
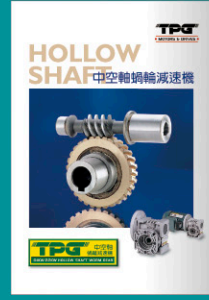
零件組 Explosion Drawing

No.	品名	No.	品名	No.	品名
1	齒輪箱 Gear house	14	雙圓鍵 Key	27	扣環 O ring
2	齒輪箱前蓋 Front gear box cover	15	一段軸 1 st stage shaft	28	止附螺絲 Screw
3	齒輪箱蓋 Gear box cover	16	內齒輪 Internal gear	29	油封 Oil seal
4	輸入法蘭 Input flange	17	軸承 Bearing	30	中段齒輪箱 Middle gear box
5	出力軸 (PD-090) Output shaft	18	套筒螺絲 Socket screw	31	內齒輪 Interior gear house
6	入力軸 Input shaft	19	連接軸 Coupling	32	空心梢 Pin
7	軸承 Bearing	20	傘齒輪 Bevel gear	33	二段連接軸 2nd coupling
8	油封 Oil seal	21	雙圓鍵 Key	34	一段軸 First shaft
9	套筒螺絲 Socket screw	22	游星齒 Planet gear	35	游星齒 Planet gear
10	套筒螺絲 Socket screw	23	滾針軸承 Needle bearing	36	直梢 Pin
11	止附螺絲 Screw	24	直梢 Pin	37	雙圓鍵 (PG-090) Key
12	套筒螺絲 Socket screw	25	軸承 Bearing	38	實心出力軸 (PG-090) Solid output shaft
13	大傘齒輪 Big bevel gear	26	軸承 Bearing		



(PD-090)

(PG-090)



ISO 9001 : 2008

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 E-mail: tpgcorp@ms13.hinet.net

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