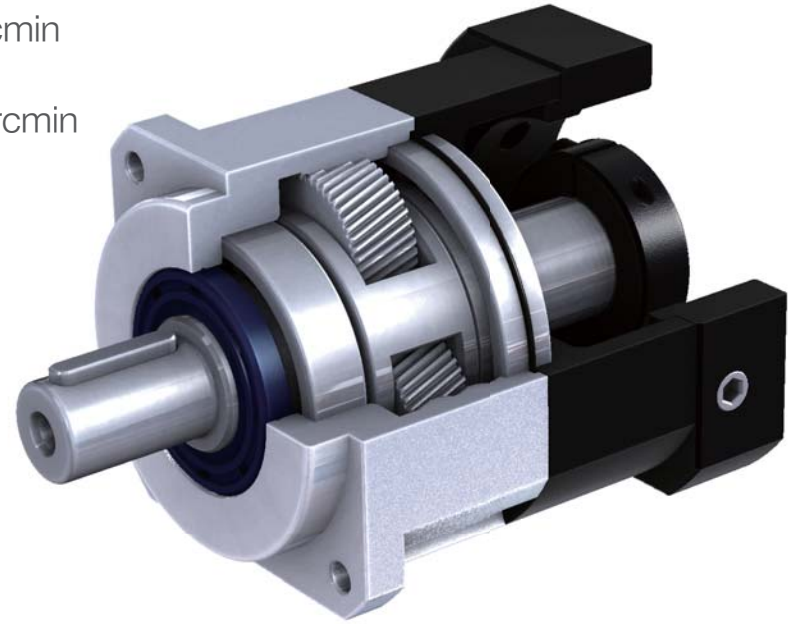
# PGX-H Series



- 1-Stage Backlash ≦ 8 arcmin
- 2-Stage Backlash ≦ 10 arcmin



## Indication of Model Numbers

| PGX | 90 | – | H | – | 10 | – | Key Type |
|---|---|---|---|---|---|---|---|

| Type | Model | Helical Gear | Ratio | Output Shaft Keyway |
|---|---|---|---|---|
| PGX | 44<br>62<br>90<br>120<br>142<br>180<br>220 | H | 1-Stage<br>3, 4, 5, 6, 7, 8, 9, 10<br><br>2-Stage<br>15, 20, 25, 30, 35, 40,<br>50, 60, 70, 80, 90, 100 | □ : 무표기<br>Standard (Keyway)<br><br>N : 표기<br>Solid Output Shaft<br>(No Keyway) |

**저소음**
헬리컬기어 사용으로 부드럽고 조용한 운전가능

**Quiet operation**
Helical gears contribute to reduce vibration and noise.

**고강성과 높은 토크**
uncage needle bearing 사용, 강성과 토크를 높임

**High Torque**
High output torque is in comparision with spur gear planetary gear reducers.

**고효율**
1-Stage 97%이상, 2-Stage 94%이상

**High Efficiency**
Efficiency for 1-Stage model exceeds 97%
2-Stage model exceeds 94%.

# Features of PGX-H Series

## PGX-H Series 제품 특성

### Integrated Planetary Arm Bracket

Planetary Arm bracket와 출력 Shaft는 일체형 구조입니다.
이는 비틀림 강성과 높은 정확도를 보장합니다.

The planetary arm bracket and the output shaft are one-piece constructed to increase torsional rigidity and accuracy.

### Full Needle Roller Bearing Design

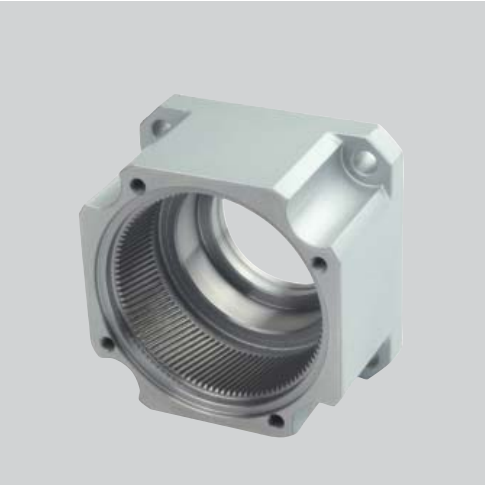
Planetary 변속기어는 접촉면 증가를 위한 Retainer없는 Full Needle Bearing 구조입니다. 구조적 강도와 출력 회전력을 상승시킨 것입니다.

The planetary gear transmission employs full needle roller bearings without retainer to increase the contact surface, which greatly upgrades structural rigidity and service life.

### Collet Locking Mechanism

감속기의 입력축과 모터 출력축을 연결하기 위한 Collet Clamp 방식으로 역학상 확실한 체결력과 동심도를 보장하여 높은 속도에서 구동할 때에도 백래쉬가 발생하지 않고 동력을 전달합니다.

The input-end and the motor are coupled through a collet locking mechanism. It has passed dynamical balance analysis to assure concentricity and balance on the connection and no backlash for power transmission while running at high speed.



### One-piece Helical Gear Box body

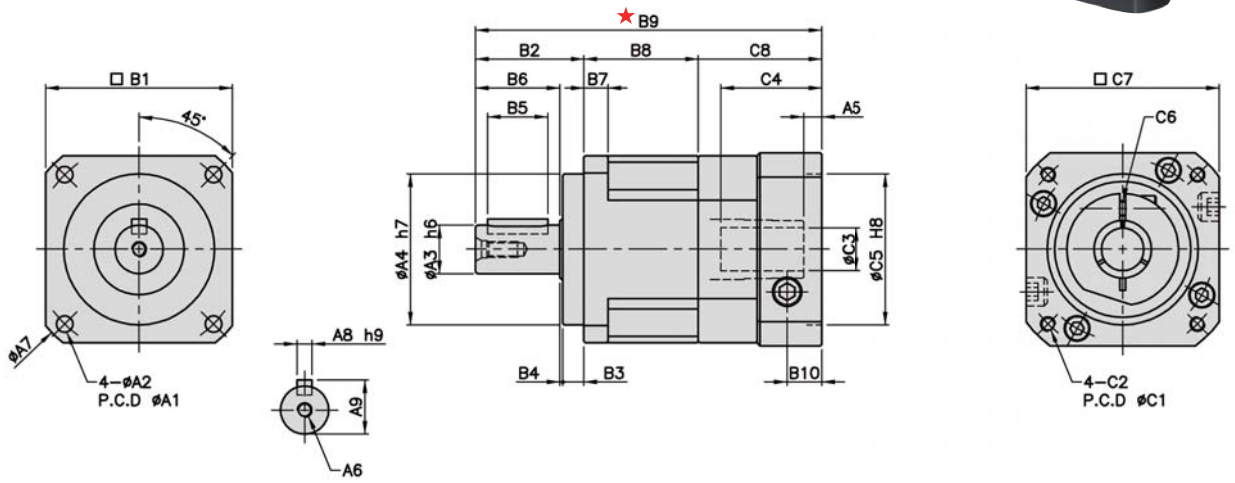
감속기 케이스에 내치기어를 일체형으로 정밀 가공하였고, 헬리컬기어로 되어 있으며 기어의 교합율은 일반 스퍼기어의 2배 이상이며 원활한 운전과 낮은 소음으로 높은 회전출력과 낮은 백래쉬를 특징으로 합니다.

The gear box and internal gear are one-piece constructed. The speed reduction mechanism employs helical gears, which provides two times meshing rate of teeth when comparing with regular spur gears. In addition, it also has features of extremely smooth running, low noise, high output torque and low backlash.

# MODEL : PGX-H

RATIO : 3, 4, 5, 6, 7, 8, 9, 10 (1-Stage)






unit : mm

| Code | Model | 44 | 62 | 90 | 120 | 142 | 180 | 220 |
|---|---|---|---|---|---|---|---|---|
| A | A1 | 50 | 70 | 100 | 130 | 165 | 215 | 250 |
| | A2 | 4.5 | 5.5 | 6.8 | 9 | 11 | 13 | 17 |
| | A3 | 13 | 16 | 22 | 32 | 40 | 55 | 75 |
| | A4 | 35 | 50 | 80 | 110 | 130 | 160 | 180 |
| | A5 | 5 | 6 | 9 | 10 | 10 | 11.5, 13.5 | 12.5, 14.5 |
| | A6 | M4 x P0.7 | M5 x P0.8 | M8 x P1.25 | M10 x P1.5 | M12 x P1.75 | M14 x P2.0 | M16 x P2.0 |
| | A7 | 58 | 80 | 116 | 148 | 186 | 238 | 288 |
| | A8 | 5 | 5 | 6 | 10 | 12 | 16 | 20 |
| | A9 | 15 | 18 | 24.5 | 35 | 43 | 59 | 79.5 |
| B | B1 | 44 | 62 | 90 | 120 | 142 | 180 | 220 |
| | B2 | 26 | 36 | 48 | 65 | 92 | 106 | 139 |
| | B3 | 5 | 7 | 10 | 12 | 15 | 20 | 30 |
| | B4 | 1 | 1 | 2 | 3 | 3 | 4 | 5 |
| | B5 | 15 | 20 | 30 | 40 | 65 | 70 | 90 |
| | B6 | 20 | 28 | 36 | 50 | 74 | 82 | 104 |
| | B7 | 5 | 8 | 10 | 12 | 15 | 16 | 20 |
| | B8 | 31.5 | 38 | 49 | 61 | 70 | 85 | 93 |
| | B9 | 95 | 115, 123 | 151.5, 164.5 | 205 | 260.5 | 323.5, 325.5 | 367.5, 369.5 |
| | B10 | 9 | 11.5 | 16 | 19.5 | 20 | 23.5, 25.5 | 23.5, 25.5 |
| C | C1 | 46, 60, 63 | 70, 75, 90 | 90, 100, 115, 145 | 115, 145, 165 | 145, 165, 215 | 200, 215, 265 | 200, 265, 300 |
| | C2 | M3, M4, M5 | M4, M5, M6 | M5, M6, M8 | M6, M8, M10 | M8, M10, M12 | M10, M12 | M12, M16 |
| | C3 | 8, (11) | 14, (19) | 19, (24) | 24, (32) | 35, (38) | 38, 42, 48, 55 | 42, 48, 55 |
| | C4 | 26 | 33.5, 41.5 | 46, 59 | 67 | 84.5 | 114.5, 116.5 | 117.5, 119.5 |
| | C5 | 30, 40, 50 | 50, 60, 70 | 70, 80, 95, 110 | 95, 110, 130 | 110, 130, 180 | 114.3, 180, 230 | 114.3, 230, 250 |
| | C6 | M4 x P0.7 | M5 x P0.8 | M6 x P1.0 | M8 x P1.25 | M10 x P1.5 | M10 x P1.5 | M10 x P1.5 |
| | C7 | 46, 55 | 64, 70, 80 | 92, 110, 130 | 122, 130, 150 | 146, 150, 190 | 182, 200, 250 | 222, 250, 265 |
| | C8 | 37.5 | 41, 49 | 54.5, 67.5 | 79 | 98.5 | 132.5, 134.5 | 135.5, 137.5 |



* ( ) 안은 주문형입니다 . * A5, ★은 적용 모터에 따라 달라질 수 있습니다 .

# Characteristic of PGX-H 1-Stage

| Model No. | | Unit | Ratio | 44 | 62 | 90 | 120 | 142 | 180 | 220 |
|---|---|---|---|---|---|---|---|---|---|---|
| Rated Output Torque (Nominal output torque) | $T_{2N}$ | Nm | 3 | 17 | 54 | 145 | 301 | 553 | 1,067 | 1,786 |
| | | | 4 | 15 | 48 | 128 | 269 | 491 | 940 | 1,587 |
| | | | 5 | 14 | 45 | 132 | 278 | 510 | 1,050 | 1,770 |
| | | | 6 | 13 | 41 | 125 | 252 | 466 | 985 | 1,680 |
| | | | 7 | 13 | 41 | 123 | 258 | 473 | 975 | 1,645 |
| | | | 8 | 12 | 39 | 115 | 241 | 442 | 942 | 1,605 |
| | | | 9 | 11 | 40 | 120 | 227 | 412 | 875 | 1,490 |
| | | | 10 | 12 | 40 | 116 | 246 | 452 | 930 | 1,565 |
| Max. Acceleration Torque | $T_{2B}$ | Nm | 3~10 | 1.8 Times of Rated Output Torque | | | | | | |
| Max. Output Torque Emergency Stop Torque | $T_{2NOT}$ | Nm | 3~10 | 3 Times of Rated Output Torque | | | | | | |
| Rated Input Speed | $n_{1N}$ | rpm | 3~10 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 2,000 |
| Max. Input Speed | $n_{1B}$ | rpm | 3~10 | 6,000 | 6,000 | 6,000 | 5,000 | 5,000 | 4,000 | 3,000 |
| Backlash | $j_t$ | arcmin | 3~10 | ≦8 | ≦8 | ≦8 | ≦8 | ≦8 | ≦8 | ≦8 |
| Torsional Rigidity | | Nm/arcmin | 3~10 | 3 | 6 | 14 | 27 | 60 | 140 | 240 |
| Max. Radial Force | $F_{2rB}$ | N | 3~10 | 720 | 1,120 | 3,040 | 6,460 | 8,830 | 14,820 | 48,450 |
| Max. Axial Force | $F_{2aB}$ | N | 3~10 | 360 | 560 | 1,520 | 3,230 | 4,410 | 7,410 | 24,225 |
| Service Life | $L_H$ | hr | 3~10 | S5 Cycle Operation: >20,000 (S1 Continuous Operation: >10,000 hrs) | | | | | | |
| Efficiency | $\eta$ | % | 3~10 | ≧97% | | | | | | |
| Operating Temperature | | ℃ | 3~10 | −25°C ~ +90°C | | | | | | |
| Lubrication | | | 3~10 | VIGO GREASE RE #0 | | | | | | |
| Protection Class | | | 3~10 | IP65 | | | | | | |
| Mounting Position | | | 3~10 | Any | | | | | | |
| Noise Level | | dB | 3~10 | ≦56 | ≦58 | ≦60 | ≦63 | ≦65 | ≦67 | ≦70 |
| Weight ±3% | | kg | 3~10 | 0.58 | 1.35 | 3.69 | 8.63 | 14.55 | 28.3 | 42.5 |

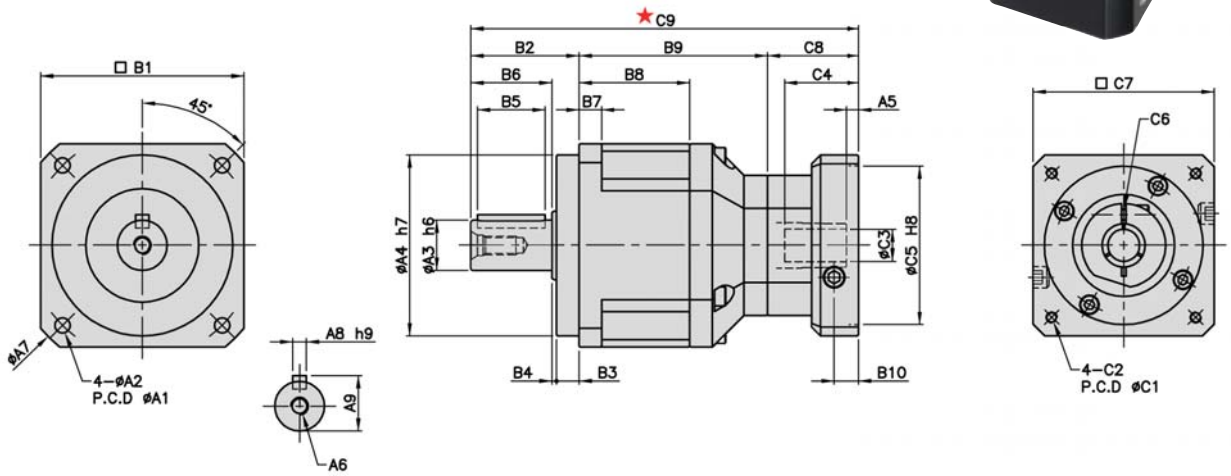
## Mass Moments of Inertia (kg.㎠)

| Ratio | 44 | 62 | 90 | 120 | 142 | 180 | 220 |
|---|---|---|---|---|---|---|---|
| 3 | 0.03 | 0.16 | 0.61 | 3.25 | 9.21 | 28.98 | 59.61 |
| 4 | 0.03 | 0.14 | 0.48 | 2.74 | 7.54 | 23.67 | 54.37 |
| 5 | 0.03 | 0.13 | 0.47 | 2.74 | 7.42 | 23.29 | 53.27 |
| 6 | 0.03 | 0.13 | 0.45 | 2.65 | 7.25 | 22.75 | 51.72 |
| 7 | 0.03 | 0.13 | 0.45 | 2.62 | 7.14 | 22.48 | 50.97 |
| 8 | 0.03 | 0.13 | 0.44 | 2.58 | 7.07 | 22.59 | 50.84 |
| 9 | 0.03 | 0.13 | 0.44 | 2.57 | 7.04 | 22.53 | 50.63 |
| 10 | 0.03 | 0.13 | 0.44 | 2.57 | 7.03 | 22.51 | 50.56 |

# MODEL : PGX-S-H

RATIO : 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100 (2-Stage)






unit : mm

| Code | Model | 62S | 90S | 120S | 142S | 180S | 220S |
|---|---|---|---|---|---|---|---|
| A | A1 | 70 | 100 | 130 | 165 | 215 | 250 |
| | A2 | 5.5 | 6.8 | 9 | 11 | 13 | 17 |
| | A3 | 16 | 22 | 32 | 40 | 55 | 75 |
| | A4 | 50 | 80 | 110 | 130 | 160 | 180 |
| | A5 | 5 | 6 | 9 | 10 | 10 | 11.5, 13.5 |
| | A6 | M5 x P0.8 | M8 x P1.25 | M10 X P1.5 | M12 x P1.75 | M14 x P2.0 | M16 x P2.0 |
| | A7 | 80 | 116 | 148 | 186 | 238 | 288 |
| | A8 | 5 | 6 | 10 | 12 | 16 | 20 |
| | A9 | 18 | 24.5 | 35 | 43 | 59 | 79.5 |
| B | B1 | 62 | 90 | 120 | 142 | 180 | 220 |
| | B2 | 36 | 48 | 65 | 92 | 106 | 139 |
| | B3 | 7 | 10 | 12 | 15 | 20 | 30 |
| | B4 | 1 | 2 | 3 | 3 | 4 | 5 |
| | B5 | 20 | 30 | 40 | 65 | 70 | 90 |
| | B6 | 28 | 36 | 50 | 74 | 82 | 104 |
| | B7 | 8 | 10 | 12 | 15 | 16 | 20 |
| | B8 | 38 | 49 | 61 | 70 | 85 | 93 |
| | B9 | 66 | 83.5 | 108.5 | 127.5 | 154 | 175 |
| | B10 | 9 | 11.5 | 16 | 19.5 | 20 | 23.5, 25.5 |
| C | C1 | 46, 60, 63 | 70, 75, 90 | 90, 100, 115, 145 | 115, 145, 165 | 145, 165, 200 | 200, 215, 265 |
| | C2 | M3, M4, M5 | M4, M5, M6 | M5, M6, M8 | M6, M8, M10 | M8, M10, M12 | M10, M12 |
| | C3 | 8 | 14 | 19 | 24 | 35 | 38, 42, 48, 55 |
| | C4 | 26 | 33.5 | 46 | 67 | 84.5 | 114.5, 116.5 |
| | C5 | 30, 40, 50 | 50, 60, 70 | 70, 80, 95, 110 | 95, 110, 130 | 110, 114.3, 130 | 114.3, 180, 230 |
| | C6 | M4 x P0.7 | M5 x P0.8 | M6 x P1.0 | M8 x P1.25 | M10 x P1.5 | M10 x P1.5 |
| | C7 | 46, 55 | 64, 70, 80 | 92, 110, 130 | 122, 130, 150 | 146, 150 | 182, 200, 250 |
| | C8 | 37.5 | 41 | 54.5 | 79 | 98.5 | 132.5, 134.5 |
| | C9 | 139.5 | 172.5 | 228 | 298.5 | 358.5 | 446.5, 448.5 |

* A5, ★은 적용 모터에 따라 달라질 수 있습니다 .

# Characteristic of PGX-S-H 2-Stage

| Model No. | | Unit | Ratio | 62S | 90S | 120S | 142S | 180S | 220S |
|---|---|---|---|---|---|---|---|---|---|
| Rated Output Torque (Nominal output torque) | $T_{2N}$ | Nm | 15 | 54 | 145 | 301 | 553 | 1,067 | 1,786 |
| | | | 20 | 48 | 128 | 269 | 491 | 940 | 1,587 |
| | | | 25 | 45 | 132 | 278 | 510 | 1,050 | 1,770 |
| | | | 30 | 41 | 125 | 252 | 466 | 985 | 1,680 |
| | | | 35 | 41 | 123 | 258 | 473 | 975 | 1,645 |
| | | | 40 | 39 | 115 | 241 | 442 | 942 | 1,605 |
| | | | 50 | 45 | 132 | 278 | 510 | 1,050 | 1,770 |
| | | | 60 | 41 | 125 | 252 | 466 | 985 | 1,680 |
| | | | 70 | 41 | 123 | 258 | 473 | 975 | 1,645 |
| | | | 80 | 39 | 115 | 241 | 442 | 942 | 1,605 |
| | | | 90 | 40 | 120 | 227 | 412 | 875 | 1,490 |
| | | | 100 | 40 | 116 | 246 | 452 | 930 | 1,565 |
| Max. Acceleration Torque | $T_{2B}$ | Nm | 15~100 | 1.8 Times of Rated Output Torque | | | | | |
| Max. Output Torque Emergency Stop Torque | $T_{2NOT}$ | Nm | 15~100 | 3 Times of Rated Output Torque | | | | | |
| Rated Input Speed | $n_{1N}$ | rpm | 15~100 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 2,000 |
| Max. Input Speed | $n_{1B}$ | rpm | 15~100 | 6,000 | 6,000 | 5,000 | 5,000 | 4,000 | 3,000 |
| Backlash | $j_t$ | arcmin | 15~100 | ≦10 | ≦10 | ≦10 | ≦10 | ≦10 | ≦10 |
| Torsional Rigidity | | Nm/arcmin | 15~100 | 6 | 14 | 27 | 60 | 140 | 240 |
| Max. Radial Force | $F_{2rB}$ | N | 15~100 | 1,120 | 3,040 | 6,460 | 8,830 | 14,820 | 48,450 |
| Max. Axial Force | $F_{2aB}$ | N | 15~100 | 560 | 1,520 | 3,230 | 4,410 | 7,410 | 24,225 |
| Service Life | $L_H$ | hr | 15~100 | S5 Cycle Operation: >20,000 (S1 Continuous Operation: >10,000 hrs) | | | | | |
| Efficiency | $\eta$ | % | 15~100 | ≧94% | | | | | |
| Operating Temperature | | ℃ | 15~100 | −25℃ ~ +90℃ | | | | | |
| Lubrication | | | 15~100 | VIGO GREASE RE #0 | | | | | |
| Protection Class | | | 15~100 | IP65 | | | | | |
| Mounting Position | | | 15~100 | Any | | | | | |
| Noise Level | | dB | 15~100 | ≦58 | ≦60 | ≦63 | ≦65 | ≦67 | ≦70 |
| Weight ±3% | | kg | 15~100 | 1.6 | 4.04 | 9.49 | 17 | 34.1 | 57.3 |

## Mass Moments of Inertia (kg.㎠)

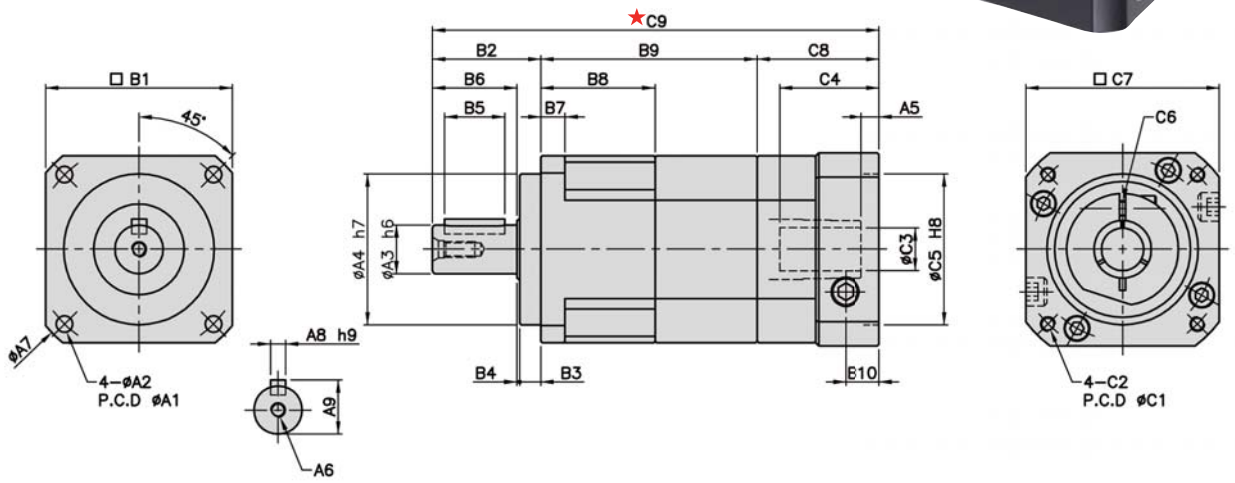
| Ratio | 62S | 90S | 120S | 142S | 180S | 220S |
|---|---|---|---|---|---|---|
| 15 | 0.03 | 0.14 | 0.46 | 2.63 | 7.30 | 22.79 |
| 20 | 0.03 | 0.14 | 0.46 | 2.63 | 7.30 | 22.79 |
| 25 | 0.03 | 0.14 | 0.46 | 2.63 | 7.10 | 22.79 |
| 30 | 0.03 | 0.14 | 0.46 | 2.43 | 7.10 | 22.59 |
| 35 | 0.03 | 0.14 | 0.44 | 2.43 | 7.10 | 22.59 |
| 40 | 0.03 | 0.14 | 0.44 | 2.43 | 6.92 | 22.59 |
| 50 | 0.03 | 0.14 | 0.44 | 2.43 | 6.92 | 22.59 |
| 60 | 0.03 | 0.14 | 0.43 | 2.39 | 6.72 | 21.83 |
| 70 | 0.03 | 0.14 | 0.43 | 2.39 | 6.72 | 21.83 |
| 80 | 0.03 | 0.14 | 0.43 | 2.39 | 6.72 | 21.83 |
| 90 | 0.03 | 0.14 | 0.40 | 2.39 | 6.72 | 21.60 |
| 100 | 0.03 | 0.14 | 0.40 | 2.39 | 6.72 | 21.60 |

* 연속운전 사용시 본사와 상담 후 선정바랍니다.

# MODEL : PGX-H

RATIO : 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100 (2-Stage)






unit : mm

| Code \ Model | | 44 | 62 | 90 | 120 | 142 | 180 | 220 |
|---|---|---|---|---|---|---|---|---|
| A | A1 | 50 | 70 | 100 | 130 | 165 | 215 | 250 |
| | A2 | 4.5 | 5.5 | 6.8 | 9 | 11 | 13 | 17 |
| | A3 | 13 | 16 | 22 | 32 | 40 | 55 | 75 |
| | A4 | 35 | 50 | 80 | 110 | 130 | 160 | 180 |
| | A5 | 5 | 6 | 9 | 10 | 10 | 11.5, 13.5 | 12.5, 14.5 |
| | A6 | M4 x P0.7 | M5 x P0.8 | M8 x P1.25 | M10 x P1.5 | M12 x P1.75 | M14 x P2.0 | M16 x P2.0 |
| | A7 | 58 | 80 | 116 | 148 | 186 | 238 | 288 |
| | A8 | 5 | 5 | 6 | 10 | 12 | 16 | 20 |
| | A9 | 15 | 18 | 24.5 | 35 | 43 | 59 | 79.5 |
| B | B1 | 44 | 62 | 90 | 120 | 142 | 180 | 220 |
| | B2 | 26 | 36 | 48 | 65 | 92 | 106 | 139 |
| | B3 | 5 | 7 | 10 | 12 | 15 | 20 | 30 |
| | B4 | 1 | 1 | 2 | 3 | 3 | 4 | 5 |
| | B5 | 15 | 20 | 30 | 40 | 65 | 70 | 90 |
| | B6 | 20 | 28 | 36 | 50 | 74 | 82 | 104 |
| | B7 | 5 | 8 | 10 | 12 | 15 | 16 | 20 |
| | B8 | 31.5 | 38 | 49 | 61 | 70 | 85 | 93 |
| | B9 | 57.5 | 71.8 | 92.5 | 117 | 136.5 | 166 | 186 |
| | B10 | 9 | 11.5 | 16 | 19.5 | 20 | 23.5, 25.5 | 23.5, 25.5 |
| C | C1 | 46, 60, 63 | 70, 75, 90 | 90, 100, 115, 145 | 115, 145, 165 | 145, 165, 215 | 200, 215, 265 | 200, 265, 300 |
| | C2 | M3, M4, M5 | M4, M5, M6 | M5, M6, M8 | M6, M8, M10 | M8, M10, M12 | M10, M12 | M12, M16 |
| | C3 | 8, (11) | 14, (19) | 19, (24) | 24, (32) | 35, (38) | 38, 42, 48, 55 | 42, 48, 55 |
| | C4 | 26 | 33.5, 41.5 | 46, 59 | 67 | 84.5 | 114.5, 116.5 | 117.5, 119.5 |
| | C5 | 30, 40, 50 | 50, 60, 70 | 70, 80, 95, 110 | 95, 110, 130 | 110, 130, 180 | 114.3, 180, 230 | 114.3, 230, 250 |
| | C6 | M4 x P0.7 | M5 x P0.8 | M6 x P1.0 | M8 x P1.25 | M10 x P1.5 | M10 x P1.5 | M10 x P1.5 |
| | C7 | 46, 55 | 64, 70, 80 | 92, 110, 130 | 122, 130, 150 | 146, 150, 190 | 182, 200, 250 | 222, 250, 265 |
| | C8 | 37.5 | 41, 49 | 54.5, 67.5 | 79 | 98.5 | 132.5, 134.5 | 135.5, 137.5 |
| | C9 | 121 | 148.8, 156.8 | 195, 208 | 261 | 327 | 404.5, 406.5 | 460.5, 462.5 |



* ( ) 안은 주문형입니다 . * A5, ★은 적용 모터에 따라 달라질 수 있습니다 .

# Characteristic of PGX-H 2-Stage

| Model No. | | Unit | Ratio | 44 | 62 | 90 | 120 | 142 | 180 | 220 |
|---|---|---|---|---|---|---|---|---|---|---|
| Rated Output Torque (Nominal output torque) | $T_{2N}$ | Nm | 15 | 17 | 54 | 145 | 301 | 553 | 1,067 | 1,786 |
| | | | 20 | 15 | 48 | 128 | 269 | 491 | 940 | 1,587 |
| | | | 25 | 14 | 45 | 132 | 278 | 510 | 1,050 | 1,770 |
| | | | 30 | 13 | 41 | 125 | 252 | 466 | 985 | 1,680 |
| | | | 35 | 13 | 41 | 123 | 258 | 473 | 975 | 1,645 |
| | | | 40 | 12 | 39 | 115 | 241 | 442 | 942 | 1,605 |
| | | | 50 | 14 | 45 | 132 | 278 | 510 | 1,050 | 1,770 |
| | | | 60 | 13 | 41 | 125 | 252 | 466 | 985 | 1,680 |
| | | | 70 | 13 | 41 | 123 | 258 | 473 | 975 | 1,645 |
| | | | 80 | 12 | 39 | 115 | 241 | 442 | 942 | 1,605 |
| | | | 90 | 11 | 40 | 120 | 227 | 412 | 875 | 1,490 |
| | | | 100 | 12 | 40 | 116 | 246 | 452 | 930 | 1,565 |
| Max. Acceleration Torque | $T_{2B}$ | Nm | 15~100 | 1.8 Times of Rated Output Torque | | | | | | |
| Max. Output Torque Emergency Stop Torque | $T_{2NOT}$ | Nm | 15~100 | 3 Times of Rated Output Torque | | | | | | |
| Rated Input Speed | $n_{1N}$ | rpm | 15~100 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 2,000 |
| Max. Input Speed | $n_{1B}$ | rpm | 15~100 | 6,000 | 6,000 | 6,000 | 5,000 | 5,000 | 4,000 | 3,000 |
| Backlash | $j_t$ | arcmin | 15~100 | ≦10 | ≦10 | ≦10 | ≦10 | ≦10 | ≦10 | ≦10 |
| Torsional Rigidity | | Nm/arcmin | 15~100 | 3 | 6 | 14 | 27 | 60 | 140 | 240 |
| Max. Radial Force | $F_{2rB}$ | N | 15~100 | 720 | 1,120 | 3,040 | 6,460 | 8,830 | 14,820 | 48,450 |
| Max. Axial Force | $F_{2aB}$ | N | 15~100 | 360 | 560 | 1,520 | 3,230 | 4,410 | 7,410 | 24,225 |
| Service Life | $L_H$ | hr | 15~100 | S5 Cycle Operation: >20,000 (S1 Continuous Operation: >10,000 hrs) | | | | | | |
| Efficiency | $\eta$ | % | 15~100 | ≧94% | | | | | | |
| Operating Temperature | | ℃ | 15~100 | −25°C ~ +90°C | | | | | | |
| Lubrication | | | 15~100 | VIGO GREASE RE #0 | | | | | | |
| Protection Class | | | 15~100 | IP65 | | | | | | |
| Mounting Position | | | 15~100 | Any | | | | | | |
| Noise Level | | dB | 15~100 | ≦56 | ≦58 | ≦60 | ≦63 | ≦65 | ≦67 | ≦70 |
| Weight ±3% | | kg | 15~100 | 0.86 | 2 | 5.48 | 10 | 21.4 | 42 | 59 |

## Mass Moments of Inertia (kg.㎠)

| Ratio | 44 | 62 | 90 | 120 | 142 | 180 | 220 |
|---|---|---|---|---|---|---|---|
| 15 | 0.03 | 0.14 | 0.46 | 2.63 | 7.30 | 22.79 | 56.98 |
| 20 | 0.03 | 0.14 | 0.46 | 2.63 | 7.30 | 22.79 | 56.98 |
| 25 | 0.03 | 0.14 | 0.46 | 2.63 | 7.10 | 22.79 | 56.98 |
| 30 | 0.03 | 0.14 | 0.46 | 2.43 | 7.10 | 22.59 | 56.48 |
| 35 | 0.03 | 0.14 | 0.44 | 2.43 | 7.10 | 22.59 | 56.48 |
| 40 | 0.03 | 0.14 | 0.44 | 2.43 | 6.92 | 22.59 | 56.48 |
| 50 | 0.03 | 0.14 | 0.44 | 2.43 | 6.92 | 22.59 | 56.48 |
| 60 | 0.03 | 0.14 | 0.43 | 2.39 | 6.72 | 21.83 | 54.58 |
| 70 | 0.03 | 0.14 | 0.43 | 2.39 | 6.72 | 21.83 | 54.58 |
| 80 | 0.03 | 0.14 | 0.43 | 2.39 | 6.72 | 21.83 | 54.58 |
| 90 | 0.03 | 0.14 | 0.40 | 2.39 | 6.72 | 21.60 | 54.00 |
| 100 | 0.03 | 0.14 | 0.40 | 2.39 | 6.72 | 21.60 | 54.00 |

* 연속운전 사용시 본사와 상담 후 선정바랍니다 .