

IP57 series - Industrial Planetary Gearhead

The IP57 gear box is designed to provide long life in industrial automation, scientific and process control applications that require repetitive cycling featuring high dynamics and accurate velocity or positional control. Advanced manufacturing techniques have resulted in a combination of strong performance characteristics combined with economic prices.

- Planetary construction for high torque and compact dimensions.
- Suitable for use with both servo and stepper motors.
- Wide range of standard ratios with additional options also available.
- Integer gear ratios simplify calibration in positional control systems
- Standard options available from stock.



IP57 series - Specifications

General specifications

| | |
|---------------------------------|--|
| Maximum shaft radial load | 560N @ 5mm from gearhead mounting face for shaft options A & B 80N at 12mm from gearhead mounting face for shaft option C |
| Maximum shaft axial load | 490N |
| Maximum Recommended Input speed | 5000 rpm |
| Operating Temperature range | -40 to + 65 °C |
| Typical Input friction at motor | <0.05Nm |

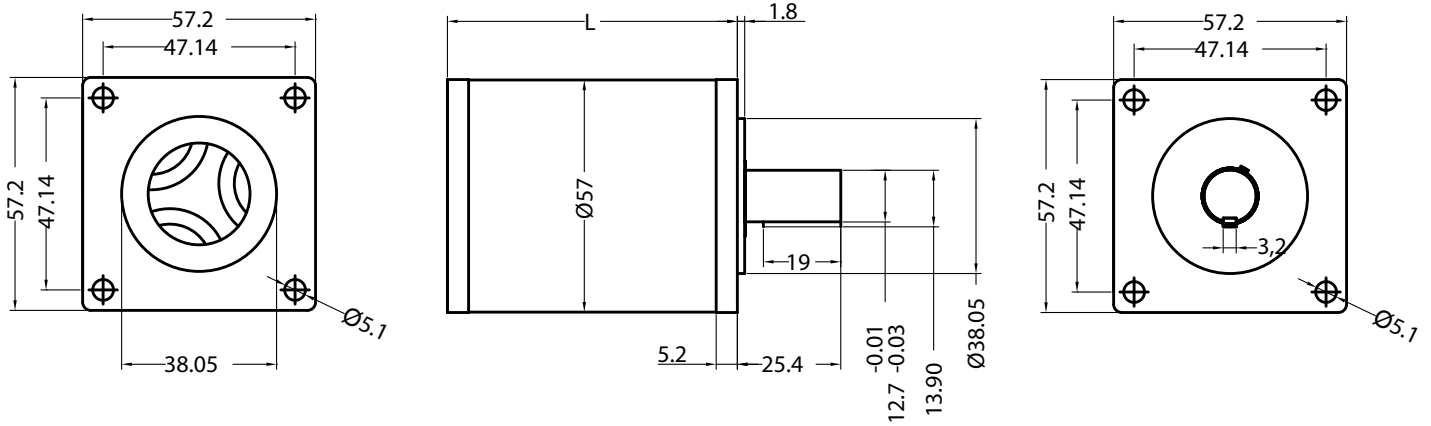
| Part Number | No. Stages | Length (L) | Gear ratio | Maximum Continuous Torque | Maximum Peak Torque | Typical Backlash | Efficiency | Mass |
|-------------|------------|------------|------------|---------------------------|---------------------|------------------|------------|------|
| | | mm | | Nm | Nm | Arc-min | % | g |
| IP57-M01 | 1 | 54 | 5:1 | 10 | 15 | 20 | 92 | 660 |
| | | 54 | 10:1 | 9 | 13.5 | | | |
| IP57-M02 | 2 | 66 | 25:1 | 20 | 30 | 30 | 84 | 880 |
| | | 66 | 50:1 | 20 | 30 | | | |
| | | 66 | 100:1 | 18 | 27 | | | |
| IP57-M03 | 3 | 79 | 125:1 | 35 | 45 | 40 | 78 | 1110 |
| | | 79 | 250:1 | 35 | 45 | | | |
| | | 79 | 500:1 | 35 | 45 | | | |
| | | 79 | 1000:1 | 31.5 | 45 | | | |

Great care is taken during the preparation of data, but Mclennan cannot guarantee accuracy so it should be used for reference only

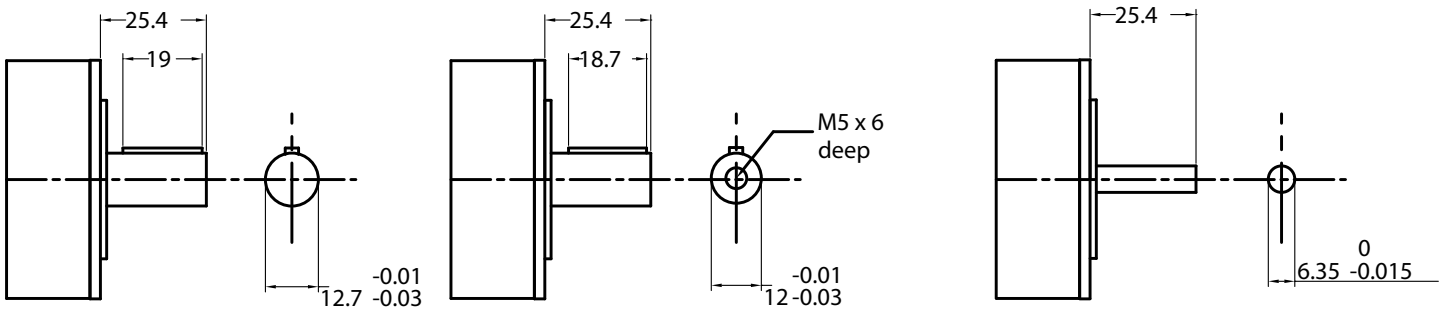


IP57 - dimensions

Outline dimensions



Output shaft options



Option A: Standard shaft available from stock

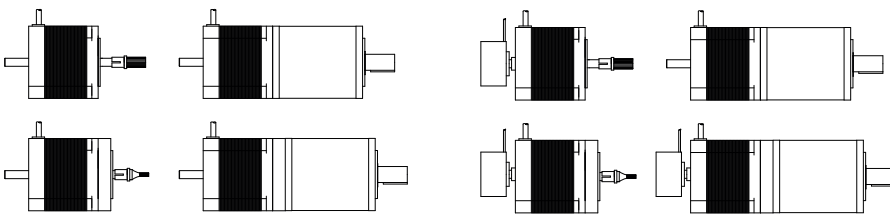
Option B: Semi- standard shaft, special order only

Option C: Semi- standard shaft, special order only. Please note output torque is limited to 4Nm when using option C

Common NEMA 23 motors fitted to an IP57

23HS and 23HSX series steppers

V series servo motor



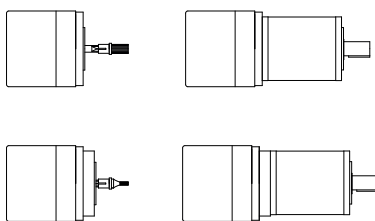
Standard NEMA 23 motor fitting kits*

| | Motor Shaft Ø6.35mm | Motor Shaft Ø8.00mm |
|-----------------|---------------------|---------------------|
| IP57-M01-5:1 | 400MAX00001 | 400MAX00017 |
| IP57-M01-10:1 | 400MAX00002 | 400MAX00018 |
| IP57-M02-25:1 | 400MAX00003 | 400MAX00019 |
| IP57-M02-50:1 | 400MAX00004 | 400MAX00020 |
| IP57-M02-100:1 | 400MAX00004 | 400MAX00020 |
| IP57-M03-125:1 | 400MAX00003 | 400MAX00020 |
| IP57-M03-250:1 | 400MAX00004 | 400MAX00020 |
| IP57-M03-500:1 | 400MAX00004 | 400MAX00020 |
| IP57-M03-1000:1 | 400MAX00004 | 400MAX00020 |

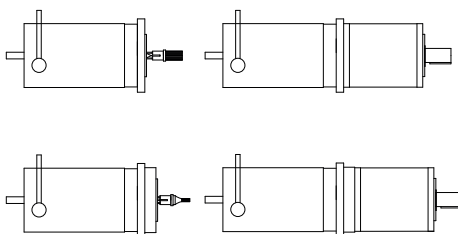
*This is a guide only. Please consult Mclennan to confirm motor compatibility.

Common round flange motors fitted to an IP57

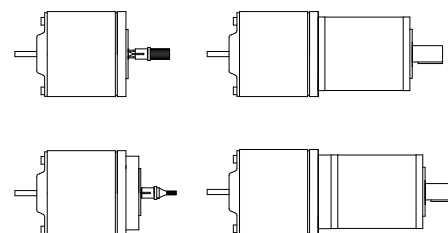
BLDC58 series brushless motor



M500 series motor



M66 series motor



Standard round flange motor details and fitting kit*

| Shaft Diameter | Ø mm | 6.00 | 6.00 | 8.00 |
|---------------------|------|--------|------------|------------|
| Max. shaft length | mm | 25 | 25 | 25 |
| Bearing register | Ø mm | 28 | 25 | 25 |
| Max register length | mm | 8.8 | 3 | 3 |
| Mounting hole size | | 3 x M4 | 4 x M5 max | 4 x M5 max |
| Mounting hole PCD | mm | 50 | 38.89 | 38.89 |

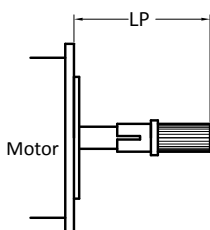
Standard Gearheads

Fitting kit part no.

| | | | |
|-----------------|-------------|-------------|-------------|
| IP57-M01-5:1 | 400MAX00005 | 400MAX00009 | 400MAX00013 |
| IP57-M01-10:1 | 400MAX00006 | 400MAX00010 | 400MAX00014 |
| IP57-M02-25:1 | 400MAX00007 | 400MAX00011 | 400MAX00015 |
| IP57-M02-50:1 | 400MAX00008 | 400MAX00012 | 400MAX00016 |
| IP57-M02-100:1 | 400MAX00008 | 400MAX00012 | 400MAX00016 |
| IP57-M03-125:1 | 400MAX00007 | 400MAX00015 | 400MAX00016 |
| IP57-M03-250:1 | 400MAX00008 | 400MAX00012 | 400MAX00016 |
| IP57-M03-500:1 | 400MAX00008 | 400MAX00012 | 400MAX00016 |
| IP57-M03-1000:1 | 400MAX00008 | 400MAX00012 | 400MAX00016 |

*This is a guide only. Please consult Mclennan to confirm motor compatibility.

Dimensions for pinion position



Optional pinion clamp



An optional pinion clamp may be ordered separately. This enables the pinion to be clamped in position.

| Standard Gearhead Ratios | Motor Shaft Ø <6.35mm | Motor Shaft Ø <8.00mm |
|--------------------------|-----------------------|-----------------------|
| IP57-M01-5:1 | 28.25 /28.35 mm | 41.95/42.05 mm |
| IP57-M01-10:1 | 41.95/42.05 mm | 41.95/42.05 mm |
| IP57-M02-25:1 | 22.35/22.45 mm | 36.05/36.15 mm |
| IP57-M02-50:1 | 36.05/36.15 mm | 36.05/36.15 mm |
| IP57-M02-100:1 | 36.05/36.15 mm | 36.05/36.15 mm |
| IP57-M03-125:1 | 22.35/22.45mm | 36.05/36.15mm |
| IP57-M03-250:1 | 36.05/36.15 mm | 36.05/36.15 mm |
| IP57-M03-500:1 | 36.05/36.15 mm | 36.05/36.15 mm |
| IP57-M03-1000:1 | 36.05/36.15 mm | 36.05/36.15 mm |

Note* Standard pinion fitted to shaft using Loctite 638.