

Precision Planetary Gearheads

TYPICAL APPLICATIONS

- Conveyor systems
- Medical pumps
- Packaging equipment
- Machine tools
- Factory automation
- Any application requiring:
 - Speed reduction
 - Torque multiplication

FEATURES

- Fits our brush and brushless motors
- Precision manufactured in accordance with DIN EN ISO 9001 Standards
- Compact design
- High efficiency
- Suitable for continuous, reversing and intermittent operation
- Can be installed in any attitude
- Life-time lubricant for maintenance-free operation

BENEFITS

- Coaxial arrangement of input and output
- Compact design
- High efficiency
- Low moments-of-inertia
- Can be installed in any attitude
- Suitable for continuous, reversing and intermittent operation
- Low sensitivity to impact load
- Large range of ratios available

32, 52, 62, 81 and 120 mm
(1.26 - 4.72 inch) Diameter



Quiet Precision Gearheads

Moog Components Group precision gearheads, when coupled to our line of brush-type and brushless motors, provide the user with a quiet and powerful precision gearmotor. Available in a wide range of ratios and output torques, these gearmotors will meet the requirements of a vast number of applications. Life-time lubrication ensures long life and maintenance-free operation.

Our engineering department is available for consultation to help you tailor a gearmotor for your specific application.

Note: This catalog contains basic marketing information and general part descriptions of Moog Components Group product lines. With respect to the U.S. export regulations, the products described herein are controlled by the U.S. Commerce Department or the U.S. State Department. Contact Moog Components Group for additional detail on the export controls that are applicable to your part.

52 MM (2.05 INCH) DIAMETER SPECIFICATIONS

| Available Ratios | # of Stages | Output Torque | Shaft Inertia (gcm ²) |
|------------------|-------------|-------------------------|-----------------------------------|
| 4:1 (3.70:1) | One | 4.0 Nm (2.95 ft - lbs) | 16.57 |
| 7:1 (6.75:1) | One | 4.0 Nm (2.95 ft - lbs) | 9.52 |
| 14:1 (13.73:1) | Two | 12.0 Nm (8.85 ft - lbs) | 16.49 |
| 25:1 (25.01:1) | Two | 12.0 Nm (8.85 ft - lbs) | 9.33 |
| 46:1 (45.56:1) | Two | 12.0 Nm (8.85 ft - lbs) | 9.21 |
| 51:1 (50.89:1) | Three | 25.0 Nm (18.4 ft - lbs) | 16.49 |
| 93:1 (92.70:1) | Three | 25.0 Nm (18.4 ft - lbs) | 9.32 |
| 169:1 (168.84:1) | Three | 25.0 Nm (18.4 ft - lbs) | 9.21 |
| 308:1 (307.54:1) | Three | 25.0 Nm (18.4 ft - lbs) | 9.21 |

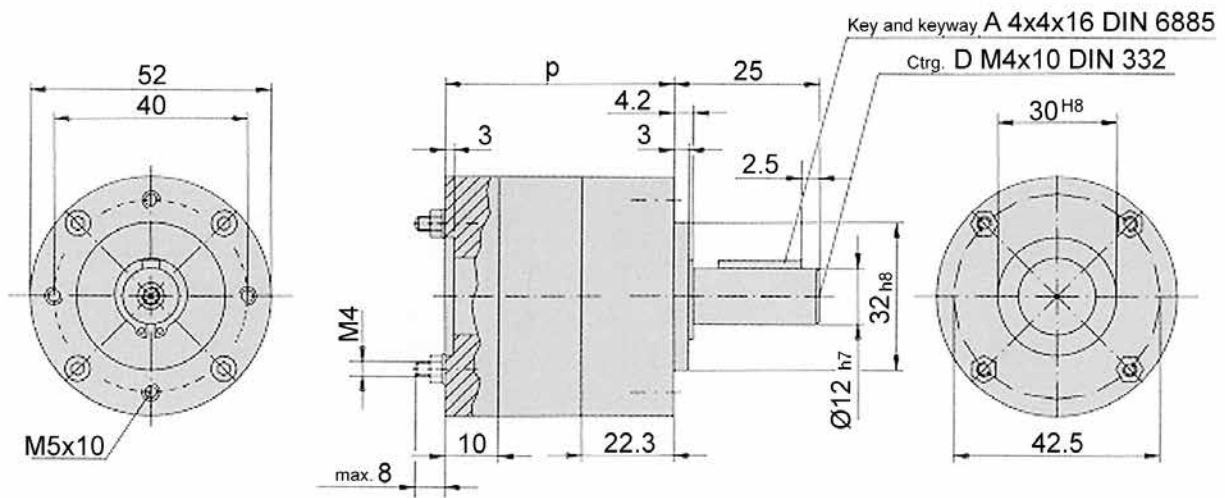


52 mm Technical Data

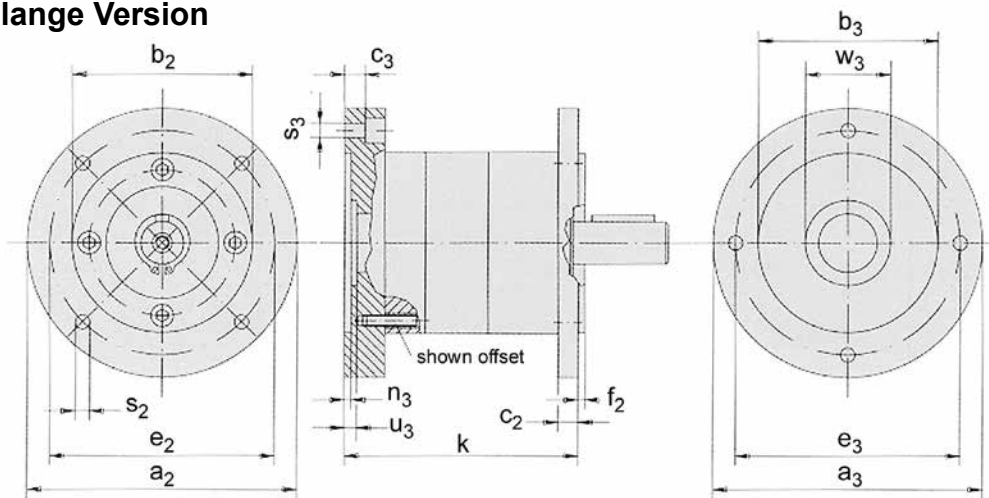
| Parameter | Units | 1-Stage | 2-Stage | 3-Stage |
|---|---------------------------------|---------|---------|----------|
| Max Input Speed | rpm | 5000 | 5000 | 5000 |
| Efficiency | % | 80 | 75 | 70 |
| Approx. Backlash(no-load, input locked) | Minutes | 45 | 45 | 45 |
| Radial Load | N | 200 | 320 | 450 |
| Axial Load | N | 60 | 100 | 150 |
| Max Permitted Fitting Pressure | N | 500 | 500 | 500 |
| Weight | kg | 0.7 | 0.9 | 1.1 |
| Dimension (diameter x length) | mm | 52 x 81 | 52 x 95 | 52 x 109 |
| Lubrication | Grease (life-time lubrication) | | | |
| Installation Attitude | Any | | | |
| Operating Temperature | -15 to +80° C | | | |
| Direction of Rotation | Same for input and output shaft | | | |

Package Dimensions

Basic Version



Standard Flange Version



| Gear Unit Length | | | | 1-Stage | 2-Stage | 3-Stage |
|------------------|--|--|--|---------|---------|---------|
| P | | | | 56 | 70 | 84 |
| K | | | | 83 | 97 | 111 |

| DIM of Motor Mounting Flange | | a_3 | b_3 | u_3 | c_3 | e_3 | n_3 | w_3 | s_3 |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Motor size 56 (B14, B3/B14) | C 80 | 80 | 50 H7 | 38 H7 | 10.2 | 65 | 3 | 5.5 | 5.5 |
| | C 105 | 105 | 70 H7 | - | 10.2 | 85 | 3 | - | 6.5 |

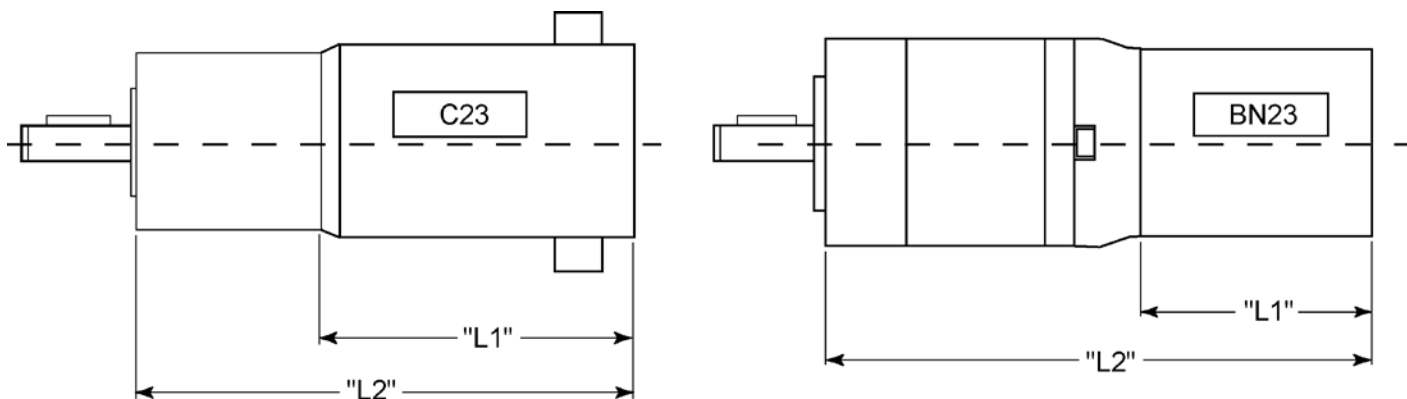
| DIM of Gear Unit Output Flan | | a_2 | b_2 | c_2 | e_2 | f_2 | s_2 |
|------------------------------|--|-------|-------|-------|-------|-------|-------|
| C 80 | | 80 | 50 j7 | 9 | 65 | 2.5 | 5.5 |
| C 90 | | 90 | 60 j7 | 9 | 75 | 2.5 | 5.5 |
| C 105 | | 105 | 70 j7 | 9 | 85 | 2.5 | 6.5 |
| C 120 | | 120 | 80 j7 | 9 | 100 | 3.0 | 6.5 |

We reserve the right to make technical changes.

Note: All dimension on this page are in millimeters.

Gearheads

52 mm Dimensional Drawings



Motor + Gearhead Dimensions*

| Unit Type | L1 Max | L2 Max (1-Stage) | L2 Max (2-Stage) | L2 Max (3-Stage) |
|-----------|--------------------|---------------------|---------------------|----------------------|
| C23-L33 | 3.30 in (83.8 mm) | 5.986 in (152 mm) | 6.538 in (166 mm) | 7.089 in (180 mm) |
| C23-L40 | 4.00 in (101.6 mm) | 6.686 in (169.8 mm) | 7.238 in (183.8 mm) | *7.789 in (197.8 mm) |
| C23-L45 | 4.50 in (114.3 mm) | 7.186 in (182.5 mm) | 7.738 in (196.5 mm) | 8.289 in (210.5 mm) |
| C23-L50 | 5.00 in (127 mm) | 7.686 in (195.2 mm) | 8.238 in (209.2 mm) | 8.789 in (223.2 mm) |
| C23-L55 | 5.50 in (139.7 mm) | 8.186 in (207.9 mm) | 8.738 in (222 mm) | 9.289 in (236 mm) |
| BN23-13 | 1.41 in (35.8 mm) | 4.484 in (113.9 mm) | 5.044 in (128.1 mm) | 5.594 in (142 mm) |
| BN23-18 | 1.91 in (48.5 mm) | 4.984 in (126.6 mm) | 5.544 in (140.8 mm) | 6.094 in (154.8 mm) |
| BN23-23 | 2.41 in (61.2 mm) | 5.484 in (139.3 mm) | 6.044 in (153.5 mm) | 6.594 in (167.5 mm) |
| BN23-28 | 2.91 in (73.9 mm) | 5.984 in (152 mm) | 6.544 in (166.2 mm) | 7.454 in (189.3 mm) |

*All dimensions are reference dimensions

Ordering Information - Examples

52-46:1 – 52 mm gearhead, 46:1 ratio
 52-308:1 – 52 mm gearhead, 308:1 ratio