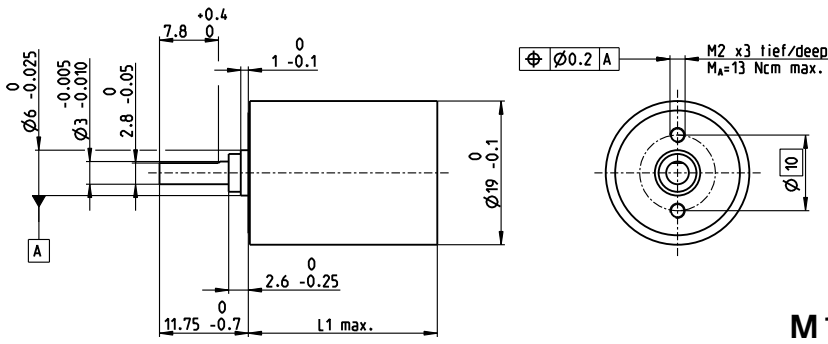


Planetary Gearhead GP 19 B $\varnothing 19$ mm, 0.1–0.3 Nm



M 1:1

Technical Data

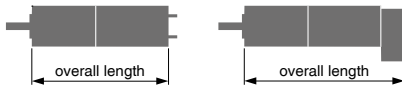
| | |
|--|---------------------------|
| Planetary Gearhead | straight teeth |
| Output shaft | stainless steel, hardened |
| Bearing at output | sleeve bearing |
| Radial play, 6 mm from flange | max. 0.08 mm |
| Axial play | 0.02–0.12 mm |
| Max. axial load (dynamic) | 8 N |
| Max. force for press fits | 100 N |
| Direction of rotation, drive to output | = |
| Max. continuous input speed | 8000 rpm |
| Recommended temperature range | -30...+100°C |
| Extended range as option | -40...+100°C |
| Number of stages | 1 2 3 4 5 |
| Max. radial load, 6 mm from flange | 8 N 12 N 16 N 20 N 20 N |

gear

- Stock program
- Standard program
- Special program (on request)

Part Numbers

| Gearhead Data | 149039 | 149041 | 149044 | 149047 | 149048 | 149051 | 149053 | 149056 |
|---|------------------|--------------------|-----------------------|---------------------|--------------------------|------------------------|----------------------------|--------------------------|
| 1 Reduction | 4.4:1 | 19:1 | 84:1 | 157:1 | 370:1 | 690:1 | 1621:1 | 3027:1 |
| 2 Absolute reduction | $\frac{57}{13}$ | $\frac{3249}{169}$ | $\frac{185193}{2197}$ | $\frac{19683}{125}$ | $\frac{10556001}{28561}$ | $\frac{1121931}{1625}$ | $\frac{601692057}{371293}$ | $\frac{63950067}{21125}$ |
| 3 Max. motor shaft diameter | mm 2 | 2 | 2 | 1.5 | 2 | 2 | 2 | 2 |
| Part Numbers | 149040 | 149042 | 149045 | | 149049 | 149052 | 149054 | 149057 |
| 1 Reduction | 5.4:1 | 24:1 | 104:1 | | 455:1 | 850:1 | 1996:1 | 3728:1 |
| 2 Absolute reduction | $\frac{27}{5}$ | $\frac{1539}{65}$ | $\frac{87723}{845}$ | | $\frac{5000211}{10985}$ | $\frac{531443}{625}$ | $\frac{285012027}{142805}$ | $\frac{30292137}{8125}$ |
| 3 Max. motor shaft diameter | mm 1.5 | 2 | 2 | | 2 | 1.5 | 2 | 2 |
| Part Numbers | | 149043 | 149046 | | 149050 | | 149055 | 149058 |
| 1 Reduction | | 29:1 | 128:1 | | 561:1 | | 2458:1 | 4592:1 |
| 2 Absolute reduction | | $\frac{729}{25}$ | $\frac{41553}{325}$ | | $\frac{2368521}{4225}$ | | $\frac{135005697}{54925}$ | $\frac{14348907}{3125}$ |
| 3 Max. motor shaft diameter | mm | 1.5 | 2 | | 2 | | 2 | 1.5 |
| 4 Number of stages | | 1 | 2 | 3 | 3 | 4 | 4 | 5 |
| 5 Max. continuous torque | Nm | 0.10 | 0.15 | 0.20 | 0.20 | 0.25 | 0.25 | 0.30 |
| 6 Max. intermittent torque at gear output | Nm | 0.150 | 0.225 | 0.300 | 0.300 | 0.375 | 0.375 | 0.450 |
| 7 Max. efficiency | % | 90 | 81 | 73 | 73 | 65 | 65 | 59 |
| 8 Weight | g | 26 | 31 | 36 | 36 | 41 | 41 | 46 |
| 9 Average backlash no load | ° | 1.4 | 1.6 | 2.0 | 2.0 | 2.4 | 2.4 | 3.0 |
| 10 Mass inertia | gcm ² | 0.07 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| 11 Gearhead length L1 | mm | 15.9 | 19.5 | 23.1 | 23.1 | 26.7 | 26.7 | 30.3 |



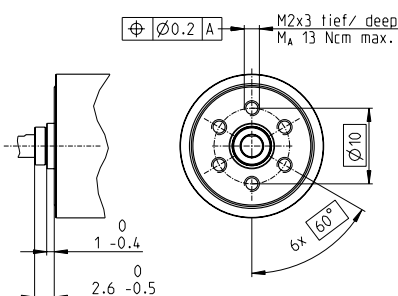
maxon Modular System

| + Motor | Page | + Sensor/Brake | Page | Overall length [mm] = Motor length + gearhead length + (sensor/brake) + assembly parts | | | | | | | |
|-----------------|---------|----------------|---------|--|------|------|------|------|------|------|------|
| A-max 19 | 163/164 | | | 44.9 | 48.5 | 52.1 | 52.1 | 55.7 | 55.7 | 59.3 | 59.3 |
| A-max 19, 1.5 W | 164 | MR | 475/476 | 50.0 | 53.6 | 57.2 | 57.2 | 60.8 | 60.8 | 64.4 | 64.4 |
| A-max 19, 1.5 W | 164 | Enc 22 | 483 | 59.3 | 62.9 | 66.5 | 66.5 | 70.1 | 70.1 | 73.7 | 73.7 |
| A-max 19, 2.5 W | 165/166 | | | 47.5 | 51.1 | 54.7 | 54.7 | 58.3 | 58.3 | 61.9 | 61.9 |
| A-max 19, 2.5 W | 166 | MR | 475/476 | 51.8 | 55.4 | 59.0 | 59.0 | 62.6 | 62.6 | 66.2 | 66.2 |
| A-max 19, 2.5 W | 166 | Enc 22 | 483 | 61.9 | 65.5 | 69.1 | 69.1 | 72.7 | 72.7 | 76.3 | 76.3 |

Option Ball Bearing

Part Numbers

Technical Data



| | | | | | |
|-------|--------|--------|--------|---|---------------------------|
| 4.4:1 | 227632 | 455:1 | 227642 | Planetary Gearhead | straight teeth |
| 5.4:1 | 227633 | 561:1 | 227643 | Output shaft | stainless steel, hardened |
| 19:1 | 227634 | 690:1 | 227644 | Bearing at output | preloaded ball bearings |
| 24:1 | 227635 | 850:1 | 227645 | Radial play, 6 mm from flange | max. 0.08 mm |
| 29:1 | 227636 | 1621:1 | 227646 | Axial play at axial load | < 4 N 0 mm |
| 84:1 | 227637 | 1996:1 | 227647 | | > 4 N max. 0.05 mm |
| 104:1 | 227638 | 2458:1 | 227648 | Max. axial load (dynamic) | 8 N |
| 128:1 | 227639 | 3027:1 | 227649 | Max. force for press fits | 25 N |
| 157:1 | 227640 | 3728:1 | 227650 | Direction of rotation, drive to output | = |
| 370:1 | 227641 | 4592:1 | 227651 | Max. continuous input speed | 8000 rpm |
| | | | | Recommended temperature range | -40...+100°C |
| | | | | Number of stages | 1 2 3 4 5 |
| | | | | Max. radial load, 6 mm from flange | 10 N 15 N 20 N 20 N 20 N |
| | | | | Gearhead values according to sleeve bearing version | |