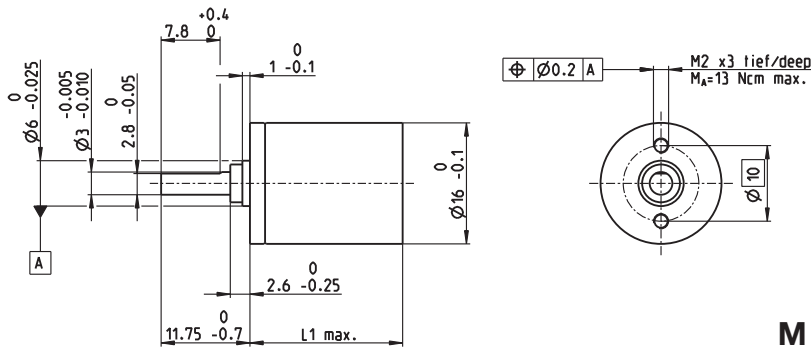


# Planetary Gearhead GP 16 A Ø16 mm, 0.1–0.3 Nm

maxon gear



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. 0.06 mm              |
| Axial play                             | 0.02–0.10 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   |

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

### Part Numbers

| 110321 | 110322 | 110323 | 118186 | 110324 | 134782 | 110325 | 134785 |
|--------|--------|--------|--------|--------|--------|--------|--------|
|--------|--------|--------|--------|--------|--------|--------|--------|

### Gearhead Data

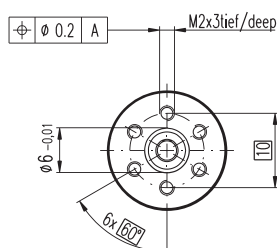
|   |                  |               |               |           |                |               |                  |                |
|---|------------------|---------------|---------------|-----------|----------------|---------------|------------------|----------------|
| 1 Reduction                               | 4.4:1            | 19:1          | 84:1          | 157:1     | 370:1          | 690:1         | 1621:1           | 3027:1         |
| 2 Absolute reduction                      | 57/13            | 3249/169      | 185193/2197   | 19683/125 | 10556001/28561 | 1121931/1625  | 601692027/371293 | 63950067/21125 |
| 3 Max. motor shaft diameter               | mm 2             | 2             | 2             | 1.5       | 2              | 2             | 2                | 2              |
| <b>Part Numbers</b>                       | <b>118184</b>    | <b>134777</b> | <b>134778</b> |           | <b>134780</b>  | <b>118187</b> | <b>134783</b>    | <b>134786</b>  |
| 1 Reduction                               | 5.4:1            | 24:1          | 104:1         |           | 455:1          | 850:1         | 1996:1           | 3728:1         |
| 2 Absolute reduction                      | 27/5             | 1539/65       | 87723/845     |           | 500021/10985   | 531441/625    | 285012027/142805 | 30292137/6125  |
| 3 Max. motor shaft diameter               | mm 1.5           | 2             | 2             |           | 2              | 1.5           | 2                | 2              |
| <b>Part Numbers</b>                       |                  | <b>118185</b> | <b>134779</b> |           | <b>134781</b>  |               | <b>134784</b>    | <b>118188</b>  |
| 1 Reduction                               |                  | 29:1          | 128:1         |           | 561:1          |               | 2458:1           | 4592:1         |
| 2 Absolute reduction                      |                  | 729/25        | 41553/325     |           | 2368521/4225   |               | 135005697/54925  | 14348907/3125  |
| 3 Max. motor shaft diameter               | mm               | 1.5           | 2             |           | 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                | 20            | 23            | 27        | 27             | 31            | 31               | 35             |
| 9 Average backlash no load                | °                | 1.4           | 1.6           | 2.0       | 2.0            | 2.4           | 2.4              | 3.0            |
| 10 Mass inertia                           | gcm <sup>2</sup> | 0.07          | 0.05          | 0.05      | 0.04           | 0.05          | 0.05             | 0.05           |
| 11 Gearhead length L1                     | mm               | 15.5          | 19.1          | 22.7      | 22.7           | 26.3          | 26.3             | 29.9           |



### maxon Modular System

| + Motor           | Page    | + Sensor/Brake | Page    | Overall length [mm] = Motor length + gearhead length + (sensor/brake) + assembly parts |      |      |      |      |      |      |      |
|-------------------|---------|----------------|---------|--|------|------|------|------|------|------|------|
| RE 16, 2 W        | 174     |                |         | 37.9   | 41.5 | 45.1 | 45.1 | 48.7 | 48.7 | 52.3 | 52.3 |
| RE 16, 2 W        | 174     | MR             | 388/390 | 43.6   | 47.2 | 50.8 | 50.8 | 54.4 | 54.4 | 58.0 | 58.0 |
| RE 16, 3.2 W      | 175/176 |                |         | 56.0   | 59.6 | 63.2 | 63.2 | 66.8 | 66.8 | 70.4 | 70.4 |
| RE 16, 3.2 W      | 176     | MR             | 388/390 | 61.0   | 64.6 | 68.2 | 68.2 | 71.8 | 71.8 | 75.4 | 75.4 |
| RE 16, 3.2 W      | 176     | MEnc 13        | 409     | 62.1   | 65.7 | 69.3 | 69.3 | 72.9 | 72.9 | 76.5 | 76.5 |
| RE 16, 4.5 W      | 177/178 |                |         | 59.0   | 62.6 | 66.2 | 66.2 | 69.8 | 69.8 | 73.4 | 73.4 |
| RE 16, 4.5 W      | 178     | MR             | 388/390 | 64.0   | 67.6 | 71.2 | 71.2 | 74.8 | 74.8 | 78.4 | 78.4 |
| RE 16, 4.5 W      | 178     | MEnc 13        | 409     | 65.2   | 68.8 | 72.4 | 72.4 | 76.0 | 76.0 | 79.6 | 79.6 |
| A-max 16          | 193-196 |                |         | 41.0   | 44.6 | 48.2 | 48.2 | 51.8 | 51.8 | 55.4 | 55.4 |
| A-max 16          | 194/196 | MR             | 388/390 | 46.0   | 49.6 | 53.2 | 53.2 | 56.8 | 56.8 | 60.4 | 60.4 |
| A-max 16          | 194/196 | MEnc 13        | 409     | 49.1   | 52.7 | 56.3 | 56.3 | 59.9 | 59.9 | 63.5 | 63.5 |
| EC 16, 30 W       | 244     |                |         | 55.6   | 59.2 | 62.8 | 62.8 | 66.4 | 66.4 | 70.0 | 70.0 |
| EC 16, 30 W       | 244     | MR             | 391     | 66.3   | 69.9 | 73.5 | 73.5 | 77.1 | 77.1 | 80.7 | 80.7 |
| EC-max 16, 5 W    | 259     |                |         | 39.6   | 43.2 | 46.8 | 46.8 | 50.4 | 50.4 | 54.0 | 54.0 |
| EC-max 16, 5 W    | 259     | MR             | 391     | 46.9   | 50.5 | 54.1 | 54.1 | 57.7 | 57.7 | 61.3 | 61.3 |
| EC-max 16, 2-wire | 260     |                |         | 49.1   | 52.7 | 56.3 | 56.3 | 59.9 | 59.9 | 63.5 | 63.5 |

### Option Ball Bearing



### Part Numbers

|       |        |        |        |
|-------|--------|--------|--------|
| 4.4:1 | 138333 | 455:1  | 138343 |
| 5.4:1 | 138334 | 561:1  | 138344 |
| 19:1  | 138335 | 690:1  | 138345 |
| 24:1  | 138336 | 850:1  | 138346 |
| 29:1  | 138337 | 1621:1 | 138347 |
| 84:1  | 138338 | 1996:1 | 138348 |
| 104:1 | 138339 | 2458:1 | 138349 |
| 128:1 | 138340 | 3027:1 | 138350 |
| 157:1 | 138341 | 3728:1 | 138351 |
| 370:1 | 138342 | 4592:1 | 138352 |

### Technical Data

|   |                           |
|---|---------------------------|
| Planetary Gearhead                                  | straight teeth            |
| Output shaft  | stainless steel, hardened |
| Bearing at output                                   | preloaded ball bearings   |
| Radial play, 6 mm from flange                       | max. 0.08 mm              |
| Axial play at axial load                            | < 4 N 0 mm                |
|   | > 4 N max. 0.05 mm        |
| Max. axial load (dynamic)                           | 8 N                       |
| Max. force for press fits                           | 25 N                      |
| Direction of rotation, drive to output              | =                         |
| 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 |                           |