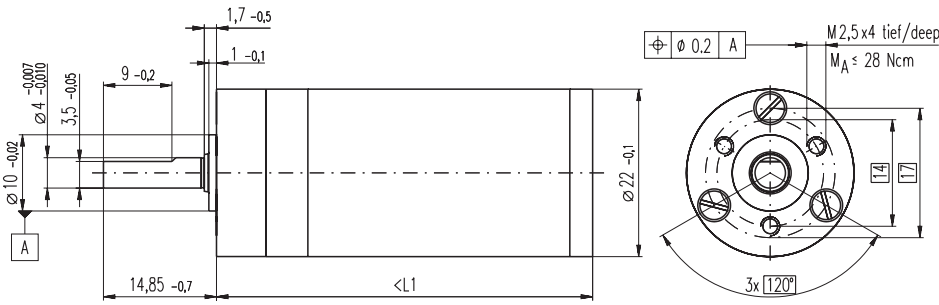


# Planetary Gearhead GP 22 M $\varnothing 22$ mm, 0.5 - 2.0 Nm

Sterilisable



M 1:1

## Technical Data

|                                       |                           |
|---------------------------------------|---------------------------|
| Planetary Gearhead                    | straight teeth            |
| Output shaft                          | stainless steel, hardened |
| Bearing at output                     | ball bearing              |
| Radial play, 10 mm from flange        | max. 0.12 mm              |
| Axial play                            | max. 0.05 mm              |
| Max. radial load, 10 mm from flange   | 25 N                      |
| Max. permissible axial load           | 100 N                     |
| Max. permissible force for press fits | 100 N                     |
| Sense of rotation, drive to output    | =                         |
| Recommended input speed               | < 8000 rpm                |
| Recommended temperature range         | -20 ... +100°C            |
| Extended area as option               | -35 ... +100°C            |

maxon gear

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


## Order Number

|   | 305129  | 305132   | 305138      | 305144    | 305148       | 305154        | 305160       | 305163         | 305169           | 305175           | 305181        |
|---|---------|----------|-------------|-----------|--------------|---------------|--------------|----------------|------------------|------------------|---------------|
| <b>Gearhead Data</b>                                  |         |          |             |           |              |               |              |                |                  |                  |               |
| 1 Reduction   | 3.8 : 1 | 14 : 1   | 53 : 1      | 104 : 1   | 198 : 1      | 370 : 1       | 590 : 1      | 742 : 1        | 1386 : 1         | 1996 : 1         | 3189 : 1      |
| 2 Reduction absolute                                  | 15/4    | 225/16   | 3375/64     | 87723/845 | 50625/256    | 1055601/28561 | 59049/100    | 759375/1024    | 158340015/114244 | 285012027/142805 | 1594323/500   |
| 3 Max. motor shaft diameter mm                        | 4.0     | 4.0      | 4.0         | 3.2       | 4.0          | 3.2           | 4.0          | 4.0            | 3.2              | 3.2              | 4.0           |
| <b>Order Number</b>                                   | 305130  | 305133   | 305139      | 305145    | 305149       | 305155        | 305161       | 305164         | 305170           | 305176           | 305182        |
| 1 Reduction   | 4.4 : 1 | 16 : 1   | 62 : 1      | 109 : 1   | 231 : 1      | 389 : 1       | 690 : 1      | 867 : 1        | 1460 : 1         | 2102 : 1         | 3728 : 1      |
| 2 Reduction absolute                                  | 57/13   | 855/52   | 12825/208   | 2187/20   | 192375/832   | 263169/676    | 1121931/1625 | 2885625/3328   | 3947535/2704     | 7105563/3380     | 30292137/8125 |
| 3 Max. motor shaft diameter mm                        | 3.2     | 3.2      | 3.2         | 4.0       | 3.2          | 3.2           | 3.2          | 3.2            | 3.2              | 3.2              | 3.2           |
| <b>Order Number</b>                                   | 305131  | 305134   | 305140      | 305146    | 305150       | 305156        | 305162       | 305165         | 305171           | 305177           | 305183        |
| 1 Reduction   | 5.4 : 1 | 19 : 1   | 72 : 1      | 128 : 1   | 270 : 1      | 410 : 1       | 850 : 1      | 1014 : 1       | 1538 : 1         | 2214 : 1         | 4592 : 1      |
| 2 Reduction absolute                                  | 27/5    | 3249/169 | 48735/676   | 41553/325 | 731025/2704  | 6561/16       | 531441/625   | 10965375/10816 | 98415/64         | 177147/80        | 14348907/8125 |
| 3 Max. motor shaft diameter mm                        | 2.5     | 3.2      | 3.2         | 3.2       | 4.0          | 2.5           | 3.2          | 4.0            | 4.0              | 4.0              | 2.5           |
| <b>Order Number</b>                                   |         | 305135   | 305141      | 305147    | 305151       | 305157        |              | 305166         | 305172           | 305178           |               |
| 1 Reduction   |         | 20 : 1   | 76 : 1      | 157 : 1   | 285 : 1      | 455 : 1       |              | 1068 : 1       | 1621 : 1         | 2458 : 1         |               |
| 2 Reduction absolute                                  |         | 81/4     | 1215/16     | 19683/125 | 18225/64     | 500211/10985  |              | 273375/256     | 801682057/371293 | 135005697/54925  |               |
| 3 Max. motor shaft diameter mm                        |         | 4.0      | 4.0         | 2.5       | 4.0          | 3.2           |              | 4.0            | 3.2              | 3.2              |               |
| <b>Order Number</b>                                   |         | 305136   | 305142      |           | 305152       | 305158        |              | 305167         | 305173           | 305179           |               |
| 1 Reduction   |         | 24 : 1   | 84 : 1      |           | 316 : 1      | 479 : 1       |              | 1185 : 1       | 1707 : 1         | 2589 : 1         |               |
| 2 Reduction absolute                                  |         | 1539/65  | 185193/2197 |           | 2777895/8788 | 124659/260    |              | 41668425/35152 | 15000633/8788    | 3365793/1300     |               |
| 3 Max. motor shaft diameter mm                        |         | 3.2      | 3.2         |           | 3.2          | 3.2           |              | 3.2            | 3.2              | 3.2              |               |
| <b>Order Number</b>                                   |         | 305137   | 305143      |           | 305153       | 305159        |              | 305168         | 305174           | 305180           |               |
| 1 Reduction   |         | 29 : 1   | 89 : 1      |           | 333 : 1      | 561 : 1       |              | 1249 : 1       | 1798 : 1         | 3027 : 1         |               |
| 2 Reduction absolute                                  |         | 729/25   | 4617/52     |           | 69255/208    | 2368521/4225  |              | 1038825/832    | 373977/208       | 63950067/21125   |               |
| 3 Max. motor shaft diameter mm                        |         | 2.5      | 3.2         |           | 3.2          | 3.2           |              | 3.2            | 3.2              | 3.2              |               |
| 4 Number of stages                                    |         | 1        | 2           | 3         | 3            | 4             | 4            | 4              | 5                | 5                | 5             |
| 5 Max. continuous torque Nm                           |         | 0.5      | 0.6         | 1.2       | 1.2          | 1.8           | 1.8          | 1.8            | 2.0              | 2.0              | 2.0           |
| 6 Intermittently permissible torque at gear output Nm |         | 0.8      | 0.9         | 1.9       | 1.9          | 2.7           | 2.7          | 2.7            | 3.0              | 3.0              | 3.0           |
| 7 Max. efficiency %                                   |         | 84       | 70          | 59        | 59           | 49            | 49           | 49             | 42               | 42               | 42            |
| 8 Weight g  |         | 64       | 77          | 90        | 90           | 103           | 103          | 103            | 116              | 116              | 116           |
| 9 Average backlash no load °                          |         | 1.0      | 1.2         | 1.6       | 1.6          | 2.0           | 2.0          | 2.0            | 2.0              | 2.0              | 2.0           |
| 10 Mass inertia gcm <sup>2</sup>                      |         | 0.5      | 0.4         | 0.4       | 0.4          | 0.4           | 0.4          | 0.4            | 0.4              | 0.4              | 0.4           |
| 11 Gearhead length L1 mm                              |         | 35.8     | 42.6        | 49.4      | 49.4         | 56.2          | 56.2         | 56.2           | 63.0             | 63.0             | 63.0          |



## Combination

| + Motor            | Page | + Tacho / Brake | Page | Overall length [mm] = Motor length + gearhead length + (tacho / brake) + assembly parts |       |       |       |       |       |       |       |       |       |       |
|--------------------|------|-----------------|------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| EC 22, 50 W, ster. | 163  |                 |      | 98.6  | 105.4 | 112.2 | 112.2 | 119.0 | 119.0 | 119.0 | 125.8 | 125.8 | 125.8 | 125.8 |

| Application   | Sterilisation information  |
|---|--|
|  <b>Medicine / surgery / chemicals</b> | The motor can be sterilised at least 100 times in autoclave. No need to dismantle. |
| Hand tools that can be sterilised, such as bone saw, bone drilling and grinding machine                                   | Sterilisation with steam   |
| Dermatological and dental tools   | Temperature +134°C ± 4°C   |
| Infusion pumps  | Compression pressure up to 2.3 bar   |
| ECG   | Rel. humidity 100 %  |
| Therapy aid, analysis and dialysis equipment  | Cycle length 20 minutes  |