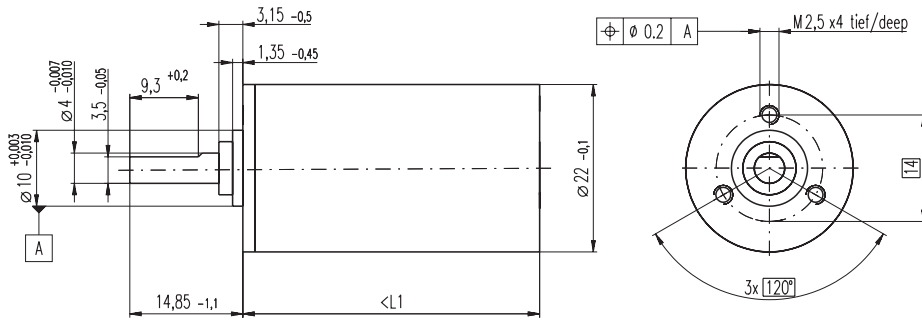


# Planetary Gearhead GP 22 C $\varnothing 22$ mm, 0.5 - 2.0 Nm

Ceramic Version



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. 0.2 mm
Axial play	max. 0.2 mm
Max. radial load, 10 mm from flange	70 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

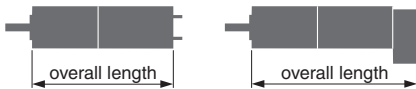
maxon gear

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

## Order Number

	143971	143974	143980	143986	143990	143996	144002	144004	144011	144017	144023
<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	10556001/28561	59049/100	759375/1024	158340015/114244	285012027/142805	1594323/500
3 Max. motor shaft diameter mm	4	4	4	3.2	4	3.2	4	4	3.2	3.2	4
<b>Order Number</b>	<b>143972</b>	<b>143975</b>	<b>143981</b>	<b>143987</b>	<b>143991</b>	<b>143997</b>	<b>144003</b>	<b>144006</b>	<b>144012</b>	<b>144018</b>	<b>144024</b>
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	3.2	3.2	3.2	3.2	3.2	3.2	3.2
<b>Order Number</b>	<b>143973</b>	<b>143976</b>	<b>143982</b>	<b>143988</b>	<b>143992</b>	<b>143998</b>	<b>144005</b>	<b>144007</b>	<b>144013</b>	<b>144019</b>	<b>144025</b>
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	14348907/3125
3 Max. motor shaft diameter mm	2.5	3.2	3.2	3.2	3.2	4	2.5	3.2	4	4	2.5
<b>Order Number</b>		<b>143977</b>	<b>143983</b>	<b>143989</b>	<b>143993</b>	<b>143999</b>		<b>144008</b>	<b>144014</b>	<b>144020</b>	
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	5000211/10985		273375/256	601692057/371293	135006697/54925	
3 Max. motor shaft diameter mm		4	4	2.5	4	3.2		4	3.2	3.2	
<b>Order Number</b>		<b>143978</b>	<b>143984</b>		<b>143994</b>	<b>144000</b>		<b>144009</b>	<b>144015</b>	<b>144021</b>	
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>		<b>143979</b>	<b>143985</b>		<b>143995</b>	<b>144001</b>		<b>144010</b>	<b>144016</b>	<b>144022</b>	
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	63950067/2125	
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
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	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	3.0
7 Max. efficiency %	84	70	59	59	49	49	49	42	42	42	42
8 Weight g	42	55	68	68	81	81	81	94	94	94	94
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	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	0.4
11 Gearhead length L1* mm	25.4	32.2	39.0	39.0	45.8	45.8	45.8	52.6	52.6	52.6	52.6

\*L1 - 2.8 mm for calculating the overall length



## Combination

+ Motor	Page	+ Tacho / Brake	Page	Overall length [mm] = Motor length + gearhead length + (tacho / brake) + assembly parts									
A-max 19	107/108			51.6	58.4	65.2	65.2	72.0	72.0	78.8	78.8	78.8	78.8
A-max 19, 1.5 W	108	MR	255/256	56.7	63.5	70.3	70.3	77.1	77.1	77.1	83.9	83.9	83.9
A-max 19, 1.5 W	108	Enc 22	261	66.0	72.8	79.6	79.6	86.4	86.4	86.4	93.2	93.2	93.2
A-max 19, 1.5 W	108	MEnc 13	270	59.1	65.9	72.7	72.7	79.5	79.5	79.5	86.3	86.3	86.3
A-max 19, 2.5 W	109/110			54.2	61.0	67.8	67.8	74.6	74.6	74.6	81.4	81.4	81.4
A-max 19, 2.5 W	110	MR	255/256	58.5	65.3	72.1	72.1	78.9	78.9	78.9	85.7	85.7	85.7
A-max 19, 2.5 W	110	Enc 22	261	68.6	75.4	82.2	82.2	89.0	89.0	89.0	95.8	95.8	95.8
A-max 19, 2.5 W	110	MEnc 13	270	61.7	68.5	75.3	75.3	82.1	82.1	82.1	88.9	88.9	88.9
A-max 22	111-114			54.6	61.4	68.2	68.2	75.0	75.0	75.0	81.8	81.8	81.8
A-max 22	112/114	MR	255/256	59.6	66.4	73.2	73.2	80.0	80.0	80.0	86.8	86.8	86.8
A-max 22	112/114	Enc 22	261	69.0	75.8	82.6	82.6	89.4	89.4	89.4	96.2	96.2	96.2
A-max 22	112/114	MEnc 13	270	61.7	68.5	75.3	75.3	82.1	82.1	82.1	88.9	88.9	88.9
RE-max 21	137/138			51.6	58.4	65.2	65.2	72.0	72.0	72.0	78.8	78.8	78.8
RE-max 21, 3.5 W	138	MR	255/256	56.7	63.5	70.3	70.3	77.1	77.1	77.1	83.9	83.9	83.9
RE-max 21	139/140			54.2	61.0	67.8	67.8	74.6	74.6	74.6	81.4	81.4	81.4
RE-max 21, 6 W	140	MR	255/256	58.5	65.3	72.1	72.1	78.9	78.9	78.9	85.7	85.7	85.7
RE-max 24	141-144			54.6	61.4	68.2	68.2	75.0	75.0	75.0	81.8	81.8	81.8
RE-max 24	142/144	MR	255/256	59.6	66.4	73.2	73.2	80.0	80.0	80.0	86.8	86.8	86.8