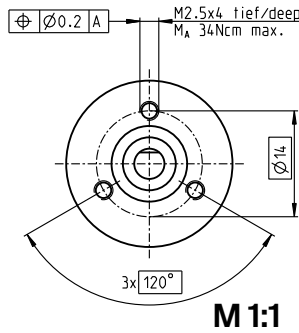
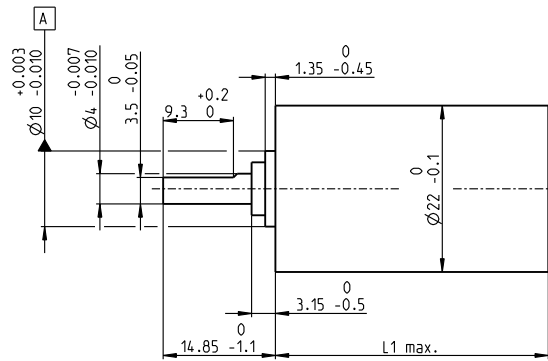


Planetary Gearhead GP 22 A Ø22 mm, 0.5–1.0 Nm

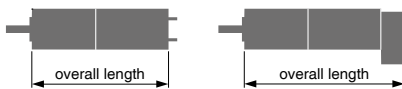


Technical Data	
Planetary gearhead	straight teeth
Output shaft	stainless steel, hardened
Bearing at output	ball bearing
Option	sleeve bearing
Radial play, 10 mm from flange	max. 0.2 mm
Axial play	max. 0.2 mm
Max. axial load (dynamic)	100 N
Max. force for press fits	100 N
Direction of rotation, drive to output	=
Max. continuous input speed	6000 rpm
Recommended temperature range	-40...+100°C
Number of stages	1 2 3 4 5
Max. radial load, 10 mm from flange	30 N 50 N 55 N 55 N 55 N

gear

Gearhead Data	Part Numbers										
	134156	134158	134163	134168	134172	110340	134183	134186	134190	134195	134203
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 Absolute reduction	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
Part Numbers	110337	134159	134164	134169	134173	134178	134184	134187	134193	134198	134204
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 Absolute reduction	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
Part Numbers	134157	110338	134165	134170	134174	134180	134185	134188	134196	134200	134205
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 Absolute reduction	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	4	3.2	4	2.5	3.2	4	4	2.5
Part Numbers		134160	134166	134171	134176	134179		134191	110341	134199	
1 Reduction		20:1	76:1	157:1	285:1	455:1		1068:1	1621:1	2458:1	
2 Absolute reduction		81/4	1215/16	19683/125	18225/64	5000211/10985		273375/256	601892057/371293	135005697/54925	
3 Max. motor shaft diameter		mm 4	4	2.5	4	3.2		4	3.2	3.2	
Part Numbers		134161	110339		134175	134181		134189	134194	134201	
1 Reduction		24:1	84:1		316:1	479:1		1185:1	1707:1	2589:1	
2 Absolute reduction		1539/65	18519/2197		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	
Part Numbers		134162	134167		134177	134182		134192	134197	134202	
1 Reduction		29:1	89:1		333:1	561:1		1249:1	1798:1	3027:1	
2 Absolute reduction		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	4	4	5	5	5	5	
5 Max. continuous torque	Nm	0.5	0.5	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0
6 Max. intermittent torque at gear output	Nm	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
7 Max. efficiency	%	84	70	59	59	49	49	42	42	42	42
8 Weight	g	42	55	68	68	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
10 Mass inertia	gcm ²	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	22.6	29.4	36.2	36.2	43.0	43.0	49.8	49.8	49.8	49.8

*for EC 32fl. L1 is +7.1 mm



maxon Modular System											
+ Motor	Page	+ Sensor/Brake	Page	Overall length [mm] = Motor length + gearhead length + (sensor/brake) + assembly parts							
A-max 19	163/164			51.6	58.4	65.2	65.2	72.0	72.0	78.8	78.8
A-max 19, 1.5 W	164	MR	475/476	56.7	63.5	70.3	70.3	77.1	77.1	83.9	83.9
A-max 19, 1.5 W	164	Enc 22	483	66.0	72.8	79.6	79.6	86.4	86.4	93.2	93.2
A-max 19, 2.5 W	165/166			54.2	61.0	67.8	67.8	74.6	74.6	81.4	81.4
A-max 19, 2.5 W	166	MR	475/476	58.5	65.3	72.1	72.1	78.9	78.9	85.7	85.7
A-max 19, 2.5 W	166	Enc 22	483	68.6	75.4	82.2	82.2	89.0	89.0	95.8	95.8
A-max 22	167-170			54.6	61.4	68.2	68.2	75.0	75.0	81.8	81.8
A-max 22	168/170	MR	475/476	59.6	66.4	73.2	73.2	80.0	80.0	86.8	86.8
A-max 22	168/170	Enc 22	483	69.0	75.8	82.6	82.6	89.4	89.4	96.2	96.2
EC-max 22, 12 W	248			57.4	64.2	71.0	71.0	77.8	77.8	84.6	84.6
EC-max 22, 12 W	248	MR	477	67.0	73.8	80.6	80.6	87.4	87.4	94.2	94.2
EC-max 22, 12 W	248	AB 20	532	93.0	99.8	106.6	106.6	113.4	113.4	120.2	120.2
EC-max 22, 25 W	249			73.9	80.7	87.5	87.5	94.3	94.3	101.1	101.1
EC-max 22, 25 W	249	MR	477	83.5	90.3	97.1	97.1	103.9	103.9	110.7	110.7
EC-max 22, 25 W	249	AB 20	532	109.5	116.3	123.1	123.1	129.9	129.9	136.7	136.7
EC 20 flat, 3 W, A	287			33.1	39.9	46.7	46.7	53.5	53.5	60.3	60.3
EC 20 flat, 3 W, B	287			32.5	39.3	46.1	46.1	52.9	52.9	59.7	59.7
EC 20 flat, 5 W	288			36.7	43.5	50.3	50.3	57.1	57.1	63.9	63.9
EC 20 flat, IE, IP 00	289			39.7	46.5	53.3	53.3	60.1	60.1	66.9	66.9
EC 20 flat, IE, IP 40	289			40.8	47.6	54.4	54.4	61.2	61.2	68.0	68.0
EC 20 flat, IE, IP 00	290			43.7	50.5	57.3	57.3	64.1	64.1	70.9	70.9
EC 20 flat, IE, IP 40	290			44.8	51.6	58.4	58.4	65.2	65.2	72.0	72.0
EC 32 flat, 6 W	291			39.8	46.6	53.4	53.4	60.2	60.2	67.0	67.0