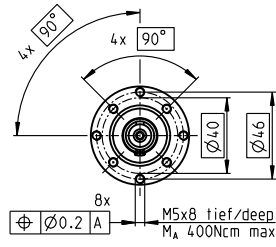
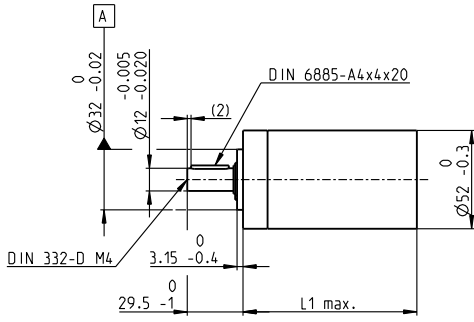


Planetary Gearhead GP 52 C $\varnothing 52$ mm, 4.0–30.0 Nm

Ceramic Version

gear



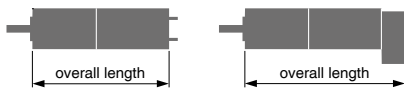
M 1:4

Technical Data

Planetary Gearhead	straight teeth
Output shaft	stainless steel
Bearing at output	preloaded ball bearings
Radial play, 12 mm from flange	max. 0.06 mm
Axial play at axial load	< 5 N 0 mm > 5 N max. 0.3 mm
Max. axial load (dynamic)	200 N
Max. force for press fits	500 N
Direction of rotation, drive to output	=
Max. continuous input speed	6000 rpm
Recommended temperature range	-15...+80°C
Extended range as option	-40...+100°C
Number of stages	1 2 3 4
Max. radial load, 12 mm from flange	420 N 630 N 900 N 900 N

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

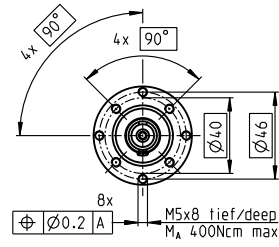
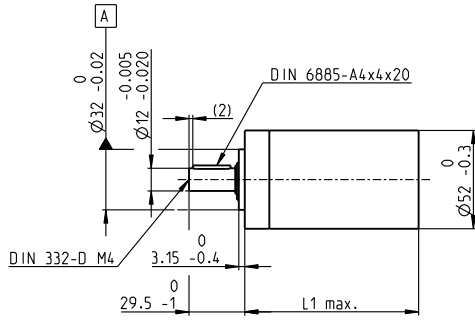
Gearhead Data	Part Numbers						
	223080	223083	223089	223094	223097	223104	223109
1 Reduction	3.5:1	12:1	43:1	91:1	150:1	319:1	546:1
2 Absolute reduction	7/2	49/4	343/8	91	2401/16	637/2	546
10 Mass inertia	gcm ² 20.7	17.6	17.3	16.7	17.3	16.8	16.4
3 Max. motor shaft diameter	mm 10	10	10	10	10	10	10
Part Numbers	223081	223084	223090	223095	223099	223105	223110
1 Reduction	4.3:1	15:1	53:1	113:1	186:1	353:1	676:1
2 Absolute reduction	13/3	91/6	637/12	338/3	4459/24	28561/61	676
10 Mass inertia	gcm ² 12	16.8	17.2	9.3	17.3	9.4	9.1
3 Max. motor shaft diameter	mm 8	10	10	8	10	8	8
Part Numbers		223085	223091	223096	223101	223106	223111
1 Reduction		19:1	66:1	126:1	230:1	394:1	756:1
2 Absolute reduction		169/9	1183/18	126	8281/36	1183/3	756
10 Mass inertia	gcm ²	9.5	16.7	16.4	16.8	16.7	16.4
3 Max. motor shaft diameter	mm	8	10	10	10	10	10
Part Numbers			223086	223092	223098	223102	223107
1 Reduction			21:1	74:1	156:1	257:1	441:1
2 Absolute reduction			21	147/2	156	1029/4	441
10 Mass inertia	gcm ²		16.5	17.2	9.1	17.3	16.5
3 Max. motor shaft diameter	mm		10	10	8	10	10
Part Numbers			223087	223093		223103	223108
1 Reduction			26:1	81:1		285:1	488:1
2 Absolute reduction			26	2197/27		15379/64	4384/9
10 Mass inertia	gcm ²		9.1	9.4		16.7	9.4
3 Max. motor shaft diameter	mm		8	8		10	8
4 Number of stages			1	2	3	4	4
5 Max. continuous torque	Nm		4	15	30	30	30
6 Max. intermittent torque at gear output	Nm		6	22.5	45	45	45
7 Max. efficiency	%		91	83	75	75	68
8 Weight	g		460	620	770	770	920
9 Average backlash no load	°		0.6	0.8	1.0	1.0	1.0
11 Gearhead length L1	mm		49.0	65.0	78.5	78.5	92.0



maxon Modular System						
+ Motor	Page	+ Sensor	Page	Brake	Page	Overall length [mm] = Motor length + gearhead length + (sensor/brake) + assembly parts
RE 40, 150 W	151					120.1 136.1 149.6 149.6 163.1 163.1 163.1
RE 40, 150 W	151	MR	479			131.5 147.5 161.0 161.0 174.5 174.5 174.5
RE 40, 150 W	151	HED_ 5540	486/489			140.8 156.8 170.3 170.3 183.8 183.8 183.8
RE 40, 150 W	151	HEDL 9140	493			174.1 190.1 203.6 203.6 217.1 217.1 217.1
RE 40, 150 W	151			AB 28	535	156.2 172.2 185.7 185.7 199.2 199.2 199.2
RE 40, 150 W	151			AB 28	536	164.2 180.2 193.7 193.7 207.2 207.2 207.2
RE 40, 150 W	151	HED_ 5540	486/489	AB 28	535	173.4 189.4 202.9 202.9 216.4 216.4 216.4
RE 40, 150 W	151	HEDL 9140	493	AB 28	536	184.6 200.6 214.1 214.1 227.6 227.6 227.6
RE 50, 200 W	152					157.1 173.1 186.6 186.6 200.1 200.1 200.1
RE 50, 200 W	152	HED_5540	487/489			177.8 193.8 207.3 207.3 220.8 220.8 220.8
RE 50, 200 W	152	HEDL 9140	494			219.5 235.5 249.0 249.0 262.5 262.5 262.5
RE 50, 200 W	152			AB 44	540	219.5 235.5 249.0 249.0 262.5 262.5 262.5
RE 50, 200 W	152	HEDL 9140	494	AB 44	540	232.5 248.5 262.0 262.0 275.5 275.5 275.5
EC 40, 170 W	239					129.1 145.1 158.6 158.6 172.1 172.1 172.1
EC 40, 170 W	239	HED_5540	487/489			152.5 168.5 182.0 182.0 195.5 195.5 195.5
EC 40, 170 W	239	Res 26	496			156.3 172.3 185.8 185.8 199.3 199.3 199.3
EC 40, 170 W	239			AB 32	537	171.8 187.8 201.3 201.3 214.8 214.8 214.8
EC 40, 170 W	239	HED_5540	487/489	AB 32	537	190.2 206.2 219.7 219.7 233.2 233.2 233.2
EC 45, 150 W	240					160.3 176.3 189.8 189.8 203.3 203.3 203.3
EC 45, 150 W	240	HEDL 9140	493			175.9 191.9 205.4 205.4 218.9 218.9 218.9
EC 45, 150 W	240	Res 26	496			160.3 176.3 189.8 189.8 203.3 203.3 203.3
EC 45, 150 W	240			AB 28	536	167.7 183.7 197.2 197.2 210.7 210.7 210.7
EC 45, 150 W	240	HEDL 9140	493	AB 28	536	184.7 200.7 214.2 214.2 227.7 227.7 227.7
EC 45, 250 W	241					193.1 209.1 222.6 222.6 236.1 236.1 236.1
EC 45, 250 W	241	HEDL 9140	493			208.7 224.7 238.2 238.2 251.7 251.7 251.7
EC 45, 250 W	241	Res 26	496			193.1 209.1 222.6 222.6 236.1 236.1 236.1

Planetary Gearhead GP 52 C $\varnothing 52$ mm, 4.0–30.0 Nm

Ceramic Version



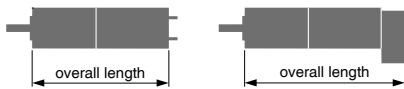
M 1:4

Technical Data

Planetary Gearhead	straight teeth
Output shaft	stainless steel
Bearing at output	preloaded ball bearings
Radial play, 12 mm from flange	max. 0.06 mm
Axial play at axial load	< 5 N 0 mm > 5 N max. 0.3 mm
Max. axial load (dynamic)	200 N
Max. force for press fits	500 N
Direction of rotation, drive to output	=
Max. continuous input speed	6000 rpm
Recommended temperature range	-15...+80°C
Extended range as option	-40...+100°C
Number of stages	1 2 3 4
Max. radial load, 12 mm from flange	420 N 630 N 900 N 900 N

gear

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



Part Numbers

223080	223083	223089	223094	223097	223104	223109
223081	223084	223090	223095	223099	223105	223110
	223085	223091	223096	223101	223106	223111
	223086	223092	223098	223102	223107	223112
	223087	223093		223103	223108	

maxon Modular System

+ Motor	Page	+ Sensor	Page	Brake	Page	Overall length [mm] = Motor length + gearhead length + (sensor/brake) + assembly parts						
EC 45, 250 W	241			AB 28	536	200.5	216.5	230.0	230.0	243.5	243.5	243.5
EC 45, 250 W	241	HEDL 9140	493	AB 28	536	217.5	233.5	247.0	247.0	260.5	260.5	260.5
EC-max 40, 120 W	253					137.1	153.1	166.6	166.6	180.1	180.1	180.1
EC-max 40, 120 W	253	MR	479			152.8	168.8	182.3	182.3	195.8	195.8	195.8
EC-max 40, 120 W	253	HEDL 5540	490			160.5	176.5	190.0	190.0	203.5	203.5	203.5
EC-max 40, 120 W	253			AB 28	534	171.5	187.5	201.0	201.0	214.5	214.5	214.5
EC-max 40, 120 W	253	HEDL 5540	490	AB 28	534	189.8	205.8	219.3	219.3	232.8	232.8	232.8
EC-i 52, 180 W	278					129.1	145.1	158.6	158.6	172.1	172.1	172.1
EC-i 52, 180 W	278	16 EASY/Abs.	464/468			142.8	158.8	172.3	172.3	185.8	185.8	185.8
EC-i 52, 180 W	278	16 RIO	481			142.8	158.8	172.3	172.3	185.8	185.8	185.8
EC-i 52, 180 W	278	AEDL 5810	484/485			151.9	168.9	181.4	181.4	194.9	194.9	194.9
EC-i 52, 180 W	278	HEDL 5540	488-492			151.9	168.9	181.4	181.4	194.9	194.9	194.9
EC-i 52, 200 W	279					159.1	175.1	188.6	188.6	202.1	202.1	202.1
EC-i 52, 200 W	279	16 EASY/XT/Abs.	464-469			172.8	188.8	202.3	202.3	215.8	215.8	215.8
EC-i 52, 200 W	279	16 EASY Abs. XT	471			173.3	189.3	202.8	202.8	216.3	216.3	216.3
EC-i 52, 200 W	279	16 RIO	482			172.8	188.8	202.3	202.3	215.8	215.8	215.8
EC-i 52, 200 W	279	AEDL 5810	484/485			181.9	198.9	211.4	211.4	224.9	224.9	224.9
EC-i 52, 200 W	279	HEDL 5540	488-492			181.9	198.9	211.4	211.4	224.9	224.9	224.9
EC 60 flat, 100 W	304					89.8	105.8	119.3	119.3	132.8	132.8	132.8
EC 60 flat, 100 W	304	MILE	460			90.8	106.8	120.3	120.3	133.8	133.8	133.8
EC 60 flat, 150 W	305					89.8	105.8	119.3	119.3	132.8	132.8	132.8
EC 60 flat, 150 W	305	MILE	460			90.8	106.8	120.3	120.3	133.8	133.8	133.8
EC 60 flat, 200 W	306					97.6	113.6	127.1	127.1	140.6	140.6	140.6
EC 60 flat, 200 W	306	MILE	460			98.6	114.6	128.1	128.1	141.6	141.6	141.6
EC 90 flat, 160 W	307					74.5	90.5	103.5	103.5	117.0	117.0	117.0
EC 90 flat, 160 W	307	MILE	463			75.0	91.0	104.0	104.0	117.5	117.5	117.5
EC 90 flat, 220 W	308					74.5	90.5	103.5	103.5	117.0	117.0	117.0
EC 90 flat, 220 W	308	MILE	463			75.0	91.0	104.0	104.0	117.5	117.5	117.5
EC 90 flat, 360 W	309					87.0	103.0	116.0	116.0	129.5	129.5	129.5
EC 90 flat, 360 W	309	MILE	463			87.5	103.5	116.5	116.5	130.0	130.0	130.0
EC 90 flat, 260 W	310					87.0	103.0	116.0	116.0	129.5	129.5	129.5
EC 90 flat, 260 W	310	MILE	463			87.5	103.5	116.5	116.5	130.0	130.0	130.0
EC 90 flat, 400 W	311					87.0	103.0	116.0	116.0	129.5	129.5	129.5
EC 90 flat, 400 W	311	MILE	463			87.5	103.5	116.5	116.5	130.0	130.0	130.0
EC 90 flat, 600 W	312					99.5	115.5	128.5	128.5	142.0	142.0	142.0
EC 90 flat, 600 W	312	MILE	463			100.0	116.0	129.0	129.0	142.5	142.5	142.5