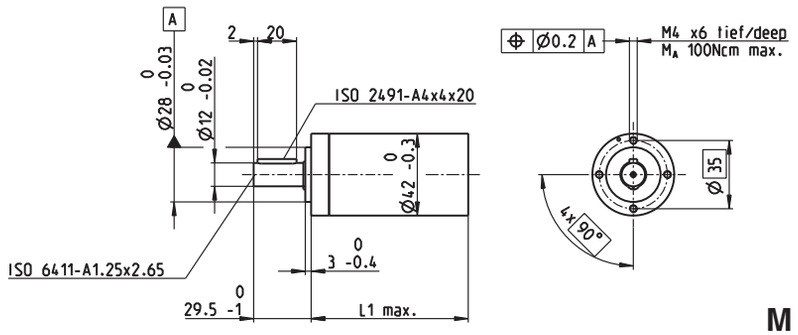
Planetary Gearhead GP 42 C ∅42 mm, 3–15 Nm

Ceramic Version



M 1:4

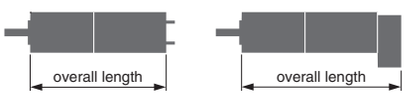
Technical Data

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. permissible axial load				150 N
Max. permissible force for press fits				300 N
Sense of rotation, drive to output				=
Recommended input speed				< 8000 rpm
Recommended temperature range				-40…+100°C
Number of stages	1	2	3	4
Max. radial load, 12 mm from flange	120 N	240 N	360 N	360 N

Stock program
Standard program
Special program (on request)

Part Numbers	203113	203115	203119	203120	203124	203129	203128	203133	203137	203141
Gearhead Data										
1 Reduction	3.5:1	12:1	26:1	43:1	81:1	156:1	150:1	285:1	441:1	756:1
2 Reduction absolute	7/2	49/4	26	343/8	2197/27	156	2401/16	15379/54	441	756
10 Mass inertia gcm²	14	15	9.1	15	9.4	9.1	15	15	14	14
3 Max. motor shaft diameter mm	10	10	8	10	8	8	10	10	10	10
Part Numbers	203114	203116	260552*	203121	203125	260553*	203130	203134	203138	203142
1 Reduction	4.3:1	15:1	36:1	53:1	91:1	216:1	186:1	319:1	488:1	936:1
2 Reduction absolute	13/3	91/6	36/1	637/12	91	216/1	4459/24	637/2	4394/9	936
10 Mass inertia gcm²	9.1	15	5.0	15	15	5.0	15	15	9.4	9.1
3 Max. motor shaft diameter mm	8	10	4	10	10	4	10	10	8	8
Part Numbers	260551*	203117		203122	203126		203131	203135	203139	260554*
1 Reduction	6:1	19:1		66:1	113:1		230:1	353 :1	546:1	1296:1
2 Reduction absolute	6/1	169/9		1183/18	338/3		8281/36	28561/81	546	1296/1
10 Mass inertia gcm²	4.9	9.4		15	9.4		15	9.4	14	5.0
3 Max. motor shaft diameter mm	4	8		10	8		10	8	10	4
Part Numbers		203118		203123	203127		203132	203136	203140	
1 Reduction		21:1		74:1	126:1		257:1	394:1	676:1	
2 Reduction absolute		21		147/2	126		1029/4	1183/3	676	
10 Mass inertia gcm²		14		15	14		15	15	9.1	
3 Max. motor shaft diameter mm		10		10	10		10	10	8	
4 Number of stages	1	2	2	3	3	3	4	4	4	4
5 Max. continuous torque Nm	3.0	7.5	7.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0
6 Intermittently permissible torque at gear output Nm	4.5	11.3	11.3	22.5	22.5	22.5	22.5	22.5	22.5	22.5
7 Max. efficiency %	90	81	81	72	72	72	64	64	64	64
8 Weight g	260	360	360	460	460	460	560	560	560	560
9 Average backlash no load °	0.6	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0
11 Gearhead length L1 mm	41.0	55.5	55.5	70.0	70.0	70.0	84.5	84.5	84.5	84.5

*no combination with EC 45 (150 W and 250 W)

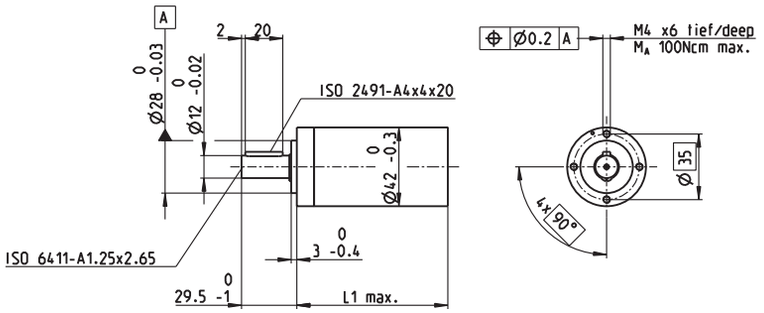


maxon Modular System

+ Motor	Page	+ Sensor	Page	Brake	Page	Overall length [mm] = Motor length + gearhead length + (sensor/brake) + assembly parts									
RE 35, 90 W	104					112.1	126.6	126.6	141.1	141.1	141.1	155.6	155.6	155.6	155.6
RE 35, 90 W	104	MR	303			123.5	138.0	138.0	152.5	152.5	152.5	167.0	167.0	167.0	167.0
RE 35, 90 W	104	HED_ 5540	305/307			132.8	147.3	147.3	161.8	161.8	161.8	176.3	176.3	176.3	176.3
RE 35, 90 W	104	DCT 22	315			130.2	144.7	144.7	159.2	159.2	159.2	173.7	173.7	173.7	173.7
RE 35, 90 W	104			AB 28	348	148.2	162.7	162.7	177.2	177.2	177.2	191.7	191.7	191.7	191.7
RE 35, 90 W	104	HED_ 5540	305/307	AB 28	348	165.4	179.9	179.9	194.4	194.4	194.4	208.9	208.9	208.9	208.9
RE 40, 150 W	105					112.1	126.6	126.6	141.1	141.1	141.1	155.6	155.6	155.6	155.6
RE 40, 150 W	105	MR	303			123.5	138.0	138.0	152.5	152.5	152.5	167.0	167.0	167.0	167.0
RE 40, 150 W	105	HED_ 5540	305/307			132.8	147.3	147.3	161.8	161.8	161.8	176.3	176.3	176.3	176.3
RE 40, 150 W	105	HEDL 9140	310			166.2	180.7	180.7	195.2	195.2	195.2	209.7	209.7	209.7	209.7
RE 40, 150 W	105			AB 28	348	148.2	162.7	162.7	177.2	177.2	177.2	191.7	191.7	191.7	191.7
RE 40, 150 W	105			AB 28	349	156.2	170.7	170.7	185.2	185.2	185.2	199.7	199.7	199.7	199.7
RE 40, 150 W	105	HED_ 5540	305/307	AB 28	348	165.4	179.9	179.9	194.4	194.4	194.4	208.9	208.9	208.9	208.9
RE 40, 150 W	105	HEDL 9140	310	AB 28	349	176.7	191.2	191.2	205.7	205.7	205.7	220.2	220.2	220.2	220.2
EC 40, 170 W	181					121.1	135.6	135.6	150.1	150.1	150.1	164.6	164.6	164.6	164.6
EC 40, 170 W	181	HED_ 5540	306/308			144.5	159.0	159.0	175.5	175.5	175.5	188.0	188.0	188.0	188.0
EC 40, 170 W	181	Res 26	316			148.3	162.8	162.8	177.3	177.3	177.3	191.8	191.8	191.8	191.8
EC 40, 170 W	181			AB 32	350	163.8	178.3	178.3	192.8	192.8	192.8	207.3	207.3	207.3	207.3
EC 40, 170 W	181	HED_ 5540	306/308	AB 32	350	187.2	201.7	201.7	216.2	216.2	216.2	230.7	230.7	230.7	230.7
EC 45, 150 W	182					152.3	166.8	166.8	181.3	181.3	181.3	195.8	195.8	195.8	195.8
EC 45, 150 W	182	HEDL 9140	310			167.9	182.4	182.4	196.9	196.9	196.9	211.4	211.4	211.4	211.4
EC 45, 150 W	182	Res 26	316			152.3	166.8	166.8	181.3	181.3	181.3	195.8	195.8	195.8	195.8
EC 45, 150 W	182			AB 28	349	159.7	174.2	174.2	188.7	188.7	188.7	203.2	203.2	203.2	203.2
EC 45, 150 W	182	HEDL 9140	310	AB 28	349	176.7	191.2	191.2	205.7	205.7	205.7	220.2	220.2	220.2	220.2
EC 45, 250 W	183					185.1	199.6	199.6	214.1	214.1	214.1	228.6	228.6	228.6	228.6
EC 45, 250 W	183	HEDL 9140	310			200.7	215.2	215.2	229.7	229.7	229.7	244.2	244.2	244.2	244.2
EC 45, 250 W	183	Res 26	316			185.1	199.6	199.6	214.1	214.1	214.1	228.6	228.6	228.6	228.6
EC 45, 250 W	183			AB 28	349	192.5	207.0	207.0	221.5	221.5	221.5	236.0	236.0	236.0	236.0
EC 45, 250 W	183	HEDL 9140	310	AB 28	349	209.5	224.0	224.0	238.5	238.5	238.5	253.0	253.0	253.0	253.0

Planetary Gearhead GP 42 C ∅42 mm, 3–15 Nm

Ceramic Version



M 1:4

Technical Data

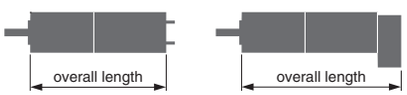
Planetary Gearhead				straight teeth
Output shaft				stainless steel
Bearing at output				preloaded ball bearings
Radial play, 12 mm from flange				max. 0.06 mm
Axial play at axial load	< 5 N			0 mm
	> 5 N			max. 0.3 mm
Max. permissible axial load				150 N
Max. permissible force for press fits				300 N
Sense of rotation, drive to output				=
Recommended input speed				< 8000 rpm
Recommended temperature range				-40…+100°C
Number of stages	1	2	3	4
Max. radial load, 12 mm from flange	120 N	240 N	360 N	360 N

maxon gear

Stock program
Standard program
Special program (on request)

		Part Numbers									
		203113	203115	203119	203120	203124	203129	203128	203133	203137	203141
Gearhead Data											
1 Reduction		3.5:1	12:1	26:1	43:1	81:1	156:1	150:1	285:1	441:1	756:1
2 Reduction absolute		7/2	49/4	26	343/8	2197/27	156	2401/16	15379/54	441	756
10 Mass inertia	gcm²	14	15	9.1	15	9.4	9.1	15	15	14	14
3 Max. motor shaft diameter	mm	10	10	8	10	8	8	10	10	10	10
Part Numbers		203114	203116	260552*	203121	203125	260553*	203130	203134	203138	203142
1 Reduction		4.3:1	15:1	36:1	53:1	91:1	216:1	186:1	319:1	488:1	936:1
2 Reduction absolute		13/3	91/6	36/1	637/12	91	216/1	4459/24	637/2	4394/9	936
10 Mass inertia	gcm²	9.1	15	5.0	15	15	5.0	15	15	9.4	9.1
3 Max. motor shaft diameter	mm	8	10	4	10	10	4	10	10	8	8
Part Numbers		260551*	203117		203122	203126		203131	203135	203139	260554*
1 Reduction		6:1	19:1		66:1	113:1		230:1	353:1	546:1	1296:1
2 Reduction absolute		6/1	169/9		1183/18	338/3		8281/36	28561/81	546	1296/1
10 Mass inertia	gcm²	4.9	9.4		15	9.4		15	9.4	14	5.0
3 Max. motor shaft diameter	mm	4	8		10	8		10	8	10	4
Part Numbers			203118		203123	203127		203132	203136	203140	
1 Reduction			21:1		74:1	126:1		257:1	394:1	676:1	
2 Reduction absolute			21		147/2	126		1029/4	1183/3	676	
10 Mass inertia	gcm²		14		15	14		15	15	9.1	
3 Max. motor shaft diameter	mm		10		10	10		10	10	8	
4 Number of stages		1	2	2	3	3	3	4	4	4	4
5 Max. continuous torque	Nm	3.0	7.5	7.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0
6 Intermittently permissible torque at gear output	Nm	4.5	11.3	11.3	22.5	22.5	22.5	22.5	22.5	22.5	22.5
7 Max. efficiency	%	90	81	81	72	72	72	64	64	64	64
8 Weight	g	260	360	360	460	460	460	560	560	560	560
9 Average backlash no load	°	0.6	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0
11 Gearhead length L1**	mm	41.0	55.5	55.5	70.0	70.0	70.0	84.5	84.5	84.5	84.5

*no combination with EC 45 (150 W and 250 W) **for EC 45 flat L1 is–3.5 mm



maxon Modular System

+ Motor	Page	+ Sensor	Page	Brake	Page	Overall length [mm] = Motor length + gearhead length + (sensor/brake) + assembly parts									
EC-max 30, 60 W	193					105.1	119.6	119.6	134.1	134.1	134.1	148.6	148.6	148.6	148.6
EC-max 30, 60 W	193	MR	302			117.3	131.8	131.8	146.3	146.3	146.3	160.8	160.8	160.8	160.8
EC-max 30, 60 W	193	HEDL 5540	308			125.7	140.2	140.2	154.7	154.7	154.7	169.2	169.2	169.2	169.2
EC-max 30, 60 W	193			AB 20	346	140.6	155.1	155.1	169.6	169.6	169.6	184.1	184.1	184.1	184.1
EC-max 30, 60 W	193	HEDL 5540	308	AB 20	346	161.4	175.9	175.9	190.4	190.4	190.4	204.9	204.9	204.9	204.9
EC-max 40, 70 W	194					99.1	113.6	113.6	128.1	128.1	128.1	142.6	142.6	142.6	142.6
EC-max 40, 70 W	194	MR	303			115.0	129.5	129.5	144.0	144.0	144.0	158.5	158.5	158.5	158.5
EC-max 40, 70 W	194	HEDL 5540	308			122.5	137.0	137.0	151.5	151.5	151.5	166.0	166.0	166.0	166.0
EC-max 40, 70 W	194			AB 28	347	133.4	147.9	147.9	162.4	162.4	162.4	176.9	176.9	176.9	176.9
EC-max 40, 70 W	194	HEDL 5540	308	AB 28	347	151.7	166.2	166.2	180.7	180.7	180.7	195.2	195.2	195.2	195.2
EC-4pole 30, 100 W	201					88.1	102.6	102.6	117.1	117.1	117.1	131.6	131.6	131.6	131.6
EC-4pole 30, 100 W	201	MR	302			100.3	114.8	114.8	129.3	129.3	129.3	143.8	143.8	143.8	143.8
EC-4pole 30, 100 W	201	HEDL 5540	309			108.7	123.2	123.2	137.7	137.7	137.7	152.2	152.2	152.2	152.2
EC-4pole 30, 100 W	201			AB 20	346	124.3	138.8	138.8	153.3	153.3	153.3	167.8	167.8	167.8	167.8
EC-4pole 30, 100 W	201	HEDL 5540	309	AB 20	346	145.1	159.6	159.6	174.1	174.1	174.1	188.6	188.6	188.6	188.6
EC-4pole 30, 200 W	202					105.1	119.6	119.6	134.1	134.1	134.1	148.6	148.6	148.6	148.6
EC-4pole 30, 200 W	202	MR	302			117.3	131.8	131.8	146.3	146.3	146.3	160.8	160.8	160.8	160.8
EC-4pole 30, 200 W	202	HEDL 5540	309			125.7	140.2	140.2	154.7	154.7	154.7	169.2	169.2	169.2	169.2
EC-4pole 30, 200 W	202			AB 20	346	141.3	155.8	155.8	170.3	170.3	170.3	184.8	184.8	184.8	184.8
EC-4pole 30, 200 W	202	HEDL 5540	309	AB 20	346	162.1	176.6	176.6	191.1	191.1	191.1	205.6	205.6	205.6	205.6
EC 45 flat, 30 W	219					53.9	68.4	68.4	82.9	82.9	82.9	97.4	97.4	97.4	97.4
EC 45 flat, 50 W	220					58.8	73.3	73.3	87.8	87.8	87.8	102.3	102.3	102.3	102.3
EC 45 fl, 70 W	221					64.2	78.7	78.7	93.2	93.2	93.2	107.7	107.7	107.7	107.7
EC 45 fl, IE, IP 00	222					72.7	87.2	87.2	101.7	101.7	101.7	116.2	116.2	116.2	116.2
EC 45 fl, IE, IP 40	222					74.9	89.4	89.4	103.9	103.9	103.9	118.4	118.4	118.4	118.4
EC 45 fl, IE, IP 00	223					77.7	92.2	92.2	106.7	106.7	106.7	121.2	121.2	121.2	121.2
EC 45 fl, IE, IP 40	223					79.9	94.4	94.4	108.9	108.9	108.9	123.4	123.4	123.4	123.4
MCD EPOS, 60 W	343					161.1	175.6	175.6	190.1	190.1	190.1	204.6	204.6	204.6	204.6
MCD EPOS P, 60 W	343					161.1	175.6	175.6	190.1	190.1	190.1	204.6	204.6	204.6	204.6