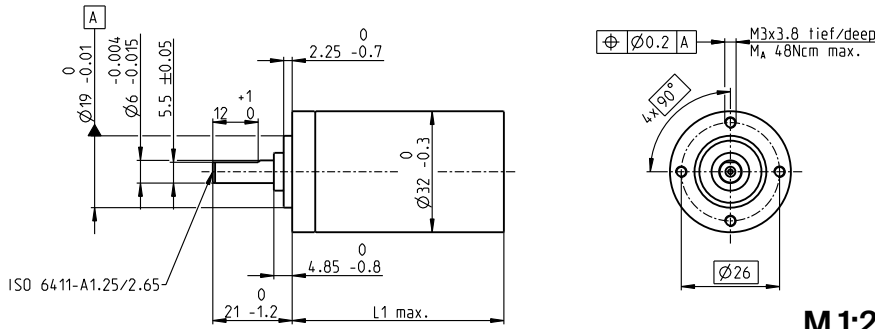


# Planetary Gearhead GP 32 A Ø32 mm, 0.75–4.5 Nm

gear



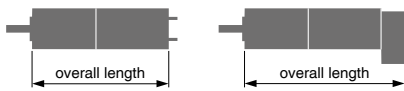
## Technical Data

Planetary Gearhead	straight teeth
Output shaft	stainless steel
Shaft diameter as option	8 mm
Bearing at output	ball bearing
Radial play, 5 mm from flange	max. 0.14 mm
Axial play	max. 0.4 mm
Max. axial load (dynamic)	120 N
Max. force for press fits	120 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	90 N 140 N 200 N 220 N 220 N

M 1:2

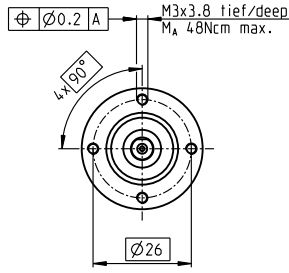
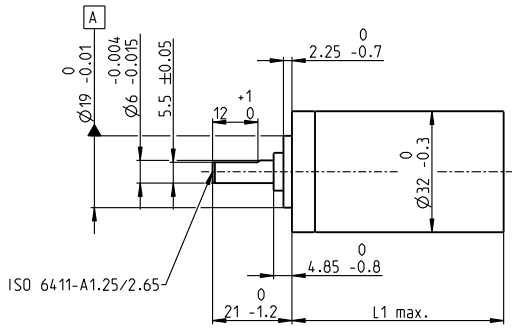
Option: Low-noise version

	Part Numbers											
	166155	166158	166163	166164	166169	166174	166179	166184	166187	166192	166197	166202
<b>Gearhead Data</b>												
1 Reduction	3.7:1	14:1	33:1	51:1	111:1	246:1	492:1	762:1	1181:1	1972:1	2829:1	4380:1
2 Absolute reduction	26/7	676/49	529/16	17576/343	13824/125	421824/1715	86112/175	19044/25	10123776/8575	8626176/4375	495144/175	109503/25
3 Max. motor shaft diameter	mm 6	6	3	6	4	4	3	3	4	4	3	3
<b>Part Numbers</b>	166156	166159		166165	166170	166175	166180	166185	166188	166193	166198	166203
1 Reduction	4.8:1	18:1		66:1	123:1	295:1	531:1	913:1	1414:1	2189:1	3052:1	5247:1
2 Absolute reduction	24/5	624/35		16224/245	6877/56	101062/343	331776/625	3650/40	2425488/1715	536406/245	1907712/625	839523/160
3 Max. motor shaft diameter	mm 4	4		4	3	3	4	3	3	3	3	3
<b>Part Numbers</b>	166157	166160		166166	166171	166176	166181	166186	166189	166194	166199	166204
1 Reduction	5.8:1	21:1		79:1	132:1	318:1	589:1	1093:1	1526:1	2362:1	3389:1	6285:1
2 Absolute reduction	23/4	299/14		3887/49	3312/25	389376/1225	20631/35	279841/256	9345024/6125	2066688/875	474513/140	6436343/1024
3 Max. motor shaft diameter	mm 3	3		3	3	4	3	3	4	3	3	3
<b>Part Numbers</b>		166161		166167	166172	166177	166182		166190	166195	166200	
1 Reduction		23:1		86:1	159:1	411:1	636:1		1694:1	2548:1	3656:1	
2 Absolute reduction		576/25		14976/175	1587/10	359424/875	79488/125		1162213/686	7962624/3125	457056/125	
3 Max. motor shaft diameter	mm	4		4	3	4	3		3	4	3	
<b>Part Numbers</b>		166162		166168	166173	166178	166183		166191	166196	166201	
1 Reduction		28:1		103:1	190:1	456:1	706:1		1828:1	2623:1	4060:1	
2 Absolute reduction		138/5		3589/35	12167/64	89401/96	15817/224		2238912/1225	2056223/784	3637933/896	
3 Max. motor shaft diameter	mm	3		3	3	3	3		3	3	3	
4 Number of stages		1	2	2	3	3	4	4	4	5	5	5
5 Max. continuous torque	Nm	0.75	2.25	2.25	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
6 Max. intermittent torque at gear output	Nm	1.1	3.4	3.4	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
7 Max. efficiency	%	80	75	75	70	70	60	60	60	50	50	50
8 Weight	g	118	162	162	194	194	226	226	226	258	258	258
9 Average backlash no load	°	0.7	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
10 Mass inertia	gcm <sup>2</sup>	1.5	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
11 Gearhead length L1	mm	26.5	36.4	36.4	43.1	43.1	49.8	49.8	49.8	56.5	56.5	56.5



maxon Modular System															
+ Motor	Page	+ Sensor/Brake	Page	Overall length [mm] = Motor length + gearhead length + (sensor/brake) + assembly parts											
RE 25	134/136			81.1	91.0	91.0	97.7	97.7	104.4	104.4	104.4	111.1	111.1	111.1	111.1
RE 25	134/136	MR	463	92.1	102.0	102.0	108.7	108.7	115.4	115.4	115.4	122.1	122.1	122.1	122.1
RE 25	134/136	Enc 22	468	95.2	105.1	105.1	111.8	111.8	118.5	118.5	118.5	125.2	125.2	125.2	125.2
RE 25	134/136	HED_ 5540	471/473	101.9	111.8	111.8	118.5	118.5	125.2	125.2	125.2	131.9	131.9	131.9	131.9
RE 25	134/136	DCT 22	480	103.4	113.3	113.3	120.0	120.0	126.7	126.7	126.7	133.4	133.4	133.4	133.4
RE 25, 20 W	135			69.6	79.5	79.5	86.2	86.2	92.9	92.9	92.9	99.6	99.6	99.6	99.6
RE 25, 20 W	135	MR	463	80.6	90.5	90.5	97.2	97.2	103.9	103.9	103.9	110.6	110.6	110.6	110.6
RE 25, 20 W	135	HED_ 5540	472/475	90.4	100.3	100.3	107.0	107.0	113.7	113.7	113.7	120.4	120.4	120.4	120.4
RE 25, 20 W	135	DCT 22	480	91.9	101.8	101.8	108.5	108.5	115.2	115.2	115.2	121.9	121.9	121.9	121.9
RE 25, 20 W	135	AB 28	519	103.7	113.6	113.6	120.3	120.3	127.0	127.0	127.0	133.7	133.7	133.7	133.7
RE 25, 20 W	135	HED_ 5540/AB 28	472/519	120.9	130.8	130.8	137.5	137.5	144.2	144.2	144.2	150.9	150.9	150.9	150.9
RE 25, 20 W	136	AB 28	519	115.2	125.1	125.1	131.8	131.8	138.5	138.5	138.5	145.2	145.2	145.2	145.2
RE 25, 20 W	136	HED_ 5540/AB 28	471/519	132.4	142.3	142.3	149.0	149.0	155.7	155.7	155.7	162.4	162.4	162.4	162.4
A-max 26	161-164			71.3	81.2	81.2	87.9	87.9	94.6	94.6	94.6	101.3	101.3	101.3	101.3
A-max 26	161-164	MR	463	80.1	90.0	90.0	96.7	96.7	103.4	103.4	103.4	110.1	110.1	110.1	110.1
A-max 26	161-164	Enc 22	468	85.7	95.6	95.6	102.3	102.3	109.0	109.0	109.0	115.7	115.7	115.7	115.7
A-max 26	161-164	HED_ 5540	472/474	89.7	99.6	99.6	106.3	106.3	113.0	113.0	113.0	119.7	119.7	119.7	119.7

# Planetary Gearhead GP 32 A Ø32 mm, 0.75–4.5 Nm



M 1:2

## Technical Data

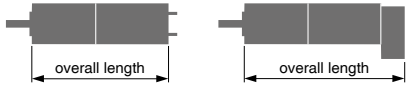
Planetary Gearhead	straight teeth
Output shaft	stainless steel
Shaft diameter as option	8 mm
Bearing at output	ball bearing
Radial play, 5 mm from flange	max. 0.14 mm
Axial play	max. 0.4 mm
Max. axial load (dynamic)	120 N
Max. force for press fits	120 N
Direction of rotation, drive to output	=
Max. continuous 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	90 N 140 N 200 N 220 N 220 N

gear

Option: Low-noise version

	Part Numbers											
	166155	166158	166163	166164	166169	166174	166179	166184	166187	166192	166197	166202
<b>Gearhead Data</b>												
1 Reduction	3.7:1	14:1	33:1	51:1	111:1	246:1	492:1	762:1	1181:1	1972:1	2829:1	4380:1
2 Absolute reduction	26/7	676/49	529/16	17576/343	13824/125	421824/1715	86112/175	19044/25	10123776/8575	8626176/4375	495144/175	109503/25
3 Max. motor shaft diameter	mm 6	6	3	6	4	4	3	3	4	4	3	3
<b>Part Numbers</b>	<b>166156</b>	<b>166159</b>		<b>166165</b>	<b>166170</b>	<b>166175</b>	<b>166180</b>	<b>166185</b>	<b>166188</b>	<b>166193</b>	<b>166198</b>	<b>166203</b>
1 Reduction	4.8:1	18:1		66:1	123:1	295:1	531:1	913:1	1414:1	2189:1	3052:1	5247:1
2 Absolute reduction	24/5	624/35		16224/245	687/56	101062/343	331776/625	3650/40	2426488/1715	536406/245	1907712/625	839523/160
3 Max. motor shaft diameter	mm 4	4		4	3	3	4	3	3	3	3	3
<b>Part Numbers</b>	<b>166157</b>	<b>166160</b>		<b>166166</b>	<b>166171</b>	<b>166176</b>	<b>166181</b>	<b>166186</b>	<b>166189</b>	<b>166194</b>	<b>166199</b>	<b>166204</b>
1 Reduction	5.8:1	21:1		79:1	132:1	318:1	589:1	1093:1	1526:1	2362:1	3389:1	6285:1
2 Absolute reduction	23/4	299/14		3887/49	3312/25	38978/1225	20631/35	279841/256	9345024/6125	2066688/875	474513/140	6436343/1024
3 Max. motor shaft diameter	mm 3	3		3	3	3	3	3	4	3	3	3
<b>Part Numbers</b>		<b>166161</b>		<b>166167</b>	<b>166172</b>	<b>166177</b>	<b>166182</b>		<b>166190</b>	<b>166195</b>	<b>166200</b>	
1 Reduction		23:1		86:1	159:1	411:1	636:1		1694:1	2548:1	3656:1	
2 Absolute reduction		576/25		14976/175	1587/10	359424/875	79488/125		1162213/686	7962624/3125	457056/125	
3 Max. motor shaft diameter	mm	4		4	3	4	3		3	4	3	
<b>Part Numbers</b>		<b>166162</b>		<b>166168</b>	<b>166173</b>	<b>166178</b>	<b>166183</b>		<b>166191</b>	<b>166196</b>	<b>166201</b>	
1 Reduction		28:1		103:1	190:1	456:1	706:1		1828:1	2623:1	4060:1	
2 Absolute reduction		136/5		3589/35	12167/64	89401/96	15817/224		2238912/1225	2056223/784	3637933/896	
3 Max. motor shaft diameter	mm	3		3	3	3	3		3	3	3	
4 Number of stages		1	2	2	3	3	4	4	4	5	5	5
5 Max. continuous torque	Nm	0.75	2.25	2.25	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
6 Max. intermittent torque at gear output	Nm	1.1	3.4	3.4	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
7 Max. efficiency	%	80	75	75	70	70	60	60	60	50	50	50
8 Weight	g	118	162	162	194	194	226	226	226	258	258	258
9 Average backlash no load	°	0.7	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
10 Mass inertia	gcm <sup>2</sup>	1.5	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
11 Gearhead length L1*	mm	26.5	36.4	36.4	43.1	43.1	49.8	49.8	49.8	56.5	56.5	56.5

\*for EC 32 flat L1 is +2.0 mm



## maxon Modular System

+ Motor	Page	+ Sensor/Brake	Page	Overall length [mm] = Motor length + gearhead length + (sensor/brake) + assembly parts											
RE 30, 15 W	137			94.6	104.5	104.5	111.2	111.2	117.9	117.9	117.9	124.6	124.6	124.6	124.6
RE 30, 15 W	137	MR	464	106.0	115.9	115.9	122.6	122.6	129.3	129.3	129.3	136.0	136.0	136.0	136.0
RE 30, 15 W	137	HED_ 5540	471/473	115.4	125.3	125.3	132.0	132.0	138.7	138.7	138.7	145.4	145.4	145.4	145.4
RE 30, 60 W	138			94.6	104.5	104.5	111.2	111.2	117.9	117.9	117.9	124.6	124.6	124.6	124.6
RE 30, 60 W	138	MR	464	106.0	115.9	115.9	122.6	122.6	129.3	129.3	129.3	136.0	136.0	136.0	136.0
RE 30, 60 W	138	HED_ 5540	471/473	115.4	125.3	125.3	132.0	132.0	138.7	138.7	138.7	145.4	145.4	145.4	145.4
RE 35, 90 W	139			97.6	107.5	107.5	114.2	114.2	120.9	120.9	120.9	127.6	127.6	127.6	127.6
RE 35, 90 W	139	MR	464	109.0	118.9	118.9	125.6	125.6	132.3	132.3	132.3	139.0	139.0	139.0	139.0
RE 35, 90 W	139	HED_ 5540	471/473	118.3	128.2	128.2	134.9	134.9	141.6	141.6	141.6	148.3	148.3	148.3	148.3
RE 35, 90 W	139	DCT 22	480	115.7	125.6	125.6	132.3	132.3	139.0	139.0	139.0	145.7	145.7	145.7	145.7
RE 35, 90 W	139	AB 28	519	133.7	143.6	143.6	150.3	150.3	157.0	157.0	157.0	163.7	163.7	163.7	163.7
RE 35, 90 W	139	HEDS 5540/AB 28	471/519	150.9	160.8	160.8	167.5	167.5	174.2	174.2	174.2	180.9	180.9	180.9	180.9
A-max 32	165			89.5	99.4	99.4	106.1	106.1	112.8	112.8	112.8	119.5	119.5	119.5	119.5
A-max 32	166			88.1	98.0	98.0	104.7	104.7	111.4	111.4	111.4	118.1	118.1	118.1	118.1
A-max 32	166	MR	464	99.3	109.2	109.2	115.9	115.9	122.6	122.6	122.6	129.3	129.3	129.3	129.3
A-max 32	166	HED_ 5540	472/474	108.9	118.8	118.8	125.5	125.5	132.2	132.2	132.2	138.9	138.9	138.9	138.9
EC 32, 80 W	228			86.6	96.5	96.5	103.2	103.2	109.9	109.9	109.9	116.6	116.6	116.6	116.6
EC 32, 80 W	228	HED_ 5540	472/475	105.0	114.9	114.9	121.6	121.6	128.3	128.3	128.3	135.0	135.0	135.0	135.0
EC 32, 80 W	228	Res 26	481	106.7	116.6	116.6	123.3	123.3	130.0	130.0	130.0	136.7	136.7	136.7	136.7
EC 32 flat, 15 W	282			44.5	54.4	54.4	61.1	61.1	67.8	67.8	67.8	74.5	74.5	74.5	74.5
EC 32 flat, IE, IP 00	283			54.6	64.5	64.5	71.2	71.2	77.9	77.9	77.9	84.6	84.6	84.6	84.6
EC 32 flat, IE, IP 40	283			56.3	66.2	66.2	72.9	72.9	79.6	79.6	79.6	86.3	86.3	86.3	86.3