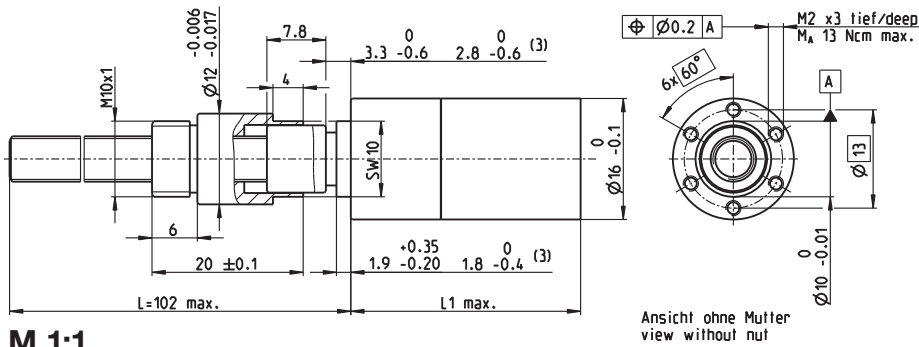


Spindle Drive GP 16 S Ø16 mm, Metric spindle

Ceramic Version



Technical Data

Spindle	M6 x 1, ceramic
Standard length	102 mm
Special length (5 mm steps)	max. 200 mm
Nut (standard)	thread nut
Material	X8CrNiS18-9
Axial play	< 0.134 mm
Planetary gearhead	straight teeth
Bearing	ball bearing
Radial play, 6 mm from flange	< 0.08 mm
Axial play	preloaded
Max. continuous input speed ²	12 000 rpm
Recommended temperature range	-15...+80°C
Max. axial load (static) ¹	500 N
Number of stages	0 1 2 3 4
Max. radial load, 6 mm from flange	20 N 40 N 60 N 80 N 80 N

M 1:1

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

Part Numbers

Spindle Drive Data (provisional)

	424241	424242	424243	424244	424245
1 Reduction	1:1	4.4:1	19:1	84:1	370:1
2 Absolute reduction	1/1	57/13	3249/169	185193/2197	10556001/28561
20 Max. feed velocity ¹	mm/s 50.0	45.5	10.5	2.4	0.5
21 Max. feed force (continuous) ¹	N 44	46	74	122	200
22 Max. feed force (intermittent) ¹	N 134	138	224	315	315
Part Numbers					
1 Reduction		424811	424812	424814	424819
2 Absolute reduction		5.4:1	24:1	104:1	455:1
20 Max. feed velocity ¹	mm/s	37.0	8.3	1.9	0.4
21 Max. feed force (continuous) ¹	N	49	80	131	215
22 Max. feed force (intermittent) ¹	N	148	243	315	315
Part Numbers					
1 Reduction			424813	424815	424820
2 Absolute reduction			29:1	128:1	561:1
20 Max. feed velocity ¹	mm/s		6.9	1.6	0.4
21 Max. feed force (continuous) ¹	N		86	141	230
22 Max. feed force (intermittent) ¹	N		258	315	315
Part Numbers					
1 Reduction				424818	424821
2 Absolute reduction				157:1	690:1
20 Max. feed velocity ¹	mm/s			1.3	0.3
21 Max. feed force (continuous) ¹	N			150	246
22 Max. feed force (intermittent) ¹	N			315	315
Part Numbers					
1 Reduction					424822
2 Absolute reduction					850:1
20 Max. feed velocity ¹	mm/s				0.2
21 Max. feed force (continuous) ¹	N				264
22 Max. feed force (intermittent) ¹	N				315
4 Number of stages	0	1	2	3	4
7 Max. efficiency gearhead incl. spindle	% 41	38	34	31	28
8 Weight ¹	g 55	61	64	68	72
9 Average backlash no load	° 1.0	1.4	1.6	2.0	2.4
23 Mechanical positioning accuracy ¹	mm 0.166	0.167	0.167	0.169	0.170
10 Mass inertia gearhead incl. spindle ¹	gcm ² 0.23	0.11	0.05	0.05	0.05
11 Gearhead length L1	mm 19.2	22.3	27.4	31.0	34.6

¹ based on spindle length 102 mm (standard length) ² for reduction 1:1 = 3000 rpm



maxon Modular System

+ Motor	Page	+ Sensor/Brake	Page	Overall length [mm] = Motor length + gearhead length + (sensor/brake) + assembly parts				
EC 16, 30 W	244			59.3	62.4	67.5	71.1	74.7
EC 16, 30 W	244	MR	391	70.0	73.1	78.2	81.8	85.4
EC 16, 60 W	245			75.3	78.4	83.5	87.1	90.7
EC 16, 60 W	245	MR	391	86.0	89.1	94.2	97.8	101.4
EC-max 16, 5 W	259			-	46.4	51.5	55.1	58.7
EC-max 16, 5 W	259	MR	391	-	53.7	58.8	62.4	66.0
EC-max 16, 8 W	261			-	58.4	63.5	67.1	70.7
EC-max 16, 8 W	261	MR	391	-	65.7	70.8	74.4	78.0

Continuation of the modular system (irrespective of the spindle) on pages 365 and 366.

maxon spindle drive