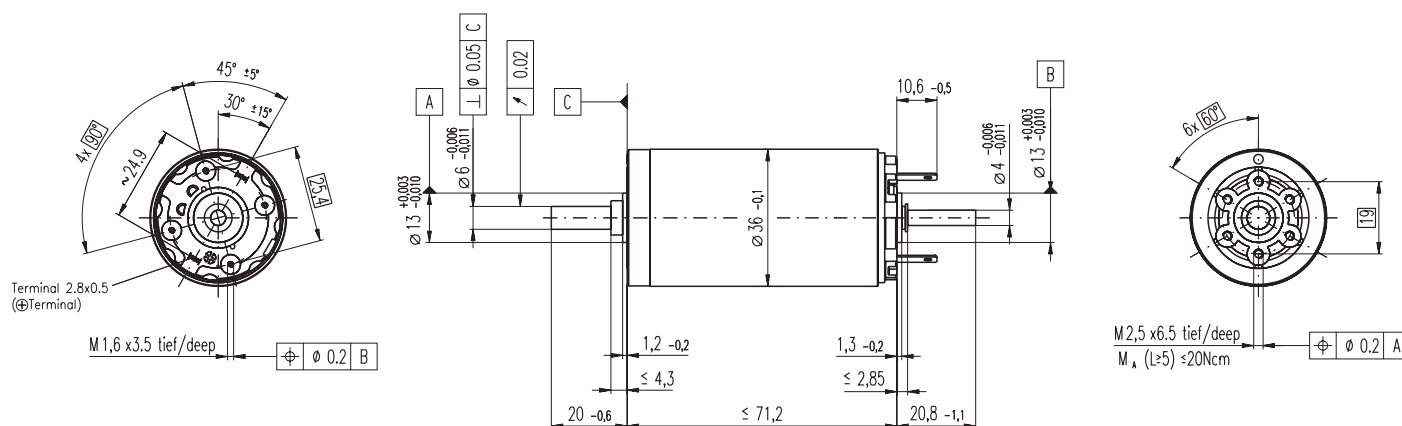




**RE 36** Ø36 mm, Graphite Brushes, 70 Watt



**M 1:2**

-  Stock program  
 Standard program  
 Special program (on request)

**Order Number**

		118797	118798	118799	118800	118801	118802	118803	118804	118805	118806	118807	118808	118809	118810	
Motor Data																
Values at nominal voltage																
1	Nominal voltage	V	18.0	24.0	32.0	42.0	42.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	
2	No load speed	rpm	6610	6210	6790	7020	6340	6420	5220	4320	3450	2830	2280	1780	1420	1180
3	No load current	mA	153	105	88.6	70.4	61.4	54.6	41.6	32.6	24.7	19.5	15.2	11.5	8.97	7.31
4	Nominal speed	rpm	5880	5530	6120	6350	5660	5740	4520	3600	2720	2090	1530	1010	651	390
5	Nominal torque (max. continuous torque)	mNm	70.2	78.2	77.1	77.9	79.9	79.5	81.5	82.2	83.6	84.1	84.1	83.8	84.1	83.1
6	Nominal current (max. continuous current)	A	2.90	2.25	1.82	1.45	1.33	1.18	0.978	0.813	0.660	0.545	0.439	0.343	0.275	0.226
7	Stall torque	mNm	730	783	832	866	786	785	627	504	403	326	258	198	158	127
8	Starting current	A	28.6	21.5	18.7	15.3	12.6	11.1	7.22	4.80	3.06	2.04	1.30	0.784	0.501	0.334
9	Max. efficiency	%	84	85	86	86	86	86	85	84	82	81	79	77	75	72
Characteristics																
10	Terminal resistance	Ω	0.628	1.11	1.71	2.74	3.35	4.32	6.65	10.0	15.7	23.5	36.8	61.3	95.8	144
11	Terminal inductance	mH	0.0988	0.201	0.300	0.487	0.597	0.760	1.15	1.68	2.62	3.87	5.96	9.70	15.1	21.9
12	Torque constant	mNm / A	25.5	36.4	44.5	56.6	62.6	70.7	86.9	105	131	160	198	253	315	380
13	Speed constant	rpm / V	375	263	215	169	152	135	110	90.9	72.7	59.8	48.2	37.8	30.3	25.1
14	Speed / torque gradient	rpm / mNm	9.23	8.05	8.27	8.18	8.14	8.25	8.41	8.65	8.67	8.80	8.96	9.17	9.21	9.51
15	Mechanical time constant	ms	6.00	5.89	5.84	5.81	5.81	5.80	5.81	5.81	5.82	5.83	5.84	5.86	5.85	5.88
16	Rotor inertia	acm²	62.0	69.9	67.5	67.8	68.1	67.2	66.0	64.2	64.1	63.3	62.2	61.1	60.7	59.0

## Specifications

### Thermal data

- |    |                                      |                |
|----|--------------------------------------|----------------|
| 17 | Thermal resistance housing-ambient   | 6.4 K / W      |
| 18 | Thermal resistance winding-housing   | 3.4 K / W      |
| 19 | Thermal time constant winding        | 44.2 s         |
| 20 | Thermal time constant motor          | 1120 s         |
| 21 | Ambient temperature                  | -20 ... +100°C |
| 22 | Max. permissible winding temperature | +125°C         |

### Mechanical data (ball bearings)

- |    |   |                 |
|----|---|-----------------|
| 23 | Max. permissible speed  | 12000 rpm       |
| 24 | Axial play  | 0.05 - 0.15 mm  |
| 25 | Radial play   | 0.025 mm        |
| 26 | Max. axial load (dynamic)                                       | 5.6 N           |
| 27 | Max. force for press fits (static)<br>(static, shaft supported) | 5.6 N<br>1200 N |
| 28 | Max. radial loading, 5 mm from flange                           | 28 N            |

### Other specifications

- |    |                               |       |
|----|-------------------------------|-------|
| 29 | Number of pole pairs          | 1     |
| 30 | Number of commutator segments | 13    |
| 31 | Weight of motor               | 350 g |

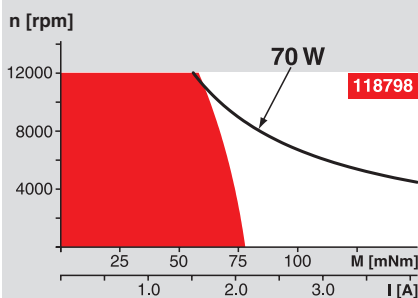
Values listed in the table are nominal.  
Explanation of the figures on page 47.

⚠ Tolerances may vary from the standard specification.

### Option

Preloaded ball bearings

## Operating Range



## Comments

### Continuous operation

**Continuous operation**  
In observation of above listed thermal resistance (lines 17 and 18) the maximum permissible winding temperature will be reached during continuous operation at 25°C ambient.  
= Thermal limit.

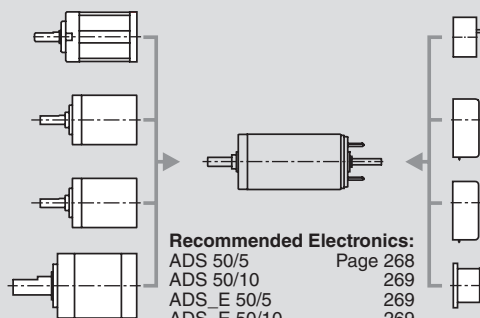
### Short term operation

The motor may be briefly overloaded (recurring).

- Assigned power rating

## maxon Modular System

- Planetary Gearhead**  
 Ø32 mm  
 0.4 - 2.0 Nm  
 Page 228
- Planetary Gearhead**  
 Ø32 mm  
 0.75 - 4.5 Nm  
 Page 230
- Planetary Gearhead**  
 Ø32 mm  
 1.0 - 6.0 Nm  
 Page 231
- Planetary Gearhead**  
 Ø42 mm  
 3 - 15 Nm  
 Page 235



Overview on page 16 - 21

- Encoder MR**  
256 - 1024 CPT,  
3 channels  
Page 251
- Encoder HEDS 5540**  
500 CPT,  
3 channels  
Page 254
- Encoder HEDL 5540**  
500 CPT,  
3 channels  
Page 256
- DC-Tacho DCT**  
Ø22 mm  
0.52 V  
Page 263