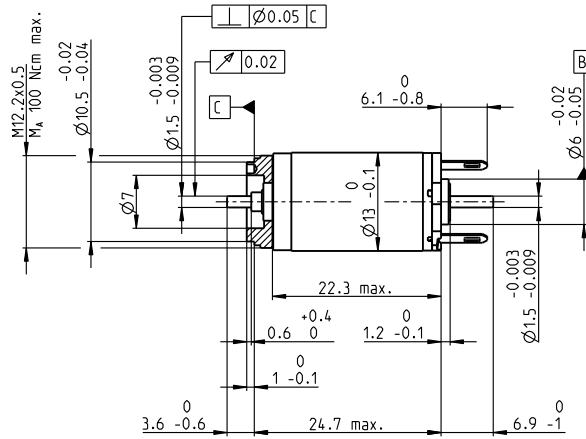
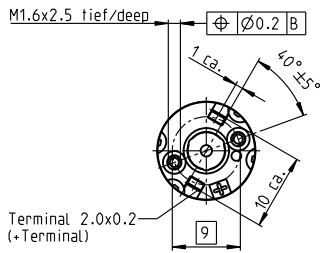


# RE 13 Ø13 mm, graphite brushes, 1.5 watt

RE



M 1:1

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

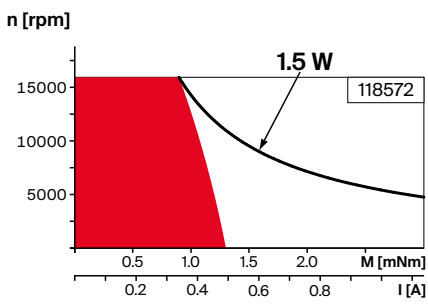
**Part Numbers**

Motor Data		118570	118571	118572	118573	118574	118575	118576	118577	118578	118579	118580	118581
<b>Values at nominal voltage</b>													
1 Nominal voltage	V	3	3.6	4.2	4.8	6	7.2	9	12	12	15	18	20
2 No load speed	rpm	13200	13000	13300	12300	12700	12300	12300	13300	12300	13100	14000	13300
3 No load current	mA	197	159	140	111	92.5	73.7	59.2	49.2	44.7	38.9	35.1	29.7
4 Nominal speed	rpm	8520	7790	8260	7130	7480	7010	7000	8040	6940	7870	8890	8020
5 Nominal torque	mNm	1.06	1.23	1.27	1.28	1.25	1.26	1.25	1.21	1.22	1.21	1.2	1.19
6 Nominal current (max. continuous current)	A	0.72	0.659	0.588	0.481	0.39	0.316	0.252	0.199	0.186	0.157	0.139	0.119
7 Stall torque	mNm	3.19	3.3	3.56	3.26	3.25	3.16	3.12	3.28	3.01	3.23	3.51	3.22
8 Stall current	A	1.67	1.41	1.32	0.989	0.814	0.639	0.506	0.429	0.368	0.335	0.321	0.254
9 Max. efficiency	%	44	45	46	45	45	44	44	45	43	44	46	44
<b>Characteristics</b>													
10 Terminal resistance	Ω	1.8	2.56	3.18	4.85	7.37	11.3	17.8	28	32.6	44.8	56.1	78.8
11 Terminal inductance	mH	0.036	0.054	0.072	0.108	0.158	0.243	0.377	0.579	0.661	0.921	1.19	1.59
12 Torque constant	mNm/A	1.91	2.35	2.69	3.3	4	4.95	6.17	7.64	8.17	9.64	10.9	12.7
13 Speed constant	rpm/V	5000	4070	3550	2890	2390	1930	1550	1250	1170	990	872	753
14 Speed / torque gradient	rpm/mNm	4700	4440	4190	4250	4410	4390	4460	4570	4660	4600	4470	4680
15 Mechanical time constant	ms	14.2	14.1	14	14	14.1	14.2	14.2	14.3	14.3	14.3	14.2	14.4
16 Rotor inertia	gcm <sup>2</sup>	0.288	0.303	0.318	0.315	0.306	0.308	0.304	0.3	0.293	0.297	0.303	0.294

**Specifications      Operating Range      Comments**

- Thermal data**
- 17 Thermal resistance housing-ambient 46 K/W
  - 18 Thermal resistance winding-housing 14 K/W
  - 19 Thermal time constant winding 5.38 s
  - 20 Thermal time constant motor 231 s
  - 21 Ambient temperature -20...+85°C
  - 22 Max. winding temperature +125°C

- Mechanical data (sleeve bearings)**
- 23 Max. speed 16000 rpm
  - 24 Axial play 0.05 - 0.15 mm
  - 25 Radial play 0.014 mm
  - 26 Max. axial load (dynamic) 0.8 N
  - 27 Max. force for press fits (static) 15 N
  - (static, shaft supported) 140 N
  - 28 Max. radial load, 5 mm from flange 1.4 N



- 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**

**Other specifications      Modular System      Details on catalog page 44**

- 29 Number of pole pairs 1
- 30 Number of commutator segments 7
- 31 Weight of motor 18 g

Modular System	Sensor	Motor Control
Gear	472_ENX 13 GAMA	532_ESCON Module 24/2
399_GP 13 K	504_Encoder MR 16 CPT	532_ESCON 36/2 DC
400_GP 13 A	505_Encoder MR 64-256 CPT	541_EPOS4 Micro 24/5
	506_Encoder MR 64-256 CPT	542_EPOS4 Module 24/1.5
		543_EPOS4 Compact 24/5 3-axes
		544_EPOS4 Compact 24/1.5

Values listed in the table are nominal.  
Explanation of the figures on page 90.