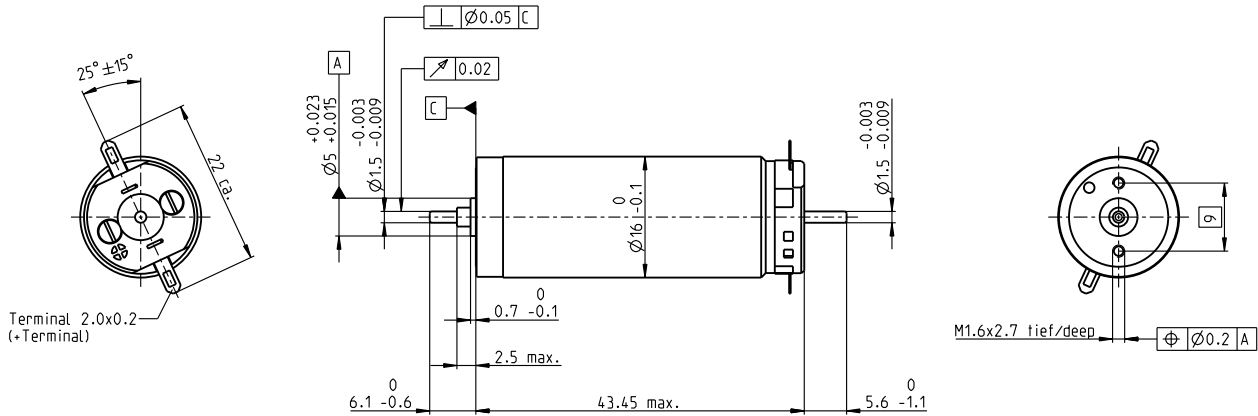


# RE 16 Ø16 mm, graphite brushes, 4.5 watt

RE



M 1:1

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

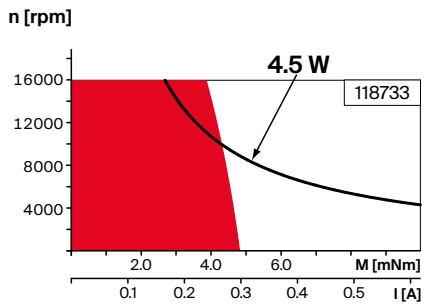
## Part Numbers

Motor Data	118725	118726	118727	118728	118729	118730	118731	118732	118733	118734	118735	118736	118737	118738	118739
<b>Values at nominal voltage</b>															
1 Nominal voltage	V	4.8	4.8	6	7.2	9	12	15	18	24	30	36	45	48	48
2 No load speed	rpm	12700	12100	13200	13600	13100	13900	14000	13200	14000	14700	14100	14500	14200	10100
3 No load current	mA	105	98.7	87.6	75.4	56.9	45.9	37.1	28.5	23	19.6	15.6	12.8	11.8	7.66
4 Nominal speed	rpm	11200	10500	11500	11700	11000	11900	12200	11300	12200	12900	12300	12700	12400	8130
5 Nominal torque	mNm	2.15	2.27	2.67	3.18	4.09	4.36	4.34	4.48	4.5	4.37	4.44	4.41	4.43	4.65
6 Nominal current (max. continuous current)	A	0.72	0.72	0.72	0.72	0.69	0.582	0.467	0.375	0.299	0.245	0.199	0.162	0.15	0.111
7 Stall torque	mNm	26.3	22.7	25.8	27.4	29.9	34.3	35.3	33.4	36.3	36.8	35.6	36.2	35.4	24.2
8 Stall current	A	7.56	6.26	6.16	5.58	4.65	4.23	3.51	2.6	2.24	1.91	1.48	1.23	1.11	0.541
9 Max. efficiency	%	69	69	72	73	76	79	79	79	80	80	80	81	81	78
<b>Characteristics</b>															
10 Terminal resistance	Ω	0.635	0.767	0.975	1.29	1.94	2.83	4.28	6.93	10.7	15.7	24.4	36.5	43.3	88.7
11 Terminal inductance	mH	0.021	0.023	0.03	0.042	0.071	0.113	0.174	0.285	0.452	0.64	0.994	1.48	1.74	3.44
12 Torque constant	mNm/A	3.48	3.64	4.2	4.91	6.43	8.11	10.1	12.9	16.2	19.3	24.1	29.4	31.9	44.8
13 Speed constant	rpm/V	2750	2630	2280	1940	1480	1180	948	742	589	495	397	325	299	213
14 Speed/torque gradient	rpm/mNm	502	554	529	511	447	411	403	399	389	403	402	404	407	423
15 Mechanical time constant	ms	9.07	8.35	7.36	6.71	6.13	5.78	5.56	5.43	5.31	5.28	5.25	5.23	5.22	5.24
16 Rotor inertia	gcm <sup>2</sup>	1.73	1.44	1.33	1.26	1.31	1.34	1.32	1.3	1.3	1.25	1.25	1.24	1.23	1.18

## Specifications      Operating Range      Comments

- Thermal data**
- 17 Thermal resistance housing-ambient: 30 K/W
  - 18 Thermal resistance winding-housing: 8.5 K/W
  - 19 Thermal time constant winding: 10.6 s
  - 20 Thermal time constant motor: 459 s
  - 21 Ambient temperature: -20...+65°C
  - 22 Max. winding temperature: +85°C

- Mechanical data (sleeve bearings)**
- 23 Max. speed: 16 000 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) (static, shaft supported): 15 N / 60 N
  - 28 Max. radial load, 5 mm from flange: 1.5 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

- Other specifications**
- 29 Number of pole pairs: 1
  - 30 Number of commutator segments: 7
  - 31 Weight of motor: 40 g

- Modular System**
- |                 |                            |
|-----------------|----------------------------|
| <b>Gear</b>     | <b>Sensor</b>              |
| 405_GP 16 A     | 472_ENX 13 GAMA            |
| 406_GP 16 C     | 507_Encoder MR 32 CPT      |
| 447-449_GP 16 S | 508_Encoder MR 128-512 CPT |

- Motor Control**
- 532\_ESCON Module 24/2
  - 532\_ESCON 36/2 DC
  - 533\_ESCON Module 50/5
  - 535\_ESCON 50/5
  - 541\_EPOS4 Micro 24/5
  - 542\_EPOS4 Module 24/1.5
  - 542\_EPOS4 Module 50/5
  - 543\_EPOS4 Compact 24/5 3-axes
  - 544\_EPOS4 Compact 24/1.5
  - 545\_EPOS4 Compact 50/5
  - 547\_EPOS4 50/5

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