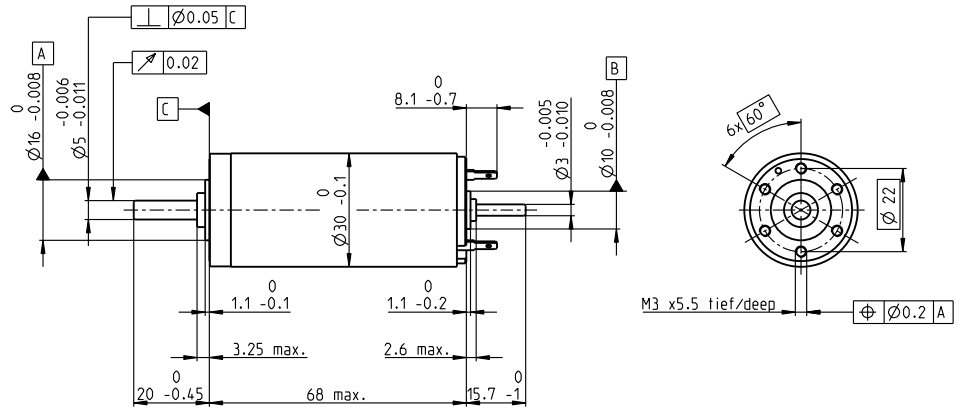
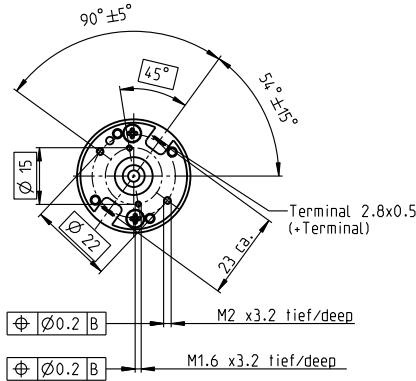


# RE 30 Ø30 mm, Precious Metal Brushes, 15 Watt



M 1:2

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

Part Numbers				
448593	448594	448595	448596	

Motor Data (provisional)	448593	448594	448595	448596	
<b>Values at nominal voltage</b>					
1 Nominal voltage	V	6	9	12	18
2 No load speed	rpm	2870	3310	2870	3190
3 No load current	mA	41.6	33.4	20.8	15.9
4 Nominal speed	rpm	2450	2870	2420	2770
5 Nominal torque (max. continuous torque)	mNm	53	53	53	53
6 Nominal current (max. continuous current)	A	2.7	2.08	1.35	1
7 Stall torque	mNm	364	402	342	401
8 Stall current	A	18.3	15.5	8.58	7.45
9 Max. efficiency	%	90	91	90	91
<b>Characteristics</b>					
10 Terminal resistance	Ω	0.378	0.63	1.45	2.47
11 Terminal inductance	mH	0.07	0.119	0.281	0.513
12 Torque constant	mNm/A	19.9	25.9	39.8	53.8
13 Speed constant	rpm/V	479	369	240	178
14 Speed / torque gradient	rpm/mNm	9.1	8.97	8.71	8.14
15 Mechanical time constant	ms	3.42	3.14	3.02	2.96
16 Rotor inertia	gcm <sup>2</sup>	35.9	33.5	33.1	34.7

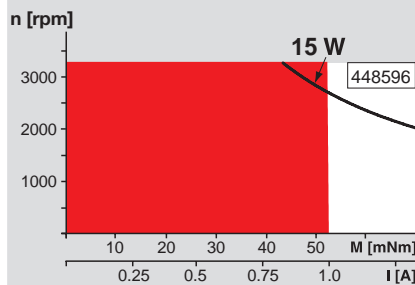
## Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient 6 K/W
  - 18 Thermal resistance winding-housing 1.7 K/W
  - 19 Thermal time constant winding 16.9 s
  - 20 Thermal time constant motor 593 s
  - 21 Ambient temperature -20...+85°C
  - 22 Max. winding temperature +100°C
- Mechanical data (ball bearings)**
- 23 Max. speed 3300 rpm
  - 24 Axial play at axial load 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) (static, shaft supported) 110 N
  - 28 Max. radial load, 5 mm from flange 1200 N
- Other specifications**
- 29 Number of pole pairs 1
  - 30 Number of commutator segments 13
  - 31 Weight of motor 260 g

Values listed in the table are nominal.  
Explanation of the figures on page 151.

- Option**
- Preloaded ball bearings

## Operating Range

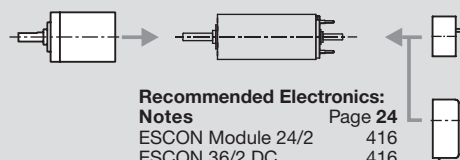


## Comments

- 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  
0.75 - 4.5 Nm  
Page 340



**Recommended Electronics:**  
Notes Page 24

ESCON Module 24/2	416
ESCON 36/2 DC	416
ESCON Module 50/5	417
ESCON 50/5	418
EPOS2 24/2	424
EPOS2 Module 36/2	424
EPOS2 24/5	425
EPOS2 P 24/5	428
MAXPOS 50/5	435

## Overview on page 20-27

- Encoder MR**  
256 - 1024 CPT,  
3 channels  
Page 393
- Encoder HED\_ 5540**  
500 CPT,  
3 channels  
Page 399/401