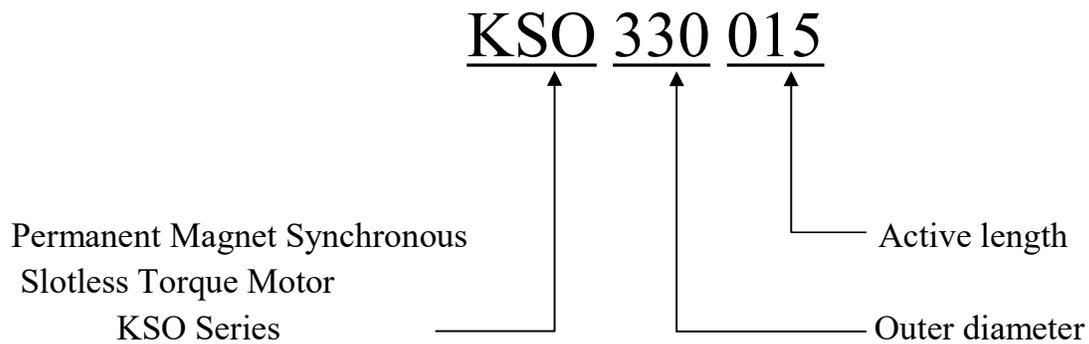




Permanent Magnet Synchronous Frameless Slotless Motor



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Product Description

The frameless, slotless motor of KSO 330 015 is a high performance brushless synchronous motor excited by rare earth permanent magnets located on the rotor. This motor is delivered as frameless kit (rotor and stator sets) and was optimized for increased torque density, zero cogging torque, compact design at minimal cost.

The stator core consists of a ring made of laminated steel. Due to the slotless configuration, the three phase star connected winding is placed in the airgap between stator core and permanent magnets. The winding is encapsulated in epoxy resin. The rotor consists of a magnetic steel ring on which there are placed high energy permanent magnets. This motor was designed to offer very low torque ripple combined with zero cogging torque.

This slotless, frameless kit motor can be use as direct drive motor providing the advantages of lower cost, increased reliability and improved performance. This motor can be customized in order to be easily adapted to a wide range of applications. The winding can be customized for different bus voltage values.

Features

- Zero cogging torque
- Designed to be compact, high performance and cost effective
- Very low torque ripple
- Smooth operation
- Allow direct coupling with the payload, eliminating parts of mechanical transmission
- Maintenance free
- High energy NdFeB magnets maximize torque density
- Customized winding for different desired voltage

Applications

- Machine tools
- Laser scanning and printing
- Motion simulators
- Rotary stage
- Robots
- Defense mechanisms



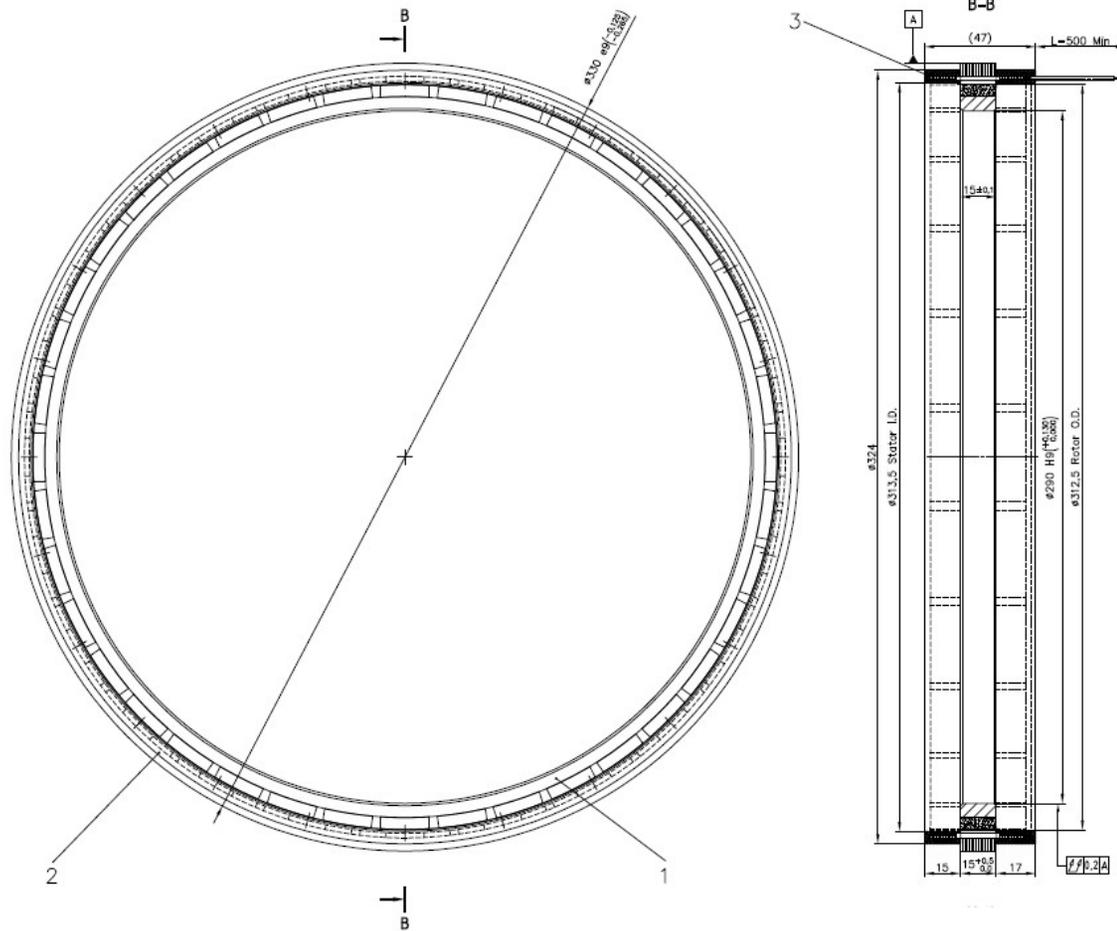
Torque motor KSO 330 015 Specifications

Parameters	Tolerances	Units	KSO 330 015
External diameter	h7	mm	330
Inner diameter	H7	mm	290
Total length	Max	mm	47
Continuous stall torque	±10%	Nm	8
Peak torque	±10%	Nm	20
Rated voltage*	±10%	V _{DC}	48
Continuous stall current**	±10%	A _{rms}	4
Peak current	±10%	A _{rms}	12
Rated speed	±10%	rpm	90
No load speed	±10%	rpm	280
Torque constant (K _T)	±10%	Nm/A _{RMS}	2.0
Back EMF constant (K _E)	±10%	V _{rms} /Krpm	130
Thermal resistance	±10%	°C/W	2.4
Total friction torque	±10%	mNm peak	0
Inertia	±10%	Kg·m ²	247
Weight	±10%	Kg	2
Phase connection			Y
Number of poles			40
Electrical resistance (at 20°C)	±10%	Ω	2.86
Electrical inductance	±20%	mH	1.3

*, ** More voltage and current values available on request



Torque motor KSO 330 015 Dimensions



* Dimension in mm

** Different stack length available on request



Torque motor KSO 330 015 Performances

