

Key Features

- Length x Diameter 90x66 mm
- Nominal Load Capacity radial 125 N
- Max. Speed up to 80,000 rpm
- Output Power 525 W
- Integrated Pneumatic Release Unit
- Water-Cooled Asynchronous Motor



Air-Bearing High-Frequency Spindle

Concept and Design

The EZ-1250 high-frequency spindle was developed specifically for the requirements of the optics industry. It offers exceptional rotational accuracy and is suitable for all high-precision machining and finishing operations.

The robust spindle is equipped with a pneumatic release unit that enables an automated tool change. The release unit and spindle are operated with a supply pressure of 5 bar.

Due to the almost friction-free air bearing, heat generation is very low, yet the spindle is provided with connections for spindle cooling. With constant cooling and a suitable drive unit, the spindle can be operated at speeds of up to 80,000 rpm.

The design of the spindle nose allows for long service life with minimal maintenance.

Further versions of the tool holder and other collet sizes are available on request.

Applications

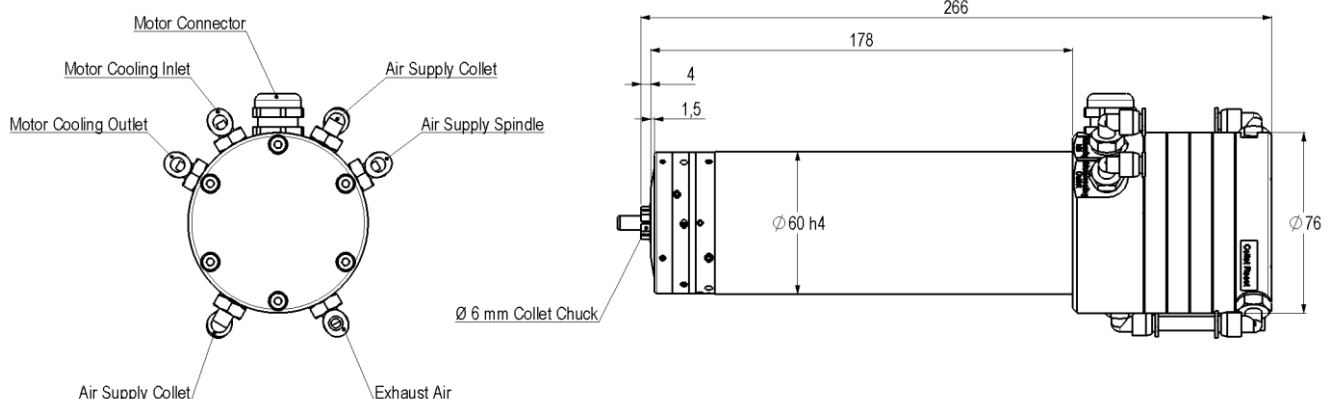
Superfinishing, glass milling, wafer sawing, grinding of optical lenses and displays for cell phones & tablets, micro-machining of optical and medical products.

In general: For applications with high demands on dynamics and precision.

Drive Control

We offer the EZ-1250 spindle with the following drive controller:

- SycoTec e@syDrive TV 4538



Specifications

Type	Unit	Value
Ident Number		0003362
Turning Range	°	> 360 (unlimited)
Max. Speed	rpm	80,000
Mechanical Data		
Type	Unit	Value
Mounting Position		unrestricted
Diameter x Height	mm	76 x 266
Diameter Collet Chuck	mm	6
Weight	kg	4.2
Max. Load axial	N	360
Nominal Load axial	N	280
Max. Load radial at spindle nose	N	160
Nominal Load radial at spindle nose	N	125
Runout axial static	µm	0.1
Runout radial static	µm	0.2
Stiffness axial ¹⁾	N/µm	14
Stiffness radial ¹⁾	N/µm	7
Inertial Moment	kg/m ²	0.002
Material Housing		1.4305 stainless steel
Material Rotor		1.4305 stainless steel
Encoder		
Type		without encoder
Drive		
Type	Unit	Value
Type		asynchronous high-frequency motor
Frequency	Hz	1,333
Intermediate Circuit Voltage	V _{DC}	340
Nominal Current	A _{rms}	1.3
Output Power	W	525
Torque Value	Nm	0.064
Interfaces and Environment		
Type	Unit	Value
Supply Pressure Air Bearing ²⁾	bar	5
Supply Pressure Release Unit ²⁾	bar	5
Air Consumption	Sl/min	40
Drive Control		
Standard		SycoTec e@syDrive TV 4538

- 1) Average stiffness over the entire air gap.
Stiffness is lower for loads around the zero point.
- 2) Deviating supply pressure possible after consultation with the manufacturer.

Subject to technical modifications and typographical errors.