

# Z33-M060.05 S14

High-frequency spindle  
Manual tool change

**Spindle for high-speed -drilling, -routing,  
-depaneling**

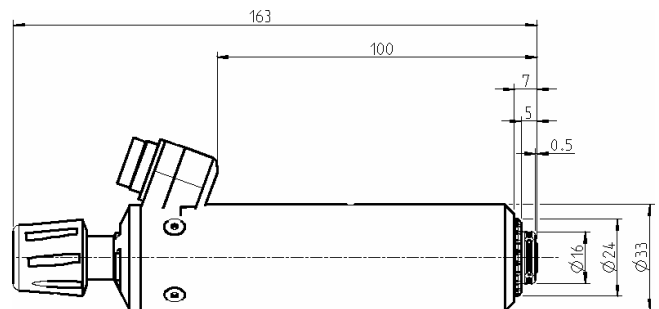
## Technical specifications

- High precision hybrid ball bearings – 2 Pcs. front
- High precision steel ball bearing – 1 Pcs. rear
- Lifetime lubricated, maintenance free
- Motor: type 1
- Output power: S1-100% ED 170 W
- Output power: S6-60% ED 400 W
- Voltage: S1-100% ED 71 V
- Voltage: S6-60% ED 87 V
- Current: S1-100% ED 3 A
- Current: S6-60% ED 4,2 A
- Frequency: max. 1000 Hz
- Motor poles: 1 pair
- Rotation speed: max. 60.000 rpm
- Housing diameter: 33 mm, stainless steel
- Cooling system: non cooled
- Tool change: manual tool change
- Clamping range: up to 3,5 mm
- Coupler plug: 8-pole plastics
- Weight: 0,5 Kg
- Inner taper run out < 1 $\mu$

## Example of design



## Dimensions



## Power-, torque- and speed diagram

