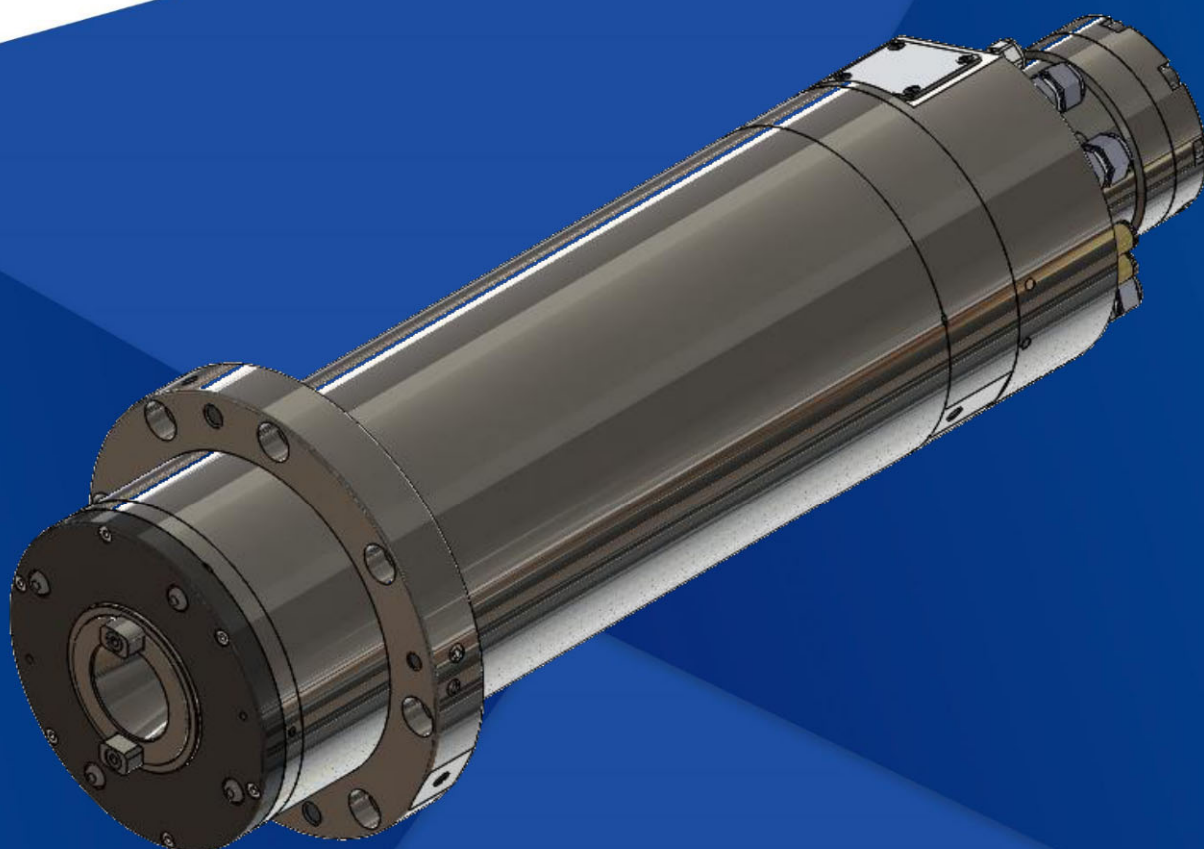


Machine-tool Motorized Spindle (DGZX-15018/20F-BFHWVJM)

Instruction Manual



Appendix 6 Spindle Technical Parameter Table

Appendix 5 Spindle Technical Parameter Table

Spindle Model DGZX-15018/20F-BFHWVJM			
Drive Parameters			
No. Item		Standard Value	
		Low-speed Winding	High-speed Winding
01	Motor Type	Three-phase Asynchronous Dual-winding Motor	
02	Motor Poles	4	
03	Rated Input Voltage (V)	175	175
04	Rated Power (S1-100%) (kW)	20	20
05	Rated Torque (S1-100%) (Nm)	53	28
06	Rated Current (S1-100%) (A)	90	90
07	Rated Power (S2-40%) (kW) Duty Cycle Time: 2min	24	24
08	Rated Torque (S2-40%) (Nm) Duty Cycle Time: 2min	64	34
09	Rated Current (S2-40%) (A) Duty Cycle Time: 2min	110	110
10	Maximum Current (A)	185	185
11	Maximum Speed (rpm)	9000	18000
12	Maximum Frequency (Hz)	300	600
13	Rated Speed (rpm)	3590	6785
14	Rated Frequency (Hz)	127	230
15	Moment of Inertia (kg·m ²)	0.0139	

Appendix 6 Spindle Technical Parameter Table (Continued)

Spindle Model DGZX-15018/20F-BFHWVJM		
Tool Holder Parameters		
No.	Item	Standard Value
01	Tool Holder Interface	BBT40-45°
02	Drawbar Force (N)	7000-9000
03	Tool Ejection Amount (mm)	0.8±0.1
04	Tool Release Method	Hydraulic Tool Release
05	Hydraulic Cylinder	Volume (mL) 42
		Stroke (mm) 13
		Cross-sectional Area (mm²) 3142
06	Tool Release Pressure (MPa)	6-8
07	Drawbar Pressure (MPa)	0.4-8
08	Spindle Taper Hole Runout (mm)	0.001
09	Spindle End Face Runout (mm)	0.001
10	Standard Test Bar Runout at 10mm (mm)	0.002
11	Standard Test Bar Runout at 300mm (mm)	0.005
Air Circuit System		
No.	Item	Standard Value
01	Air Curtain Seal AS1/AS2 Pressure (MPa)	0.2-0.3
02	Central Blowing CL Pressure (MPa)	0.3-0.4

Appendix 7 Spindle Technical Parameter Table (Continued)

Spindle Model DGZX-15018/20F-BFHWVJM		
Cooling System		
No.	Item	Standard Value
01	Cooling Medium Water (Filtration Grade: <150μm)	
02	Cooling Demand (kW)	4
03	Cooling Water Flow Rate (L/min)	12-15
04	Cooling Water Inlet-Outlet Temperature Difference (°C)	≤5
05	Maximum Injection Temperature (°C)	40
06	Maximum Injection Pressure (MPa)	0.6
Ring Spray System		
No.	Item	Standard Value
01	Cooling Medium Cutting Fluid/Oil Mist/Dry Air	
02	Cooling Medium Pressure (MPa)	<1
03	Cooling Medium Filtration Grade	<50μm
04	Cooling Medium Maximum Injection Temperature (°C)	40

Appendix 8 Spindle Technical Parameter Table (Continued)

Spindle Model DGZX-15018/20F-BFHWVJM		
Shaft System		
No. Item	Standard Value	
01 Bearing Type	Ceramic Ball Bearing	
02 Maximum Bearing Temperature (°C)		Upper Bearing ≤ Water Injection Temp +15 Lower Bearing ≤ Water Injection Temp +20
Sensors		
No. Item	Standard Value	
01 Encoder Signal	Sin/cos 1Vpp	
02 Encoder Disk Teeth	160	
03 Proximity Switch	24V, PNP Normally Open	
04 Stator Temperature Sensor Type	3 PTC in Series, KTY84-130	
05 Stator Temperature (°C)	≤130	
Other Technical Parameters		
No. Item	Standard Value	
01 Spindle Assembly Diameter (mm)	φ150h6	
02 Spindle Mounting Method	Vertical/Horizontal	
03 Spindle Vibration Velocity (mm/s)	1.0 (O-P)	
04 Spindle Noise (dB(A))	≤75	
05 Spindle Weight (kg)	65 (1±10%)	
06 Spindle Protection Class	F	
07 Motor Winding Insulation Resistance (MΩ)	500	
08 Motor Winding Withstand Voltage Test (V/min)	1500	