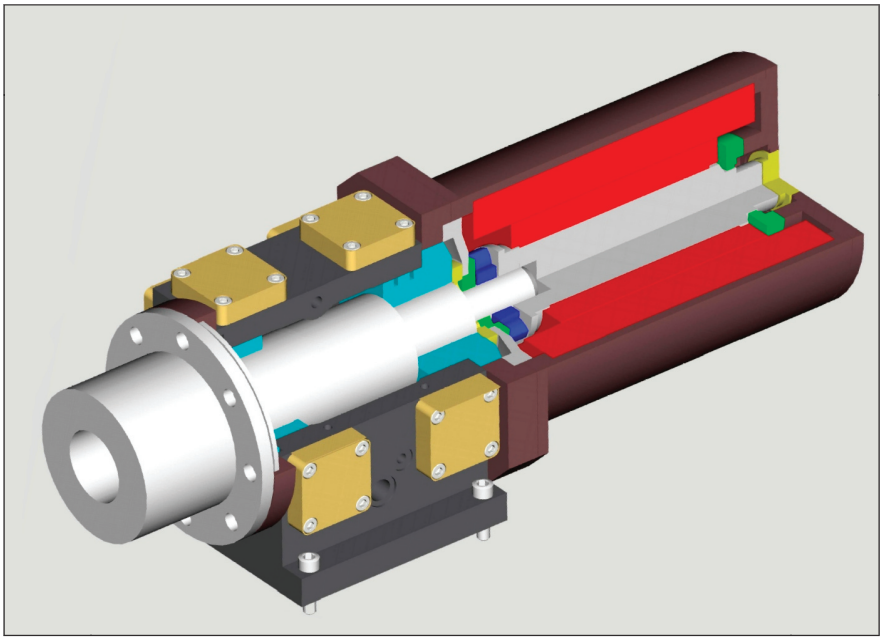
HYPROSTATIK
Schonfeld GmbH



Technical Features of Grinding Spindle with Motor

Speed	to 3500 rpm	to 7000 rpm	to 10000 rpm
Friction power at max. speed	1.0 kW	2.0 kW	2.3 kW
Max. pump + friction power	1.7 kW	3.4 kW	3.6 kW
Pump pressure	63 bar	63 bar	63 bar
Max. oil flow	6.5 l/min	13 l/min	13 l/min
Max. grinding force axial radial	± 2800 N 2800 N	± 2800 N 2800 N	± 2300 N 2500 N
with reserve	200%	200%	200%
Stiffness at the grinding disk axial radial	500 N/µm 320 N/µm	500 N/µm 320 N/µm	400 N/µm 300 N/µm
Bearing diameter	95/65 mm	95/65 mm	85/60 mm
Angle deflection of grinding wheel at 100 N	0.2 µm/100 mm	0.2 µm/100 mm	0.2 µm/100 mm
Max. oil heating	12.8° C	13.2° C	14.5° C
Motor power	50 kW	50 kW	60 kW
	60 m/s	160 m/s	160 m/s

Features of Hydrostatic Grinding Spindles with Motor

- Very low friction will heat the spindle only slightly. Nearly all motor power gets to the workpiece.
- Heat that is generated is moved immediately out of the spindle area with the oil and cooled in the chiller.
- No vibration from roller bearings for extremely smooth operation.
- Excellent damping of vibration during grinding process, resulting in superior surface finish and workpiece accuracy. In addition, grinding wheels will stay sharp longer.
- Very high axial and radial stiffness, allowing required dimensions to be reached faster and more precisely. Excellent roundness of grinding diameters.
- High load capacity.
- Stiffness is independent of speed and load, grinding and dressing can both be performed at maximum speed.
- Wear-free because there is no contact between moving parts when in operation.
- No loss of accuracy, even under full load at maximum speed.
- Not sensitive to grinding grit or other contamination—the bearings are flushed continuously.
- Gap is sealed with a compressor air lock which keeps the oil in the spindle and keeps machining coolant and chips out.
- The spindle is supplied with a properly sized hydraulic power unit with chiller. The system is designed to protect the internal bearings should electrical power fail.

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