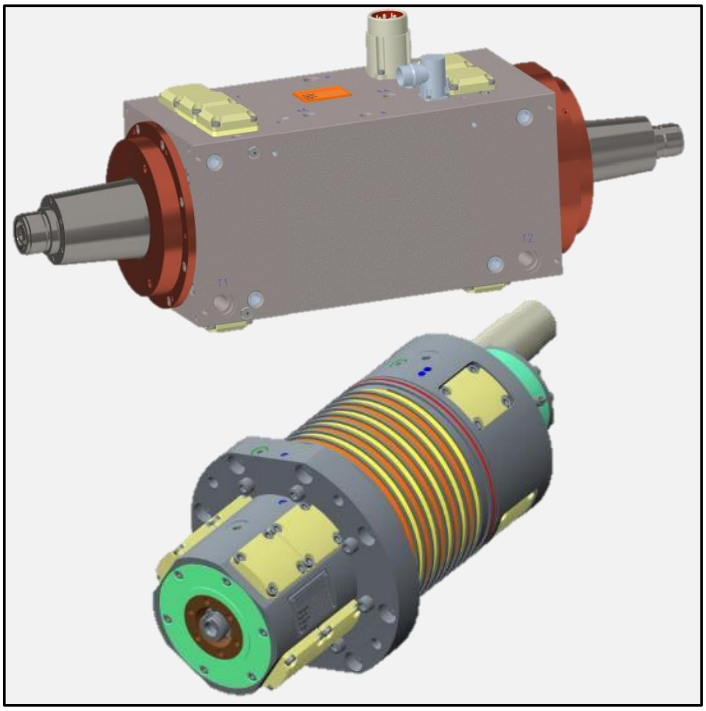
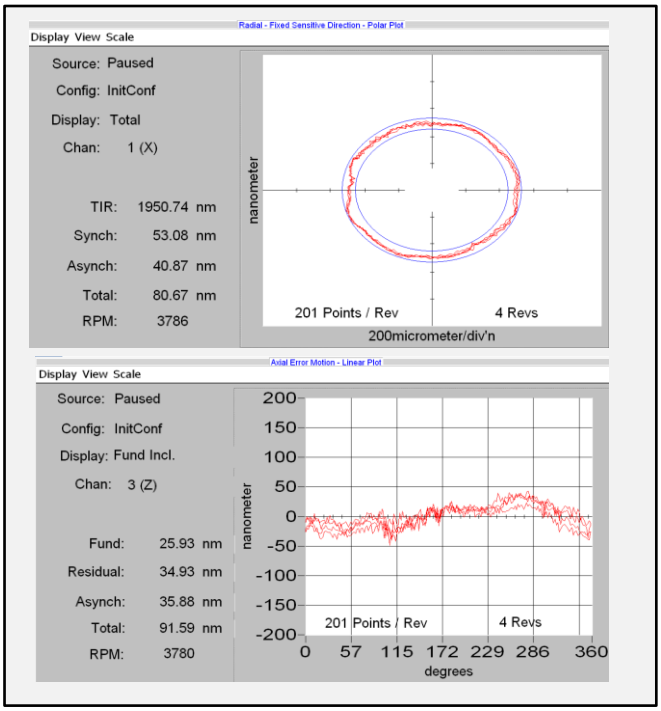
Better precision and liability with

hydrostatic grinding spindles

HYPROSTATIK
a schunk company

Spindle technic





Why using hydrostatic grinding spindle?

- ✓ Runout < 0,1 to 0,3µm and balance quality <G0,4 reduces vibration for better work piece surface.
- ✓ Good bearing damping improve possible grinding power and surface quality.
- ✓ Wear free hydrostatic bearings keeps grinding quality at highest level for long time.
- ✓ High load capacity and stiffness by high rigid hydrostatic bearings with PM-flow controller for heavy work pieces.
- ✓ With special synchro motor inside for fast speed up and stop and low thermal deflection.
- ✓ With magnetic or optical angle measurement system, useful also for indexing stopping.
- ✓ With cone or flange fixture for grinding wheel flange or with manual or automatic HSK tool change.
- ✓ For manual balancing or automatic balancing and acoustic emission gap sensor
- ✓ With adapted hydraulic unit and special inverter adapted for stop at electric power loss and auto tuning depending wheel size

Housing size	Ø150 or □130mm	Ø200 or □180mm	Ø240 or □220mm	Ø270 or □250mm
Max. speed [1]	1.000-10.000 rpm	1.00-7000 rpm	8.0-5500 rpm	500-3500 rpm
Max. torque [2]	5 - 10 Nm	40 - 70 Nm	60 - 180 Nm	120 - 400 Nm
Max. power [2]	12 kW	25 kW	45 kW	70 kW
Max. radial force [3]	700 N	1.500 N	2.500 N	4.000 N
Max. axial force	+/- 500 N	+/-1.000 N	+/-2.000 N	+/-3.000 N
Max. tilt torque [3]	50 Nm	150 Nm	300 Nm	600 Nm
Radial stiffness [4]	500 N/µm	800 N/µm	1300 N/µm	1800 N/µm
axial stiffness [4]	400 N/µm	600 N/µm	900 N/µm	1200 N/µm
oil flow at visc. VG5, max. 32°C	5 l/min (max. 6.000 rpm)	12 l/min (max. 5.000 rpm)	14 l/min (max. 4.000 rpm)	16 l/min (max.3.500 rpm)

[1] Oil flow and oil viscosity will be adapted to max. speed [2] Nm and power values at S1: 100% - you can select max. values needed
[3] Radial force, axial force and tilt torque can be applied together on the spindle nose. Values can be adapted to application
[4] Gaps stiffness in hydrostatic bearing. Stiffness on spindle nose is lower.

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