

OERLIKON BEVEL GEAR TEST STAND TS 30

The TS 30 bevel gear test stands make it possible to check bevel gear sets of different sizes for wear and fatigue strength.

Electric drive initiate the rotary motion at the drive side (motor) and the brake torque at the output side (generator). This concept makes it possible to operate the test stand in an extremely energy-efficient way.

The center distances and shaft angles between the bevel gears can be individually adjusted using the control unit.

During the test run the rotation speed, the torque, the vibration, the oil pressure, the oil flow rate and the temperature are continuously recorded and evaluated via the system control unit. The test runs can be individually programmed using the touch panel.

The workpiece arbors are equipped with a telemetry system for measuring the tooth root bending via DMS.



AT A GLANCE

- Programmable bevel gear test stand
- Variable rotation speed and variable torque
- Variable setting of the shaft angle and the center distance
- Scuffing and pitting detection
- Efficiency measurement
- Oil lubrication
- Energy-efficient



RANGE OF APPLICATION	TS 30
Workpiece data	
Workpiece diameter (min. – max.)	50 – 300 mm, 301 – 600 mm (only with shaft angle 85° – 95°)
Workpiece weight (max.)	20 kg
Normal module range (min. – max.)	1.5 – 5.0 mm
Transmission ratio (min. – max.)	1.0 – 2.5
Adjustable shaft angle	60° – 120° (90° at neutral position)
Axes X, Y, Z	max. traversing path of 300 mm
Drive/output	
Power	2 x 156 kw
Speed range (max.)	12,000 rpm
Torque 1 (max.)	400 Nm at 1,000 rpm – 4,500 rpm
Torque 2 (max.)	100 Nm at 12,000 rpm
Control unit	Beckhoff
Machine dimensions (L x W x H) approx.	4,500 x 3,700 x 3,200 mm
Cooling unit dimensions (L x W x H) approx.	2,230 x 1,545 x 2,010 mm
Net weight approx.	30,000 kg

The above-mentioned maximum values were determined for industry-typical gear units.
Further testing may be required to determine whether maximum values can be combined.

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