

Large gear measurement standard (PTB, Germany)

The large gear measurement standard is designed as a segment of a complete gear. The measurement standard can be used for both profile and helix measurements. Three different helix angles and hands of helices allow the standard to be universally used. It provides 21 boreholes for Pt100 temperature sensors for monitoring the temperature distribution inside the workpiece. Further holes for the supporting hemispheres as well as for eye bolts to lift the workpiece with a crane are provided.

Each of the six gear flanks have been calibrated according to existing standards and guidelines (e.g. ISO 1328-1). For all the profiles the total deviation F_α , the form deviation $f_{f\alpha}$ and the slope deviation $f_{H\alpha}$ have been evaluated. Equivalently, the helices are calibrated in terms of F_β , $f_{f\beta}$ and $f_{H\beta}$. In all this gives 36 calibrated parameters describing the large gear measurement standard.



Geometry parameters	
Helix angle / hand	0° / spur; 10° / right; 20° / left
Number of teeth	38 / 37 / 36
Normal module	25 mm
Pressure angle	20°
Facewidth	400 mm
Outer diameter	500 mm
Weight	450 kg

For further information please contact

Dr. Martin Stein
martin.stein@ptb.de
 +49 (0)531 592 5335

600 01 s
 Physikalisch-Technische Bundesanstalt
 Bundesallee 100
 38116 Braunschweig, Germany

Hausadresse, Lieferanschrift:
 Bundesallee 100
 38116 Braunschweig
 DEUTSCHLAND

Telefon: +49 531 592-0
 Telefax: +49 531 592-9292
 E-Mail: poststelle@ptb.de-mail.de
 Internet: <http://www.ptb.de>

Deutsche Bundesbank, Filiale Leipzig
 IBAN: DE38 8600 0000 0086 0010 40
 BIC: MARKDEF1860
 VAT-Nr.: DE 811 240 952

PTB Berlin-Charlottenburg
 Abbestr. 2-12
 10587 Berlin
 DEUTSCHLAND