

IF-EDGEMASTERHOB

alicona

EDGE MEASUREMENT AT TOOTH FLANK, TOOTH ROOT AND TOOTH TIP

The IF-EdgeMasterHOB is one of Alicona's optical 3D tool measurement systems and a market specific adaption of the optical cutting edge measurement device IF-EdgeMaster. A large working distance of 33 mm allows effortless measurement of cutting edges even in areas that are hard to access. Users measure hob cutters at every stage of manufacture, regardless of surface finish or coating.

USERS MEASURE:

- » Edge roundness at tooth flank, tooth root and tooth tip
- » Radius, wedge angle, true edge geometry ("waterfall" and/or "trumpet" type) through ellipse fitting method
- » Positive and negative bevel
- » Chipping and roughness
- » Wear and difference to CAD models or reference geometries

THE PRACTICE

"Being able to measure the edge radius of both, tooth tip and tooth flank over this broad range is, as far as I know, not possible with any other system."

Tobias Schulz
Head of quality assurance in gearing
LMT Werkzeugtechnologie



GENERAL SPECIFICATION

Travel range	66 mm (26 mm motorized)
Rotation table	+/- 90°
Illumination	LED ring light with 24 segments
Weight	30 kg
Dimensions	299 mm x 254 mm x 502 mm (W x D x H)
Sample size	Diameter 25 mm - 300 mm

OBJECTIVES

		10x SX	20x
Sampling distance	μm	1.1	0.55
Min. repeatability (vertical)	nm	40	25
Max. scan height (approx.)	mm	22	12
Best vertical resolution	nm	100	100
Working distance	mm	33.5	13.0
Measurement field X x Y	mm	1.76 x 1.32	0.88 x 0.66

RANGE OF RESOLUTION AND APPLICATIONS

		10x SX	20x
Min. measurable radius	μm	6	4
Min. measurable wedge angle	°	20	20
Uncertainty of angle	°	0.5	0.5
Max. Bevel length	μm	500	250

