µLine F1 ROTARY KIT

Measurement system for the calibration of rotating axes

- Fully automated measurement and calibration
- Highest possible precision
- Cable-free connection with the µLine unit

BR 1079 E 10/13

Another fine solution by Status Pro maschinenmesstechnik

µLine F1

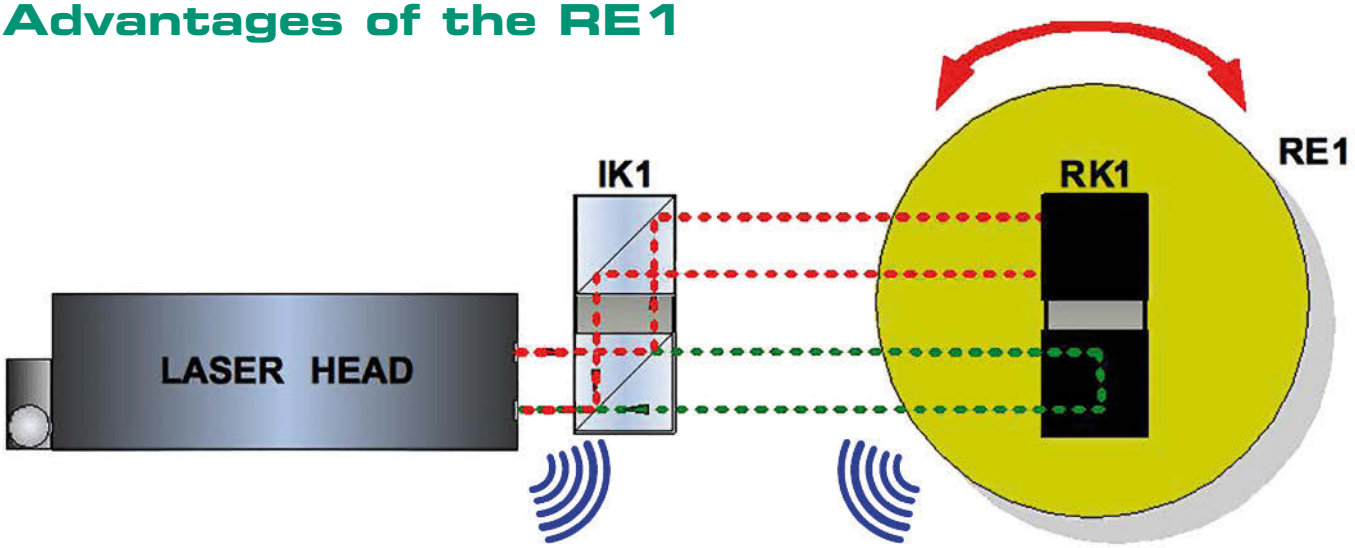
The µLine F1 Laser Interferometer is a complete and universal measurement system for measuring positioning as well as dual-axis straightness. The system was developed to operate to the highest precision standards. The F1 is used in a large scope of industries such as: CNC machine calibration, the printing industry, in laboratories and in the semiconductor production etc.

Calibration of rotating axes:

The complexity of machines is always increasing and the growing popularity of multi-axes machines necessitates newer measurement technologies.
The measurement of rotating axes is also very important. With the F1, the measurement of Angular accuracy, Backlash as well as Reproducibility is achieved in one go!. Simple fault diagnosis irrespective of whether measuring a new machine, an overhauled machine or a "crash candidate".

With trustworthy and secure measurement results are you in a position to handle the task

Advantages of the RE1



The RE1 Rotary Calibration Kit is capable of carrying highly reproducible and accurate measurements using a combination of "Gleason Toothing" and supplied optics.
The comparison between the "true" turned angle and the machine display is measured using the Interferometer and the RE1 unit.

Any angle of rotation can be measured with a precision of 0,5 Arcsecond.

The mechanical characteristics of the "gearbox" ensure the highest precision over many years.

Calibration process

1) The RE1 is positioned in the axis of rotation.

2) The "optics" are aligned with the F1 Laser head.

3) The µ-Line F1 Laser Unit and the RE1 are connected with each other (click "Link").
   The calibration process will now be started automatically.

4) Table rotation now proceeds in the desired increments.
   Measurements are carried out in both directions, several times with automatic recording of the results.

5) Results of a measurement can be viewed during and/or after a measurement has been carried out.
   After choosing the appropriate Standard or "Norm" the results can evaluated accordingly.

6) The final measurement after compensating/correcting shows the improvement within the machine.

RE1 Technical Specifications

Accuracy of the RE1 Unit (Arcsecond):	1 arcsec (0.5 arcsec*)
Reproducibility of the RE1 Unit:	0.2 arcsec
Measurement accuracy:	1 arcsec (0.5 arcsec*) for steps of 5°
	4 arcsec with chosen angle
Resolution:	0.01 arcsec
Measurement range:	720°
Maximum turning speed:	1 U/min with angles > 5°
	> 100 U/min with angles < 5°
Optics required:	IK1 and RK1 (BG 840210)
Operation temperature range:	10°C – 30°C
Triggering and control:	Wireless link, 2.4 GHz

* Extended precision version

RE1 kit

The RE1 kit is available in 2 classes of accuracy:

- Normal: ±1 arcsecond
- Extended: ±0.5 arcsecond

Both systems achieve a reproducibility of 0.2 Arcsecond.

The complete system is housed in a robust transport case.

***µLine* F1** is a joint project between the University of Wrocław (Breslau), the Lasertex Co. Ltd. and Status Pro Measuerement Technologies GmbH.

Status Pro
maschinenmesstechnik

Status Pro Maschinenmesstechnik GmbH
Mausegatt 19 · D-44866 Bochum
Phone: + 49 (0) 2327 - 9881 - 0
Fax: + 49 (0) 2327 - 9881 - 81
www.statuspro.com · info@statuspro.com

Distributor

BR 1079E 10/13 · Design / DTP: Seichter & Steffens Grafikdesign, D-44229 Dortmund ·