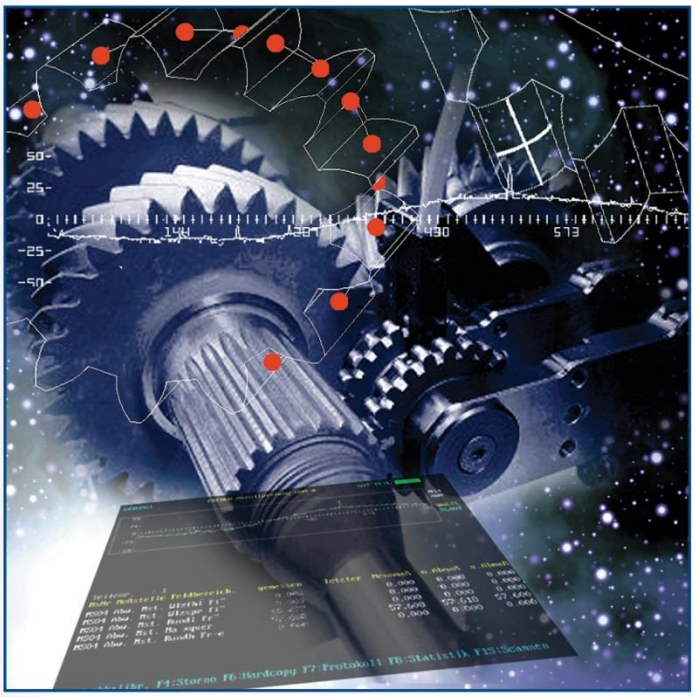


Multiple Inspector

Rotating simultaneous measurements

pure perfection

RM E 07 2014

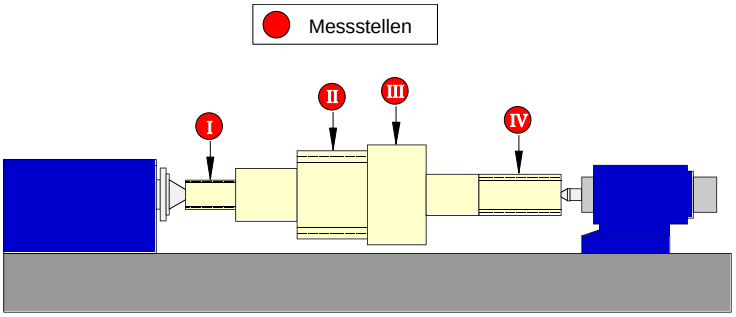
FRENCO

General Information

The inspection of workpieces is carried out within a continuous rotation of 360°. The workpieces are scanned by radially assembled measuring carriages, each equipped with its own sensor and powered by a central encoder.

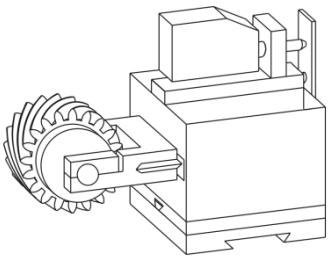
The alignment of various measuring carriages, with one sensor each and a central encoder, allows for different measuring tasks to be carried out simultaneously within one single rotation. The measuring data is processed in real time via the measuring electronic MEG32.

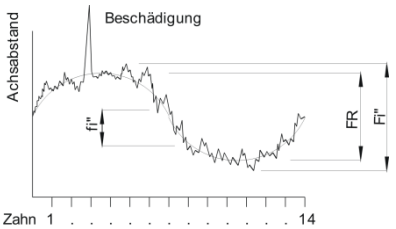
There are three types of measuring carriages that can be combined as required.

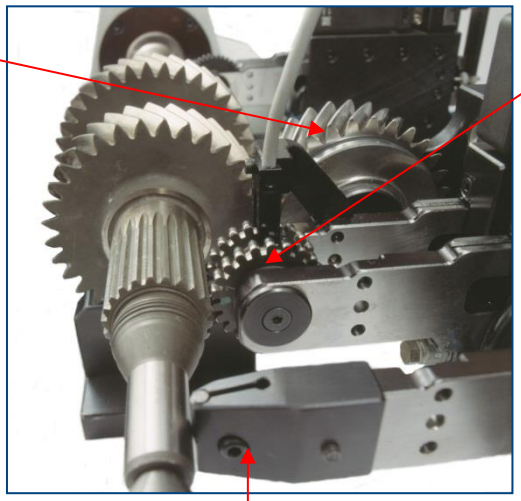


The axes of the individual geometrical elements of the workpiece can be determined and offset against each other.

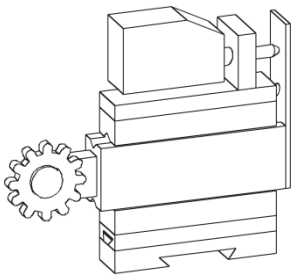
Measuring slide with master gear for a double flank roll test (W)



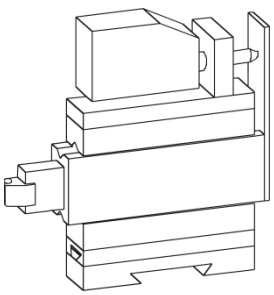


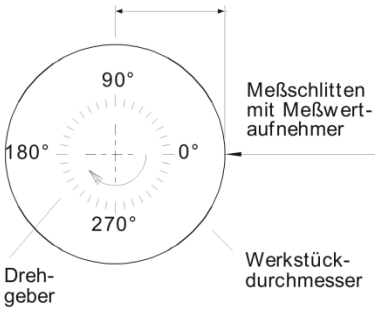


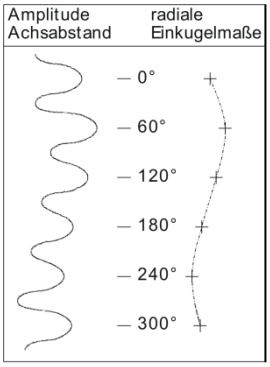
Measuring slide with measuring wheel for splines (R)



Measuring slide with measuring edge for diameter (R)







Performance and Application

- Fast measuring of specific features for gears and splines like dimension over balls, runout and roundness
- Double flank roll test for gears
- Rolling ball inspection using measuring wheels on splines
- Measuring time approximately 15 seconds simultaneously on all measuring points
- Automatic slide and tailstock
- Detecting deviations in position on gears, diameters and surfaces
- Automated testing allows a 100-percent-inspection
- Highest precision due to substitution procedure (calibration with setting master)
- Designed for shop-floor use, very robust
- Link between production and measuring laboratory
- Freely programmable system with a powerful evaluation software
- Recording of all measurement results for process monitoring. Interfaces: qs-stat®, transfer format, csv®, pdf® etc.
- Adaption of mechanics and software to customers' specification

pure perfection

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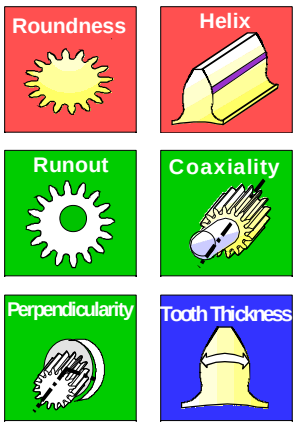
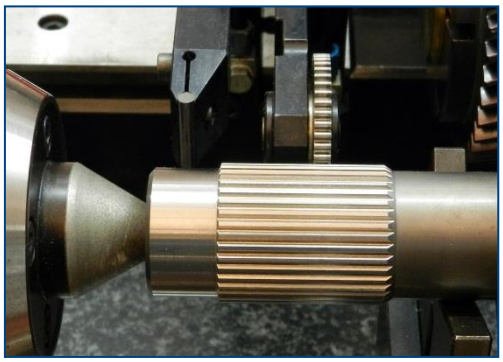
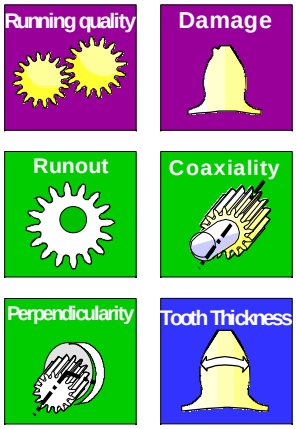
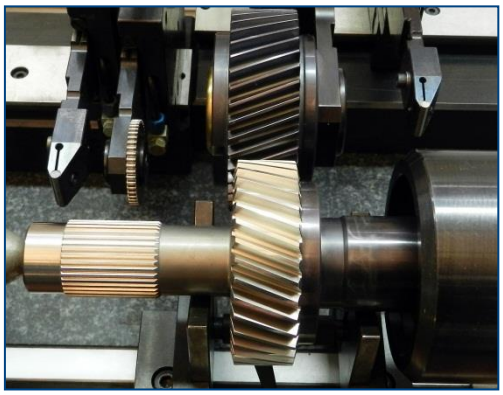
Measurement of geometries



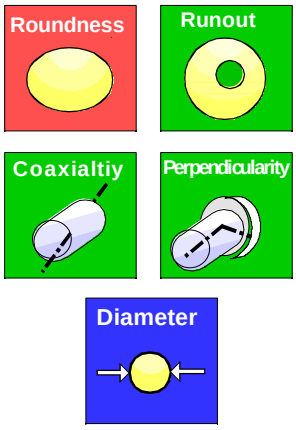


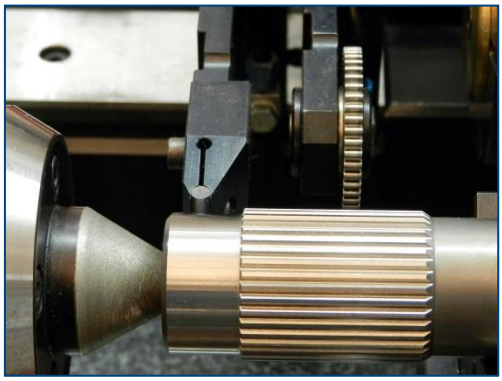
spline





two gears





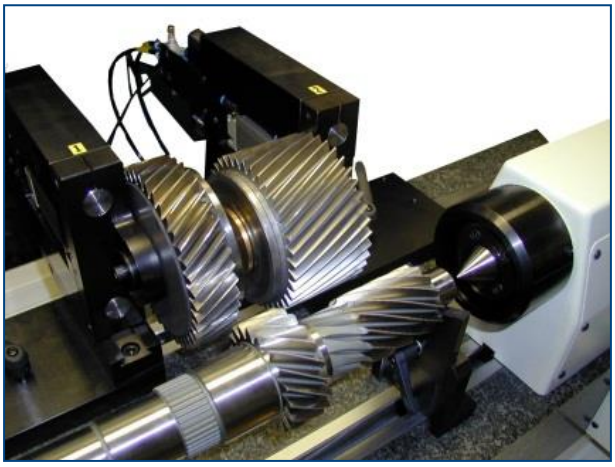
diameter

RM - horizontal

The typical place of use of URM-R/W inspection machines is directly next to the production machine. They can be used for quick random checks and are perfect for a 100 percent inspection.

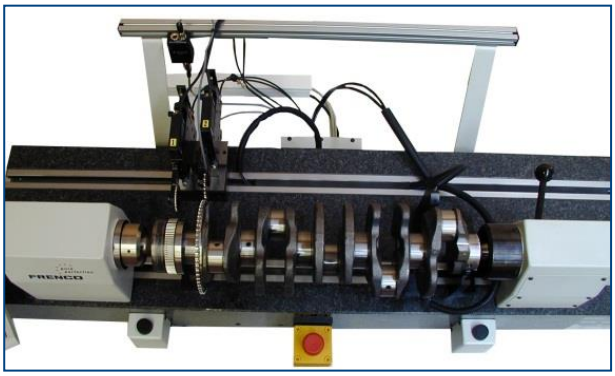
Measurement of splines

2 x measuring slides for splines with index measurement.



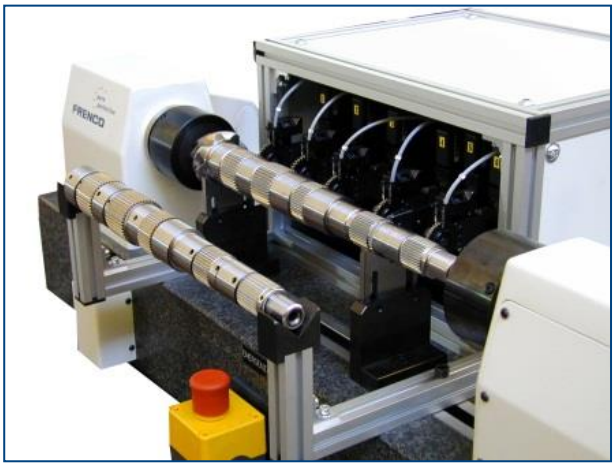
Measurement of a crankshaft

Measuring slide for splines and
measuring slide for straight-sided splines with index measurement relative to each other.



Measurement of a shaft

5 measuring slides for 5 splines with index measurement. Prepared for automatic loading.



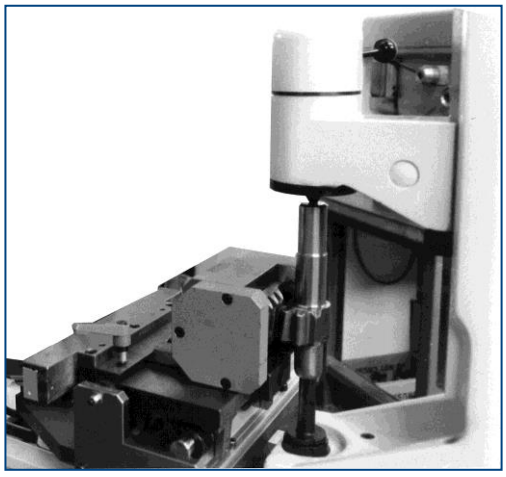
Technical data

		RM
part	max. length	750 mm
	max. external dia	230 mm
	min. internal dia	20 mm
	max. weight	15 kg
measurement	slide	85 mm
measurement sequence	automatic	●
clamping	between tips automatic	●
calibration	profiled setting master	●
	ground shafts	○

Special designs

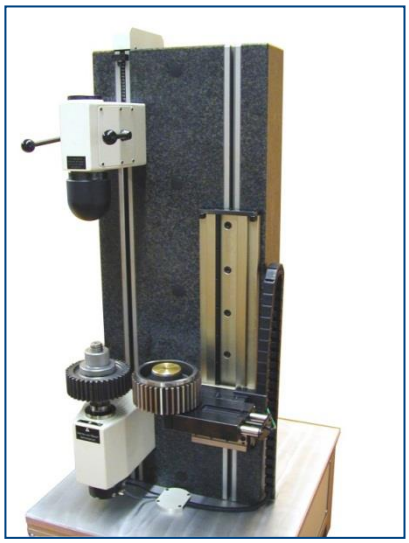
RM - vertical

Double flank gear rolling inspection with special evaluation for steering pinions.



RM - vertical

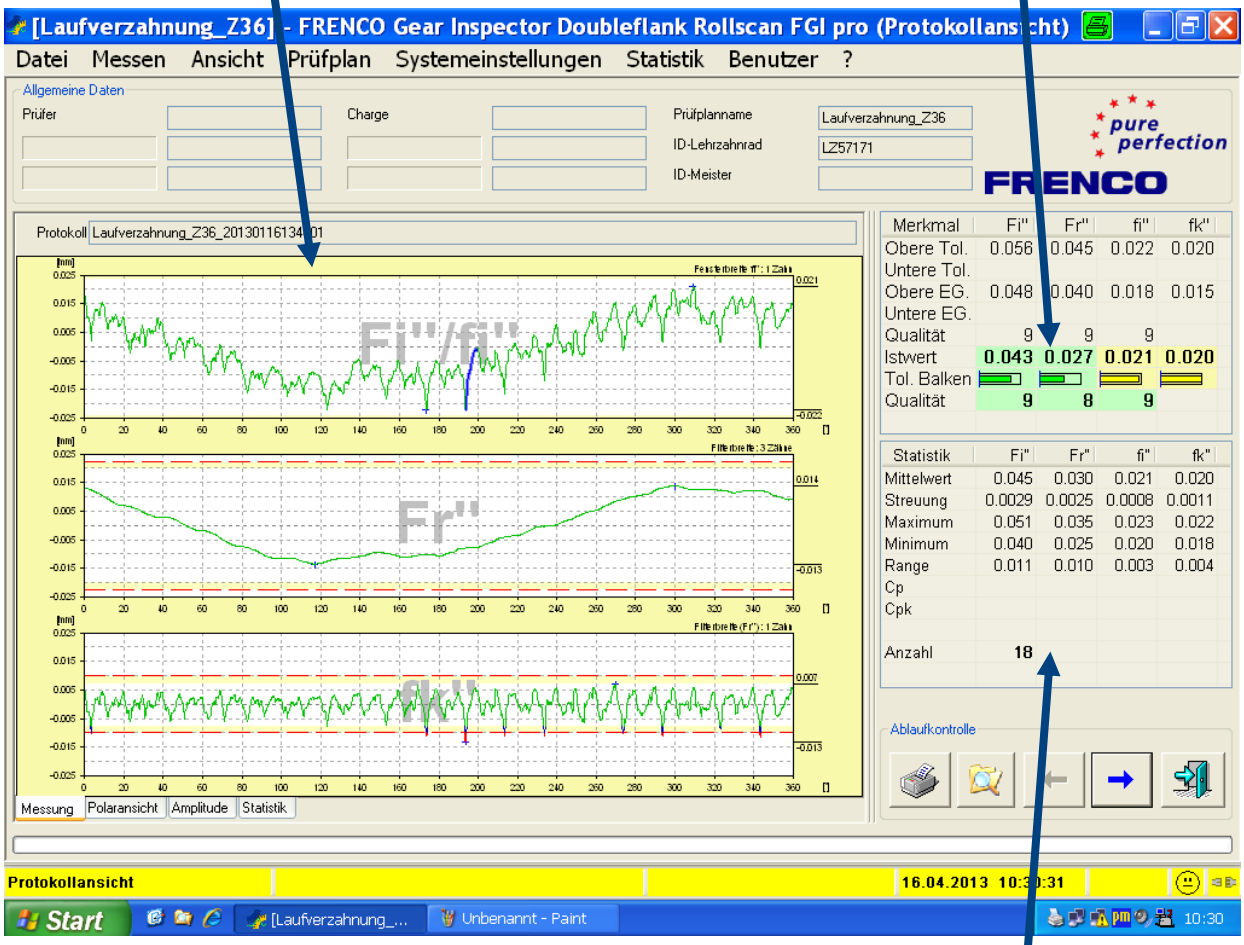
Double flank rolling inspection machine with a vertical slide and a tailstock.



Software for URM-R/W

Graphical evaluation of the measuring values

Coloured marking of measuring results



Output of measurement values

The FRENCO measuring electronic MEG32 controls the measuring slides, captures the measuring values and communicates with the integrated PC.

Frenco product range

High precision gears and splines H

Gear and spline gauges

Master gears, master wheels

Artefacts, masters

Punches, dies & electrodes

Profiled clamping systems

Gear and spline manufacture

Instruments for size inspection series V

Measuring pins and balls

Gauges, rocking Type

Gauges with face stop

Gauges, gear & spline profiles

Circumferential backlash measuring instrument

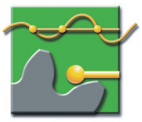
Customized solutions

Rotation measuring systems R

Measuring systems with measuring circles

Multiple inspector

Gear flank analysing
Linear gear flank analyser rack
Gear flank analyser
Double flank gear roll inspection



Gear & spline inspection P

DAkkS- calibration

Monitoring of inspection equipment

Workpiece inspections

Analysis of deviations

Know-how transfer K

Software

Training, seminars, workshops

Consulting and calculations

Literature and documentations

National and international standards

pure perfection

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