FLEXCAL
FLEXGAUGE

Precise measurement in the production environment is unrealistic!

"Nothing is more harmful to advancement than old wisdom."
(c) W.v. Goethe

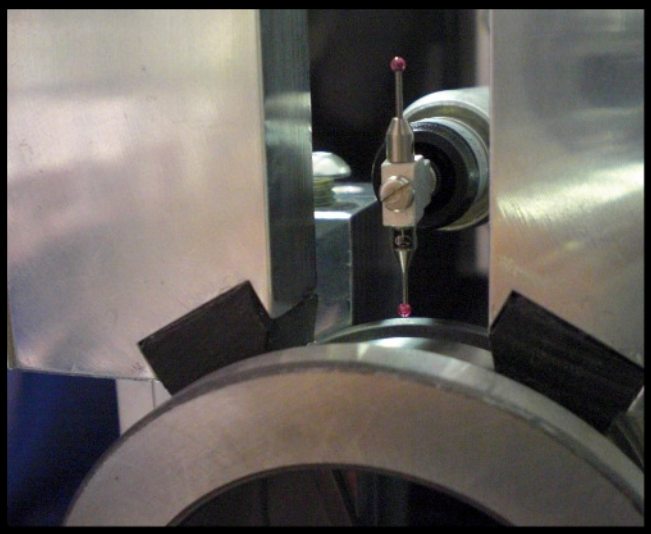
powered by OM

FLEXCAL
BALL BEARINGS

Ball bearings are produced rapidly in large quantities

High volume production demands continuous checking of the individual components. With the FlexCal, and a customized clamping device, quality control can be achieved in minimum time. Regardless of the bearing type, precise production is required. With new production methods such as hardturning, accurate checking must be carried out faster than before.
The FlexCal displays all the key parameters including geometry of the angle between endplane and raceway, parallelism of the ball track plus roughness of the raceway and is supplied with all the necessary fixtures for fully automatic clamping and measurement

R K by Peter-Wiegel /pixelio.de



measurement on inner race of a taper roller bearing

Higher throughput

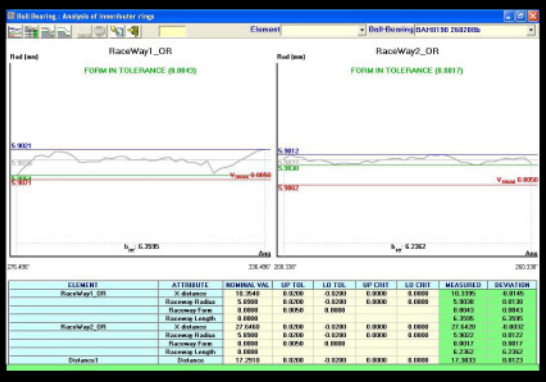
The FlexCal reduces time and intermediate steps. All measurements including roughness are possible.

ball joint bearing
groove ball bearing
angular ball bearing
cylinder roller bearing
barrel roller bearing

Vital measurements

raceway geometry
angle between endplane and raceway
parallelism of the ball track
roughness of the raceway

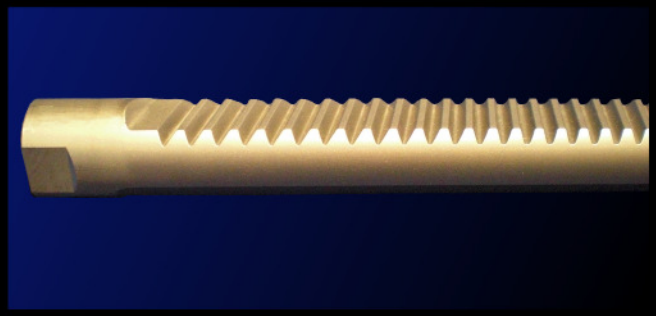
Different sized components are automatically recognized and the corresponding test program initiated.All selected parameters are presented in the minimum time
e.g. for a deep ball bearing having an inside ring diameter of Ø=100mm, the measurement is completed within approximately 30 seconds.
Results can be displayed and presented in tabular and graphical form.



Reliance on precision

Components such as gears and sprockets require monitoring of the overall form envelope. Cog wheels, rack gears and similar components require that each tooth is measured exactly.
To ensure control of the demands for both precision accuracy and quality in- line metrology has become an essential requirement.
Historically this has been a time consuming task necessitating controlled measuring environment and skilled measurement personnel. Experience has also taught us that permanent automatic controls are indispensible during continuous production to detect rejects. Using the FlexGauge, Quality Control can be assured at the production site without interruption.
Our robust FlexGauge satisfies the demands with its extremely high speed measurement capability so that minimization of rejects and quality controls can be achieved without constraining throughput.

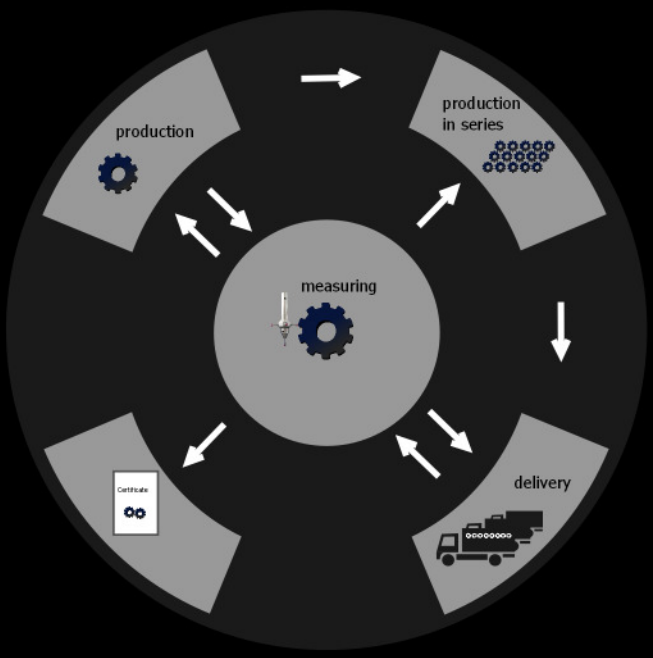
FLEXGAUGE



Cog wheels
Gear racks
Spur gear

fast
directly
precise

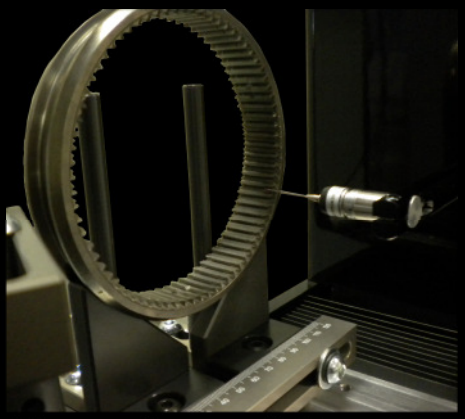
segments
diameter
angles



Many different measurements are needed to achieve effective production control and to optimise the setting of the production machines. Your customers´ request for documented verification of key quality parameters can be satisfied with hard copy print out of measurement data in your chosen format.
FlexGauge can also be used for quality control of incoming components – a modern requirement. especially for just-in-time situations where time is the most expensive factor.
Because of the time constraints in such situations , the FlexGauge is the ideal answer .

- Production controls
- Machine optimisation
- Customer document verification
- Checking received components

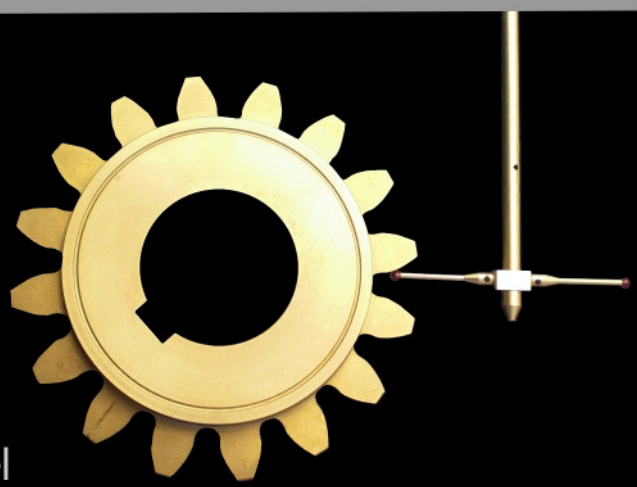
Precision measurements create smooth running components, reduced wear and lead to ideal power transmission.



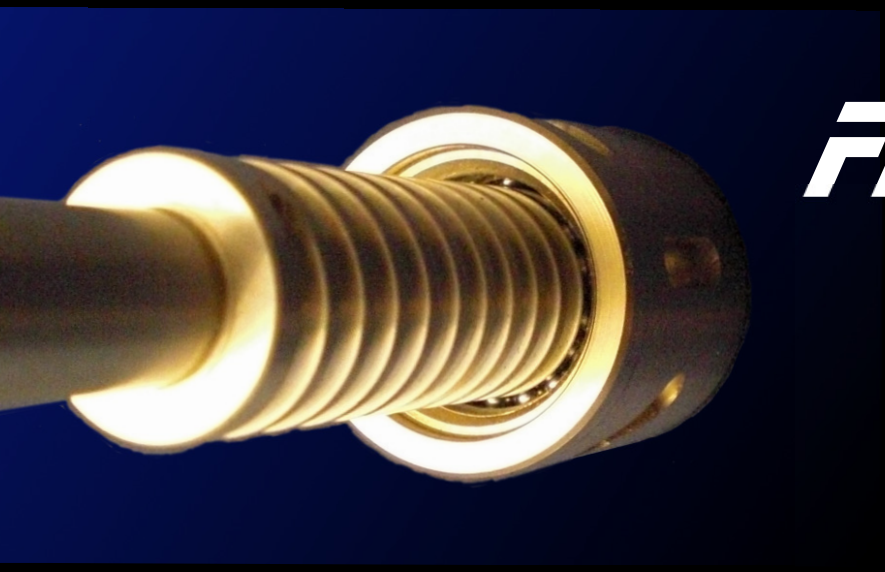
Measuring a shift collar

FlexGauge T16

powered by OTM



Scanning of a gear wheel

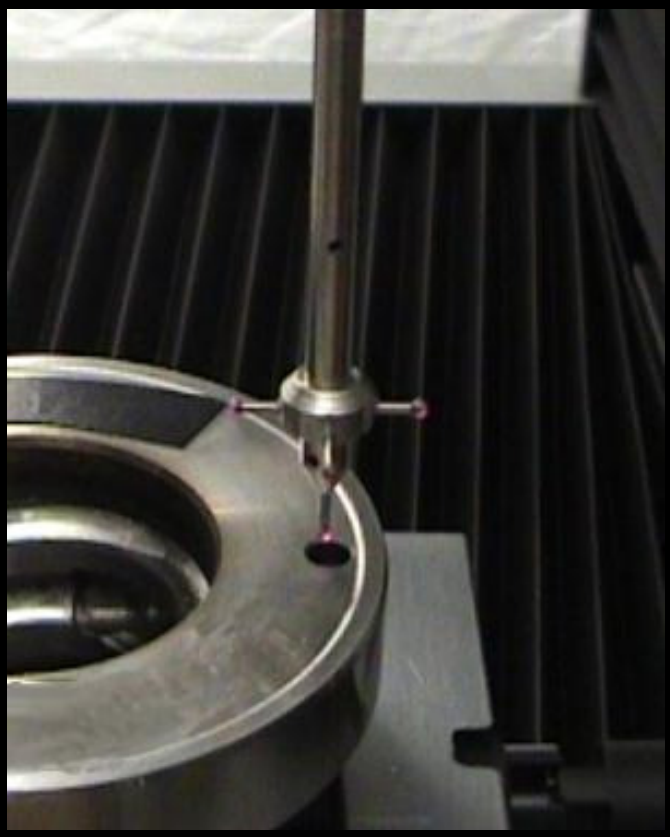


FLEXGAUGE
ball screws

Manufacturers of ball screws need to check continously the following key control parameters:

- lead profile errors
- exact track geometry (particularly when using gothic profiles
- parallelism of the track to the external nut
- ball diameter
- angularity of the track face

Measurement of a ball-type linear drive nut type 63mm x 20mm is complete, using the advanced FlexCal, wthin almost one minute



The use of a 4mm diameter ruby ball as a probe serves as a mechanical filter and makes possible repeatability of less than one micrometer.
This precision, coupled with the speed of the measurement system, makes the FlexGauge indispensable for quality control in large volume production.

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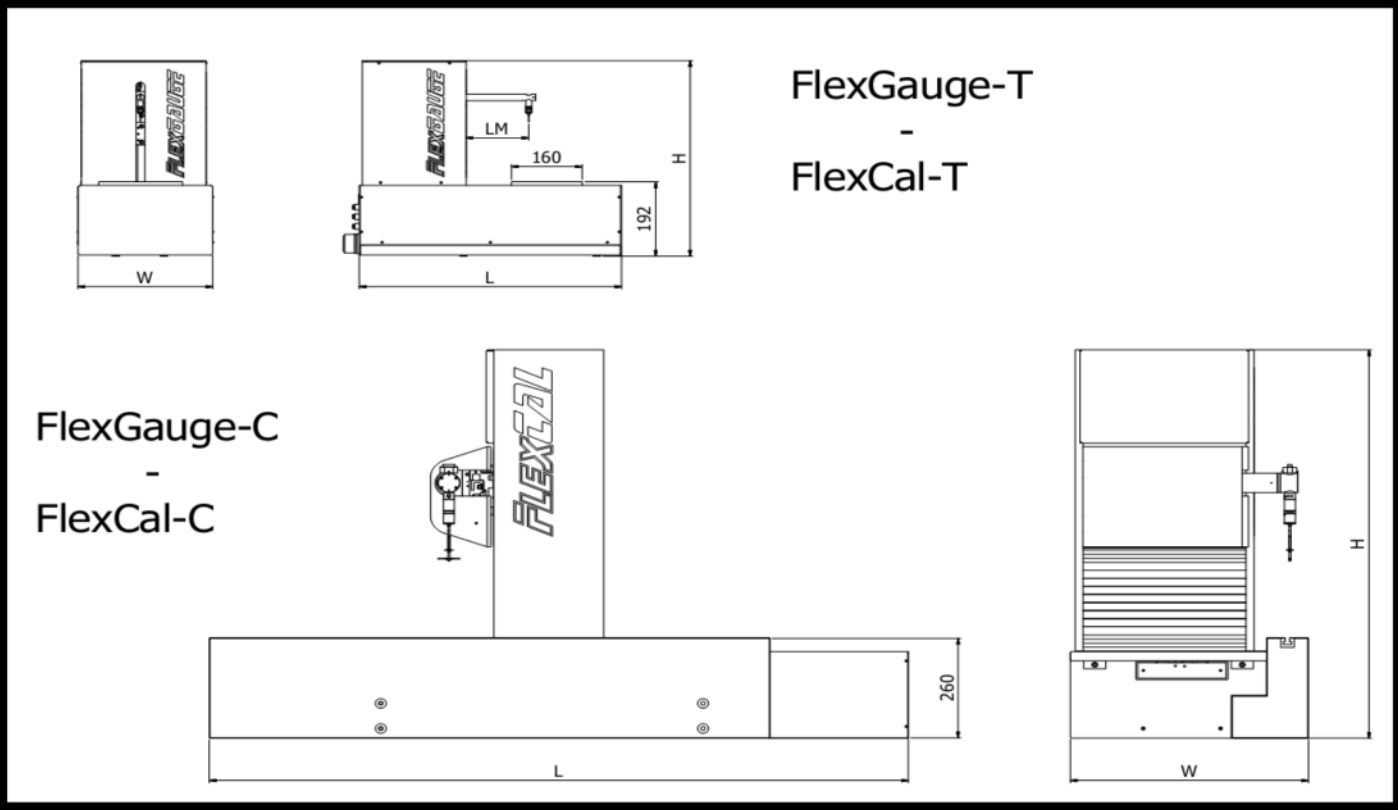
Technical Data



		stroke			Res	accuracy			dynamic		size and weight					
		X mm	Y mm	Z mm	µm	MPEe µm	Max µm	MPEp µm	Acc mm/s²	speed mm/s	L mm	W mm	H mm	LM mm	weight kg	part kg
T	FlexGauge-T16	160	100	160	0,1	1+L/300	1.5	1.5	1400	550	694	305	506	150	48	7
T	FlexGauge-T22	220	150	220	0,1	1+L/300	2	1.2	1400	550	670	370	570	180	75	7
C	FlexGauge-C33	330	200	250	0,1	1+L/300	2	1.2	1400	700	750	650	870	300	200	25
C	FlexGauge-C100	1000	200	250	0,1	1+L/300	4	1.2	1400	700	1450	650	870	300	330	25
	FlexCal-T16	160	-	160	0,1	1+L/300	1.5	1.5	1400	550	694	305	506	150	46	7