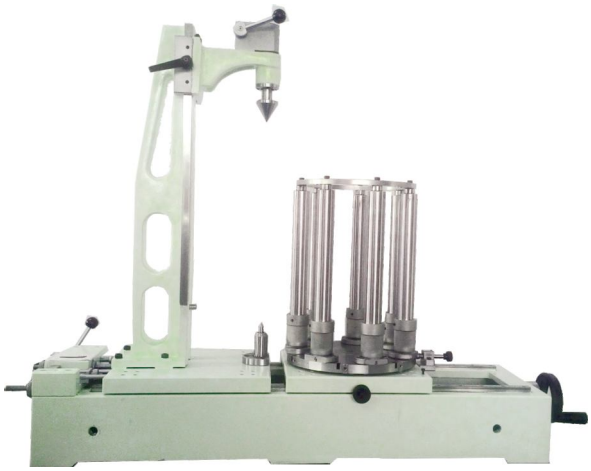
ADITYA

CNC / AUTOMATIC GEAR ROLL TESTER

Features

- Unique design for fast measurement of Spur & Helical gears
- Automatic Cycle features
- Preloading of gear.
- Rotation for measurement
- Retraction
- Graphical representation of measured parameters.
- Finds high point or dent automatically
- Full automatic version with pick & place arrangement also available on request.
- Evaluation Software version 1.0 for Radial Composite error F_i", Radial tooth-to-tooth composite error", working radial Run-out F_r" & Flick Finding

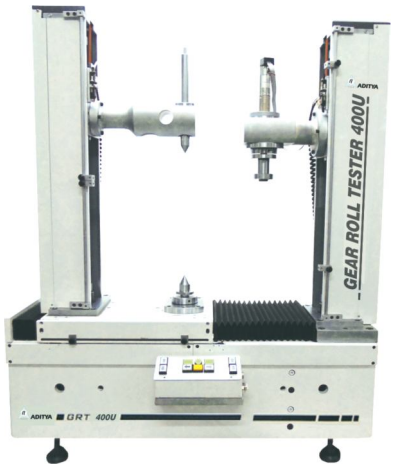
MANUAL GEAR ROLL TESTER



Features

- Robust Cast-Iron base – insures high , accuracy & repeatability.
- Used Spring Mechanism enables user to set spring pressure depends on Module or Dia. of Gear.
- Vernier scale placed for setting Centre distance.
- Dial indicator or Digital probe connected to measuring slide for measurement of displacement

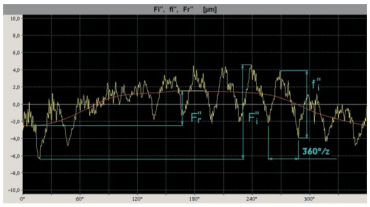
CNC UNIVERSAL GEAR ROLL TESTER



Features

- Equipped with proven software with SPC analysis
- Constant pressure spring mechanism for external as well as internal gears
- High precision LM guide ways for all 3 axis
- Gear shaft can be held with tailstock attachment
- Available for both external as well as internal gear measurement
- Proven design & manufactured holding fixture for precise holding for gear parts

APPLICATION



Radial composite error Fi”

- Fi" is the difference between the largest and the smallest functional center distance a" within a single revolution of the test gear (DIN 3960/3963)

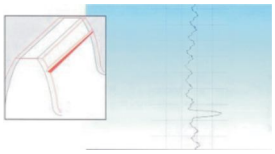
Radial tooth-to-tooth composite error

- Fi” is the largest difference in the working centre distance which occurs within an angle of rotation Corresponding to the engagement of one tooth (DIN3960/3963)

Working radial run-out Fr”

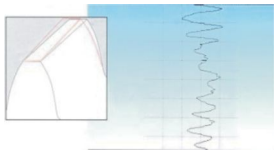
- Fr" the long –wave length component of the radial composite errors. It is obtained from the test diagram using the double -flank working test by drawing a mean line, whereby the short –wavelength components (corresponding to the number of teeth) are suppressed. The working radial run -out Fr" is, therefore, the distance between the highest and the lowest points of the sinusoidal averaging line (DIN 3960/3963)

TYPICAL TOOTH SHAPE DEVIATION IN THE TEST PICTURE



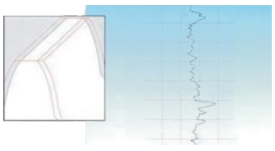
Tooth Damage

Tooth damage is shown in the test picture by a marked rise in individual peaks



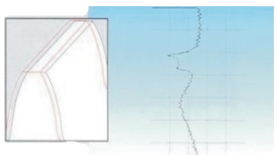
Total flank line deviation

This is shown by a rising and falling of the graph line (i.e. not periodic). Deviations are caused by axial run-out errors and slanted mounting axes (bores)



Fluctuation in tooth thickness

These can be seen on the diagram as troughs that occur in the generally wavy progression of the curves. This represents a fluctuation in tooth thickness and tooth gap leading to inaccurate pitch. Deviations are normally due to the cutting machine or the cutting tool.



Pitch Deviation

Shown on the diagram by jerky, irregular peaks of varying size that occurs on a tooth-to-tooth basis. Caused mainly by the cutting tool, slight damage or poorly de -burred work pieces

SOFTWARE FACILITY

- Possible to save the records, retrieve the records with graphs
- In case of internal gears measurement of run out compensation for measuring gear possible in case of any misalignment
- Based on inspection reports of measured gear possible to define the quality class with the reference of following standard; *DIN Class 3963, DIN 58405, AGMA 2000, IS 1328, AGMA 2015 & User free class
- Position & rotation of measured gear can be interchange
- Online graph plotting & display error
- Colour presentation of measuring result is possible based on tolerance class in Red / Green / smiley

Technical Specifications

CNC / Automatic GEAR ROLL TESTER

	Minimum	Maximum	Unit
Max Dia of measured gear	10	125	mm
Centre Distance	40	80	mm
Max Weight of Gear	Upto 4		Kg
Max testing moment	Variable		
Accuracy	Within ±3 Micron as per specifying standard		

CNC UNIVERSAL GEAR ROLL TESTER

Technical Specifications	Minimum	Maximum	Unit
Max Dia of measured gear	15	400	mm
Max Dia of master gear	80	150	mm
Dia. (For Internal Gear)	1.25*	400	mm
	Master Gear Diameter		
Centre Distance	40	275	mm
Max Weight of Gear	Upto 30		Kg
Max testing moment	Variable		
Accuracy	Within ±3 Micron as per specifying standard		

ADITYA

Manufactured by & Sales by

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MKT - 2017

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Note : Due to continuous R & D activities at our end, Specifications are subject to change without prior notice.