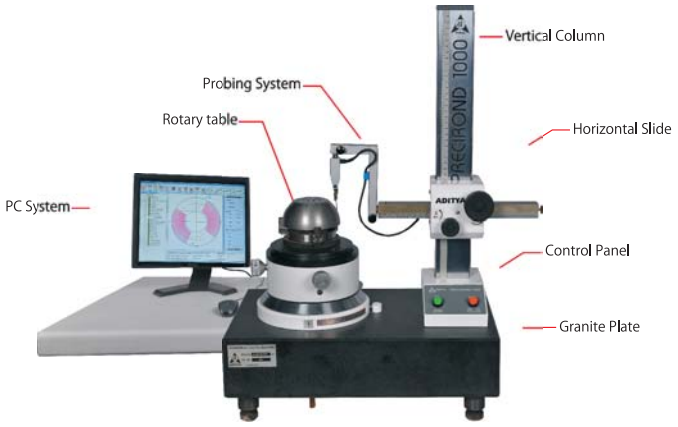
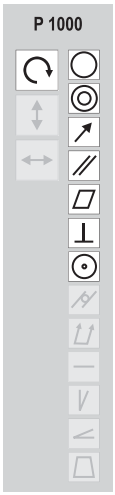
ADITYA

Compact and cost-effective roundness measuring systems

PRECIROND 1000

Product Code : C1201010400





The Compact roundness measurement systems Precirond 1000 is designed to operate on shop floor with granite base and isolation pads. Complete with powerful data analysis software Winround and enhanced functionality and ease of operation.

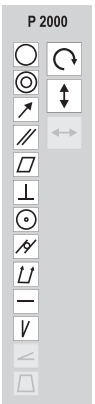
Features

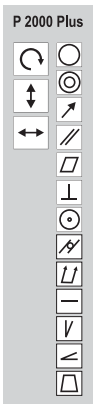
- Air bearings for high accuracy table rotation and long-lasting precision.
- Table diameter of 160mm to accommodate parts weighing upto 25kg and for part testing on rotationally symmetrical workpiece.
- High Precision Gaugehead to give excellent repeatability & linearity over entire range.
- Designed to operate on shop floor Granite base and vibration isolation pads provided.
- Variety of optional Styli mzany optional Styli & Extension probe holders are available for different applications.
- It can accommodate work pieces upto height 350mm and diameter upto 300mm.

Precision measurement of Roundness, Cylindrical form and Straightness

PRECIROND 2000 & 2000 Plus

Product Code : C1201020400 & C1201030400





The Precirond 2000 & Precirond 2000 Plus are ideal for measuring precision partsz where cylindrical form needs to be measured in addition to the roundness.

Both models have a high precision vertical measuring axis with measuring distance 400mm (As per customer request) & motorised movement. In addition Precirond 2000 Plus has a precision, horizontal measuring axis with a measuring distance of a radial 150mm & motorised movement.

For measuring the roundness & parallelism of the small and large ends.

For measuring the roundness on half round bearing.

For measuring the roundness of uneven shapes and sizes parts.

Evaluation Software with Parameter - Oriented user Guidance

Winround Evaluation Software

Winround roundness measurement software is based on ANSI/ISO 1101 GPS standards it is user friendly with simple measuring program. Winround supports measurement & evaluation of following geometrical features -

- Roundness • Cylindericity • Eccentricity • Concentricity • Squareness • Straightness • Co-Axiality • Parallelism
- Flatness • Slope Vertical & Horizontal • Radial & Axial Runout• Conicity • Total Radial & Axial Runout
- Interrupted Roundness & Cylindricity

Advantage at a glance

- The Colour display facilitates the reading of all measuring parameters. The functions are easy and directly accessible.
- Winround is assisted with manual centering and leveling adjustment.
- Filters: To remove the roughness / waviness components of specific wavelength from the actual measured profile. It is expressed in undulation per revolution (UPR) various filters selection from 0-15, 0-50, 0-100, 0-150, 0-250, 0-500 & none are possible depending on requirements.
- 50% Gaussian filter is more accurate than 2CR Filter since wavelength near the cutoff are more sharply distinguished in case of Gaussian filter either as waviness/ roughness.
- Calculation Method: Roundness measurements can be made with reference to LSC (least squares reference circle), MZC (minimum zone reference circle), MCC (minimum circumscribed circle), MIC (maximum inscribed circle); Flatness measurements can be made with reference to LSC
- Selectable Magnification: For easy assessment of measured profile, user can choose desired magnifications with different scales.
- Interrupted Profile / Cylindricity evaluation possible
- Archiving / logos: save and load measurements
- Detailed 3D representations of the measurement such as cylindricity and flatness simplify evaluation.

Icon Base Parameters

User friendly windows based evaluation software with quick selection of Icon Base system.

Measurement

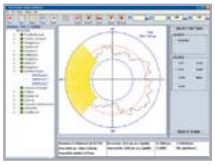
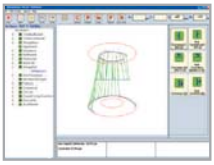
Visualization of the measuring profile through graphical Display allows an evaluation to be made during the measurement.

Alignment

Software assisted manual centering and leveling adjustment : Aditya Winround software provides quick centering and leveling of work piece on the turn table. Tilting table facilitate leveling of both short and tall components.

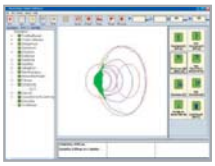
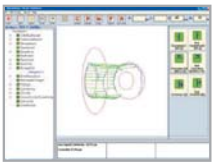
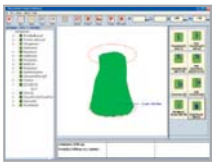
Interrupted Profile

Winround Software allows to measure Interrupted Profile / Cylindricity by deleting the specific sector after measurement for roundness analysis.

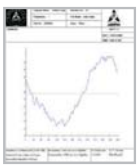
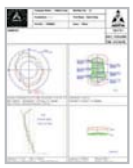

Analysis

The measuring profiles are shown clearly in (3D) graph after scanning the workpiece.

Report Formats

Customize Report Formats for various Measuring Parameters.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TECHNICAL DATA

	Poduct Code Model	C1201010400 PRECIROND1000	C1201020400 PRECIROND 2000	C1201030400 PRECIROND 2000
PLUS SPECIFICATIONS		↻	↻ ↕	↻ ↕ ↔
MEASURING FUNCTIONS		◯ ◎ ↗ // ▱ ⊥ ⊙	◯ ◎ ↗ // ▱ ⊥ ⊙ ⌭ ⌰ — V	◯ ◎ ↗ // ▱ ⊥ ⊙ ⌭ ⌰ — V ∠ ⌓
MEASURING RANGE				
Max. Test Diameter	mm	300	300	300*
Max. Measuring Height	mm	350	400	400*
Distance C-Z Axis	mm	200	240	240*
Max. Load	kg.	25	25	25*
WORK TABLE & SPINDLE (C-AXIS)				
Work Table Diameter	mm	160	250	250
Work Piece Alignment		manual	manual	manual
Rotational Error + um/mm of measuring height (h)	µm	0.05+0.0005h(h in mm) (at 0-50 upr in LSC)		
Axial error +um/mm of radius(r)	µm	0.08+0.0005r (r in mm) (at 0-50 upr in LSC)		
Centering Range	mm	±2	±3	±3
Leveling Range		±30′	±1°	±1°
Spindle Speed	r.p.m.	2-4		
Bearing		Air		
VERTICAL – AXIS (Z – AXIS)				
Measuring Traverse	mm	300	400	400
Drive		manual	motorized	motorized
Straightness error/ measuring height	µm	N/A	1.0	1.0
Parallelism C - Z Axis	µm	N/A	1.0	1.0
HORIZONTAL – AXIS(R – AXIS)				
Measuring Traverse	mm	150	150	150
Drive		manual	manual	motorised
Straightness error/ measuring radius	µm	N/A	N/A	1.5
GAUGE HEAD				
Maximum Range	mm	±0.3		
Resolutation at Maximum Range	µm	0.1		
Minimum Range	mm	±0.04		
Resolutation at Minimum Range	µm	0.01		
Measuring pressure	N	0.1		
FILTERS /EVALUATION METHOD				
Filter		Gaussian / 2 CR selectable from		
Evaluation Method		0-15, 0-50, 0-100, 0-150, 0-250, 0-500 none upr LSC, MZC, MIC, MCC		
Magnification		Selectable		
ELECTRICITY / AIR SUPPLY				
Electric Supply		AC 230 V, 50 Hz		
Air Supply		supply 5 bar (operating 4 Bar)		
Air Consumption		0.04 cu.m / min		
WEIGHT / DIMENSION				
Length	mm	600	720	720
Width	mm	600	450	450
Height	mm	1350	1465	1465
Weight(approx)	kg	50	230	230

*Customer Requirement on request.

Accessories

Standard

Flick Standard (Sensitivity Master)

For Dynamic Calibration of gauge head sensitivity.

Product Code :C2101070001

Cresting Standard

For checking vertical & horizontal alignment of the gauge head.

Product Code :C2101070002

Optional

Stylus Kit

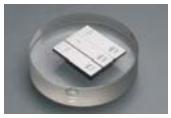
Ruby Ball. Dia 1 X 40mm,
4X40mm 1 X 100mm, 4X100mm.

Product Code :C210108005

Gauge Head Calibration Set

Calibration of gauge head. Comprises a optical flat with 1.5, 1.8, & 2.0mm Gauge Blocks

Optical Flat:
Product Code: C2101080003
Gauge Block:
Product Code: C2101080004



Glass Hemisphere

Used for checking overall system performance. Roundness < 0.06µm.

Product Code :C2101080001

Six Jaw Chuck / Three Jaw Chuck

A six / three jaw precision scroll chuck for clamping a small dia work pieces.
External Range 2-32mm/2-40mm.
Reversible External Range 82mm/85mm
Internal Range 16-74 mm/25-85mm

3 Jaw Product Code : C2101080006
6 Jaw Product Code : C2101080007

Master Cylinder Dia. 60 X 300mm

For checking instrument's vertical. straightness & parallelism to the spindle axis.
Roundness < 0.8µm, Straightness < 1.0µm, Cylindricity < 2.0µm

Product Code :C2101080002

Various Geometrical Measurements on Precirond

PARAMETERS	C	C Z	C Z R	APPLICATION
ROUNDNESS	•	•	•	
CONCENTRICITY / ECCENTRICITY	•	•	•	
RUN OUT	•	•	•	
FLATNESS (single circumference)	•	•	•	
PARALLELISM (single radius)	•	•	•	
SQUARENESS	•	•	•	
CO-AXIALITY (single section/axis)	•	•	•	
CYLINDRICITY		•	•	
TOTAL RADIAL RUNOUT		•	•	
STRAIGHTNESS (vertical)		•	•	
VERTICAL SLOPE		•	•	
STRAIGHTNESS (horizontal)			•	
TOTAL AXIAL RUNOUT			•	
FLATNESS (multi circumference)			•	
HORIZONTAL SLOPE			•	
CONICITY (vertical)			•	

ADITYA

Manufactured by & Sales by
Aditya Engineering Company
(An ISO 9001:2008 Certified company)
Head Office : Gauge House, 67, Hadapsar Ind. Estate, Pune 411 013
INDIA. Tel.: +91-20-26870158, +91-20-26870159, Fax :+91-20-26870858
Email: adityaengg@adityaengg.com I support@adityaengg.com
Web: www.adityaengg.com I www.accuratemetrology.in

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ISO 9001 BUREAU VERITAS Certification

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