

Cutting-Edge Linear Motor Dramatically Boosts Precision The New Standard in Contour Measuring

CONTOURECORD 1700DX



Higher Precision

- A measuring accuracy that is adequate for measuring molds and other precision parts has been achieved. This dramatic increase in measuring precision enables measurement of workpieces that required a higher-end model in the past, substantially increasing the range of applications.

World's First Linear Motor in a Roughness Instrument (patent pending)

- The world's highest level of measuring speed and lowest vibration enable consistent high-magnification measurements to be performed. The non-contact drive and simple structure (no feed screw or gear box) of the linear motor ensures stable vibration-free operation over an extended period.

High Efficiency Measurements

- The teaching/playback function automates the series of processes, from measurement to pasting of data to generate the inspection report. A maximum measuring speed of 20 mm/s and maximum movement speed of 60 mm/s dramatically enhance measuring efficiency.

Space Saving

- A new design creates a fresh image, and the footprint has been reduced by approximately 25% (compared to previous model). This helps reduce expenses when installing the unit in a constant-temperature room.

Easy Evaluation of Contour of General-Purpose Parts (Contour)

Accurate data can be obtained quickly for the contour of parts that were evaluated with a projector or tool microscope in the past. The measuring results can be used as is on the inspection report.

Superior ACCRETECH Functions

Automatic Element Discrimination Function (AI Function)

The element (point, line, circle) is automatically determined without being specified by the operator.

Dimension Line Display Function

This enables dimension lines to be drawn on the diagram along with actual measured values for parameters and geometric deviation.

Automatic Crowning Function

The maximum or minimum workpiece values are automatically detected.

Calculation Point Repeat Function

Overall analysis of workpieces with profiles that are repeated can be executed by analyzing only one pattern.

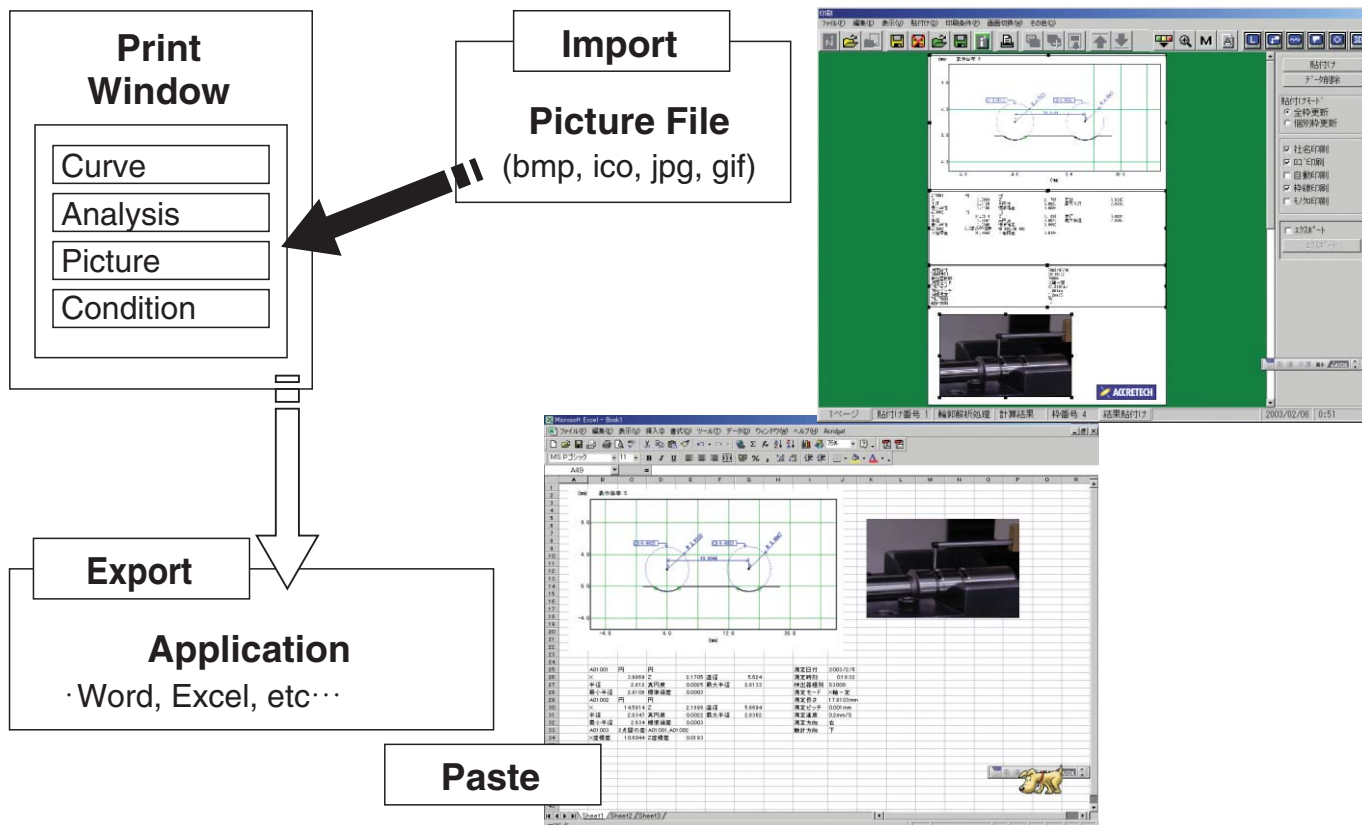
Workpiece Trace Function

The measuring range can be determined without setting the values by manually tracing the workpiece once.

This function is ideal for measurement of intricate shapes.

Import/Export Function

Image data can be pasted in the measured results, and measurement waveform data can be pasted in standard programs.



Specifications		
Model		CONTOURECORD 1700DX
Measuring range	Z axis (vertical)	50mm
	X axis (horizontal)	100mm
Accuracy	Z axis indication accuracy	$\pm(2.5+2H/100) \mu\text{m}/5\text{mm}$ range, 20mm range, $\pm(3.5+4H/100) \mu\text{m}/50\text{mm}$ range H: Measuring height (mm)
	Measuring resolution	0.1 $\mu\text{m}/5\text{mm}$ range, 0.4 $\mu\text{m}/20\text{mm}$ range, 1 $\mu\text{m}/50\text{mm}$ range
	X axis indication accuracy	$\pm(1+2L/100) \mu\text{m}$ L: Measuring length (mm)
	Measuring resolution	0.04 μm
Straightness accuracy		1 $\mu\text{m} / 100 \text{ mm}$
Sensing method	Z axis	Differential transducer (trans)
	X axis	Moiré striped scale
Recording	Vertical magnification	0.01 – 10,000,000 (Possible for any or automatic value)
	Horizontal magnification	0.01 – 10,000,000 (Possible for any or automatic value)
Speed	Column up/down (Z axis)	10 mm/s
	Measuring (X axis)	0.03 - 20 mm/s
Min. measuring pitch		1 μm
Max. measuring points		100,000 (Max. 10 profiles)
Radius of stylus		0.025 mm R
Measuring force		30 mN or less
Measuring feed direction		Push/pull, both directions
Measuring orientation		Up/down, both directions
Calculation processing functions		Point, line, circle, partial circle, ellipse, max. point/min. point, distance, coordinate difference, polar coordinate difference, orthogonal/polar coordinate difference display, intersecting elements (point-line, line-line, circle-line, circle-circle, line-ellipse), symmetric elements (point-point, point-circle, point-ellipse, line-line, circle-circle, circle-ellipse, ellipse-ellipse), coordinate control (zero point setting, X axis setting, parallel movement, rotary movement), surface calculation, over-pin calculation, dimension line display function, calculation result/design value collation, mirror reversal, profile synthesis function, macro function, automatic element discrimination, calculation point repeat function, workpiece trace function, peak and valley function, auto operation log/playback function, profile design value collation, best fit, design value generation, IGES/DXF conversion
Power source		Single phase AC 100 V $\pm 10\%$, 50/60 Hz
Power consumption		400VA
Installation dimensions		1250 (W) \times 850 (D) \times 1500 (H) mm
Weight		125kg