

# ROUNDNESS TESTER CV-EC2500™

PC controlled roundness measuring system

- Motorized auto centering and tilting support function
- Large stage size of 260mm
- Safety function on pick-up
- Geometrical features:  
Roundness, straightness, cylindricity, spiral cylindricity, co-axiality, concentricity, parallelism, flatness, squareness, circular runout, thickness deviation, radius deviation, knife-edge analysis
- Powerful data processing software
- Static air bearing
- Very high rotating accuracy of  $(0.02+0.0003H)\mu\text{m}$
- Max. workpiece diameter 450mm
- Max. probing height (OD): 570mm for outer diameter
- Max. probing height (ID): 420mm for inner diameter
- 12 interchangeable styli available for all kinds of special applications

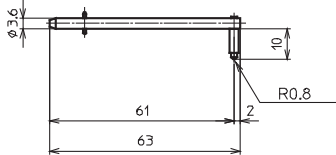
## Option

- Measuring direction (IN/OUT) auto exchanger
- Radial arm straightness guarantee  
(straightness  $0.5\mu\text{m}/100\text{mm}$ , squareness  $1\mu\text{m}/100\text{mm}$ )

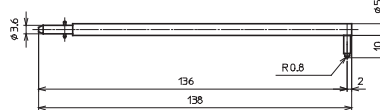


## Styli for series roundness testers

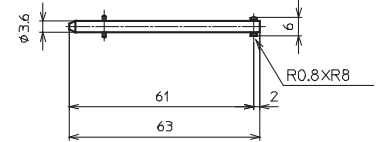
Type: SA-148



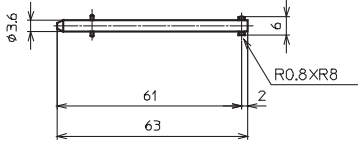
Type: SA-149



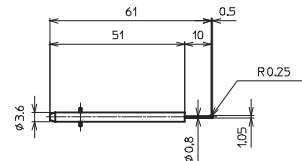
Type: SA-151



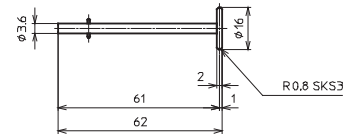
Type: SA-152



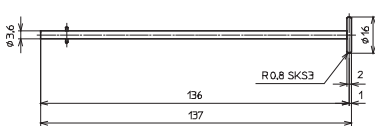
Type: SA-154



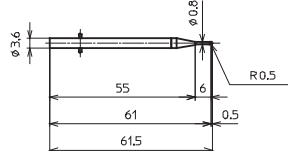
Type: SA-155



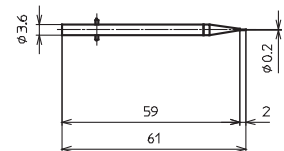
Type: SA-156



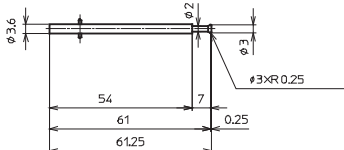
Type: SA-157



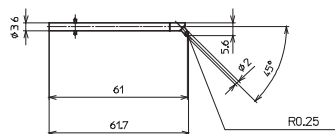
Type: SA-158



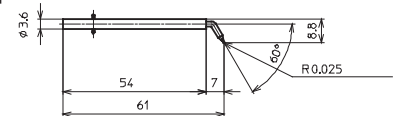
Type: SA-159



Type: SA-160



Type: SA-161



# ROUNDNESS TESTER CV-EC2500™

PC controlled roundness measuring system

## Technical specifications

### Stage

Rotating method	Porus static air bearing / stage rotation
Rotating accuracy	(0.02+0.0003H)µm H: Height from stage (mm)
Rotating speed	1 to 10rpm
Stage size	260mm dia
Centering adjustment range	±5mm (Motorized)
Leveling adjustment range	±2° (Motorized)
Max. workpiece load	30kg
Max. workpiece diameter	450mm

### Column unit

Straightness	0.15µm/100mm (0.4µm/300mm)
Parallelism	0.8µm/200mm
Vertical travel	400mm
Travelling speed	0.5, 1, 2 and 5mm/s at measuring, 20mm/sec at positioning
Max. measuring height	570mm for outer, 420mm for inner
Radial arm unit	Radial travel: 180mm

### Pick up unit

Measuring force	100mN or less (adjustable)
Measuring range	1800µm
Stylus	Radius 0.8mm, Tungsten carbide

### Analysis unit

Measuring magnification	100, 200, 500, 1K, 2K, 5K, 10K, 20K, 50K, 100K
Digital filter	
Roundness	2CR N15, N50, N150, N500, N15-500, non-filter
Gaussian	D15, D50, D150, D500, D15-500, non-filter
Straightness	2CR fh0.025, 0.08, 0.25, 0.8, 2.5, 8mm, non-filter
Gaussian	fh0.025, 0.08, 0.25, 0.8, 2.5, 8mm, non-filter
Determination method	MZC, LSC, MCC, MIC
Analysis items	Roundness, flatness, cylindricity, co-axiality, concentricity, run-out, squareness, straightness, parallelism, thickness deviation

### Utilities

Power Supply	AC100V, ±10%, 50/60Hz, 1KVA
Air pressure at bearing	4 to 5kgf/cm <sup>2</sup> G (390 to 490KPa), 30NI/min
Air Supply	4.5 to 9.9kgf/cm <sup>2</sup> G (440 to 970KPa), Dry air

### Dimensions

Measuring unit	930mm x 590mm x 1660mm (WxDxH), 550kg
Amplifier	406mm x 342mm x 270mm (WxDxH), 20kg
PC and printer	Local supply

**Operating environment** 10°C to 30°C, RH 80% or less

### Standard delivery

- Measuring unit
- Standard probe
- Controller
- Programm software

### Optional accessories

- PC with monitor
- Interchangeable styli for different applications:  
Ask for separate overview
- Chucks ø 0.8 ~ 56mm used for clamping small diameter workpieces
- Reference hemisphere for checking accuracy
- Printer