

# SURFACE FINISH TESTER CV-SE1700A™

Compact multi-function surface finish and form measuring instrument

- Instrument for laboratory or production use
- Surface roughness, waviness, straightness and form
- Wide range of pick-ups with interchangeable styli
- Wide range of roughness parameters
- Measurement length 0.08mm to 30mm
- Conforms to international standards ISO, DIN, ASME, JIS
- Waviness measurement based on ISO standard
- Quick rechargeable battery pack
- Statistics output
- RS-232C output



## Technical specifications

Measuring system	Skidless/Skidded method using inductive (LVDT) Pick-Up. with interchangeable styli
Measurement parameter	Ra, Rz, tp, Sm, Rt, Rp, Rv, Pc, HSC, Ra/RMS, RmaxD, R3Z, Rmax, RSm, Rmr(c), Rdc, Rsk, Rku, Rk, Mr1, Mr2, Rpk, Rvk, A1, A2, Pa, Pz, Pp, Pv, Pq, RSm, Pmr(c), Pdc, Pt, Pak, Pku, Wa, Wz, Wp, Wv, Wq, Wsm, Wmr(c), Wdc, Wt, BAC, ADC, P/R/W profile
Display	Touch screen LCD
Filter	Gauss, 2RC, ISO13565-1 (DIN4776), special Gauss
Profile	Un-filtered, filtered (roughness), filtered (centre-line) waviness
Cut-off	$\lambda_c$ 0.08, 0.25, 0.8, 2.5, R+W $\lambda_s$ ISO3274(96) / ISO97 $\lambda_c-\lambda_f$ 0.08-0.8, 0.25-0.5, 0.8-8mm
Measuring length	30mm
Evaluation length	$\lambda_c \times 1, 2, 3, 4, 5$ / arbitrary 0.08~16mm
Vertical magnification	50~100000 (11 steps) / Auto
Horizontal magnification	1~1000 (10 steps), 25mm/ $\lambda_c$ , 50mm/ $\lambda_c$
Straightness accuracy	0.3 $\mu$ m / 30mm
Measuring range/resolution	800 $\mu$ m / 0.0005 $\mu$ m
Stylus/skid	R2 $\mu$ m Diamond / R40mm Sapphire
Force	0.7mN
Function	Leveling support, Multi standard analysis, Touch panel, 99 data SPC, PC linking software
Memory	2 sets of data (optional: 16 sets of measurement conditions)
Data output	RS-232C
Power Supply	Ni-H battery pack, 100 - 240 V with AC adapter
Weight	Amplifier 4.5kg, Drive unit 0.9kg

## Standard delivery

- Amplifier controller unit
- Drive unit
- Calibration specimen Ra
- Nose piece ANA
- Stylus arm AA2
- Pick-up body PU-A2
- Manual
- CV Instruments certificate

## Optional accessories

- Pick-ups with interchangeable styli, see next pages
- Memory card for storage of 16 sets of measuring conditions
- UKAS certified roughness reference standards
- Attachment for roll measurement FT-22 (>60mm)
- Extension cable, length 2m  
Drive unit can be apart from amplifier (3.5m)
- RS-232 cable, length 1.5m
- Carrying handle for back side controller unit
- Battery pack for reserve purpose
- Carrying case

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## Display and touch control panel

The unique display and touch control panel is very user friendly, even without an instruction manual. The opening of individual windows by touching the panel makes selection of all measurement conditions, parameters and data required for records a simple operation.

No instruction manual required, simply open a "window" and select, input or change the data.

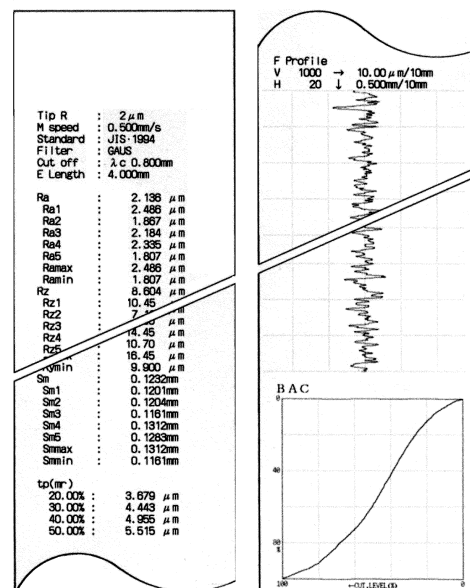
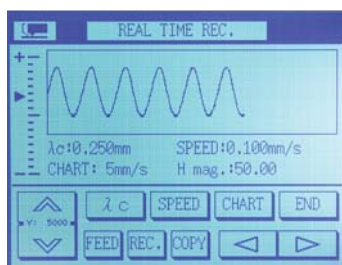


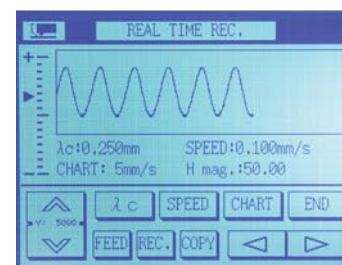
Chart data outputs



Real time profile recording



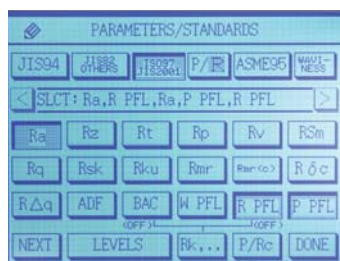
Measurement display



Real time rec.



Display of all measuring conditions



Parameter selection



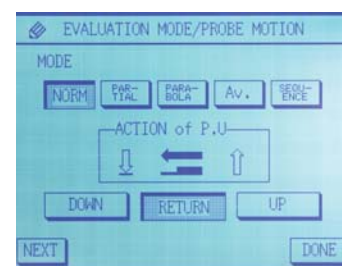
Magnification settings



Cut-off/Filter settings



Probe



Mode selection

# SURFACE FINISH PICK-UPS

A-series for CV-SE1200 and CV-SE1700A and CV-SE3500 (exchangeable)

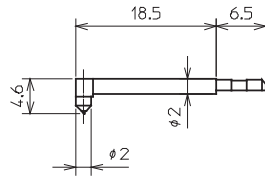
## Pick-up body

Type: PU-A (normal force) Pick-up body not including stylus arm and nose piece (CV-SE1200)  
 Type: PU-A2 (low force) Pick-up body not including stylus arm and nose piece (CV-SE1700)

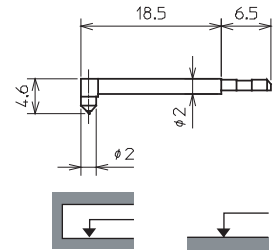
## Stylus arms

( ) = low force to be used with body PU-A2

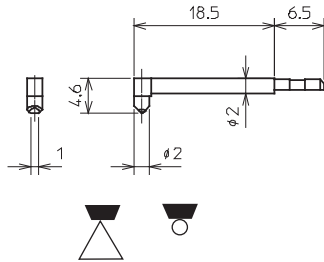
**Type:** AA2  
**(CV-SE1700)**  
 Radius: 2µm  
 Force: 4mN (0.7mN)  
 Nose pc: ANA/ANH  
 Range: 600µm  
 Use: General use  
 Normal bore



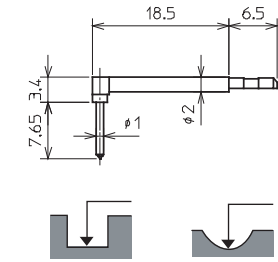
**Type:** AA5  
**(CV-SE1200)**  
 Radius: 5µm  
 Force: 4mN (0.7mN)  
 Nose pc: ANA/ANH  
 Range: 600µm  
 Use: General use  
 Normal bore



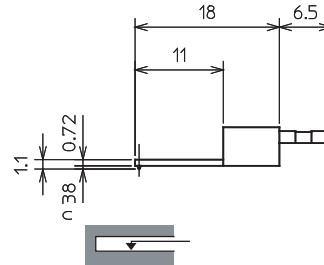
**Type:** AC5  
 Radius: 5µm  
 Force: 4mN (0.7mN)  
 Nose pc: ANA/ANH  
 Range: 600µm  
 Use: Knife edge  
 Very small wire



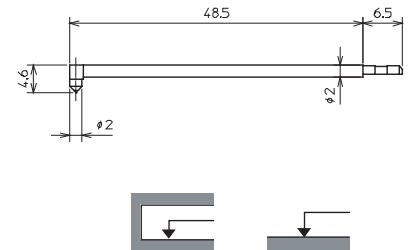
**Type:** AG5  
 Radius: 5µm  
 Force: 4mN (0.7mN)  
 Nose pc: ANG/ANH  
 Range: 600µm  
 Use: Curve surface  
 Deep grooves



**Type:** AI5  
 Radius: 5µm  
 Force: 4mN (0.7mN)  
 Nose pc: ANH  
 Range: 600µm  
 Use: Small bore

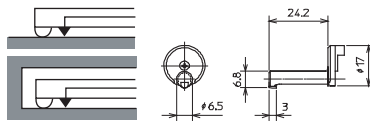


**Type:** AL10  
 Radius: 5µm  
 Force: 8mN (5mN)  
 Nose pc: ANL/ANH  
 Range: 1200µm  
 Use: Long bore

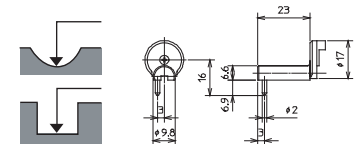


## Nose pieces

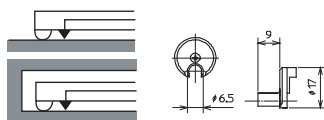
**Type:** ANA  
 R40mmxR2mm  
 Skid  
 General use



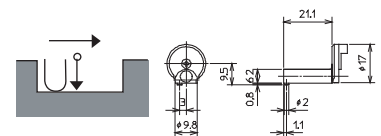
**Type:** ANG  
 R0.5mm Skid  
 Curve/Groove



**Type:** ANH  
 Skidless  
 measurement  
 without Skid



**Type:** ANK  
 R40mm Skid  
 Corner end



**Type:** ANL  
 R40mmxR2mm  
 Skid  
 Long bore

