

# Surftest SJ-410

## Series 178 - Portable Surface Roughness Measuring Instrument

### Additional Specifications

Optional accessories Other optional and standard accessories are listed later in different sections for accessories and styli.

### Optional accessories

No.	Description
02AZD790D	U-WAVE-T Connection Cable D, Flat 10-Pin Type
12AAB358	Cylinder attachment Ø15-60mm
12AAD510	USB cable for SJ-310 / SJ-410 series
178-019	Precision vise
178-042-1	Digital XY leveling table [mm], Leveling range +/- 1,5°; 25 x 25mm
178-043-1	XY leveling table [mm], Leveling range +/- 1,5°; 25 x 25mm
178-047	Digital three-axis adjustment table
178-048	Leveling table D.A.T.
178-396-2	Detector, 0,75mN
178-397-2	Detector, 4mN
178-605	Roughness specimen Ra 1µm [mm], Ra 1µm
178-610	Step gauge, (1, 2, 5, 10)µm
178-611	Step gauge, mm, (2, 10)µm
936937	Digimatic Cable, Flat 10-Pin Type, 1m
965014	Digimatic Cable, Flat 10-Pin Type, 2m
12AAW452	Memory card 2GB, for SJ-210
<b>Stands</b>	
178-039	Granite stand, for SJ-410

### Consumable spares

No.	Description
12AAN046	Replacement battery, for Surftest SJ-310 / SJ-410
12BAL402	Touch Panel Protecting Sheet
270732	Printer paper, 5 rolls, for SJ-301



12AAB358  
Cylinder attachment



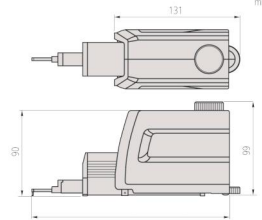
178-048  
Leveling table D.A.T.



Optional leveling table (178-048)



R-surface measurement



SJ-411: 207,5 mm / SJ-412: 234 mm  
Drive unit



- Optional:
- Autoset unit 178-010
  - X-axis adjustment unit 178-020
  - Digital leveling unit 178-030



Scope of delivery



178-039  
(displayed with SJ-411)

# Surftest SJ-410

## Series 178 - Portable Surface Roughness Measuring Instrument

This is a portable measuring instrument that allows you to easily and accurately measure surface roughness.

### The Surftest SJ-410 offers you the following benefits:

- Skidless system with touch-screen functionality and built-in printer.
- It works independently of mains power, allowing you to make on-site measurements.
- Easy and intuitive menu navigation.
- The large **14,5 cm** [5,7"] colour LCD gives you high visibility.
- The skidless detector allows you to measure the primary profile (P), roughness profile (R), waviness profile (W) and more.
- Surface compensation of curved, radial and tilted surfaces.
- It performs roughness analyses conform to various international standards (EN ISO, VDA, ANSI, JIS) and customized settings.
- You can store up to 10 different measuring conditions inside the SJ-410, and up to 500 with an optional SD card.
- It allows two different evaluation conditions within one measurement adjustable.
- You can separately password protect many functions.
- It comes with support for 16 languages.
- Available options include an auto-set unit, X-axis fine adjustment and digital levelling unit.



SJ-410

### Surftest SJ-411

Traverse : 25 mm

Traverse straightness : 0.3 µm / 25 mm

No.	Detector measuring force [mN]	Stylus tip angle	Stylus tip radius [µm]
178-580-11D	0,75	60°	2
178-580-12D	4	90°	5

### Surftest SJ-412

Traverse : 50 mm

Traverse straightness : 0.5 µm / 50 mm

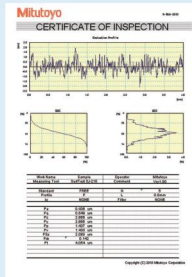
No.	Detector measuring force [mN]	Stylus tip angle	Stylus tip radius [µm]
178-582-11D	0,75	60°	2
178-582-12D	4	90°	5

### Specifications

<b>Drive unit</b>	
Traverse	SJ-411: 25 mm SJ-412: 50 mm
Measuring speed	0,05 mm/s; 0,1 mm/s; 0,2 mm/s; 0,5 mm/s; 1 mm/s
<b>Detector</b>	
Measuring method	Skidless - Differential inductance
Range	800 µm; 80 µm; 8 µm (up to 2,4 mm with an optional stylus)
Positioning	±1,5° (tilting), 10 mm (up/down)
<b>Display unit</b>	
Profiles	Primary Profile (P), Roughness Profile (R), Waviness (W), MOTIF (R, W) and more
Standard	EN ISO, VDA, JIS, ANSI and customize settings
Analysis graphs	BAC, ADC
Digital filter	Gauss, 2CR75, PC75
Cut-off length	λc : 0,08 mm; 0,25 mm; 0,8 mm; 2,5 mm; 8 mm λs : 2,5 µm; 8 µm; 25 µm
Printer	Thermal Printer
Tolerance	Coloured upper / lower limit
Interface	USB, Digimatic, RS-232C, Foot switch
Power supply	AC adapter or rechargeable battery

### Optional accessories

No.	Description
178-093-1	Desktop vibration isolator pump type, with max loading mass 120kg



### USB COMMUNICATION TOOL

as a free download on [www.mitutoyo.eu](http://www.mitutoyo.eu)  
registration required  
(refer to page Optional Software USB  
Communication Tool)



Refer to Surftest SJ-410 brochure



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