

Free Communication Software

SJ-Tools

This program can be downloaded for FREE from the Mitutoyo website. <http://www.mitutoyo.com>

Output software based on Microsoft-Excel* for controlling the devices and reproducing and storing the measurement data.

* Microsoft-Excel is not included in the scope of supply. Complete with exclusive accessories.

- Measurement device control
- Definition of measurement variables
- Graphic representation of the profile
- Storage of measurement records
- Documentation of measurement results
- Connecting cable

Optional cables (Required for software communication)

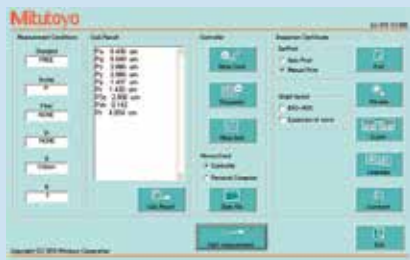
12AAL068: USB PC connecting cable(USB cable) for SJ-210

12AAD510: USB PC connecting cable(USB cable) for SJ-310/410

12AAL067: RS-232C cable for SJ-210

12AAA882: RS-232C cable for SJ-310/410

12AAH490: USB PC connecting cable for SJ-500/SV-2100

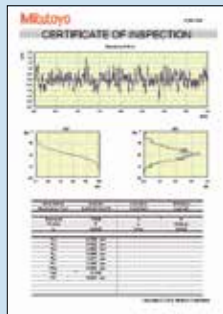


SJ-Tools input mask for Surftest SJ series

Required environment*:

- OS:
Windows XP-SP3
Windows Vista
Windows 7/8/10
- Spreadsheet software:
Microsoft Excel 2000/2002/
2003/2007/2010/2013/2016

* Windows OS and Microsoft Excel are products of Microsoft Corporation.



SJ-Tools output record from MS-Excel

Optional Accessories

12AAL272: SJ-210 Replacement Battery Pack

12AAN046: SJ-310 Replacement Battery Pack

12BAK820: SJ-210 Display Protection Sheet (1pc.)

12AAL066: SJ-210 Display Protection Sheet (5pcs.)

12BAL402: SJ-310 Display Protection Sheet (1pc.)

12AAN040: SJ-310 Display Protection Sheet (10pcs.)

178-601: Precision Reference Specimen (Ra 3.00 µm)

178-602: Precision Reference Specimen
(Ra 119 µin / 3.00 µm)

178-603: Precision Reference Specimen – 2 values (GAR)

178-604: Precision Reference Specimen – 2 Values (MIT)

178-606: Precision Reference Specimen for Transverse Drive
(Ra 39.5 µin / 1.0 µm)

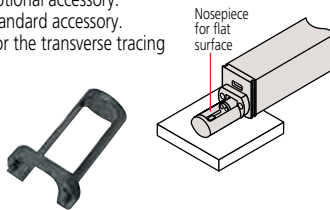
178-029: Manual Column Stand, must use adapter
12AAA221 to mount SJ drive unit.

Nosepiece, Adapter

Nosepiece for flat surfaces

12AAA217

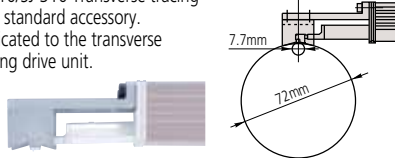
- SJ-210/210R optional accessory.
- SJ-310/310R standard accessory.
- Not available for the transverse tracing drive unit.



V-type adapter

12AAE644

- SJ-210/SJ-310 Transverse tracing type standard accessory.
- Dedicated to the transverse tracing drive unit.

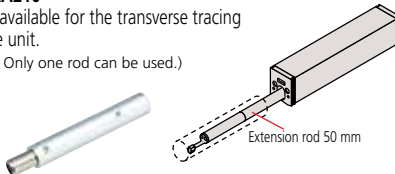


Extension rod (50mm)

12AAA210

- Not available for the transverse tracing drive unit.

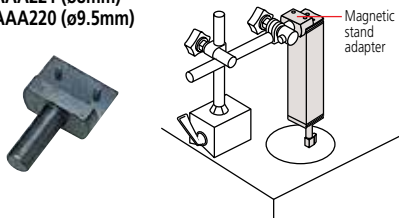
(Note: Only one rod can be used.)



Magnetic stand adapter

12AAA221 (ø8mm)

12AAA220 (ø9.5mm)



Extension cable (1m)

12BAA303

- Only one cable can be used.

Setting attachments

* Not available for the transverse tracing drive unit

Improves measurement efficiency by allowing the setup of workpieces of the same type and the positioning of hard-to-access features of a workpiece.

No. 178-033

V-type for measuring in the cylinder axis direction



The V-width is adjustable to the cylinder diameter facilitating axial measurement of a wide range of cylinder diameters.

- Adjustable range: ø 5 - 150mm

No. 178-034

Setting attachment: Magnetic slider type



Best suited for measurement of the flat surface of a workpiece that has partial indentions and steps and that is hard to set the drive unit. Combination use with the magnet type specimen holder (Option No. 12AAA910) further improves the ease of operation.

No. 178-035

Setting attachment: Inside diameter type



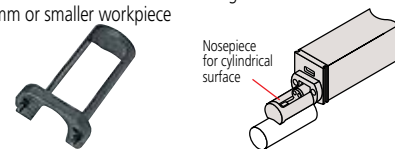
Greatly facilitates measurement of internal wall surfaces of, for example, cylinder-block bores.

- Applicable diameter: ø75 - ø95mm
- Accessible depth: 30 - 135mm

Nosepiece for cylindrical surfaces

12AAA218

- SJ-210/210R optional accessory.
- SJ-310/310R standard accessory.
- Not available for the transverse tracing drive unit.
- ø30mm or smaller workpiece



Point-contact adapter

12AAE643

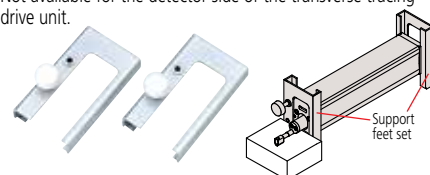
- SJ-210/SJ-310 Transverse tracing type standard accessory.
- Dedicated to the transverse tracing drive unit.



Support feet set

12AAA216

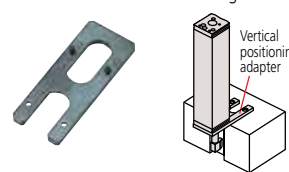
- SJ-210/210R optional accessory.
- SJ-310/310R standard accessory.
- Not available for the detector side of the transverse tracing drive unit.



Vertical positioning adapter

12AAA219

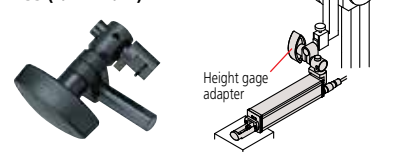
- Not available for the transverse tracing drive unit.



Height gage adapter

12AAA222 (9mm x 9mm)

12AAA233 (1/4" x 1/2")



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Optional cables (Required for software communication)

12AAD510: USB PC connecting cable (USB cable)

12AAA882: RS-232C connecting cable

Optional Accessories

- 178-611:** Step gage (2μm, 10μm)
178-612: Step gage (2μm, 10μm, 79μin, 394μin)
178-610: Step gage (step: 1μm, 2μm, 5μm, 10μm)
12AAM556: Height/tilt adjustment unit for SJ-410
178-039: Manual column stand (granite base) (vertical travel: 250mm)
178-010: Auto-set unit for **178-039**
178-020: X axis adjustment unit for **178-039**
178-030: Tilting adjustment unit (Inclination adjustment unit) for **178-039**
12AAB358: Cylindrical surface adapter (workpiece dia.: 15 - 60mm)
178-016: Leveling table (tilting: ±1.5°, max. loading: 15kg)
178-048: Leveling table with D.A.T function (mm) (tilting: ±1.5°, max. loading: 15kg)
178-058: Leveling table with D.A.T function (inch) (tilting: ±1.5°, max. loading: 15kg)
178-043-1: XY leveling table (25 x 25mm) (tilting: ±1.5°, max. loading: 15kg, swiveling: ±3°)
178-053-1: XY leveling table (1" x 1") (tilting: ±1.5°, max. loading: 15kg, swiveling: ±3°)
178-042-1: Digital XY leveling table (25 x 25mm) (tilting: ±1.5°, max. loading: 15kg, swiveling: ±3°)
178-052-1: Digital XY leveling table (1" x 1") (tilting: ±1.5°, max. loading: 15kg, swiveling: ±3°)
178-049: Digital XY leveling table (25 x 25mm) (max. loading: 15kg)
178-059: Digimatic XY leveling table (1" x 1") (max. loading: 15kg)
178-019: Precision vise for XY leveling table (jaw opening: 36mm)
998291: Precision V-block for XY leveling table (workpiece dia.: 1 - 160mm)
12AAL069: Micro SD card w/adaptor (4GB)
965014: SPC cable (2m)
264-012-10: Input tool (USB type)
264-505A: DP-1VA
 —: Detectors, Styli, and nosepieces (See pg. J-22/23.)

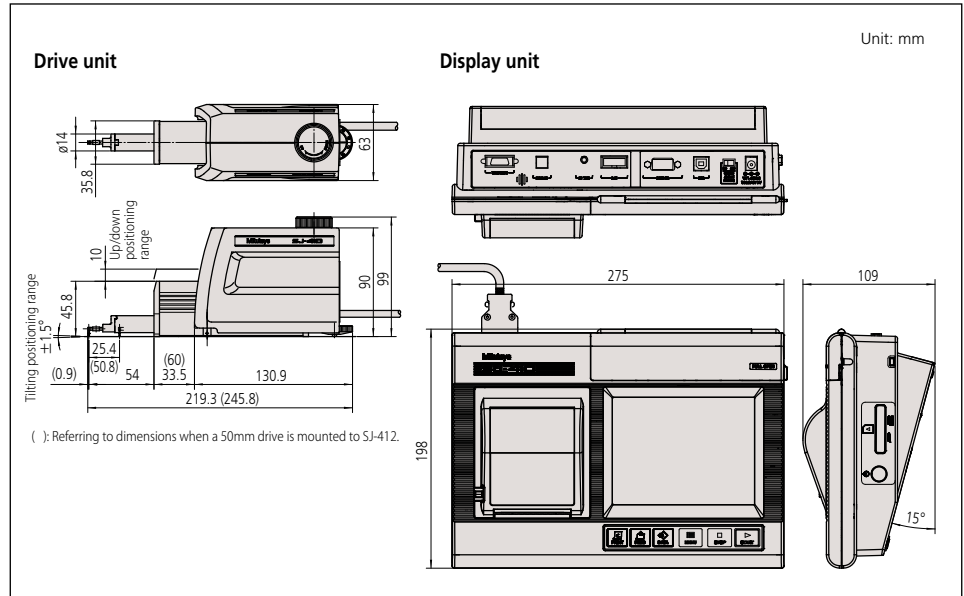
Consumables

- 12AAN040:** LCD protective sheet (10 sheets/set)
12AAA876: Durable printer paper (25m, 5 rolls/set)
270732: Printer paper (5 pack)
12AAN046: Replacement battery
12AAJ088: Footswitch

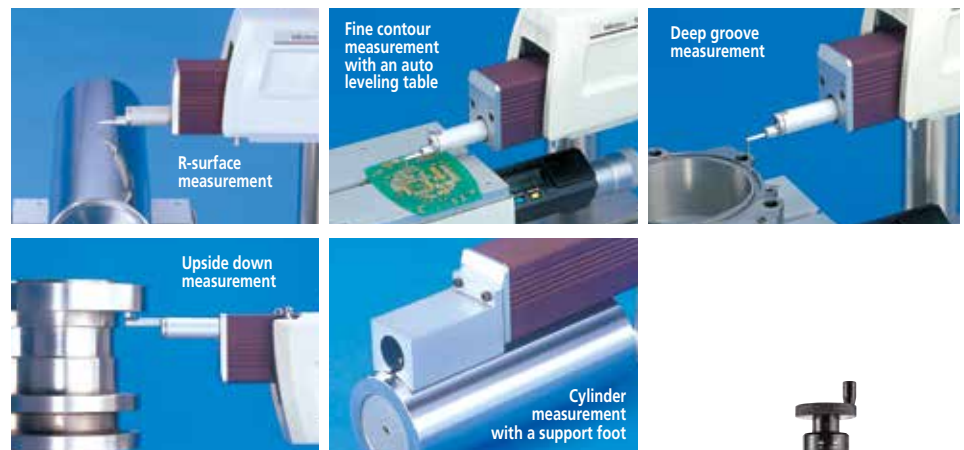
Surftest SJ-410

SERIES 178 — Portable Surface Roughness Tester

DIMENSIONS



MEASUREMENT APPLICATIONS



Carrying case is a standard accessory.



With optional accessories.

178-010: Auto-set unit

178-020: X-axis adjustment unit

178-030: Tilting adjustment unit