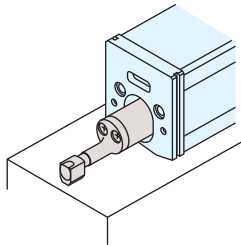


Dimensions: Detectors and Drive units

Detectors

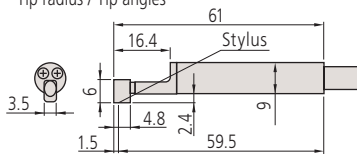
Unit: mm

Standard detectors

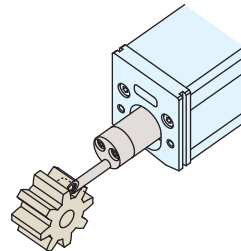


Order No.	Measuring force	Stylus profiles*	Remarks column
178-296	0.75mN	2 μmR/60°	Dedicated to the standard/retractable drive unit
178-390	4 mN	5 μmR/90°	
178-387	0.75mN	2 μmR/60°	Dedicated to the transverse tracing drive unit
178-386	4 mN	5 μmR/90°	
178-391	4 mN	10 μmR/90°	Dedicated to the standard/retractable drive unit

*Tip radius / Tip angles

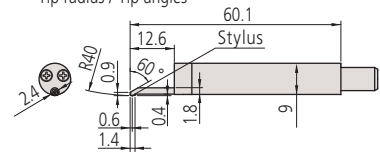


Gear-tooth surface detectors

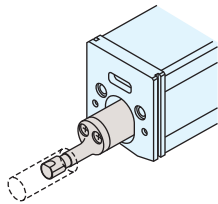


Order No.	Measuring force	Stylus profiles*
178-388	0.75mN	2 μmR/60°
178-398	4 mN	5 μmR/90°

*Tip radius / Tip angles

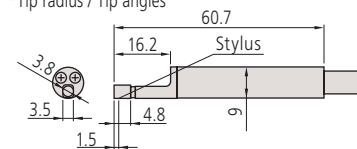


Small hole detectors

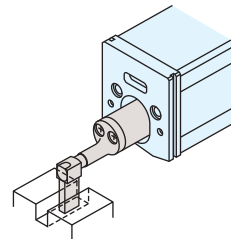


Order No.	Measuring force	Stylus profiles*	Remarks column
178-383	0.75mN	2 μmR/60°	Minimum measurable hole diameter: 4.5mm
178-392	4 mN	5 μmR/90°	

*Tip radius / Tip angles

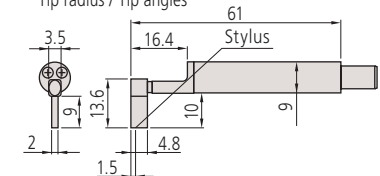


Deep groove detectors

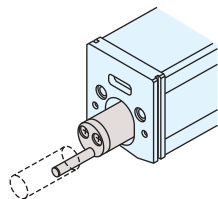


Order No.	Measuring force	Stylus profiles*	Remarks column
178-385	0.75mN	2 μmR/60°	Not available for the transverse tracing drive unit
178-394	4 mN	5 μmR/90°	

*Tip radius / Tip angles

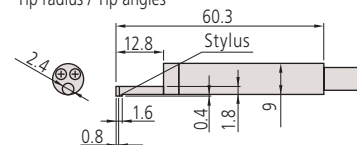


Extra small hole detectors



Order No.	Measuring force	Stylus profiles*	Remarks column
178-384	0.75mN	2 μmR/60°	Minimum measurable hole diameter: 2.8mm
178-393	4 mN	5 μmR/90°	

*Tip radius / Tip angles



Drive units

Order No.	
178-230-2	Standard drive unit
178-233-2	S-Drive unit
178-234-2	S-Drive unit set
178-235	R-Drive unit



Optional Accessories: For Drive Unit

Drive unit accessories

Nosepiece for flat surface

No.12AAA217

*Not available for the transverse tracing drive unit.



Nosepiece for cylindrical surface

No.12AAA218

*Not available for the transverse tracing drive unit.

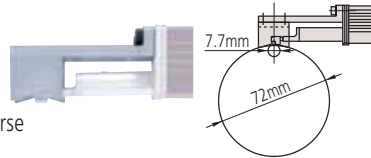


V-type adapter

No.12AAE644

*Transverse tracing drive unit type standard accessories.

*Dedicated to the transverse tracing drive unit.

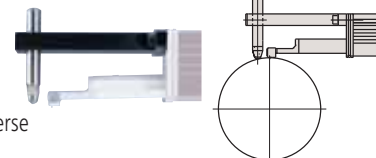


Point-contact adapter

No.12AAE643

*Transverse tracing drive unit type standard accessories.

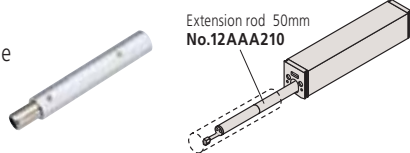
*Dedicated to the transverse tracing drive unit.



Extension rod (50mm) (Note: Extension is possible with only a single rod.)

No.12AAA210

*Not available for the transverse tracing drive unit.



Extension cable (1m) (Note: Extension is possible with only a single cable.)

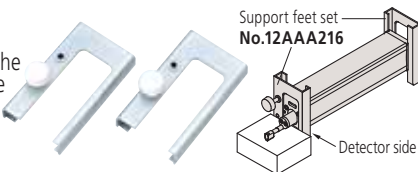
No.12BAA303

*For connecting between calculation display unit and drive unit.

Support feet set

No.12AAA216

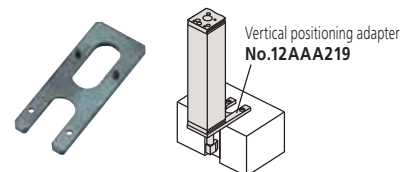
*Not attachable to the detector side of the transverse tracing drive unit.



Vertical positioning adapter

No.12AAA219

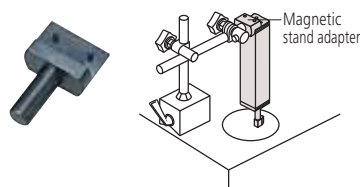
*Not available for the transverse tracing drive unit.



Magnetic stand adapter

No.12AAA221 (ø8mm)

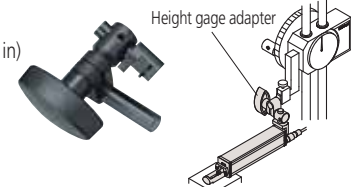
No.12AAA220 (ø9.5mm)



Height gage adapter

No.12AAA222 (9 × 9mm)

No.12AAA233 (1/4 in × 1/2 in)



Setting attachments

* Not available for the transverse tracing drive unit

Enhances measurement efficiency by facilitating the measurement setup of multiple workpieces of the same type and of the hard-to-access sections of a workpiece.

Setting attachment: V type for measuring in the cylinder axis direction

No.178-033

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

- Adjustable range: ø 5 ~ 150mm



Setting attachment: Magnetic slider type

No.178-034

The magnet attached to the frame bottom surface allows taking hands-free measurement on the wall.



Setting attachment: Inside diameter type

No.178-035

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

- Applicable diameter: ø 75 ~ ø 95mm
- Accessible depth: 30 ~ 135 mm



Optional Accessories: For External Equipment

Printer for SJ-210

Assessed profiles and calculation results and curves can be printed out by connecting the SJ-210-dedicated printer, which is palm sized 3.7 x 4.9 x 2.7" (W x D x H: 93 x 125 x 70mm) and can run on an internal battery.

Power supply can be selected. (AC adaptor or battery pack)
Printable items: Measurement conditions, calculation results, assessed profile, bearing area curve (BAC), amplitude distribution curve (ADC), and environment settings.

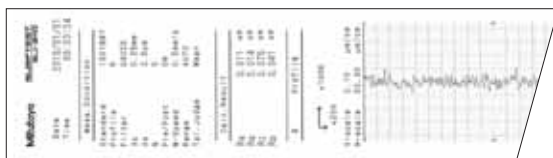


178-421A

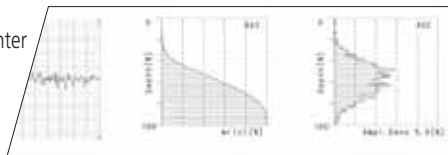
- Unit configuration:
- Printer main unit
 - Printer connecting cable
 - Printing paper 6-pack
 - Battery pack 1 piece
 - Exclusive use AC adaptor (with AC power cord) 1 piece



Example of the connection with SJ-210



Example of the output by the printer



Printer for SJ-210 supplies:
Printing paper (5-pack) No. 12AAA876

Digimatic mini processor DP-1VR

By connecting this printer to the SurfTest SJ-210's digimatic output, you can print calculation results, perform a variety of statistical analyses, draw a histogram or D chart, and also perform complicated operations for X-R control charts.



264-504-5A

SJ-210 DP-1VR Connecting cable
1m: No. 936937 Digimatic SPC cable
2m: No. 965014 Digimatic SPC cable

Memory card

A memory card for saving 500 measurement conditions, 10,000 measured profiles, 500 display images, text file (measurement conditions, measured profiles, assessed profiles, BAC, ADC)



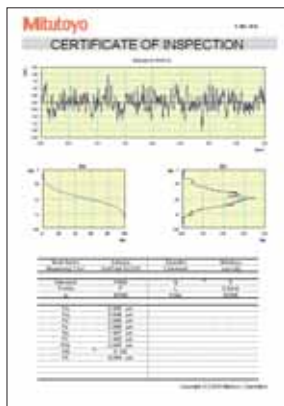
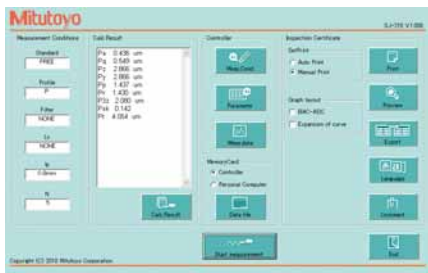
*Not all memory cards can be recognized. Please use the memory card recommended by Mitutoyo.

No. 12AAL069

Optional Accessories: For External Output

Simplified communication program for SURFTEST SJ series

The Surfctest SJ-210 has a USB interface, enabling data to be transferred to spreadsheet or other software. We also provide a program that lets you create inspection record tables using a Microsoft Excel* macro.



Required environment*:

OS : Windows 2000 SP4	Spreadsheet software:
Windows XP	Microsoft Excel 2000
Windows Vista	Microsoft Excel 2002
Windows 7	Microsoft Excel 2007

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

The optional USB cable is also required.

USB cable for SJ-210 series (2m)

No. 12AAL068

This program can be downloaded for free from the Mitutoyo website.
<http://www.mitutoyo.co.jp>

Footswitch

A footswitch is used to trigger measurement. This tool is very useful in cases where you need to measure the same workpiece multiple times using jigs and other fixtures.



No. 12AAJ088

Input Tool: Calculation results input unit

Surftest SJ-210 calculation results can be loaded directly into commercial spreadsheet software via this unit simply by connecting it to the USB connector on a computer or a PS/2 type keyboard connector. (See Catalog No. E4250-264 for details.)



USB keyboard signal conversion model
 IT-012U No. 264-012-10

PS/2 keyboard signal conversion model
 IT-005D No. 264-005



- Coordinate Measuring Machines
- Vision Measuring Systems
- Form Measurement
- Optical Measuring
- Sensor Systems
- Testing Equipment and Seismometer
- Digital Scale and DRO Systems
- Small Tool Instruments and Data Management

WILLRICH PRECISION: 866-945-5742 / info@willrich.com

Note: All information regarding our products, and in particular the illustrations, drawings, dimensional and performance data contained in this printed matter as well as other technical data are to be regarded as approximate average values. We therefore reserve the right to make changes to the corresponding designs. The stated standards, similar technical regulations, descriptions and illustrations of the products were valid at the time of printing. In addition, the latest applicable version of our General Trading Conditions will apply. Only quotations submitted by ourselves may be regarded as definitive.

Mitutoyo products are subject to US Export Administration Regulations (EAR). Re-export or relocation of Mitutoyo products may require prior approval by an appropriate governing authority.

Trademarks and Registrations

Designations used by companies to distinguish their products are often claimed as trademarks. In all instances where Mitutoyo America Corporation is aware of a claim, the product names appear in initial capital or all capital letters. The appropriate companies should be contacted for more complete trademark and registration information.

We reserve the right to change specifications and prices without notice.

M³ Solution Centers

Aurora, Illinois
(Corporate Headquarters)

Westford, Massachusetts

Huntersville, North Carolina

Mason, Ohio

Plymouth, Michigan

City of Industry, California

Mitutoyo
Precision is our Profession