ACCRETECH

SURFCOM NEX

ENGLISH

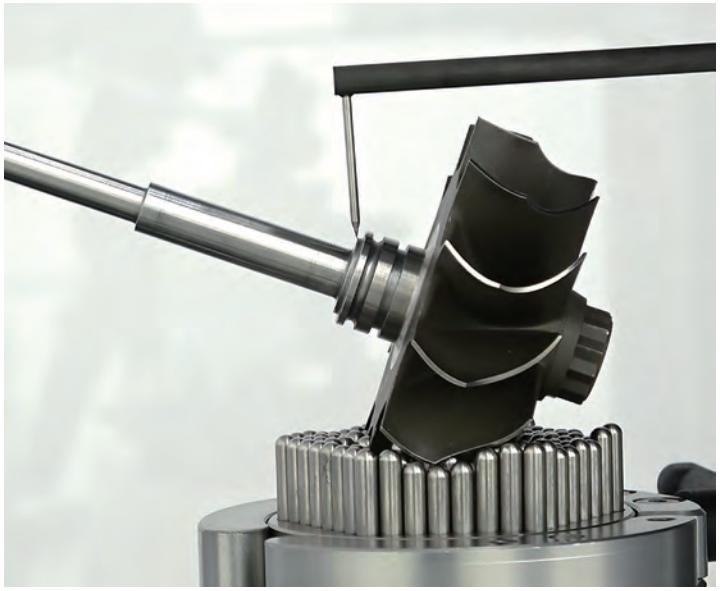
Complete Measurement of Surface Texture and Contour in One Equipment

NEW Surface Texture and Contour

SURFCOM NEX

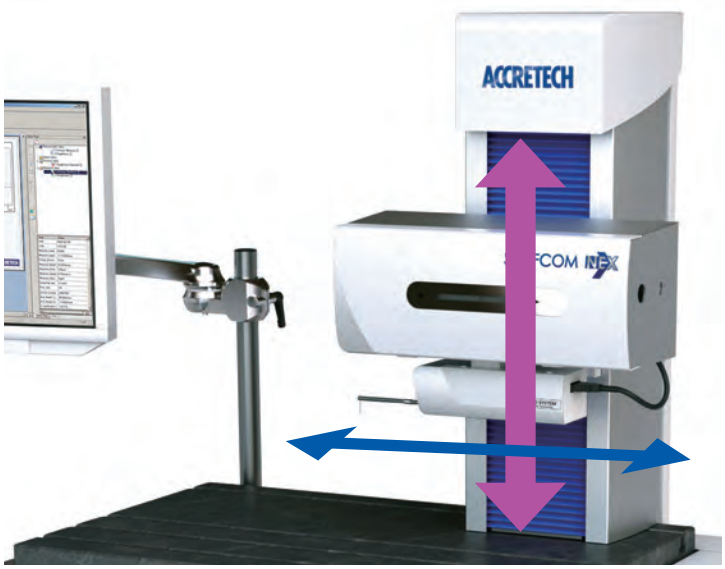
“NEX”t stage of SURFCOM is wider

Measuring a wide variety of workpieces under varying



When you need surface texture, contour, or you may require both.The ability to freely combine detectors to suit any workpiece.

Equipped with newly-developed, wide-range hybrid detectors covering more than twice the range of conventional machines, this machine efficiently evaluates the surface texture and contour of inclined surfaces, undulating shapes, and curved surfaces in one trace. In addition, special-purpose detectors for surface texture and contour measurement can be freely switched and added at a later stage depending on the workpiece. As long as you have one SURFCOM NEX, you won’t need another surface texture or contour measuring equipment.



Preparation and measurement in a short time with the fastest drive in the class and wide-range hybrid detectors

Significantly improved drive speed reduces the time for approaching workpieces in manual mode, creating CNC programs and drive during CNC measurement. This improves efficiency throughout the inspection process, from preparation to measurement. In addition, by using a wide-range hybrid detector, there is no need to measure surface texture and contour shape separately, and necessary precise alignment before measuring the surface texture of inclined or curved surfaces can be skipped. This means inspections can be performed with minimal effort in the shortest period of time.

The world's only linear motor drive machine that can measure ultra-low vibration and operate at 20±5 degrees Celsius

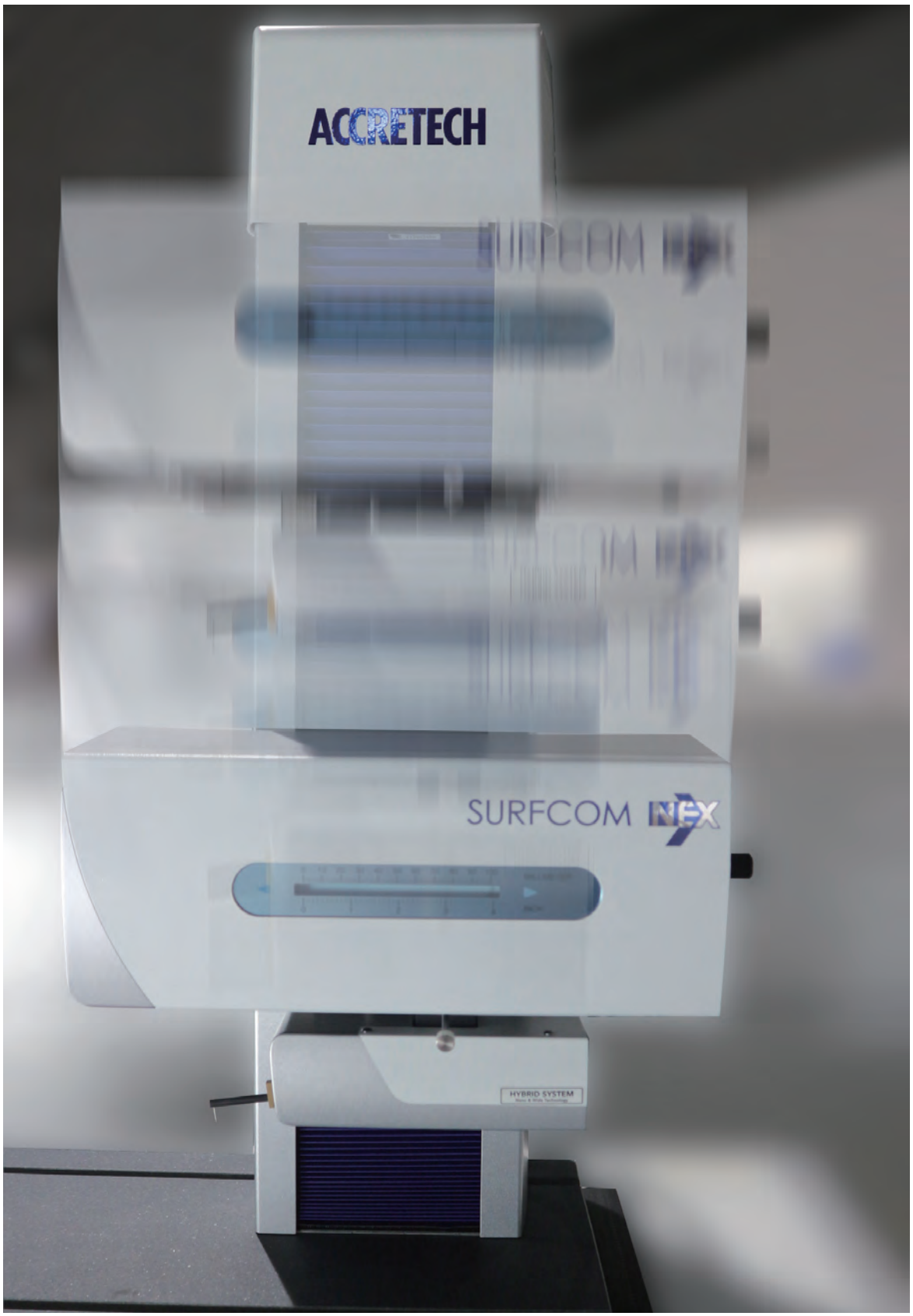
SURFCOM NEX inherits the linear motor drive unit, a patented technology of ACCRETECH, from a conventional SURFCOM NEX. An ultra-low vibration drive mechanism reduces noise caused by vibration and provides high-accuracy measurement results. Moreover, by offsetting the impact of temperature change on the scale in real time, accuracy can be assured over a wide temperature range of 20±5 degrees Celsius. Reliable measurement results are obtainable even in environments where temperature control is difficult.

and faster towards automation

temperature environments in a short period of time

Extremely high-speed driving to enable shorter tact time

High efficiency
High versatility
High relibility
Maintenance-free
Usability



Newly developed column and tracing driver significantly increase driving speed
Fast approach to and retraction from the measurement point reduce the total inspection time

Conventional

Horizontal (X-axis) driving speed

60 mm/s

NEW

100 mm/s

1.6 times faster than conventional instruments

Vertical (C-axis) driving speed

10 mm/s

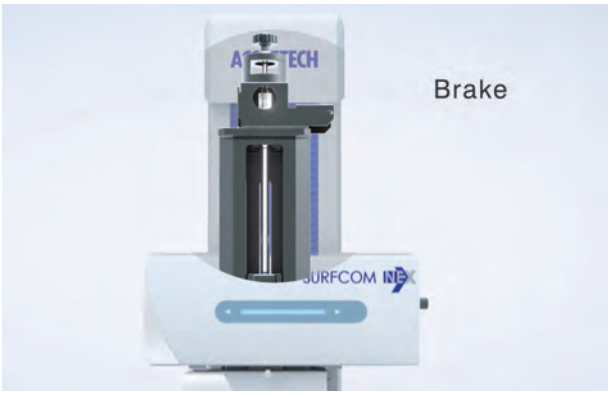
50 mm/s

5 times faster than conventional instruments

Patented

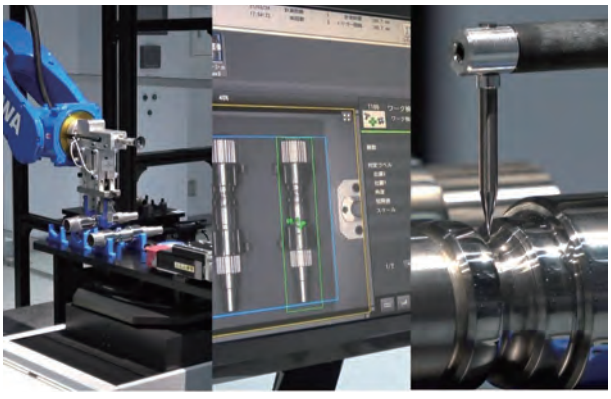
New mechanism enabling higher speed One-way clutch and brake

The new column has a new mechanism built in it. When the tracing driver rises, the mechanism lets the brake free to cancel the load equivalent to the weight of the tracing driver. When the tracing driver descends, it puts the brake on to prevent the tracing driver from falling under its weight. The vertical movement of the tracing driver adjusted to the same load optimizes the reduction ratio and motor gain, significantly increasing the maximum speed and acceleration.



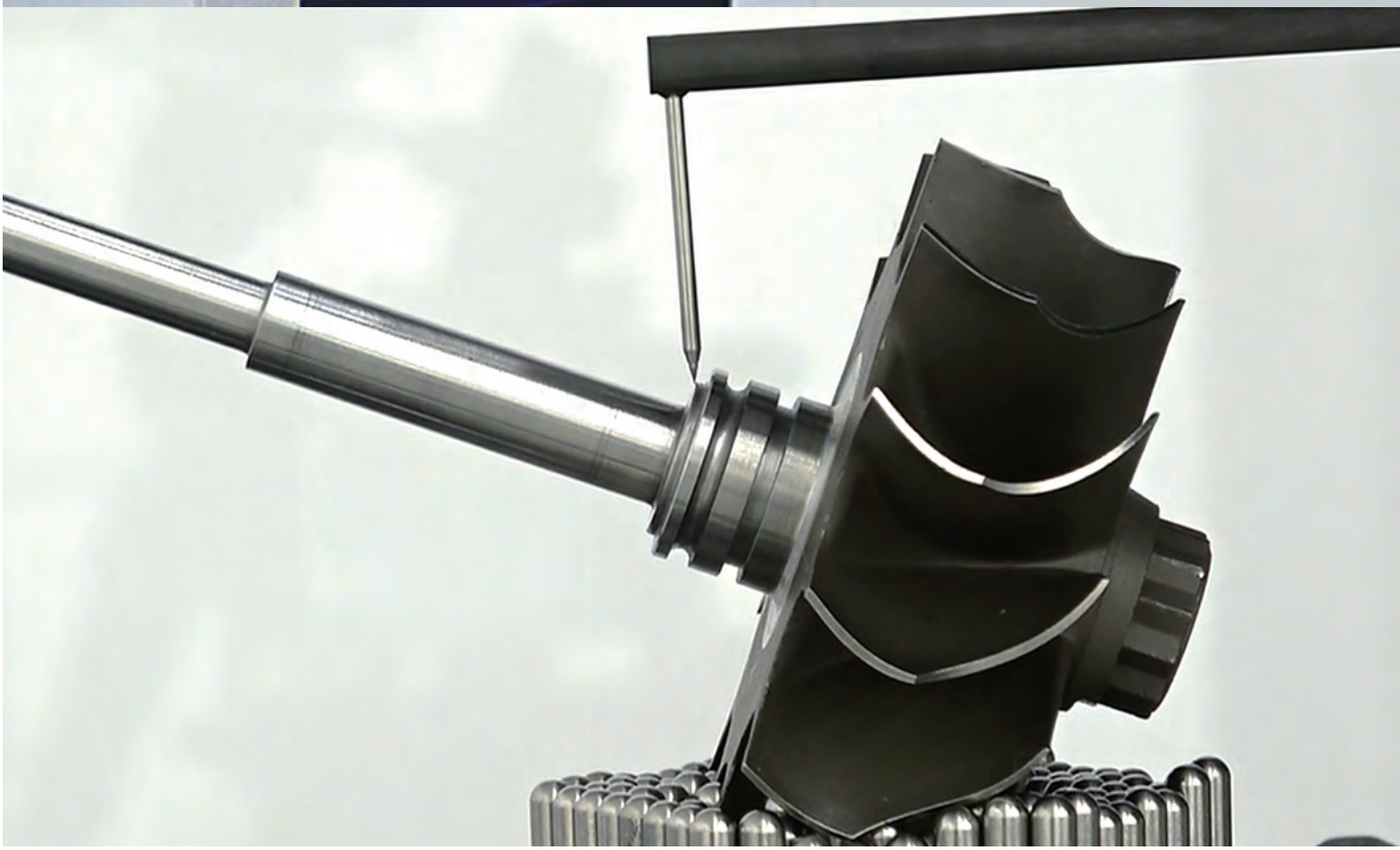
Continuous measurement on multiple workpieces with the help of a robot or material handling systems can be conducted with greater efficiency

Even if you try to increase the inspection efficiency by automating the continuous measurement of multiple workpieces or measurement points using the instrument in combination with a robot or material handling system, the effect of streamlining will be limited unless the approach to the workpiece, the movement between measurement points, and the retraction operation are fast enough. The SURFCOM NEX capable of high-speed driving enables each of these operations to be performed in a shorter time, thus maximizing the advantage of automation.

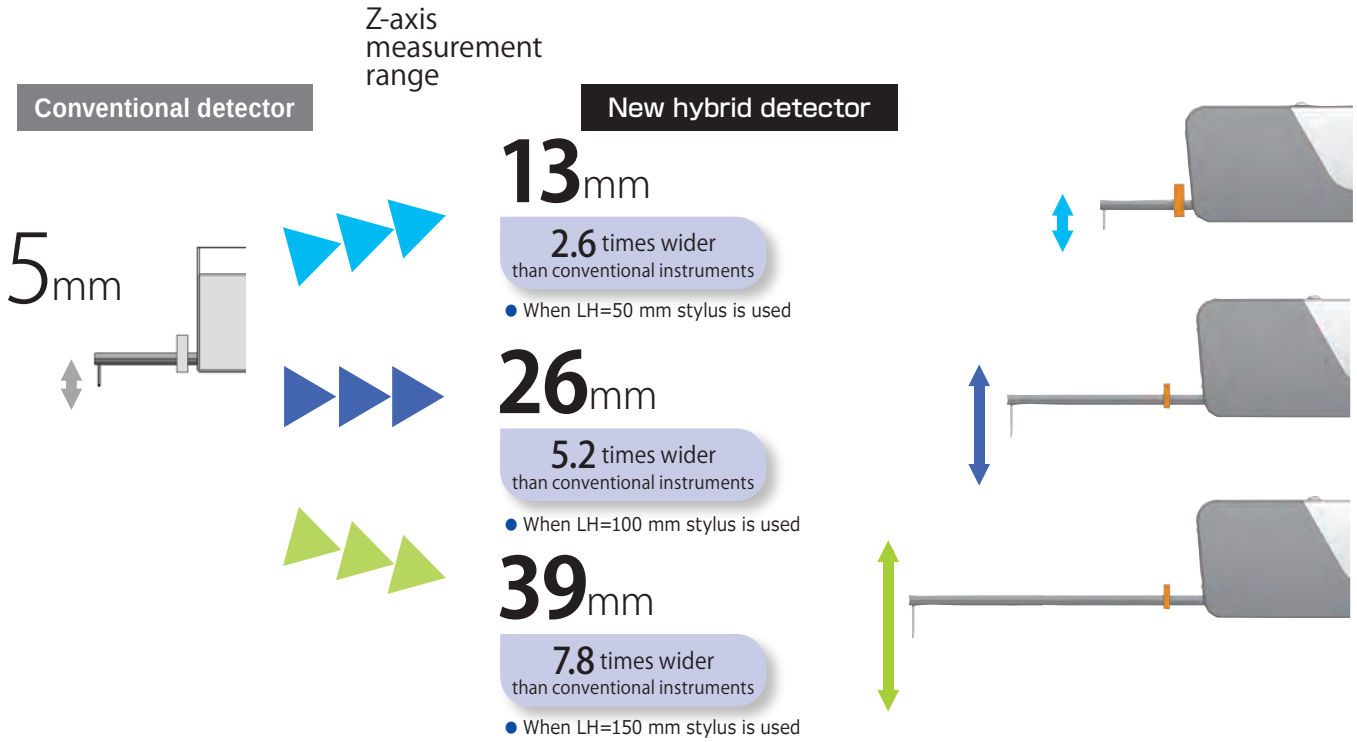


Wide range and high resolution
Newly developed hybrid detector

High efficiency
High versatility
High relibility
Maintenance-free
Usability



Both surface texture and contour can be measured in a single trace.A measurement range 2.6 times as wide as that of conventional instruments allows efficient measurement of all kinds of workpieces.



* LH=50 mm surface texture and contour measurement stylus DM84071 and LH=100 mm contour-measurement-dedicated stylus DM48775 are provided as standard accessories.
* LH=100 mm surface texture and contour measurement stylus DM48636 is optional.
* LH=150 mm surface texture and contour measurement stylus DM84400 is optional.

High resolution is supported across a wide measurement range. Cumbersome measurement range switching is no longer necessary

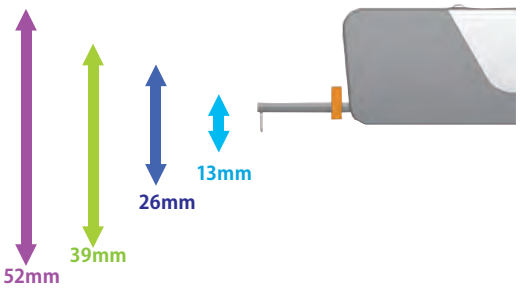
In the case of general hybrid detectors and roughness pickups, the measurement range needs to be switched to a narrower one, such as 0.5 mm or 0.05 mm, for high-resolution measurement even if it supports a measurement range of up to 5 mm, for example. The SURFCOM NEX hybrid detector requires no such measurement range switching. It supports high resolution across a 13-mm, 26-mm or 39-mm measurement range, allowing you to perform measurements without worrying about the measurement range setting.

Resolution (full range)	Z-axis measurement range
0.9nm	13mm ● When LH=50 mm stylus is used
1.8nm	26mm ● When LH=100 mm stylus is used
2.7nm	39mm ● When LH=150 mm stylus is used

Wide-range contour measurement is possible just by switching the styli

By switching to a optional styli*, you can further expand the Z-axis measurement range. Wide-range contour measurement is possible just by switching the styli, without the need to replace the detector. In the case of the LH=150 mm stylus, the measurement range can be expanded to 39 mm. As for the LH=200 mm stylus, the measurement range can be expanded up to 52 mm, which is comparable to the measurement range of general contour measuring instruments .

* LH=150 mm surface texture and contour measurement DM84400, LH=150 mm dedicated contour measurement styli DM84399/DM84409, and LH=200 mm dedicated contour measurement styli DM84376/DM84377 are optional.



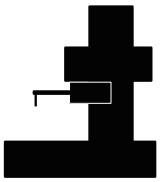
Significant reduction in the inspection process
Surface texture and contour measurement using a hybrid detector

When surface texture and contour are measured simultaneously "using a hybrid detector"

Calibration using a reference standard → Workpiece setting → Surface texture and contour measurement

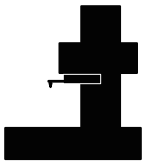
Inspection efficiency is improved substantially through a reduction in measurement time achieved by omitting workpiece re-setup and detector replacement, reducing the number of measurements, and supporting high-speed driving

When performing measurement with "separate measuring instruments"



Contour measuring instrument

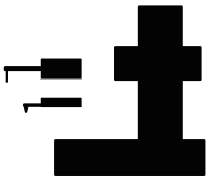
Calibration using a reference standard → Workpiece setting → Contour measurement → Workpiece removed → Workpiece carried around



Surface texture measurement

Calibration using a reference standard → Workpiece setting → Surface texture measurement

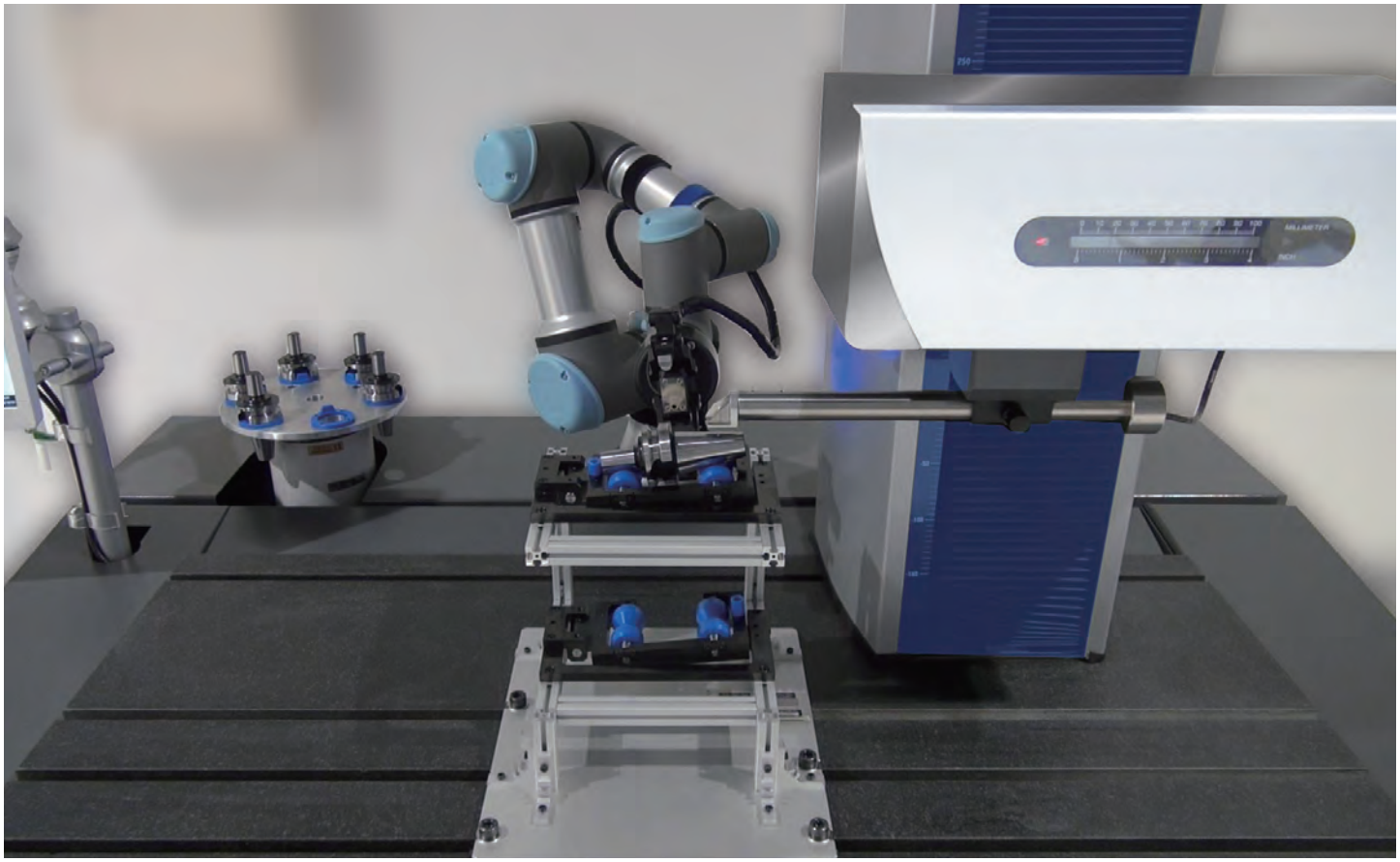
When performing measurement by using a single measuring instrument while switching the detectors



Contour and surface texture combined measuring instrument

Calibration using a reference standard → Workpiece setting → Contour measurement → Detector replacement → Workpiece removed → Calibration using a reference standard → Workpiece setting → Surface texture measurement

Hybrid detector equipped with a function to support automation



Collision detection safety mechanism to detect contact between detector and workpiece

The measuring instrument is equipped with a collision detection safety mechanism, which stops the measuring instrument operation as its sensor immediately detects the impact caused when the left or bottom side of the detector collides with a workpiece or jig. In addition, if a large load is applied in the driving direction of the detector, the linear motor tracing driver with a shaft motor releases the force to prevent damage. This structure ensures the safe use of the measuring instrument.

Low-noise, disturbance-resistant high-speed digital communication technology

High-speed digital communication technology is adopted for communication between the new hybrid detector and a data processor. Communication can be accomplished with low noise, compared to the conventional analog communication systems, thus minimizing the adverse effect of noise on measurement results. Since the technology also makes the instrument resistant to disturbance, you can feel at ease using it in an environment closer to the production site.

Detectors can be combined freely to meet your needs

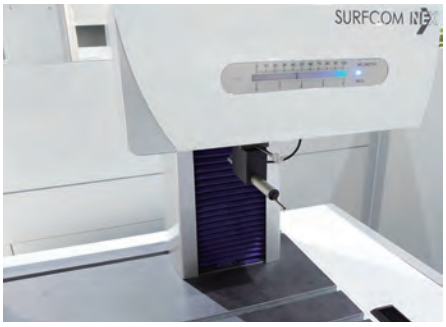
Detectors other than the hybrid detector are also available.
All these detectors can be combined and installed later.

Roughness pickup

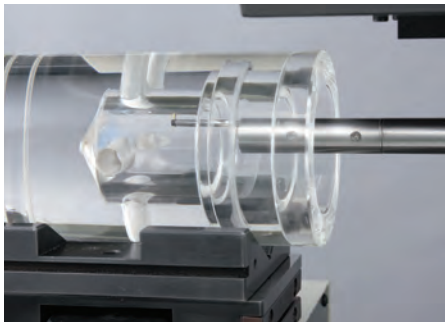
- Measurement range (Z): 1000 µm
- Resolution (Z): 0.1 to 20 nm
- Horizontal trace measurement is supported as a standard feature
- The pickup can automatically stop for measurement in both upward and downward directions
- 3D surface texture measurement is also supported by the optional Y-axis fixed pitch tracing driver and SURFCOM Map

Wide range for easy alignment and flexibility to meet diverse needs

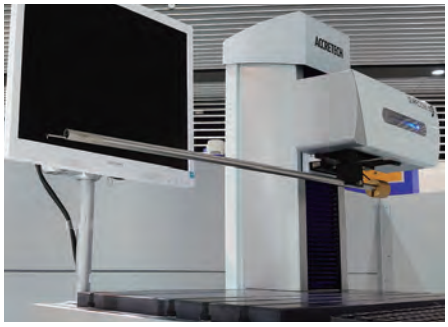
- 1000 µm measurement range that is 200 µm wider than the general roughness pickup
- Saving in time for precise alignment when measuring an inclined surface or curved surface (shaft, bearing workpiece, etc.)
- A rich lineup of measurement functions and diverse options



Horizontal trace measurement

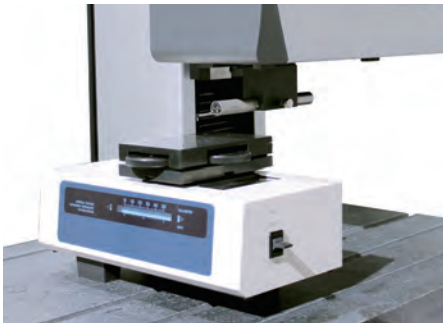


The pickup can automatically stop even for measurement in the upward direction.



Example of using the connecting rod option for super-long holes

Example of 3D surface texture measurement
Y-axis fixed pitch tracing driver of the detector moving type



Example of 3D surface texture measurement
Y-axis fixed pitch tracing driver of the workpiece moving type

Detector for contour measurement

- Measurement range (Z): 60 mm
- Indication accuracy (Z):
  ± (1.2+|2H|/100) µm (20 ℃± 2 ℃)
  ± (1.5+|2H|/100) µm (20 ℃± 5 ℃)
- Quick change arm that is easy to replace
- Continuous upward and downward measurements using a T-shaped stylus are supported
- Equipped with a collision detection safety mechanism

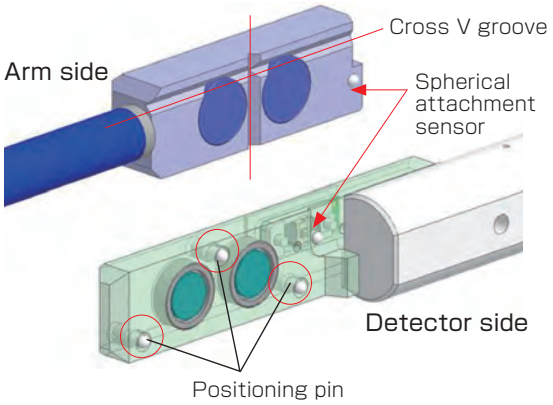
Detector for high-accuracy contour measurement

- Measurement range (Z): 60 mm
- Indication accuracy (Z): ± (0.8+|2H|/100) µm
- Quick change arm that is easy to replace
- Continuous upward and downward measurements using a T-shaped stylus are supported
- Equipped with an automatic balancing (automatic measuring force adjustment) mechanism for automatic adjustment of measuring force by software
- Equipped with a collision detection safety mechanism

Patented

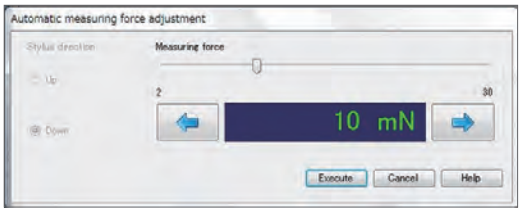
Quick change arm equipped with a detachment/ attachment recognition sensor

- A double-magnet, 3-point supported cross V groove structure holds the arm stably and allows highly reproducible attachment and detachment
- A spherical sensor for arm misalignment and a sliding guide structure to protect the detector main unit against shock ensure a high level of safety

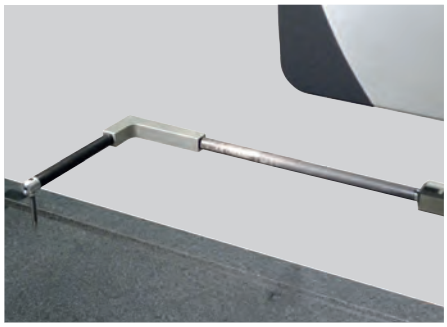


Automatic balancing (automatic measuring force adjustment) mechanism

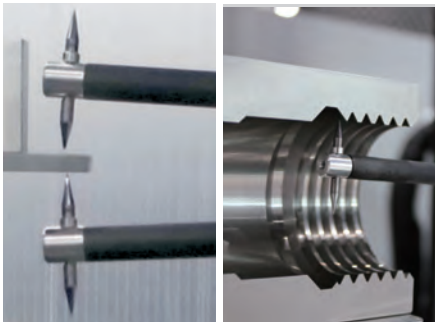
- Fine-tuned adjustment and control of measuring force in units of 2 mN by software
- Various arm-stylus combinations can be used without the need for weight adjustment
- Prevents the stylus from being scratched, or otherwise chipped when passing over a bump, etc., during a trace



Example of using the 592-mm long arm option



Example of using the offset arm option



Example of upward and downward measurement using a T-shaped stylus
Thickness measurement (left)/diameter measurement (right)

Accurate measurement results at various temperatures

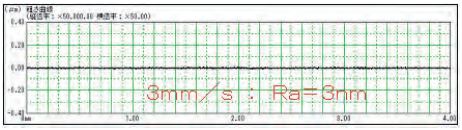
Unique linear motor tracing driver boasting unwavering reliability

Patented

Highly reliable measurement results enabled by ultra-low vibration drive

The linear motor tracing driver, a technology patented by Tokyo Seimitsu, does not generate vibration due to the ball screw period and vibration of the gear box that occur in general tracing drivers employing a ball screw feed mechanism, thereby enabling an ultra-low vibration, smooth feed operation. This minimizes vibration-caused noise and provides highly reliable measurement results.

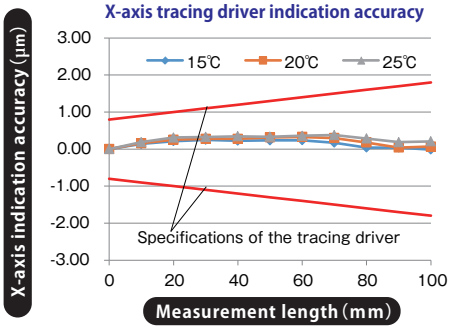
Optical flat measurement



Real-time scale temperature correction guarantees accuracy for a wide temperature range: 20 ℃± 5 ℃

The temperature sensor built in the linear motor tracing driver corrects the expansion and contraction of the tracing driver scale caused by a change in temperature, reducing the impact on the X-axis indication accuracy. This real-time scale temperature correction technology guarantees accuracy for a temperature range of 20 ℃± 5 ℃ , which is much wider than the accuracy guarantee temperature range of 20 ℃± 1℃ or 20 ℃± 2 ℃ supported by general surface texture and contour measuring instruments.

X-axis tracing driver indication accuracy



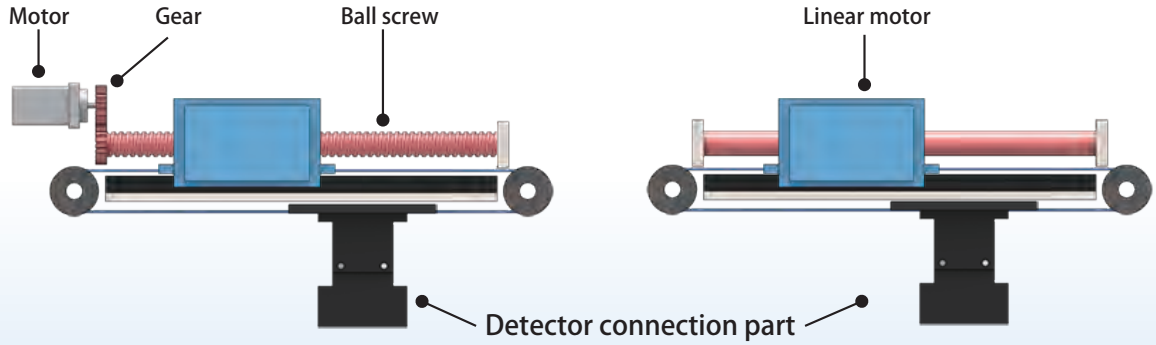
No need for daily maintenance

Newly developed column and tracing driver

Time can be used effectively since there is no need for daily maintenance

General Surface Texture and Contour Profile Measuring Instruments

SURFCOM NEX



Ball screw driving method producing side-to-side movement of a detector by transmitting the rotation of the motor to the ball screw through the gear. (Daily oil supply is required.)

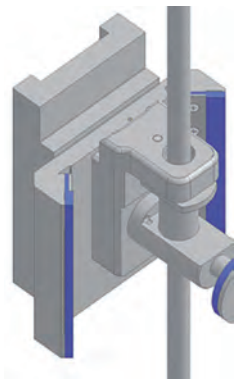
Linear motor driving method enabling side-to-side movement of a detctor by making use of the attractive and repulsive forces of magnet. (Daily oil supply is not required.)

Linear motor tracing driver having a simple structure that is free from daily maintenance

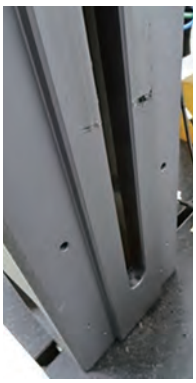
The structure has been made simple by eliminating the ball screw built in the tracing driver of a general surface texture and contour measuring instrument and the gear box that transmits the motor power. Also, the structure and material of the guide surface that supports driving have been changed. These eliminate the need for daily lubrication and greasing to the tracing driver, thus making it maintenance-free.

Newly developed column that is highly durable and free from daily maintenance

While a conventional instrument needs its column to be greased periodically, the newly developed column of the SURFCOM NEX eliminates the need for daily maintenance because of the newly developed lubrication-free sliding material and column coating. There is no need for lubrication. The column is highly durable even when it is integrated into an automated system for continuous operation.



lubrication-free sliding material



anticorrosive and lubricant coating

Preparation, measurement, and cleanup
All kinds of work are easier to do

High efficiency
High versatility
High relibility
Maintenance-free
Usability

High usability ensures stress-free work

All-in-one DX type

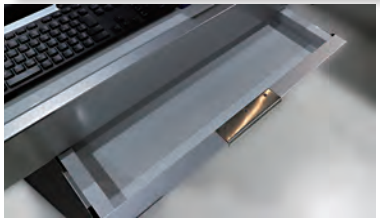
The size and position of the monitor can be selected

- Size: 17 inches (standard)/ Approx. 24 inches (option)
- Position: Left/Right

The base that is positioned at the left edge of the stand, making it easy to place a heavy workpiece
(Width increased by 100 mm*)

*-12/-13/-22/-23size

Drawer useful for storing accessories (option)



Back cover (option)

Storage box to make it easy to store the detector

New operation panel that enables safe, efficient measurement

An anti-vibration table that reduces the impact of vibration is provided as a standard component

Integrated-type stand capable of storing all of the data processor, controller, monitor, and printer* (option)

*To store the printer in the stand requires a partition plate option separately. A printer drawer option with rails is also available for pulling out the stored printer

General separate SD type[*1]

Base making it easy to place a workpiece
Base width increased by 100 mm[*2]

*2 -12/-13/-22/-23size

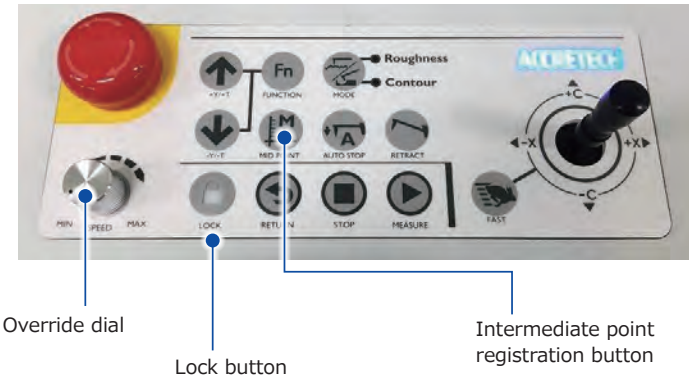
Stand to make it easy to place the detector

New operation panel that enables safe, efficient measurement

*1 For SD type, the anti-vibration table is an option. In addition, the data processer, controller, monitor, and printer (optional) can be stored and mounted on the stand in DX type, but the SD type requires to installate them separately from the measurement unit. (System rack for installation is available as an option)

The new operation panel with intuitive icons and new functions which enable safe, efficient measurement.

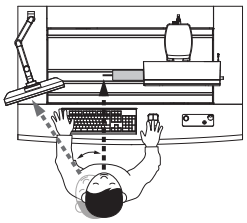
In addition to the high operability provided by intuitive icons, the "override dial" for real-time control of X-axis and C-axis driving speeds and the "lock button" for disabling panel operations other than measurement stop, emergency stop, and emergency stop release ensure safe measurement. Moreover, the "Intermediate point registration button" is provided for registering middle points intuitively using the current coordinate values, instead of numeric values, during CNC teaching



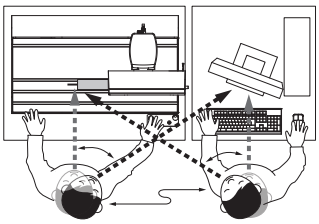
DX design offering both high operability and installation space savings

The DX type of the SURFCOM NEX series has the measuring unit, anti-vibration table, and data processor integrated into one. This not only saves the installation space but also allows the operator to perform all operations in front of the measuring unit comfortably, eliminating the need for the operator to move around, such as standing in front of the measuring unit to adjust the measurement position while looking at the workpiece and then moving to the front of the data processor to operate the software while viewing the monitor.

SURFCOM NEX DX Type

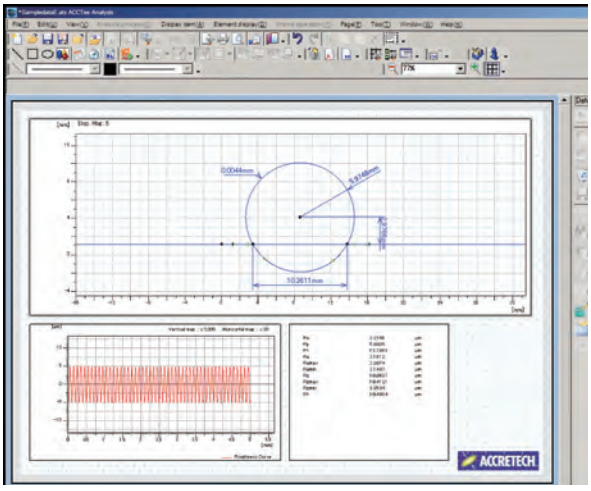


General surface texture and contour measuring instrument /SURFCOM NEX SD type



Integrated measurement analysis software ACCTee that allows all operations to be performed intuitively

ACCTee is software that allows you to perform the entire inspection process, from preparation such as calibration, analysis, and result printout, in a quite intuitive manner. It is easy to create a CNC program that measures multiple points and outputs results automatically. The contour angles and dimensions, as well as measurement values and waveforms of surface texture etc., can be placed freely in the measurement result sheet. By printing this sheet or converting it to a PDF file, you can use it as an inspection report as is.



Names of models based on system configuration and selection

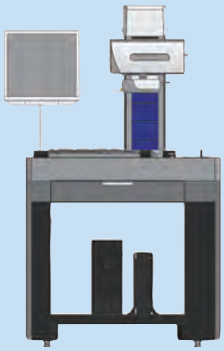
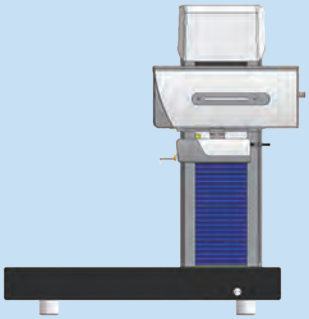
Product name **SURFCOM NEX** [***] [DX2/SD2] – [○○]

[1] Detector [2] Type [3] Tracing driver and measuring stand

[1] Detector selection

Model / Detector	030	040	001	031	041	200	230	240	201	231	241
Hybrid detector						●	●	●	●	●	●
Contour detector (general purpose)	●			●			●			●	
Contour detector (high accuracy)		●			●			●			●
Roughness pickup			●	●	●				●	●	●

[2] Type selection

Type	DX2	SD2
External View		

[3] Selection of tracing driver and measuring stand

Tracing driver		-1○	-2○
X-axis stroke (mm)	100	●	
	200		●

Measuring stand		-○2	-○3	-○4	-○5
Base Width × Depth (mm)	700×450	●	●		
	1000×450			●	●
Column Up and Down stroke (mm)	250	●			
	450		●	●	
	650				●

Specifications

Measuring Unit

Item					Model	SURFCOM NEX (DX2/SD2)							
						12	13	14	15	22	23	24	25
Tracing driver	X-axis (L: measuring lengh mm)	Sensing method				Linear scale							
		Straightness accuracy	with Hybrid detector (μm)			(0.05+1.0L/1000) (L: Measuring length mm) *with LH=50 mm stylus							
						2(0.05+1.0L/1000) (L: Measuring length mm) *with LH=100 mm stylus							
			with High-accuracy contour detector (μm/mm)			0.8/100				2.0/200			
			with General-purpose contour detector (μm/mm)			0.8/100				2.0/200			
			with Roughness pickup (μm)			(0.05+1.0L/1000) (L: Measuring length mm)							
		X-aixs indication accuracy (μm): horizontal*1				± (0.8+1.0L/100) (L: Measuring length mm) *Contour measurement with 100 mm driver							
						± (0.8+3.0L/200) (L: Measuring length mm) *Contour measurement with 200 mm driver							
		Resolution (μm)				0.016							
		Speed (mm/s)	Travel speed			0.03 to 100							
			Measuring speed			0.03 to 30							
		Tilt angle (°)				± 15 (Optional tilting device)							
Measuring stand	Column	Speed (mm/s)	Travel speed	CNC		Max. 50							
				Joystick		Max. 35							
	Base	Material				Gabbro							

Detector

Hybrid detector	Measuring range	Z-axis (mm): vertical				13 (with LH=50 mm stylus)、26 (with LH=100 mm stylus)
	Roughness and Contour	Sensing method				High accucary scale
		Resolution (nm)				0.9 (Full range) *with LH=50 mm stylus
						1.8 (Full range) *with LH=100 mm stylus
		Indication accuracy (μm): vertical				± (1.0+¦2H¦/100) (H: Measuring height mm) *with LH=50 mm stylus
						± (1.5+¦2H¦/100) (H: Measuring height mm) *with LH=100 mm stylus
	Stylus	for Roughness and Contour (LH=50 mm)		Model		DM84071 (Standard accessory for NEX 2**)
				Measuring force (mN)		0.75
				Tip material		Diamond
				Tip shape		Rtip 2 μm/60° cone
		for Contour (LH=100 mm)		Model		DM48775 (Standard accessory for NEX 2**)
				Measuring force (mN)		4
				Tip material		Cemented carbide
				Tip shape		Rtip 25 μm/24° cone
	Common function					Downward measurement / Collision detection safety function / Retract function
General-purpose contour detector	Measuring range	Z-axis (mm): vertical				60
	Contour	Sensing method				High accuracy scale
		Resolution (μm)				0.04 (Full range)
		Indication accuracy (μm): vertical				± (1.2+¦2H¦/100) (H: Measuring height mm) *at 20 ± 2 ℃
						± (1.5+¦2H¦/100) (H: Measuring height mm) *at 20 ± 5 ℃
	Stylus	for Contour		Model		DM45505 (Standard accessory for NEX *3*)
				Measuring force (mN)		10 to 30 (Manually adjustable)
				Tip material		Cemented carbide
				Tip shape		Rtip 25 μm/24° cone
	Function					Down/upward measurements / Collision detection safety function / Retract function
High-accuracy contour detector	Measuring range	Z-axis (mm): vertical				60
	Contour	Sensing method				Laser optical diffraction scale
		Resolution (μm)				0.02 (Full range)
		Indication accuracy (μm): vertical				± (0.8+¦2H¦/100) (H: Measuring height mm)
	Stylus	for Contour		Model		DM45505 (Standard accessory for *4*)
				Measuring force (mN)		2 to 30 (Adjustable on measuring/analysis integrated software "ACCTee")
				Tip material		Cemented carbide
				Tip shape		Rtip 25 μm/24° cone
	Function					Down/upward measurements / Collision detection safety function / Retract function
Roughness pickup	Measuring range	Z-axis (μm): vertical				1000
	Roughness	Sensing method				Differential inductance
		Measuring range (μm)				6.4 to 1000
		Resolution (nm)				0.1 to 20
	Stylus	for Roughness		Model		DM43801 (Standard accessory for NEX **1)
				Measuring force (mN)		0.75
				Tip material		Diamond
				Tip shape		Rtip 2 μm/60° cone
	Function					Down/upward measurements / Upper limit detection safety mechanism

Other

Power supply	Voltage (V) , Frequency (Hz)		Single phase AC100 to 240、50/60
	Power consumption (VA)		Max. 930
Air supply	Supply pressure (MPa)		0.45 to 0.7
	Working pressure (MPa)		0.4
	Air consumption (L/min)		0.1 (Max. 10)
	Position of supply port		DX2 model: main body lower left / SD2 model: main body back side (with anti-vibration table)
	Air supply connecting port		One-touch pipe joint for tubes with Outside diameter ϕ 6 mm
Environment	Temperature	Temperature of accuracy guarantee (℃)*2*3	20 ± 5 (Ratio of temperature change ± 0.5 / within an hour 0.1 / within one measuring time)
		Temperature of operation guarantee (℃)	15 to 30
		Storage temperature (℃)	5 to 40
	Humidity	Humidity of operation guarantee (%)	40 to 80 (without condensation)
		Storage humidity (%)	80 (without condensation)

*1 Excluding when using roughness pickup
*2 Guaranteed accuracy is excluding deformation of workpiece,caused by temperature change.
*3 Indication accuracy(vertical) with general-purpose contour detector is variable depending on temperature range.
■ Power and air supply and a connecting hose are required before the delivery.
■ Contents of the specification may be changed without any notice due to product modifications.

Specifications when using hybrid detector and LH=150 mm, LH=200 mm stylus

Measuring Unit

item \ Model				SURFCOM NEX (DX2/SD2)							
				12	13	14	15	22	23	24	25
Tracing driver	X-axis	Straightness accuracy *2	When hybrid detector and LH=150 mm or LH=200 mm stylus is used	(0.45+3.0L/1000) µm (L: Measuring length mm) *with LH=150 mm stylus							
				(0.8+4.0L/1000) µm (L: Measuring length mm) *with LH=200 mm stylus							

Detector

Hybrid detector (When LH=150 mm or LH=200 mm stylus is used)	Measuring range	Z-axis: vertical		39 mm (with LH=150 mm stylus), 52 mm (with LH=200 mm stylus)
	Roughness and Contour	Sensing method		High accucary scale
		Resolution		2.7 nm (Full range) *with LH=150 mm stylus
				3.6 nm (Full range) *with LH=200 mm stylus
		Indicaton accuracy: vertical *2		± (2.0+|2H|/100) µm (H: Measuring height mm) *at 20 ± 2 ˚C
				± (2.0+|10H|/100) µm (H: Measuring height mm) *at 20 ± 5 ˚C
	Stylus *1	for Roughness and Contour (LH=150 mm)	Model	DM84400 (optional)
			Measuring force	4 mN
			Tip material	Diamond
			Tip shape	Rtip 2 µm/60˚ cone
		for Contour (LH=150 mm)	Model	DM84399 (optional)
			Measuring force	4.5 mN
			Tip material	Cemented carbide
			Tip shape	Rtip 25 µm/24˚ cone
		for Contour (LH=150 mm)	Model	DM84409 (optional)
			Measuring force	4.5 mN
			Tip material	Cemented carbide
			Tip shape	Rtip 25 µm/12˚ angle
		for Contour (LH=200 mm)	Model	DM84376 (optional)
			Measuring force	7 mN
			Tip material	Cemented carbide
			Tip shape	Rtip 25 µm/24˚ cone
		for Contour (LH=200 mm)	Model	DM84377 (optional)
			Measuring force	7 mN
			Tip material	Cemented carbide
			Tip shape	Rtip 25 µm/12˚ angle
	Common function			Downward measurement / Collision detection safety function / Retract function

*1 For calibration with LH=150 mm and LH=200 mm stylus, a 25 mm high block gauge (optional) is required instead of the 10 mm high block gauge normally used with the SURFCOM NEX 200 DX2/SD2.
*2 Values in environments with wind speeds of 0.02 m/s or less. It is recommended to use a wind proof cover (optional) because it is easily affected by disturbances such as the wind from the air conditioner and the wind near the entrance. Also, be careful about vibrations.

● For specifications other than the above, follow the SURFCOM NEX (DX2/SD2) specification table on another page.

Specifications when using hybrid detector and LH=150 mm, LH=200 mm stylus

Image of using LH=150mm stylus

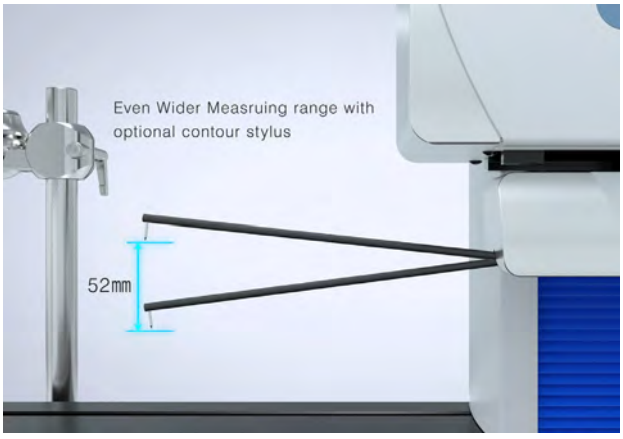


Image of using LH=200mm stylus

Dimensions and External view

DX2 type		Dimensions (mm)					Measuring range (mm)		Base (mm)		Weight (kg)		
		Width	Depth	Height	Height to top surface of base	Height of column	X-axis (Tracing driver)	C-axis (Column)	Width	Depth	Weight of measuring unit	Total weight*1	Max. loading weight
Model		W1	D1	H1	H2	H3	-	-	W2	-	-	-	-
DX2	12	960	800	1489	855	634	100	250	700	450	277	290	82
	13	960	800	1689	855	834	100	450	700	450	284	297	75
	14	1261	800	1689	855	834	100	450	1000	450	407	420	95
	15	1261	800	1909	855	1054	100	650	1000	450	421	434	81
	22	960	800	1489	855	634	200	250	700	450	284	297	75
	23	960	800	1689	855	834	200	450	700	450	291	304	68
	24	1261	800	1689	855	834	200	450	1000	450	414	427	88
	25	1261	800	1909	855	1054	200	650	1000	450	428	441	74

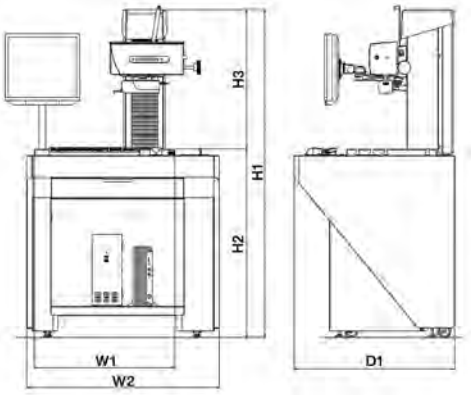
*1 Weights in include PC, driver unit, monitor

SD2 type		Dimensions (mm)					Measuring range (mm)		Base (mm)		Weight (kg)		
		Width	Depth	Height	Height to top surface of base	Height of column	X-axis (Tracing driver)	C-axis (Column)	Width	Depth	Weight of measuring unit	Total weight*2	Max. loading weight*3
Model		W1	D1	H1	H2	H3	-	-	W2	-	-	-	-
SD2	12	700	636	1452	818	634	100	250	700	450	119	132/217	81
	13	700	636	1652	818	834	100	450	700	450	126	139/224	74
	14	1000	780	1675	841	834	100	450	1000	450	206	219/442	54
	15	1000	780	1895	841	1054	100	650	1000	450	220	233/456	40
	22	700	636	1452	818	634	200	250	700	450	126	139/224	74
	23	700	636	1652	818	834	200	450	700	450	133	146/231	67
	24	1000	780	1675	841	834	200	450	1000	450	213	226/449	47
	25	1000	780	1895	841	1054	200	650	1000	450	227	240/463	33

*2 Left values ··· Weights include PC, driver unit, and monitor / Right values ··· Weights include PC, driver unit, monitor and optional accessories(anti-vibration table, stand, rack)
*3 Max. loading weight is the value with optional anti-vibration table(12/13/22/23 ··· E-VS-S319A, 14/15/24/25 ··· E-VS-R16E)

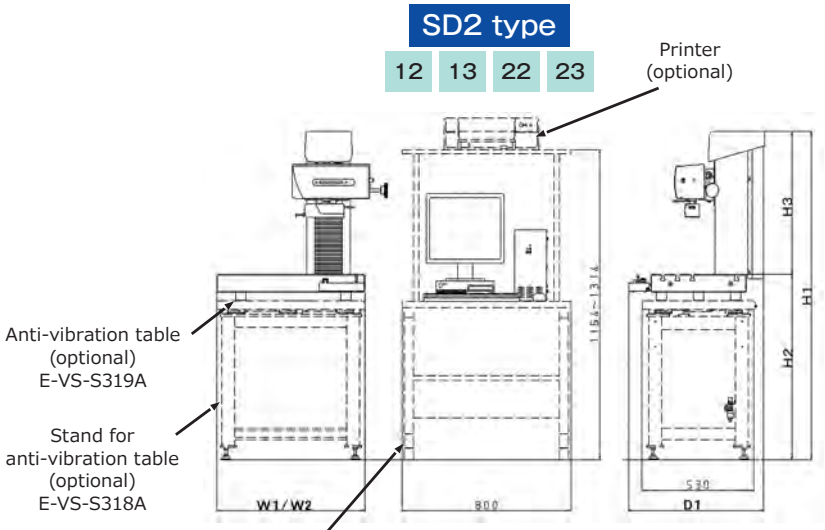
DX2 type

12 13 14 15 22 23 24 25



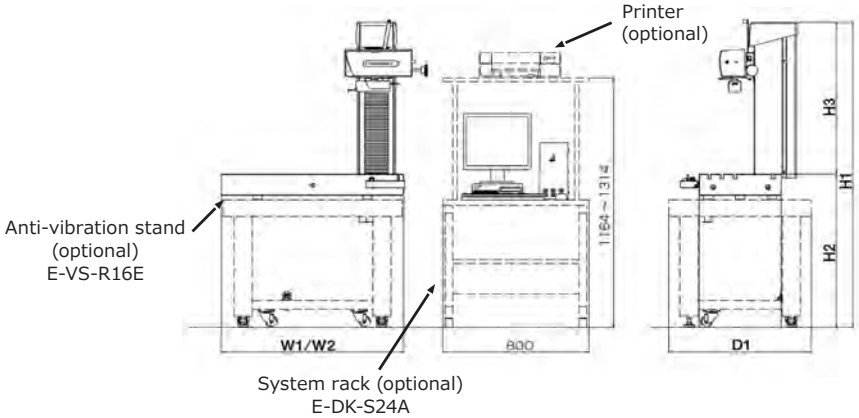
SD2 type

12 13 22 23



SD2 type

14 15 24 25

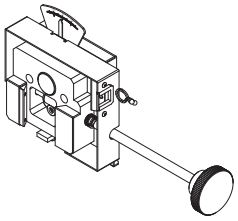


Main Accessories

For accessories not listed on the following pages, see our general catalog of surface texture and contour measuring instruments.

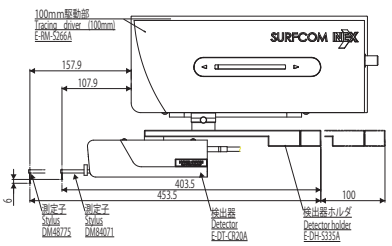
Tracing driver tiling unit E-CA-S164A

- Tilt angle: ±15 °
- Weight: 6 kg
- 100 mm/200 mm Common to the tracing drivers



Hybrid Detector Offsetting Holder E-DH-335A

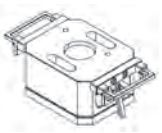
- A holder that can increase the amount of stylus extruding from the left end of tracing driver(For hybrid detector)
- Max. extrusion: approx. 108 mm*1/158 mm*2 from the left end of tracing driver
- Max. measuring height: 18 mm less than the standard holder
- Straightness: 0.3 μm/100 mm, 0.5 μm/200 mm*1 0.6 μm/100 mm, 1.0 μm/200 mm*2
- Measurement target*1: Ra≥0.02 μm, Rz≥0.2 μm



*1 When the standard stylus(LH=50 mm) DM84071 is used. *2 When the standard stylus(LH=100 mm) EM48775 is used.

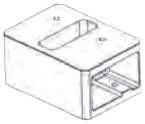
Column Rotary Spacer E-CS-S170A

- By raising the column, it is possible to measure large workpieces
- Height: 100 mm
- Rotation angle: 360°



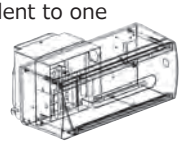
Column Spacer E-CS-S169A

- By raising the column, it is possible to measure large workpieces
- Height: 100 mm



Tracing Driver Spacer E-CA-S166A

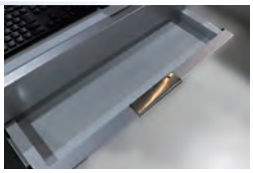
- Mounted between the column and the tracing driver
- The measurement position is offset 70 mm forward (distance equivalent to one T-groove on the base), making it easier to measure a workpiece with depth.



DX2 type accessories

Storage drawer DM51816-S400

- Drawer in front of the stand that is useful for storing accessories and small articles



Partition plate DM51816-S300

- Required when installing the printer (option) in the stand
- You can install the data processor and driver unit on the partition and the printer below it

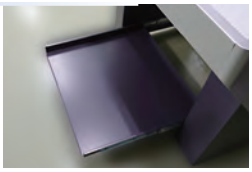
Back cover DM51816-S100／DM51817-S100

for-○2,○3 sizes : DM51816-S100
for-○4,○5 sizes : DM51817-S100

- This cover prevents dust from entering from the rear side of the stand

Printer drawer with rail DM51816-S200

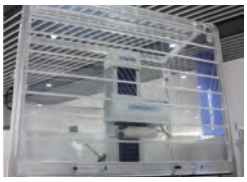
- When used in combination with the partition shown above, the drawer allows you to slide out the printer (option) installed in the stand
- Including with the partition plate DM51816-S300



Wind proof cover DM78500／DM78503／DM78501／DM78504

for -○2, ○3 sizes (without door): DM78500 ／ for -○2, ○3 sizes (with door): DM78503
for -○4, ○5 sizes (without door): DM78501 ／ for -○4, ○5 sizes (with door): DM78504

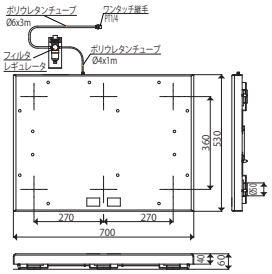
- Covers that reduce the effect of wind on measurements.
- Recommended option when using LH=150 mm, LH=200 mm styli.



SD2 type accessories

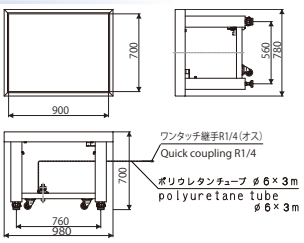
Desktop anti-vibration table E-VS-S319A

- Natural frequency: 2.5 to 3.5 Hz
- Allowable load weight: 210 kg
- Supply pressure: 0.45 to 0.7 Mpa
- Dimensions: 700×530×60 mm
- Weight: 29 kg
- Connecting port: One-touch joint R 1/4 male
- With regulator



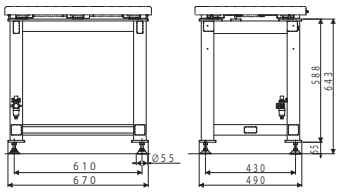
Anti-vibration stand E-VS-R16E

- Natural frequency: V; 2.0 Hz H; 2.2 Hz
- Allowable load weight: 260 kg
- Air supply: 0.45 to 0.7 Mpa
- Dimensions: 980×780×700 mm
- Weight: 190 kg
- Connecting port: One-touch joint R 1/4 male
- With regulator



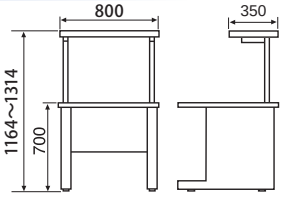
Stand for desktop anti-vibration table E-VS-S318A

- Dimensions: 670×490×643 mm
- For desktop anti-vibration table E-VS-S319A

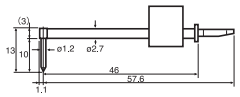
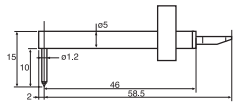
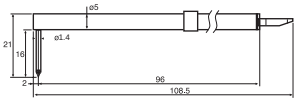
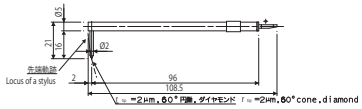
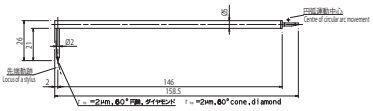
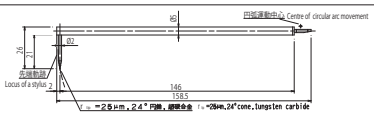
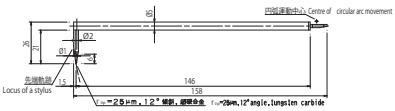
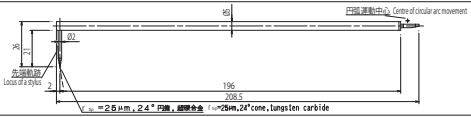
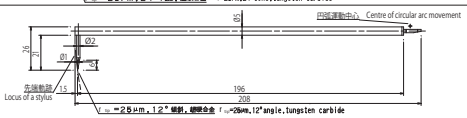
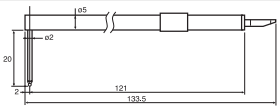
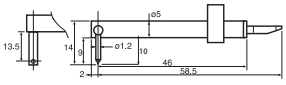
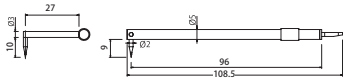
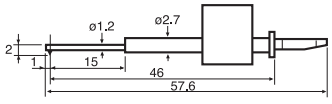
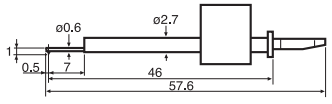
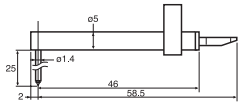
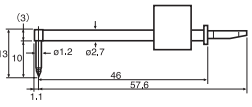
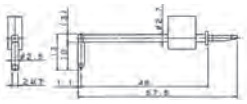


System rack E-DK-S24A

- Dimensions: 800 mm x 730 mm x (1164 to 1314) mm



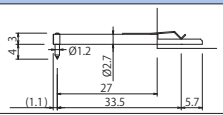
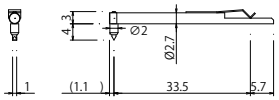
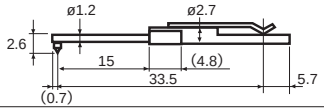
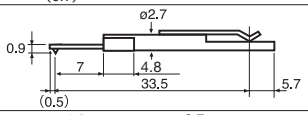
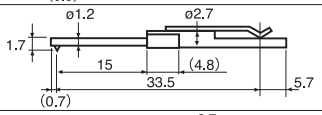
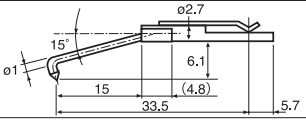
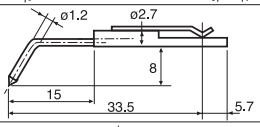
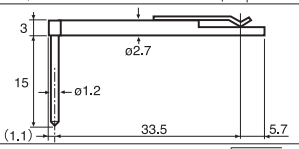
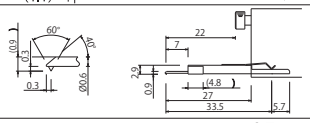
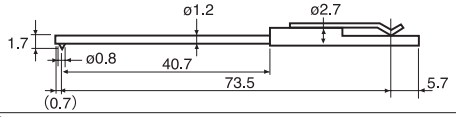
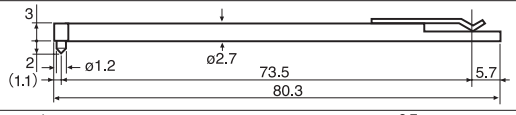
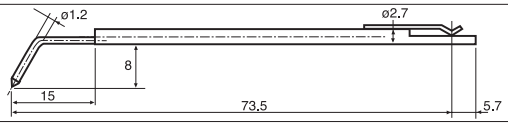
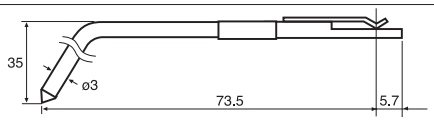
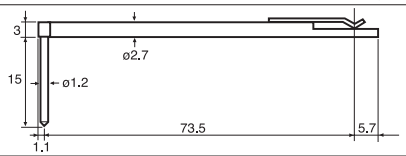
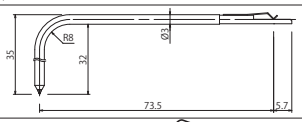
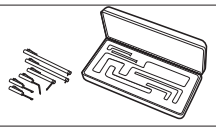
Stylus for Hybrid Detector

Roughnss	Contour	Name	Model	External view	Specifications	Remarks
●	●	General purpose	DM48505		Rtip 2 μm, 60° conical diamond, 0.75 mN	• Stroke: 13 mm • For roughness and contour measurement
●	●	General purpose highly rigid stylus	DM84071		Rtip 2 μm, 60° conical diamond, 0.75 mN	• Stroke: 13 mm • For roughness and contour measurement • Standard accessory for S-NEX 2**
	●	Highly rigid stylus for contours	DM48775		Rtip 25 μm, 24° conical carbide, 4 mN	• Stroke: 26 mm • For contour measurement only • Standard accessory
●	●	General purpose highly rigid stylus	DM48636		Rtip2 μm, 60° conical diamond, 0.75 mN	• Stroke: 26 mm • For roughness and contour measurement
●	●		DM84400		Rtip 2 μm, 60° conical diamond, 4 mN	• Stroke: 39 mm • For roughness and contour measurement • 25 mm height block gauge required for calibration • Using a wind proof cover is recommended
	●	Highly rigid stylus for contours	DM84399		Rtip 25 μm, 24 ° conical carbide, 4.5 mN	• Stroke: 39 mm • For contour measurement only • 25 mm height block gauge required for calibration • Using a wind proof cover is recommended
	●		DM84409		Rtip 25 μm, 12 ° angle carbide, 4.5 mN	• Stroke: 39 mm • For contour measurement only • 25 mm height block gauge required for calibration • Using a wind proof cover is recommended
	●		DM84376		Rtip 25 μm, 24 ° conical carbide, 7 mN	• Stroke: 52 mm • For contour measurement only • 25 mm height block gauge required for calibration • Using a wind proof cover is recommended
	●		DM84377		Rtip 25 μm, 12° angle carbide, 7 mN	• Stroke: 52 mm • For contour measurement only • 25 mm height block gauge required for calibration • Using a wind proof cover is recommended
	●	Highly rigid stylus for contours	DM48509		Φ 1 ruby ball, 3.2 mN	• Stroke: 32.5 mm • For contour measurement only
●	●	Offset measurement stylus	DM48511		Rtip 2 μm, 60° conical diamond, 0.75 mN	• Stroke: 13 mm • For roughness and contour measurement
	●	Offset measurement stylus	DM48742		Rtip25 μm, 24° conical diamond, 4 mN	• Stroke: 26 mm • For contour measurement only
●	●	Small hole stylus	DM48513		Rtip 2 μm, 60° conical diamond, 0.75 mN	• Stroke: 13 mm • For roughness and contour measurement
●	●	Extra small hole stylus	DM48514		Rtip 2 μm, 60° conical diamond, 0.75 mN	• Stroke: 13 mm • For roughness and contour measurement
●	●	Deep hole stylus	DM48515		Rtip 2 μm, 60° conical diamond, 0.75 mN	• Stroke: 13 mm • For roughness and contour measurement
●	●	Stylus for fine contours	DM48588		Rtip 5 μm, 30° conical diamond, 0.75 mN	• Stroke: 13 mm • For roughness and contour measurement
●	●	Stylus for ridge measurement	DM48774		Rtip 2 μm, 60° knife edge-shaped diamond, 0.75 mN	• Stroke: 13 mm • For roughness and contour measurement

*Special stylus will be studied and proposed in accordance with customer's workpieces.

Standard Inventory Parts

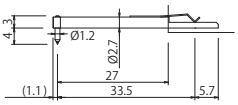
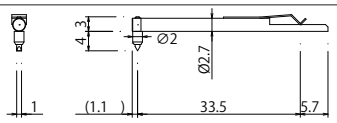
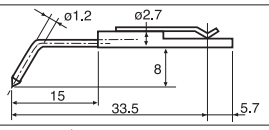
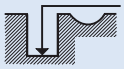
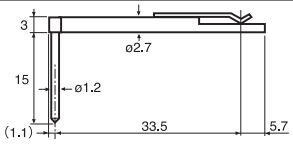
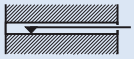
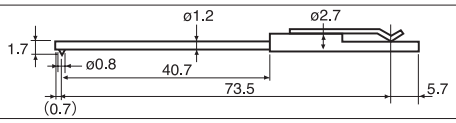
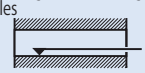
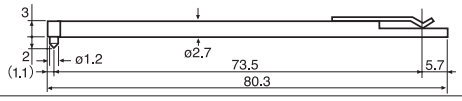
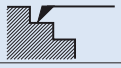
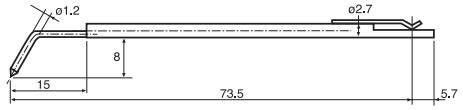
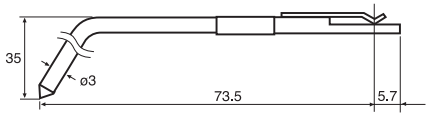
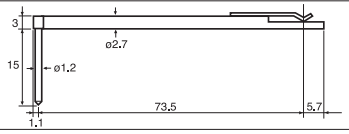
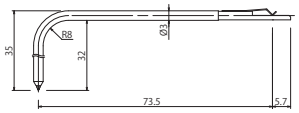
Stylus for Roughness(Rtip 2 µm)

Measuring application	Model	External view	Specifications	Remarks
General purpose	DM43801		Rtip 2 µm, 60° conical diamond, 0.75 mN	• All orientations • Horizontal tracing possible • Standard accessory for S-NEX **1
Fine wires, knife edges	DM43802		Rtip 2 µm, 60° knife edge-shaped diamond, 0.75 mN	• All orientations
Medium fine holes	DM43809		Rtip 2 µm, 60° conical diamond, 0.75 mN	• All orientations • Horizontal tracing possible
Extra fine holes, gear flank	DM43811		Rtip 2 µm, 60° conical diamond, 0.75 mN	• All orientations
Fine holes/ thin grooves	DM43812 *1		Rtip 2 µm, 60° conical diamond, 0.75 mN	• All orientations • Horizontal tracing possible
Hole bottom/ conical surfaces	DM43813		Rtip 2 µm, 60° conical diamond, 0.75 mN	• All orientations • Horizontal tracing possible
Corners/ tooth surfaces	DM43814 *1		Rtip 2 µm, 60° conical diamond,	• All orientations • Horizontal tracing possible
Deep grooves/ round grooves	DM43815 *1		Rtip 2 µm, 60° conical diamond, 0.8 mN	• Downward measurement • Large waveform distortion
Gear tooth profiles, thread flank	DM43818		Rtip 2 µm, 60° conical diamond, 0.75 mN	• All orientations • Magnifi cation: x10000
Fine long holes	DM43821		Rtip 2 µm, 60° conical diamond, 2 mN	• Downward measurement • Sensitivity: 1/2 • Magnifi cation: x5000 • Large waveform distortion
Low magnification, long holes	DM43822 *1		Rtip 2 µm, 60° conical diamond, 3 mN	• Downward measurement • Sensitivity: 1/2 • Magnifi cation: x20000
Low magnification, corners	DM43824		Rtip 2 µm, 60° conical diamond, 4 mN	• Downward measurement • Sensitivity: 1/2 • Magnifi cation: x2000
Deep groove corners	DM43827		Rtip 2 µm, 60° conical diamond, 4 mN	• Downward measurement • Sensitivity: 1/2 • Magnifi cation: x10000
Deep hole grooves, O-ring groove bottom surfaces	DM43825		Rtip 2 µm, 60° conical diamond, 3.4 mN	• Downward measurement • Sensitivity: 1/2 • Magnifi cation: x20000 • Large waveform distortion
Extra deep grooves	DM43826		Rtip 2 µm, 60° conical diamond, 4 mN	• Downward measurement • Sensitivity: 1/2 • Magnifi cation: x5000 • Large waveform distortion
Stylus set	DM43900-A	Pickup E-DT-SS01A•B E-DT-SSE01A用 	Rtip 2 µm	Nosepiece：DM44026-A Stylus: DM43801, DM43811, DM43812, DM43814, DM43815, DM43822

*1 Indicates stylus/nose piece set DM43900-A.

Standard Inventory Parts

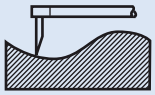
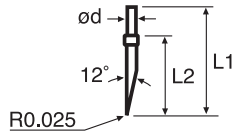
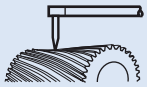
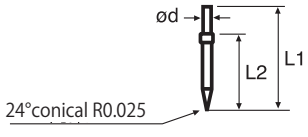
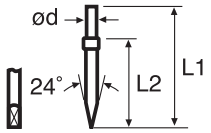
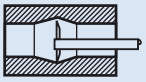
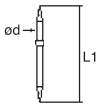
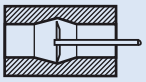
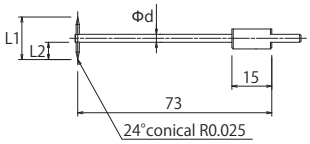
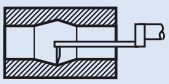
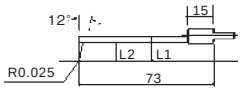
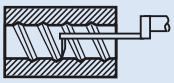
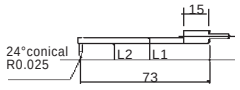
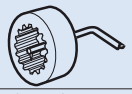
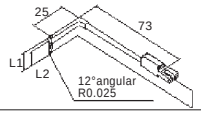
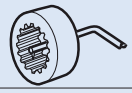
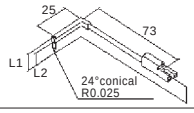
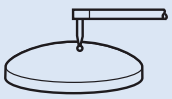
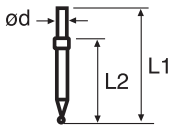
Stylus for Roughness(Rtip 5 µm)

Measuring application	Model	External view	Specifications	Remarks
General purpose 	010 2501		Rtip 5 µm, 90° conical diamond, 4 mN	• All orientations • Horizontal tracing possible
Fine wires, knife edges 	010 2502		Rtip 5 µm, 90° knife edge-shaped diamond, 5 mN	• All orientations
Corners/ tooth surfaces 	010 2514		Rtip 5 µm, 60° conical diamond, 4 mN	• All orientations • Horizontal tracing possible
Deep grooves/round grooves 	010 2515		Rtip 5 µm, 90° conical diamond, 5 mN	• Downward measurement • Large waveform distortion
Fine long holes 	010 2521		Rtip 5 µm, 90° conical diamond, 5 mN	• Downward measurement • Sensitivity: 1/2 • Magnification: x5000 • Large waveform distortion
Low magnification, long holes 	010 2522		Rtip 5 µm, 90° conical diamond, 5 mN	• Downward measurement • Sensitivity: 1/2 • Magnification: x20000
Low magnification, corners 	010 2524		Rtip 5 µm, 60° conical diamond, 5 mN	• Downward measurement • Sensitivity: 1/2 • Magnification: x20000
Deep groove corners 	010 2527		Rtip 5 µm, 60° conical diamond, 8 mN	• Downward measurement • Sensitivity: 1/2 • Magnification: x10000 • Large waveform distortion
Deep hole grooves, O-ring groove bottom surfaces 	DM43271		Rtip 5 µm, 90° conical diamond, 5.5 mN	• Downward measurement • Snsitivity: 1/2 • Magnification: x20000
Extra deep grooves 	DM43255		Rtip 5 µm, 90° conical diamond, 6 mN	• Downward measurement • Snsitivity: 1/2 • Magnification: x10000 • Large waveform distortion

Standard Inventory Parts

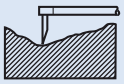
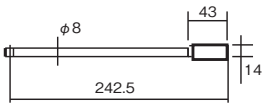
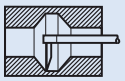
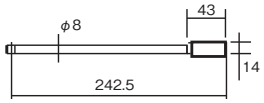
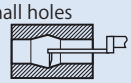
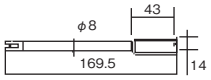
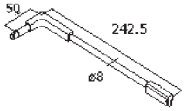
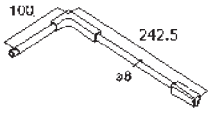
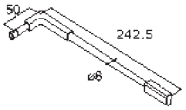
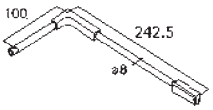
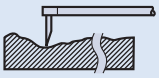
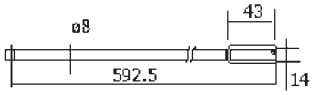
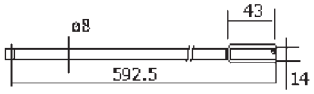
Standard Inventory Parts

Stylus and Arm for Contour

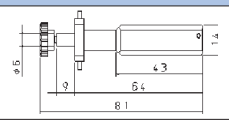
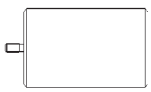
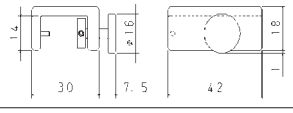
Measuring application	Model	External view	d	L1	L2	Applicable arm	Remarks
General purpose(one-sided cut) 	DM45501		3	60	52	DM83501 DM83517 DM83518	
	DM45502		3	34	26		
	DM45503		2	21	13	DM83507 DM83519 DM83520	
Helix surface(cone) 	DM45504		3	60	52	DM83501 DM83517 DM83518	
	DM45505		3	34	26		• Standard accessory for S-NEX ∗3∗/∗4∗
	DM45506		2	21	13	DM83507 DM83519 DM83520	
Edge line(knif edge) 	DM45507		3	60	52	DM83501 DM83517 DM83518	
	DM45508		3	34	26		
	DM45509		2	21	13	DM83507 DM83519 DM83520	
Up/downward (cone) 	DM83502 ∗1		3	26	—	DM83501 DM83517 DM83518	• Measuring force: 10 mN or less
	DM83503 ∗1		3	32	—		
	DM83504 ∗1		3	44	—		
Small hole up/ downward (cone) 	DM83534 ∗3		3	16	6.5	DM83521	• Measuring force: 10 mN or less
	DM83535 ∗3		3	9	3		
	DM83536 ∗3		2	5	1.5		
	DM83537 ∗3		1	2.4	0.7		
Small holes (onesided cut) 	DM83522		—	12	9	DM83521	• Measuring force: 10 mN or less
	DM83523		—	8	5		
	DM83524 ∗2		—	4.5	1.5		
Small hole helix surface(cone) 	DM83525		—	12	9		• Measuring force: 10 mN or less
	DM83526		—	8	5		
	DM83527 ∗2		—	4.5	1.5		
Ordinary off set (one-sided cut) 	DM83528		—	12	9		• Measuring force: 10 mN or less • Offset: 25 mm
	DM83529		—	8	5		
	DM83530 ∗2		—	4.5	1.5		
Helix surface off set (cone) 	DM83531		—	12	9		• Measuring force: 10 mN or less • Offset: 25 mm
	DM83532		—	8	5		
	DM83533 ∗2		—	4.5	1.5		
High precision (ball) 	DM45522		3	60	52	DM83501 DM83517 DM83518	• Φ 0.7 Ruby ball
	DM45523		3	34	26		
	DM45524		2	21	13	DM83507 DM83519 DM83520	
	DM45525		3	60	52	DM83501 DM83517 DM83518	• Φ 1 Ruby ball
	DM45526		3	34	26		
	DM45527		2	21	13	DM83507 DM83519 DM83520	

*1: Up/downward measurement masterball calibration unit (E-MC-S97A) is required. *2: Small hole masterball calibration unit (E-MC-S59D) is required.
*3: Small hole up/downward measurement calibration unit (E-MC-S104A) is required.

Standard Inventory Parts

Measuring application	Model	External view	Applicable stylus	Remarks
General purpose 	DM83501		DM45501 DM45502 DM45504 DM45505 DM45507 DM45508 DM45522 DM45523 DM45525 DM45526 DM83502 DM83503 DM83504	• S-NEX ∗3∗ / ∗4∗ standard accessory • Stylus diameter d = 3 mm • Stroke: 60 mm(when combined with left stylus)
Inner surface 	DM83507		DM45503 DM45506 DM45509 DM45524 DM45527	• Stylus diameter d = 2 mm • Stroke: 60 mm(when combined with left stylus)
Small holes 	DM83521		DM83522 ≀ DM83537	• Stroke: 60 mm(when combined with left stylus)
Offset 	DM83517		DM45501 DM45502 DM45504 DM45505 DM45507 DM45508 DM45522 DM45523 DM45525 DM45526 DM83502 DM83503 DM83504	• Offset: 50 mm • Provided with auxiliary weight • Measuring force: 10mN or less • Stylus diameter d = 3 mm • Stroke: 60 mm(when combined with left stylus)
	DM83518			• Offset: 100 mm • Provided with auxiliary weight • Measuring force: 10mN or less • Stylus diameter d = 3 mm • Stroke: 60 mm(when combined with left stylus)
	DM83519		DM45503 DM45506 DM45509 DM45524 DM45527	• Offset: 50 mm • Provided with auxiliary weight • Measuring force: 10mN or less • Stylus diameter d = 2 mm • Stroke: 60 mm(when combined with left stylus)
	DM83520			• Off set: 100 mm • Provided with auxiliary weight • Measuring force: 10mN or less • Stylus diameter d = 2 mm • Stroke: 60 mm(when combined with left stylus)
Long items 	DM83512		DM45501 DM45502 DM45504 DM45505 DM45507 DM45508 DM45522 DM45523 DM45525 DM45526	• Offset: 100 mm • Provided with auxiliary weight • Measuring force: 10mN or less • Stylus diameter d = 2 mm • Stroke: 60 mm(when combined with left stylus)
Long holes 	DM83514		DM45503 DM45506 DM45509 DM45524 DM45527	• Lever movable range: 120 mm • Provided with auxiliary weight • Arm clamp attached • Stylus diameter d = 3 mm • Stroke: 60 mm(when combined with left stylus)

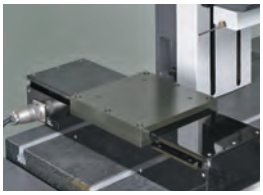
Quick change attachment

Measuring application	Model	External view	Applicable arm	Remarks
Quick change attachment	DM83506			• Required for S-NEX ∗3∗/∗4∗ when using linear series (C1700·1710·2700·S1900·1910·2900) arm or stylus • Auxiliary weight required
Auxiliary weight for quick change attachment	DM83505-S310*1*3		0102800 0102805 0102801 0102806 0102802 0102807 0102804	• S-NEX ∗3∗ • Measuring force 10 mN or less
	DM83505-S307*1*3		0102808	• S-NEX ∗3∗ • Measuring force 10 mN or less
	DM83505-S308*1*3		0102810	• S-NEX ∗3∗ • Measuring force 10 mN or less
	DM83505-S305*1*3		0102800	• S-NEX ∗3∗ • Measuring force 30 mN or less
	DM83505-S306*1*3		0102801	• S-NEX ∗3∗ • Measuring force 30 mN or less
	DM83505-S309*2*3		DM45528 DM45531 DM45529 DM45532 DM45530 DM45533	• S-NEX ∗4∗ • Measuring force 10 mN or less
	DM83505-S301*2*3		DM45528 DM45529	• S-NEX ∗4∗ • Measuring force 30 mN or less
Arm clamp	DM83538		0102808 0102810	• Required when using combination of linear series long arm 0102808, 0102810 and quick change attachment

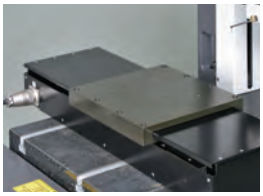
*1: Please refer to our general catalogue of surface texture and contour measuring instruments for finding stylus which can be attached to the applicable arm for selecting S-NEX ∗ 3 ∗ anixiliary weight. Standard Inventory Parts
*2: Please refer to our general catalogue of surface texture and contour measuring instruments for finding stylus which can be attached to the applicable arm for selecting S-NEX ∗ 4 ∗ anixiliary weight.
*3: Please contact us in case of using combination of stylus and arm other than *1 and *2.

CNC tables supporting labor-saving

The CNC table, which can be retrofitted to the measuring instrument can be controlled by the integrated measurement software ACCTee for easy teaching and playback.



Y-axis CNC table (100 mm)	
E-AT-S105A	
Travel	100 mm
Max. travel speed	50 mm/s
Positioning accuracy	20 µm
Max. load	30 kg
Weight	Approx. 19 kg



Y-axis CNC table (200 mm)	
E-AT-S106A	
Travel	200 mm
Max. travel speed	50 mm/s
Positioning accuracy	20 µm
Max. load	30 kg
Weight	Approx. 22 kg

*The image is with a sub-table (special item).

*

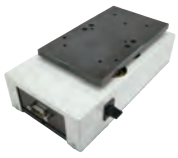
θ-axis CNC table (Horizontal)	
E-AT-S107A	
Travel	360°
Max. travel speed	20°/sec
Positioning accuracy	0.03°
Max. load	15 kg
Weight	Approx. 2.5 kg

*

θ-axis CNC table (Vertical)	
E-AT-S108A	
Travel	360°
Max. travel speed	20°/sec
Positioning accuracy	0.03°
Max. load	5 kg
Allowable moment load	5 N・m
Weight	Approx. 3.2 kg

Automatic tilting table

Combined with SURFCOM series, it reduces the troublesome tilting adjustment.

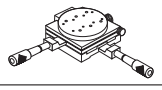
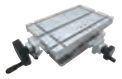
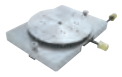
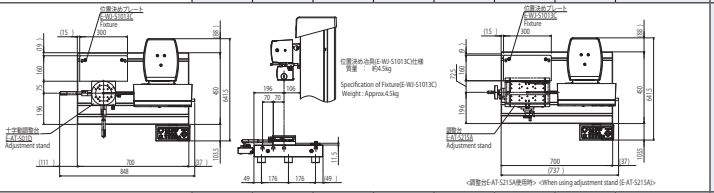
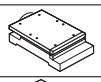
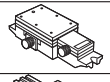
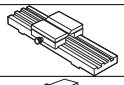
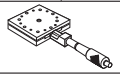


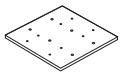
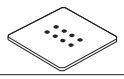
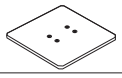
1 axis automatic tilting table	
E-AT-S72B	
Adjustment range	±1°
Max. loadable weight	5 kg
Weight	Approx. 3 kg

2 axes automatic tilting table	
E-AT-S62B	
Adjustment range	±1°
Max. loadable weight	5 kg
Weight	Approx. 4 kg

●Separate related options are required to use the CNC tables and automatic tilting tables. Please contact us for details.

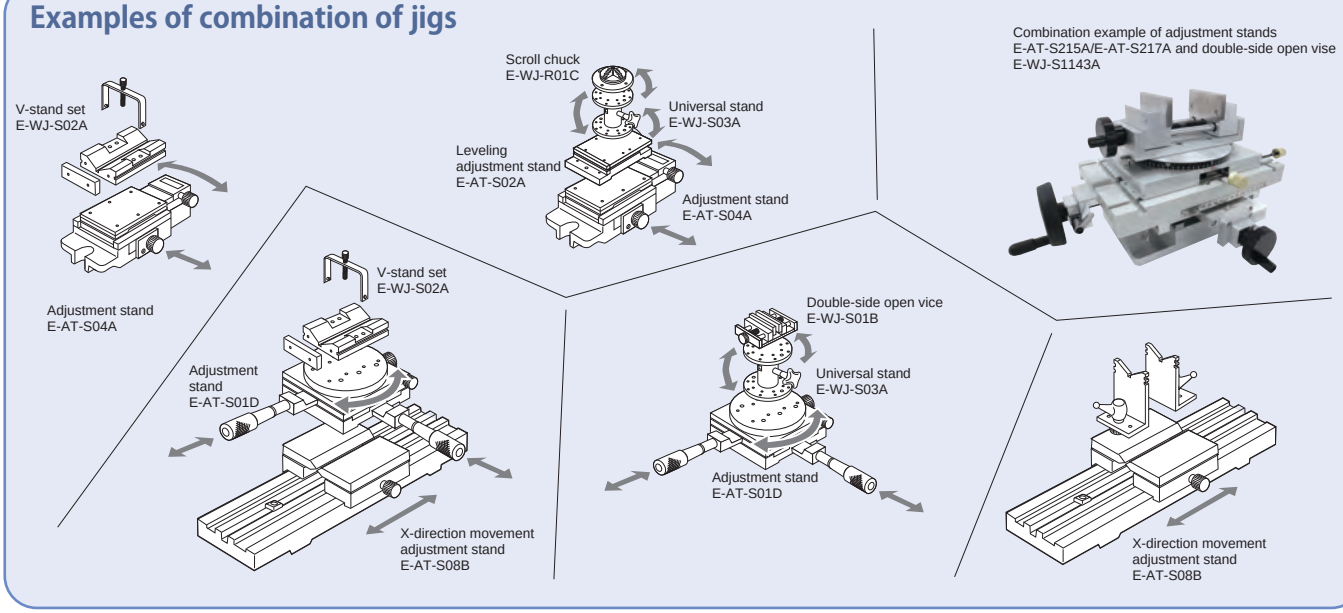
Jigs

Name	Model	External view	Orthogonal axis adjustment (mm)			Swivel adjustment		Tilt adjustment		Table size (mm)	Allowable load (net wt.) (kg)	Remarks
			X	Y	Z	Fine	Coarse	Fine	Coarse			
Adjustment stand	E-AT-S01D		50	50		8°	360°			ϕ 150	20 (7)	• Min. reading increment 10 µm
	E-AT-S215A		± 55	± 30						280 × 180	50(8.5)	Attachable fixtures: E-AT-S217A/E-AT-S02A/E-AT-S64B/E-WJ-R01C/E-WJ-S01B/E-WJ-S02A/E-WJ-S03A
	E-AT-S217A					± 5°	360°			ϕ 150	20(2.5)	Attachable fixtures: E-WJ-S1143A/E-AT-S02A/E-AT-S64B/E-WJ-R01C/E-WJ-S01B/E-WJ-S02A/E-WJ-S03A/E-AT-S215A
Positioning plate	E-WJ-S1013C*5*6										(4.5)	• Dimensions: 300 mm × 160 mm × 11.5 mm • Usable for adjustable stand E-AT-S01D/E-AT-S215A • For S-NEX(DX2/SD2) and S-NEX
Leveling adjustment stand	E-AT-S02A							± 1.5°		80 x 110	15 (3)	
Adjustment stand	E-AT-S04A			± 8		± 3°				80 x 125	15 (8)	
X-direction movement adjustment stand	E-AT-S08B		400							150 x 150	20 (25)	
3D fine adjustment stand	E-AT-S10B		50	50	30					76 x 76	1.6 (5)	• Straightness: 0.03 mm
1-axis precision fine adjustment stand	E-AT-S11B			50						125 x 150	20 (4.9)	• Straightness: 3 µm • Min. reading value: 10 µm
Swivel fine rotation staand	E-AT-S12B					± 5°	360°			ϕ 90	3 (0.58)	• Min. reading value: 5′
Tilting stand	E-AT-S64B							± 20°		60 x 120	10 (1)	• Min. reading value: 5′
Universal stand	E-WJ-S03A						360°		± 90°	ϕ 110	3 (2.5)	• X/Y-direction adjustment

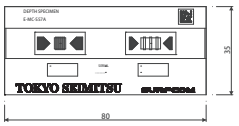
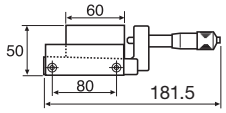
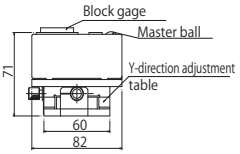
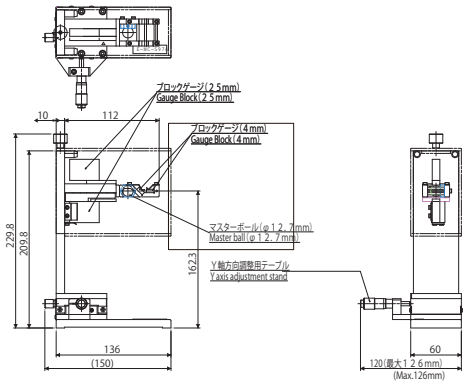
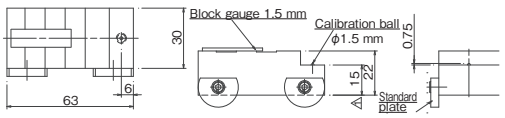
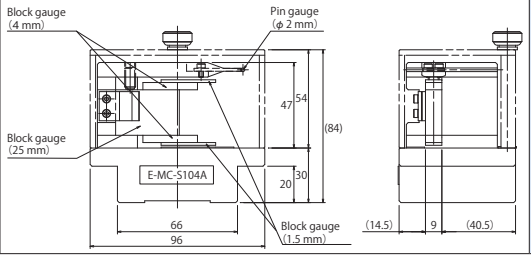
Name	Model	External view	V Holder (mm)	Chucking (mm)	Vice (mm)	Clamp (mm)	Flat surface (mm)	Allowable load (net wt.) (kg)	Remarks
Double-side open vice	E-WJ-S01B				Inside: 0 to 57 outside: 38 to 105			5 (0.8)	• Consult us when combining with the tilt stand.
	E-WJ-S1143A				Jaw pos.1: 0 to 70 (inside the jaws), 16 to 86 (outside the jaws) Jaw pos.2: 60 to 136 (inside the jaws), 82 to 152 (outside the jaws)			(2)	Attachable fixtures: E-AT-S217A
V-stand set	E-WJ-S02A		ϕ 1 ～ ϕ 150					(1.5)	• Provided with workpiece clamper
V-stand holder set	E-WJ-S04A		ϕ 12 ～ ϕ 120					(3)	• Two pieces used just for T-groove clamp
Compact stand	E-WJ-S05A		ϕ 4 ～ ϕ 100					(0.4)	
Load plate	E-WJ-S06A						150 x 150 angle plate	(1)	
Scroll chuck	E-WJ-R01C			OD: ϕ 2 ～ϕ 79 ID: ϕ 20 ～ϕ 90				(1)	
Iris chuck	E-WJ-R10B E-WJ-R378B			OD: ϕ 5 ～ϕ 110 OD: ϕ 5 ～ϕ 150				(3) (5)	• Manufactured after receipt of order
Clamp set	JC-3					Height 40 to 60		-	
Ceramic load plate	E-WJ-S252A						300 x 300 angle plate	(5.3)	• Manufactured after receipt of order
	E-WJ-S234A						500 x 500 angle plate	(15)	• Manufactured after receipt of order

Standard Inventory Parts

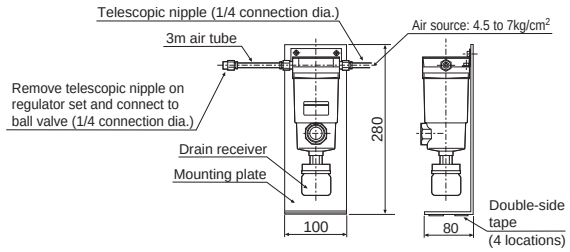
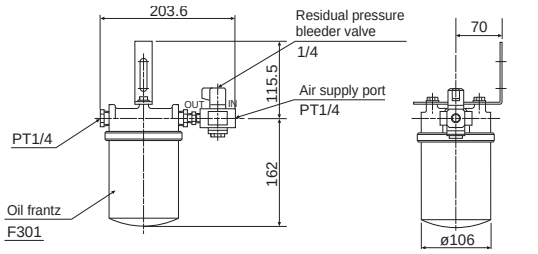
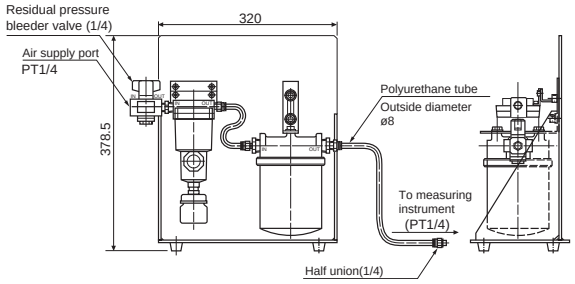
Examples of combination of jigs



Calibrators

Name	Model	External view	Specifications	Remarks
Reference specimen	E-MC-S109A E-MC-S24D		E-MC-S109A: For Japan (indication in millimeters) E-MC-S24D: For outside Japan (indication in millimeters / inches) Calibration surface:Ra approx. 3.1 μm Stylus check surface: Ra approx. 0.4 μm Measured value described	• For sensitivity calibration and stylus check • Applicable to JCSS calibration and NIST calibration • Standard accessory for S-NEX 2**
Level difference reference specimen	E-MC-S57A		Large range: Approx. 20 μm Small range: Approx. 2 μm Measured value described.	• Standard accessory for NEX series and linear series roughness system • For detector sensitivity calibration and stylus check • Applicable to JCSS calibration
Magnification calibrator	E-MC-S50C		Narrow range accuracy: 0 to 10 μm ± 0.1 μm Wide range accuracy: 0 to 400 μm ± 1.0 μm	• For magnification calibration
Master ball calibration unit	E-MC-S65B		Reference sphere: ϕ 12.7 mm Block gauge: S-NEX 2**·····10 mm *3*/*4* ··· 25 mm	• For measurements with stylus pointing downwards • Standard accessory for S-NEX 2**/*3*/*4*
Up/downward measurement stylus calibration unit	E-MC-S97A		Reference sphere: ϕ 12.7 mm Block gauge: 4 mm、25 mm	• For Up/downward measurement stylus • For S-NEX *3*/*4*
Small hole stylus master ball calibration unit	E-MC-S59D		Block gauge: 1.5 mm Reference sphere: Φ 1.5 mm	• For measurements with stylus pointing downwards and stylus for small bore measurement • For S-NEX*3*/*4*
Small hole up/ downward measurement stylus calibration unit	E-MC-S104A		Block gauge: 25 mm, 4 mm, 1.5 mm Pin gauge: Φ 2 mm	• For small hole up/downward measurement stylus • For S-NEX*3*/*4*

Are peripherals

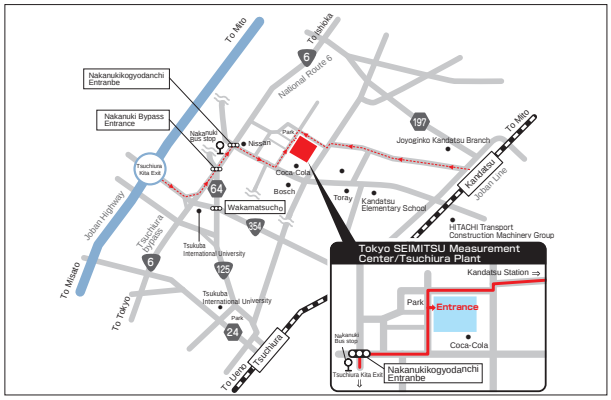
Name	Model	External view	Specifications	Remarks
Water separator	L-WF-R08B			Applicable models: All models Dimensions: 100 mm (W) x 80 mm (D) x 280 mm (H)
Oil separator	L-WF-R07B		Filtration: 0.1 μ m	Applicable models: All models Dimensions: 100 mm (W) x 190 mm (H) Weight: 1.7 kg
Air purifier set	L-WF-R11B		Install L-WF-R08B water separator, L-WF-R07B oil separator on mounting plate	Applicable models: All models Dimensions: 320 mm (W) x 170 mm (D) x 378.5 mm (H)

ACCRETECH showrooms in Japan

ACCRETECH offers introduction activities and training programs for the measuring devices at our offices. If you are considering buying our products, please visit one of our offices to check their performance.

Tsuchiura Showroom (Measurement Center/Tsuchiura Plant)

4, Higashi-Nakanuki-machi, Tsuchiura-shi, Ibaraki 300-0006, Japan
Tel: 81 (29) 831-1234 Fax: 81 (29) 831-4453



We would like to please and impress our customers by offering solutions to their measurement problems and bringing benefits to them.

The Measurement Center offers consultation on measurement technology and proposes solutions.

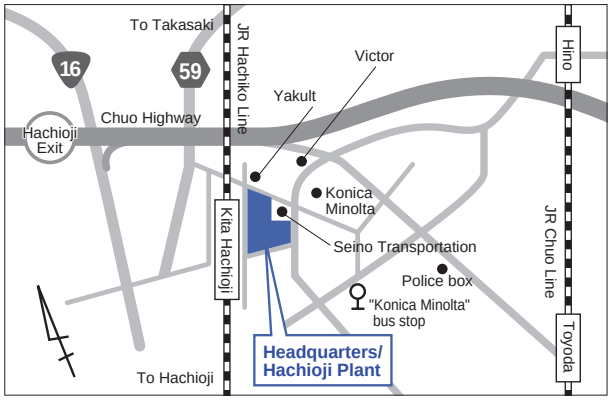
Customers may say, "We want to measure particular workpieces but,"

- We don't have measuring instruments and cannot purchase one right now.
- We cannot use our current machines to evaluate a newly developed prototype.
- (We have to conduct evaluation with high-precision, large-scale, or non-contact type machines.)
- The quantity of parts is large. The capacity of our machines is not enough.
- We want to raise measurement efficiency (We want to have automatic measurement programs).

Please contact us if you have any of these needs or concerns.
The Measurement Center will help you solve your problems.
We can meet your demand with the lineup of state-of-the-art machines.
Please visit to the nearest office.

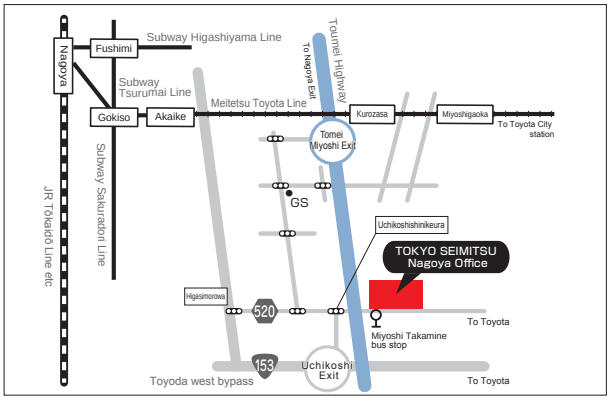
Hachioji Showroom (Hachioji Plant)

2968-2, Ishikawa-machi, Hachioji-shi, Tokyo 192-0032, Japan
Tel: 81 (42) 642-0381 Fax: 81 (42) 642-0386



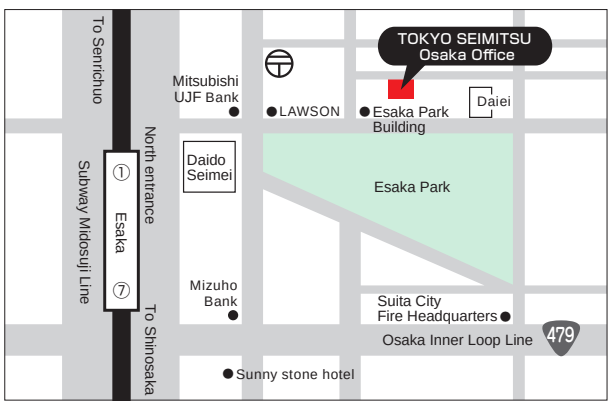
Nagoya Showroom (Nagoya Office)

96, Shin-Ikeura, Uchikoshi-cho, Miyoshi-shi, Aichi,470-0213 Japan
Tel: 81 (56) 132-8501 Fax: 81 (56) 132-8618



Osaka Showroom (Osaka Office)

1-18-27, Esaka-cho, Suita-shi, Osaka, 564-0063 Japan
Tel: 81 (66) 821-0221 Fax: 81 (66) 821-0210



Training School

We regularly offer paid training class to users who wish to learn all the functions.There are basic courses with standard curriculum and tailored courses.

— Introduction of the training school (basic course) —

Coordinate Measuring Machines

6 different courses are selectable according to your using model. All courses are two consecutive days.
Time 9:30 to 16:30 (both days)
http://www.accretech.jp/product/measuring/training_sfg/

SURFCOM / CONTOURECORD / RONDCOM

3 different courses are selectale according to your using model.
Time 9:30 to 16:30
URL / https://www.accretech.jp/product/measuring/training_sfg/

*Please bring writing utensils. Textbooks will be given on the first day of the course
*Make application two weeks prior to the training program and inform the number of participants and the starting date of the course.
*Participation is not allowed without prior application.
*Please contact us about tailored courses.

After-sales support information

We provide total support for the daily measurement operations of customers who have chosen Tokyo Seimitsu products, from careful inspection, repair and maintenance by our skilled service staff to the introduction of accessories.

Various services including JCSS calibration and inspection are provided to customers

ACCRETECH

XYZAX Coordinate Measuring Machines

ZEISS

ZEISS Coordinate Measuring Machines

ACCRETECH

Surface Texture and Contour Measuring Instruments

ACCRETECH

Roundness and Cylindrical Profile Measuring Instruments

- Periodic inspection service
- JCSS periodic inspection service
- Mid-term inspection service
- Annual maintenance service

Long-term support is provided to our customers' measuring instruments through replacing parts and offering measurement support tools.

(Replacement)

Old-model control unit and probe head are replaced to improve stability and productivity

Old-model
VAST XT

New-model
VAST XT GOLD

Old-model
PH10T/M

New-model
PH10TPLUS
PH10MPLUS

(Measurement Support)

We help our customers improve productivity through offering highly flexible assembly fixtures OmniFix® or making customized fixtures

ZEISS Industrial Quality Solutions, LLC
6250 Sycamore Lane North
Maple Grove, MN 55369
USA

Phone: +1 763 744-2400
Fax: +1 763 533-0219
info.metrology.us@zeiss.com
www.zeiss.com/metrology

Seeing beyond

ISO 9001
ISO 14001
BUREAU VERITAS
Certification

UKAS MANAGEMENT SYSTEMS
0008

ISO 9001 and ISO 14001 awarded to the Hachioji and Tsuchiura Plants

https://www.accretech.jp/

B-83-1094-E-2210