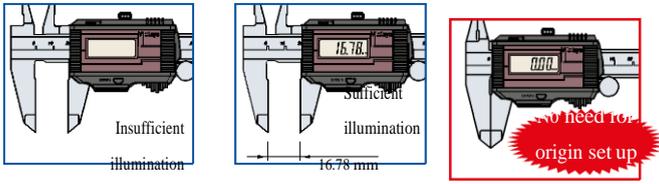


Calipers

SERIES 500 – ABSOLUTE Digimatic Coolant Proof Solar SuperCaliper

- Top-of-the-line digital caliper. Solar type caliper with no battery and IP67 protection assures waterproof reliability.
- With no annoying origin restoration necessary, a measurement can be started any time and there is no restriction on operating speed.



- SPC data output models can be integrated into statistical process control and measurement systems.
- Slider operation is smooth and comfortable.
- The impact resistance of the display unit has been increased for improved usability in workshop conditions.
- Waterproof design makes this SuperCaliper suitable for use in an environment containing large amounts of cutting fluid or coolant.
- 100% inspection by air leak test is performed to ensure quality and reliability.
- This SuperCaliper uses components that do not contain harmful substances and is compatible with RoHS Directives.



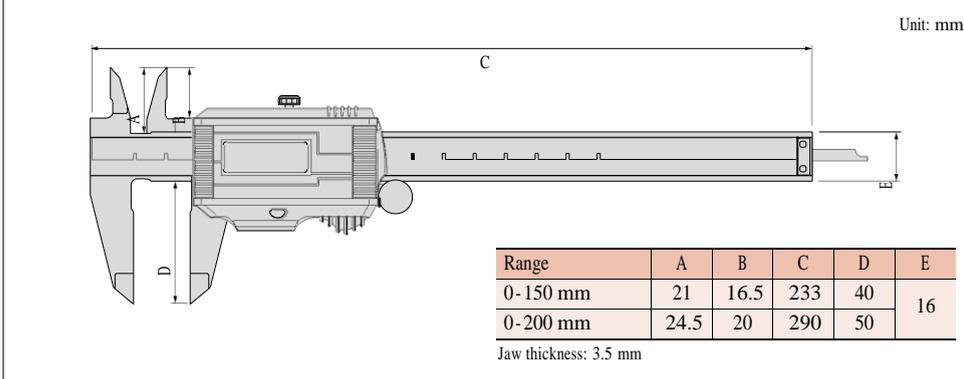
500-784

Specifications

Inch/Metric					
Code No.	Range	Resolution	Accuracy*1	Mass	Price
With SPC data output					
500-786	0-150 mm (0-6")	0.01 mm (.0005")	±0.02 mm	180 g	
500-787	0-200 mm (0-8")			210 g	
Without SPC data output					
500-784	0-150 mm (0-6")	0.01 mm (.0005")	±0.02 mm	180 g	
500-785	0-200 mm (0-8")			210 g	

*1 Excluding quantizing error.

Dimensions



Technical Data

Repeatability:	0.01 mm
Quantizing error:	±1 count
Dust/water protection level:	IP67*2
Power supply:	Solar cell*3
Scale type:	ABSOLUTE electromagnetic induction linear encoder

Max. response speed: Unlimited

*2 Rustproofing treatment to be applied after use.

*3 Can be used continuously above 60 lux ambient illumination.

Functions

ABSOLUTE system measurement:

After power is turned ON, measurement can be started without zero-setting if origin-setting was previously performed. The ABS (absolute) origin position can be changed by the ORIGIN button.

Zero-setting (INC measurement mode):

Displayed value can be set to zero at any arbitrary position of the slider for comparative measurements.

Data output:

Models equipped with this function have an output port for transferring measurement data to a Statistical Process Control (SPC) system.

Inch/mm selection:

Switches the units of measurement (at any time).

Alerts:

If the ambient illumination and the stored charge voltage are insufficient an error message is displayed and measurement stops. If contamination on the surface of the scale causes a calculation error, an error message is displayed and measurement stops.



Unaffected by splashing water and cutting oil.

Optional Accessories*

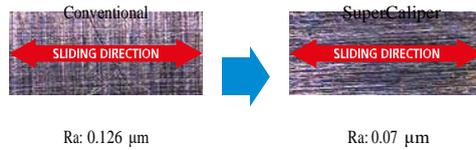
Code No.	Description	Price
02AZD790A	U-WAVE-T data cable with pushbutton (160 mm)	
02AZE140A	U-WAVE-T data cable with pushbutton and footswitch connection (160/500 mm)	
05CZA624	SPC data cable with pushbutton (1 m)	
05CZA625	SPC data cable with pushbutton (2 m)	
06AFM380A	USB Input Tool Direct USB-ITN-A (2 m)	

* Only for models with data output function.



SPC data output cable with pushbutton fitted to a Digimatic caliper.

Smooth slider movement makes for comfortable operation.
High quality guide surface finish for smooth slider movement.



Ra: 0.126 μm

Ra: 0.07 μm

Charge function

The minimum illumination required in the uncharged state is 60 lux. As shown in the table at right, this SuperCaliper can be used with confidence in a normal work environment. The charge function allows the operator to use the SuperCaliper without interrupting work even if the ambient illumination is temporarily insufficient. In the fully charged state this SuperCaliper can

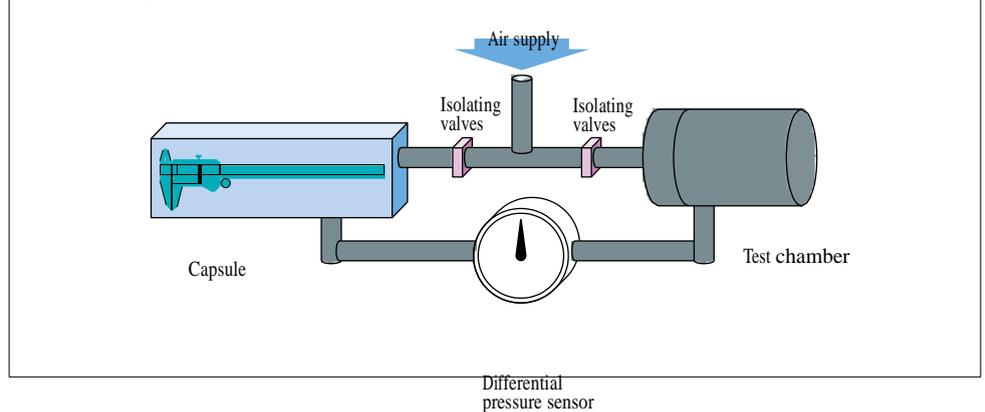
operate for approximately one hour in an environment of 50 lux illumination (less than the minimum necessary illumination intensity). The time necessary for full charge varies according to

the charging conditions. If the SuperCaliper is left unused in an illumination of 500 lux (usual for manufacturing environments), it takes approximately one hour to reach full charge.

Illumination (lx)	Site (possible operations)
1500	
1000	Design room, drafting room (fine visual work)
750	
500	Conference room, control room (usual manufacturing environment) (normal visual work)
300	
200	Machine room, electric room, lecture hall (rough visual work)
150	
100	Corridor, passage, stairs (very rough visual work)
75	
50	Emergency staircase, warehouse (loading, unloading work)
30	
20	

Excerpts from JIS Z 9110 Artificial Illumination Intensity Standard

Air leak test equipment for water resistance inspection



Generally, an air leak test is used for evaluating water resistance. Procedure: Place the measuring tool inside the capsule and seal it. Then fill the capsule and the test chamber with air at the required pressure and close the isolating valves. If there is no leak in the measuring tool the differential pressure sensor will read zero because the amount of air inside the test chamber is unchanging. However, if there is a leak in the measuring tool, the differential pressure sensor will show a non-zero reading due to a decrease in pressure inside the test chamber as air leaks into the tool. By detecting this differential pressure, GO/NO-GO judgement for the severity of the leak is performed. This air leak test is performed for all coolant proof calipers and coolant proof micrometers.



Air leak test equipment for coolant proof caliper.