

MARUI KEIKI

CATALOG

Apart from the standard products given in this catalog, we also accept orders for specially made items for all models. Please feel free to consult us regarding your requirements.



ISO-9001

From one-step-ahead technology to one-step-ahead world.

MARUI-KEIKI CO., LTD.

2-2138, Onaribashi, Kanuma-shi, Tochigi

322-0005, Japan

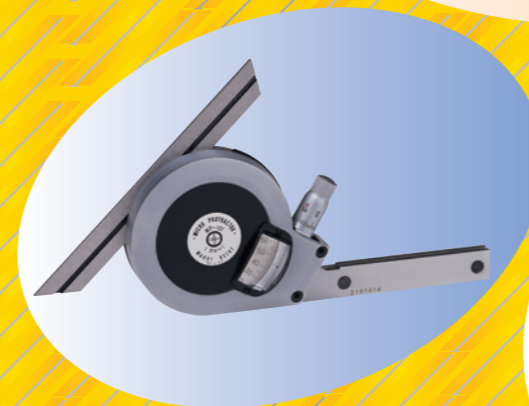
TEL: +81-289-62-7925

FAX: +81-289-64-9106

URL: <http://www.maruikeiki.com/>

E-mail: info@maruikeiki.com

Sales agent:



Caution!
When using our company's products, read carefully the danger, warning, and caution notes given in the instruction manual provided with the product as well as the indications affixed on the product.

0703-3-KB



From one-step-ahead technology to one-step-ahead world.

MARUI-KEIKI CO., LTD.

"More Precisely, More Accurately". Our Pride of Having No.1 Share in Precision Protractors offers our customers a sense of security.

Ever since the establishment in 1959, Marui Keiki Co., Ltd., has been facing squarely the problem of what is technology. Japan is called a Technology Giant. Our company's role is to fill up the requirements for "more advanced precision and accuracy" from our country of the Technology Giant. The precision measuring instruments of Marui Keiki Co., Ltd. are born out of incessant products development efforts.

The high reliability and appreciation to our company are supported by customers not only in Japan but also many countries in the world. Marui Keiki Co., Ltd. is challenging not only to strengthen the foundation of our technologically giant country but also to obtain higher reliability and appreciation from our customers.

3 **Digital Protractor DP-601, DP-601ST**
This is a high accurate protractor that is lightweight, compact, and uses an LCD digital display from which it is easy to read out the measured values. This reduces the burden on the measuring operator, makes the inspection process efficient and gives support for enhancing the reliability.

5 **Height Gauge Bevel HG-36**
This is a totally new concept digital protractor that can measure angles easily by mounting to a vernier calipers or to a height gauge. This instrument makes hitherto difficult angle measurements possible.

7 **Micro Protractor MP-101, MP-101ST**
This is a standard model of protractors. This is a high accurate protractor that can be used for various applications from assembling to inspection of machines, moulds, jigs, gauges, etc.

9 **Bevel Protractor BP-301, BP-301ST**
This is a typical protractor model that has been used in various countries in the world because of its high reliability. It has a simple construction, easy to use, and can be used for various applications with various optional accessories.

10 **Slide Protractor BP-303**
This is a protractor having a construction in which the stock part can be slid, and can be used for a wide range of applications. Particularly, it can be used smoothly even for acute angle measurement and step measurement that were conventionally considered to be difficult.

10 **Single Protractor SP-403 SP-403L (with lens)**
This is an entry model protractor that is lightweight, compact, and easy to operate. Its accurate measurement results are comparable to higher quality model.

11 **Compact Digital Angle Sensor RE-36, DP-621, DP-641**
This is a digital rotation angle sensor that has a coupling (RE-36) built in a compact body. This is a small sized sensor that realizes both wide general applicability and a minimum reading of 1 minute (0.01°).

13 **R Calipers RC-150**
World's first calipers type radius measuring instrument "R Calipers". Radius of up to 150mm can be measured by merely applying to the outer periphery of the part whose radius of curvature to be measured.

13 **Digital Outer Diameter Measuring Instrument MD Series**
The MD series outer diameter measuring instruments make it possible to measure the outer diameters of rollers, and cylindrical work pieces with simple operations. Easy direct reading type digital display contributes for reducing the measuring time.

14 **Speed Micro Mini SM-Mini**
This is a revolutionary measuring instrument that combines a high accurate digimatic indicator with a micrometer head. This can measure small precise parts or products in quantity efficiently.

Digital Protractor DP-601

This is a compact, light-weight, and high accurate protractor with easy-to-read LCD digital display. This reduces the burden on the person making the measurement, makes the inspection process efficient, and greatly contributes to increasing the reliability.

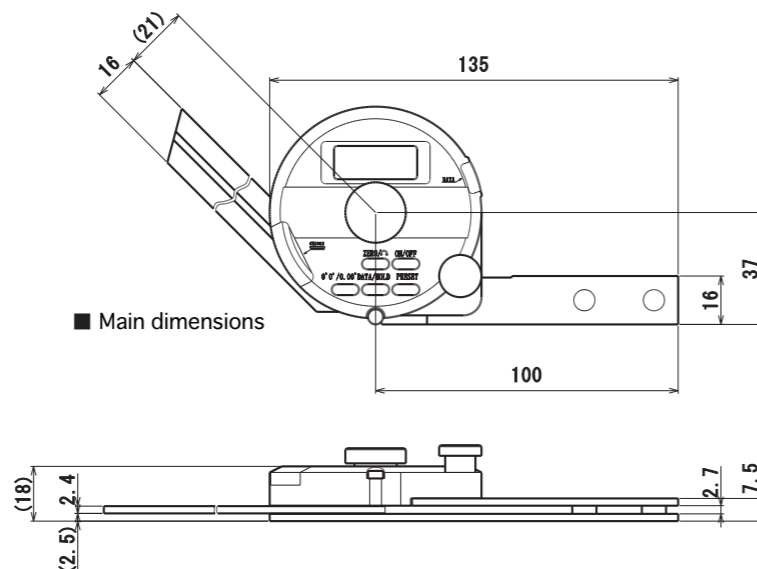


■ Features

- Compact, lightweight, high accurate digital protractor
- The main parts are made of rust-resistant hardened stainless steel (SUS420J2)
- Display mode selection between 0° 0' (base of 60) and 0.00° (decimal)
- Many different measurements are possible with optional accessories.
- With data output function

■ Specifications

Measurement range	-360°~+360° (Full circle)
Minimum reading	1' or 0.01°
Instrument error	± 2'
Repeatability	1'
Response speed	3rps
Display unit	0° 0' (base of 60) or 0.00° (decimal)
Battery	Coin type lithium ion battery CR2032 x 1 pc
Battery life	About 2000 hours
Body material	Hardened stainless steel (SUS420J2)
Main unit weight	270g approx.
Functions	Count up direction selection, preset, displayed value hold
Data output	Mitutoyo digimatic output *1 Connector shape: Compatible with Mitutoyo connection cable (flat type) *2 Not all Mitutoyo products are compatible.
Accessories	150mm blade



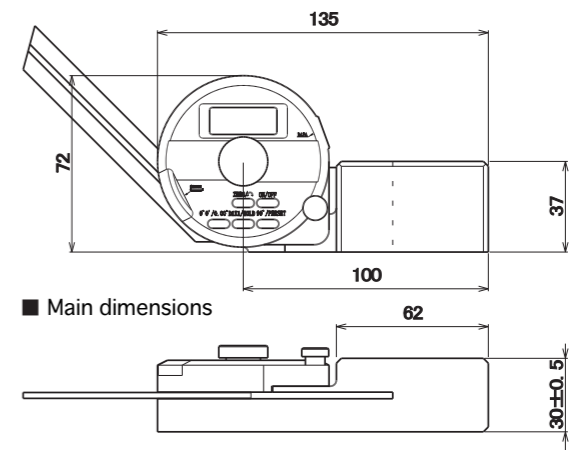
Digital Protractor - Heavy Duty Type DP-601ST

This is high accurate heavy-duty type digital protractor with high rigidity and stability. Thanks to high rigid body, this unit can be clamped by vices and etc. In addition the stability is very high due to wide measuring surface.

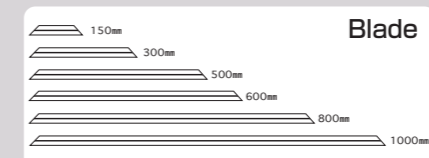
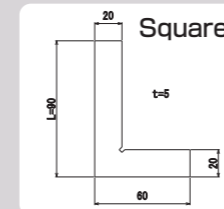
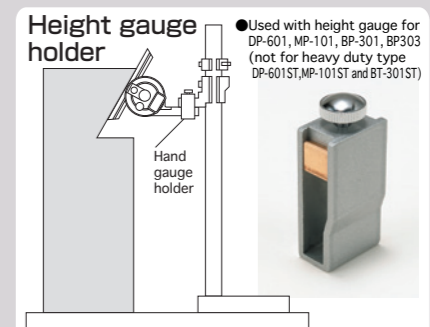
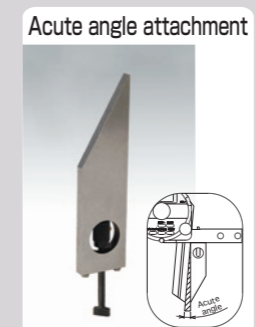
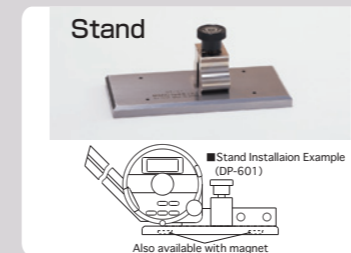


■ Specifications

Main unit weight | 1150g approx.
All other specifications are the same as for the DP-601.
※ It is not possible to affix the height gauge holder or the acute angle attachment.



Optional Accessories



Note that a part of the external appearance, specifications, price, etc. may be changed without notice for the sake of product improvement.

5 Standard Protractors for next generation

LCD Display

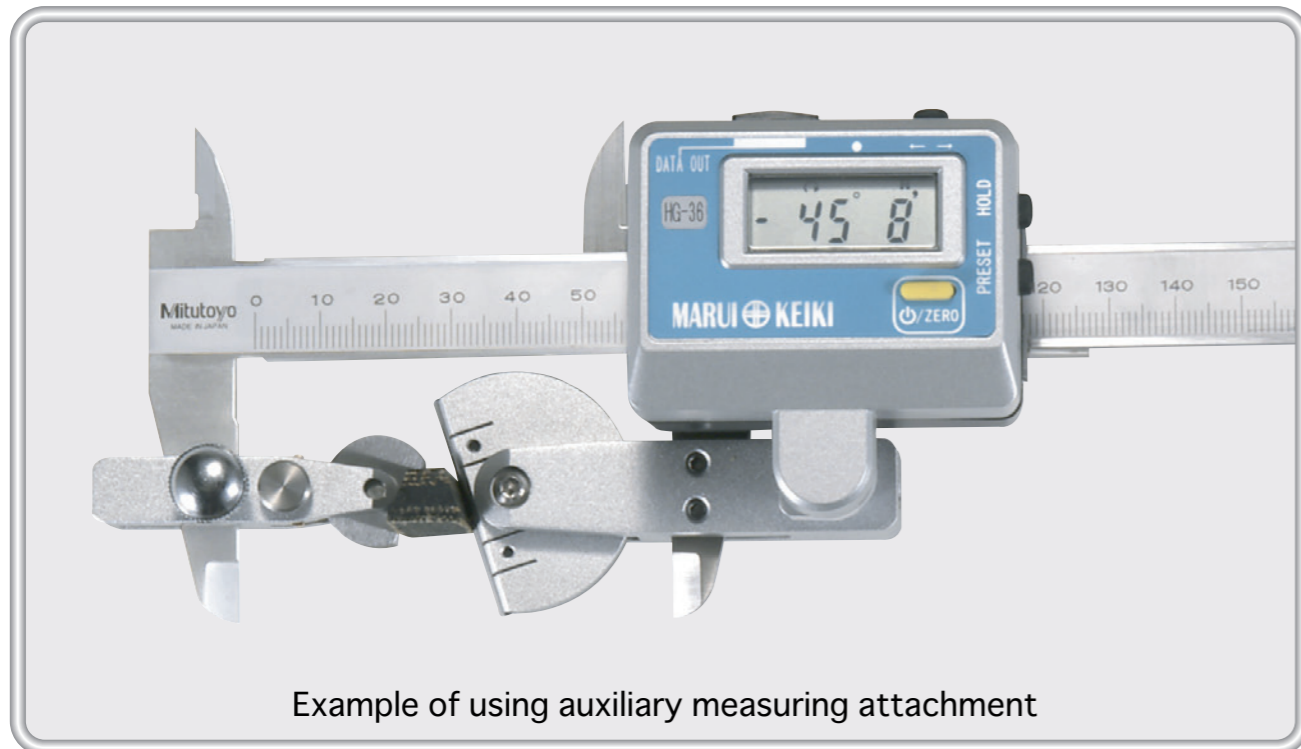
Measurement range 180°

Minimum reading 1' (0.01°)

Optional accessories

Height Gauge Bevel HG-36

This is a digital protractor with totally new concept to measure the angle by attached on a height gauge or vernier calipers easily.

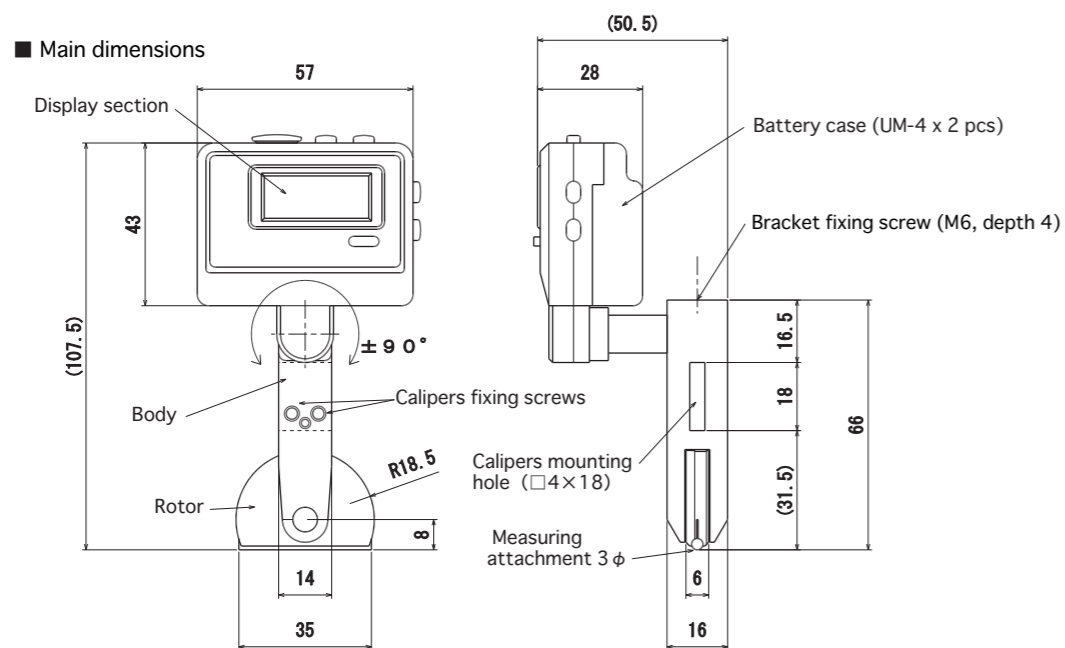


Example of using auxiliary measuring attachment

■ Features

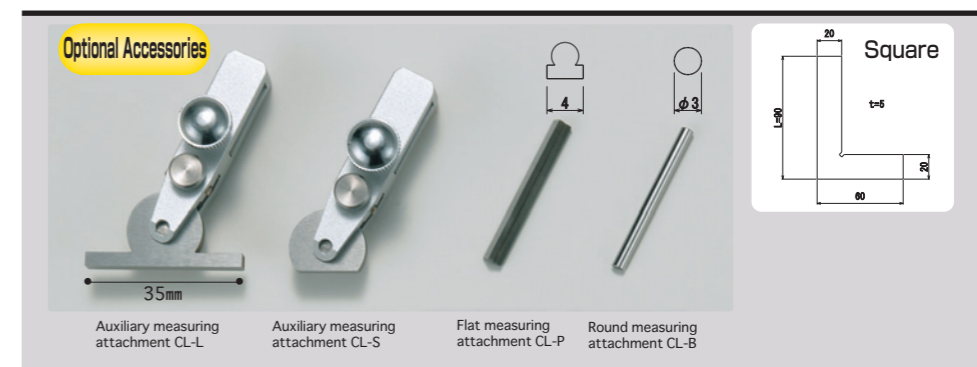
- Easy and stable measurements can be made by merely applying this HG-36 to the work-piece.
- Can be attached to or detached from a calipers or height gauge easily.
- With various functions such as display mode selection between 0° 0' (base of 60) and 0.00° (decimal), preset, etc.
- Many different measurements are possible by using optional accessories.
- Special measuring attachment suitable to the work-piece are available on request, with which the measuring applications are getting wider.
- With data output function

■ Main dimensions



■ Specifications

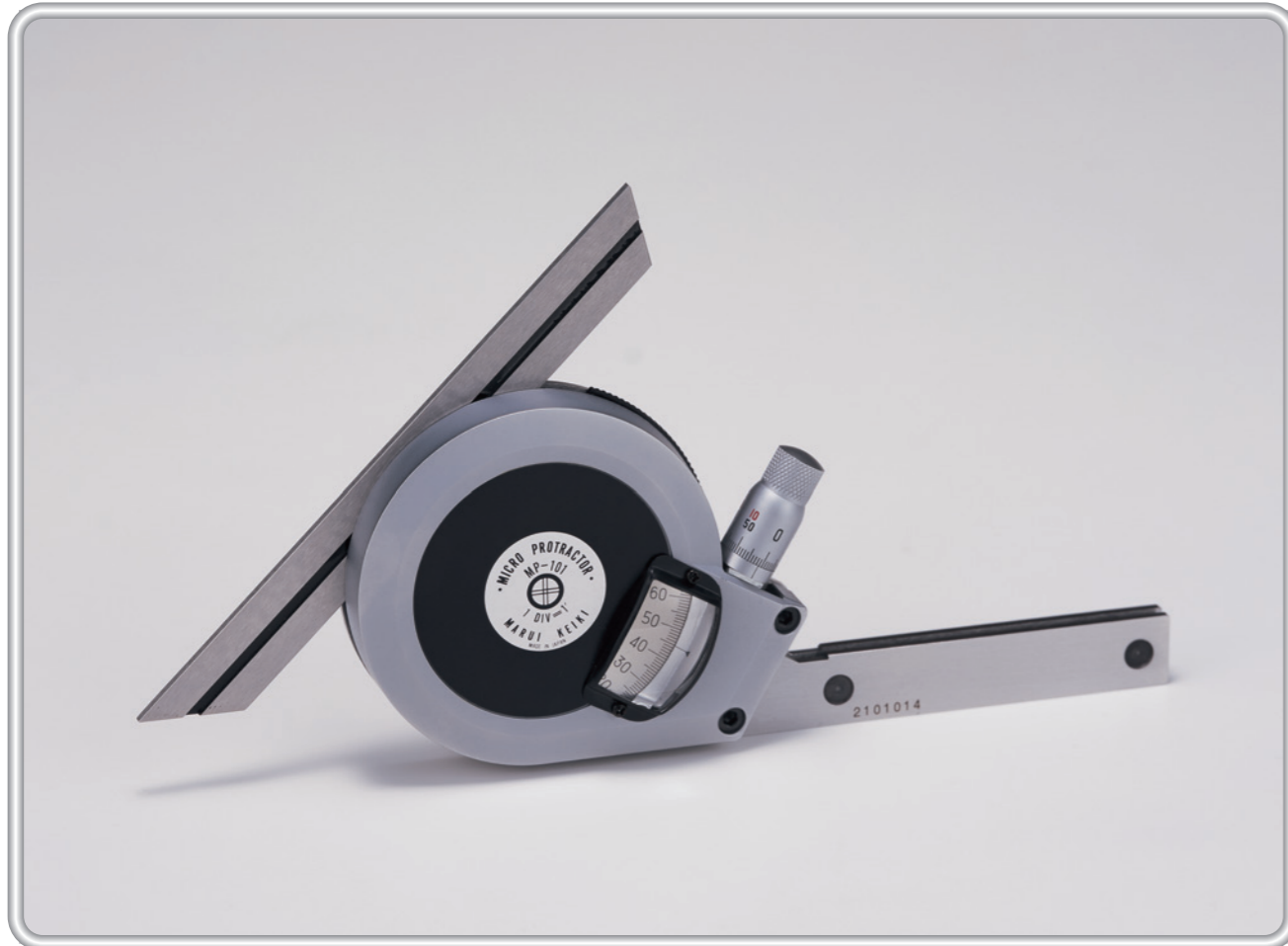
Measurement range	180°
Minimum reading	1' or 0.01°
Instrument error	± 5'
Repeatability	1'
Display unit	0° 0' (base of 60) or 0.00° (decimal)
Battery	UM-4 type dry battery cells x 2 pcs
Battery life	About 80 hours (UM-4 type dry battery cells x 2 pcs)
Main unit weight	150g approx.
Functions	Count up direction selection, preset, displayed value hold
Data output	Mitutoyo digimatic output *1 Connector shape: Compatible with Mitutoyo connection cable (flat type) *2 Not all Mitutoyo products are compatible.
Accessories	Bracket, clamping screw



Note that a part of the external appearance, specifications, price, etc. may be changed without notice for the sake of product improvement.

Micro Protractor MP-101

This is a high accurate protractor for measuring the angles on machining, assembling and inspection of machines, moulds, jigs, gauges and etc.



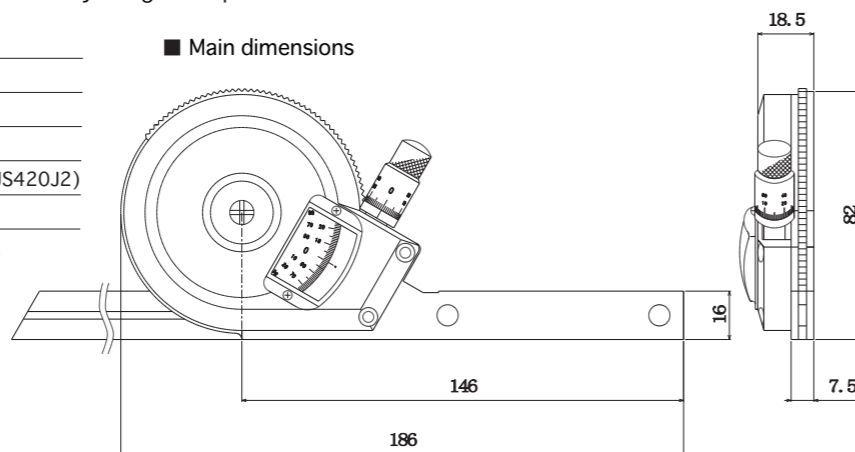
■ Features

- High accurate protractor with minimum reading of 1 minute.
- Full circle type with fine adjustment and also fast feeding is possible. ● No backlash and stable measurements are obtained.
- Special designed high accurate worm fixes the gauge while it is in a state of rest. (By the thimble operation, fine adjustment and fast feeding are possible.)
- The main parts of the case are made of hardened stainless steel superior in rust-resistance and durability.
- High accuracy with an instrument error of $\pm 2'$.
- Various types of measurements can be made by using with optional accessories.

■ Specifications

Measurement range	360° (0-90° x 4)
Minimum reading	1'
Instrument error	$\pm 2'$
Body material	Hardened stainless steel (SUS420J2)
Main unit weight	460g approx.
Accessories	150mm and 300mm blades, speed square (90x60)

■ Main dimensions



Micro Protractor Heavy Duty Type MP-101ST

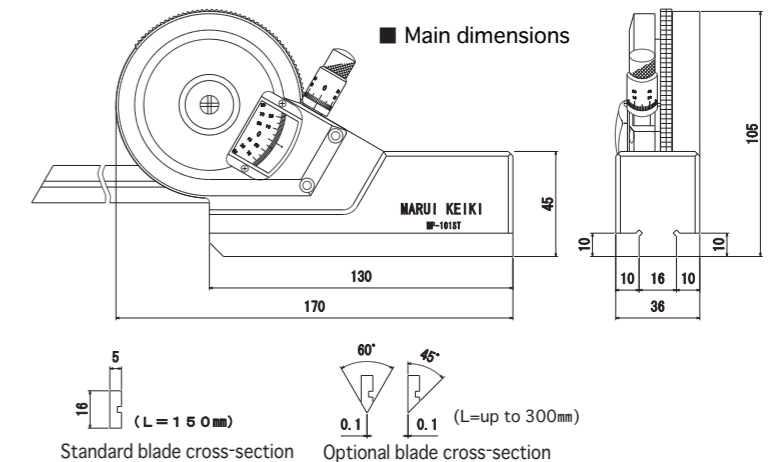
This is a high rigid, stable and accurate micro protractor but heavy-duty type. Thanks to high rigid body, this unit can be clamped by vices and etc. In addition the stability is very high due to wide measuring surface.



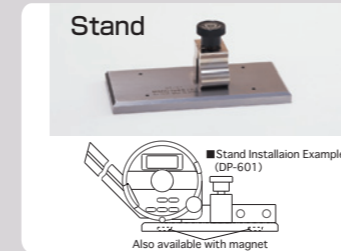
■ Specifications

Main unit weight	2000g approx.
Accessory	150mm blade (dedicated to the MP-101ST)
All other specifications are the same as for the MP-101.	
Optional accessory: 300mm blade (dedicated to the MP-101ST)	

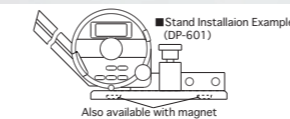
■ Main dimensions



Optional Accessories



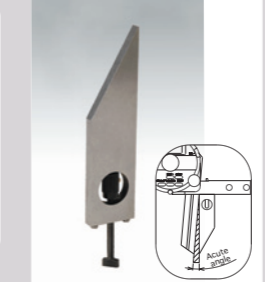
Stand



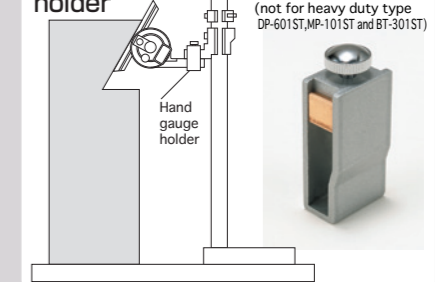
■ Stand Installation Example (DP-601)

Also available with magnet

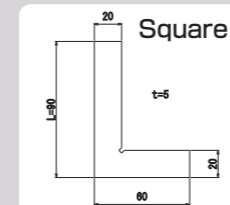
Acute angle attachment



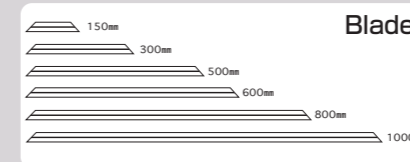
Height gauge holder



● Used with height gauge for DP-601, MP-101, BP-301, BP303 (not for heavy duty type DP-601ST, MP-101ST and BT-301ST)



Square



Blade



L-blade for horizontal angles (level)

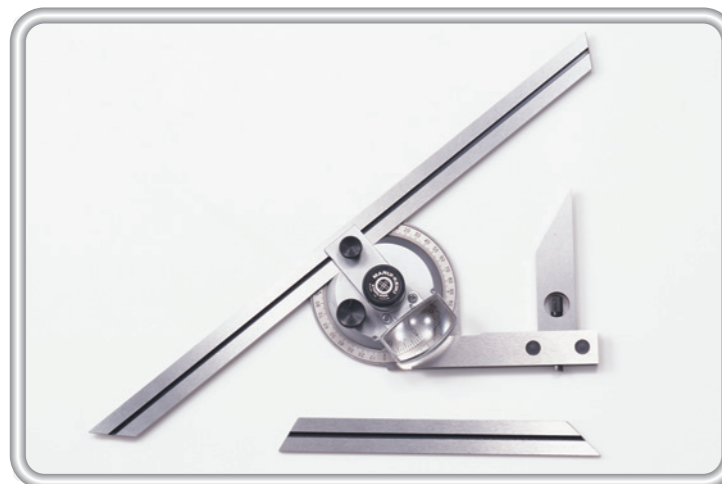
With bubble vial

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Bevel Protractor BP-301

This is a high reliable general purpose type precision protractor used widely in many countries in the world.

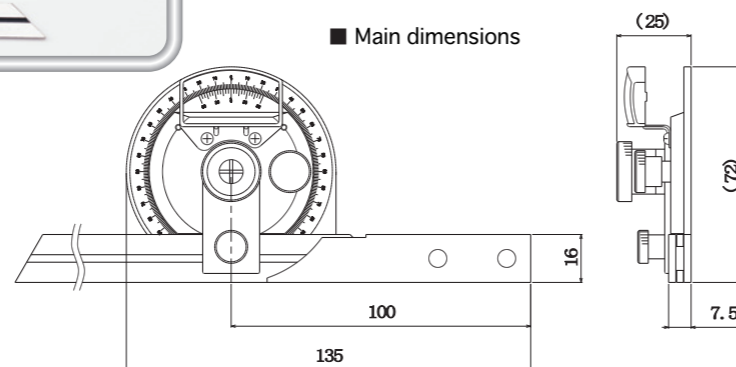
This popular protractor has been favored by many users because of their superior sense.



■ Features

- The main scale and vernier scale are flat to avoid the reading error due to step gap.
- Fine adjustment can be made by using the fine adjustment knob.
- Scale part is satin-chrome plated for easy reading with less reflection.
- Main parts are made of hardened stainless steel superior in rust-resistance and durability.
- Instrument error: $\pm 5'$

■ Main dimensions



■ Specifications

Measurement range	-360° (0-90° x 4)
Minimum reading	5'
Instrument error	$\pm 5'$
Body material	Hardened stainless steel (SUS420J2)
Main unit weight	180g approx.
Accessories	150mm and 300mm blades, acute angle attachment

Bevel Protractor Heavy Duty Type BP-301ST

This is a high rigid, stable and accurate bevel protractor but heavy-duty type.

Thanks to high rigid body, this unit can be clamped by vices and etc.

In addition the stability is very high due to wide measuring surface (30mm).



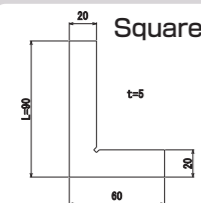
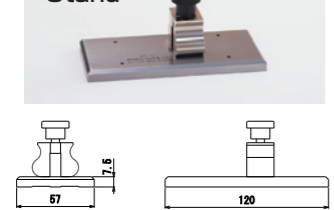
■ Specifications

Main unit weight	1050g approx.
Accessory	150mm blade

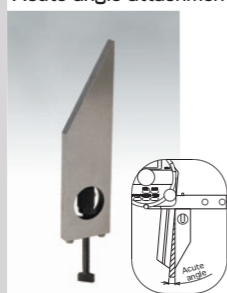
All other specifications are the same as for the BP-301.

Optional Accessories

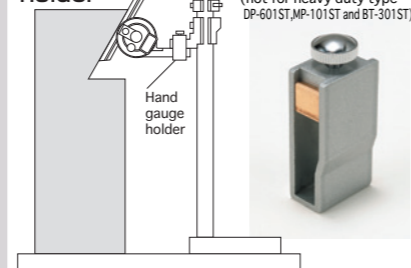
Stand



Acute angle attachment

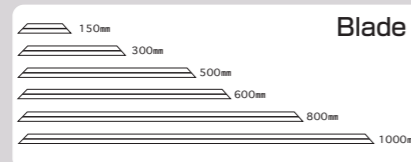


Height gauge holder



- Used with height gauge for DP-601, MP-101, BP-301, BP303 (not for heavy duty type DP-601ST, MP-101ST and BT-301ST)

Blade

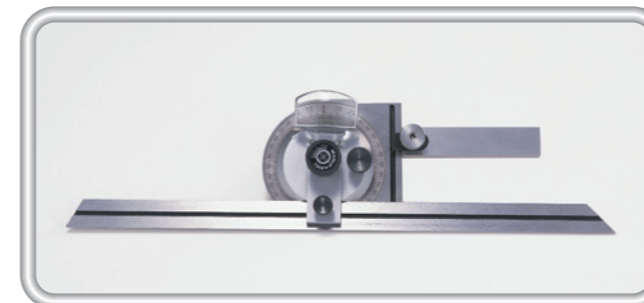


L-blade for horizontal angles (level)



Slide Protractor BP-303

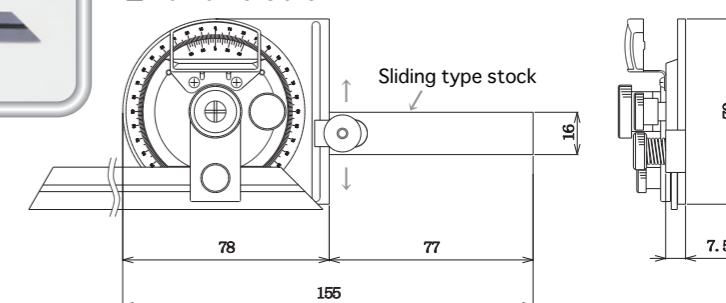
Because of the use of the slide type stock, this is very useful for measurement of acute angles and steps. Also, it can be used equally conveniently by both left handed and right handed persons.



■ Features

- This can be used for a wide range of measurements without having to use an accessory, such as for acute angle measurement, angle measurements of steps, etc.

■ Main dimensions



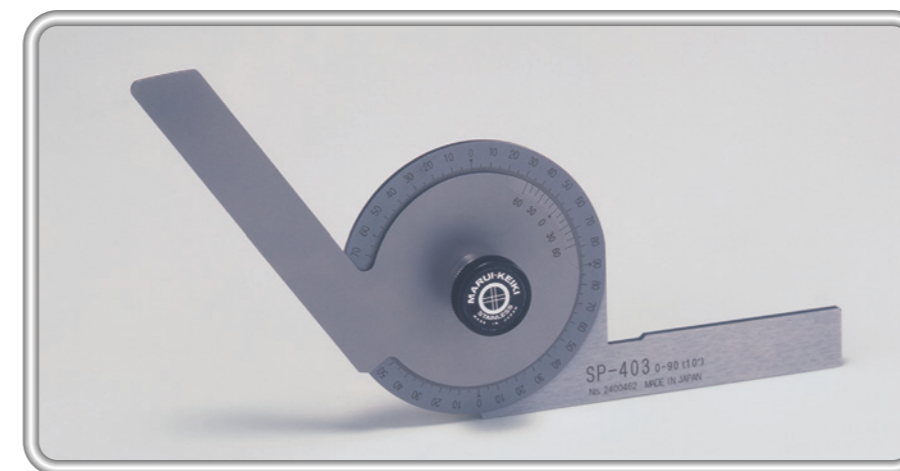
■ Specifications

Instrument error	$\pm 10'$
Main unit weight	260g
Accessories	300mm blade

All other specifications are the same as for the BP-301.

Single Protractor SP-403, SP-403L (with lens)

Economical but yet full functions! This is a lightweight and compact protractor.



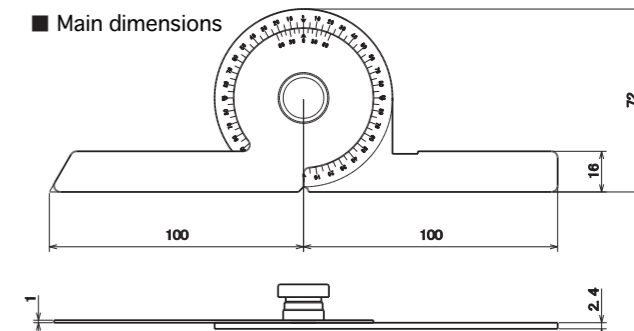
■ Features

- A minimum reading of 10' has been achieved at a very low price.
- Clamp handle can be locked at any angle.
- Center shaft is durable without chattering.
- Ground finish comparable with high quality model.

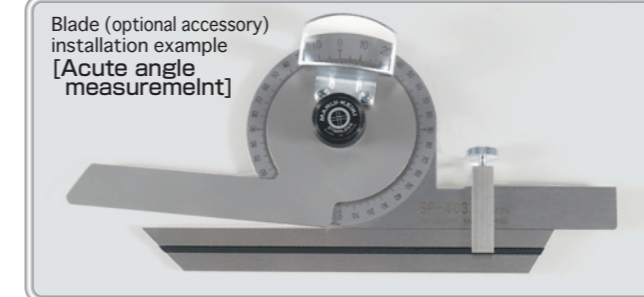
■ Specifications

Measurement range	360° (0-90° x 4)
Minimum reading	10'
Instrument error	$\pm 10'$
Body material	Stainless steel
Main unit weight	130g

■ Main dimensions



Blade (optional accessory) installation example [Acute angle measurement]



A blade holder is required for mounting.

Note that a part of the external appearance, specifications, price, etc. may be changed without notice for the sake of product improvement.

Compact Digital Angle Sensor RE-36

This is a small digital angle sensor with a built-in coupling.
A minimum reading of 1 minute (0.01°) has been realized in a small-sized sensor.



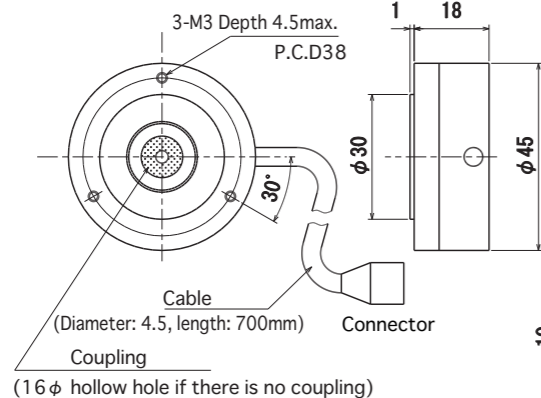
■ Features

- The small body in a diameter of 45mm with a built-in coupling makes the installation easy and the equipment after installation is smart.
- Even the LCD display section is small and can be mounted anywhere.
- The coupling is in the hollow shaft of 16mm dia.
- With various functions such as display mode selection 0°0' (sexagesimal) and 0.00° (decimal), preset and etc.
- Many different measurements are possible by using various accessories.
- Battery powered can be used where no power supply is available. (An optional AC adapter is available.)
- With data output.

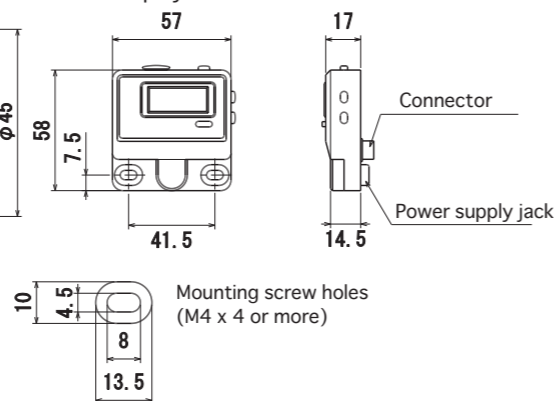
■ Specifications

Measurement range	250° (The rotation is endless.)
Minimum reading	1' or 0.01°
Instrument error	± 5'
Display unit	0°0' (base of 60) or 0.00° (decimal)
Power supply	3V DC
Battery life	About 80 hours (UM-4 type alkaline dry battery cells x 2 pcs)
Main unit weight	150g approx.
Functions	Count up direction selection, preset, displayed value hold
Data output	Mitutoyo digimatic output *1 Connector shape: Compatible with Mitutoyo connection cable (flat type) *2 Not all Mitutoyo products are compatible.
Accessories	Battery case, monitor batteries (UM-4 type alkaline dry battery cells x 2 pcs)
Optional accessory	AC adapter

■ Sensor section main dimensions



■ Display section main dimensions



Digital Angle Sensor DP-621 (Integrated type display)

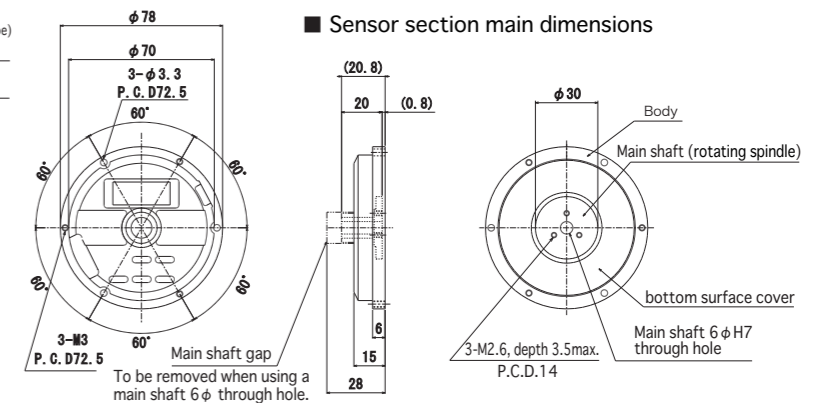
This is a lightweight, compact, high accurate rotation angle detector.
It does not require any wiring because it is battery driven and the digital display section is built-in. With data output function.

■ Specifications

Measurement range	-360° ~ +360° (Full circle)
Minimum reading	1' or 0.01°
Instrument error	± 2'
Repeatability	1'
Response speed	3rps
Display unit	0°0' (base of 60) or 0.00° (decimal)
Battery	Coin type lithium ion batter CR2032x1 pc
Battery life	About 2000 hours
Main unit weight	110g approx.
Functions	Count up direction selection, preset, displayed value hold
Data output	Mitutoyo digimatic output *1 Connector shape: Compatible with Mitutoyo connection cable (flat type) *2 Not all Mitutoyo products are compatible.
Accessories	Monitor battery



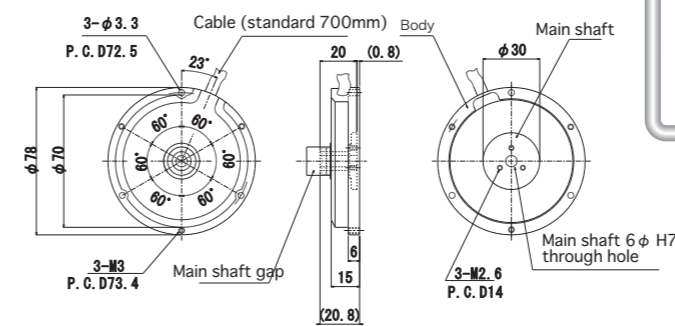
■ Sensor section main dimensions



Digital Angle Sensor DP-641 (Separate display type)

This is a lightweight, compact, high accurate rotation angle detector.
The display and sensor sections are separated so that the display section can be installed at the convenient place for easy reading.

■ Sensor section main dimensions



■ Display section main dimensions



■ Specifications

Same as those of the DP-621 except for the following.

Display unit	0°0' (base of 60) * If you desire 0.00° (decimal) display, specify so at the time of ordering.
Power supply	3V DC
Main unit weight	280g approx.
Accessories	Battery case, monitor battery (two UM-4 type dry cells)
Optional accessory	DC adapter

Note that a part of the external appearance, specifications, price, etc. may be changed without notice for the sake of product improvement.

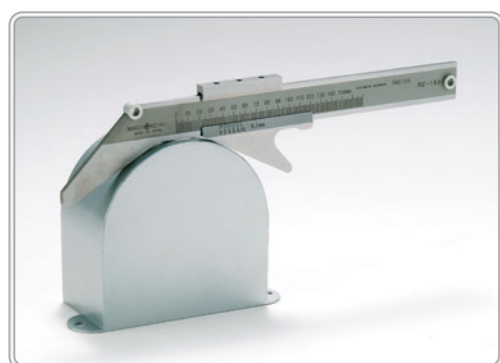
R Calipers RC-150

The first in the World! Calipers type radius measuring instrument "R Calipers". Radius of up to 150mm can be measured by merely applying to the outer periphery of the part to be measured.



■ Specifications

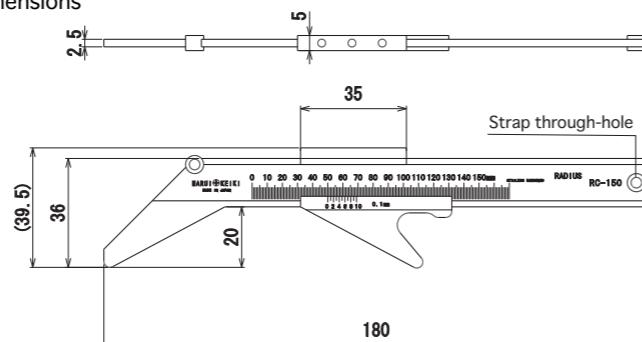
Measurement range	Radius of 0.5mm to 150mm
Minimum reading	0.1mm
Instrument error	±0.2mm
Body material	Hardened SUS420J2
Weight	55g
Accessory	Strap
Optional accessory	Magnifying lens for the scale



Example of application

- Features
- Radius of up to 150mm can be measured without a number of radius gauges.
 - Made of hardened stainless steel which is strong against rust and scratches.
 - The measurement can be made if about 17% of the total circumference is available.
 - With a strap convenient to carrying and preventing falling down.

■ Main dimensions



Speed Micro Mini SM-Mini

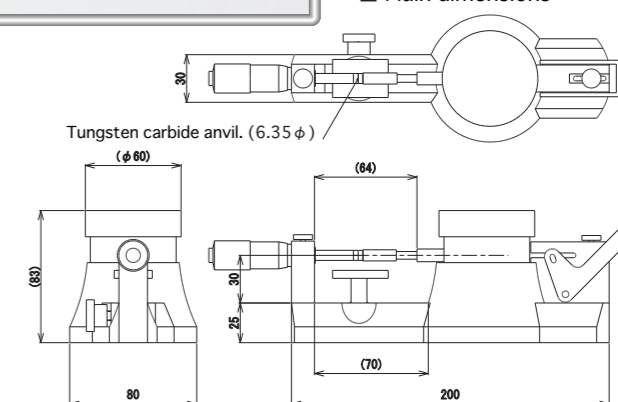
This is a revolutionary measuring instrument that combines a high accurate digimatic indicator with a micrometer head.

This can measure small precision parts or products in quantity efficiently.



- Features
- Stable measurements can be done by using the lever operation and is ideal for inspection of the items in mass-production.
 - Maximum measurement stroke of 35mm. (Digimatic side: 10mm or more + micrometer side: 25mm)
 - With measuring pressure adjustment device up to maximum 800g.
 - Up/down movable table is used.
 - The measuring attachment can be made specially to order. (Consult us freely.)

■ Main dimensions



■ Specifications

Measurement range	0-35mm
Minimum reading	0.001mm
Measuring attachment parallelism	2 μm
Repeatability	1 μm
Weight	1800g approx.
Spindle side	Mitutoyo Digimatic indicator 543-250B
Anvil side	Mitutoyo micrometer head 150-196

Digital Outer diameter Measuring Instrument MD Series

This is an external diameter measuring instrument that can measure the outer diameter by merely applying to the outer periphery of a cylindrical work piece such as a roller, etc.



- Features
- The external diameter can be measured merely by applying to a part of the outer periphery of a cylindrical work piece.
 - A digimatic indicator with computing function superior in visual reading.
 - The instrument is light because the body is made of aluminum and hardened stainless steel is used for the contacting part (the measuring surface).
 - The joining between the body and the contacting part (the measuring attachment) is of the assembling type without using screws, etc. to minimize distortions, sags, etc.
 - Since the measurement can be made if 19% of the total circumference is available, it is possible to measure the work-piece already assembled or stored in the working site.
 - Arc master gauge for confirming the origin and for calibration is available as an option.

■ Specifications

Measurement range	± 50mm φ (See Table of Standard Items.)
Minimum reading	0.01mm (Can also be changed to 0.0002mm to 1mm by setting.)
Repeatability	± 0.03mm
Body material	Aluminum (alumite treated)
Material of measuring attachment	Hardened SUS420J2
Options	Arc master gauges of various sizes, various types of digimatic indicator measuring attachments

■ Table of Standard Items

Model No.	Measurement range	Arc master gauge size
MD-100	φ 30~φ 150mm	φ 100
MD-200	φ 150~φ 250mm	φ 200
MD-300	φ 250~φ 350mm	φ 300
MD-400	φ 350~φ 450mm	φ 400
MD-500	φ 450~φ 550mm	φ 500

* Contact us for other sizes.

Note that a part of the external appearance, specifications, price, etc. may be changed without notice for the sake of product improvement.