

Small-sized fine differential pressure gauge FS type/PS type

- A memory pointer, which is convenient for setting of index for planned differential pressure value or limit value, is equipped as standard.
- Allows various pipe connections.
- Only by exchanging the base on the high-pressure side with that on the low pressure side, it is possible to change the polarity. *For side face piping only

Flat-type fine differential pressure gauge N type/R type

- The lowest master gauge thickness of 29.2 mm has been achieved.
- Thin design and standard equipment of rotary base make it possible to conduct smart piping.



Model WO71FS

(surface type w/VT base and memory pointer)



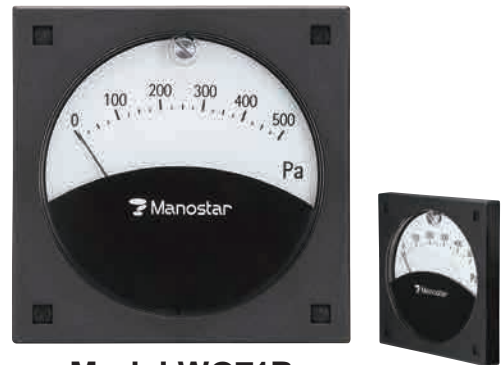
Model WO71PS

(square panel type w/VT base and memory pointer)



Model WO71N

(surface type/round panel type w/rotary base)



Model WO71R

(square panel type w/rotary base)

<Main application fields>

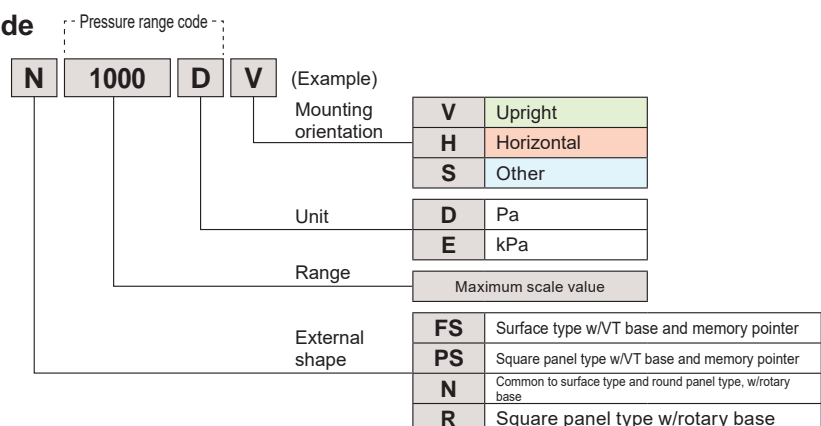
- General factory management equipment
- Negative pressure for dust collector/differential pressure of air conditioner
- Filter pressure loss management
- Precision machine manufacturing line
- Building air conditioning control equipment

<Usage>

- Detection of clogging of air filter
- Room pressure measurement in a clean room
- Measurement of clogging of bug filter
- Measurement of dynamic pressure at ventilation/exhaust device

Product code

WO71



*(Refer to pages 114 to 117)

◆When making an inquiry or placing an order, specify the above product code.

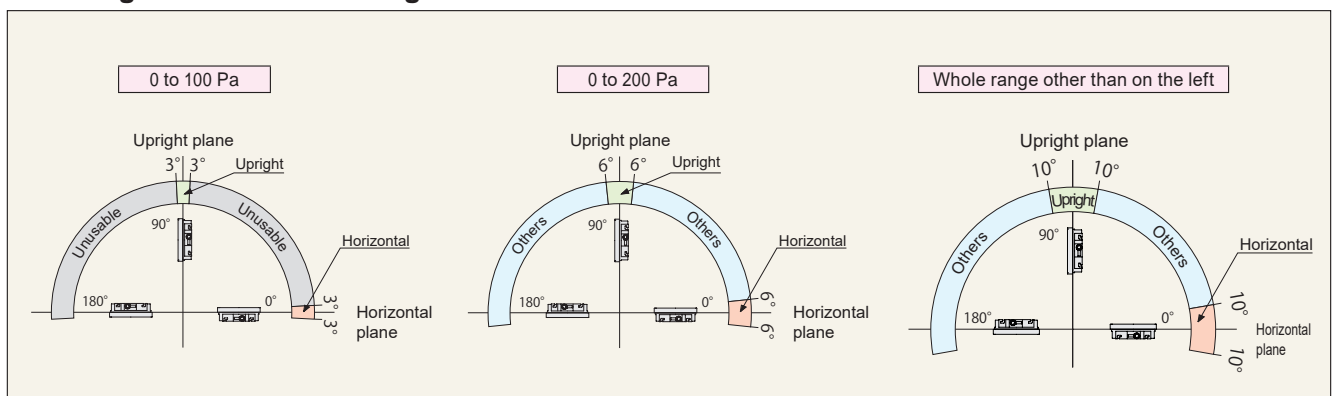
Specifications

Model	Surface type w/VT base and memory pointer	Square panel type w/VT base and memory pointer	Common to surface type and round panel type, w/rotary base	Square panel type w/rotary base	
	WO71FS	WO71PS	WO71N	WO71R	
Pressure unit Pressure measurement method Pressure-receiving element Measured gas Scale indication angle Operating ambient temperature Operating ambient humidity Instrument body withstanding pressure Exterior material Durable vibration Durable impact Compatible pipe	Pa, kPa Differential pressure method Diaphragm Air and noncorrosive gas (liquid cannot be measured) Approx. 70° -10°C to +50°C (no freezing allowed) 90% RH or below (no condensation allowed) 50 kPa (refer to page 118)	Base polarity Mass Accessories	FS type, PS type Changeable (only for side face pipe) Identification with red on high pressure side and blue on low pressure side N type, R type Unchangeable Indicating high-pressure side and low-pressure side with "H" and "L" marks, respectively on the instrument body. FS type Approx. 200 g PS type Approx. 180 g N type Main body: approx. 130 g, mounting plate: approx. 40 g R type Approx. 150 g		
	FS type, PS type <ul style="list-style-type: none"> Vinyl pipe or rubber pipe (inner diameter of 6 mm) Base for resin vinyl pipe (already mounted on gauge) Metallic pipe (outer diameter of 6 ± 0.1 mm) Separately sold base for metallic pipe is necessary. Hard tube (outer diameter 6 × inner diameter 4 mm) Separately sold base for metallic pipe and inner sleeve set (refer to page 111) or push-in joint is necessary. N type, R type <ul style="list-style-type: none"> Vinyl pipe or rubber pipe (inner diameter of 4 mm) Rotary base for resin vinyl pipe (already mounted on gauge) (main body side: M5 internal thread, depth of 4 mm) 		FS type Mounting plate (already installed on main body), custom seal PS type Mounting nut set, custom seal N type Mounting plate (already installed on main body), mounting screw set, custom seal R type Mounting nut set, custom seal		
Pressure range code	Pressure range	Mounting orientation *It is necessary to specify the orientation at the time of order placement for all ranges.	Accuracy (Note) (at 23°C)	Pressure-receiving element material	Withstanding pressure of pressure-receiving element (Refer to page 118)
100 D	0–100 Pa	Horizontal and upright	±2.5% FS	Silicone rubber	20 kPa
200 D	0–200 Pa	Horizontal or Upright or Others			
300 D	0–300 Pa				
500 D	0–500 Pa				
1000 D	0–1000 Pa				
2 E	0–2 kPa				
3 E	0–3 kPa				
5 E	0–5 kPa				

(Note) Accuracy in full span (refer to page 121)

◆For use environment, refer to page 118.

Mounting orientation and range It is necessary to specify the orientation at the time of order placement for all ranges.



Model WO71FS

List of products

WO81

WO71

FR51A

MS99

MS99S

MS61A-RA

QDP33

EMD8A

EMD7

EMT1

EMTGP1

EMT1H

EMT6

EMP5A

EMRT1

HWS15A

Accessories

Application

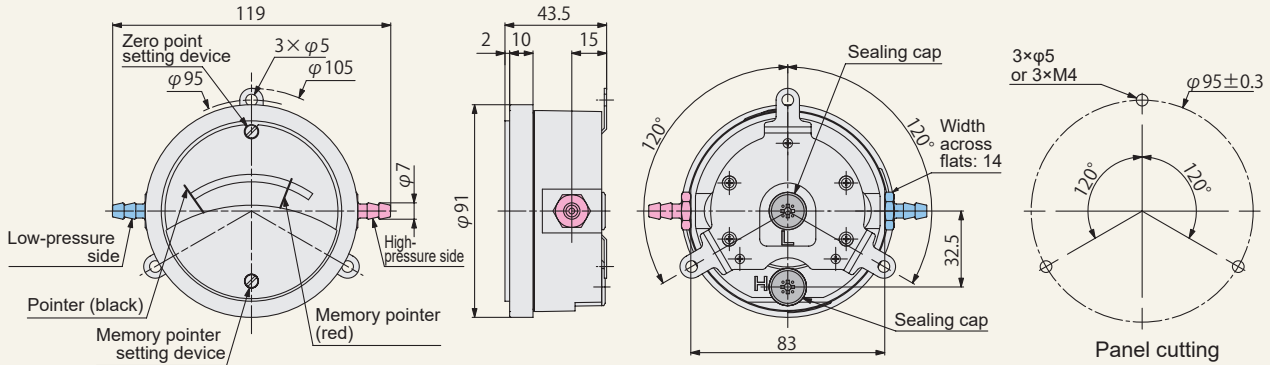
Precautions

Maintenance

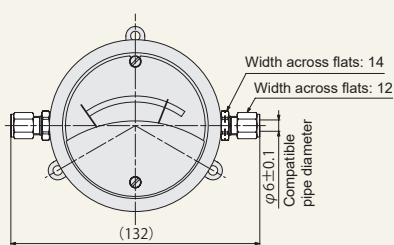
External dimension drawing

Installation of base on side face

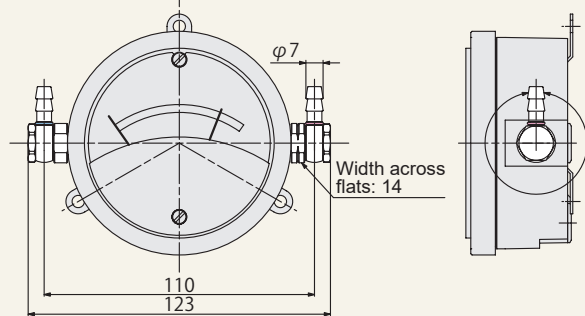
VT base (for vinyl pipe)



MT base (for metallic pipe)

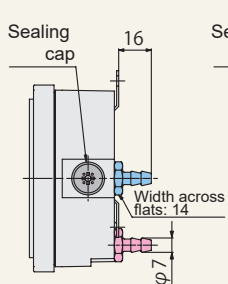


VR base (rotary type for vinyl pipe)

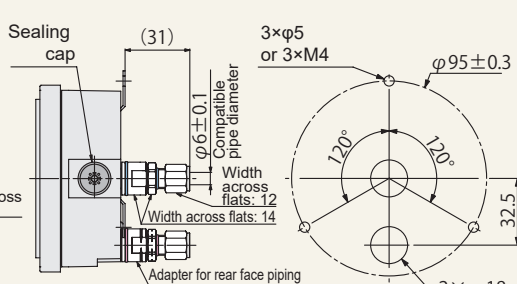


Installation of base on rear face

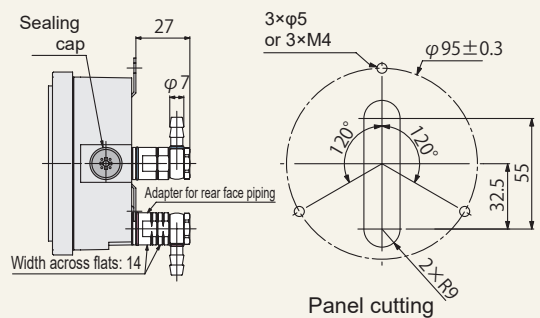
VT base (for vinyl pipe)



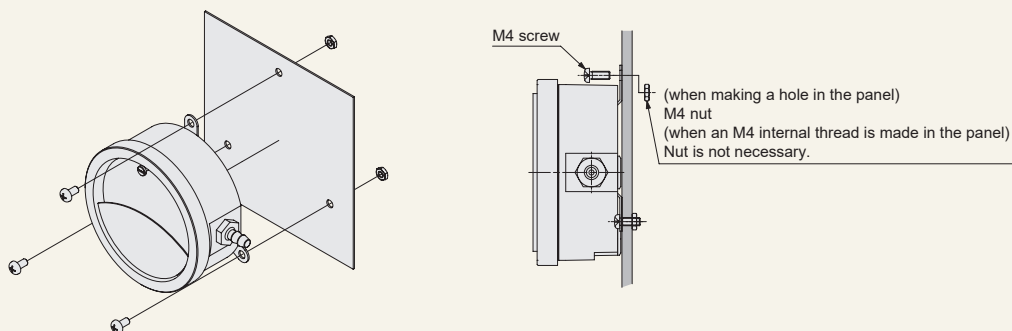
MT base (for metallic pipe)



VR base (rotary type for vinyl pipe)

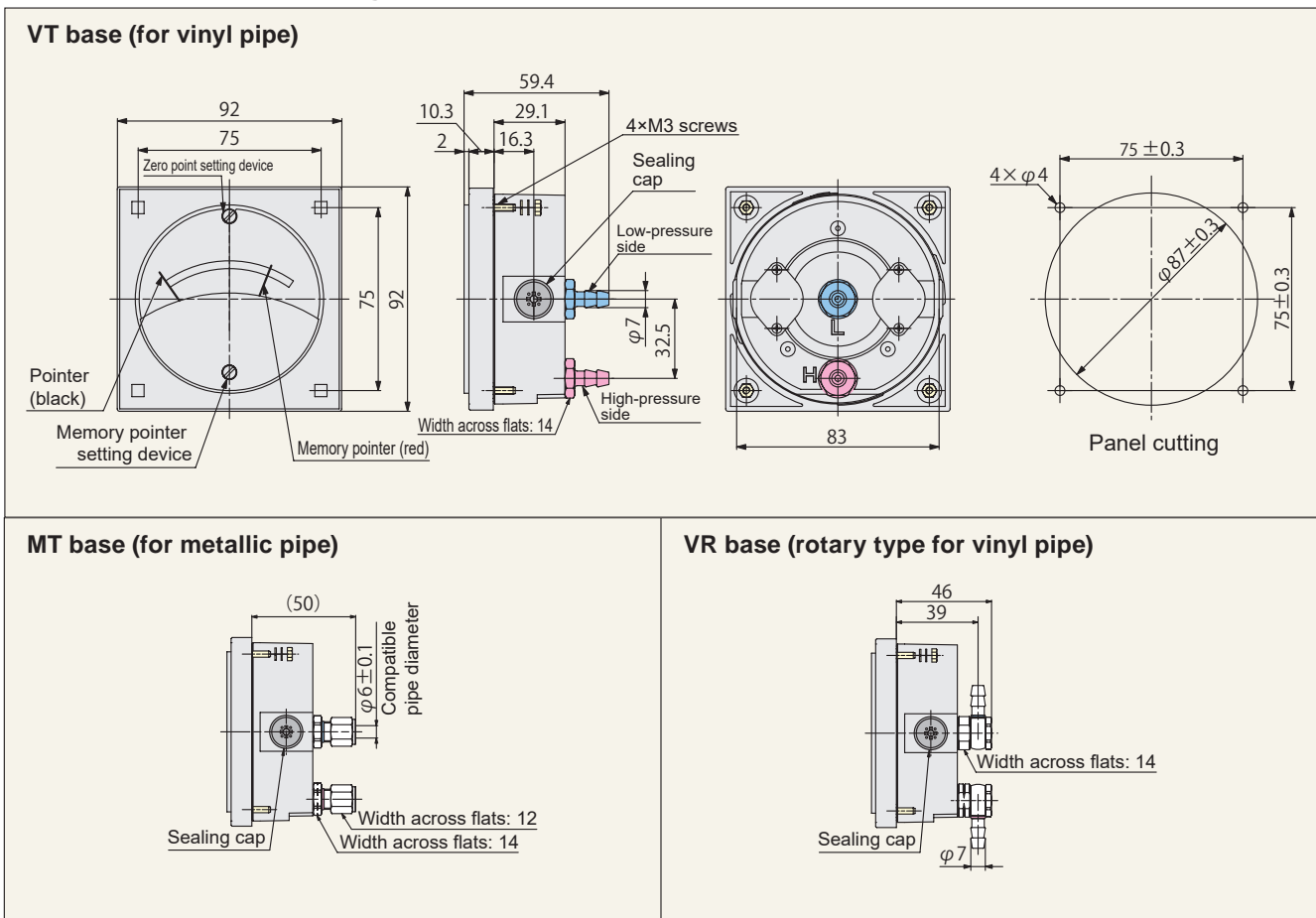


Mounting method

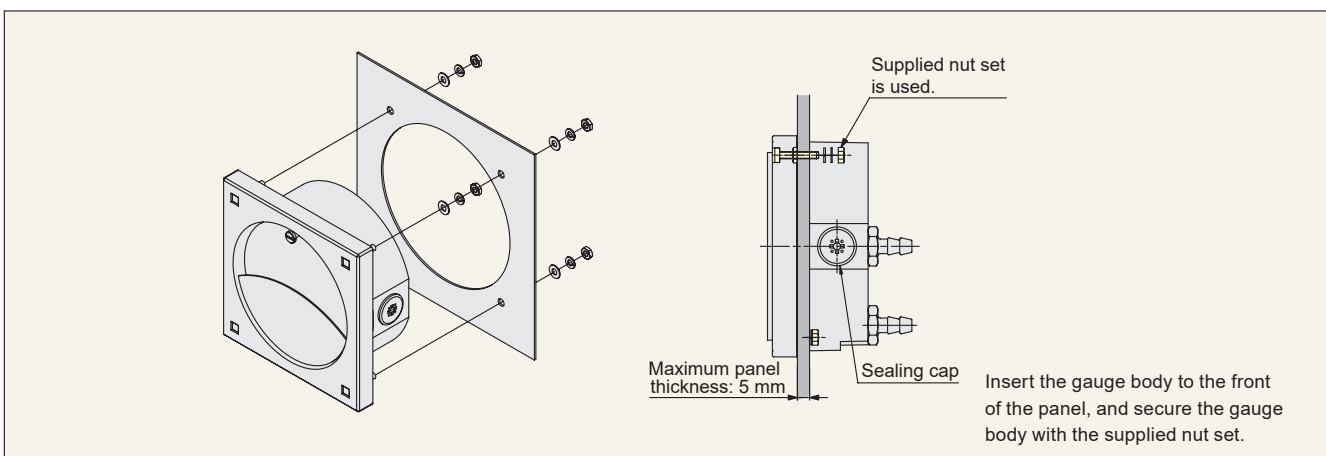


*Mounting screw set is not supplied.

External dimension drawing



Mounting method



Caution

- Tighten the screws and nuts to a torque of 0.8 N·m.
- Do not tighten to a torque that exceeds the specified value because doing so breaks the gauge body.

Model WO71N

List of products

WO81

WO71

FR51A

MS99

MS99S

MS61A-RA

QDP33

EMD8A

EMD7

EMT1

EMTGP1

EMT1H

EMT6

EMP5A

EMRT1

HWS15A

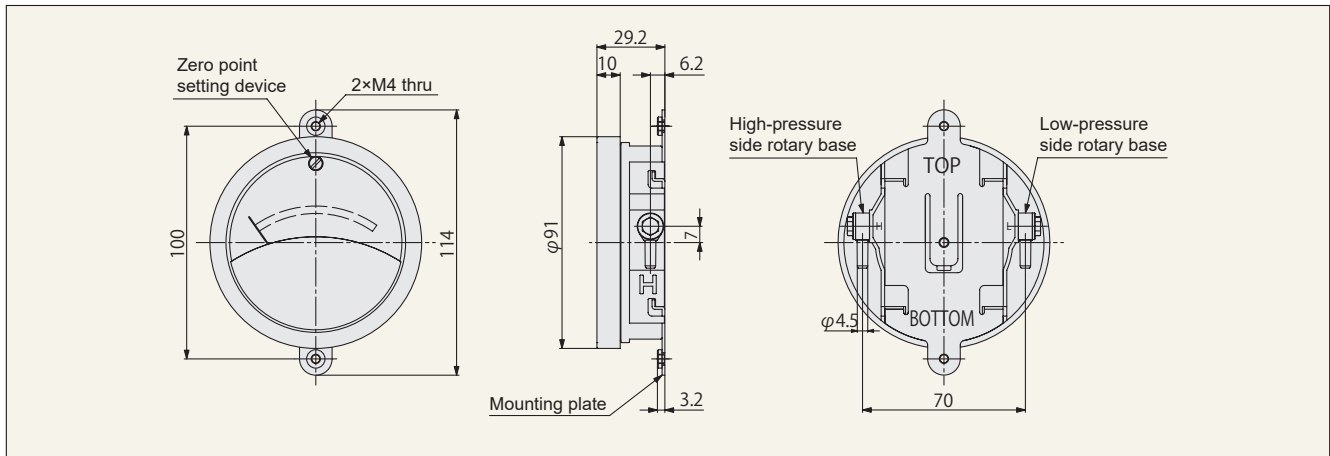
Accessories

Application

Precautions

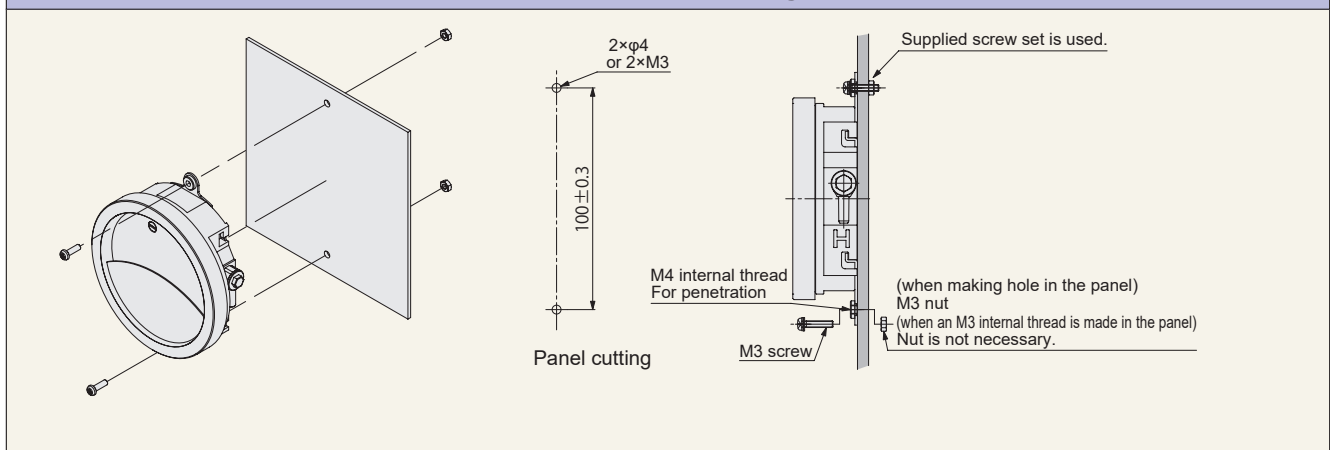
Maintenance

External dimension drawing

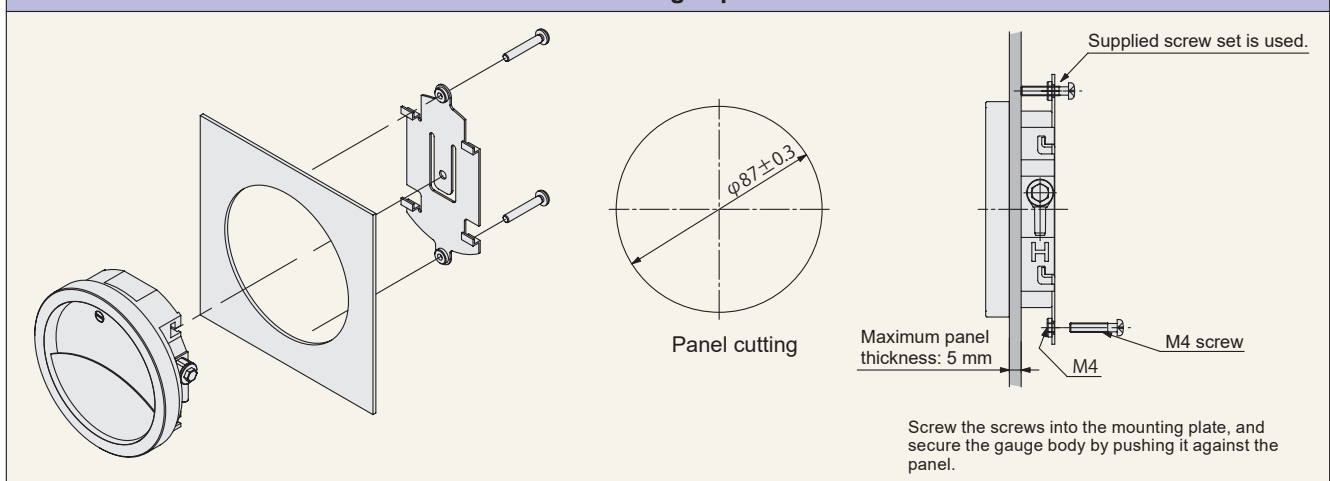


Mounting method

Wall surface mounting



Embedding in panel

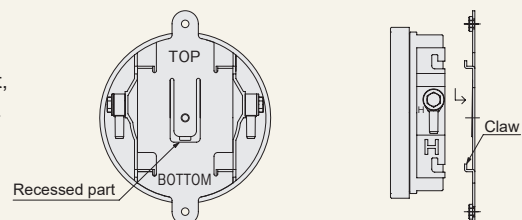


<Mounting panel mounting/dismounting method>

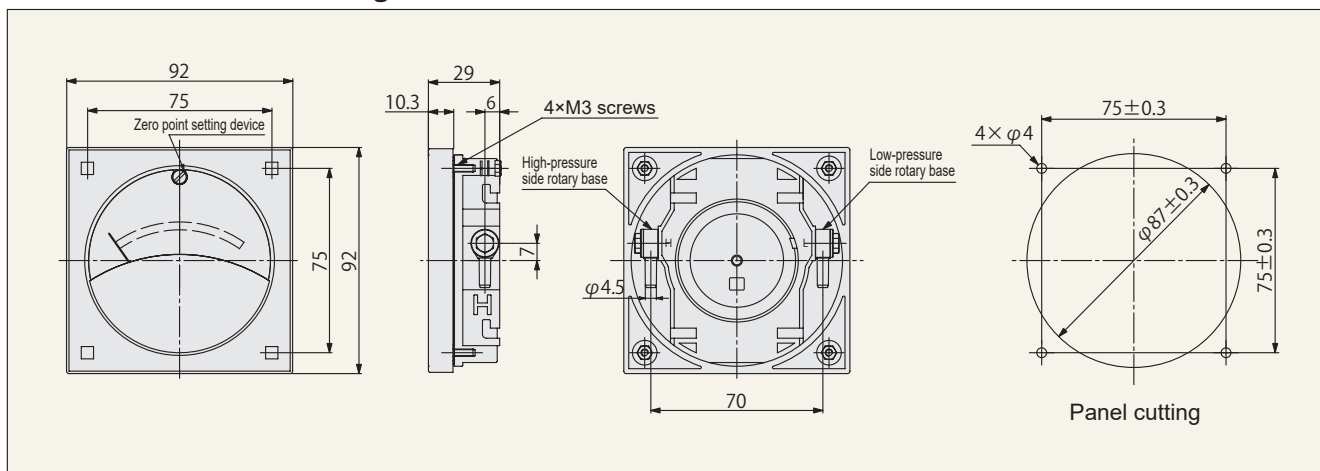
The claw is designed to hook the gauge body.

Insert a flat-blade screwdriver into the recessed part in the figure on the right, and push it down while lifting the mounting plate to remove the mounting plate.

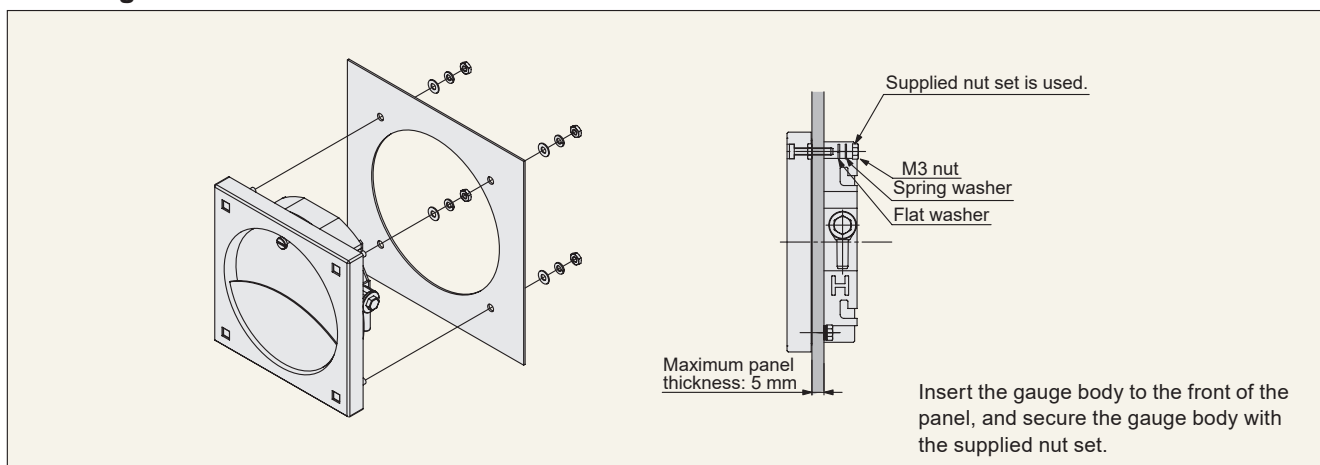
To mount the mounting plate, fit the gauge body in the mounting plate by aligning the claw with the recessed part, and push the mounting plate upward.



External dimension drawing



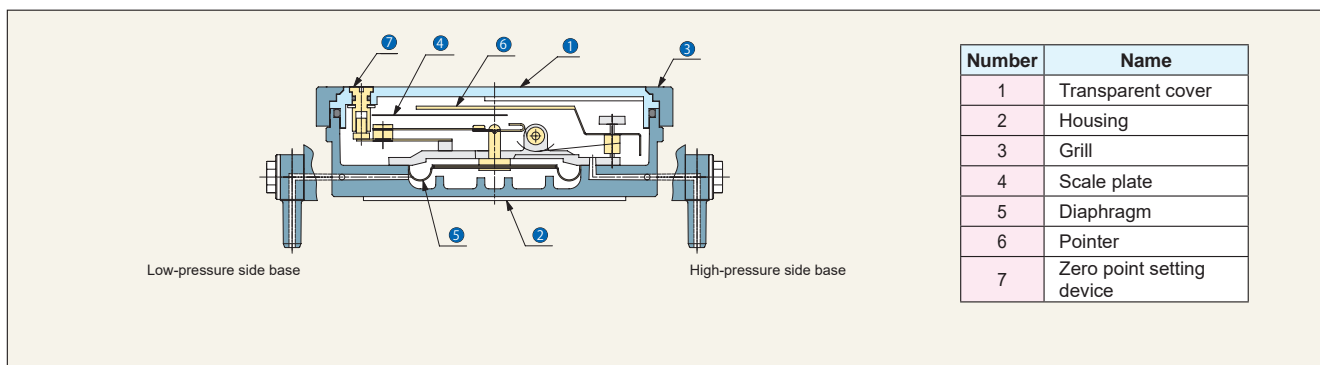
Mounting method



Caution

- Tighten the screws and nuts to a torque of 0.8 N·m.
- Do not tighten to a torque that exceeds the specified value because doing so breaks the gauge body.

Overview of structure



WO71 List of scales

List of products

WO81

WO71

FR51A

MS99

MS99S

MS61A-RA

QDP33

EMD8A

EMD7

EMT1

EMTGP1

EMT1H

EMT6

EMP5A

EMRT1

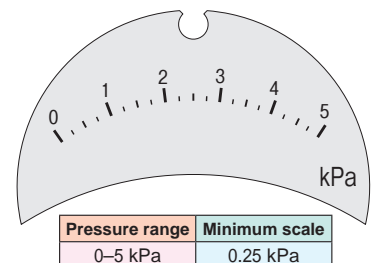
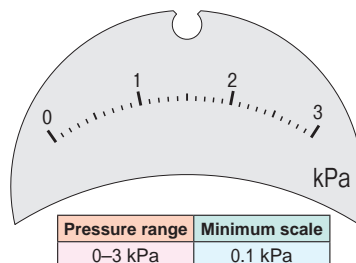
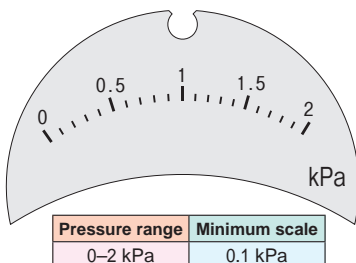
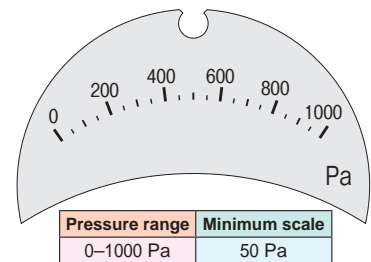
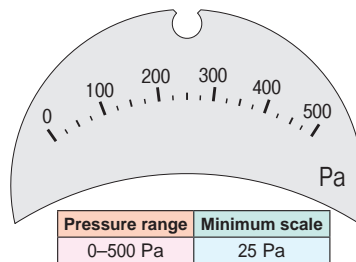
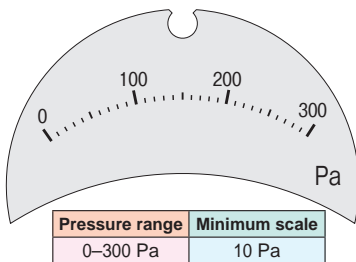
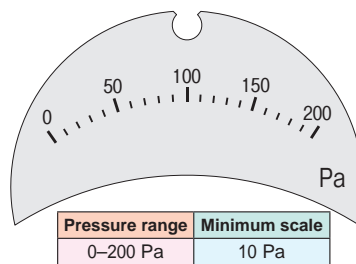
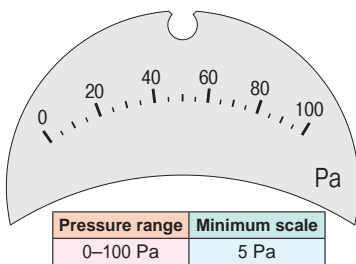
HWS15A

Accessories

Application

Precautions

Maintenance



Accessories dedicated to WO71 RoHS

Custom seal (Auxiliary item)

(Example of customization)

Item number	Material
SEAL-WO71	Polyester film

It is possible to freely attach the seal on the gauge body to color-code the scale and indicate the planned differential pressure value and limit value.

VR base (Auxiliary item)

Dedicated to N type and R type

Item number	Material
KGA71VR	Polycarbonate/aluminum

This serves as an elbow whose tube mounting part rotates. A vinyl pipe or rubber pipe with an inner diameter of 4 mm can be connected. This is already installed when the gauge is purchased.

Caution

- There are no high-pressure side and low-pressure side polarities.
- As the structure allows the O-ring (2 pieces) to drop, pay attention not to lose the O-ring at the time of removal of the base.

Mounting plate (Auxiliary item)

Dedicated to N type

Item number	Material
ADPL71	Steel

This is used for mounting the gauge body.



Sealing cap (Auxiliary item)

Item number	Material
KGA71PLG	Polypropylene



This is already installed when the gauge is purchased.

RoHS



Accessories for FS type and PS type

VT base			
High-pressure side (Auxiliary item) 		Low-pressure side (Auxiliary item) 	
Item number	Material	Item number	Material
KGA81VT-H-P	Polypropylene	KGA81VT-L-P	Polypropylene



A vinyl pipe or rubber pipe with an inner diameter of 6 mm can be connected. This is already installed when the gauge is purchased.

VR base			
High-pressure side 		Low-pressure side 	
Item number	Material	Item number	Material
KGA81VR-H	Brass	KGA81VR-L	Brass



This serves as an elbow whose tube mounting part rotates. A vinyl pipe or rubber pipe with an inner diameter of 6 mm can be connected.

PT base			
High-pressure side 		Low-pressure side 	
Item number	Material	Item number	Material
KGA81PT-H	PBT/brass	KGA81PT-L	PBT/brass



The tube mounting part is a push-in joint. For piping, use the separately sold tube (refer to page 112) or a tube compatible with JIS B 8381-1. (Connectable tube outer diameter: 6 mm)

PR base			
High-pressure side 		Low-pressure side 	
Item number	Material	Item number	Material
KGA81PR-H	PBT/brass	KGA81PR-L	PBT/brass



The tube mounting part is a rotary elbow push-in joint. The piping is the same as that for the PT base. (Connectable tube outer diameter: 6 mm)

MT base			
High-pressure side 		Low-pressure side 	
Item number	Material	Item number	Material
KGA81MT-H	Brass	KGA81MT-L	Brass



A metallic pipe, such as copper pipe and aluminum pipe, with an outer diameter of 6 ± 0.1 mm can be connected. However, for stainless steel pipe, use an MTW base. When connecting with a plastic pipe (outer diameter 6 mm \times inner diameter 4 mm), remove the brass sleeve and use the separately sold resin inner sleeve set (XIN6 \times 4; refer to page 111).

MR base			
High-pressure side 		Low-pressure side 	
Item number	Material	Item number	Material
KGA81MR-H	Brass	KGA81MR-L	Brass



This serves as an elbow whose tube mounting part rotates. The piping material is the same as that of MT base. When connecting with a plastic pipe (outer diameter 6 mm \times inner diameter 4 mm), remove the brass sleeve and use the separately sold resin inner sleeve set (XIN6 \times 4; refer to page 111).

MTW base			
High-pressure side 		Low-pressure side 	
Item number	Material	Item number	Material
KGA81MTW-H-S	Stainless steel	KGA81MTW-L-S	Stainless steel



This is used to connect a stainless steel pipe with an outer diameter of 6 ± 0.1 mm.

Adapter for rear face piping			
High-pressure side (Dedicated to FS type rear face piping) 		Low-pressure side (Dedicated to FS type rear face piping) 	
Item number	Material	Item number	Material
KGA81FBA-H	Brass	KGA81FBA-L	Brass

When arranging an MT base on the rear face of the WO71FS type, this adapter is required as a spacer for hooking a stabilizing wrench to the base at the time of pipe connection. This adapter is also required when arranging the VR base or MR base (excluding MTW base) on the rear face in order to avoid interference between the base and panel.
When connecting an R1/8 joint, use an R1/8 base adapter.

R1/8 base adapter			
High-pressure side 		Low-pressure side 	
Item number	Material	Item number	Material
KGA81R1/8AD-H	Brass	KGA81R1/8AD-L	Brass

It is possible to connect an R1/8 joint.
*The specifications of this adapter differ from those of the adapter for rear face piping.

R1/8 base adapter (SUS)			
High-pressure side 		Low-pressure side 	
Item number	Material	Item number	Material
KGA81R1/8AD-H-S	Stainless steel	KGA81R1/8AD-L-S	Stainless steel

It is possible to connect an R1/8 joint.
*The specifications of this adapter differ from those of the adapter for rear face piping.

Warranty

Warranty period

The warranty period for our product is one (1) year from delivery to the location specified by the orderer who makes a direct transaction with us.

Scope of warranty

If any failure or defect attributable to us becomes clear during the above warranty period, we will repair the product or supply a substitute product free of charge. However, even during the warranty period, we will exclude the product from the scope of the warranty if the failure or defect corresponds to any of the following:

- (1) The failure or defect was caused by an unreasonable condition, environment, handling, or usage not mentioned in the instruction manual, specifications, and our product catalog.
- (2) The failure or defect was caused by a factor other than our product.
- (3) The failure or defect was caused by a modification or repair conducted by a party other than us.
- (4) The failure or defect was caused by an event that could not be foreseen at the scientific and technical levels at the time of product shipment from us.
- (5) The failure or defect was caused by an external factor not attributable to us, such as acts of God and disasters.

Please note that the warranty mentioned here means the warranty for our individual product, and damage provoked by a failure or defect of the product is excluded from the scope of the warranty.

*This warranty is valid only in Japan.

Application and usage

Our products are designed and manufactured as general-purpose instruments for general industries.

Therefore, our products are not intended for the following uses, and our products used in such a manner are outside the scope of application.

- (1) Equipment that is anticipated to greatly affect lives and properties, such as nuclear power generation, aviation, railways, marine vessels, vehicles, and medical devices
- (2) Utilities that include electricity, gas, and service water
- (3) Use in outdoor locations and under similar conditions or environments other than those stipulated in the instruction manual
- (4) Usage to which considerable safety consideration and attention equivalent to (1) and (2) above need to be given

Service

Scope of service

Because the product price does not include service expenses, such as the dispatch of engineers, we will separately charge for the expenses in the following cases:

- (1) Instruction for installation and adjustment and a witnessed test run
- (2) Maintenance inspection, adjustments, and repairs
- (3) Technical guidance and technical education
- (4) Witnessed inspections of products at our factory

<<Note>> The product specifications and information in this catalog are subject to change without prior notice for product improvement or other reasons.

● For order placement, contact

General agent  **Manostar Shop Co., Ltd.**

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TEL. +81-78-621-7000 FAX. +81-78-621-7788

Manufacturer  **Yamamoto Electric Works Co., Ltd.**

1-2-3 Nishishiriike-cho, Nagata-ku, Kobe City, Hyogo 653-0031
TEL. +81-78-631-6000 FAX. +81-78-631-6020