AT9000 Advanced Transmitter SuperAce

JTE Series Remote-Seal Differential Pressure Transmitter

JTE9□□S/W Models

Overview

The AT9000 Advanced Transmitter is a smart transmitter which features a built-in microprocessor and outstanding stability.

It is capable of measuring the flow rate, liquid level, etc., of gases, liquids, and vapors, outputting a 4 to 20 mA DC analog signal corresponding to the measured pressure.

This remote-seal differential pressure transmitter is suitable for performing differential pressure measurements (for flow rate, liquid level, etc.) on process fluids which are highly corrosive or which are accompanied by condensation or precipitation of metal, etc.

Features

(1) Outstanding usability
- Zero adjustment can be performed without removing the cover.

(2) A wide variety of functions
- Using a communicator, historical information regarding excessive pressure, abnormal temperature, etc., can be checked.

Product Usage Precautions

- This product is intended for the general industrial market.

- This product is not subject to the regulations pursuant to the Chinese electronic information product pollution control laws. However, if the product is used with semiconductor manufacturing equipment, special-purpose equipment for electronic devices, etc., it may in some cases be necessary to include documents and to mark the product in accordance with Chinese electronic information product pollution control laws. If necessary, please indicate this in advance to our sales department.

Specifications

Measuring span/setting range/working pressure range:
See Table 1.

Output signal:
Analog output: 4 to 20 mA DC

Communication method: SFN,
HART®
HART® Version: 5

Supply voltage/load resistance:
DC 12.5 to 45 V DC
For communication with a communicator, load resistance of at least 250 Ω is required between loops. Regarding supply voltage and load resistance, see Figure 1.

Sealed liquid:
General purpose model, high-temperature model, high-temperature vacuum model, high-temperature high-vacuum model: silicone oil
For oxygen, for chlorine: fluorine oil
Regarding specific gravity, see Table 2.

Waterproof/dustproof structure: IP66/IP67

Ambient temperature range:
See Tables 2 and 3. However, with the indicators or with explosion-proofing specifications, the operating range is the narrowest range from among the range shown below, the range shown in Table 2, and the range shown in Table 3.
- With indicators
  Normal operating range: -20 to +70 °C
  Operating Limit Range: -30 to +80 °C
- TIIS special explosion-proof model:
  -20 to +60 °C (without indicators)
  -20 to +55 °C (with indicators)

Wetted part temperature range:
See Tables 2 and 3.

Transport and storage temperature range:
Without indicators: -50 to +85 °C
With indicators: -25 to +80 °C

Ambient humidity limits: 5 to 100 % RH

Supply voltage/voltage characteristics: ±0.005 % FS/V

EMC regulation applied: EN 61326-1:2013
IEC 61326-2-3
Lightning protection characteristics
(surge immunity test, IEC 61000-4-5)
Line-to-line (S+, S-): ±1 kV
Line-to-ground (S+, S-) ±2 kV
Waveform: 1.2/50 (8/20) μS

Response time: Approx. 700 ms
(reference value, regular type capillary 5 m at room temperature)

Damping time constant: Settable to 10 levels in range 0 to 32 s
(HART® communication protocol can be set to 10 levels in range 0 to 128 s)

Output saturation point:
High limit: 21.6 mA
Low limit: 3.6 mA

Vibration characteristics:
Amplitude: 1.5 mm/frequency: 5 to 9 Hz
Acceleration: 4.9 m/s^2 (0.5 G)/9 to 200 Hz
Shock characteristics: Acceleration 9.8 m/s^2 (1G)

Process pipe connection:
- Flange (both high and low pressure sides)
  Flange flush diaphragm type:
  JIS 10K, 20K, 30K,63K-40A, 50A, 80A (RF) equivalent,
  ANSI 150, 300, 600-1.5 inches, 2 inches, 3 inches (RF) equivalent,
  JPI 150, 300, 600-1.5 inches, 2 inches, 3 inches (RF) equivalent
  Extended flange type:
  JIS 10K, 20K, 30K-50A, 80A, 100A (RF) equivalent,
  ANSI 150, 300-2 inches, 3 inches, 4 inches (RF) equivalent,
  JPI 150, 300-2 inches, 3 inches, 4 inches (RF) equivalent

Used flange standard year/month:
JIS: JIS B 2220 (2004)
ANSI: ANSI B16.5 (1988)
JPI: JPI-7S-15-93

Electrical conduit connection: G 1/2 internal thread, 1/2 NPT internal thread, M20 internal thread

Body material
Main unit: SUS316
Transmitter case: Aluminum alloy
Meter body cover: SCS14 (SUS316 equivalent)

Wetted part material: SUS316 (diaphragm-only SUS316L), Alloy C-276, tantalum, SUS316L

Flange material: SUS304, SUS316, SUS316L

Nut and bolt material (for meter body cover fastening):
Carbon steel (SNB7), SUS304, SUS630

Mounting bracket material:
Bracket: Carbon steel, SUS304, SF8 (SUS304 equivalent)
Nuts and bolts : SUS304

Capillary tube section
Capillary tube length:
2, 3, 4, 5, 6, 7, 8, 9, 10 m However, for the following flange sizes (and for olefin coating), capillary tube length is 2, 3, 4, 5 m: direct mounting type 2 inches (50A), 1.5 inches (40A), 3/4 inches (20A), 1/2 inches (15A); extended type 3 inches (80A), 2 inches (50A).
Capillary tube material: SUS316
Armored tube material: SUS304
Coating (optional): Olefin coating (improved anti-corrosion characteristics) (cannot be used with high-temperature vacuum model/high-temperature high-vacuum model)

Finish:
Standard corrosion prevention:
Baked acrylic resin paint finish
Corrosion-proof finish: Urethane baked finish
Standard color: Cover: Azbil Bold 2.5R 2.25/5
Body: Silver N-8.2
Silver:Cover: Silver N-8.2
Body: Silver N-8.2

Built-in indicators:
- Digital LCD indicators (optional)
- Engineering unit scale display compatible
- Can be set to any value in the range -19999 to +19999 (4.5 digits).

Specify the following when issuing engineering unit scale commands.
- Meter calibration range
- Engineering unit scale
- Specification of display proportional, square root
  All data setting operations are performed from the communicator.

Burnout features:
Can be selected from the following
High limit direction: 21.6 mA (110 %) or higher
Low limit direction: 3.6 mA (-2.5 %) or lower

Grounding: D class (resistance under 100 ohms)
Installation:
(1) 2-inch pipe mounting bracket
Mount the transmitter body to a horizontal or vertical 2-inch pipe using a mounting bracket.

(2) Pit-Tank model (regular type only)
It is possible to connect directly to the tank using the included installation kit for Pit-Tank.
<Features>
- It is possible to connect directly to the tank without the 2-inch pipe. Using the adapter makes it possible to save space.
- Clean capillary tube installation
  Using tube clamps fastens the tubes securely while also improving temperature characteristics.

Mass: approx. 18.3 kg (with JIS 10-80A flange, capillary 5 m)
For JTE9☐☐W, +1.0 kg
HF adapter (for 1/2 remote): approx. 0.7 kg/unit

Table 1. Installation Kit for Pit-Tank (mass: approx. 600 g)

Configuration	Material
Adapter	SCS13 (SUS304 equivalent)
Adapter Fastening Bolt	SUS304 (M8)
Tube Clamps	Brass and nickel plating

Table 2. Measuring Span/Setting Range/Working Pressure Range

Model No.	Measuring Span	Setting Range	Working Pressure Range
JTE929☐	2.5 to 100 kPa	-100 to +100 kPa	The smaller of the 10 MPa and the flange rating (for negative pressure, see Figures 2, 7, and 10; for flange rating values, see the Maximum Working Pressure charts below)
JTE930☐	35 to 700 kPa	-100 to +700 kPa	

Table 3. Wetted Part Temperature Range/Ambient Temperature Range

		Temperature range (°C) [1, 4]				
		General-purpose	High-temperature model	For high-temperature vacuum	For high-temperature high-vacuum	For oxygen or chlorine
Wetted part	Normal operating range	-40 to +180	-5 to +280 [5]	-5 to +280 [5]	10 to 300 [5]	-10 to +120
	Operating limit range	-50 to +185	-10 to +310 [6]	-10 to +310 [6]	-10 to +310 [6]	-40 to +125
Surrounding area [2] Flange size: direct mounting, 3 inches (80A) Extended type: 4 inches (100A)	Normal operating range	-30 to +75	-5 to +55	-5 to +55	10 to 55	-10 to +75
	Operating limit range	-50 to +80	-10 to +60	-10 to +60	-10 to +60	-40 to +80
Surrounding area [2] Flange size: direct mounting, 2 inches (50A), 1.5 inches (40A) Extended type: 3 inches (80A), 2 inches (50A)	Normal operating range	-15 to +65	-5 to +45	-5 to +55	10 to 55	-10 to +75
	Operating limit range	-30 to +80	-10 to +55	-10 to +60	-10 to 60	-40 to +80
Sealed liquid specific gravity [3]		0.935	1.07	1.07	1.09	1.87

[1]: See working pressure and temperature of wetted parts in Figures 2 to 10.
[2]: Ambient temperature of transmitter body.
[3]: Rough value at temperature of 25 °C.
[4]: Be careful to stay within normal operating range, as dropping below this range results in transmitter response speed decreasing, and output becoming unstable.
With the sealed liquid high temperature model, and with capillary length of 5 m, ambient temperature of 0 °C, and flange sizes 2 inches/50A and 1.5 inches/40A, response time is approx. 13 seconds.
[5]: Process wetted material: for tantalum, high limit is 180 °C.
[6]: Process wetted material: for tantalum, high limit is 200 °C.

Table 4. Wetted Part Temperature and Ambient Temperature Range (Flange Sizes 3/4 inches (20A), 1/2 inches (15A))

		Temperature range (°C) [1, 4]			
		General-purpose	High-temperature model	For oxygen or chlorine	For fast response
Wetted part	Normal operating range	-40 to +180	-5 to +280	-10 to +120	-40 to +120
	Operating limit range	-50 to +185	-10 to +310	-40 to +125	-50 to +125
Surrounding area [2]	Normal operating range	-15 to +65	-5 to +45	-10 to +75	-15 to +65
	Operating limit range	-30 to +80	-10 to +55	-40 to +80	-30 to +80
Sealed liquid specific gravity [3]		0.935	1.07	1.87	0.873

[1]: See working pressure and temperature of wetted parts in Figures 2 to 10.
[2]: Ambient temperature of transmitter body.
[3]: Rough value at temperature of 25 °C.
[4]: Be careful to stay within normal operating range, as dropping below this range results in transmitter response speed decreasing, and output becoming unstable.

With the sealed liquid high temperature model, and with capillary length of 5 m and ambient temperature of 0 °C, response time is approx. 13 seconds.

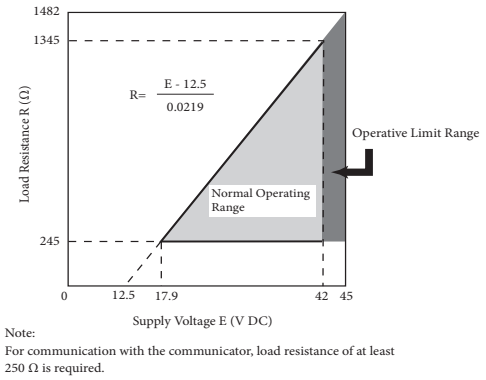


Figure 1. Supply Voltage and Load Resistance Characteristics

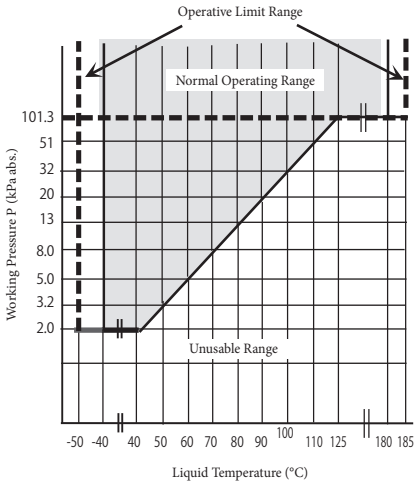


Figure 2. Wetted Parts Working Pressure and Temperature (General Purpose)

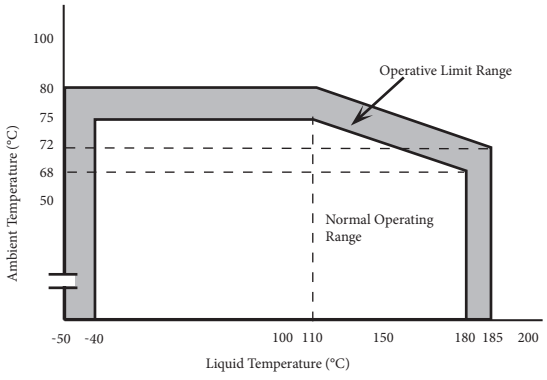


Figure 3. Ambient Temperature and Wetted Part Temperature (General Purpose) [Flange Size: Direct Mounting 3 inches (80A); Extended Flange Type 4 inches (100A)]

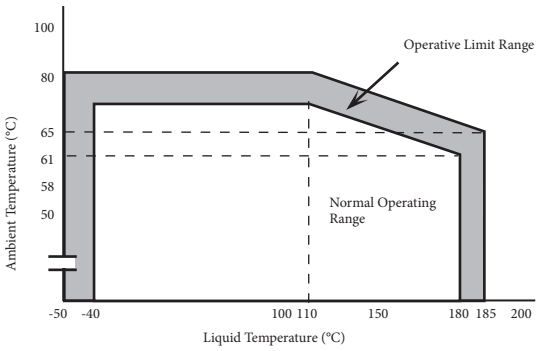


Figure 4. Ambient Temperature and Wetted Part Temperature (General Purpose) [Flange Size: Direct Mounting 2 inches (50A)/1.5 inches (40A); Extended Flange Type 3 inches (80A)/2 inches (50A)]

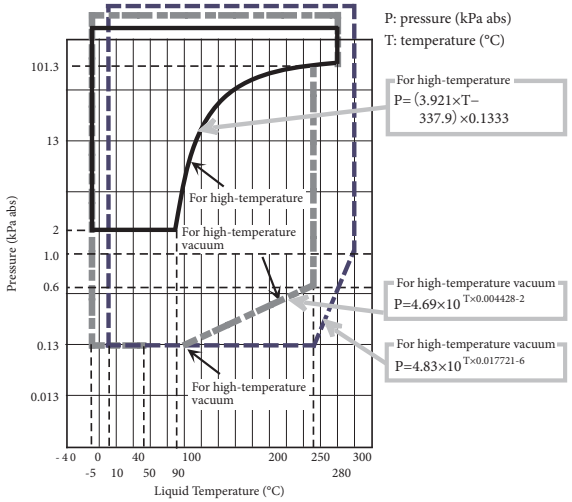


Figure 5. Wetted Parts Working Pressure and Temperature (High-Temperature Model/High-Temperature Vacuum model/High Temperature High-Vacuum Model)

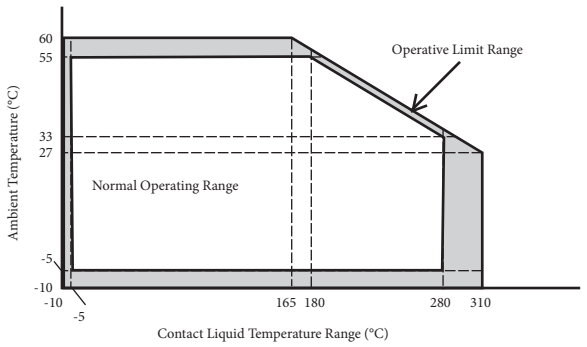


Figure 6. Ambient Temperature and Wetted Part Temperature (High-Temperature High-Vacuum Model 2, 3 m) [Flange Size: Direct Mounting 2 inches (50A)/1.5 inches (40A); Extended Flange Type 3 inches (80A)/2 inches (50A)]

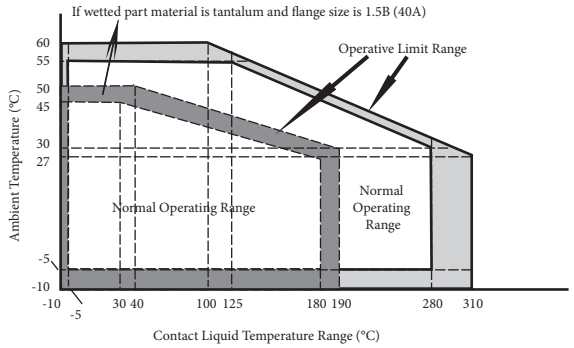


Figure 7. Ambient Temperature and Wetted Part Temperature (High-Temperature Vacuum Model 4, 5m) [Flange Size: Direct Mounting 2 inches (50A)/1.5 inches (40A); Extended Flange Type 3 inches (80A)/2 inches (50A)]

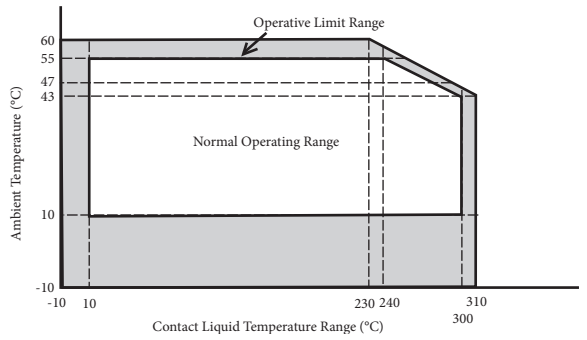


Figure 8. Ambient Temperature and Wetted Part Temperature (High-Temperature High-Vacuum Model 2, 3 m) [Flange Size: Direct Mounting 2 inches (50A)/1.5 inches (40A);
Extended Flange Type 3 inches (80A)/2 inches (50A)]

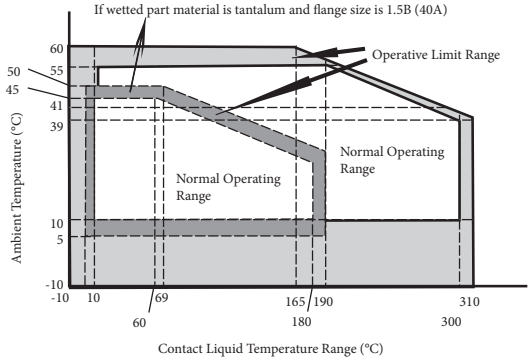


Figure 9. Ambient Temperature and Wetted Part Temperature (High-Temperature High-Vacuum Model 4, 5m) [Flange Size: Direct Mounting 2 inches (50A)/1.5 inches (40A); Extended Flange Type 3 inches (80A)/2 inches (50A)]

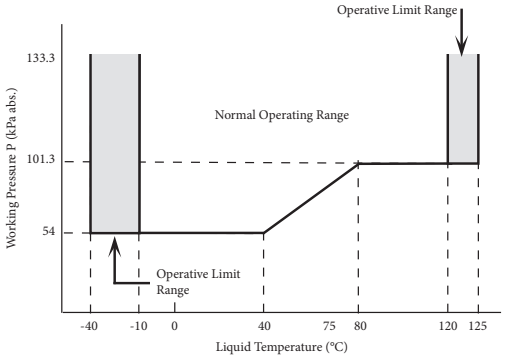


Figure 10. Wetted Parts Working Pressure and Temperature (for Oxygen/Chlorine)

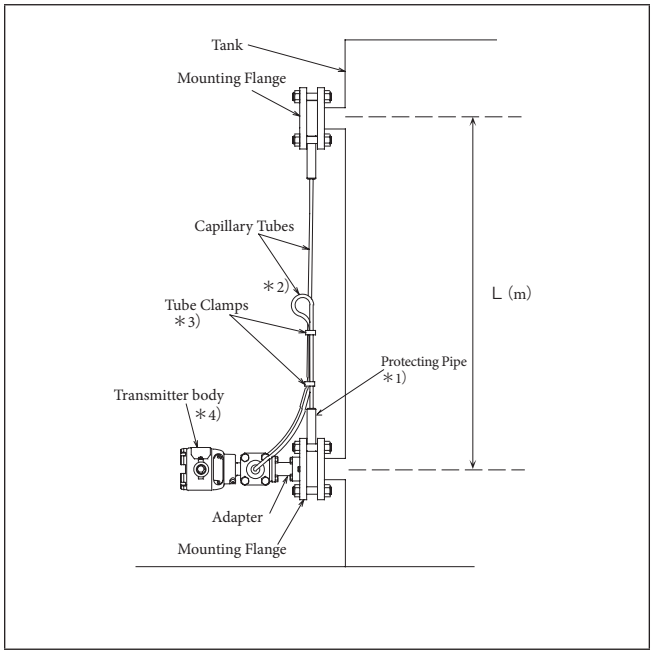
Explosion-proof Structure

TIIS special explosion-proof model (Ex d IIC T4)
Note:
Use cables with the maximum allowable temperature shown below.
JTE9☐☐S: 65 °C (with indicators)
70 °C (without indicators)
JTE9☐☐W: 60 °C (with indicators)
65 °C (without indicators)

Tank Level Instrumentation with Pit-Tank

Cautionary notes (patent no. 03089580)

*1) If the protecting pipe is installed facing upward as shown in the diagram, be sure to specify the olefin coating for the capillary tube. If the olefin coating is not used, attach the pipe such that capillary output is directed downward.
*2) When handling capillary tubes as shown in the diagram, be careful not to twist them. The bend diameter of the capillary tubes is no less than approx. 5 cm. Do not bend them beyond that by applying excessive force.
*3) Three tube clamps are available as an option; referring to the diagram, use them for attachment at any desired locations. Do not fasten capillary tubes so tightly that they are deformed.
*4) Before using the Smart Field Communicator to perform zero adjustment, be sure to set the inter-flange height L (m) and enable the sealed liquid temperature compensation function.



Options

External zero adjustment function:
On-site zero adjustment of the transmitter can be performed using the included magnetic bar.
Note: Be sure to use this in conjunction with the indicators.

Long vent drain:
Maintenance, process conditions, and safety are addressed by using a drain whose length (60 mm) is longer than the standard length (27 mm).

Elbow:
An adapter for changing the orientation of the electrical conduit connection port from horizontal to vertical in order to fit the on-site wiring conditions. Either one or two can be selected as necessary.

Moisture-free finish (including oil free finish):
Shipped with water content and oil content removed from the wetted part. (A small amount of fluorine oil is applied to vent/drain plugs in order to prevent sticking.)

High-grade moisture-free finish (incl. oil free finish):
Shipped with water content and oil content removed from the wetted part (including the vent/drain plugs).

Oil-free finish:
Shipped with oil content removed from the wetted part. (A small amount of fluorine oil is applied to vent/drain plugs in order to prevent sticking.)

FEP protective film:
Used to prevent deformation of a diaphragm due to slurry or adhesion of liquid, or when there is a desire to avoid metal ions from the diaphragm, as in for example the semiconductor industry.
Operating temperature range: 0 to 110 °C
Working pressure range: atmospheric pressure - flange rating (up to JIS 10K, ANSI 150, JPI 150). Cannot use at negative pressure.

Electric power specification:
Applicable in cases in which particularly strict quality control is required, as in the electric power and gas industries.
Stability tests under high static pressure, confirmation tests of differential pressure gauge input output characteristics under high-speed static pressure variation, and the like are performed.

Special failure mode (3.2 mA):
Safe failure output values (low limit) during abnormal conditions will be 3.2 mA (-5 %) or lower.

Variable output saturation point: can be set within the following range:
12 mA (50 %) ≤ output high limit ≤ 21.6 mA (110 %)
3.6mA (-2.5 %) ≤ output low limit ≤ 12 mA (50 %)

Notes regarding the HART® communication protocol:

1. Option J8: When "Special Safe failure 3.2 mA" is selected, 3.2 mA (-5 %) ≤ output lower limit < 12 mA (50 %).
2. Option J8: When "Special Safe failure 3.2 mA" is not selected, 3.8 mA (-1.25 %) ≤ output lower limit < 12 mA (50 %).

Test report:
Shows the results of having tested the appearance, input-output characteristics, insulation resistance, dielectric strength, etc., of the transmitter.

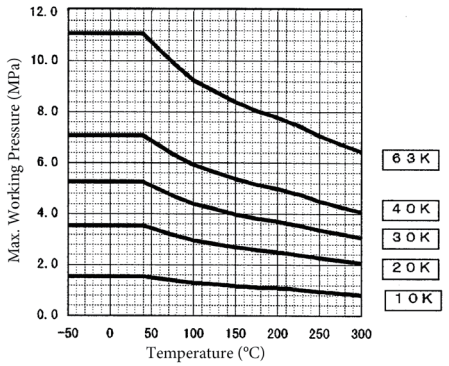
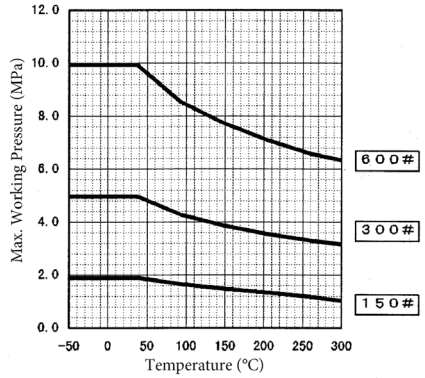
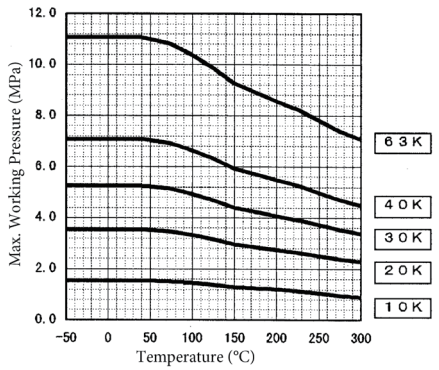
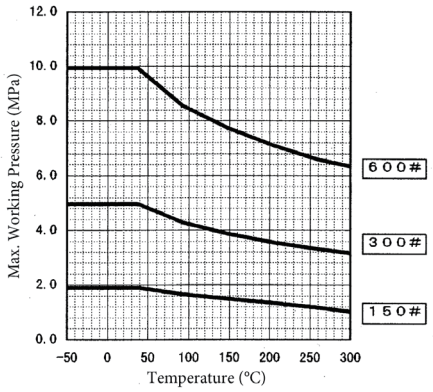
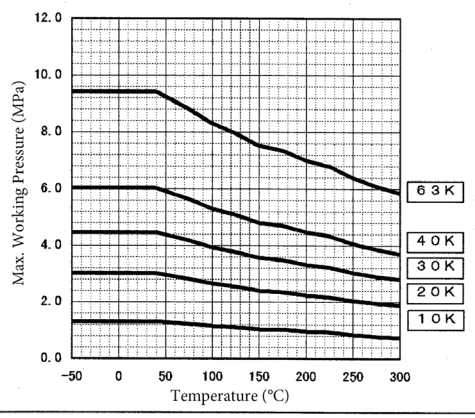
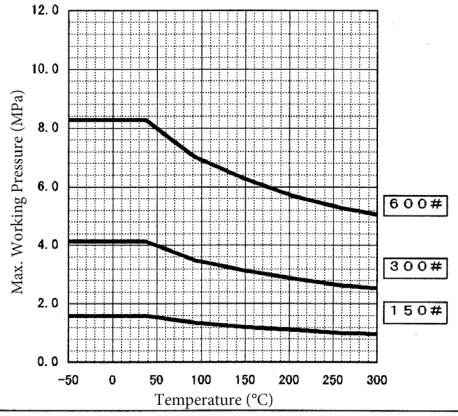
Mill sheet:
Shows data related to the chemical composition, heat treatment condition, and mechanical properties of the wetted part material.

Strength calculation sheet:
Shows the results of having calculated the strength of the meter body cover, flanges, and bolts.

Withstand pressure and air tight test (general-purpose use):
Shows the results of the wetted part withstand pressure test (water pressure: 10 minutes) and air tight test (N2: 10 minutes).

Test report (with traceability certificate):
Comprised of three documents: a traceability diagram, a calibration certificate, and a test report.

Maximum Working Pressure

	JIS	JPI and ANSI
SUS304		
SUS316		
SUS316L		

Notes

1. Maximum working pressure based on flange rating, flange material, and working temperature is as shown above. Also note that the operating temperature range is specified in the specifications for the transmitter.

Product Usage Precautions

Bear in mind the following points when using the product in order to bring out its full performance, Also be sure to read the operating instructions for the product before use.

Installation Precautions

⚠Warning

- When installing the product, make sure that the gaskets do not stick out at the connections with the process (connections between adapter flanges and connecting pipes and flanges). There is a danger that the measured fluid will leak out and cause scalding and other harmful health effects. If the measured fluid is harmful to the human body, take safety measures such as wearing goggles or a mask so that it does not contact the skin or the eyes, become inhaled, etc.
- Use this product within the limits of the described usage conditions (explosion proofing, pressure rating, temperature, humidity, voltage, vibration, shock, installation orientation, ambient atmosphere, and the like). There is a danger of scalding and other harmful health effects as a result of instrument failure, fire, etc.
- When working in a hazardous area, perform installation and deployment according to the construction methods prescribed by the hazard guidelines.
  In addition, with the TIIS flameproof model, be sure to use flameproof cable glands certified by this company for the flameproof packing cable wiring system.

⚠Caution

- After installing this product, do not use it as a scaffold, place your body weight on it, etc. Doing so may cause damage to the product.
- Be careful not to strike the glass portion of the display with tools, etc. The glass can become damaged, and injuries can occur.
- As this product is extremely heavy, when installing it exercise care regarding scaffolding, and be sure to wear safety shoes.
- This product is a precision instrument. Be sure to avoid subjecting it to shock. Shock may damage the product.

Wiring Precautions

⚠Warning

- Do not perform wiring work, turn on the electricity, etc., when your hands are wet. There is a risk of electric shock.

⚠Caution

- Be sure to thoroughly check the specifications to ensure that the wiring is carried out correctly. Incorrect wiring can cause instrument damage or malfunctions.
- Supply power correctly based on the specifications. Inputting an incorrect power supply can damage the instrument.
- Use a power supply for this product which has overcurrent protection capability.

Usage Precautions for HART® Devices

- If operation using a secondary host (HART® Communicator, etc.) is necessary, set the communication interval of the primary host (distributed control system, device management system, etc.) to 8 seconds or longer, or terminate communication from the primary host before using the secondary host. If the primary host repeats HART® communication before 8 seconds have elapsed, the secondary host may not receive the request (i.e., may not be able to communicate).
- If, as a result of the effects of electrical noise in the installation environment, HART® communication with the host is not possible, take countermeasures such as distancing the signal cable from the noise sources, re-evaluating the grounding conditions, and changing the signal cable to a shielded cable. However, even if HART® communication is not possible due to noise, control by the 4 to 20 mA analog signal will not be affected.
- When using this product in multidrop mode, there is a limit to the number of units which can be used. If using multidrop, please consult our representative for more details.

Using the remote-seal Gauge Pressure Transmitter Correctly

Various accuracy standards and cautionary notes are included so that the characteristics of this remote-seal gauge pressure transmitter can be retrieved and properly utilized.

A. Standard accuracy
Shows linearity at a constant ambient temperature and a constant static pressure (For details, see pp. 12 to 24.)

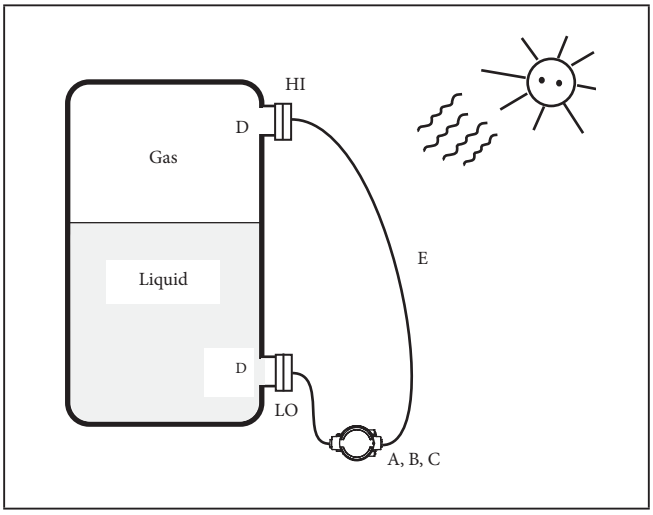
B. Ambient temperature characteristics
Shows accuracy at a constant static pressure as ambient temperature varies. (For details, see pp. 12 to 24.)

C. Static pressure characteristics
Shows accuracy at a constant ambient temperature as static pressure varies.(For details, see pp. 12 to 24.)

D. Wetted part temperature characteristics
Shows the combined shift when the difference in temperature between the process contact liquid of the upper flange (gas side) and the lower flange (liquid side) has changed.

Note: Consider level measurement applications in which the temperature of a reaction furnace or other process changes.

However, even if a difference arises in the process temperature, any discrepancies can be canceled out by performing a zero adjustment when the difference arises.



Flange type	3 inches flange flush diaphragm type, 4 inches extended flange type		
Sealed liquid	General purpose model/ high-temperature model	For high-temperature vacuum	For high-temperature high-vacuum
Wetted temperature characteristics (combined shift for setting range)	$\pm\{(60+\frac{2L}{50})\times\frac{1}{55}\times\frac{\Delta T}{\chi}\}$ %	$\pm\{(90+\frac{2L}{50})\times\frac{1}{55}\times\frac{\Delta T}{\chi}\}$ %	$\pm\{(120+\frac{3L}{50})\times\frac{1}{55}\times\frac{\Delta T}{\chi}\}$ %

Flange type	2 inches flange flush diaphragm type, 3 inches extended flange type	1.5 inches flange flush diaphragm type, 2 inches extended flange type
Sealed liquid	General purpose model/high-temperature model/ high-temperature vacuum model/high-temperature high-vacuum model	
Wetted temperature characteristics (combined shift for setting range)	$\pm\{(5+0.008L)\times\frac{\Delta T}{2\chi}\}$ %	$\pm\{(5+0.008L)\times\frac{\Delta T}{\chi}\}$ %

Flange type	1/2 inches, 3/4 inches flange flush diaphragm type		
Flange Model No.	1, 2	5	6
Sealed liquid	General purpose model/ high-temperature model	General purpose model/ high-temperature model	General purpose model/ high-temperature model
Wetted temperature characteristics (combined shift for setting range)	$\pm(5\times\frac{\Delta T}{\chi})$ %	$\pm(2.4\times\frac{\Delta T}{\chi})$ %	$\pm(1.1\times\frac{\Delta T}{\chi})$ %

χ: the upper range value (URV) or lower range value (LRV) of the calibration range, or the maximum value (kPa) of the span.
L: flange extension length (standard: L=0 mm)
ΔT: the difference between the ambient temperature of the flange part and the ambient temperature of the body

E: Capillary tube temperature characteristics
Indicates the combined shift if, due to the effects of sunlight, radiant heat from the process, etc., a temperature difference arises between the upper flange portion of the capillary tube and the lower flange portion of the capillary tube.

Note: Take into account situations in which, for example, the capillary tube on one side is in direct sunlight and the capillary tube on the other side is in shade.

In addition, if the temperature difference becomes significant, consider for instance adjusting the capillary tubes, using heat insulating material, or using a shielding plate to prevent direct contact with radiant heat.

Flange type	3 inches flange flush diaphragm type, 4 inches extended flange type	2 inches flange flush diaphragm type, 3 inches extended flange type	1.5 inches flange flush diaphragm type, 2 inches extended flange type
Sealed liquid	General purpose model/high-temperature model/high-temperature vacuum model/high-temperature high-vacuum model		
Capillary tube temperature characteristics (combined shift for setting range)	$\pm(1.6\times \frac{\Delta\ell\times\Delta T}{\chi})$ %	$\pm(3.0\times \frac{\Delta\ell\times\Delta T}{\chi})$ %	$\pm(7.1\times \frac{\Delta\ell\times\Delta T}{\chi})$ %

Flange type	1/2 inches, 3/4 inches flange flush diaphragm type		
Flange Model No.	1, 2	5	6
Sealed liquid	General purpose model/ high-temperature model	General purpose model/ high-temperature model	General purpose model/ high-temperature model
Capillary tube temperature characteristics (combined shift for setting range)	$\pm(7.1\times \frac{\Delta\ell\times\Delta T}{\chi})$ %	$\pm(1.2\times \frac{\Delta\ell\times\Delta T}{\chi})$ %	$\pm(0.7\times \frac{\Delta\ell\times\Delta T}{\chi})$ %

χ: the upper range value (URV) or lower range value (LRV) of the calibration range, or the maximum value (kPa) of the span.
$\Delta\ell$: length (m) arising from capillary tube section temperature difference
ΔT: the temperature difference between the ambient temperature of the flange part and the ambient temperature of the body

F. Ability to perform temperature compensation on sealed liquid in capillary tube section: (patent no. 1978534)
The temperature changes in the density (ρ) of the sealed liquid are calculated, and output compensation is performed accordingly. As a result, the effects of seasonal temperature variations are significantly reduced.
Function Setting Method
From the communicator, set the height L (m) between the flanges on the tank. If the height L (m) is known, be sure to specify it. If it is not specified, this function will not be configured prior to shipping.

If the high pressure (HP) side of the transmitter is attached to the lower portion of the tank, place a minus sign (-) on the height L setting.

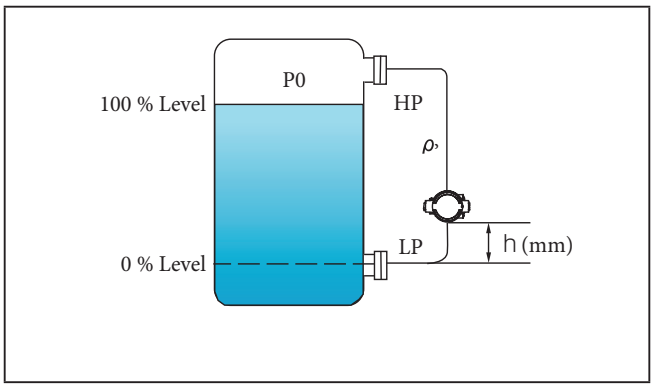
G. remote-seal gauge pressure transmitter set-up
If the remote-seal differential pressure transmitter is attached to a sealed tank, it is recommended that the transmitter body be attached at a position which is lower than that of the lower flange. If however it is to be attached to the middle of the tank due to for instance piping and instrumentation constraints, check the conditions below when doing so.

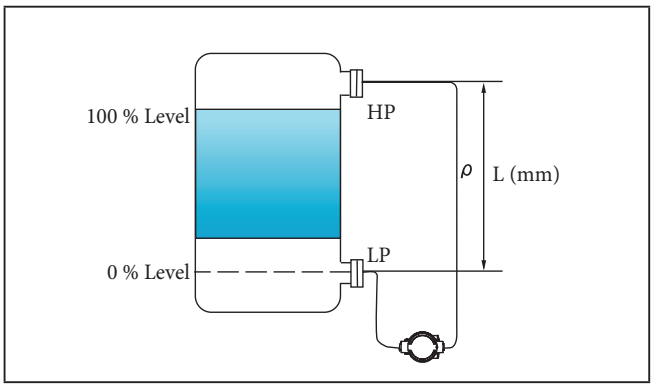
$P_0 + (-\rho' h/102) \geqq P$ (1 kPa = 102 mm H_20)
therefore: $h \leqq (P_0 - P) \times 102/\rho'$

P: transmitter allowed pressure low limit (kPa abs)
ρ': transmitter sealed liquid specific gravity
P_0: tank interior pressure (kPa abs)
h: distance (mm) from lower flange

	Sealed Liquid Specific Gravity ρ'	Pressure Tolerance Lower Limit P (kPa abs)	Contact Liquid Temperature Range (°C)
General-purpose	0.935	2	-40 to +40
High-temperature model	1.07	2	-5 to +90
For high-temperature vacuum	1.07	0.1333	-5 to +100
For high-temperature high-vacuum	1.09	0.1333	10 to 250
For oxygen, for chlorine	1.87	54	-10 to +40

Note:
1. Caution is particularly necessary for applications in which the tank interior pressure P_0 reaches vacuum conditions.
2. If there is any deviation from the above conditions, negative pressure which exceeds the working pressure range will be applied to the diaphragm surface and the sealed liquid to exceed the saturation vapor pressure, causing bubbles to form and resulting in a zero point shift. If pulled by even more negative pressure, the diaphragm may become deformed and damaged.
3. If the contact liquid temperature in the table is exceeded, the pressure tolerance lower limit will change as well; check the device specifications.





Performance Specifications

The performance specifications (accuracy/temperature characteristics/static pressure characteristics) show the absolute values of the lower range value (LRV)*1 and upper range value (URV)*2 of the calibration range, as well as the maximum value χ in the span. The value relative to the span = (value for χ) × (χ)/(span)

JTE929□ General Purpose Model/High-Temperature Model/Oxygen Model
Process wetted material: SUS316, SU316L
Flange size: direct mounting 3 inches (80A), extended type 4 inches (100A); variant: direct mounting 3 inches (80A)/extended type 4 inches (100A)*3

Accuracy	Linear output:	±0.15 % $\pm(0.05 + 0.1\times\frac{12.5}{\chi})$ %	(χ ≥ 12.5 kPa) (χ < 12.5 kPa)
Temperature characteristics (shift from the set range) 30 °C change	Combined shift: (incl. zero/span shift)	±0.71 % $\pm(0.38 + 0.33\times\frac{25}{\chi})$ %	(χ ≥ 25 kPa) (χ < 25 kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	$\pm(0.03 + 0.72\times\frac{25}{\chi})$ %	(χ: kPa)
	Combined shift: (incl. zero/span shift)	±1.00 % $\pm(0.03 + 0.97\times\frac{25}{\chi})$ %	(χ ≥ 25 kPa) (χ < 25 kPa)

JTE929□ General Purpose Model/High-Temperature Model/Oxygen Model
Process wetted material: SUS316, SU316L
Flange size: direct mounting 2 inches (50A), extended type 3 inches (80A); variant: direct mounting 2 inches (50A)/extended type 3 inches (80A)*3

Accuracy	Linear output:	±0.15 % $\pm(0.05 + 0.1\times\frac{12.5}{\chi})$ %	(χ ≥ 12.5 kPa) (χ < 12.5 kPa)
Temperature characteristics (shift from the set range) 30 °C change	Combined shift: (incl. zero/span shift)	±0.88 % $\pm(0.55 + 0.33\times\frac{25}{\chi})$ %	(χ ≥ 25 kPa) (χ < 25 kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	$\pm(0.03 + 1.44\times\frac{25}{\chi})$ %	(χ: kPa)
	Combined shift: (incl. zero/span shift)	±1.97 % $\pm(0.03 + 1.94\times\frac{25}{\chi})$ %	(χ ≥ 25 kPa) (χ < 25 kPa)

Notes: *1. URV is the measured value when 100 % (20 mA DC) is outputted
*2. LRV is the measured value when 0 % (4 mA DC) is outputted
*3. Tank low flange ("L") is extended flange, and high flange ("H") is standard flange.

JTE929□ General Purpose Model/High-Temperature Model /Oxygen Model
Process wetted material: SUS316, SU316L
Flange size: extended type 2 inches (50A); variant: direct mounting 2 inches (50A) /extended type 2 inches (50A)[*1]; variant: direct mounting 1.5 inches (40A)/extended type 2 inches (50A)[*1]

Accuracy	Linear output:	±0.2 % $\pm(0.05 + 0.15 \times \frac{12.5}{\chi})$ %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics[*2] (shift from the set range) 30 °C change	Combined shift: (incl. zero/span shift)	±6.54 % $\pm(6.21 + 0.33 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
Static pressure characteristics[*2] (shift from the set range) 7 MPa change	Zero shift:	±2.7 % $\pm(2.7 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
	Combined shift: (incl. zero/span shift)	±3.5 % $\pm(3.5 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)

Notes: *1. Tank low flange ("L") is extended flange, and high flange ("H") is standard flange.
*2. Provided that capillary length is up to 3 m. For 4.5 m, there is a shift of 1.5x compared to 3 m or less.
(For flange size of direct mounting 1.5 inches (40A), 1.5 times high temperature table.)

JTE929□ General Purpose Model/Oxygen Model, capillary tube length 3 m or less
Process wetted material: SUS316, SU316L
Flange size: direct mounting 1.5 inches (40A)

Accuracy	Linear output:	±0.2 % $\pm(0.05 + 0.15 \times \frac{12.5}{\chi})$ %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics (shift from the set range) 30 °C change	Combined shift: (incl. zero/span shift)	±0.88 % $\pm(0.55 + 0.33 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	$\pm(0.03 + 1.44 \times \frac{25}{\chi})$ %	(χ:kPa)
	Combined shift: (incl. zero/span shift)	±1.97 % $\pm(0.03 + 1.44 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)

JTE929□ General Purpose Model/Oxygen Model, capillary tube length 4 m, 5 m;
JTE929□ High-Temperature Model
Process wetted material: SUS316, SU316L
Flange size: direct mounting 1.5 inches (40A)

Accuracy	Linear output:	±0.2 % $\pm(0.05 + 0.15 \times \frac{12.5}{\chi})$ %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics (shift from the set range) 30 °C change	Combined shift: (incl. zero/span shift)	±6.54 % $\pm(6.21 + 0.33 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	±2.7 % $\pm(2.7 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
	Combined shift: (incl. zero/span shift)	±3.5 % $\pm(3.5 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)

JTE929□ General Purpose Model/Oxygen Model, capillary tube length 3 m or less
Process wetted material: SUS316, SU316L
Flange size: small diameter remote type 3/4 inches (20A), 1/2 inches (15A)

Accuracy	Linear output:	±0.3 % $\pm(0.15 + 0.15\times\frac{12.5}{\chi})$ %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics* (shift from the set range) 30 °C change	Combined shift: (incl. zero/span shift)	±0.88 % $\pm(0.55 + 0.33\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
Static pressure characteristics* (shift from the set range) 7 MPa change	Zero shift:	$\pm(0.03 + 1.44\times\frac{25}{\chi})$ %	(χ: kPa)
	Combined shift: (incl. zero/span shift)	±1.97 % $\pm(0.03 + 1.44\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)

JTE929□ General Purpose Model/Oxygen Model, capillary tube length 4 m, 5 m;
JTE929□ High-Temperature Model
Process wetted material: SUS316, SU316L
Flange size: 3/4 inches (20A), 1/2 inches (15A)

Accuracy	Linear output:	±0.3 % $\pm(0.15 + 0.15\text{x}\frac{12.5}{\chi})$ %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics* (shift from the set range) 30 °C change	Combined shift: (incl. zero/span shift)	±6.54 % $\pm(6.21 + 0.33\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
Static pressure characteristics* (shift from the set range) 7 MPa change	Zero shift:	±2.7 % $\pm(2.7\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
	Combined shift: (incl. zero/span shift)	±3.5 % $\pm(3.5\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)

JTE929□ General Purpose Model/High-Temperature Model
Process wetted material: SUS316
Flange size: small diameter high-performance remote type 3/4 inches (20A), 1/2 inches (15A)

Accuracy	Linear output:	±0.15 % $\pm(0.05 + 0.1\times\frac{12.5}{\chi})$ %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics* (shift from the set range) 30 °C change (-5 to +55 °C range)	Combined shift: (incl. zero/span shift)	±0.77 % $\pm(0.38 + 0.39\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
Static pressure characteristics* (shift from the set range) 7 MPa change	Zero shift:	±1.23 % $\pm(1.23\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
	Combined shift: (incl. zero/span shift)	±1.65 % $\pm(1.65\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)

*Provided that capillary length is up to 3 m. For 4.5 m, there is a shift of 1.5x compared to 3 m or less.
(For flange size of direct mounting 1.5 inches (40A), 1.5 times high temperature table.)

JTE929□ General Purpose Model/Oxygen Model
Process wetted material: SUS316
Flange size: small diameter high-anticorrosion remote type 3/4 inches (20A), 1/2 inches (15A)

Accuracy	Linear output:	±0.15 % $\pm(0.05 + 0.1\times\frac{12.5}{\chi})$ %	(χ ≥ 12.5 kPa) (χ < 12.5 kPa)
Temperature characteristics* (shift from the set range) 30 °C change (-5 to +55 °C range)	Combined shift: (incl. zero/span shift)	±0.81 % $\pm(0.38 + 0.43\times\frac{25}{\chi})$ %	(χ ≥ 25 kPa) (χ < 25 kPa)
Static pressure characteristics (shift from the set range) 7 MPa change *4	Zero shift:	±1.47 % $\pm(1.47\times\frac{25}{\chi})$ %	(χ ≥ 25 kPa) (χ < 25 kPa)
	Combined shift: (incl. zero/span shift)	±1.97 % $\pm(1.97\times\frac{25}{\chi})$ %	(χ ≥ 25 kPa) (χ < 25 kPa)

JTE929□ High-Temperature Vacuum Model/High-Temperature High-Vacuum Model
Process wetted material: SUS316, SU316L
Flange size: direct mounting 3 inches (80A), extended type 4 inches (100A)

Accuracy	Linear output:	±0.2 % $\pm(0.05 + 0.15\text{x}\frac{12.5}{\chi})$ %	(χ ≥ 12.5 kPa) (χ < 12.5 kPa)
Temperature characteristics (shift from the set range) 30 °C change	Combined shift: (incl. zero/span shift)	±1.36 % $\pm(0.69 + 0.67\times\frac{25}{\chi})$ %	(χ ≥ 25 kPa) (χ < 25 kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	±1.5 % $\pm(1.5\times\frac{25}{\chi})$ %	(χ ≥ 25 kPa) (χ < 25 kPa)
	Combined shift: (incl. zero/span shift)	±2.0 % $\pm(2.0\times\frac{25}{\chi})$ %	(χ ≥ 25 kPa) (χ < 25 kPa)

JTE929□ High-Temperature Vacuum Model/High-Temperature High-Vacuum Model
Process wetted material: SUS316, SU316L
Flange size: direct mounting 2 inches (50A), extended type 3 inches (80A)

Accuracy	Linear output:	±0.2 % $\pm(0.05 + 0.15\text{x}\frac{12.5}{\chi})$ %	(χ ≥ 12.5 kPa) (χ < 12.5 kPa)
Temperature characteristics (shift from the set range) 30 °C change	Combined shift: (incl. zero/span shift)	±4.0 % $\pm(3.33 + 0.67\times\frac{25}{\chi})$ %	(χ ≥ 25 kPa) (χ < 25 kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	±6.0 % $\pm(6.0\times\frac{25}{\chi})$ %	(χ ≥ 25 kPa) (χ < 25 kPa)
	Combined shift: (incl. zero/span shift)	±7.0 % $\pm(7.0\times\frac{25}{\chi})$ %	(χ ≥ 25 kPa) (χ < 25 kPa)

*Provided that capillary length is up to 3 m. For 4.5 m, there is a shift of 1.5x compared to 3 m or less.
(For flange size of direct mounting 1.5 inches (40A), 1.5 times high temperature table.)

JTE929□ High-Temperature Vacuum Model/High-Temperature High-Vacuum Model
Process wetted material: SUS316, SU316L
Flange size: direct mounting 1.5 inches (40A), extended type 2 inches (50A)

Accuracy	Linear output:	±0.2 % $\pm(0.05 + 0.15\times\frac{12.5}{\chi})$ %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics (shift from the set range) 30 °C change	Combined shift: (incl. zero/span shift)	±6.54 % $\pm(5.87 + 0.67\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	±6.0 % $\pm(6.0\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
	Combined shift: (incl. zero/span shift)	±7.0 % $\pm(7.0\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)

JTE929□ Fast Response
Process wetted material: SUS316
Flange size: small diameter remote type 3/4 inches (20A), 1/2 inches (15A)

Accuracy	Linear output:	±0.3 % $\pm(0.15 + 0.15\text{x}\frac{12.5}{\chi})$ %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics (shift from the set range) 30 °C change (-5 to +55 °C range)	Combined shift: (incl. zero/span shift)	±6.54 % $\pm(5.87 + 0.67\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	±2.7 % $\pm(2.7\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
	Combined shift: (incl. zero/span shift)	±3.5 % $\pm(3.5\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)

JTE929□ Diaphragm Thickness 0.1 mm (optional) (General Purpose Model/ High-Temperature Model/Oxygen Model)
Process wetted material: SUS316, SU316L
Flange size: direct mounting 3 inches (80A), extended type 4 inches (100A)

Accuracy	Linear output:	±0.3 % $\pm(0.1 + 0.2\times\frac{12.5}{\chi})$ %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics (shift from the set range) 30 °C change	Combined shift: (incl. zero/span shift)	±2.84 % $\pm(1.52 + 1.32\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	$\pm(0.06 + 1.44\times\frac{25}{\chi})$ %	(χ: kPa)
	Combined shift: (incl. zero/span shift)	±2.00 % $\pm(0.06 + 1.94\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)

JTE929□ General Purpose Model/High-Temperature Model/Oxygen Model/Chlorine Model
Wetted part material: Alloy C-276, tantalum
Flange size: direct mounting 3 inches (80A)

Accuracy	Linear output:	±0.2 % $\pm(0.05 + 0.15 \times \frac{12.5}{\chi})$ %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics (shift from the set range) 30 °C change (-5 to +55 °C range)	Combined shift: (incl. zero/span shift)	±1.36 % $\pm(0.69 + 0.67 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	±1.5 % $\pm(1.5 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
	Combined shift: (incl. zero/span shift)	±2.00 % $\pm(2.00 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)

JTE929□ General Purpose Model/High-Temperature Model/Oxygen Model/Chlorine Model
Wetted part material: alloy C-276, tantalum
Flange size: direct mounting 2 inches (50A), 1.5 inches (40A); small diameter remote type 3/4 inches (20A), 1/2 inches (15A)

Accuracy	Linear output:	±0.3 % $\pm(0.05 + 0.25 \times \frac{12.5}{\chi})$ %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics (shift from the set range) 30 °C change	Combined shift: (incl. zero/span shift)	±6.54 % $\pm(5.87 + 0.67 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	±6.00 % $\pm(6.00 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
	Combined shift: (incl. zero/span shift)	±7.00 % $\pm(7.00 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)

JTE929□ General Purpose Model/High-Temperature Model
Wetted part material: alloy C-276
Flange size: small diameter remote type (high anticorrosion type) 3/4 inches (20A), 1/2 inches (15A)

Accuracy	Linear output:	±0.3 % $\pm(0.05 + 0.25 \times \frac{12.5}{\chi})$ %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics (shift from the set range) 30 °C change (-5 to +55 °C range)	Combined shift: (incl. zero/span shift)	$\pm(1.0 + 1.05 \times \frac{25}{\chi})$ %	(χ: kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	±6.00 % $\pm(6.00 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
	Combined shift: (incl. zero/span shift)	±7.00 % $\pm(7.00 \times \frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)

JTE929□ High-Temperature Vacuum Model/High-Temperature High-Vacuum Model
Wetted part material: alloy C-276, tantalum
Flange size: direct mounting 3 inches (80A)

Accuracy	Linear output:	±0.3 % $\pm(0.05 + 0.25\times\frac{12.5}{\chi})$ %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics (shift from the set range) 30 °C change (-5 to +55 °C range)	Combined shift: (incl. zero/span shift)	±3.0 % $\pm(2.33 + 0.67\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	±1.5 % $\pm(1.5\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
	Combined shift: (incl. zero/span shift)	±2.0 % $\pm(2.0\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)

JTE929□ (High-Temperature Vacuum Model/High-Temperature High-Vacuum Model)
Wetted part material: alloy C-276, tantalum
Flange size: direct mounting 2 inches (50A), 1.5 inches (40A)

Accuracy	Linear output:	±0.3 % $\pm(0.05 + 0.25\times\frac{12.5}{\chi})$ %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics (shift from the set range) 30 °C change (-5 to +55 °C range)	Combined shift: (incl. zero/span shift)	±6.54 % $\pm(5.87 + 0.67\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	±6.00 % $\pm(6.00\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)
	Combined shift: (incl. zero/span shift)	±7.00 % $\pm(7.00\times\frac{25}{\chi})$ %	($\chi \geq 25$ kPa) ($\chi < 25$ kPa)

JTE930□ (General Purpose Model/High-Temperature Model/Oxygen Model)
Process wetted material: SUS316, SU316L
Flange size: direct mounting 3 inches (80A), extended type 4 inches (100A); variant: direct mounting 3 inches (80A)/extended type 4 inches (100A)[*1]

Accuracy*2	Linear output:	±0.15 % $\pm(0.05 + 0.1\times\frac{210}{\chi})$ %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)
Temperature characteristics (shift from the set range) 30 °C change *3	Combined shift: (incl. zero/span shift)	±0.71 % $\pm(0.38 + 0.33\times\frac{210}{\chi})$ %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change *3	Zero shift:	$\pm(0.03 + 0.47\times\frac{700}{\chi})$ %	(χ: kPa)
	Combined shift: (incl. zero/span shift)	$\pm(0.03 + 0.72\times\frac{700}{\chi})$ %	(χ: kPa)

Note: *1. Tank low flange ("L") is extended flange, and high flange ("H") is standard flange.
*2. Range is URV ≥ 0, LRV ≥ 0

JTE930□ General Purpose Model/High-Temperature Model/Oxygen Model, capillary tube length 3 m or less
Process wetted material: SUS316, SU316L
Flange size: direct mounting 2 inches (50A), 1.5 inches (40A); variant: direct mounting 2 inches (50A)/extended type 3 inches (80A); direct mounting 2 inches (50A)/extended type 2 inches (50A); direct mounting 1.5 inches (40A)/extended type 2 inches (50A)[*1]
Extended type: 3 inches (80A), 2 inches (50A)

Accuracy*2		Linear output:	±0.15 % $\pm(0.05 + 0.1\times\frac{210}{\chi})$ %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)
Temperature characteristics (shift from the set range) 30 °C change	*3	Combined shift: (incl. zero/span shift)	±2.3 % $\pm(1.8 + 0.5\times\frac{210}{\chi})$ %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	*3	Zero shift:	$\pm(0.03 + 0.47\times\frac{700}{\chi})$ %	(χ: kPa)
		Combined shift: (incl. zero/span shift)	$\pm(0.03 + 0.72\times\frac{700}{\chi})$ %	(χ: kPa)

JTE930□ General Purpose Model/High-Temperature Model/Oxygen Model, capillary tube length 4.5 m
Process wetted material: SUS316, SU316L
Flange size: direct mounting 2 inches (50A), 1.5 inches (40A); variant: direct mounting 2 inches (50A)/extended type 3 inches (80A); direct mounting 2 inches (50A)/extended type 2 inches (50A); direct mounting 1.5 inches (40A)/extended type 2 inches (50A)[*5]
Extended type: 3 inches (80A), 2 inches (50A)

Accuracy		Linear output:	±0.15 % $\pm(0.05 + 0.1\times\frac{210}{\chi})$ %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)
Temperature characteristics (shift from the set range) 30 °C change	*3	Combined shift: (incl. zero/span shift)	±2.3 % $\pm(1.8 + 0.5\times\frac{210}{\chi})$ %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	*3	Zero shift:	$\pm(0.03 + 0.47\times\frac{700}{\chi})$ %	(χ: kPa)
		Combined shift: (incl. zero/span shift)	$\pm(0.03 + 0.72\times\frac{700}{\chi})$ %	(χ: kPa)

Note: *1. Tank low flange ("L") is extended flange, and high flange ("H") is standard flange.
*2. Range is URV ≥ 0, LRV ≥ 0

JTE930□ General Purpose Model/Oxygen Model, capillary tube length 3 m or less
Process wetted material: SUS316, SU316L
Flange size: small diameter remote type 3/4 inches (20A), 1/2 inches (15A)

Accuracy		Linear output:	±0.2 % $\pm(0.05 + 0.15\times\frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Temperature characteristics*1 (shift from the set range) 30 °C change		Combined shift: (incl. zero/span shift)	±1.53 % $\pm(1.2 + 0.33\times\frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	*4	Zero shift:	$\pm(0.03 + 0.47\times\frac{210}{\chi})$ %	(χ: kPa)
		Combined shift: (incl. zero/span shift)	±0.47 % $\pm(0.03 + 0.72\times\frac{210}{\chi})$ %	(kPa)

JTE930□ General Purpose Model/Oxygen Model, capillary tube length 4 m, 5m;
JTE930□ High-Temperature Model
Process wetted material: SUS316, SU316L
Flange size: 3/4 inches (20 A), 1/2 inches (15 A)

Accuracy		Linear output:	±0.2 % $\pm(0.05 + 0.15x\frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Temperature characteristics (shift from the set range) 30 °C change		Combined shift: (incl. zero/span shift)	±2.3 % $\pm(1.8 + 0.5\times\frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	*4	Zero shift:	$\pm(0.03 + 0.47\times\frac{210}{\chi})$ %	(χ: kPa)
		Combined shift: (incl. zero/span shift)	$\pm(0.03 + 0.72\times\frac{210}{\chi})$ %	(χ: kPa)

JTE930□ High-Temperature Vacuum Model/High-Temperature High-Vacuum Model
Process wetted material: SUS316, SU316L
Flange size: direct mounting 3 inches (80A), extended type 4 inches (100A)

Accuracy*2		Linear output:	±0.15 % $\pm(0.05 + 0.1\times\frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Temperature characteristics (shift from the set range) 30 °C change	*3	Combined shift: (incl. zero/span shift)	±1.67 % $\pm(1.00 + 0.67\times\frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	*3	Zero shift:	$\pm(0.75\times\frac{700}{\chi})$ %	(χ: kPa)
		Combined shift: (incl. zero/span shift)	$\pm(1.0\times\frac{700}{\chi})$ %	(χ: kPa)

Note: *1. Provided that capillary length is up to 3 m. For 4.5 m, there is a shift of 1.5x compared to 3 m or less. (For flange size of direct mounting 1.5 inches (40A), 1.5 times high temperature table.)

*2. Range is URV ≥ 0, LRV ≥ 0

JTE930□ High-Temperature Vacuum Model/High-Temperature High-Vacuum Model
Process wetted material: SUS316, SU316L
Flange size: direct mounting 2 inches (50A), extended type 3 inches (80A)

Accuracy*		Linear output:	±0.15 % $\pm(0.05 + 0.15\times\frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Temperature characteristics (shift from the set range) 30 °C change (-5 to +55 °C range)	*3	Combined shift: (incl. zero/span shift)	±1.87 % $\pm(1.2 + 0.67\times\frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	*3	Zero shift:	$\pm(0.75\times\frac{700}{\chi})$ %	(χ: kPa)
		Combined shift: (incl. zero/span shift)	$\pm(1.0\times\frac{700}{\chi})$ %	(χ: kPa)

JTE930□ High-Temperature Vacuum Model/High-Temperature High-Vacuum Model
Process wetted material: SUS316, SU316L
Flange size: direct mounting 1.5 inches (40A), extended type 2 inches (50A)

Accuracy	*3	Linear output:	±0.15 % $\pm(0.05 + 0.1\times\frac{12.5}{\chi})$ %	(χ ≥ 12.5 kPa) (χ < 12.5 kPa)
Temperature characteristics (shift from the set range) 30 °C change (-5 to +55 °C range)	*3	Combined shift: (incl. zero/span shift)	±2.87 % $\pm(2.2 + 0.67\times\frac{25}{\chi})$ %	(χ ≥ 25 kPa) (χ < 25 kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	*3	Zero shift:	$\pm(0.75\times\frac{700}{\chi})$ %	(χ: kPa)
		Combined shift: (incl. zero/span shift)	$\pm(1.0\times\frac{700}{\chi})$ %	(χ: kPa)

JTE930□ Diaphragm Thickness 0.1 mm (optional) (General Purpose Model/High-Temperature Model/Oxygen Model)
Process wetted material: SUS316, SU316L
Flange size: direct mounting 3 inches (80A), extended type 4 inches (100A)

Accuracy	*3	Linear output:	±0.3 % $\pm(0.1 + 0.2\times\frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Temperature characteristics (shift from the set range) 30 °C change	*3	Combined shift: (incl. zero/span shift)	±2.84 % $\pm(1.52 + 1.32\times\frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	*3	Zero shift:	$\pm(0.06 + 0.94\times\frac{700}{\chi})$ %	(χ: kPa)
		Combined shift: (incl. zero/span shift)	$\pm(0.06 + 1.44\times\frac{700}{\chi})$ %	(χ: kPa)

*Range is URV ≥ 0, LRV ≥ 0

JTE930□ General Purpose Model/High-Temperature Model/Oxygen Model/Chlorine Model
Wetted part material: alloy C-276, tantalum
Flange size: direct mounting 3 inches (80A), extended type 4 inches (100A); variant: direct mounting 3 inches (80A)/extended type 4 inches (100A)[*1]

Accuracy[*2]	Linear output:	±0.15 % $\pm(0.05 + 0.1\times\frac{210}{\chi})$ %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)
Temperature characteristics (shift from the set range) 30 °C change [*3]	Combined shift: (incl. zero/span shift)	±1.75 % $\pm(1.00 + 0.75\times\frac{210}{\chi})$ %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change [*3]	Zero shift:	$\pm(0.75\times\frac{700}{\chi})$ %	(χ: kPa)
	Combined shift: (incl. zero/span shift)	$\pm(1.0\times\frac{700}{\chi})$ %	(χ: kPa)

JTE930□ General Purpose Model/High-Temperature Model/Oxygen Model/Chlorine model
Wetted part material: alloy C-276, tantalum
Flange size: direct mounting 2 inches (50A), 1.5 inches (40A)
Small diameter type remote type (high performance type/high corrosion resistance type) 3/4 inches (20A), 1/2 inches (15A)

Accuracy	Linear output:	±0.15 % $\pm(0.05 + 0.1\times\frac{210}{\chi})$ %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)
Temperature characteristics[*3] (shift from the set range) 30 °C change	Combined shift: (incl. zero/span shift)	±3.0 % $\pm(2.2 + 0.8\times\frac{210}{\chi})$ %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change [*4]	Zero shift:	$\pm(0.75\times\frac{700}{\chi})$ %	(χ: kPa)
	Combined shift: (incl. zero/span shift)	$\pm(1.0\times\frac{700}{\chi})$ %	(χ: kPa)

Note: *1. Tank low flange ("L") is extended flange, and high flange ("H") is standard flange.
*2. Range is URV ≥ 0, LRV ≥ 0
*3. Provided that capillary length is up to 3 m. For 4.5 m, there is a shift of 1.5x compared to 3 m or less. (For flange size of direct mounting 1.5 inches (40A), 1.5 times high temperature table.)

JTE930□ General Purpose Model/High-Temperature Model/Oxygen Model/Chlorine Model
Wetted part material: alloy C-276
Flange size: small diameter remote type 3/4 inches (20A), 1/2 inches (15A)

Accuracy		Linear output:	±0.2 % $\pm(0.05 + 0.15 \times \frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Temperature characteristics (shift from the set range) 30 °C change	*4	Combined shift: (incl. zero/span shift)	±3.0 % $\pm(2.2 + 0.8 \times \frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	*4	Zero shift:	$\pm(0.75 \times \frac{700}{\chi})$ %	(χ: kPa)
		Combined shift: (incl. zero/span shift)	$\pm(1.0 \times \frac{700}{\chi})$ %	(χ: kPa)

JTE930□ High-Temperature Vacuum Model/High-Temperature High-Vacuum Model
Wetted part material: alloy C-276, tantalum
Flange size: direct mounting 3 inches (80A)

Accuracy	*3	Linear output:	±0.15 % $\pm(0.05 + 0.1 \times \frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Temperature characteristics (shift from the set range) 30 °C change (-5 to +55 °C range)	*3	Combined shift: (incl. zero/span shift)	±1.75 % $\pm(1.00 + 0.75 \times \frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	*3	Zero shift:	$\pm(0.75 \times \frac{700}{\chi})$ %	(χ: kPa)
		Combined shift: (incl. zero/span shift)	$\pm(1.0 \times \frac{700}{\chi})$ %	(χ: kPa)

JTE930□ High-Temperature Vacuum Model/High-Temperature High-Vacuum Model
Wetted part material: alloy C-276, tantalum
Flange size: direct mounting 2 inches (50A), 1.5 inches (40A)

Accuracy	*3	Linear output:	±0.15 % $\pm(0.05 + 0.1 \times \frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Temperature characteristics (shift from the set range) 30 °C change (-5 to +55 °C range)	*3	Combined shift: (incl. zero/span shift)	±3.0 % $\pm(2.2 + 0.8 \times \frac{210}{\chi})$ %	(χ ≥ 210 kPa) (χ < 210 kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	*3	Zero shift:	$\pm(0.75 \times \frac{700}{\chi})$ %	(χ: kPa)
		Combined shift: (incl. zero/span shift)	$\pm(1.0 \times \frac{700}{\chi})$ %	(χ: kPa)

Note: *3: Range is URV ≥ 0, LRV ≥ 0
*4: Provided that capillary length is up to 3 m. For 4.5 m, there is a shift of 1.5x compared to 3 m or less.
(For flange size of direct mounting 1.5 inches (40A), 1.5 times high temperature table.)

■ FEP Protective Film Usage Performance Specifications (reference specifications, dependent upon protective film installation conditions, usage date, etc.)

JTE929□

Accuracy	Linear output:	±(accuracy + 3) % ±(accuracy + $3\times\frac{12.5}{\chi}$) %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Temperature characteristics (shift from the set range) 30 °C change (-5 to +55 °C range)	Zero shift:	±(temperature characteristics + 2.2) % ±(temperature characteristics + $2.2\times\frac{12.5}{\chi}$) %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
	Combined shift:	±(temperature characteristics + 3) % ±(temperature characteristics + $3\times\frac{12.5}{\chi}$) %	($\chi \geq 12.5$ kPa) ($\chi < 12.5$ kPa)
Static pressure characteristics (shift from the set range) 7 MPa change	Zero shift:	±(static pressure characteristics + 2.2) % ±(static pressure characteristics + $2.2\times\frac{210}{\chi}$) %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)
	Combined shift:	±(static pressure characteristics + 3) % ±(static pressure characteristics + $3\times\frac{210}{\chi}$) %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)

JTE930□

Accuracy	Linear output:	±(accuracy + 3) % ±(accuracy + $3\times\frac{210}{\chi}$) %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)
Temperature characteristics (shift from the set range) 30 °C change (-5 to +55 °C range)	Zero shift:	±(temperature characteristics + 2.2) % ±(temperature characteristics + $2.2\times\frac{210}{\chi}$) %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)
	Combined shift:	±(temperature characteristics + 3) % ±(temperature characteristics + $3\times\frac{210}{\chi}$) %	($\chi \geq 210$ kPa) ($\chi < 210$ kPa)

Note: For specifications (accuracy, temperature characteristics, and static pressure characteristics), see pp. 10 to 18.

Model number configuration table

Flange Flush Diaphragm Type 3 inches (80A); General Purpose Model /High-Temperature Model/Oxygen Model/Chlorine Model

Basic Model No. | Selections | Additional Selections | Options

Measuring span	2.5 to 100 kPa	JTE 929S	
		JTE 929W (with external terminal box)	
	35 to 700 kPa	JTE 930S	
		JTE 930W (with external terminal box)	

Output/ communication format	4 to 20 mA DC (standard)	1
	Digital output (DE protocol) *1	3
	4 to 20 mA DC (HART® communication)	5
Process-wetted material	SU 316 (diaphragm: SUS 316L)	2
	Tantalum *2	4
	Alloy C-276 *3	H
	SUS 316L	8
Sealed liquid	Regular type (silicone oil)	1
	For oxygen service (fluorine oil)	2
	High-temperature model (silicone oil) *3	3
	For chlorine service (fluorine oil) *4	5
Flange standard	JIS 10K	A
	JIS 20K	C
	JIS 30K	D
	JIS 63K *3	F
	ANSI 150	G
	ANSI 300	H
	ANSI 600 *3	J
	JPI 150	N
	JPI 300	P
	JPI 600 *3	Q
Flange size	3 inches / 80A	2
Flange type	Standard	1
Flange material / bolt and nut material	SUS 304 / carbon steel	D
	SUS 304 / SUS 304	E
	SUS 304 / SUS 630	F
	SUS 316 / carbon steel	G
	SUS 316 / SUS 304	H
	SUS 316 / SUS 630	J
	SUS 316L / carbon steel	K
	SUS 316L / SUS 304	L
	SUS 316L / SUS 630	M
Capillary length	2 m	2
	3 m	3
	4 m	4
	5 m	5
	6 m	6
	7 m	7
	8 m	8
	9 m	9
	10 m	Q
	2 m (olefin coating)	A
	3 m (olefin coating)	B
	4 m (olefin coating)	C
	5 m (olefin coating)	H
	6 m (olefin coating)	D
	7 m (olefin coating)	J
	8 m (olefin coating)	E
	9 m (olefin coating)	F
	10 m (olefin coating)	K
		G

X	Electrical connection / explosion-proof	G 1/2, water-tight
2		G 1/2, TIIS special explosion-proof model with 1 cable gland attached
3		G 1/2, TIIS special explosion-proof model with 2 cable glands attached
A		1/2 NPT, non-explosion-proof
X	Indicators	None
1		Digital meter linear scale (0 to 100 %)
2		Digital meter engineering unit scale
X	Corrosion-resistant finish	Standard corrosion-proofing
B		Heavy corrosion-proofing
C		Silver paint (standard corrosion-proofing)
D		Silver paint (heavy corrosion-proofing)
X	Flange processing	None (standard: JISRa3.2 (12.5 s))
X	Fail safe	None
U		Fail safe high limit
D		Fail safe low limit
X	Mounting bracket	None
1		Carbon steel (square)
2		SUS 304 (square)
7		CF8 (SUS 304 equivalent, round)
P		Pit-Tank specifications (direct tank installation) general purpose model only *3

XX	No options
A2	External zero adjustment *5
B7	For mounting a high load resistance smart meter
G1	Elbow x 1 (left)
G2	Elbow x 1 (right)
G3	Elbow x 2
G6	Adapter for dual diaphragm *6
D1	Moisture-free (incl. oil-free) finish
D2	Oil-free finish
D3	FEP protecting film *3
E4	Diaphragm thickness: 0.1 mm *7
J2	Electric power specification
J8	Special failure mode (3.2 mA)
K9	Variable output saturation point
T1	Test report
T2	Mill sheet
T5	Strength calculation sheet
T6	Withstand pressure and air tight test (general-purpose use)
T8	Test report (with traceability certificate)
□□	Other

*1. Cannot be combined with Failure mode "None," variable output saturation point, or external zero adjustment.

*2. If sealed liquid is high temperature model and wetted part material is tantalum, the temperature range of wetted parts is -10 to +180 °C.

*3. Cannot be used with adapter for dual diaphragm.

*4. For wetted part, only "tantalum" can be selected.

*5. Be sure to select indicators.

*6. Select model number of adapter for dual diaphragm (see pp. 26).

*7. For wetted part, only "SUS316, SUS316L" can be selected.

Flange Flush Diaphragm Type 2 inches (50A), 1.5 inches (40A); General Purpose Model/High-Temperature Model/Oxygen Model/Chlorine Model

Basic Model No. – Selections – Additional Selections – Options

Basic Model No.

Measuring span		Model
Measuring span	2.5 to 100 kPa	JTE 929S
		JTE 929W (with external terminal box)
	35 to 700 kPa	JTE 930S
		JTE 930W (with external terminal box)

Selections

Item	Selection	Note	Code
Output/ communication format	4 to 20 mA DC (standard)		1
	Digital output (DE protocol)	*1	3
	4 to 20 mA DC (HART® communication)		5
Process-wetted material	SU 316 (diaphragm: SUS 316L)		2
	Tantalum	*2	4
	Alloy C-276	*3	H
	SUS 316L		8
Sealed liquid	Regular type (silicone oil)		1
	For oxygen service (fluorine oil)		2
	High-temperature model (silicone oil)	*3	3
	For chlorine service (fluorine oil)	*4	5
Flange standard	JIS 10K		A
	JIS 20K		C
	JIS 30K		D
	JIS 63K	*3	F
	ANSI 150		G
	ANSI 300		H
	ANSI 600	*3	J
	JPI 150		N
	JPI 300		P
	JPI 600	*3	Q
Flange size	2 inches / 50A		3
	1.5 inches / 40A	*3	4
Flange type	Standard		1
Flange material / bolt and nut material	SUS 304 / carbon steel		D
	SUS 304 / SUS 304		E
	SUS 304 / SUS 630		G
	SUS 316 / carbon steel		
	SUS 316 / SUS 304		H
	SUS 316 / SUS 630		K
	SUS 316L / carbon steel		
	SUS 316L / SUS 304		L
	SUS 316L / SUS 630		M
Capillary length	2 m		2
	3 m		3
	4 m		4
	5 m		5
	2 m (olefin coating)		B
	3 m (olefin coating)		C
	4 m (olefin coating)		H
	5 m (olefin coating)		D

Additional Selections

Code	Item	Selection
X	Electrical connection / explosion-proof	G 1/2, water-tight
2		G 1/2, TIIS special explosion-proof model with 1 cable gland attached
3		G 1/2, TIIS special explosion-proof model with 2 cable glands attached
A		1/2 NPT, non-explosion-proof
X	Indicators	None
1		Digital meter linear scale (0-100 %)
2		Digital meter engineering unit scale
X	Corrosion-resistant finish	Standard corrosion-proofing
B		Heavy corrosion-proofing
C		Silver paint (standard corrosion-proofing)
D		Silver paint (heavy corrosion-proofing)
X	Flange processing	None (standard: JISRa3.2 (12.5 s))
X	Burnout direction	None
U		Fail safe high limit
D		Fail safe low limit
X	Mounting bracket	None
1		Carbon steel (square)
2		SUS 304 (square)
7		CF8 (SUS 304 equivalent, round)
P		Pit-Tank specifications (direct tank installation) general purpose model only *3

Options

Code	Option	Note
X X	No options	
A 2	External zero adjustment	*5
B 7	For mounting a high load resistance smart meter	
G 1	Elbow x 1 (left)	
G 2	Elbow x 1 (right)	
G 3	Elbow x 2	
G 6	Adapter for dual diaphragm	*6
D 1	Moisture-free (incl. oil-free) finish	
D 2	Oil-free finish	
D 3	FEP protecting film	*3
J 2	Electric power specification	
J 8	Special failure mode (3.2 mA)	
K 9	Variable output saturation point	
T 1	Test report	
T 2	Mill sheet	
T 5	Strength calculation sheet	
T 6	Withstand pressure and air tight test (general-purpose use)	
T 8	Test report (with traceability certificate)	
□□	Other	

*1. Cannot be combined with Failure mode "None," variable output saturation point, or external zero adjustment.

*2. If sealed liquid is high temperature model and wetted part material is tantalum, the temperature range of wetted parts is -10 to +180 °C.

*3. Cannot be used with adapter for dual diaphragm.

*4. For wetted part, only "tantalum" can be selected.

*5. Be sure to select indicators.

*6. Select model number of adapter for dual diaphragm (see pp. 26).

Extended Flange Type 4 inches (100A); General Purpose Model/High-Temperature Model/ Oxygen Model

Basic Model No. | Selections | Additional Selections | Options

Measuring span	2.5 to 100 kPa	JTE 929S	
		JTE 929W (with external terminal box)	
	35 to 700 kPa	JTE 930S	
		JTE 930W (with external terminal box)	

Output / communication format	4 to 20 mA DC (standard)	1
	Digital output (DE protocol) *1	3
	4 to 20 mA DC (HART® communication)	5
Process-wetted material	SUS 316 (diaphragm: SUS 316L)	2
	SUS 316L	8
Sealed liquid	Regular type (silicone oil)	1
	For oxygen service (fluorine oil)	2
	High-temperature model (silicone oil)	3
Flange standard	JIS 10K	A
	JIS 20K	C
	JIS 30K	D
	ANSI 150	G
	ANSI 300	H
	JPI 150	N
	JPI 300	P
Flange size	4 inches / 100A	1
Flange type	Extension length: 50 mm	2
	Extension length: 100 mm	3
	Extension length: 150 mm	4
	Extension length: 200 mm	5
	Extension length: 250 mm	6
	Extension length: 300 mm	7
Flange material / bolt and nut material	SUS 304 / carbon steel	D
	SUS 304 / SUS 304	E
	SUS 304 / SUS 630	F
	SUS 316 / carbon steel	G
	SUS 316 / SUS 304	H
	SUS 316 / SUS 630	J
	SUS 316L / carbon steel	K
	SUS 316L / SUS 304	L
	SUS 316L / SUS 630	M
Capillary length	2 m	2
	3 m	3
	4 m	4
	5 m	5
	6 m	6
	7 m	7
	8 m	8
	9 m	Q
	10 m	A
	2 m (olefin coating)	B
	3 m (olefin coating)	C
	4 m (olefin coating)	H
	5 m (olefin coating)	D
	6 m (olefin coating)	J
	7 m (olefin coating)	E
	8 m (olefin coating)	F
	9 m (olefin coating)	K
	10 m (olefin coating)	G

X X	No options	
A 2	External zero adjustment *2	
B 7	For mounting a high load resistance smart meter	
G 1	For mounting a high load resistance smart meter	
G 2	Elbow x 1 (right)	
G 3	Elbow x 2	
D 1	Moisture-free (incl. oil-free) finish	
D 2	Oil-free finish	
E 4	Diaphragm thickness: 0.1 mm *3	
J 2	Electric power specification	
J 8	Electric power specification	
K 9	Variable output saturation point	
T 1	Test report	
T 2	Mill sheet	
T 5	Strength calculation sheet	
T 6	Withstand pressure and air tight test (general-purpose use)	
T 8	Test report (with traceability certificate)	
□□	Other	

X	Electrical connection / explosion-proof	G 1/2, water-tight
2		G 1/2, TIIS special explosion-proof model with 1 cable gland attached
3		G 1/2, TIIS special explosion-proof model with 2 cable glands attached
A		1/2 NPT, non-explosion-proof
X	Indicators	None
1		Digital meter linear scale (0 to 100 %)
2		Digital meter engineering unit scale
X	Corrosion-resistant finish	Standard corrosion-proofing
B		Heavy corrosion-proofing
C		Silver paint (standard corrosion-proofing)
D		Silver paint (heavy corrosion-proofing)
X	Flange processing	None (standard: JISRa3.2 (12.5 s))
X	Fail safe	None
U		Fail safe high limit
D		Fail safe low limit
X	Mounting bracket	None
1		Carbon steel (square)
2		SUS 304 (square)
7		CF8 (SUS 304 equivalent, round)
P		Pit-Tank specifications (direct tank installation) general purpose model only

*1. Cannot be combined with Failure mode "None," variable output saturation point, or external zero adjustment.

*2. Be sure to select indicators.

*3. For wetted part, only "SUS 316, SUS 316L" can be selected.

Extended Flange Type 3 inches (80A), 2 inches (50A); General Purpose Model/High-Temperature Model/Oxygen Model

Basic Model No. – Selections – Additional Selections – Options

Measuring span	2.5 to 100 kPa	JTE 929S	
		JTE 929W (with external terminal box)	
	35 to 700 kPa	JTE 930S	
		JTE 930W (with external terminal box)	
Output/ communication format	4 to 20 mA DC (standard)		1
	Digital output (DE protocol) *1		3
	4 to 20 mA DC (HART® communication)		5
Process-wetted material	SUS 316 (diaphragm: SUS 316L)		2
	SUS 316L		8
Sealed liquid	Regular type (silicone oil)		1
	For oxygen service (fluorine oil)		2
	High-temperature model (silicone oil)		3
Flange standard	JIS 10K		A
	JIS 20K		C
	JIS 30K		D
	ANSI 150		G
	ANSI 300		H
	JPI 150		N
	JPI 300		P
Flange size	3 inches / 80A		2
	2 inches / 50A		3
Flange type	Extension length: 50 mm		2
	Extension length: 100 mm		3
	Extension length: 150 mm		4
	Extension length: 200 mm		5
	Extension length: 250 mm		6
	Extension length: 300 mm		7
Flange material / bolt and nut material	SUS 304 / carbon steel		D
	SUS 304 / SUS 304		E
	SUS 304 / SUS 630		F
	SUS 316 / carbon steel		G
	SUS 316 / SUS 304		H
	SUS 316 / SUS 630		J
	SUS 316L / carbon steel		K
	SUS 316L / SUS 304		N
	SUS 316L / SUS 630		M
Capillary length	2 m		2
	3 m		3
	4 m		4
	5 m		5
	2 m (olefin coating)		B
	3 m (olefin coating)		C
	4 m (olefin coating)		H
	5 m (olefin coating)		D

X	Electrical connection / explosion-proof	G 1/2, water-tight
2		G 1/2, TIIS special explosion-proof model with 1pc. of cable gland attached
3		G 1/2, TIIS special explosion-proof model with 2pcs. of cable gland attached
A		1/2 NPT, non-explosion-proof
X	Indicators	None
1		Digital meter linear scale (0 to 100 %)
2		Digital meter engineering unit scale
X	Corrosion-resistant finish	Standard corrosion-proofing
B		Heavy corrosion-proofing
C		Silver paint (standard corrosion-proofing)
D		Silver paint (heavy corrosion-proofing)
X	Flange processing	None (standard: JISRa3.2 (12.5 s))
X	Fail safe	None
U		Fail safe high limit
D		Fail safe low limit
X	Mounting bracket	None
1		Carbon steel (square)
2		SUS 304 (square)
7		CF8 (SUS 304 equivalent, round)
P		Pit-Tank specifications (direct tank installation) general purpose model only

X X	No options
A 2	External zero adjustment *2
B 7	For mounting a high load resistance smart meter
G 1	Elbow x 1 (left)
G 2	Elbow x 1 (right)
G 3	Elbow x 2
D 1	Moisture-free (incl. oil-free) finish
D 2	Oil-free finish
J 2	Electric power specification
J 8	Special failure mode (3.2 mA)
K 9	Variable output saturation point
T 1	Test report
T 2	Mill sheet
T 5	Strength calculation sheet
T 6	Withstand pressure and air tight test (general-purpose use)
T 8	Test report (with traceability certificate)
□□	Other

*1. Cannot be combined with Failure mode "None," variable output saturation point, or external zero adjustment.

*2. Be sure to select indicators.

Variant*2 Flange Type 3 inches (80A) Standard/4 inches (100A) Extended; General Purpose Model/High-Temperature Model/Oxygen Model

Basic Model No. | Selections | Additional Selections | Options

Measuring Span	2.5 to 100 kPa	JTE 929S	
		JTE 929W (with external terminal box)	
	35 to 700 kPa	JTE 930S	
		JTE 930W (with external terminal box)	

Output/communication format	4 to 20 mA DC (standard)	1
	Digital output (DE protocol) *1	3
	4 to 20 mA DC (HART* communication)	5
Process-wetted material	SUS 316 (diaphragm: SUS 316L)	2
	SUS 316L	8
Sealed liquid	Regular type (silicone oil)	1
	For oxygen service (fluorine oil)	2
	High-temperature model (silicone oil)	3
Flange standard	JIS 10K	A
	JIS 20K	C
	JIS 30K	D
	ANSI 150	G
	ANSI 300	H
	JPI 150	N
	JPI 300	P
Flange size	3 inches (80A) Standard / 4inches (100A) extended *2	F
Flange type	Extension length: 50 mm	2
	Extension length: 100 mm	3
	Extension length: 150 mm	4
	Extension length: 200 mm	5
	Extension length: 250 mm	6
	Extension length: 300 mm	7
Flange material / bolt and nut material	carbon steel / carbon steel	A
	carbon steel / SUS 304	B
	carbon steel / SUS 630	C
	SUS 304 / carbon steel	D
	SUS 304 / SUS 304	E
	SUS 304 / SUS 630	F
	SUS 316 / carbon steel	G
	SUS 316 / SUS 304	H
	SUS 316 / SUS 630	J
	SUS 316L / carbon steel	K
	SUS 316L / SUS 304	L
	SUS 316L / SUS 630	M
Capillary length	2 m	2
	3 m	3
	4 m	4
	5 m	5
	6 m	6
	7 m	7
	8 m	8
	9 m	Q
	10 m	A
	2 m (olefin coating)	B
	3 m (olefin coating)	C
	4 m (olefin coating)	H
	5 m (olefin coating)	D
	6 m (olefin coating)	J
	7 m (olefin coating)	E
	8 m (olefin coating)	F
	9 m (olefin coating)	K
	10 m (olefin coating)	G

X	Electrical connection / explosion-proof	G 1/2, water-tight
2		G 1/2, TIIS special explosion-proof model with 1 cable gland attached
3		G 1/2, TIIS special explosion-proof model with 2 cable glands attached
A		1/2 NPT, non-explosion-proof
X	Indicators	None
1		Digital meter linear scale (0 to 100 %)
2		Digital meter engineering unit scale
X	Corrosion-resistant finish	Standard corrosion-proofing
B		Heavy corrosion-proofing
C		Silver paint (standard corrosion-proofing)
D		Silver paint (heavy corrosion-proofing)
X	Flange processing	None (standard: JISRa3.2 (12.5 s))
X	None (standard: JISRa3.2 (12.5s))	None
U		Fail safe high limit
D		Fail safe low limit
X	Mounting bracket	None
1		Carbon steel (square)
2		SUS 304 (square)
7		CF8 (SUS 304 equivalent, round)

X X	No options
A 2	External zero adjustment *3
B 7	For mounting a high load resistance smart meter
G 1	Elbow x 1 (left)
G 2	Elbow x 1 (right)
G 3	Elbow x 2
D 1	Moisture-free (incl. oil-free) finish
D 2	Oil-free finish
J 2	Electric power specification
J 8	Special failure mode (3.2 mA)
K 9	Variable output saturation point
T 1	Test report
T 2	Mill sheet
T 5	Strength calculation sheet
T 6	Withstand pressure and air tight test (general-purpose use)
T 8	Test report (with traceability certificate)
□□	Other

*1. Cannot be combined with Failure mode "None," variable output saturation point, or external zero adjustment.

*2. Tank low flange ("L") is extended flange, and high flange ("H") is standard flange.

*3. Be sure to select indicators.

Variant*2 Flange Type; General Purpose Model/High-Temperature Model/Oxygen Model 2 inches (50A) Direct Mounting/2 inches (50A) Extended, 2 inches (50A) Direct Mounting/3 inches (80A) Extended, 1.5 inches (40A) Direct Mounting/2 inches (50A) Extended

Basic Model No. — Body model — Additional Selections — Options

Measuring Span	2.5 to 100 kPa	JTE 929S	
		JTE 929W (with external terminal box)	
	35 to 700 kPa	JTE 930S	
		JTE 930W (with external terminal box)	

Output/ communication format	4 to 20 mA DC (standard)		1
	Digital output (DE protocol)	*1	3
	4 to 20 mA DC (HART* communication)		5
Process-wetted material	SUS 316 (diaphragm: SUS 316L)		2
	SUS 316L		8
Sealed liquid	Regular type (silicone oil)		1
	For oxygen service (fluorine oil)		2
	High-temperature model (silicone oil)		3
Flange standard	JIS 10K		A
	JIS 20K		C
	JIS 30K		D
	ANSI 150		G
	ANSI 300		H
	JPI 150		N
	JPI 300		P
Flange size	2 inches (50A) Standard / 2 inches (50A) extended	*2	H
	2 inches (50A) Standard / 3 inches (80A) extended	*2	O
	2 inches (50A) Standard / 3 inches (80A) extended	*2	Y
Flange type	Extension length: 50 mm		2
	Extension length: 100 mm		3
	Extension length: 150 mm		4
	Extension length: 200 mm		5
	Extension length: 250 mm		6
	Extension length: 300 mm		7
Flange material / bolt and nut material	SUS 304 / carbon steel		D
	SUS 304 / SUS 304		E
	SUS 304 / SUS 630		F
	SUS316 / carbon steel		G
	SUS 316 / SUS 304		H
	SUS 316 / SUS 630		J
	SUS 316L / carbon steel		K
	SUS 316L / SUS 304		N
	SUS 316L / SUS 630		M
Capillary length	2 m		2
	3 m		3
	4 m		4
	5 m		5
	2 m (olefin coating)		B
	3 m (olefin coating)		C
	4 m (olefin coating)		H
	5 m (olefin coating)		D

X X	No options	
A 2	External zero adjustment	*3
B 7	For mounting a high load resistance smart meter	
G 1	Elbow x 1 (left)	
G 2	Elbow x 1 (right)	
G 3	Elbow x 2	
D 1	Moisture-free (incl. oil-free) finish	
D 2	Oil-free finish	
J 2	Electric power specification	
J 8	Special failure mode (3.2 mA)	
K 9	Variable output saturation point	
T 1	Test report	
T 2	Mill sheet	
T 5	Strength calculation sheet	
T 6	Withstand pressure and air tight test (general-purpose use)	
T 8	Test report (with traceability certificate)	
□□	Other	

X	Electrical connection / explosion-proof	G 1/2, water-tight
2		G 1/2, TIIS special explosion-proof model with 1 cable gland attached
3		G 1/2, TIIS special explosion-proof model with 2 cable glands attached
A		1/2 NPT, non-explosion-proof

X	Indicators	None
1		Digital meter linear scale (0 to 100 %)
2		Digital meter engineering unit scale

X	Corrosion-resistant finish	Standard corrosion-proofing
B		Heavy corrosion-proofing
C		Silver paint (standard corrosion-proofing)
D		Silver paint (heavy corrosion-proofing)

X	Flange processing	None (standard: JISRa3.2 (12.5 s))

X	Fail safe	None
U		Fail safe high limit
D		Fail safe low limit

X	Mounting bracket	None
1		Carbon steel (square)
2		SUS 304 (square)
7		CF8 (SUS 304 equivalent, round)

*1. Cannot be combined with Failure mode "None," variable output saturation point, or external zero adjustment.

*2. Tank low flange ("L") is extended flange, and high flange ("H") is standard flange.

*3. Be sure to select indicators.

Flange Flush Diaphragm Type 3 inches (80A); High-Temperature Vacuum Model/High-Temperature High-Vacuum Model

Basic Model No. — Selections — Additional Selections — Options

Measuring Span	2.5 to 100 kPa	JTE 929S	
		JTE 929W (with external terminal box)	
	35 to 700 kPa	JTE 930S	
		JTE 930W (with external terminal box)	

Output/ communication format	4 to 20 mA DC (standard)	1
	Digital output (DE protocol) *1	3
	4 to 20 mA DC (HART® communication)	5
Process-wetted material	Tantalum *2	4
	Alloy C-276	H
	SUS 316L	8
Sealed liquid	High-temperature vacuum model (silicone oil)	4
	High-temperature high-vacuum model (silicone oil)	7
Flange standard	JIS 10K	A
	JIS 20K	C
	JIS 30K	D
	JIS 63K	F
	ANSI 150	G
	ANSI 300	H
	ANSI 600	J
	JPI 150	N
	JPI 300	P
	JPI 600	Q
Flange size	3 inches / 80A	2
Flange type	Standard	1
Flange material / bolt and nut material	SUS 304 / Carbon Steel	D
	SUS 304 / SUS 304	E
	SUS 304 / SUS 630	F
	SUS 316 / Carbon Steel	G
	SUS 316 / SUS 304	H
	SUS 316 / SUS 630	J
	SUS 316L / Carbon Steel	K
	SUS 316L / SUS 304	L
	SUS 316L / SUS 630	M
Capillary length	2 m	2
	3 m	3
	4 m	4
	5 m	5
	6 m	6
	7 m	7
	8 m	8
	9 m	Q
	10 m	A

X	Electrical connection / explosion-proof	G 1/2, water-tight
2		G 1/2, TIIS special explosion-proof model with 1 cable gland attached
3		G 1/2, TIIS special explosion-proof model with 2 cable glands attached
A		1/2 NPT, non-explosion-proof
X	Indicators	None
1		Digital meter linear scale (0 to 100 %)
2		Digital meter engineering unit scale
X	Corrosion-resistant finish	Standard corrosion-proofing
B		Heavy corrosion-proofing
C		Silver paint (standard corrosion-proofing)
D		Silver paint (heavy corrosion-proofing)
X	Flange processing	None (standard: JISRa3.2 (12.5 s))
X	Fail safe	None
U		Fail safe high limit
D		Fail safe low limit
X	Mounting bracket	None
1		Carbon steel (square)
2		SUS 304 (square)
7		CF8 (SUS 304 equivalent, round)

X X	No options	
A 2	External zero adjustment	*3
B 7	For mounting a high load resistance smart meter	
G 1	Elbow x 1 (left)	
G 2	Elbow x 1 (right)	
G 3	Elbow x 2	
D 1	Moisture-free finish (incl. oil-free)	
D 2	Oil-free finish	
J 2	Electric power specification	
J 8	Special failure mode (3.2 mA)	
K 9	Variable output saturation point	
T 1	Test report	
T 2	Mill sheet	
T 5	Strength calculation sheet	
T 6	Withstand pressure and air tight test (general-purpose use)	
T 8	Test report (with traceability certificate)	
□□	Other	

*1. Cannot be combined with Failure mode "None," variable output saturation point, or external zero adjustment.

*2. If sealed liquid is high-temperature vacuum model/high-temperature high-vacuum model and wetted part material is tantalum, the temperature range of wetted parts is -10 to +180 °C.

*3. Be sure to select indicators.

Extended Flange Type 4 inches (100A); High-Temperature Vacuum Model/High-Temperature High-Vacuum Model

Basic Model No. — Selections — Additional Selections — Options

Measuring span	2.5 to 100 kPa	JTE 929S	
		JTE 929W (with external terminal box)	
	35 to 700 kPa	JTE 930S	
		JTE 930W (with external terminal box)	

Output/ communication format	4 to 20 mA DC (standard)	1
	Digital output (DE protocol) *1	3
	4 to 20 mA DC (HART® communication)	5
Process-wetted material	SUS 316 (diaphragm: SUS 316L)	2
	SUS 316L	8
Sealed liquid	High-temperature vacuum model (silicone oil)	4
	High-temperature high-vacuum model (silicone oil)	7
Flange standard	JIS 10K	A
	JIS 20K	C
	JIS 30K	D
	ANSI 150	G
	ANSI 300	H
	JPI 150	N
	JPI 300	P
Flange size	4 inches / 100A	1
Flange type	Extension length: 50 mm	2
	Extension length: 100 mm	3
	Extension length: 150 mm	4
	Extension length: 200 mm	5
	Extension length: 250 mm	6
	Extension length: 300 mm	7
Flange material / bolt and nut material	SUS 304 / carbon steel	D
	SUS 304 / SUS 304	E
	SUS 304 / SUS 630	F
	SUS 316 / carbon steel	G
	SUS 316 / SUS 304	H
	SUS 316 / SUS 630	J
	SUS 316L / carbon steel	K
	SUS 316L / SUS 304	L
	SUS 316L / SUS 630	M
Capillary length	2 m	2
	3 m	3
	4 m	4
	5 m	5
	6 m	6
	7 m	7
	8 m	8
	9 m	Q
	10 m	A

X	Electrical connection / explosion-proof	G 1/2, water-tight
2		G 1/2, TIIS special explosion-proof model with 1 cable gland attached
3		G 1/2, TIIS special explosion-proof model with 2 cable glands attached
A		1/2 NPT, non-explosion-proof
X	Indicators	None
1		Digital meter linear scale (0 to 100 %)
2		Digital meter engineering unit scale
X	Corrosion-resistant finish	Standard corrosion-proofing
B		Heavy corrosion-proofing
C		Silver paint (standard corrosion-proofing)
D		Silver paint (heavy corrosion-proofing)
X	Flange processing	None (standard: JISRa3.2 (12.5 s))
X	Fail safe	None
U		Fail safe high limit
D		Fail safe low limit
X	Mounting bracket	None
1		Carbon steel (square)
2		SUS 304 (square)
7		CF8 (SUS 304 equivalent, round)

X X	No options
A 2	External zero adjustment *2
B 7	For mounting a high load resistance smart meter
G 1	Elbow x 1 (left)
G 2	Elbow x 1 (left)
G 3	Elbow x 2
D 1	Moisture-free (incl. oil-free) finish
D 2	Oil-free finish
J 2	Electric power specification
J 8	Special failure mode (3.2 mA)
K 9	Variable output saturation point
T 1	Test report
T 2	Mill sheet
T 5	Strength calculation sheet
T 6	Withstand pressure and air tight test (general-purpose use)
T 8	Test report (with traceability certificate)
□□	Other

*1. Cannot be combined with Failure mode "None," variable output saturation point, or external zero adjustment.

*2. Be sure to select indicators.

Flange Flush Diaphragm Type 2 inches (50A), 1.5 inches (40A); High-Temperature Vacuum Model/High-Temperature High-Vacuum Model

Basic Model No. — Selections — Additional Selections — Options

Measuring span	2.5 to 100 kPa	JTE 929S	
		JTC 929W (with external terminal box)	
	35 to 700 kPa	JTE 930S	
		JTE 930W (with external terminal box)	

Output/ communication format	4 to 20 mA DC (standard)	1
	Digital output (DE protocol) *1	3
	4 to 20 mA DC (HART® communication)	5
Process-wetted material	SUS 316L	8
	Tantalum *2	4
	Alloy C-276	H
Sealed liquid	High-temperature vacuum model (silicone oil)	4
	High-temperature high-vacuum model (silicone oil)	7
Flange standard	JIS 10K	A
	JIS 20K	C
	JIS 30K	D
	JIS 63K	F
	ANSI 150	G
	ANSI 300	H
	ANSI 600	J
	JPI 150	N
	JPI 300	P
	JPI 600	Q
Flange size	2 inches / 50A	3
	1.5 inches / 40A	4
Flange type	Standard	1
Flange material / bolt and nut material	SUS 304 / carbon steel	D
	SUS 304 / SUS 304	E
	SUS 304 / SUS 630	F
	SUS 316 / carbon steel	G
	SUS 316 / SUS 304	H
	SUS 316 / US 630	J
	SUS 316L / carbon steel	K
	SUS 316L / SUS 304	L
	SUS 316L / SUS 630	M
Capillary length	2 m	2
	3 m	3
	4 m	4
	5 m	5

X	Electrical connection / explosion-proof	G 1/2, water-tight
2		G 1/2, TIIS special explosion-proof model with 1 cable gland attached
3		G 1/2, TIIS special explosion-proof model with 2 cable glands attached
A		1/2 NPT, non-explosion-proof
X	Indicators	Indicators
1		Digital meter linear scale (0 to 100 %)
2		Digital meter engineering unit scale
X	Corrosion-resistant finish	Standard corrosion-proofing
B		Heavy corrosion-proofing
C		Silver paint (standard corrosion-proofing)
D		Silver paint (heavy corrosion-proofing)
X	Flange processing	None (standard: JISRa3.2 (12.5 s))
X	Fail safe	None
U		Fail safe high limit
D		Fail safe low limit
X	Mounting bracket	None
1		Carbon steel (square)
2		SUS 304 (square)
7		CF8 (SUS 304 equivalent, round)

X X	No options	
A 2	External zero adjustment *3	
B 7	For mounting a high load resistance smart meter	
G 1	Elbow x 1 (left)	
G 2	Elbow x 1 (right)	
G 3	Elbow x 2	
D 1	Moisture-free (incl. oil-free) finish	
D 2	Oil-free finish	
J 2	Electric power specification	
J 8	Special failure mode (3.2 mA)	
K 9	Variable output saturation point	
T 1	Test report	
T 2	Mill sheet	
T 5	Strength calculation sheet	
T 6	Withstand pressure and air tight test (general-purpose use)	
T 8	Test report (with traceability certificate)	
□□	Other	

*1. Cannot be combined with Failure mode "None," variable output saturation point, or external zero adjustment.

*2. If sealed liquid is high-temperature vacuum model/high-temperature high-vacuum model and wetted part material is tantalum, the temperature range of wetted parts is -10 to +180 °C.

*3. Be sure to select indicators.

Extended Flange Type 80A, 2 inches (50A); High-Temperature Vacuum Model/High-Temperature High-Vacuum Model

Basic Model No. — Selections — Additional Selections — Options

Measuring Span	2.5 to 100 kPa	JTE 929S	
		JTE 929W (with external terminal box)	
	35 to 700 kPa	JTE 930S	
		JTE 930W (with external terminal box)	

Output/ communication format	4 to 20 mA DC (standard)	1
	Digital output (DE protocol) *1	3
	4 to 20 mA DC (HART® communication)	5
Process-wetted material	SUS 316 (diaphragm:SUS 316L)	2
	SUS 316L	8
Sealed liquid	High-temperature vacuum model (silicone oil)	4
Flange standard	High-temperature high-vacuum model (silicone oil)	7

	JIS 10K	A
	JIS 20K	
	JIS 30K	D
	ANSI 150	G
	ANSI 300	H
	JPI 150	N
	JPI 300	P
Flange size	3 inches / 80 A	2
	2 inches / 50A	3
Flange Type	Extension length: 50 mm	2
	Extension length: 100 mm	3
	Extension length: 150 mm	4
Flange material / bolt and nut material	SUS 304 / carbon steel	D
	SUS 304 / SUS 304	E
	SUS 304 / SUS 630	F
	SUS 316 / carbon steel	G
	SUS 316 / SUS 304	H
	SUS 316 / SUS 630	J
	SUS 316L / carbon steel	K
	SUS 316L / SUS 304	N
	SUS 316L / SUS 630	M
Capillary length	2 m	2
	3 m	3
	4 m	4
	5 m	5

X	Electrical connection / explosion-proof	G 1/2, water-tight
2		G 1/2, TIIS special explosion-proof model with 1 cable gland attached
3		G 1/2, TIIS special explosion-proof model with 2 cable glands attached
A		1/2 NPT, non-explosion-proof

X	Indicators	None
1		Digital meter linear scale (0 to 100 %)
2		Digital meter engineering unit scale

X	Corrosion-resistant finish	Standard corrosion-proofing
B		Heavy corrosion-proofing
C		Silver paint (standard corrosion-proofing)
D		Silver paint (heavy corrosion-proofing)

X	Flange processing	None (standard: JIS Ra3.2 (12.5 s))

X	Fail safe	None
U		Fail safe high limit
D		Fail safe low limit

X	Mounting bracket	None
1		Carbon steel (square)
2		SUS 304 (square)
7		CF8 (SUS 304 equivalent, round)

X X	No options	
A 2	External zero adjustment	*2
B 7	For mounting a high load resistance smart meter	
G 1	Elbow x 1 (left)	
G 2	Elbow x 1 (right)	
G 3	Elbow x 2	
D 1	Moisture-free (incl. oil-free) finish	
D 2	Oil-free finish	
J 2	Electric power specification	
J 8	Special failure mode (3.2 mA)	
K 9	Variable output saturation point	
T 1	Test report	
T 2	Mill sheet	
T 5	Strength calculation sheet	
T 6	Withstand pressure and air tight test (general-purpose use)	
T 8	Test report (with traceability certificate)	
□□	Other	

*1. Cannot be combined with Failure mode "None," variable output saturation point, or external zero adjustment.

*2. Be sure to select indicators.

Adapter for Dual Diaphragm Models

Basic Model No.		Selections							Options
		–						-	
Basic Model No.	Adapter for dual diaphragm	H H							
Selections									
Body model	JTE (with 2 adapters)		E						
Process-wetted material	SUS 316 (diaphragm: SUS 316L)			2					
	Tantalum			4					
	Alloy C-276			H					
	SUS 316L			8					
Sealed liquid	Regular type (silicone oil)				1				
	For oxygen service (fluorine oil)				2				
	For chlorine service (fluorine oil)				5				
Flange standard	JIS 10K					A			
	JIS 20K					C			
	JIS 30K					D			
	ANSI 150					G			
	ANSI 300					H			
	JPI 150					N			
	JPI 300					P			
Flange size	3 inches / 80A						2		
	2 inches / 50A						3		
Flange type	Standard (flange type)							1	
Flange processing	Standard							X	
Options									
	No options								XX
	Moisture/oil-free finish*								D1
	Oil-free finish*								D2
	Mill sheet*								T2
	Document for high pressure gas law*								T3
	Overload pressure test*								T7

*When selecting this model type, be sure to select the product with the same model number.

1/2 inches Remote Type, General Purpose Model/High-Temperature Model

Basic Model No. | Selections | Additional Selections | Options

Basic Model No.			
Measuring Span	2.5 to 100 kPa	JTE 929S	
		JTE 929W (with external terminal box)	
	35 to 700 kPa	JTE 930S	
		JTE 930W (with external terminal box)	

Selections			
Output/communication format	4 to 20 mA DC (standard)		1
	Digital output (DE protocol)	Note 1	3
	4 to 20 mA DC (HART® communication)		5
Process-wetted material	SUS 316 (diaphragm: SUS 316L)		2
	SUS 316L		8
	Alloy C-276		H
Sealed liquid	Regular type (silicone oil)		1
	For oxygen service (fluorine oil)		2
	High-temperature model (silicone oil)		3
Flange standard	No flange		W
Flange Size	1/ 2 inches remote model (capillary rear output)		R
Flange Type	Standard		1
Flange material / bolt and nut material	No flange / carbon steel		N
	No flange / SUS 304		P
	No flange / SUS 630		Q
Capillary length	1 m		1
	2 m		2
	3 m		3
	4 m		4
	5 m		5
	1 m (olefin coating)		L
	2 m (olefin coating)		B
	3 m (olefin coating)		C
	4 m (olefin coating)		H
	5 m (olefin coating)		D

Additional Selections		
X	Electrical connection / explosion-proof	G 1/2, water-tight
2		G 1/2, TIIS special explosion-proof model with 1 cable gland attached
3		G 1/2, TIIS special explosion-proof model with 2 cable glands attached
A		1/2 NPT, non-explosion-proof
X	Indicators	None
1		Digital meter linear scale (0 to 100 %)
2		Digital meter engineering unit scale
X	Corrosion-resistant finish	Standard corrosion-proofing
B		Heavy corrosion-proofing
C		Silver paint (standard corrosion-proofing)
D		Silver paint (heavy corrosion-proofing)
X	Flange processing	None (standard: JISRa3.2 (12.5 s))
X	Fail safe	None
U		Fail safe high limit
D		Fail safe low limit
X	Mounting bracket	None
1		Carbon steel (square)
2		SUS 304 (square)
7		CF8 (SUS 304 equivalent, round)

Options		
X X	No options	
A 2	External zero adjustment	Note 2
A 6	1/2B remote installation kit	Note 3
B 7	For mounting a high load resistance smart meter	
G 1	Elbow x 1 (left)	
G 2	Elbow x 1 (right)	
G 3	Elbow x 2	
D 1	Moisture-free finish (incl. oil-free)	
E 6	Moisture-free (incl. oil-free) finish high-grade	
D 2	Oil-free finish	
J 2	Electric power specification	
J 8	Special failure mode (3.2 mA)	
K 9	Variable output saturation point	
T 1	Test report	
T 2	Mill sheet	
T 5	Strength calculation sheet	
T 6	Withstand pressure and air tight test (general-purpose use)	Note 4
T 8	Test report (with traceability certificate)	
□□	Other	

Note 1: Cannot be combined with Failure mode "None," variable output saturation point, or external zero adjustment.

Note 2: Be sure to select indicators.

Note 3: Be sure to specify the 1/2 inches remote installation kit (A6), which is necessary for connection to the process pipe.

Note 4: Be sure to specify 1/2 inches remote installation kit option 4 (transmitter assembly).

1/2 inches Remote Type, Fast Response; Low-Temperature Model

Basic Model No. | Selections | Additional Selections | Options

Measuring Span	2.5 to 100 kPa	JTE 929S	
		JTE 929W (with external terminal box)	

Output/ communication format	4 to 20 mA DC (standard)	1
	Digital output (DE protocol) Note 1	3
	4 to 20 mA DC (HART® communication)	5
Process-wetted material	SUS 316 (diaphragm: SUS 316L)	2
Sealed liquid	For fast response/low temp. (silicone oil)	8
Flange Standard	No flange	W
Flange size	1/2 inches remote model (capillary rear output)	R
Flange type	Standard	1
Flange material / bolt and nut material	No flange / carbon steel	N
	No flange / SUS 304	P
	No flange / SUS 630	Q
Capillary length	1 m	1
	2 m	2
	3 m	3
	4 m	4
	5 m	5
	1 m (olefin coating)	L
	2 m (olefin coating)	B
	3 m (olefin coating)	C
	4 m (olefin coating)	H
	5 m (olefin coating)	D

X	Electrical connection / explosion-proof	G 1/2, water-tight
2		G 1/2, TIIS special explosion-proof model with 1 cable gland attached
3		G 1/2, TIIS special explosion-proof model with 2 cable glands attached
A		1/2 NPT, non-explosion-proof

X	Indicators	None
1		Digital meter linear scale (0 to 100 %)
2		Digital meter engineering unit scale

X	Corrosion-resistant finish	Standard corrosion-proofing
B		Heavy corrosion-proofing
C		Silver paint (standard corrosion-proofing)
D		Silver paint (heavy corrosion-proofing)

X	Flange processing	None (standard: JIS Ra3.2 (12.5 s))

X	Fail safe	None
U		Fail safe high limit
D		Fail safe low limit

X	Mounting bracket	None
1		Carbon steel (square)
2		SUS 304 (square)
7		CF8 (SUS 304 equivalent, round)

X X	No options	
A 2	External zero adjustment	Note 2
A 6	1/2B remote installation kit	Note 3
B 7	For mounting a high load resistance smart meter	
G 1	Elbow x 1 (left)	
G 2	Elbow x 1 (right)	
G 3	Elbow x 2	
D 1	Moisture-free finish (incl. oil-free)	
E 6	Moisture-free (incl. oil-free) finish, high-grade	
D 2	Oil-free finish	
J 2	Electric power specification	
J 8	Special failure mode (3.2 mA)	
K 9	Variable output saturation point	
T 1	Test report	
T 2	Mill sheet	
T 5	Strength calculation sheet	
T 6	Withstand pressure and air tight test (general-purpose use)	Note 4
T 8	Test report (with traceability certificate)	
□□	Other	

Note 1: Cannot be combined with Failure mode "None," variable output saturation point, or external zero adjustment.
Note 2: Be sure to select indicators.
Note 3: Be sure to specify the 1/2 inches remote installation kit (A6), which is necessary for connection to the process pipe.
Note 4: Be sure to specify 1/2 inches remote installation kit option 4 (transmitter assembly).

High Performance 1/2 inches remote-seal of Differential Pressure Transmitter; General Purpose Model/High-Temperature Model

Basic Model No. | Selections | Additional Selections | Options

Measuring span	2.5 to 100 kPa	JTE 929S	
		JTE 929W (with external terminal box)	

Output/communication format	4 to 20 mA DC (standard)	1
	Digital output (DE protocol) Note 1	3
	4 to 20 mA DC (HART® communication)	5
Process-wetted material	SUS 316 (diaphragm: SUS 316L)	2
Sealed liquid	Regular type (silicone oil)	1
	High-temperature model (silicone oil)	3
Flange standard	No flange	W
Flange Size	1/2 inches remote model (capillary rear output)	U
Flange Type	Standard	1
Flange material / bolt and nut material	No flange / carbon steel	N
	No flange / SUS 304	P
	No flange / SUS 630	Q
Capillary length	1 m	1
	2 m	2
	3 m	3
	4 m	4
	5 m	5
	1 m (olefin coating)	L
	2 m (olefin coating)	B
	3 m (olefin coating)	C
	4 m (olefin coating)	H
	5 m (olefin coating)	D

Note 1: Cannot be combined with Failure mode "None," variable output saturation point, or external zero adjustment.

Note 2: Be sure to select indicators.

Note 3: The 1/2 inches remote installation kit (A7) is necessary to connect with process pipe. Be sure to specify this.

Note 4: Be sure to specify 1/2 inches remote installation kit option 4 (transmitter assembly).

X X	No options	
A 2	External zero adjustment	Note 2
A 7	1/2B remote installation kit	Note 3
B 7	For mounting a high load resistance smart meter	
G 1	Elbow x 1 (left)	
G 2	Elbow x 1 (right)	
G 3	Elbow x 2	
D 1	Moisture-free (incl. oil-free) finish	
E 6	Moisture-free (incl. oil-free) finish, high-grade	
D 2	Oil-free finish	
J 2	Electric power specification	
J 8	Special failure mode (3.2 mA)	
K 9	Variable output saturation point	
T 1	Test report	
T 2	Mill sheet	
T 5	Strength calculation sheet	
T 6	Withstand pressure and air tight test (general-purpose use)	Note 4
T 8	Test report (with traceability certificate)	
□□	Other	

X	Electrical connection / explosion-proof	G 1/2, water-tight
2		G 1/2, TIIS special explosion-proof model with 1 cable gland attached
3		G 1/2, TIIS special explosion-proof model with 2 cable glands attached
A		1/2 NPT, non-explosion-proof
X	Indicators	None
1		Digital meter linear scale (0 to 100 %)
2		Digital meter engineering unit scale
X	Corrosion-resistant finish	Standard corrosion-proofing
B		Heavy corrosion-proofing
C		Silver paint (standard corrosion-proofing)
D		Silver paint (heavy corrosion-proofing)
X	Flange processing	None (standard: JISRa3.2 (12.5 s))
X	Fail safe	None
U		Fail safe high limit
D		Fail safe low limit
X	Mounting bracket	None
1		Carbon steel (square)
2		SUS 304 (square)
7		CF8 (SUS 304 equivalent, round)

1/2 inches Remote High Anticorrosion Type; General Purpose Model/High-Temperature Model

Basic Model No.			
Measuring span	2.5 to 100 kPa	JTE 929S	
		JTE 929W (with external terminal box)	

Selections								
Output/ communication format	4 to 20 mA DC (standard)	1						
	Digital output (DE protocol) Note 1	3						
	4 to 20 mA DC (HART® communication)	H						
Process-wetted material	SUS 316 (diaphragm: SUS 316L)		2					
	Alloy C-276		H					
Sealed liquid	General (silicone oil)			1				
	High-temperature model (silicone oil)			3				
Flange standard	No flange				W			
Flange size	1/2 inches high-performance specifications					T		
Flange type	Standard						1	
Flange material / bolt and nut material	No flange / Carbon Steel							N
	No flange / SUS 304							P
	No flange / SUS 630							Q
Capillary length	1 m							1
	2 m							2
	3 m							3
	4 m							4
	5 m							5
	1 m (olefin coating)							L
	2 m (olefin coating)							B
	3 m (olefin coating)							C
	4 m (olefin coating)							H
	5 m (olefin coating)							D

Note 1: Cannot be combined with Failure mode "None," variable output saturation point, or external zero adjustment.

Note 2: Be sure to select indicators.

Note 3: The 1/2 inches remote installation kit (A7) is necessary to connect with process pipe. Be sure to specify this.

Note 4: Be sure to specify 1/2 inches remote installation kit option 4 (transmitter assembly).

Additional Selections

X	Electrical connection / explosion-proof	G 1/2, water-tight
2		G 1/2, TIIS special explosion-proof model with 1 cable gland attached
3		G 1/2, TIIS special explosion-proof model with 2 cable glands attached
A		1/2 NPT, non-explosion-proof

X	Indicators	None
1		Digital meter linear scale (0 to 100 %)
2		Digital meter engineering unit scale

X	Corrosion-resistant finish	Standard corrosion-proofing
B		Heavy corrosion-proofing
C		Silver paint (standard corrosion-proofing)
D		Silver paint (heavy corrosion-proofing)

X	Flange processing	None (standard: JIS Ra3.2 (12.5 s))

X	Fail safe	None
U		Fail safe high limit
D		Fail safe low limit

X	Mounting bracket	None
1		Carbon steel (square)
2		SUS 304 (square)
7		CF8 (SUS 304 equivalent, round)

Options

XX	No options
A2	External zero adjustment Note 2
A7	1/2B remote high-performance liquid level installation kit Note 3
B7	For mounting a high load resistance smart meter
G1	Elbow x 1 (left)
G2	Elbow x 1 (right)
G3	Elbow x 2
D1	Moisture-free (incl. oil-free) finish
E6	Moisture-free (incl. oil-free) finish, high-grade
D2	Oil-free finish
J2	Electric power specification
J8	Special failure mode (3.2 mA)
K9	Variable output saturation point
T1	Test report
T2	Mill sheet
T5	Strength calculation sheet
T6	Withstand pressure and air tight test (general-purpose use) Note 4
T8	Test report (with traceability certificate)
□□	Other

1/2 inches Remote Installation Kit (Adapter Flange)

	Basic Model No. HF -	Selections					Options	
Compatible model	For differential pressure remote (2 adapter bodies) *1, *4	E					X	No options
	For differential pressure remote (2 adapter bodies) *3, *5, *6	W					1	Oil-free, moisture-free finish *7
Flange size	1/2 inches flange		1				2	Oil-free finish *7
	3/4 inches flange		2				3	Long vent drain
	Screwed Rc1/2 (external thread)		A				4	Transmitter assembly
Flange standard	JIS 10K			A			7	Moisture-free finish (incl. oil-free) High-grade *7
	JIS 20K			C				
	JIS 30K *2			D				
	ANSI 150			G				
	ANSI 300 *2			H				
	JPI 150			N				
	JPI 300 *2			P				
	No flange (select when flange diameter is screwed)			X				
Adapter body material	SCS 14A (SUS 316 equivalent) or SUS 316				2			
Adapter body clamping Nut and bolt material	SUS 304					2		
	SUS 630					3		

*1. For adapter body fastening bolts and nuts material, be sure to select SUS 630.

*2. Device places restriction on maximum working pressure. Check the spec sheet.

*3. Cannot be used with oval throat (model no.: SDR-).

*4. Transmitter body flange size model number: use this model number when selecting "R".

*5. Transmitter body flange size model number: use this model number when selecting "U" or "T".

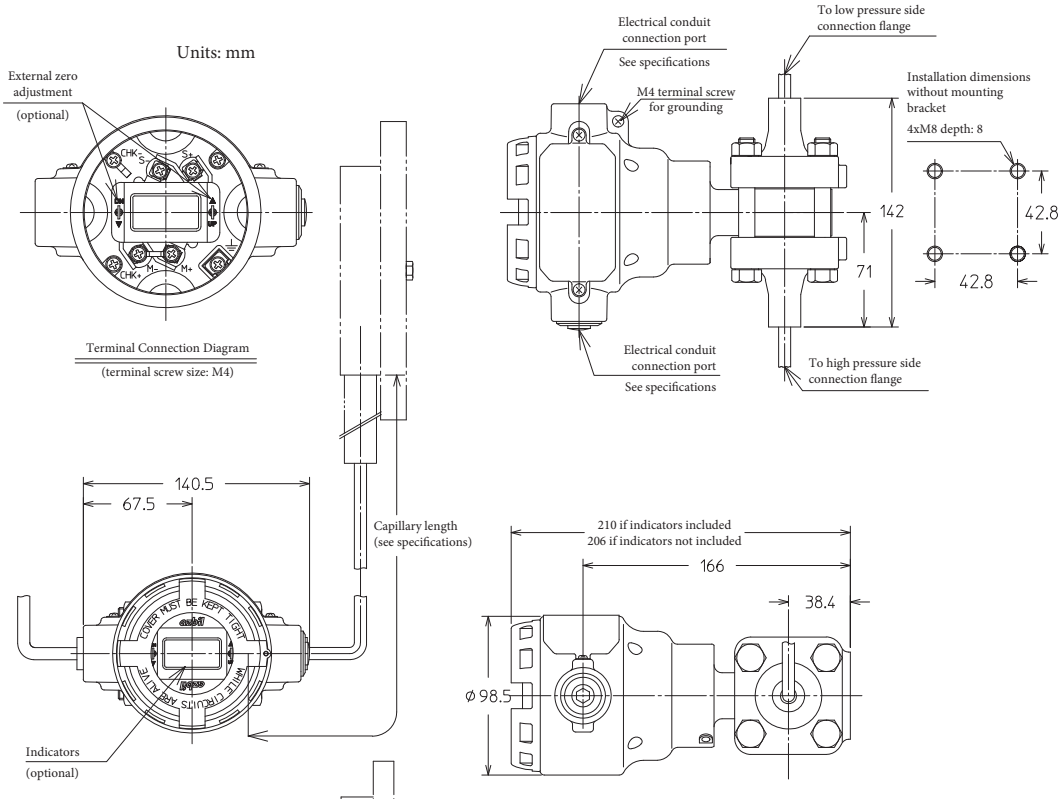
*6. For adapter body fastening bolts and nuts material, be sure to select SUS 304.

*7. When selected as a transmitter body option, be sure to select the same model number.

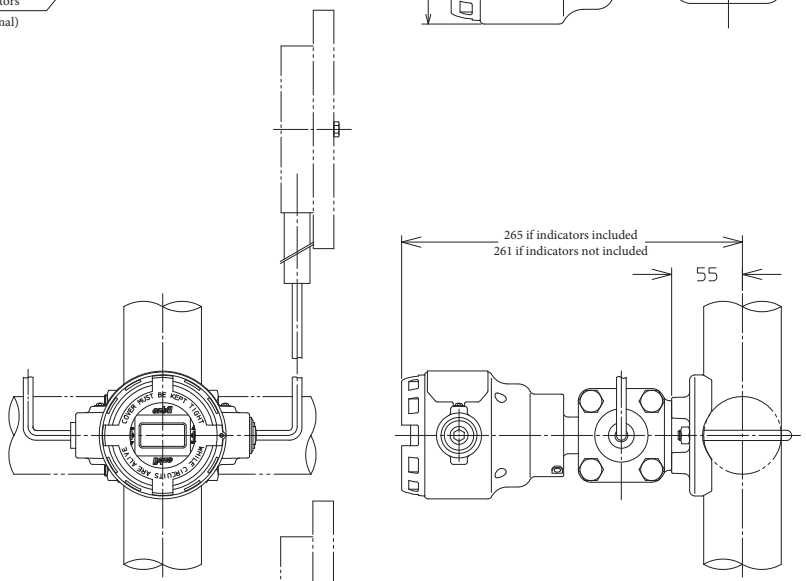
Dimensions

JTE929S/930S

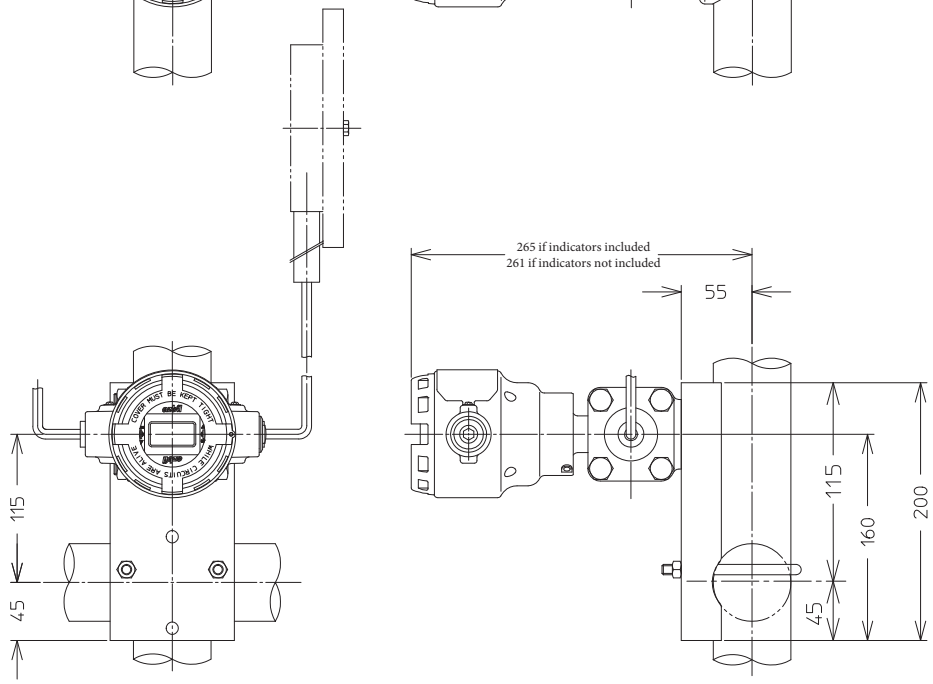
Units: mm



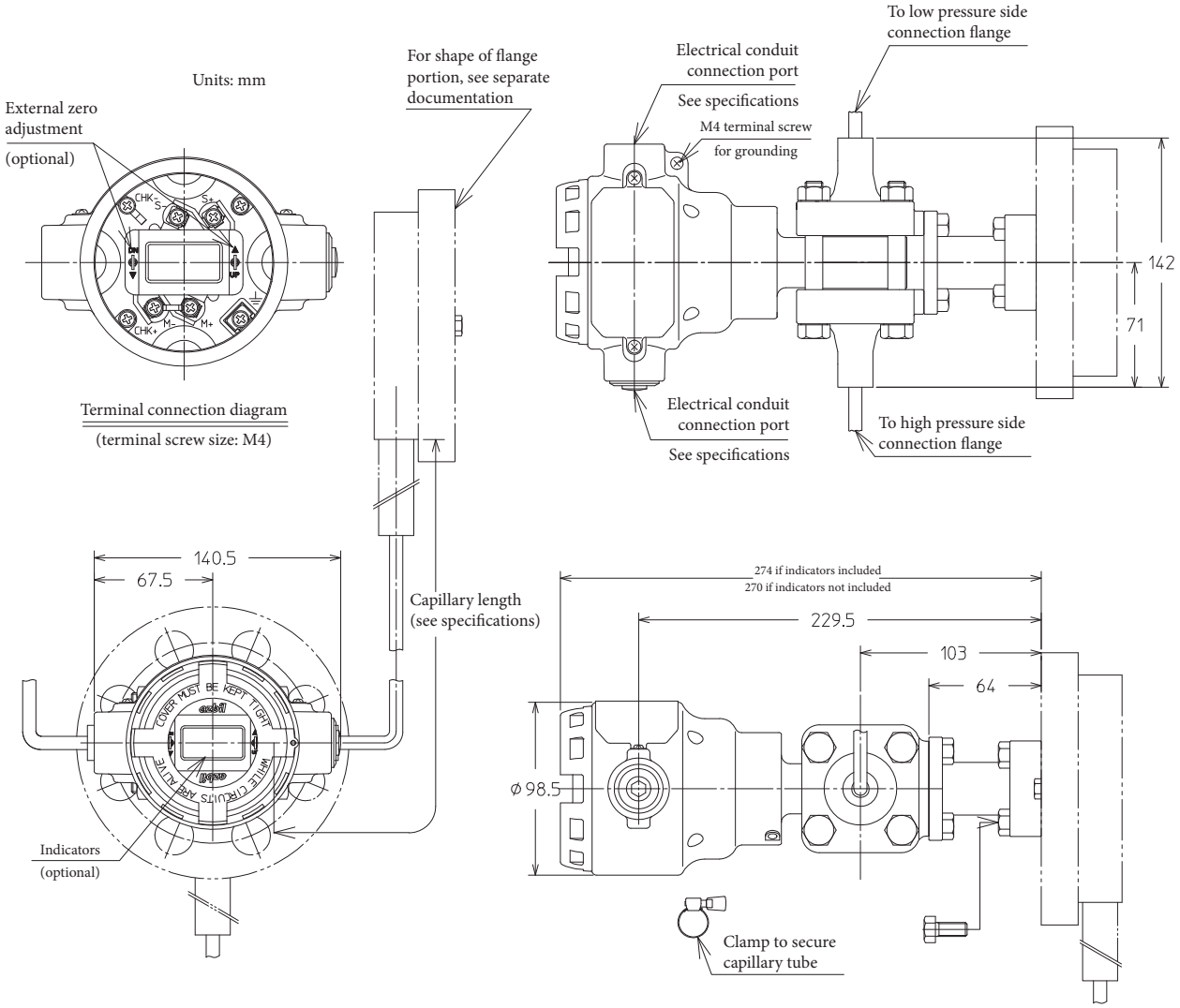
Round Bracket



Square Bracket



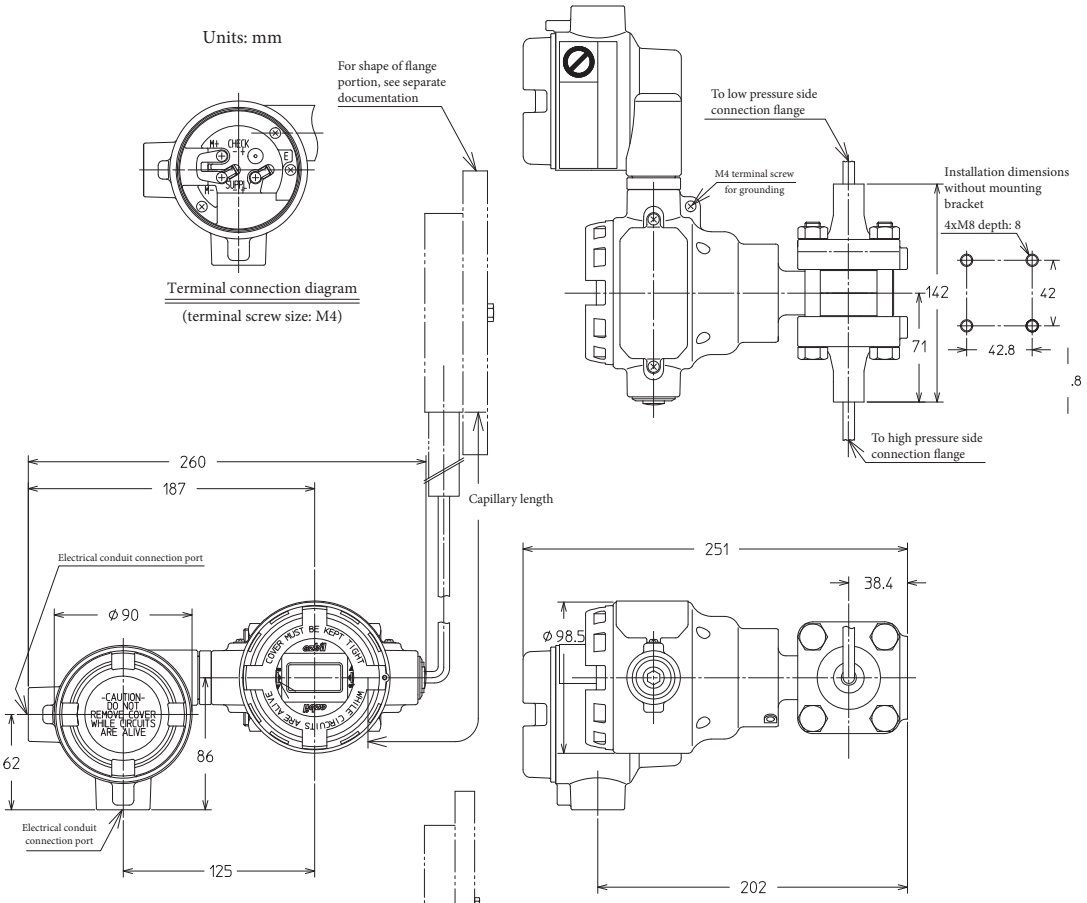
JTE929S/930S (Pit-Tank Specifications)



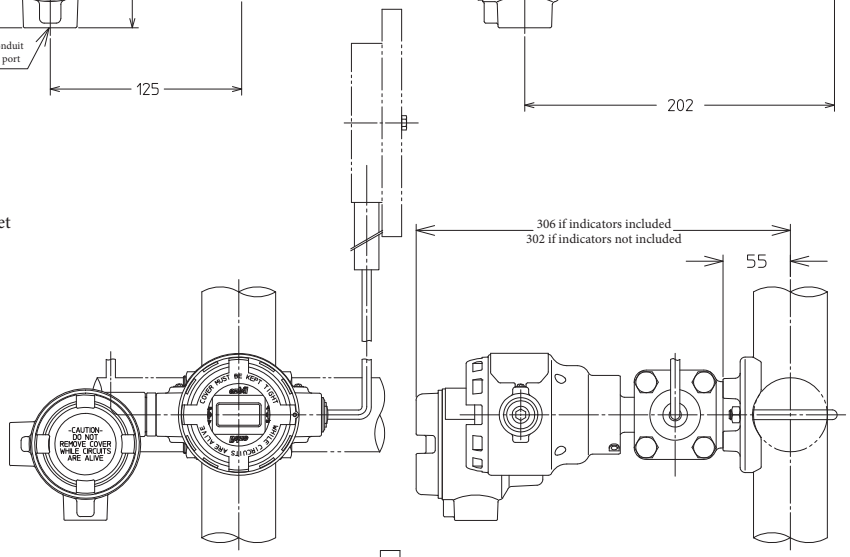
JTE929W/930W

Units: mm

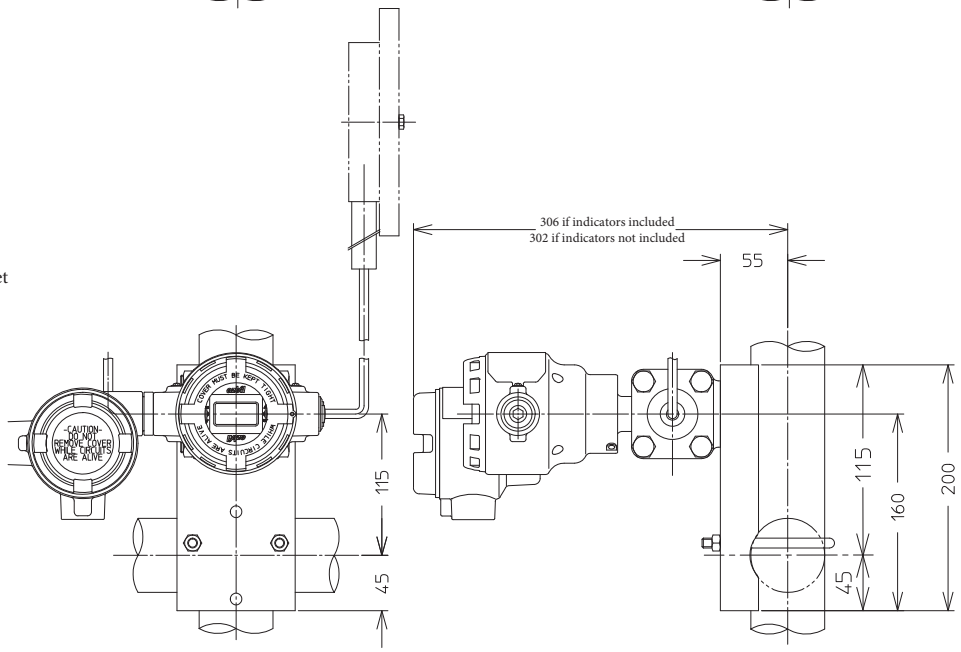
Terminal connection diagram
(terminal screw size: M4)



Round Bracket



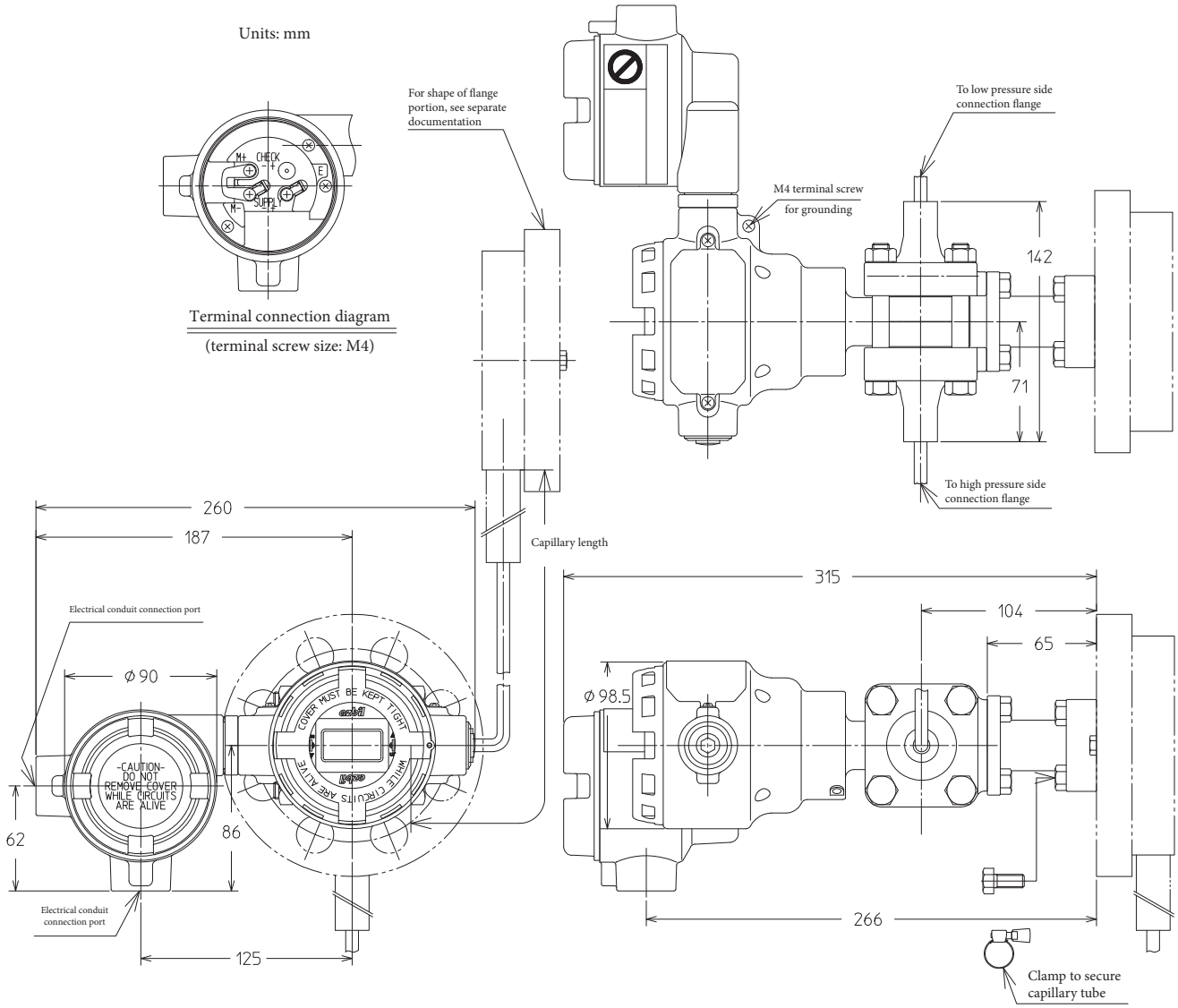
Square Bracket



JTE929W/930W (Pit-Tank Specifications)

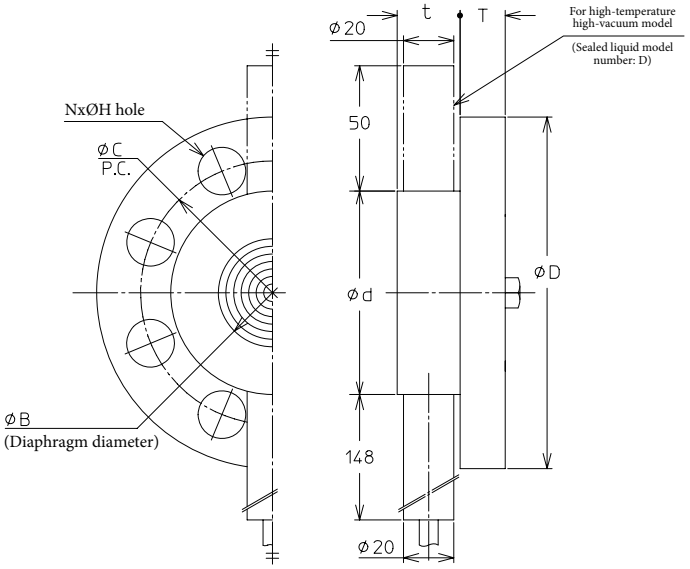
Units: mm

Terminal connection diagram
(terminal screw size: M4)



Flush Diaphragm Flange

Units: mm



Model No.		Flange Rating		øD	T	øC	N	øH	ød
Flange Size	Flange Standard	Flange Size	Flange Standard						
D	A1	1-½ inches (40A)	ANSI 150	127	18	98.6	4	16	81
	A2		ANSI 300	155	25	114.3	4	22	
	A3		ANSI 600	155	32	114.3	4	22	
	P1		JPI 150	127	18	98.6	4	16	
	P2		JPI 300	155	25	114.3	4	22	
	P3		JPI 600	155	32	114.3	4	22	
	J1		JIS 10K	140	18	105	4	19	
	J3		JIS 20K	140	18	105	4	19	
	J4		JIS 30K	160	25	120	4	23	
	J6		JIS 63K	175	32	130	4	25	
E	A1	2 inches (50A)	ANSI 150	152	19.5	120.6	4	19	99
	A2		ANSI 300	165	22.5	127	8	19	
	A3		ANSI 600	165	25.5	127	8	19	
	P1		JPI 150	152	19.5	120.6	4	19	
	P2		JPI 300	165	22.5	127	8	19	
	P3		JPI 600	165	25.5	127	8	19	
	J1		JIS 10K	155	16	120	4	19	
	J3		JIS 20K	155	18	120	8	19	
	J4		JIS 30K	165	22	130	8	19	
	J6		JIS 63K	185	34	145	8	23	
F	A1	3 inches (80A)	ANSI 150	190	24	152.4	4	19	129.5
	A2		ANSI 300	210	28.5	168.1	8	22	
	A3		ANSI 600	210	32	168.1	8	22	
	P1		JPI 150	190	24	152.4	4	19	
	P2		JPI 300	210	28.5	168.1	8	22	
	P3		JPI 600	210	32	168.1	8	22	
	J1		JIS 10K	185	18	150	8	19	
	J3		JIS 20K	200	22	160	8	23	
	J4		JIS 30K	210	28	170	8	23	
	J6		JIS 63K	230	40	185	8	25	

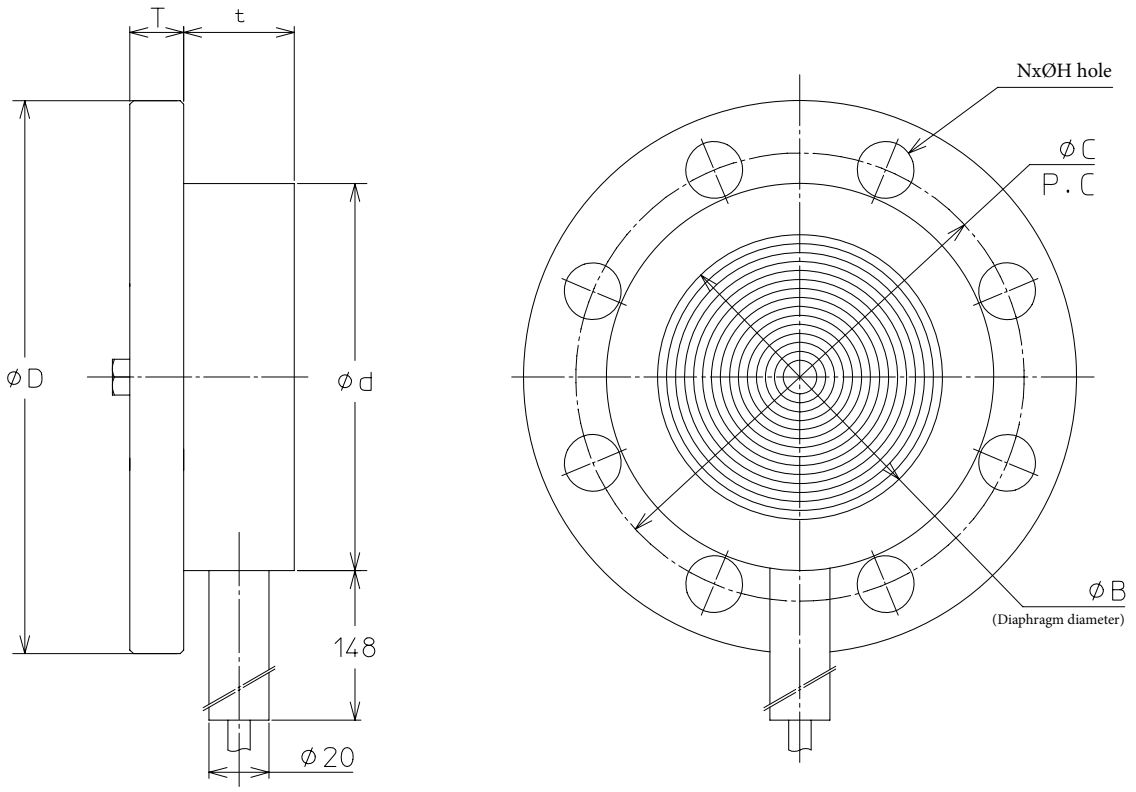
Diaphragm Diameter

Model No.		Flange Rating		øB	t
Flange Size	Process Wetted Material	Flange Size	Process Wetted Material		
D	A,C,D	1½ inches (40A)	SUS316 Tantalum SUS316L	43	25
	B		Alloy C-276		26.7
E	A,C,D	2 inches (50A)	SUS316 Tantalum SUS316L	62	25
	B		Alloy C-276	43	26.7
F	A,B,C,D	3 inches (80A)	SUS316 Alloy C-276 Tantalum SUS316L	95	25

Source is the following standards: ASME / ANSI B16.5 (1988)
JPI-7S-15-93
JIS B2220 (2004)

Flush Diaphragm Flange
Diaphragm Thickness: 0.1 mm

Units: mm

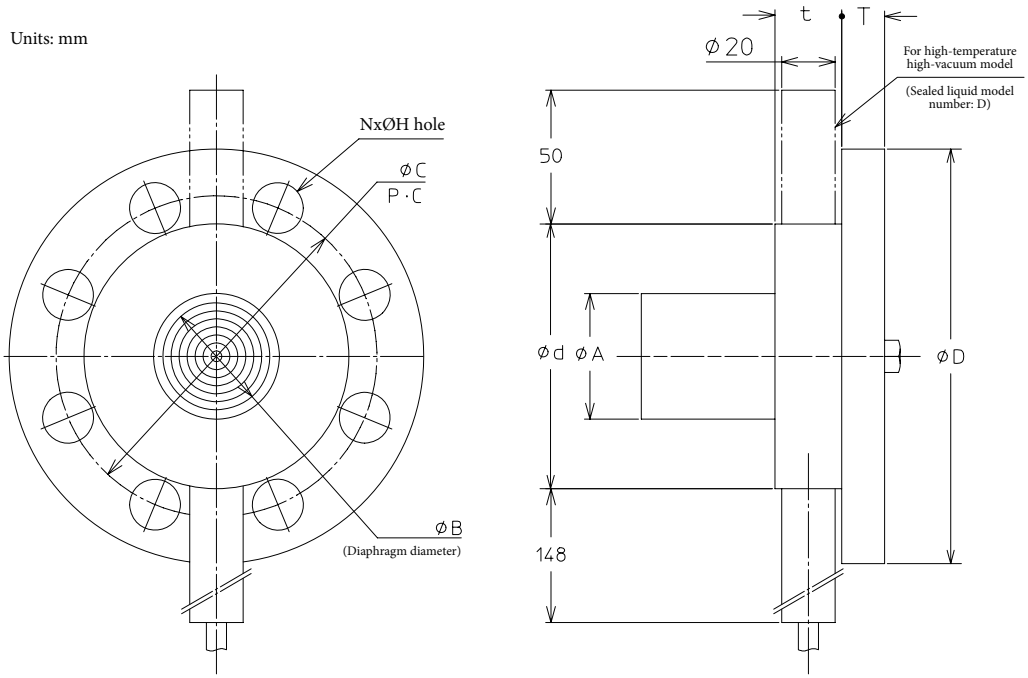


Model No.		Flange Rating		ØD	T	ØC	N	ØH	Ød	t	ØB
Flange Size	Flange Standard	Flange Size	Flange Standard								
F	A1	3 inches (80A)	ANSI 150	190	24	152.4	4	19	129.5	25	95
	A2		ANSI 300	210	28.5	168.1	8	22			
	A3		ANSI 600	210	32	168.1	8	22			
	P1		JPI 150	190	24	152.4	4	19			
	P2		JPI 300	210	28.5	168.1	8	22			
	P3		JPI 600	210	32	168.1	8	22			
	J1		JIS 10K	185	18	150	8	19			
	J3		JIS 20K	200	22	160	8	23			
	J4		JIS 30K	210	28	170	8	23			
	J6		JIS 63K	230	40	185	8	25			

Source is the following standards: ASME / ANSI B16.5 (1988)
JPI-7S-15-93
JIS B2220 (2004)

Extended Flange

Units: mm



Model No.		Flange Rating		ØD	T	ØC	N	ØH	Ød	ØA	ØB
Flange Size	Flange Standard	Flange Size	Flange Standard								
E	A1	2 inches (50A)	ANSI 150	152	19.5	120.6	4	19	99	$47^{\pm1}$	43
	A2		ANSI 300	165	22.5	127	8	19			
	A3		ANSI 600	165	25.5	127	8	19			
	P1		JPI 150	152	19.5	120.6	4	19			
	P2		JPI 300	165	22.5	127	8	19			
	P3		JPI 600	165	25.5	127	8	19			
	J1		JIS 10K	155	16	120	4	19			
	J3		JIS 20K	155	18	120	8	19			
	J4		JIS 30K	165	22	130	8	19			
	J6		JIS 63K	185	34	145	8	23			
F	A1	3 inches (80A)	ANSI 150	190	24	152.4	4	19	129.5	$69^{\pm1}$	62
	A2		ANSI 300	210	28.5	168.1	8	22			
	A3		ANSI 600	210	32	168.1	8	22			
	P1		JPI 150	190	24	152.4	4	19			
	P2		JPI 300	210	28.5	168.1	8	22			
	P3		JPI 600	210	32	168.1	8	22			
	J1		JIS 10K	185	18	150	8	19			
	J3		JIS 20K	200	22	160	8	23			
	J4		JIS 30K	210	28	170	8	23			
	J6		JIS 63K	230	40	185	8	25			
G	A1	4 inches (100A)	ANSI 150	229	24	190.5	8	19	157	$95^{\pm1}$	90.4
	A2		ANSI 300	254	32	200.2	8	22			
	A3		ANSI 600	273	38.5	215.9	8	26			
	P1		JPI 150	229	24	190.5	8	19			
	P2		JPI 300	254	32	200.2	8	22			
	P3		JPI 600	273	38.5	215.9	8	26			
	J1		JIS 10K	210	18	175	8	19			
	J3		JIS 20K	225	24	185	8	23			
	J4		JIS 30K	240	32	195	8	25			

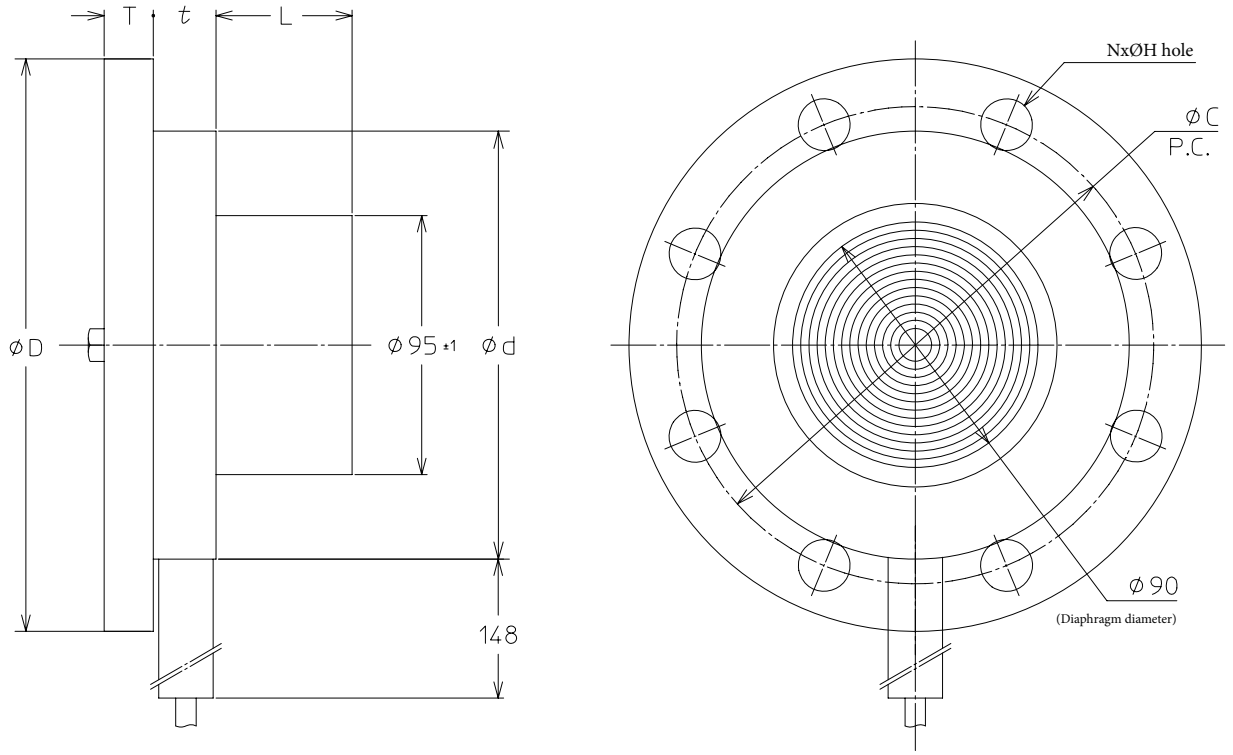
Extension Length L

Model No.	L
B	50
C	100
D	150
E	200
F	250
G	300

Source is the following standards: ASME / ANSI B16.5 (1988)
JPI-7S-15-93
JIS B2220 (2004)

Extended Flange
Diaphragm Thickness: 0.1 mm

Units: mm



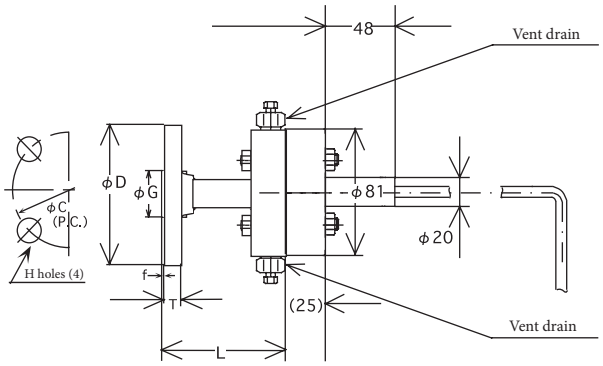
Model No.		Flange Rating		ØD	T	ØC	N	ØH	t	Ød
Flange Size	Flange Standard	Flange Size	Flange Standard							
G	A1	4 inches (100A)	ANSI 150	229	24	190.5	8	19	23	157
	A2		ANSI 300	254	32	200.2	8	22		
	P1		JPI 150	229	24	190.5	8	19		
	P2		JPI 300	254	32	200.2	8	22		
	J1		JIS 10K	210	18	175	8	19		
	J3		JIS 20K	225	24	185	8	23		
	J4		JIS 30K	240	32	195	8	25		

Extension Length L

Model No.	L
B	50
C	100
D	150
E	200
F	250
G	300

Source is the following standards: ASME / ANSI B16.5 (1988)
JPI-7S-15-93
JIS B2220 (2004)

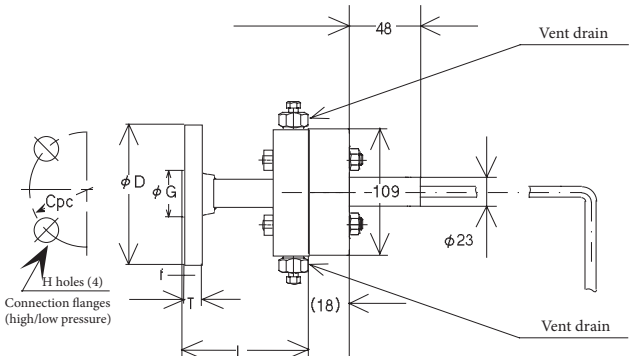
1/2 inches, 3/4 inches Flange Adapter Assembly Diagram
Model No. HF-E __ __ __ __ - __



Flush Diaphragm Flange Dimensions

Flange Rating	ØD	ØG	T	f	ØC	ØH	L
JIS 10K-15A	95	51	12	1	70	15	84
JIS 20K-15A	95	51	14	1	70	15	84
JIS 30K-15A	115	55	18	1	80	19	79
ANSI 150-1/2 inches	89	35.1	11.5	1.6	60.5	16	86
ANSI 300-1/2 inches	95	35.1	14.5	1.6	66.5	16	92
JPI 150-1/2 inches	89	35.1	11.5	1.6	60.5	16	86
JPI 300-1/2 inches	95	35.1	14.5	1.6	66.5	16	92
JIS 10K-20A	100	56	14	1	75	15	90
JIS 20K-20A	100	56	16	1	75	15	90
JIS 30K-20A	120	60	18	1	85	19	84
ANSI 150-3/4 inches	99	42.9	13	1.6	69.8	16	90
ANSI 300-3/4 inches	117	42.9	16	1.6	82.6	19	99
JPI 150-3/4 inches	99	42.9	13	1.6	69.8	16	90
JPI 300-3/4 inches	117	42.9	16	1.6	82.6	19	99

1/2 inches, 3/4 inches Flange Adapter Assembly Diagram
Model No. HF-W __ __ __ __ - __



Flush Diaphragm Flange Dimensions

Flange Rating	ØD	ØG	T	f	ØC	ØH	L
JIS 10K-15A	95	51	12	1	70	15	102
JIS 20K-15A	95	51	14	1	70	15	102
JIS 30K-15A	115	55	18	1	80	19	107
ANSI 150-1/2 inches	89	35.1	11.5	1.6	60.5	16	99
ANSI 300-1/2 inches	95	35.1	14.5	1.6	66.5	16	105
JPI 150-1/2 inches	89	35.1	11.5	1.6	60.5	16	99
JPI 300-1/2 inches	95	35.1	14.5	1.6	66.5	16	105
JIS 10K-20A	100	56	14	1	75	15	103
JIS 20K-20A	100	56	16	1	75	15	103
JIS 30K-20A	120	60	18	1	85	19	107
ANSI 150-3/4 inches	99	42.9	13	1.6	69.8	16	103
ANSI 300-3/4 inches	117	42.9	16	1.6	82.6	19	112
JPI 150-3/4 inches	99	42.9	13	1.6	69.8	16	103
JPI 300-3/4 inches	117	42.9	16	1.6	82.6	19	112

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