

# Diaphragm pressure gauge with dry type

## Model: P770 series

Spec. sheet no. PD07-09

### Service intended

P770 series are equipped with the specially designed dry type diaphragm. This special diaphragm offers a unique capability to use with all types of liquids, high-viscosity fluids, solids, and even corrosive chemicals. P770 is a perfect solution for a wide range of process industry such as Petro-chemical, environmental technology, offshore, mechanical engineering, power stations, and plant construction.



### Nominal diameter

100 and 160 mm

### Accuracy

±1.6% of full scale

### Scale range

0 ~ 1 kPa to 0 ~ 40 kPa (Flange 150 mm)  
0 ~ 50 kPa to 0 ~ 2.5 MPa (Flange 100 mm)

### Working pressure

Steady : Full scale value  
Fluctuating : 90 % of full scale value

### Over range protection

Overpressure safety 130 % of full scale value  
Overpressure safety 500 % of full scale value, Max. 5 MPa (Option)  
Option : Overpressure safety 500 % of full scale value, Max. 5 MPa

### Working temperature

Ambient : -20 ~ 65 °C  
Fluid : Max. 100 °C

### Temperature effect

Accuracy at temperature above and below the reference temperature (20 °C) will be effected by approximately ±0.8 % per 10 °C of full scale



Model : P771

Model : P772

## Standard features

### Upper flange (Gauge side)

Material : Stainless steel (304SS, 316SS)

### Diaphragm material

≤ 40 kPa : Stainless steel (316Ti SS)  
> 40 kPa : Duratherm 600

### Pressure connection and under flange

Material : Stainless steel  
(316SS, 316L SS, 304SS, 304L SS) and others  
Lower screw and flange mount

### Case

Stainless steel (304SS)

### Cover

Stainless steel (304SS)  
Bayonet type

### Window

Safety glass

### Movement

Stainless steel

### Dial

White aluminium with black graduations

### Pointer

Black painted aluminium alloy

### Option

External zero adjustable

### Certificates

ATEX Ex II GD c IIC TX

**WISE**<sup>®</sup>

**1. Base model**

- P771** Screwed process connection  
diaphragm pressure gauge with dry type
- P772** "I" type flange process connection  
diaphragm pressure gauge with dry type

**2. Gauge model and mounting type**

- 8A** P252 100A
- XA** P252 160A

**3. Process connection**

- XXX** Refer to process connection type table

**4. Under flange material (Wetted parts)**

- BX** 304SS
- CX** 316SS
- EX** 316L SS

**5. Unit**

- H** bar
- I** MPa
- J** kPa
- S** mbar

**6. Range**

- XXX** Refer to pressure range table

**7. Over range protection**

- 0** Overpressure safety 130 % of full scale value
- 1** Overpressure safety 500 % of full scale value, Max. 5 MPa

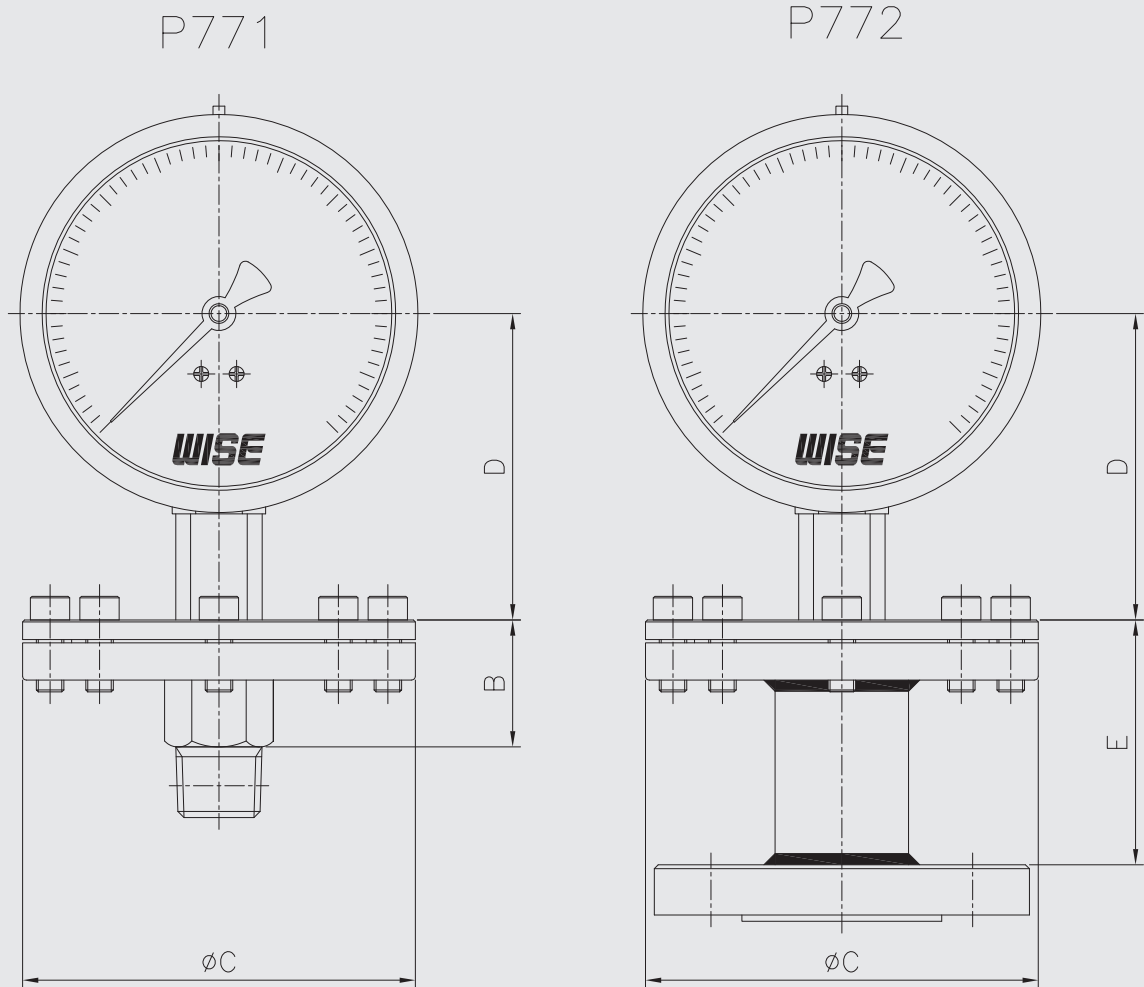
**8. Option**

- 0** None
- 1** Accessories

**Sample ordering code**

1	2	3	4	5	6	7	8
P771	8A	XXX	BX	H	XXX	0	0

## P77X : Type of mounting



Dial size	Pressure range	Dimensions (mm)			
		B	C	D±2	E
100	≤ 40KPa	33	150	78	66
100	> 40KPa < 1.6MPa	32	100	78	66
100	≥ 1.6MPa	43.5	100	78	77.5
160	≤ 40KPa	33	150	108	66
160	> 40KPa < 1.6MPa	32	100	108	66
160	≥ 1.6MPa	43.5	100	78	77.5

## Range table

Range and code	Unit and code				Diaphragm material	
	J : kPa	s : mbar	H : bar	I : MPa		
406	-4 ~ 0	-40 ~ 0	X	X	316Ti (130Ø)	
404	-6 ~ 0	-60 ~ 0	X	X		
403	-10 ~ 0	-100 ~ 0	X	X		
501	-16 ~ 0	-160 ~ 0	X	X		
401	-20 ~ 0	-200 ~ 0	X	X		
502	-25 ~ 0	-250 ~ 0	X	X		
104	-40 ~ 0	-400 ~ 0	-0.4 ~ 0	X		
419	-2 ~ 2	-20 ~ 20	X	X		
417	-3 ~ 3	-30 ~ 30	X	X		
413	-5 ~ 5	-50 ~ 50	X	X		
581	-5 ~ 10	-50 ~ 100	X	X		
470	-10 ~ 10	-100 ~ 100	X	X		
604	-10 ~ 15	-100 ~ 150	X	X		
206	-20 ~ 20	-200 ~ 200	-0.2 ~ 0.2	X		
826	0 ~ 4	0 ~ 40	X	X		
830	0 ~ 6	0 ~ 60	X	X		
792	0 ~ 10	0 ~ 100	X	X		
810	0 ~ 16	0 ~ 160	X	X		
793	0 ~ 20	0 ~ 200	X	X		
818	0 ~ 25	0 ~ 250	X	X		
130	0 ~ 40	0 ~ 400	0 ~ 0.4	X		
040	0 ~ 50	0 ~ 500	0 ~ 0.5	X		Duratherm 600 (75Ø)
131	0 ~ 60	0 ~ 600	0 ~ 0.6	X		
041	0 ~ 100	0 ~ 1,000	0 ~ 1	0 ~ 0.1		
042	X	X	0 ~ 2	0 ~ 0.2		
134	X	X	0 ~ 2.5	0 ~ 0.25		
045	X	X	0 ~ 6	0 ~ 0.6		
143	X	X	0 ~ 16	0 ~ 1.6		
052	X	X	0 ~ 25	0 ~ 2.5		

X : Not available

## Process connection type table - 7<sup>th</sup> and 8<sup>th</sup> characters

7 <sup>th</sup> character		8 <sup>th</sup> character			
Code	Connection size	For model P771		For model P772	
		Code	Connection type	Code	Flange rating
C *	1/4"	PF	PF	KA	JIS 5K RF
D *	3/8" (10A)	AB	PT	AC	B16.5 Class 150 RF
E	1/2" (15A)	AA	NPT	AE	B16.5 Class 150 FF
F	3/4" (20A)	FF	BSPT	AD	B16.5 Class 150 RFSF
G	1" (25A)	GG	BSPF	AF	B16.5 Class 300 RF
H	1 1/4" (32A)	HH	NPS	AH	B16.5 Class 300 FF
J	1 1/2" (40A)	JJ	M	AG	B16.5 Class 300 RFSF
K	2" (50A)	Z	Other	AJ	B16.5 Class 600 RF
L	2 1/2" (65A)			KT	JIS 5K FF
M	3" (80A)			AL	B16.5 Class 600 FF
N	4" (100A)			AK	B16.5 Class 600 RFSF
Z	Other			KL	JIS 10K RF
				KN	JIS 10K FF
				KM	JIS 10K RFSF
				KP	JIS 20K RF
				KR	JIS 20K FF
				KQ	JIS 20K RFSF
				KC	JIS 30K RF
				KU	JIS 30K FF
				KJ	JIS 30K RFSF
				AS	B16.5 Class 900 RF
				KD	JIS 40K RF
				KV	JIS 40K FF
				A8	B16.5 Class 150 RTJ
				A9	B16.5 Class 300 RTJ
				AV	B16.5 Class 600 RTJ
				ZZ	Other

\* Code C and D, only available with model P771

Large empty rectangular area for writing or drawing.