

## FEATURES

- All SS measuring system
- Socket-case, direct welded
- Threaded / Flanged connection
- External zero adjustment
- Overpressure safety up to 40 bar or 100 bar
- High overpressure safety up to 400 bar with solid-front case

## APPLICATION

- Liquid & gaseous mediums
- Corrosive environments
- Oil & Gas applications
- Chemical & Petrochemical
- Food & Beverages
- Nuclear power plants

### Diaphragm



### STANDARD PARAMETERS

Accuracy	: CL 1.6
Ambient temperature	: -20...+60°C / -40...+60°C with silicon oil dampening
Service temperature	: 100°C max.
Pressure limits	: Over pressure up to 1.3 FS value Steady pressure up to FS value Fluctuating pressure up to 90% of FS value
Weld joint	: TIG argon arc welding

### MATERIAL OF CONSTRUCTION

Sensing element	: Diaphragm
Case & Ring material	: AISI 304 SS (Bayonet type)
Diaphragm	: ≤ 16 bar - AISI 316L SS, > 16 bar Inconel 718
Chamber	: AISI 316 SS (lower and upper diaphragm housing)
Shank	: AISI 316L SS
Movement mechanism	: AISI 304 SS
Chamber sealing gaskets	: FPM / FKM
Dial	: Aluminum, black graduation on white background
Pointer	: Micro-adjustable, aluminum, black powder coated
Gaskets, Blow off disc & filling plug	: Neoprene
Window	: Shatterproof safety glass

### STANDARD SPECIFICATIONS

Dial size	: DN100 / DN150
Range	: 0...10 to 0...16 mbar (flange Ø 174 mm) 0... 25 to 0...250 mbar (flange Ø 150 mm) 0...0.4 to 0...40 bar (flange Ø 100 mm)
Mounting pattern	: Direct, Bottom connection
Process connection	: 1/2" NPT (M) or 1/2" BSP (M)
Ingress protection	: IP 65 - EN 60529 / IEC 529
Execution	: Dry

### STANDARD SPECIFICATIONS : DAMPENING LIQUID FILLED, GLYCERIN

Window	: Shatterproof safety glass
Dampening liquid	: Glycerin [Service temperature up to 65°C]

### TEMPERATURE EFFECT

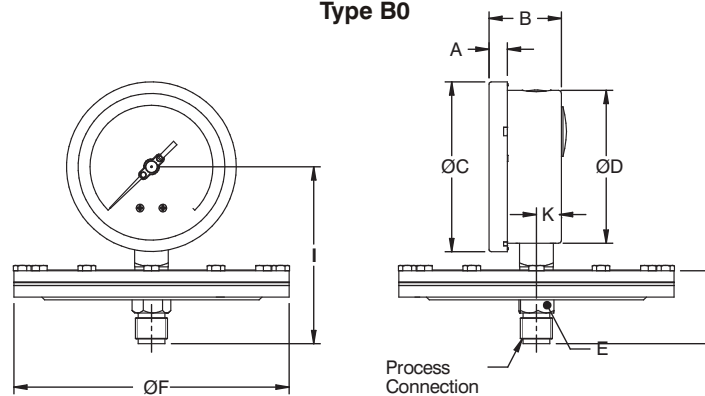
When temperature of the measuring system deviates from reference temperature (+20°C) max error ±0.8% / 10K of true scale value.

## REFERENCE

EN 837-3

## DIMENSIONAL DRAWING

Type B0



Range	DN	A	B	ØC	ØD	E	ØF	I	J	K	Weight (grams)
Below 40 mbar to 6 mbar	100	12	52	100	100	A/F-22	174	130	50	17	2814
0/40 to 0/250 mbar	100	12	52	100	100	A/F-22	150	130	55	17	2205
0/0.4 to 0/25bar	150	15	52	150	149	A/F-22	98	155	55	17	1525
	150	15	52	150	149	A/F-22	174	155	55	17	1920

All dimensions are in mm.

## ORDERING CODES

### 1. DIAL SIZE

**04** 100 mm / 4"      **06** 150 mm / 6"

### 2. RANGE

**XXX** Refer "Range Table"

### 3. MOUNTING PATTERN

**B0** Direct, Bottom connection  
**B2** 2" Pipe/Yoke mounting, Bottom connection

### 4. PROCESS CONNECTION

**12B** 1/4" BSP (M)      **12N** 1/4" NPT (M)  
**13B** 3/8" BSP (M)      **14B** 1/2" BSP (M)  
**14M** M20 X 1.5 mm (M)      **14N** 1/2" NPT (M)  
**A31** 2" RF 150# as per ANSI B 16.5  
**A43** 3" RF 150# as per ANSI B 16.5

### 5. INGRESS PROTECTION

**ER** IP 65

### 6. EXECUTION

**EA** Dry  
**EB** Dry but fillable, glycerine  
**EC** Dry but fillable, silicon oil<sup>2</sup>  
**EG** Dampening liquid filled, glycerine  
**EH** Dampening liquid filled, silicon oil<sup>2</sup>

### 7. OTHER OPTIONS

**BA** Case & Ring in AISI 316 SS (B0)  
**BC** Case & Ring in AISI 316 SS (B2)  
**EN** Dampening screw, AISI 316 SS  
**EY** Internal vacuum stop  
**GL** AISI 316 SS movement  
**GZ** External zero adjustment  
**OQ** Over-pressure up to 5 times of FS<sup>4</sup>  
**OR** Over-pressure up to 10 times of FS<sup>4</sup>  
**PC** PTFE lining / coating on wetted parts  
**PK** Hastelloy lining / coating on wetted parts  
**PM** Monel lining / coating on wetted parts  
**TA** 5 - point calibration certificate  
**TC** Material test certificate 3.1  
**TM** Material test certificate 2.2  
**TO** Certification for Oxygen service  
**T5** Max. Medium temperature +200°C (NOT for ATEX version)  
**TX** ATEX certificate  
**XB** Accuracy CL 1.0  
**XF** SS tag plate  
**XH** Flushing plug on lower body  
**XR** Custom designed dial  
**XT** Dial tag marking

**XX**

**Ordering Example : P604-04-XXX-B0-14N-ER-EA**

### NOTES

- For other connections, please contact factory.
- Rubber parts shall be in Viton.
- For electrical contact details, refer model P501.
- Maximum pressure shall be 40 bar.

# P 400

## DIAPHRAGM PRESSURE GAUGES

### APPLICATION

- For measuring points with increased overpressure
- For gaseous, liquid and aggressive media, also in aggressive ambience
- With liquid filled case for applications with high dynamic pressure loads or vibrations
- With the open flange connection option also for viscous media
- Process industry: chemical/petrochemical, power stations, mining, on- and offshore, environmental technology, machine building and general plant construction

### SPECIAL FEATURES

- High overpressure safety
- All stainless steel construction
- Wide choice of special materials
- Process connection thread or flange
- Scale ranges from 0 ... 10 mbar

### STANDARD FEATURES

#### DESIGN

EN 837-3

#### CASE DIAMETER

100 and 160 mm

#### ACCURACY CLASS

1.6

#### SCALE RANGES

0...10 to 0...16 mbar  
(flange Ø 174 mm)  
0...25 to 0...250 mbar  
(flange Ø 150 mm)  
0...0,4 to 0...40 bar  
(flange Ø 100 mm)  
or equivalent other units of  
pressure or vacuum

#### PRESSURE LIMITATION

Steady: full scale value  
Fluctuating: 0.9 x FSV

#### OVERPRESSURE SAFETY

1,3 full scale value

### OPERATING TEMPERATURE

Ambient : -20 / +60 °C  
Medium : +100 °C maximum  
Storage : - 40 /+70 °C (scale  
ranges ≤ 60 mbar : - 20/+70°C)

### TEMPERATURE EFFECT

When temperature of the  
measuring system deviates  
from reference temperature  
(+ 20 °C) max error ± 0,8% /10K  
of full scale value

### INGRESS PROTECTION

IP 65 – EN 60 529 / IEC 529  
without/with liquid filling

### PRESSURE CHAMBER

AISI 316 stainless steel  
lower and upper diaphragm  
housing

### PROCESS CONNECTION

AISI 316 L stainless steel  
Thread size ½" BSP or NPT

### PRESSURE CHAMBER SEALING

FPM/FKM

### PRESSURE ELEMENT

≤ 16 bar AISI 316L stainless steel  
> 16 bar Inconel 718

### DIAL

Aluminium with black  
markings on white  
background, dial arc 270 °

### CASE AND RING

AISI 304 stainless steel  
Bayonet ring style  
with pressure relief in case  
back  
Filling plug on top

### MOVEMENT

Stainless steel

### POINTER

Adjustable, black aluminium

### WINDOW

Laminated safety glass

### MOUNTING

Lower connection

### OPTIONAL EXTRAS

Other process connection  
Case and ring AISI 316 stainless steel  
Overpress. safe : 5 x FSV, max. 40 bar  
Overpress. safe : 10 x FSV, max. 40 bar  
Vacuum safe up to -1 bar  
Max. medium temperature +200 °C (NOT  
for ATEX version)

Ambient temperature -40/+60 °C  
(silicone oil filling)

Higher accuracy class 1.0

Open flange connection

per UNI EN/ASME

Wetted parts lined/coated with special

materials: PTFE;Hastelloy C276, Monel

Glycerine case filling

Silicon oil case filling

Electric contact (see CE data sheet)

Bracket for surface mounting

Flushing plug on lower body

(ranges ≥ 400 mbar)

Cleaning for oxygen service

Customer designed dials

Dial tag marking

ATEX execution

Version ATEX (with inductive contacts)



II 2 GD c

### SPECIAL VERSION

Overpressure safety up 4.0 or 100 bar  
model P400.40 / P400.100

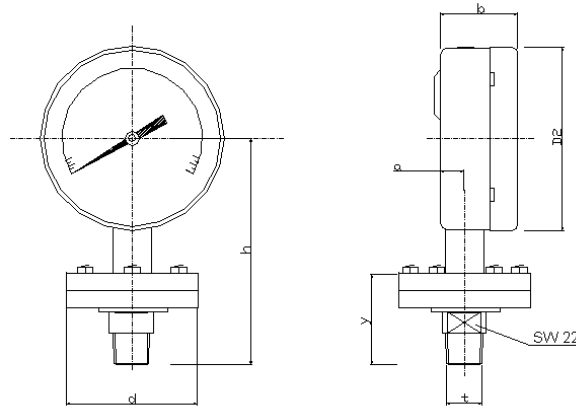
High overpressure safety up to 400 bar  
special version with case solid-front



ITEC srl  
Via C. Battisti 114B  
28045 Invorio (NO)- ITALY  
Tel: +390322259759  
Fax: +390322255157  
e-mail: [info@itec.it](mailto:info@itec.it)

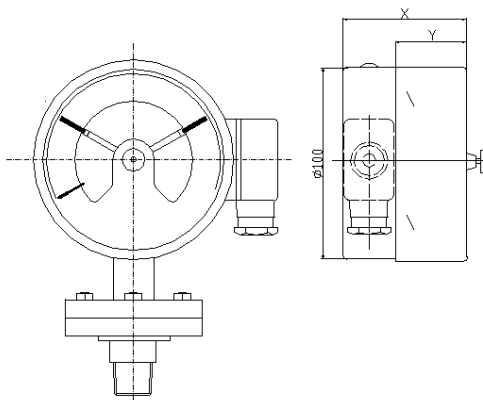
# P 400

## DIAPHRAGM PRESSURE GAUGES

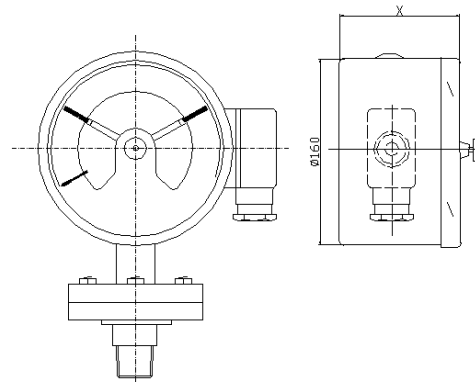


Dimensions (mm)

CASE DN	RANGE	d	a	b	D2	t	h±2	y	Weight Kg
100	10 to 16 mbar	174	17	49.5	101	½" BSP or NPT	135	55	2,6
160	10 to 16 mbar	174	17	49.5	161	½" BSP or NPT	165	55	3,2
100	25 to 250 mbar	150	17	49.5	101	½" BSP or NPT	135	55	2,4
160	25 to 250 mbar	150	17	49.5	161	½" BSP or NPT	165	55	3,0
100	0,4 to 40 bar	100	17	49.5	101	½" BSP or NPT	135	55	1,8
160	0,4 to 40 bar	100	17	49.5	161	½" BSP or NPT	165	55	2,2



TYPE OF CONTACT	CASE DN 100	
	X	Y
Single or double contact	88	55
DPDT	113	80
Quadruple contact	113	80



TYPE OF CONTACT	CASE DN 160	
	X	Y
Single or double contact	102	
DPDT	116	
Quadruple contact	116	



ITEC srl  
 Via C. Battisti 114B  
 28045 Invorio (NO)- ITALY  
 Tel: +390322259759  
 Fax : +390322255157  
 e-mail: [info@itec.it](mailto:info@itec.it)

# P 400

## DIAPHRAGM PRESSURE GAUGES



### HOW TO ORDER

- 1) NOMINAL SIZE 100 160
- 2) BASIC MODEL P400  
P400/98 (range from 0.4 bar to 40 bar) P400/150 (range from 25 mbar to 250 mbar)  
P400/174 (range from 10 bar to 16 mbar)
- 3) GAUGE CONNECTION 7 1/2" NPT-M 8 1/2" BSP-M FL Flanged process connection
- 4) TYPE OF MOUNTING L DIRECT BOTTOM ENTRY
- 5) SCALE RANGE 0...10 mbar to 0...40 bar
- 6) OPTION CS AISI 316 CASE & RING PG GLYCERINE FILLED DAMPENING LIQUID  
PZ SILICON OIL FILLED DAMPENING LIQUID SOP OVERPRESSURE SAFE VP VACUUM SAFE  
FL FLANGED PROCESS CONNECTION (flanges per UNI-EN or ANSI standard)  
RH CUSTOMER DESIGNED DIAL SW DIAL TAG MARKING  
SX STAINLESS STEEL TAG PLATE

--- Further options required

--- ELECTRIC CONTACTS (code and description data sheet "electric contacts")

### EXAMPLE

1	2	3	4	5	6
100	P400/98	7	L	160 mbar	PZ-SX



ITEC srl  
Via C. Battisti 114B  
28045 Inverio (NO)- ITALY  
Tel: +390322259759  
Fax: +390322255157  
e-mail: [info@itec.it](mailto:info@itec.it)