

Differential Pressure Gauges

All Stainless Steel, Case With Bayonet Ring

Ø 100 mm (4") and Ø 160 mm (6")

Standard (BIDPA 100/160 D) or Glycerine Filled (BIDPA 100/160 L)

Models :

BIDPA 100 / 160 D

BIDPA 100 / 160 L

APPLICATIONS

Differential pressure gauges models BIDPA are used for direct reading of low differential pressure from 0/25 mbar (0/10 "WC) and above at static pressures of 10 bar or 25 bar (150 psi or 400 psi)

NOMINAL HEAD DIAMETERS

Ø 100 mm (4") and Ø 160 mm (6")

ACCURACY CLASS

Class 2.5 according to EN 837-3 Standard (i.e. $\pm 2.5\%$ f.s.)

PRESSURE RANGES (EN / ASME 837)

From 0 / 25 mbar (10 "WC) up to 0 / 25 bar (400 psi)

PRESSURE LIMITATIONS

Max. static pressure:

PN 10 (150 psi) for ranges ≤ 250 mbar [100 "WC]

PN 25 (400 psi) for ranges $\geq 0,4$ bar [160 "WC]

overrange protected up to 10-times full scale pressure, but for one sided overpressure max. up to permissible PN (10 or 25 bar resp. 150 or 400 psi); vacuum protected

TEMPERATURE LIMITATIONS

Ambient temperature -20 to +80 °C (-4 to + 176 °F)

Medium temperature max. +100 °C (+212 °F)

PROTECTION TYPE (EN 60529 / IEC 529)

Model BIDPA (dry) = IP 54 / Model BIDPA (liquid filled) = IP 65

STANDARD CONFIGURATION

CASE AND BAYONET RING

Stainless steel AISI 304

CONNECTION

2 x 1/4 "BSP female bottom connection, connections marked with "+" HP and "-" LP direct mounting on pressure service lines

PRESSURE CHAMBERS

Stainless steel in AISI 316 L

DIAPHRAGM

Measuring ranges < 1 bar (0/15 psi): Stainless steel AISI 316 L

Measuring ranges ≥ 1 bar (0/15 psi): NiCrCo-Alloy (Duratherm)

BELLOWS

Stainless steel in AISI 316 L

MOVEMENT

Stainless steel

DIAL PLATE

Aluminum Alloy, black figures, white background

WINDOW

Laminated safety glass

POINTER

Aluminum alloy black, pointer adjustable $\pm 25\%$ of the full span through an opening at the case top

ACCESSORIES

3- or 4- spindle valve manifold,

for 3 spindle valve see page 23



SPECIAL CONFIGURATIONS

- ➔ Other connections threads upon request
- ➔ Special scales (dual ranges or flow ranges)
- ➔ Stationary red pointer, internal or external adjustment
- ➔ Installation of electrical accessories like magnetic or inductive **limit-switch contact assemblies** (see page 17)

STANDARD RANGES

psid	mBar	bar	I.W.D.
3	40	0.6	10
5	60	1.0	30
10	100	1.6	60
15	160	2.5	100
30	250	4	200
60	400	6	
100		10	
160		16	
200		25	
300			
400			

HOW TO ORDER

Please select :

- BIDPA 100 D T
 1. Model code : BIDPA
 2. Nominal head diameter
 Ø 100 mm (4") or Ø 160 mm (6")
 3. D : Dry / standard or L : Liquid filled
 4. Mounting Type : M for direct mounting
 T for 2" tube mounting
 W for wall mounting

EXAMPLE OF ORDER NUMBER

Differential Pressure Gauges Ø 100 mm
 Material : all stainless steel
 Range : 0 – 6 kg/cm²
 Bottom connection : 1/2" NPT Male
 Liquid filled, with 2" pipe mounting
 Maximal static pressure : 25 kg/cm²

Order number :

·BIDPA 100 LT, 0 - 6 kg/cm², 1/2" NPT Male

Differential Pressure Gauges

All Stainless Steel, Case With Bayonet Ring

Ø 100 mm (4") and Ø 160 mm (6")

Standard (BIDPA 100/160 D) or Glycerine Filled (BIDPA 100/160 L)

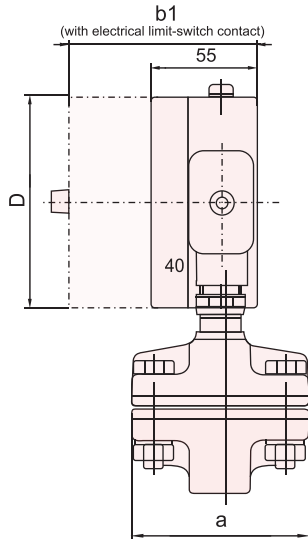
Models :

BIDPA 100 / 160 D

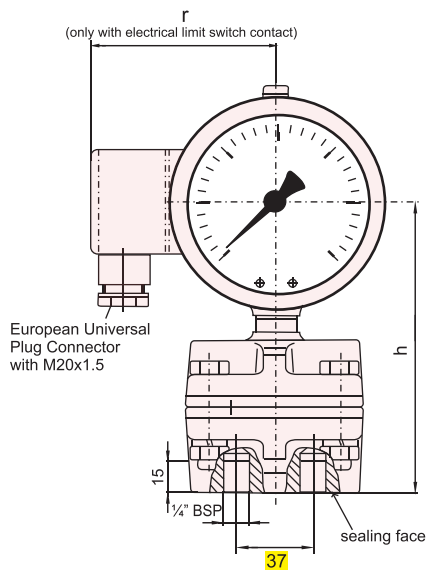
BIDPA 100 / 160 L

CASE CONFIGURATIONS AND DIMENSIONAL DATA (in mm)

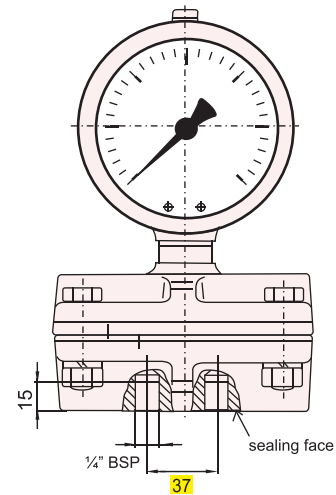
BASIC MODEL



PRESSURE RANGES 0.4 - 25 BAR



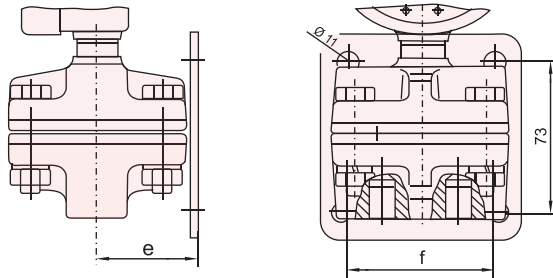
PRESSURE RANGES 25 - 250 MBAR



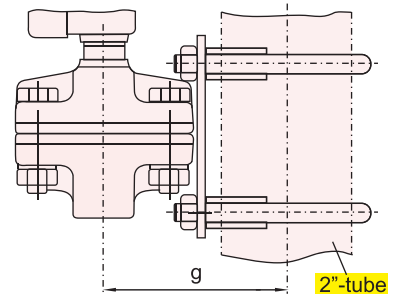
NOTE : Distance between centre to centre "HP" to "LP" = 37 mm

0.4 - 25 BAR

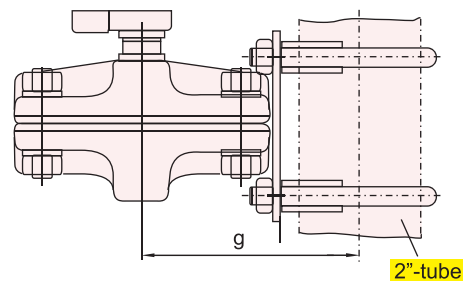
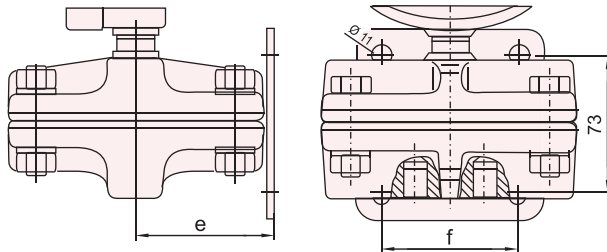
WALL MOUNTING



TUBE MOUNTING



25 - 250 MBAR



Dimensions (mm)

Case Size	Pressure Range	a	D	b1	b2	e	f	g	h±1	r
100 4"	0/25 ... 0/250 mbar 0/10 ... 0/100 "WC	136	101	100	116	76	73	114	140	86
	0/0.4 ... 0/25 bar 0/160 "WC ... 0/400 psi	90				51		91		
160 6"	0/25 ... 0/250 mbar 0/10 ... 0/100 "WC	136	161	102	118	74	73	114	170	170
	0/0.4 ... 0/25 bar 0/160 "WC ... 0/400 psi	90				51		91		

Differential Pressure Gauges

All Stainless Steel, Case With Bayonet Ring

Ø 100 mm (4") and Ø 160 mm (6")

Standard (BIDPB100/160 D) or Glycerine Filled (BIDPB 100/160 L)

Models :

BIDPB 100 / 160 D

BIDPB 100 / 160 L

APPLICATIONS

The differential pressure gauges models BIDPB are used for direct indication of low differential pressure from 0/40 mbar and above at static pressure of 40 bar (600 psi) or 100 bar (1500 psi)

NOMINAL HEAD DIAMETERS

Ø 100 mm (4") and Ø 160 mm (6")

ACCURACY CLASS

± 1.6 % f.s. according to EN 837-3 Standard

PRESSURE RANGES (EN / ASME 837)

Ø 100 mm (4") : 0 / 0,6 bar (10 psi) to 0 / 25 bar (400 psi)

Ø 160 mm (6") : 0 / 40 mbar (16 "WC) to 0 / 25 bar (400 psi)

PRESSURE LIMITATIONS

Max. static pressure PN 40 (600 psi)

overrange protected up to permissible PN (for one-sided over pressure); vacuum protected

TEMPERATURE LIMITATIONS

Ambient temperature -20 to +80 °C (-4 to + 176 °F)

Medium temperature max. +100 °C (+212 °F)

PROTECTION TYPE (EN 60529 / IEC 529)

Model BIDPB (dry) = IP 54 / Model BIDPB (liquid filled) = IP 65

STANDARD CONFIGURATION

CASE AND BAYONET RING

Stainless steel AISI 304

CONNECTION

2 x ½ "BSP female bottom connection, connections marked with "+" and "-"; direct mounting on pressure service lines

PRESSURE CHAMBERS

Stainless steel In AISI 316 L

DIAPHRAGM

0/40 to 0/400 mbar (0/16 to 0/160 "WC): AISI 316 Ti

0/6 to 0/25 bar (0/10 to 0/400 psi): NiCrCo-Alloy (Duratherm)

INTERMEDIATE PLATE

AlMgSi Pb - HART COAT ®

MOVEMENT

Stainless steel

DIAL PLATE

Aluminum Alloy, black figures, white background

WINDOW

Laminated safety glass

POINTER

Aluminum alloy, black, external adjustment for pointer, ± 25 % of the measuring range

ACCESSORIES

3- or 4- spindle valve manifold,
for 3 spindle valve see page 23



SPECIAL CONFIGURATIONS

- ➔ Other connections threads upon request
- ➔ Special scales (dual ranges or flow ranges)
- ➔ Stationary red pointer, internal or external adjustment
- ➔ Installation of electrical accessories like magnetic or inductive **limit-switch contact assemblies** (see page 17)

STANDARD RANGES

psid	mBar	bar	I.W.D.
3	40	0.6	10
5	60	1.0	30
10	100	1.6	60
15	160	2.5	100
30	250	4	200
60	400	6	
100		10	
160		16	
200		25	
300			
400			

HOW TO ORDER

Please select :

1. Model code : BIDPB
2. Nominal head diameter
Ø 100 mm (4") or Ø 160 mm (6")
3. D : Dry / standard or L : Liquid filled
4. Mounting Type : M for direct mounting
T for 2" tube mounting
W for wall mounting

EXAMPLE OF ORDER NUMBER

Differential Pressure Gauges Ø 100 mm
Material : all stainless steel
Range : 0 – 6 kg/cm²
Bottom connection : ½" NPT Male
Dry / non Liquid filled, with 2" pipe mounting
Maximal static pressure : 40 kg/cm²

Order number :
·BIDPB 100 DT, 0 – 6 kg/cm², ½" NPT Male

Differential Pressure Gauges

All Stainless Steel, Case With Bayonet Ring

Ø 100 mm (4") and Ø 160 mm (6")

Standard (BIDPB 100/160 D) or Glycerine Filled (BIDPB 100/160 L)

Models :

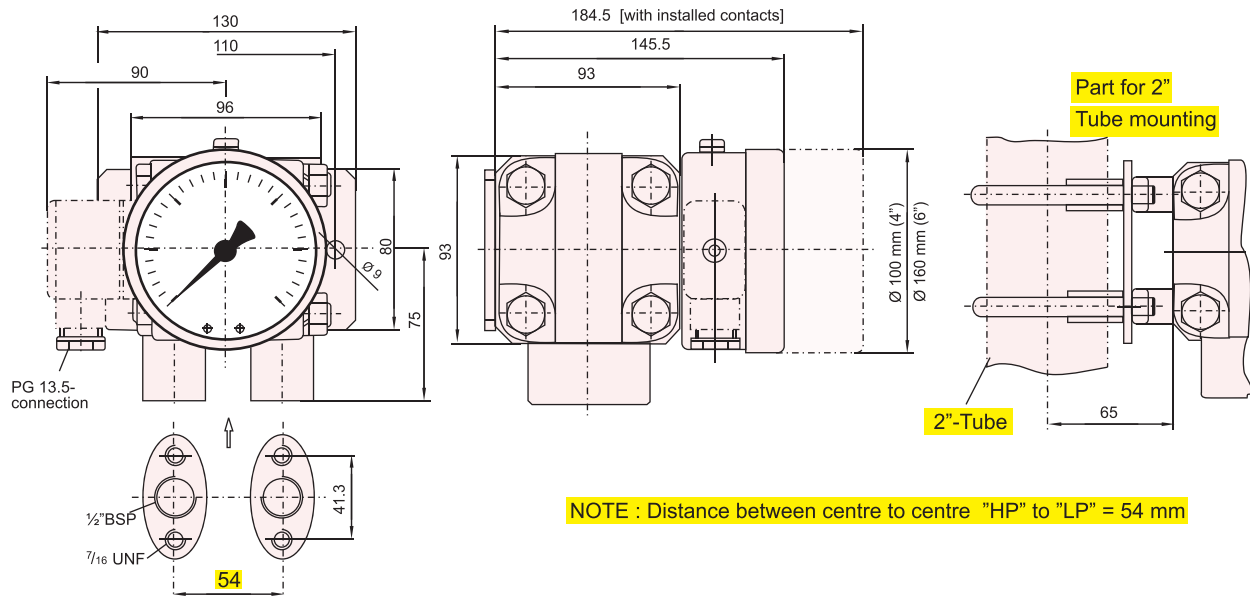
BIDPB 100 / 160 D

BIDPB 100 / 160 L

CASE CONFIGURATIONS AND DIMENSIONAL DATA (in mm)

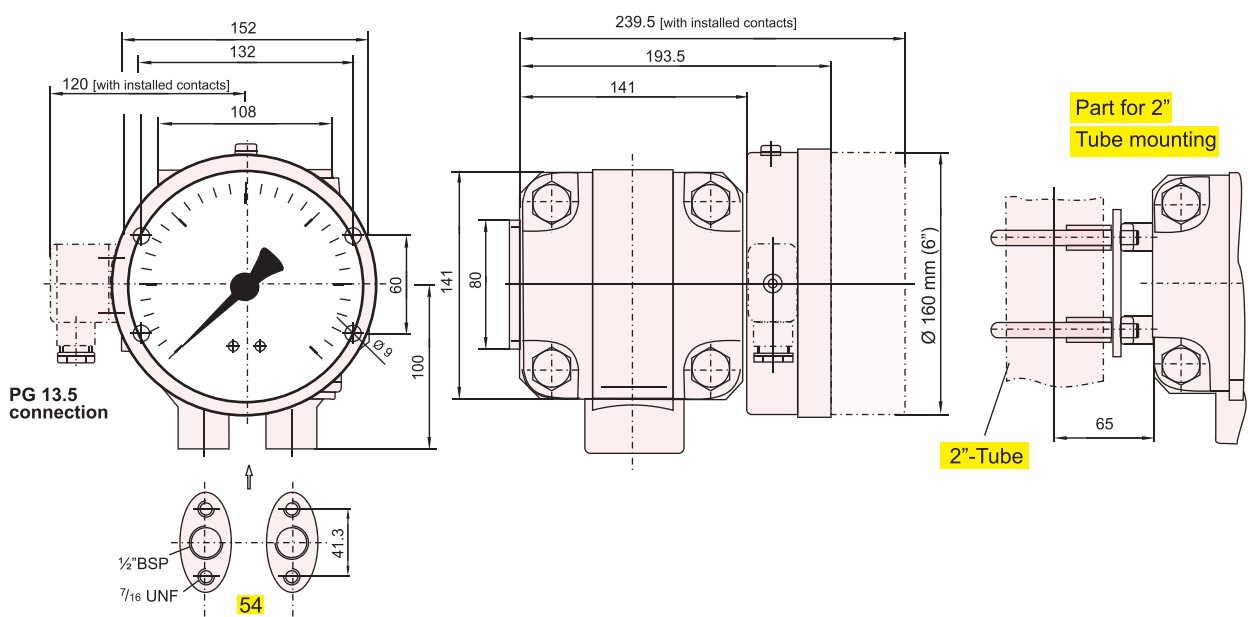
CASE DIAMETER 100 mm (4") and 160 mm (6")

PRESSURE RANGES FROM 0/0.6 TO 0/25 BAR (0/10 TO 0/400 PSI)



CASE DIAMETER 160 mm (6")

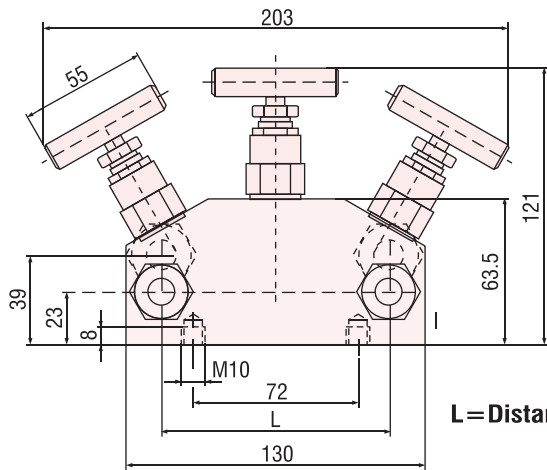
PRESSURE RANGES FROM 0/40 to 0/400 mbar (0/16 to 0/160 "WC)



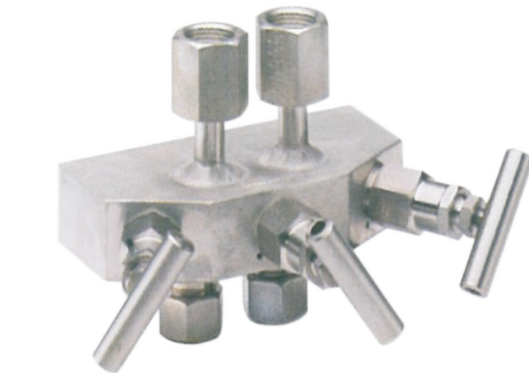
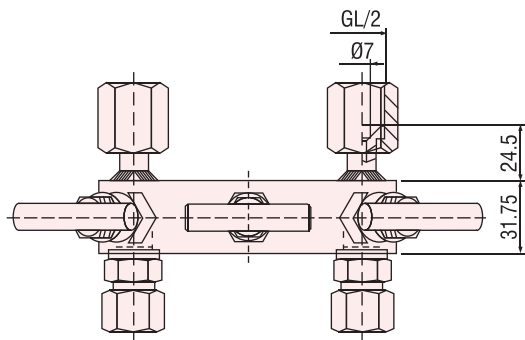
3 Valve Manifold PN 400 bar / 6000 psi

For Differential Pressure Gauges Model BIDPA and BIDPB

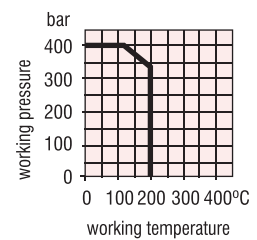
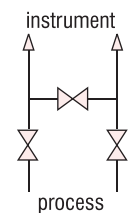
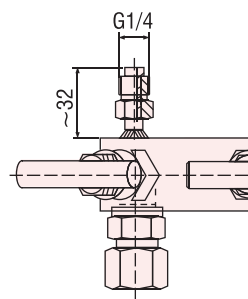
DIMENSIONAL DATA AND DRAWING



L = Distance between centre to centre "HP" to "LP"



alternative
instrument connection
swivel male :



Material	Distance L [mm]	Connections		Part no.
		inlet	Outlet	
steel Stainless steel	37	tube fitting O. D. 12 mm line S, G 3/8	swivel nut G 1/2	N342.141.01 N342.241.01
steel Stainless steel	54			N342.141.02 N342.241.02
steel Stainless steel	100			N342.141.03 N342.241.03

Components	Steel	Stainless steel
	DIN - Material Number	
Body	1.0460	1.4404
Bonnet	1.4401	
Valve stem	1.4404	
Needle tip	1.4122 ⁴⁾	1.4571
Packing	PTFE	
Gland nut	1.4301	
T-handle	stainless steel	

- ⇒ Surface: steel phosphatized
- ⇒ External stem thread
- ⇒ Stem with cold rolled surface, back seat and non-rotating needle tip
- ⇒ Special types are available
- 1) Can also be supplied for oxygen service.
- 2) Available with inspection certificate 3.1.B acc. to EN 10 204
- 3) The manifold can be supplied with male connectors G 1/2 or 1/2 NPT instead of tube fittings on the inlet ports.
- 4) 1.4122 quenched and tempered