

Differential Pressure Gauges

Medium to Heavy Duty

Model DP3



Data sheet : DP3/2012

A range of economically priced 100mm and 150mm nominal size differential pressure gauges ideally suited to most medium to heavy duty industrial applications where accuracy and durability is required.

A choice of mounting options enables simple installation - either direct mounting to the process, in a panel, surface mounting on a wall or with a vertical or horizontal pipe mounting.

DP3 Range - Standard Differential Pressure Range (maximum static pressure)

0 to 25 mbar (25 bar)	0 to 1.6 bar (100 bar*)
0 to 40 mbar (25 bar)	0 to 2.5 bar (100 bar*)
0 to 60 mbar (25 bar)	0 to 4 bar (100 bar*)
0 to 100 mbar (25 bar)	0 to 6 bar (100 bar*)
0 to 160 mbar (100 bar*)	0 to 10 bar (100 bar*)
0 to 250 mbar (100 bar*)	0 to 16 bar (100 bar*)
0 to 400 mbar (100 bar*)	0 to 25 bar (100 bar*)
0 to 600 mbar (100 bar*)	




* 200 & 400 bar maximum static pressure options



DP360, DP370 and DP362 instruments are available with electrical contact head options and can be fitted with diaphragm seal units.

The DP range of differential pressure gauges is also available with a wide range of options including Monel 400 and Hastelloy C276 wetted parts, oxygen cleaning and liquid filled cases. 3 valve and 5 valve integral and remote mounted manifolds are also available.

Medium to Heavy Duty Differential Pressure Gauges - Range Overview

Model	Case Material	Mounting	Nominal Dial Sizes (mm)	Wetted Parts	Connections*	Standard Pressure Ranges**	Maximum Static Pressure
 DP360	AISI 304 Stainless Steel (316 option)	Direct Surface Panel 2" pipe	100 or 150	AISI 316 stainless steel (NACE option) Monel 400	1/4" NPT female 1/2" BSP male 1/2" NPT male	0 to 160 mbar to 0 to 25 bar	100 bar (200 bar option)
 DP370	AISI 304 Stainless Steel (316 option)	Direct Surface Panel 2" pipe	100 or 150	AISI 316 stainless steel (NACE option) Monel 400	1/4" NPT female 1/2" BSP male 1/2" NPT male	0 to 25 mbar to 0 to 100 mbar	25 bar
 DP362	AISI 304 Stainless Steel (316 option)	Direct Surface Panel 2" pipe	100 or 150	AISI 316 stainless steel (NACE option) Monel 400	1/4" NPT female 1/2" BSP male 1/2" NPT male	0 to 160 mbar to 0 to 25 bar	200 bar (400 bar option)

Technical Specification

Nominal Dial Sizes

100 and 150 mm

Mounting Options

- Direct mounting
- Surface mounting with 3 hole back flange
- Back panel flush mounting with 3 hole fixing flange
- 2" vertical pipe or post mounting

Case & Bezel Material

Case and bezel in AISI 304 stainless steel with bayonet bezel. AISI 316 stainless steel option)

Ingress Protection

IP55 for 2" pipe mounting.
IP65 for liquid filled and liquid fillable cases.

Window

Standard Instrument Glass. Laminated safety glass option.
Methacrylate for liquid filled and liquid fillable cases

Case Filling Liquid

Silicone oil

Pressure Connections

AISI 316L stainless steel
Standard Connections: 1/4" NPT female
Options: 1/2" BSP male, 1/2" NPT male

Pressure Element

AISI 316Ti 1.4571 stainless steel

Differential Cell

AISI 316L Stainless steel

Differential Element Filling Fluid

Silicone fluid (standard)
Food compatible fluid (option)

Differential Cell Gaskets

Nitrile rubber (NBR). FPM (Viton) on request

Movement

Stainless steel

Torsion Shaft

Stainless steel

Pointer

Aluminium with micrometer adjustment

Dial

White aluminium with black figures

Accuracy

Class 1.6 ($\pm 1.6\%$ of full scale deflection) to EN837
Class 1.0 ($\pm 1.0\%$ of full scale deflection) to EN837 option

Ambient Temperature

-20 to +60 Deg C

Process Temperature

Maximum 120°C

Options

Maximum Pointer

To indicate the maximum pressure reached; zero setting on the window

Window

Laminated safety glass

Wetted Parts

Monel wetted parts
Hastelloy C276 wetted parts

Diaphragm Seal Units

Applicable to model DP360 with ranges between 0.6 and 25 bar.
Please see data sheet Diaphragm Seal Units for options. Diaphragm seals units can be connected to the gauge remotely via stainless steel capillary.

Electrical Contacts

Gauges can be fitted with an electrical contact system. Contacts are only available on differential pressure gauges that have dry cases - i.e. no liquid filling

Diaphragm Seal Units

Model DP3 can be fitted with a diaphragm seal unit if required.

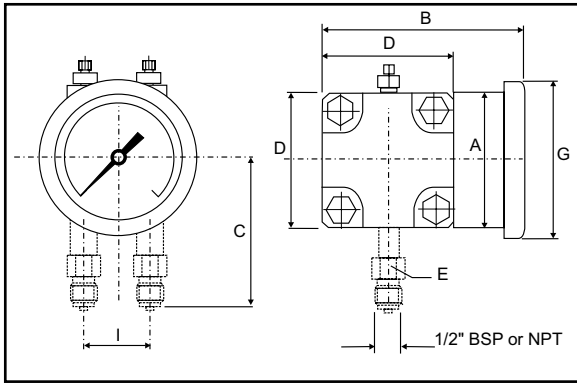
The fitting of a diaphragm seal unit to a pressure gauge is recommended where the medium to be measured is highly viscous or contains suspended solids or is potentially corrosive to the Bourdon Tube.

Seal units are normally connected directly to the gauge, but connection may be made by flexible capillary, which makes them ideal for remote pressure indication. Flexible capillary can be used to facilitate the fitting

of a gauge in a surface or panel mounting location. Maximum capillary length is 5 metres.

Pressure is transmitted from the diaphragm seal unit to the bourdon tube by a suitable filling medium, the selection of which will ensure compatibility with the process and process temperature. Where it is known that the instrument will be used on processes subject to extremes of temperature, the temperature at the tapping point should be advised at the time of ordering.

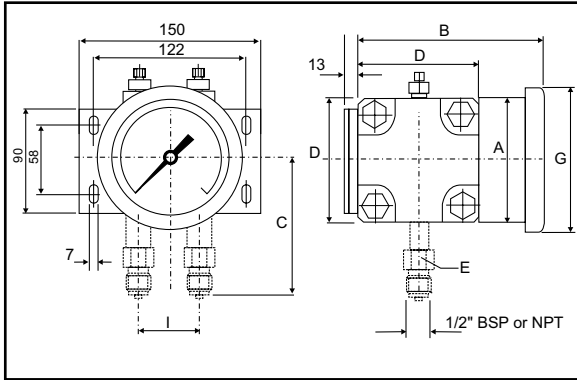
Dimensions in mm



Model DP3

Direct Mounting

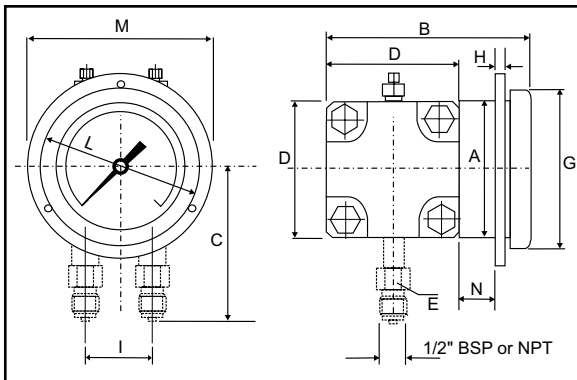
Model	Dial Size	A	B	C	D	E	G	I
DP360	100	103	150	112	100	22	118	54
	150	150	150	112	100	22	166	54
DP362	100	103	150	112	100	22	118	54
	150	150	150	112	100	22	118	54
DP370	100	103	200	137	150	22	166	54
	150	150	200	137	150	22	166	54



Model DP3 Surface Mounting

Back flange mounting with fixing holes

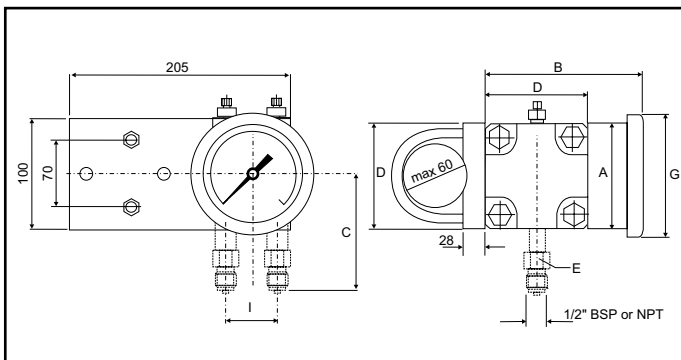
Model	Dial Size	A	B	C	D	E	G	I
DP360	100	103	150	112	100	22	118	54
	150	150	150	112	100	22	166	54
DP362	100	103	150	112	100	22	118	54
	150	150	150	112	100	22	166	54
DP370	100	103	200	137	150	22	118	54
	150	150	200	137	150	22	166	54



Model DP3 Panel Mounting

Back panel flush mounting with 3 fixing holes

Model	Dial Size	A	B	C	D	E	G	H	I	L	M	N
DP360	100	103	150	112	100	22	118	7	54	126	140	27
	150	150	150	112	100	22	166	7	54	178	192	27
DP362	100	103	150	112	100	22	118	7	54	126	140	27
	150	150	150	112	100	22	166	7	54	178	192	27
DP370	100	103	200	137	150	22	118	7	54	126	140	27
	150	150	200	137	150	22	166	7	54	178	192	27



Model DP3 Pipe Mounting

Horizontal or vertical 2" pipe mounting with AISI 304 stainless steel support

Model	Dial Size	A	B	C	D	E	G	I
DP360	100	103	150	112	100	22	118	54
	150	150	150	112	100	22	166	54
DP362	100	103	150	112	100	22	118	54
	150	150	150	112	100	22	166	54
DP370	100	103	200	137	150	22	118	54
	150	150	200	137	150	22	166	54

All dimensions are in mm. Drawings are for illustration purposes only

Approximate weight

100mm gauge (dry) = 5.0 kgs

150mm gauge (liquid filled) = 11.5 kgs

DP3 Differential Pressure Gauge Accessories

AM413 Three valve manifold

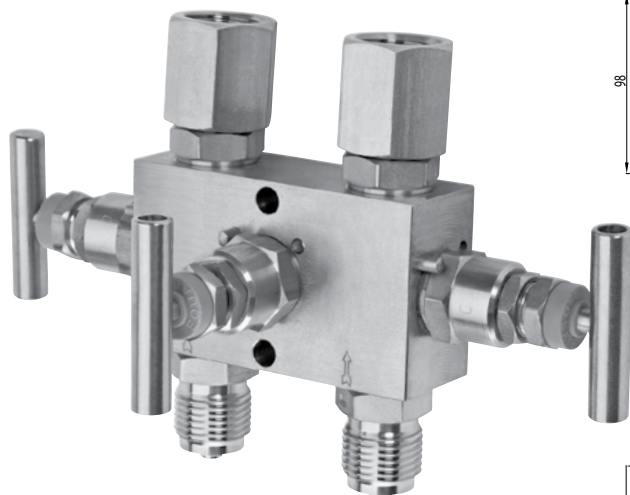
- AISI 316 stainless steel body
- AISI 316 stainless steel needle plug
- AISI 304 stainless steel handles
- Maximum working pressure 400 bar
- Maximum operating temperature 250 °C

Inlet connections

1/4-18 NPT (1/4 NPT female) - standard;
adaptors for male connection 1/2" BSP (1/2 Gas) 1/2-14 NPT EXT (1/2 NPT); others threaded on request;

Output connections

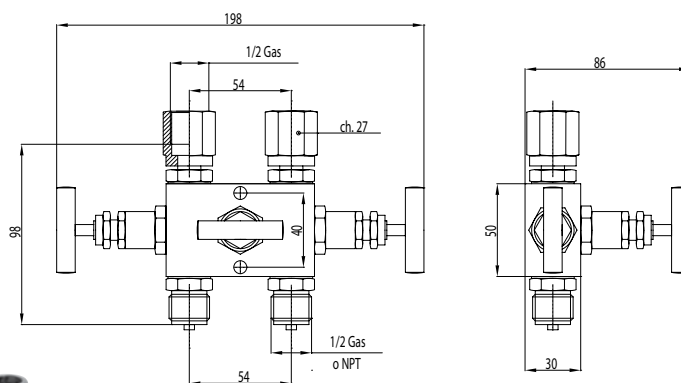
Revolving female 1/2" BSP (female) as standard. Other threads on request.



AM415 Five valve manifold

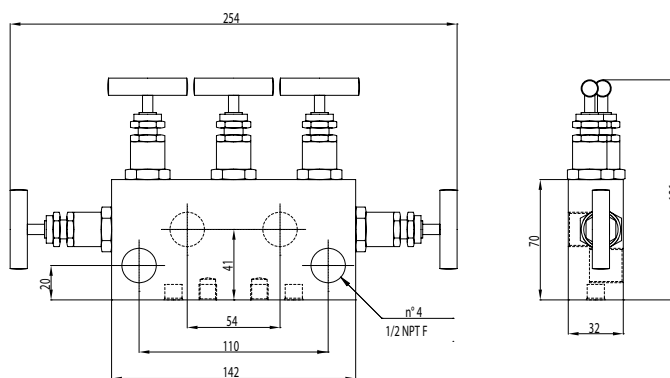
- AISI 316 stainless steel body
- AISI 316 stainless steel needle plug
- AISI 304 stainless steel handles
- Maximum working pressure 400 bar
- Maximum operating temperature 250 °C
- 1/2-14 NPT (1/2 NPT) female threaded connections
- 1/4-18 NPT (1/4 NPT) drain plugs;

AM 413



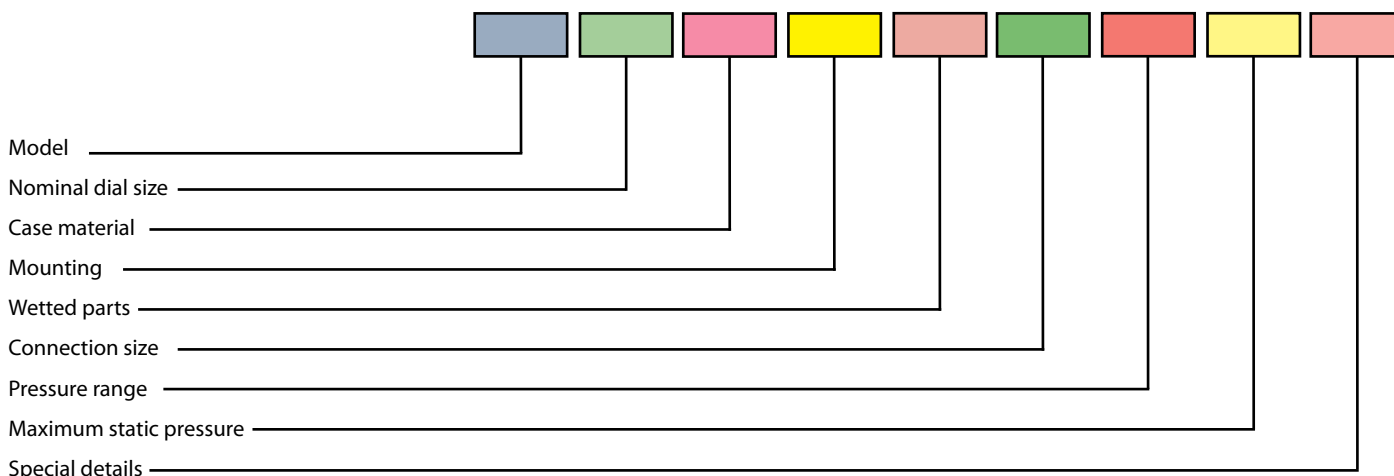
Weight = 1.5 kgs

AM 415



Weight = 2.8 kgs

Ordering Information



1. Model

DP360	DP370	DP362
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2. Nominal dial size

100	100mm (4.0")	150	150mm (6.0")
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3. Case material

304	304 stainless steel (standard)	316	316 stainless steel
304 SP	304 stainless steel (Safety Pattern)	316 SP	316 stainless steel (Safety Pattern)

4. Mounting

A	Direct	C	Panel with 3 hole fixing
B	Surface with clamp	D	2" pipe mounting

5. Wetted parts

SS	316L stainless steel	SSN	316L stainless steel to NACE standard
MM	Monel 400	XX	Other - state requirement

6. Connection size

4N	1/4" NPT female (standard)	4B	1/4" BSP female
2N	1/2" NPT Male	2B	1/2" BSP male
ZZ	Other via adaptors		

7. Pressure Range

Enter standard pressure range

8. Maximum static pressure

25	25 bar	200	200 bar (DP360 option)
100	100 bar	400	400 bar (DP362 option)

9. Options

0	None		
S	Liquid filled case	O2	Dual scale
M	Maximum pointer	DSU	Diaphragm seal unit*
SG	Safety glass window	ECH	Electrical contact head*
3VM	3 Valve Manifold	5VM	5 Valve manifold

*state full requirement