



MP SERIES

Diaphragm pressure gauges

- ◆ cwatertight casing;
- ◆ NS 100 - 150;
- ◆ ranges included between -16 mbar and 25 bar.

This instrument has a diaphragm that, under the process fluid pressure, acts directly on the movement. This type of instrument can detect the pressure of highly viscous or crystallizable or solidifiable fluids.



TECHNICAL FEATURES

• Nominal sizes

- 100 and 150.

• Models

- MP 319/320/321:
ranges included between 0,6 and 25 bar;
- MP 419/420/421:
ranges included between 16 and 400 mbar.

• Casing

- case and ring in AISI 304 stainless steel (AISI 316 on request - option V61) with bayonet bezel.

• Protection degree (according to EN 60529)

- IP 55 for dry execution;
- IP 67 (option V66 and V72).

• Window

- glass for dry execution;
- methacrylate for liquid filled execution;
- laminated safety glass (on request - option V17).

• Blow-out device

- blow out plug.

• Pressure connection (according to EN 837-3)

- o G 1/2 B (1/2 Gas or BSP) or 1/2-14 NPT EXT (1/2 NPT) thread (MP 319/419);
- o flanged connection as per EN and ASME standards (see tables MP 1 and 2 at page MP06):
 - flange with through holes (MP 320/420);
 - flange with threaded blind or through holes (MP 321/421).

• Pressure connection material

- AISI 316L stainless steel, standard;
- AISI 316L stainless steel with P.T.F.E. coating;
- special materials (see specific heading).

• Pressure element

- AISI 316Ti stainless steel diaphragm;
- diaphragm coated (see specific heading).

• Movement

- stainless steel.

• Ranges (according to EN 837-3)

o Graduation:

- pressure gauges: 0 ÷ 16; 0 ÷ 25; 0 ÷ 40; 0 ÷ 60; 0 ÷ 100; 0 ÷ 160; 0 ÷ 250; 0 ÷ 400 (unit of pressure mbar); 0 ÷ 0,6; 0 ÷ 1; 0 ÷ 1,6; 0 ÷ 2,5; 0 ÷ 4; 0 ÷ 6; 0 ÷ 10; 0 ÷ 16; 0 ÷ 25 (unit of pressure bar);
- vacuum gauges: -16 ÷ 0; -25 ÷ 0; -40 ÷ 0; -60 ÷ 0; -100 ÷ 0; -160 ÷ 0; -250 ÷ 0; -400 ÷ 0 (unità di vuoto mbar); -1 ÷ 0 (unit of vacuum bar);
- compound gauges: -1 ÷ 0,6; -1 ÷ 1,5; -1 ÷ 3; -1 ÷ 5; -1 ÷ 9; -1 ÷ 15; -1 ÷ 24 (unità di pressione bar) - su request (unit of pressure mbar).

(divisions as per table C1 at page P08)

- other graduations not normalized for single or double range (on request).

o Unit of pressure:

- mbar, bar, kPa, kg/cm² and psi for single or double range.

o Scale angle:

- 270 °.

• Working pressure (referred to full scale deflection)

- steady from 1/10 to 3/4;
- fluctuating from 1/10 to 2/3.

• Over-pressure (referred to full scale deflection)

- 115% standard (occasionally allowed);
- special, on request only – option V28.

• Pointer

- aluminium with micrometric adjustment for dry execution;
- aluminium not adjustable for filled execution.

• Dial

- white aluminium with black figures (for dial modifications see available options).

• Accuracy (according to EN 837-3)

- class 1,6 (± 1,6% of full scale deflection).

note: accuracy indicated on the pressure gauge does not consider the interference of an eventually applied electric contact.



- **Ambient temperature**
 - -20 ÷ +60 °C.
 - 0,4% every 10 °C for models MP 319/320/321;
 - 0,8% every 10 °C for models MP 419/420/421.
- **Thermal drift**

out of the optimum ambient temperature values included within +15 ÷ +25 °C, the thermal drift affects the instruments accuracy as follows:
- **Operating temperature**
 - -20 ÷ +100 °C standard execution;
 - -20 ÷ +150 °C execution with special gaskets (except compound pressure gauges) (option V74);
 - -20 ÷ +100 °C P.T.F.E. coated diaphragm.

APPLICATIONS

- **Electric contact**
(see CE series)
the instrument can be identified by the number of the chosen model, adding the reference of the switching action as shown in tables of the CE series.
(identification CE...)

SPECIAL MATERIALS

- **Diaphragm coatings**
 - P.T.F.E.; **(identification M03)**
 - Monel 400; **(identification M04)**
 - Hastelloy C276; **(identification M06)**
 - titanium; **(identification M07)**
 - tantalum; **(identification M08)**
 - other exotic materials. **(identification M...)**
- **Connection materials or coatings**

special material pressure connection requires a diaphragm with the same coating material:

 - P.T.F.E.; **(identification W03)**
 - Monel 400; **(identification W04)**
 - Hastelloy C276; **(identification W06)**
 - titanium; **(identification W07)**
 - tantalum; **(identification W08)**
 - other exotic materials. **(identification W...)**

OPTIONS

- **Maximum pointer**
to indicate the maximum pressure reached:
- zero-setting on the window.
(identification V11)
- **Window**
different from standard:
- laminated safety glass.
(identification V17)
- **Diaphragm stop**
allows the diaphragm to withstand to overpressure 10 time full scale value with a maximum of 2,5 bar for ranges within 16 and 400 mbar. (models with electric contacts excluded).
(identification V28)
- **Threaded pressure connection**
different from standard. **(identification V42)**
- **Changes to the dial**
 - serial number; **(identification V50)**
 - specific dial; **(identification V51)**
 - red mark; **(identification V52)**
 - writings; **(identification V53)**
 - TAG number; **(identification V54)**
 - dial without logo; **(identification V56)**
 - double logo (Fantinielli + customer); **(identification V57)**
 - customer's logo. **(identification V58)**
- **AISI 316 stainless steel case and ring**
as alternative to AISI 304 stainless steel.
(identification V61)
- **Spacer (for MP 319 only)**
to remove the threaded connection for diaphragm inspection and n. 2 flushing plugs allowing the washing:
- AISI 316L stainless steel. **(identification V62)**
- **Solid front execution casing**
(identification V65)
- **Liquid filling**
silicone fluid filled casing
(minimum range 250 mbar pressure).
(identification V66)
- **IP 67 casing**
to grant the calibration, the instrument is not fillable by the enduser.
(identification V72)
- **Operating temperature higher than 100 °C**
execution with special gaskets
(except compound pressure gauges).
(identification V74)
- **Metal tag plate**
AISI 316 stainless steel for tag number.
(identification V82)

DOCUMENTATION

- **Fantinielli calibration certificate class 1,6**
rising pressure.
(identification V93)
- **ACCREDIA calibration certificate**
(identification V98)
- **Complementary documents**
 - o certificate of compliance with the order EN 10204 2.2.
 - o technical documentation including;
 - drawings and technical informations ;
 - installation and maintenance instructions.
 - o inspection and test certificate EN 10204-3.1.
 - o material certificates.
 - o PED declaration.
 - o ATEX declaration (II 2 G/D).



Table MP 1

Model of available instruments according with flange size - as per UNI / DIN standards

DN \ PN	6	10	16	25
15	MP 320/420 MP 321/421	MP 320/420 MP 321/421	MP 320/420 MP 321/421	MP 320/420 MP 321/421
20	MP 320/420 MP 321/421	MP 320/420 MP 321/421	MP 320/420 MP 321/421	MP 320/420 MP 321/421
25	MP 320/420 MP 321/421	MP 320/420 MP 321/421	MP 320/420 MP 321/421	MP 320/420 MP 321/421
40	MP 320/420 MP 321/421	MP 320/420 MP 321/421	MP 320/420 MP 321/421	MP 320/420 MP 321/421
50	MP 320/420 MP 321/421	MP 420 MP 321*/421	MP 420 MP 321*/421	MP 420 MP 321*/421
80	MP 420 MP 321*/421	MP 420 MP 321*/421	MP 420 MP 321*/421	MP 420 MP 321*/421

Model marked with "*" have through holes flange

Table MP 2

Model of available instruments according with flange size - as per ASME standards

DN \ CLASS	150	300
1/2"	MP 320/420 MP 321/421	MP 320/420 MP 321/421
3/4"	MP 320/420 MP 321/421	MP 320/420 MP 321/421
1"	MP 320/420 MP 321/421	MP 320/420 MP 321/421
1" 1/2	MP 320/420 MP 321/421	MP 320/420 MP 321/421
2"	MP 320/420 MP 321/421	MP 320/420 MP 321/421
2" 1/2	MP 420 MP 321*/421	MP 420 MP 321*/421

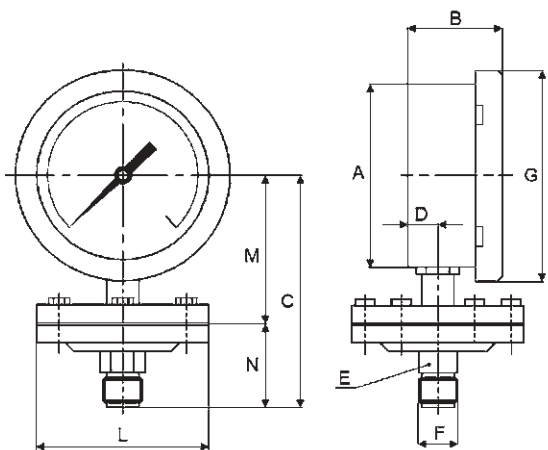


Table MP 319

DN	A	B	C	D	E	F	G	H	I	L	M	N	∅ fori 120°	PESO ~ kg
100	103	50	132	165	22	1/2	118			95	88	44		1,40
150	150	50	156	165	22	1/2	166			95	112	44		1,70

Pressure gauge with ranges 0,6/25 bar.

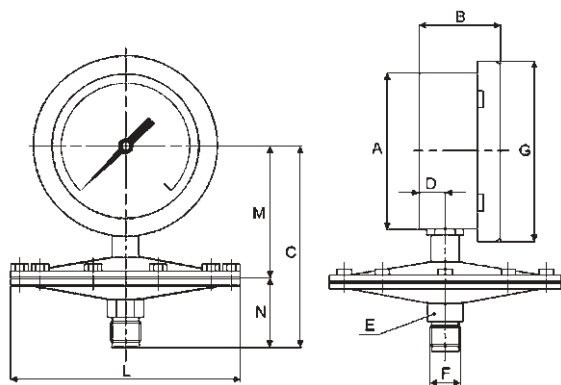


Table MP 419

DN	A	B	C	D	E	F	G	H	I	L	M	N	∅ fori 120°	PESO ~ kg
100	103	50	142	165	22	1/2	118			150	93	49		1,55
150	150	50	166	165	22	1/2	166			150	117	49		1,85

Pressure gauge with ranges 16/400 mbar.

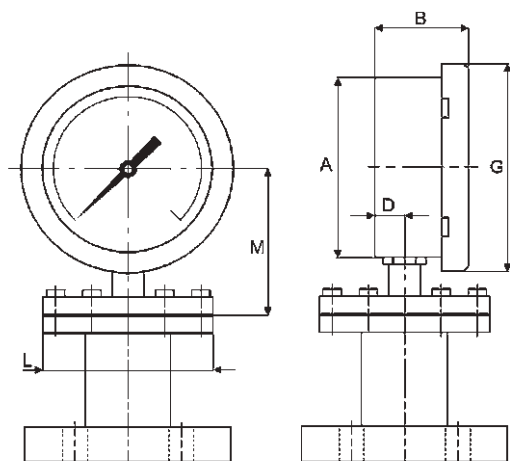


Table MP 320

DN	A	B	C	D	E	F	G	H	I	L	M	N	∅ fori 120°	PESO ~ kg
100	103	50		165			118			95	88			
150	150	50		165			166			95	112			

Pressure gauge with flanged connection, with fixing through holes - ranges included between 0,6 and 25 bar.

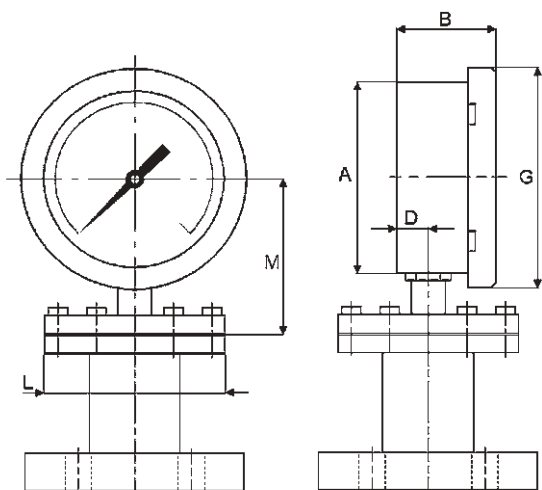


Table MP 420

DN	A	B	C	D	E	F	G	H	I	L	M	N	∅ fori 120°	PESO ~ kg
100	103	50		165			118			150	93			
150	150	50		165			166			150	117			

Pressure gauge with flanged connection, with fixing through holes - ranges included between 16 and 400 mbar.

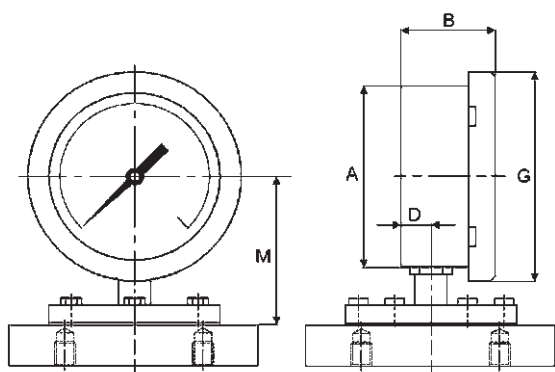


Table MP 321

DN	A	B	C	D	E	F	G	H	I	L	M	N	∅ fori 120°	PESO ~ kg
100	103	50		165			118				88			
150	150	50		165			166				112			

Pressure gauge with flanged connection, with fixing blind or through holes as per MP 1 and MP 2 tables - ranges included between 0,6 and 25 bar.

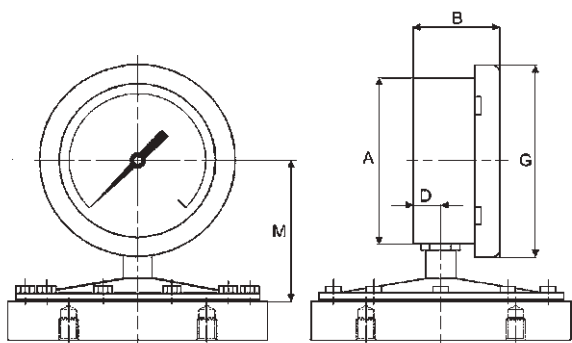


Table MP 421

DN	A	B	C	D	E	F	G	H	I	L	M	N	∅ fori 120°	PESO ~ kg
100	103	50		165			118				93			
150	150	50		165			166				117			

Pressure gauge with flanged connection, with fixing blind holes - ranges included between 16 and 400 mbar.

note: informations shown in this series may be changed at any time without prior notice.