SP 200 SERIES

"All stainless steel" Bourdon tube pressure gauges

- watertight casing, dry or liquid filled execution;
- NS 63 - 100 - 150 - 200 - 250;
  (View SF serie for solid front execution)
- ranges included between -1 and 1000 bar.

made in ITALY

PED 2014/68/EU
ATEX 2014/34/EU

TECHNICAL FEATURES

- **Nominal sizes**
  - 63, 100, 150, 200 e 250.
- **Casing**
  - case and ring in AISI 304 stainless steel with bayonet bezel (execution B).
- **Protection degree (according to EN 60529)**
  - IP 55 for execution D (dry);
  - IP 67 for execution F (liquid filled) and for execution P (fillable).
- **Window**
  - tempered glass for NS 63, 100 and 150;
  - methacrylate for NS 200 and 250;
  - laminated safety glass (option V17).
- **Blow-out device**
  - blow out plug.
- **Filling liquid**
  - glycerine (standard);
  - silicone fluid (on request - option V64).
- **Pressure connection (according EN 837-1)**
  Gas (BSP), BSPT or NPT thread as F dimension shown in SP tables, otherwise only on request:
  - AISI 316L stainless steel (execution 2);
  - Monel 400 (option W04).
- **Pressure element**
  - AISI 316L stainless steel (execution 2);
  - Monel 400 (option M04 and W04).
- **Welding**
  - TIG.
- **Movement**
  - stainless steel.
- **Ranges (according to EN 837-1)**
  - o **Maximum value:**
    - 1600 bar.
  - o **Scale ranges for pressure values between –1 and 1600 bar:**
    - pressure gauges: see table C1 at page P04;
    - vacuum gauges and compound gauges: see table C1 at page P04;
    - other graduations not normalized for single or double range (on request).
  - o **Unit of pressure:**
    - bar, kPa, MPa, 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;
  - pulsating from 1/10 to 1/2.
- **Over-pressure (occasionally allowed)**
  - 130% of full scale value.
- **Pointer**
  - aluminium with micrometer adjustment;
  - aluminium not adjustable for NS 63.
- **Dial**
  - white aluminium with black figures (for dial modifications see available options).
- **Accuracy (according to EN 837-1)**
  - class 1 (± 1% of full scale deflection) for NS 100, 150, 200 and 250;
  - class 1,6 (± 1,6% of full scale deflection) for NS 63.
- **Ambient temperature**
  - -40 ÷ +60 °C dry execution;
  - -20 ÷ +60 °C glycerine filled execution;
  - -40 ÷ +60 °C silicone fluid filled execution.
- **Thermal drift**
  - out of optimum ambient temperature values included within +15 ÷ +25 °C, the thermal drift affects the instruments accuracy of 0,3% every 10 °C.
- **Operating temperature**
  - -40 ÷ +250 °C dry execution;
  - -20 ÷ +100 °C glycerine filled execution;
  - -40 ÷ +120 °C silicone fluid filled execution.

APPLICATIONS

- **Accessories** (see AM series)
- **Diaphragm seal** (see FP series)

OPTIONS

- **Maximum pointer**
  to indicate the maximum pressure reached:
  - zero setting on the window (only NS 100 and 150).
    (identification V11)

- **Red pointer on the dial**
  only NS 100 and 150. **(identification V14)**

- **Window**
  different from standard (only NS 63, 100 and 150):
  - methacrylate;
    (identification V16)
  - laminated safety glass.
    (identification V17)

- **External zero adjustment**
  only NS 100 and 150. **(identification V20)**

- **Damped movement**
  only NS 100 and 150. **(identification V23)**

- **Restrictor**
  applicable to pressure connection to reduce the process fluid entry speed.
  (identification V26)

- **High overpresseres device**
  allows to NS 100 and 150 for ranges up to 40 bar with-stand over-pressures up to:
  -160%
  (identification V25)
  -250%
  (identification V27)
  note: for higher over-pressures you must use over-pressure protector.

- **Degreasing for oxygen service**
  (identification V31)

- **Accuracy class 0,5**
  ± 0,5% of full scale deflection
  (NS 63 excluded).
  (identification V34)

- **Accuracy class 0,6**
  ± 0,6% of full scale deflection
  (NS 63 excluded).
  (identification V36)

- **Process connection**
  not 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 (Fantinelli + customer);
    (identification V57)
  - customer's logo.
    (identification V58)

- **AISI 316 stainless steel case and ring**
  as alternative to AISI 304 stainless steel for NS 63, 100 and 150 (for model SP 208 only).
  (identification V61)

- **Silicone fluid**
  as alternative to glycerine.
  (identification V64)

- **Tropicalization**
  requires AISI 316 stainless steel case and ring.
  (identification V67)

- **Metal tag plate**
  AISI 316 stainless steel for tag number.
  (identification V82)

- **Monel 400 pressure element**
  as alternative to AISI 316L st.st. pressure element on NS 100 and 150.
  (identification M04)

- **Monel 400 pressure element assembly**
  as alternative to AISI 316L st.st. pressure element assembly on NS 100 and 150 (sonly for model SP 208).
  (identification W04)

DOCUMENTATION

- **Fantinelli calibration certificate**
  rising pressure:
  - class 0,6;
    (identification V91)
  - class 1.
    (identification V92)

- **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 certificate.
  o PED declaration.
  o ATEX declaration (II 2 G/D).

TECHNICAL INFORMATIONS

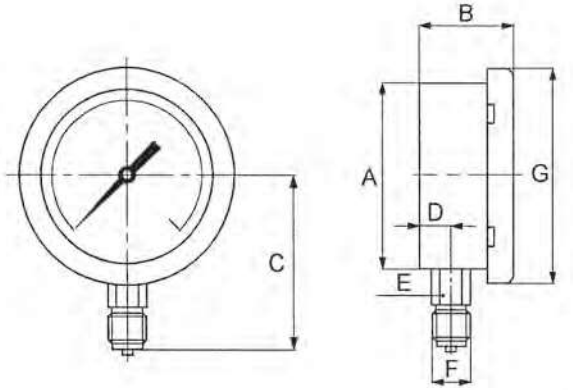

Table SP 208

DN	A	B	C	D	E	F	G	H	I	L	M	N	Ø fori 120°	PESO ~ kg es. D	es. F
63	62	32	56	10	14	1/4	69							0,16	0,23
100	100	49	90	15	22	1/2	112							0,57	0,91
150	151	49	114	15	22	1/2	166							0,92	1,79
200	202	51	144	15	17	1/2	216							1,32	
250	248	56	168	15	17	1/2	262							1,78	

Pressure gauge with bottom connection for local mounting.

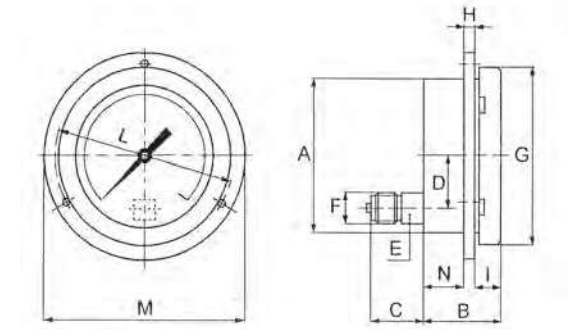

Table SP 211

DN	A	B	C	D	E	F	G	H	I	L	M	N	Ø fori 120°	PESO ~ kg es. D	es. F
63	64	31	23	0	14	1/4	69	2,5	12	75	84	16,5	3,6	0,18	0,25
100	100	50	35,5	28	22	1/2	110	3	16	116	134	31	5	0,56	0,90
150	150	50	35,5	33	17	1/2	166	7	19	178	192	27	5	1,04	1,88

Pressure gauge with back connection for flush mounting with 3 fixing holes.

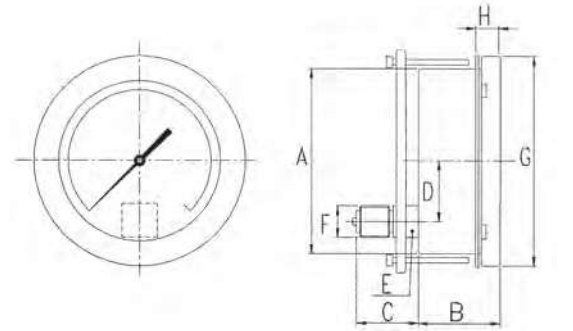

Table SP 212

DN	A	B	C	D	E	F	G	H	I	L	M	N	Ø fori 120°	PESO ~ kg es. D	es. F
63	62	31	23	0	14	1/4	69	12						0,19	0,26
100	100	50	35,5	28	22	1/2	110	15						0,58	0,92

Pressure gauge with back connection for flush mounting with clamp fixing.

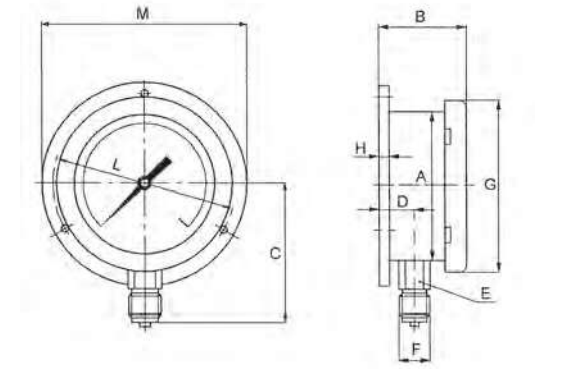

Table SP 213

DN	A	B	C	D	E	F	G	H	I	L	M	N	Ø fori 120°	PESO ~ kg es. D	es. F
100	100	49	90	15	22	1/2	112	1		116	132		5	0,62	0,96
150	151	56	114	22	22	1/2	166	7		178	192		5	1,16	2,03
200	202	60	144	24	17	1/2	216	9		220	240		6,5	1,92	
250	248	58	168	17	17	1/2	262	2		276	290		7	2,82	

Pressure gauge with bottom connection for surface mounting with 3 fixing holes

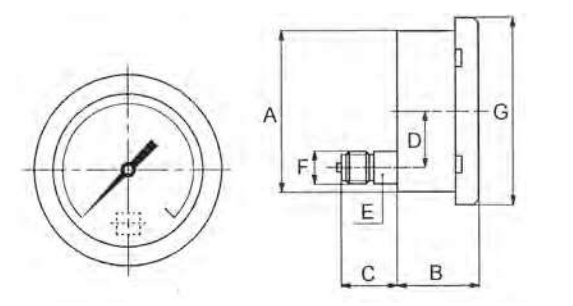

Table SP 215

DN	A	B	C	D	E	F	G	H	I	L	M	N	Ø fori 120°	PESO ~ es. D	es.
63	62	31	23	0	14	1/4	69							0,16	0,23
100	100	50	35,5	28	22	1/2	110							0,51	0,85
150	150	50	35,5	33	17	1/2	166							0,98	1,82

Pressure gauge with back connection for local mounting.

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