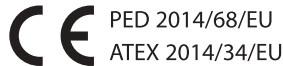




## SP 200 SERIES

### "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.



## 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)**
  - **Maximum value:**
    - 1600 bar.
  - **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).
- **Unit of pressure:**
  - bar, kPa, MPa, kg/cm<sup>2</sup> and psi for single or double range.
- **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

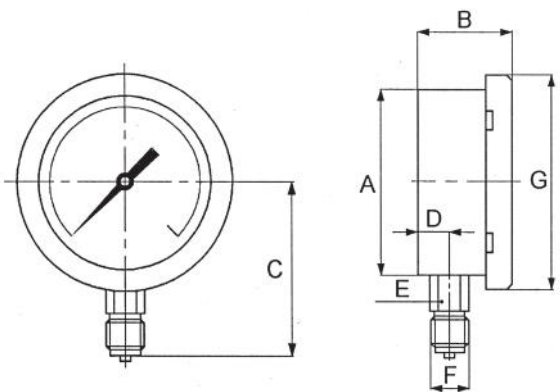
- **Maximum pointer**  
to indicate the maximum pressure reached:
  - zero setting on the window (only NS 100 and 150).  
(identification V11)
- **Red pointer on the dial**  
only NS 100 and 150. (identification V14)
- **Window**  
different from standard (only NS 63, 100 and 150):
  - methacrylate;  
(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 overpressures 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**  
 $\pm 0,5\%$  of full scale deflection  
(NS 63 excluded).  
(identification V34)
- **Accuracy class 0,6**  
 $\pm 0,6\%$  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 (only 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).



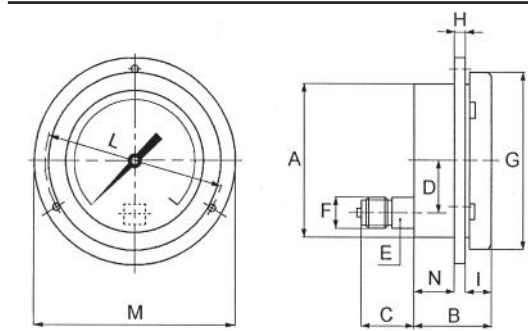
## TECHNICAL INFORMATIONS



**Table SP 208**

DN	A	B	C	D	E	F	G	H	I	L	M	N	∅ 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

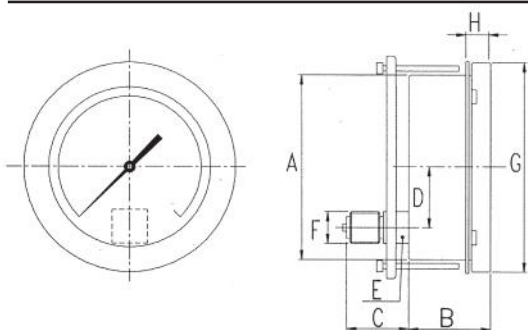
Pressure gauge with bottom connection for local mounting.



**Table SP 211**

DN	A	B	C	D	E	F	G	H	I	L	M	N	∅ fori 120°	PESO ~ kg es. D es. F
63	64	31	23	0	14	1/4	69	2,5	12	75	84	165	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

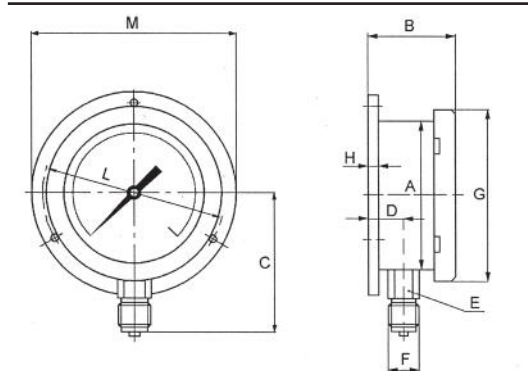
Pressure gauge with back connection for flush mounting with 3 fixing holes.



**Table SP 212**

DN	A	B	C	D	E	F	G	H	I	L	M	N	∅ 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

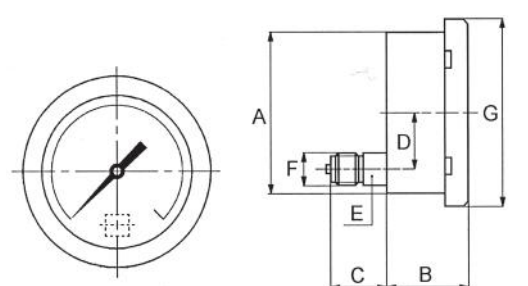
Pressure gauge with back connection for flush mounting with clamp fixing.



**Table SP 213**

DN	A	B	C	D	E	F	G	H	I	L	M	N	∅ 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	∅ fori 120°	PESO ~ kg 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.