SF SERIES

Solid front safety pressure gauges

- SF 316 with stainless steel casing
  - stainless steel or Ni-Span C or Monel Bourdon tube pressure element;
  - NS 100 - 150;
  - ranges included between -1 and 4000 bar.
- SF 317 with phenolic casing
  - stainless steel or Monel Bourdon tube pressure element;
  - NS 125 (4 1/2");
  - ranges included between 1 and 1000 bar.

Solid front pressure gauges are manufactured as per EN 837-1 and ASME B40.1. During the design of this type of pressure gauges, "safety" factor is taken into great consideration. Safety is guaranteed by a protection baffle wall positioned between the pressure element assembly and the dial, and by a blow-out device made of a back plate which allows an eventual pressure vent from the casing.

made in ITALY

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

TECHNICAL FEATURES

- **Nominal sizes**
  - NS 100 and 150 for model SF 316;
  - NS 125 (4 1/2") (maximum scale value 1000 bar) for model SF 317.

  Casing
  - case and ring in AISI 304 stainless steel (AISI 316 on request - option V61) with bayonet bezel for model SF 316;
  - phenolic case for model SF 317.

- **Protection degree (according to EN 60529)**
  - IP 55 for execution D (dry);
  - IP 67 for execution F (liquid filled) and execution P (fillable - SF 317).

- **Window**
  - laminated safety glass for model SF 316;
  - polycarbonate for model SF 317.

- **Filling liquid**
  - glycerine (standard);
  - silicone fluid (on request for SF 316 only - option V64).

- **Pressure connection**
  - AISI 316L stainless steel G 1/2 B (1/2 Gas or BSP) or 1/2-14 NPT EXT (1/2 NPT) thread for NS 100, 125 and 150 with ranges up to 1600 bar;
  - AISI 316L stainless steel 9/16-18 UNF or 5/8-18 UNF or M16x1,5 female thread with tapered seal, for NS 100 and 150 with ranges 2500 and 4000 bar;
  - Monel 400 (on request only - option V68).

- **Pressure element**
  - AISI 316L stainless steel for scale values up to 1600 bar;
  - Ni-Span C (Fe Ni Cr alloy) for scale values 2500 and 4000 bar;
  - Monel 400 (option V68).

- **Welding**
  - TIG.

- **Movement**
  - stainless steel.

- **Ranges (according to EN 837-1)**
  - o **Maximum values referred to NS:**
    - 1000 bar for NS 125;
    - 4000 bar for NS 100 and 150.
  - o **Divisions related for pressure values between -1 and 4000 bar:**
    - pressure gauges: see table C1 at page P04;
    - 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**
  - o referred to measuring ranges up to 1600 bar:
    - steady: from 1/10 to 3/4;
    - fluctuating: from 1/10 to 2/3;
    - pulsating: from 1/10 to 1/2.
  - o referred to measuring ranges of 2500 and 4000 bar:
    - steady: from 1/10 to 2/3;
    - fluctuating: from 1/10 to 1/2.

- **Over-pressure (occasionally allowed)**
  - 130% of full scale value for measuring ranges up to 1600 bar (standard);
  - 160% of full scale value for measuring ranges up to 60 bar (option V25);
  - 250% of full scale value for measuring ranges up to 60 bar (option V27);
  - not allowed for measuring ranges 2500 and 4000 bar.

- **Pointer**
  - aluminium with micrometer adjustment for dry execution;

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

- **Accuracy**
  (secondo EN 837-1)
  o SF 316:
  - class 1 (± 1% of full scale deflection) standard;
  - class 0,6 o 0,5 (± 0,6 o 0,5% of full scale deflection) on request - option V36 o V34 (full scale 4000 bar excluded).

  o SF 317:
  - class 0,5 (± 0,5% of full scale deflection) standard (according to BS and ANSI).

- **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.

  note: 80 °C maximum operating temperature for glycerine filled instruments, 120 °C for silicone fluid filled ones.

APPLICATIONS

- **Diaphragm seal (see FP series)**
  when available.

- **Accessories (see AM series)**

OPTIONS

Maximum pointer
to indicate the maximum pressure reached:
- zero setting on the window.
  (identification V11)

- **Elastic pointer stop**
  in cases of sudden return to zero of the pointer.
  (identification V21)

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

- **High over-pressures device**
  allows to NS 100 and 150, for ranges up to 60 bar to with-stand over-pressures up to:
  - 160%; **(identification V25)**
  - 250% **(identification V27)**

  nota: 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.
  (identification V34)

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

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 (Fantinelli + customer);
    (identification V57)
  - customer's logo.
    (identification V58)

- **Fluoride fluid**
  as alternative to glycerine fluid for case filling.
  (identification V60)

- **AISI 316 stainless steel case and ring**
  as alternative to AISI 304 stainless steel.
  (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 stainless steel pressure element.
  (identification M04)

- **Monel 400 pressure element assembly**
  as alternative to AISI 316L stainless steel pressure element assembly. **(identification W04)**

DOCUMENTATION

- **Fantinelli calibration certificate**
  rising pressure:
  - class 0,6 or 0,5;
    (identification V91)
  - class 1.
    (identification V92)

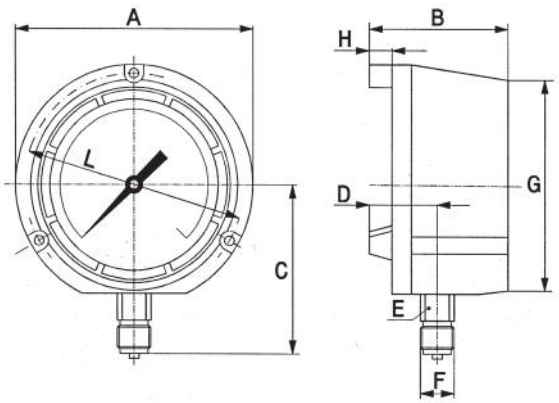
- **ACCREDIA calibration certificate**
  (identification V98)

- **Complementary documents**
  o acertificate 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).

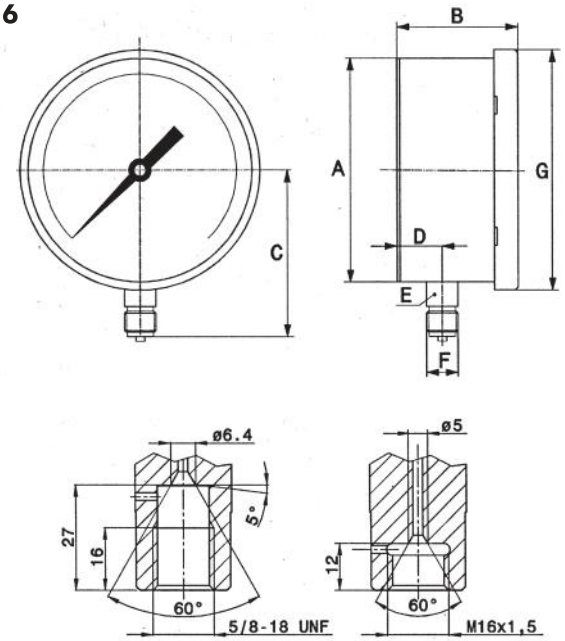
TECHNICAL INFORMATIONS

SF 317

Solid front pressure gauge with bottom connection for local or surface mounting.



SF 316



Pressure connection for ranges 2500 and 4000 bar.

Table SF

Model	DN	A	B	C	D	E	F	G	H	L	Ø fori 120°	PESO ~ kg es. D	es. F
SF316	100	100	50	90	16	22	1/2	112				0,70	1,04
	150	151	52	114	16	22	1/2	166				1,15	2,02
SF317	125	148	86	103	42	22	1/2	129	14	137	6	1,00	1,50

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