

Safety Pressure Gauges SOLID-FRONT  
NACE MR 01.03 - version  
Type 01.60 - DS 125

01.60



These instruments are built in conformity with the construction and safety specifications of **ANSI B40.1**. In case of leaks or break of the elastic element the operator is protected by a stainless steel safety cell solid front and by the blow-out back. They are usually used in the petrochemical industry. They are built to resist to the most severe conditions created by H<sub>2</sub>S, by the environment and for those fluids which have high viscosity and do not crystallize. The TIG welding between the safety cell and the process socket strengthens the instrument and assures a better tight in case of dampening fluid. The advantages of filling the case of the instrument with a dampening fluid are: reduced pointer fluctuation, reduced wear of rotating parts of the movement when pulsant vibrations and pulsations occur. Moreover condensation and corrosive atmospheres which could damage the internal parts.

**Functional and constructive characteristics.**

**1.60.2.A** - Glycerine fillable - Lower connection only

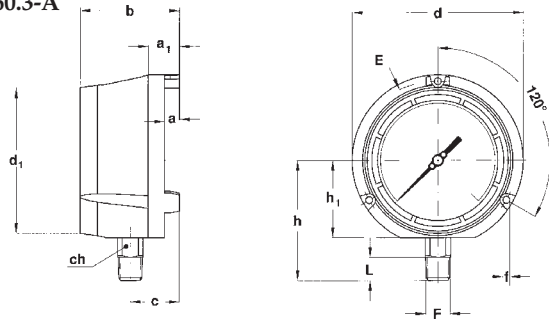
- Accuracy:** Grade 1A as per ASME B40.1 ( $\pm 1,0\%$  of span).
- Ambient temperature:** -25...+65°C.
- Process temperature:** -30...+150°C max.
- Working pressure** (referred to the full scale value): max 90% for pulsating pressure; 100% for static pressure.
- Over pressure limit:** 30% of full scale value.
- Protection:** IP 65 as per IEC 529.
- Socket material:** AISI 316L st.st., MONEL 400 available on request (code E07).
- Elastic element:** MONEL 400 seamless tube.
- Leak Test:** Helium Test leak Search (max  $1 \times 10^{-7}$  mbar  $\times 1 \times s^{-1}$ ).
- Case and blow out disk:** polyammide, fiberglass reinforced, UV stabilized.
- Ring:** polypropylene, fiberglass reinforced.
- Safety cell:** AISI 304 st.st.
- Window:** tempered glass.
- Movement:** stainless steel with internal limit stops for minimum and maximum pressure.
- Dial:** aluminium, white with black markings.
- Pointer:** aluminium, micrometric adjustable.
- Gaskets:** EPDM/NBR.
- Note:** suitable for glycerine filling, silicone oil/Fluorolube filling available on request (code P01).

**1.60.3.A** - Liquid filled - Lower connection only

- Ambient temperature:** max +65 °C, (see DAMPING LIQUIDS table on page 2 for further information)
- Process temperature:** max +65 °C.
- Damping liquids:** glycerine 98%, silicone oil (code S10) or Fluorolube fluid (code F30) on request.
- Compensating device:** EPDM.
- Other features:** as type 1.60.2.A.

TYPE, DIMENSIONS AND WEIGHTS

01.60.2-A  
01.60.3-A



**TYPE A**  
stem mounting;  
lower connection.

PROCESS CONNECTIONS

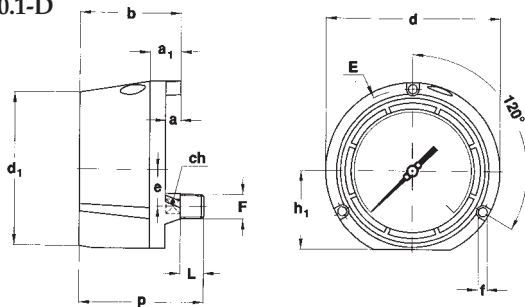
F	Code	L	h
1/4-18 NPT	23M	15	98,5
1/2-14 NPT	43M	20	103,5

(dimensions : mm.)

TYPE	a	a <sub>1</sub>	b	c	d	d <sub>1</sub>	E	f	h <sub>1</sub>	ch	Weight 01.60.2-A	Weight 01.60.3-A
A	13	27	86	42	148	126	137	6,5	66,5	22	0,81 kg	1,3 kg

(dimensions : mm.)

01.60.1-D



**TYPE D**  
stem mounting;  
back connection.

Dry version - Back connection only

Protection: IP 55 as per IEC 529.

Case: phenolic resin.

Ring and blow out disk: polypropylene, fiberglass reinforced.

Safety cell: not available.

Other features: as type 01.60.2-A

TYPE	a	a <sub>1</sub>	b	d	d <sub>1</sub>	e	E	f	h <sub>1</sub>	p	ch	Weight 01.60.1-D
D	13	27	86	148	129	31	137	6	66,5	106	17	1,0 kg

(dimensions : mm.)

DAMPING LIQUIDS

Damping liquids	Ambient temperature
Gliceryne 98%	+15...+65 °C (+60...+150 °F)
Silicone oil	-45...+65 °C (-50...+150 °F)
"Fluorolube"	-60...+65 °C (-76...+150 °F)

Glycerine or silicone should not be used with highly oxidizing agents such as oxygen, chlorine, nitric acid or hydrogen peroxide, because of danger of spontaneous chemical reaction, inflammability or exposition. The use of fluorinated fluid is recommended in these cases.

**RANGES**

PRESSURE

TAB. 1

RANGE	bar	kPa	MPa	bar ext. psi int.
0÷	◆		◆	◆
0÷1,6	◆		◆	◆
0÷2,5	◆		◆	◆
0÷	◆		◆	◆
0÷	◆		◆	◆
0÷10	◆		◆	◆
0÷16	◆		◆	◆
0÷25	◆		◆	◆
0÷40	◆		◆	◆
0÷60	◆		◆	◆
0÷100	◆	◆		◆
0÷160	◆	◆		◆
0÷250	◆	◆		◆
0÷300	◆			◆
0÷400	◆	◆		◆
0÷600	◆	◆		◆

TAB. 2

RANGE	psi	psi int. kPa ext.	psi ext. bar int.
0÷15	◆	◆	◆
0÷30	◆	◆	◆
0÷60	◆	◆	◆
0÷100	◆	◆	◆
0÷160	◆	◆	◆
0÷200	◆	◆	◆
0÷300	◆	◆	◆
0÷400	◆	◆	◆
0÷600	◆	◆	◆
0÷800	◆	◆	◆
0÷1000	◆	◆	◆
0÷1500	◆	◆	◆
0÷2000	◆	◆	◆
0÷3000	◆	◆	◆
0÷4000	◆	◆	◆
0÷6000	◆	◆	◆
0÷10000	◆	◆	◆

VACUUM & COMPOUND

TAB. 3

RANGE	bar	kPa
-1÷0	◆	
-1÷0,6	◆	
-1÷1,5	◆	
-1÷3	◆	
-1÷5	◆	
-1÷9	◆	
-1÷15	◆	
-1÷24	◆	
-100÷0		◆
-100÷150		◆
-100÷300		◆
-100÷500		◆
-100÷900		◆
-100÷1500		◆
-100÷2400		◆

TAB. 4

RANGE	psi*	psi int.* kPa ext.
-30/0	◆	◆
-30/15	◆	◆
-30/30	◆	◆
-30/60	◆	◆
-30/100	◆	◆
-30/150	◆	◆

\* unit for vacuum ranges:  
 "inHg"

OPTIONS

DESCRIPTION	Code	01.60.1-D	01.60.2-A	01.60.3-A
MONEL 400 socket	E07	◆	◆	◆
NACE MR 01.03 version	E30	◆	◆	◆
Panel mounting kit	F11	◆	◆	◆
"Fluorolube" filling (1)	F30			◆
Suitable for filling with Silicone oil and "Fluorolube" (1)	P01		◆	
Oxygen service	P02	◆	◆ (2)	◆ (3)
Blow out disk with compensating device	FDP		◆	
Without restrictor (4)	S03	◆	◆	◆
Silicone oil filling (1)	S10			◆
Tropicalisation	T01	◆	◆	◆
Stainless steel label	T25	◆	◆	◆
Safety glass window	T32	◆	◆	◆

- (1) gaskets: FPM
- (2) to be ordered with option P01
- (3) to be ordered with Fluorolube filling only (option F30)
- (4) std with E07 option

ORDER-CODE:

01	01- bourdon tube pressure gauges
60	60 - safety pressure gauge (NACE MR 01.03)
2	1 - dry version (1) 2 - glycerin fillable version 3 - filled version
A	A - stem mounting, lower connect. D - stem mounting, back connect. (1)
F	F - DS 125
2	1 - up to 2,5 bar 2 - from 4 to 40 bar 3 - over 40 bar
0/100 psi	see ranges table
43M	23M - 1/4-18 NPT 43M - 1/2-14 NPT
T32	see options table

(1) back connection is available as dry version only.

ACCESSORIES

**Diaphragm seals:** a complete range of diaphragm seals are available with a choice of materials of construction. Specifically for corrosive and difficult process fluids plus hygienic applications. For further details refer to relevant data sheets.

**Adjustable over-load protector:** this is useful for installations which may generate high overpressures; the pressure gauge is automatically excluded at the pre-set pressure and cut in again automatically when the operating pressure returns to normal. For further details refer to relevant data sheet.

**Valves:** for construction details and for use limits refer to relevant data sheet.

**Pigtail and siphons:** recommended with temperatures of 65° C (150° F) or over. For further details refer to relevant data sheet.

**Pressure snubbers:** for further details refer to relevant data sheet.



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