

## bourdon tube "solid-front" pressure gauges NACE MR0175/ISO 15156-3 version DS 4", 6" (100-150mm)



PED 2014/68/UE ATEX 2014/34/UE

These instruments are built in conformity with the construction and safety requirements of EN 837-1/S3 e ASME B40.1. In case of leaks or failure of the elastic element, the operator is protected by a solid separating wall placed at the front of the instrument and by a 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 and by the environment. The TIG welding between the case and the process socket, reinforces the instrument and ensures a better sealing when the case is filled with damping fluid. Filling the case with a damping fluid offers several advantages: it reduces the pointer fluctuation, minimizes wear of rotating parts of the movement under pulsant vibrations and pulsation peaks, and prevents the formation of condensation and corrosive atmospheres that could damage the internal parts of the instrument.

### 1.41.1 - Standard Model

**Design:** EN 837-1.

**Safety designation:** S1 as per EN 837-2.

**Ranges:** from -30...0 INHG to 0...6000 psi (from -1...0 to 0...400 bar or equivalent units).

**Accuracy class:** 1 as per EN 837-1.

**Ambient temperature:** -13...+149 °F (-25...+65 °C).

**Process fluid temperature:** -40...+212 °F (-40...+100 °C).

**Working pressure:**

100% of FSV for static pressure;

90% of FSV for pulsating pressure.

**Over pressure limit:**

30% of FSV, max 6500 psi - 450 bar (max 12 hours).

**Special overpressure (upon request):**

1000 psi (60 bar) for pressure > 15 psi (1 bar) ... ≤ 150 psi (10 bar);

3500 psi (250 bar) for pressure > 150 psi (10 bar) ... ≤ 1500 psi (100 bar);

6500 psi (450 bar) for pressure > 1500 psi (100 bar) ... ≤ 6000 psi (400 bar).

**Protection degree:** IP 55 as per EN 60529/IEC 529.

**Bourdon tube:** AISI 316L st.st.

**Diaphragm seal filling fluid:** silicone oil.

**Wetted parts:** Hastelloy C276.

**Leak test:** Helium Test leak Search (max 1x10<sup>-6</sup> mbar x l x s<sup>-1</sup>)

**Case:** stainless steel.

**Ring:** stainless steel, bayonet lock.

**Blow out disk:** stainless steel.

**Window:** safety glass.

**Movement:** stainless steel with internal limit stops for minimum and maximum pressure.

**Dial:** aluminium, white with black markings.

**Pointer:** adjustable, aluminium, black.

### 1.41.2 - Fillable Model

**Protection degree:** IP 67 as per EN 60529/IEC 529.

**Other features:** as Standard Model.

### 1.41.3 - Filled Model

**Pressure gauges damping liquid:**

glycerine 98%, silicon oil or fluorinated fluid.

**Ambient temperature:**

+32...+149 °F (0...+65 °C) with glycerine filling;

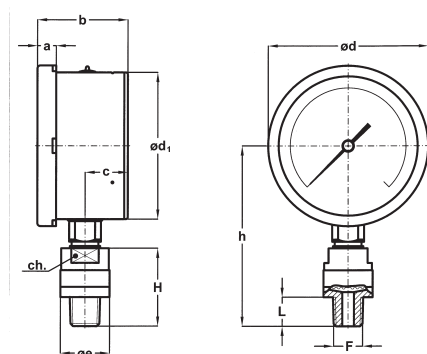
-40...+149 °F (-40...+65 °C) with silicon oil filling;

-40...+149 °F (-40...+65 °C) with fluorinated fluid filling.

**Process fluid temperature:** max +212°F (+100 °C).

**Protection degree:** IP 67 as per EN 60529/IEC 529.

**Other features:** as Standard Model.



**A - LOWER CONNECTION**

DS	Ranges	F	a	b	c	ø d	ø d <sub>1</sub>	ø e	h	H	L	ch	Weight (1)
<b>E</b> 4" (100)	≤ 160 psi (10 bar)	<b>43M</b> 1/2-14 NPT	0.51" (13)	2.46" (62,5)	1.16" (29,5)	4.35" (110,6)	3.97" (101)	2.24" (57)	4.86" (123,5)	2.12" (54)	0.78" (20)	1.06" (27)	2.44 lbs (1,11 kg)
	> 160 psi (10 bar)							1.33" (34)					
<b>G</b> 6" (150)	≤ 160 psi (10 bar)	<b>43M</b> 1/2-14 NPT	0.59" (15)	2.52" (64)	1.18" (30)	6.33" (161)	5.88" (149,6)	2.24" (57)	6.12" (155,5)	2.12" (54)	0.78" (20)	1.06" (27)	3.65 lbs (1,66 kg)
	> 160 psi (10 bar)							1.33" (34)					

dimensions : inches (mm)

(1) add 0.72 lbs (0,33 kg) for DS 4" (100) and 1.65 lbs (0,75 kg) for DS 6" (150), when filled

**OPTIONS**

Model	standard	fillable	filled
<b>C40</b> - Case, ring and blow out disk in AISI 316L st. st. (compulsory option for DN100)	♦	♦	♦
<b>2G2</b> - ATEX II 2G h - Dry - A.t. -20...+60 °C (1)	♦		
<b>2D2</b> - ATEX II 2GD h - Dry/Silicon oil <b>S10</b> - A.t. -20...+60 °C (1)			♦ (2)
<b>2D0</b> - ATEX II 2GD h - Glycerine filled - A.t. 0...+60 °C (1)			♦
<b>E75</b> - NACE MR0175/ISO 15156-3 certificate	♦	♦	♦
<b>P02</b> - Oxygen service	♦	♦ (3)	♦ (4)
<b>P01</b> - Suitable for filling with silicone and fluorinated fluid		♦	
<b>S10</b> - Silicone filling			♦
<b>F30</b> - Fluorinated fluid filling			♦
<b>SPS</b> - Special overpressure	♦	♦	♦
<b>T01</b> - Tropicalization	♦	♦	♦

(1) Please see catalogue sheet concerning the ATEX version

(2) To be ordered with S10 option

(3) to be ordered with instruments suitable for fluorinated fluid filling

(4) to be ordered with fluorinated fluid filled instruments

**"HOW TO ORDER" SEQUENCE**

Section / Model / Case / Mounting / Diameter / Range / Process connection / Options

**1**   **41**   **1**   **A**   **E**   **43M**   **C40**  
**2**   **G**   **2G2...T01**  
**3**

Copyright © Nuova Fima srl. All rights reserved. Any part of this publication should not be reproduced without a written Nuova Fima's srl approval