



GENERAL CATALOGUE

NUOVA FIMA

bourdon tube "solid-front" pressure gauges NACE MR0103/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 specifications of EN 837-1/S3 e ASME B40.1. In case of leaks or break of the elastic element, the operator is protected by a solid separating wall placed on the front of the instrument and by the blow out back. They are usually used in the petrochemical and natural gas industry; they are built to resist to the most severe conditions created by H₂S, by the environment and for those fluids, which have high viscosity and do not crystallize. The TIG welding between the case 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.

1.40.1 - Standard Model

Design: EN 837-1, ISO 15156-3.

Safety designation: S3 as per EN 837-2.

Ranges: from 0...15 to 0...10000 psi ; (from 0...1 to 0...600 bar or other equivalent units).

Accuracy class: 1 as per EN 837-1.

Ambient temperature:

-40...+149 °F (-40...+65 °C), IP55 housing (EN 60529/IEC 529);

-58...+149 °F (-50...+65 °C), vented IP67 housing

(EN 60529/IEC 529).

Process fluid temperature: -40...+302°F (-40...+150 °C).

Thermal drift: ±0,4 %/10 °C of range (starting from 68°F - 20°C).

Working pressure:

100% of FSV for static pressure;

90% of FSV for pulsating pressure.

Overpressure: 30% of FSV (max 12 h).

Socket material: AISI 316L or MONEL 400.

Bourdon tube: MONEL 400 seamless tube

Leak test: Helium Test leak search, (max 1x10⁻⁶ mbar x 1 x s⁻¹).

Case: stainless steel

Ring: stainless steel, bayonet lock.

Blow out disk: stainless steel.

Window: safety glass (with external zero adjustment on request).

Movement: stainless steel with internal limit stops.

Dial: aluminium, white with black markings.

Pointer: adjustable, aluminium, black.

1.40.2 - Ffillable Model - Lower connection only

Ambient temperature: -40...+149 °F (-40...+65 °C), IP 67 housing (EN 60529/IEC 529).

Other features: as Standard Model.

1.40.3 - Filled Model - Lower connection only

Filling liquid: glycerina 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 or fluorinated fluid filling.

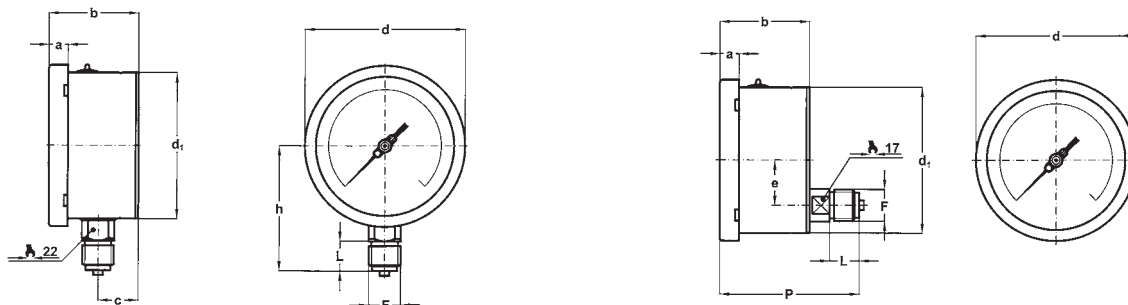
Process fluid temperature: +149°F (+65 °C).

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

Other features: as Standard Model

**bourdon tube "solid-front" pressure gauges,
NACE MR0103/MR0175 - ISO15156-3 version, DS 4", 6" (100-150mm)**

MGS40



A - LOWER CONNECTION

**D - BACK CONNECTION,
Standard model only**

Mounting	DS	F	a	b	c	d	d ₁	e	h	p	L	Weight (1)
Lower	E 4" (100)	41M - G 1/2 A	0.51"	2.46"	1.16"	4.35"	3.97"		3.38"		0.78"	1.43 lbs (1)
		43M - 1/2-14 NPT	(13)	(62,5)	(29,5)	(110,6)	(101)		(86)		(20)	(0,65 kg)
Lower	G 6" (150)	41M - G 1/2 A	0.59"	2.51"	1.18"	6.33"	5.92"		4.60"		0.78"	2.64 lbs (1)
		43M - 1/2-14 NPT	(15)	(64)	(30)	(161)	(150,5)		(117)		(20)	(1,2 kg)
Back	E 4" (100)	41M - G 1/2 A	0.51"	2.46"		4.35"	3.97"	1.22"		3.75"	0.78"	1.54 lbs
		43M - 1/2-14 NPT	(13)	(62,5)		(110,6)	(101)	(31)		(95,5)	(20)	(0,70 kg)
Back	G 6" (150)	41M - G 1/2 A	0.59"	2.51"		6.33"	5.92"	1.22"		3.77"	0.78"	2.53 lbs
		43M - 1/2-14 NPT	(13)	(64)		(161)	(150,5)	(31)		(96)	(20)	(1,15 kg)

dimensions : inches (mm)

(1) add 0.73 lbs (0,33 kg) for DS 4" (100) and 1.76 lbs (0,8 kg) for DS 6" (150), when filled

OPTIONS

Model	standard	fillable	filled
C - Back flange, for lower connection pressure gauges	◆	◆	◆
E - Front flange, for back connection pressure gauges	◆		
2G1 - ATEX II 2G c version	See the ATEX pressure gauges data-sheet for technical details		
2D1 - ATEX II 2GD c version			
C40 - AISI 316L st. st. case, ring and blow out disk	◆	◆	◆
E07 - Socket material MONEL 400	◆	◆	◆
E30 - NACE MR0103/MR0175 - ISO 15156-3 certificate	◆	◆	◆
F30 - Fluorinated fluid filling			◆
P01 - Suitable for filling with silicone/Fluorinated fluid		◆	
P03 - Compensating device, for DS 4" (100 mm) and lower mounting only	◆	◆	◆
S10 - Silicone filling			◆
ECV - Vented housing version, Ambient temperature -50...+65 °C (1) (2)	◆		
E67 - Protection degree IP67 (3)	◆		
T01 - Tropicalization	◆	◆	◆

(1) to be ordered with E67 option

(2) lower mounting and not adjustable pointer

(3) to be ordered with ECV option

"HOW TO ORDER" SEQUENCE

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

1 40 1 A E -- 41M C...E
2 D G E07 43M 2G1...T01
3

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bourdon tube "solid-front" pressure gauges NACE MR0103/MR0175 -ISO 15156-3 version turret case - DS 4.5" (125mm)



These instruments are built in conformity with the construction and safety specifications of **ASME 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 H₂S, 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.

1.60.2 - Fillable Model - Lower connection only

Design: ASME B40.1, ISO 15156-3.

Ranges: from 0...15 to 0...10000 psi (from 0...1 to 0...600 bar or equivalent units).

Accuracy: 1A Grade as per ASME B40.1 (± 1 % of FSV).

Ambient temperature: -22...+149°F (-30...+65°C).

Process fluid temperature: -22...+302°F (-30...+150°C max).

Thermal drift: $\pm 0,4$ %/10 K of range (starting from 68°F - 20°C).

Working pressure:

100% of FSV for static pressure;

90% of FSV for pulsating pressure.

Overpressure limit: 30% of FSV (max 12 h).

Protection degree: IP 65 as per EN 60529/IEC 529.

Socket material: AISI 316L st.st. or MONEL 400

Bourdon tube: MONEL 400 seamless tube.

Leak test: Helium Test leak search

(max 1×10^{-6} mbar x l x s⁻¹).

Case and blow out disk: strengthened polyammides, fiber glass, UV rays stabilized.

Ring: strengthened polypropylene fiber glass.

Safety cell: stainless steel.

Window: tempered glass.

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

Dial: aluminium, white with black markings.

Pointer: adjustable, aluminium, black.

1.60.3 - Filled Model - Lower connection only

Filling liquid: glycerine 98%, silicon oil or Fluorinated fluid.

Ambient temperature:

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

-22...+149°F (-30...+65 °C) with silicon oil filling;

-22...+149°F (-30...+65 °C) with fluorinated fluid filling.

Fluid process temperature: +149°F (+65 °C).

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

Compensating device: gum.

Other features: as fillable model.

1.60.1 - Standard Model - Back connection only

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

Case: phenolic resin.

Ring and blow out disk: strengthened polyammides, fiber glass.

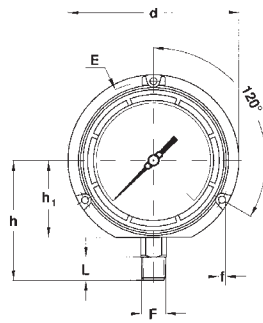
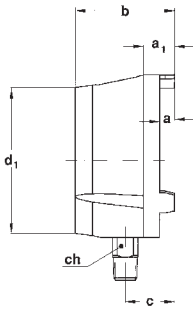
Safety cell: not available.

Separating wall: phenolic resin.

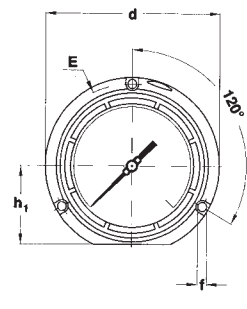
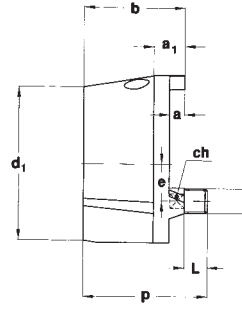
Other features: as fillable model.

bourdon tube "solid-front" pressure gauges
NACE MR0103/MR0175 - ISO 15156-3 version,
turret case DS 4.5" (125mm)

MGS60



A - LOWER CONNECTION



**D - BACK CONNECTION,
 FOR STANDARD MODEL ONLY**

Mounting	F	a	a ₁	b	c	d	d ₁	e	E	f	h	h ₁	p	ch	L	Weight (1)
Lower	43M 1/2-14 NPT	0.51" (13)	1.06" (27)	3.38" (86)	1.65" (42)	5.82" (148)	4.96" (126)		5.39" (137)	0.25" (6,5)	4.07" (103,5)	2.61" (66,5)		0.86" (22)	0.78" (20)	1.78 lbs (0,81 kg)
Back	43M 1/2-14 NPT	0.51" (13)	1.06" (27)	3.38" (86)		5.82" (148)	5.07" (129)	1.22" (31)	5.39" (137)	0.23" (6)	4.07" (103,5)	2.61" (66,5)	4.17" (106)	0.66" (17)	0.78" (20)	1.78 lbs (0,81 kg)

dimensions : inches (mm)

(1) add 1.10 lbs (0,5 kg) when filled

OPTIONS

Model	standard	fillable	filled
E07 - Socket material MONEL 400	◆	◆	◆
E30 - NACE MR0103/MR0175 - ISO 15156-3 certificate	◆	◆	◆
F11 - Panel mounting kit	◆	◆	◆
F30 - Fluorinated fluid filling			◆
P01 - Suitable for filling with silicone/fluid filling		◆	
P03 - Blow out disk with compensating device		◆	
S10 - Silicone filling			◆
T01 - Tropicalization	◆	◆	◆
T32 - Safety glass window	◆	◆	◆

"HOW TO ORDER" SEQUENCE

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

1 60 1 A F --- 41M E30...T32
2 D E07
3



bourdon tube pressure gauges NACE MR0175/ISO15156-3 version DS 4", 6" (100-150mm)



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

These instruments are designed for petrochemical industry. They are built to resist to the most severe conditions created by H₂S and by the environment. The quality of the materials used to build the sensible element allows their use with high frequency pulsating pressures. The TIG welding between the case 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

1.37.1 - 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 1x10⁻⁶ mbar x l x s⁻¹)

Case: stainless steel.

Ring: stainless steel, bayonet lock.

Window: tempered glass.

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

Dial: aluminium, white with black markings.

Pointer: adjustable, aluminium, black.

1.37.2 - Fillable Model

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

Other features: as Standard Model.

1.37.3 - Filled Model

Pressure gauges damping liquid:

glycerine 98%, silicon oil or fluorinated fluid.

Ambient temperature:

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

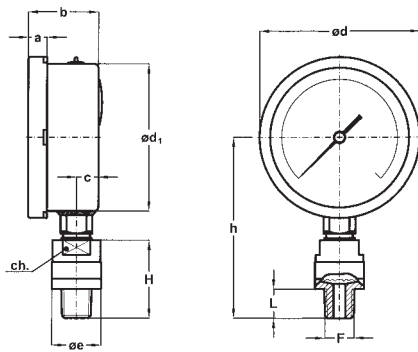
-40...+149 °F (-40...+65 °C) with silicon oil filling;

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

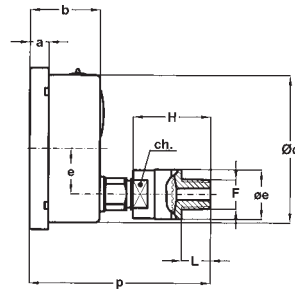
Process fluid temperature: max +212°F (+100 °C).

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

Other features: as Standard Model.



A - LOWER CONNECTION



D - BACK CONNECTION

DS	Ranges	F	a	b	c	ø d	ø d ₁	e	øe	h	H	L	p	ch	Weight (1)
E 4" (100)	≤ 160 psi (≤ 10 bar)	43M 1/2-14 NPT	0.51" (13)	1.91" (48,5)	0.59" (15)	4.35" (110,6)	3.97" (101)	1.22" (31)	2.24" (57)	4.86" (123,5)	2.12" (54)	0.78" (20)	4.94" (125,5)	1.06" (27)	2.18 lbs (0,99 kg)
	> 160 psi (> 10 bar)								1.34" (34)						
G 6" (150)	≤ 160 psi (≤ 10 bar)	43M 1/2-14 NPT	0.59" (15)	1.99" (50,5)	0.61" (15,5)	6.33" (161)	5.88" (149,6)	1.22" (31)	2.24" (57)	6.12" (155,5)	2.12" (54)	0.78" (20)	4.88" (124)	1.06" (27)	3.26 lbs (1,48 kg)
	> 160 psi (> 10 bar)								1.34" (34)						

dimensions : 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
E - Front flange, for back connection pressure gauges	◆	◆	◆
2G1 - ATEX II 2G c version	<i>See the ATEX pressure gauges data-sheet for technical details</i>		
2D1 - ATEX II 2GD c version			
C40 - AISI 316L case and ring	◆	◆	◆
E75 - NACE MR0175/ISO 15156-3 certificate	◆	◆	◆
P02 - Oxygen service	◆	◆(1)	◆(2)
P01 - Suitable for filling with silicone / fluorinated fluid		◆	
S10 - Silicone filling			◆
F30 - Fluorinated fluid filling			◆
SPS - Special overpressure	◆	◆	◆
T01 - Tropicalization	◆	◆	◆
T32 - Safety glass window	◆	◆	◆

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

(2) to be ordered with fluorinated fluid filled instruments

"HOW TO ORDER" SEQUENCE

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

1 37 1 A E 43M E
2 D G 2G1...2D1
3 C40...T32



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 specifications of EN 837-1/S3 e ASME B40.1. In case of leaks or break of the elastic element, the operator is protected by a solid separating wall placed on the front of the instrument 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 H₂S and by the environment. The TIG welding between the case 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.

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 1x10⁻⁶ mbar x l x s⁻¹)

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.

