

# bourdon tube "solid-front" pressure gauges

## turret case

### DS 4.5" (125 mm)

# MGS30



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 chemical, petrochemical industries and in conventional power plants. 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.

#### 1.30.2 - Fillable Model - Lower connection only

**Design:** ASME B40.1  
**Ranges:** from 0...15 to 0...30000 psi; (from 0...0,6 to 0...1600 bar or other equivalent units).  
**Accuracy:** 2A grade as per ASME B40.1 ( $\pm 0,5\%$  of FSV).  
**Ambient temperature:** -13...+149°F (-25...+65°C).  
**Process fluid temperature:** -22...302°F (-30...+150°C max).  
**Working pressure:**  
100% del FSV for static pressure;  
90% del FSV for pulsating pressure.  
**Overpresssure:** 30% of FSV (max 12 h).  
**Protection degree:** IP 67 as per IEC 529.  
**Socket material:** AISI 316L st.st.  
**Bourdon tube:** AISI 316L st.st. seamless tube.  
**Case and blow out disk:** strengthened polyammides with 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.

#### 1.30.3 - Filled Model - Lower connection only

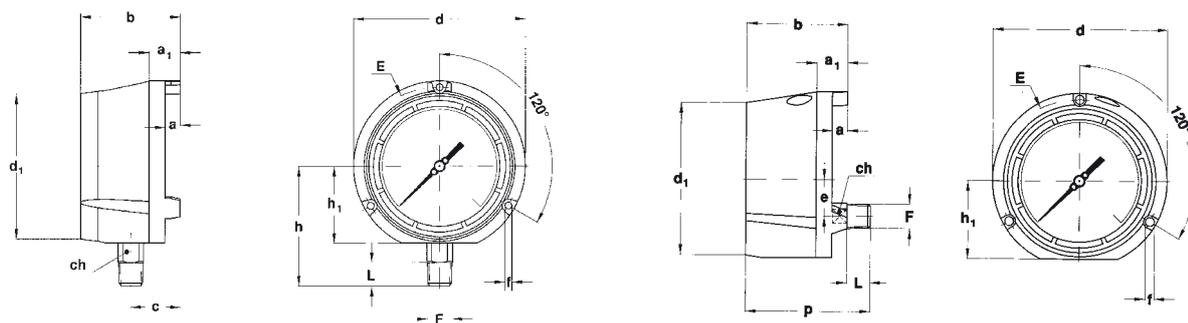
**Ranges:** from 0...15 to 0...30000 psi; (from 0...1 to 0...1600 bar or other equivalent units).  
**Accuracy:** 1A grade as per ASME B40.1 ( $\pm 1,0\%$  of FSV).  
**Filling liquid:** glycerine 98%, and silicon oil or Fluorinated fluid on request.  
**Ambient temperature:**  
+32...+149°F (0...+65 °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:** +149°F (+65 °C).  
**Compensating device:** gum.  
**Other features:** as Fillable Model.

#### 1.30.1 - Standard Model - Back connection only

**Protection degree:** IP 55 as per IEC 529.  
**Case:** phenolic resin.  
**Ring and blow out disk:** strengthened polypropylene, fiber glass.  
**Safety cell:** not available.  
**Separating wall:** phenolic resin.  
**Other features:** as Fillable Model.

#### OXYGEN INSTRUMENTS

Glycerine and silicon oil should not be used with highly oxydizing agents as oxygen, chlorine, nitric acid or hydrogrn peroxide because of danger of spontaneous chemical reaction, inflammability or explosion. The use of fluorinates fluid is recommended in these cases.



**A - LOWER CONNECTION**

**D - BACK CONNECTION**

Mounting	F	a	a <sub>1</sub>	b	c	d	d <sub>1</sub>	e	E	f	h	h <sub>1</sub>	ch	p	Weight (1)
Lower	<b>41M</b> G 1/2 A	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	<b>43M</b> 1/2-14 NPT	0.51" (13)	1.06" (27)	3.38" (86)		5.82" (148)	5.07" (129)	1.22" (31)		0.23" (6)		2.61" (66,5)	0.66" (17)	4.17" (106)	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
<b>F11</b> - Panel mounting kit	◆	◆	◆
<b>F30</b> - Fluorinated fluid filling			◆
<b>P01</b> - Suitable for silicone filling		◆	
<b>P02</b> - Oxygen service (3)	◆	◆ (1)	◆ (2)
<b>FDP</b> - Blow out disk with compensating device		◆	
<b>F30</b> - Over pressure limit: 50% of FSV for pressure ranges < 6000 psi (400 bar)	◆	◆	◆
<b>S10</b> - Silicone filling			◆
<b>T01</b> - Tropicalization	◆	◆	◆
<b>T32</b> - Safety glass window	◆	◆	◆

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

(3) For pressure ranges up to 15000 psi (1000 bar)

**"HOW TO ORDER" SEQUENCE**

Section / Model / Case / Mounting / Diameter / Range / Process connection / Options  
**1 30 1 A F 41M K03...T32**  
**2 D 43M**  
**3**