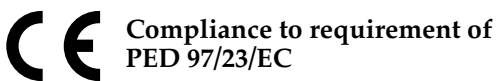


liquid filled pressure gauge

MGS10 - DS 63

1.10



Instruments designed for use on power units, pump, hydro-cleaning machines, presses, engine compressors, turbines, diesel engines, chemical, petrochemical and refrigerating plants and on machines and equipment where pulsating pressures or mechanical vibrations are apparent. They can be used with gaseous or liquid media which do not corrode copper alloy and which do not have high viscosity or do not cristalize.

Functional and constructive characteristics.

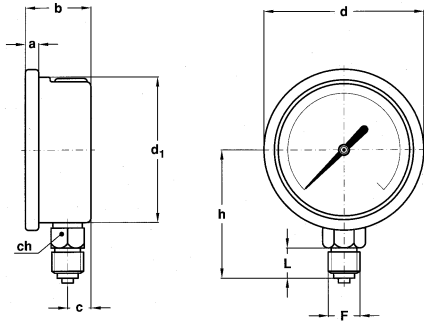
1.10.2 Fillable

Accuracy: 1,6 as per EN 837-1.
Ambient temperature: -25...+65 °C.
Process temperature: max +100 °C (max + 65 °C when filled).
Working pressure: max 75% of the full scale value .
Over pressure limit: (referred to the full scale value):
 25% for pressure ranges up to 100 bar;
 15% for pressure ranges over 100 bar.
Protection: IP 67 as per IEC 529.
Socket material: brass.
Elastic element:
 phosphor bronze C-shaped for pressure ranges ≤ 40 bar;
 phosphor bronze spiral for pressure ranges > 40 bar.
Case: AISI 304 st.st.
Ring: AISI 304 st.st. polished, crimped.
Window: Plexiglas
Movement: brass and stainless steel.
Dial: ABS, white with black markings.
Special dials: ranges different from standard, or custom artwork,
 available on request.
Pointer: aluminium, black painted.
Gasket: silicone rubber.
Blow out vent: EPDM.
Note: std. version is suitable for glycerine filling only; other
 filling fluids available on request (see OPTIONS table).

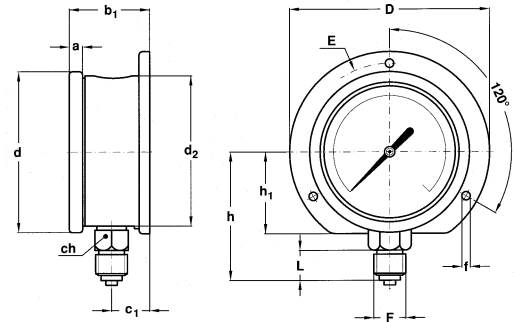
1.10.3 Liquid filled

Accuracy: 1,6 as per EN 837-1.
Ambient temperature: max +65 °C, (see DAMPING LIQUIDS
 table for further information)
Process temperature: max +65 °C.
Working pressure: max 75% of the full scale value .
Over pressure limit: (referred to the full scale value):
 25% for pressure ranges up to 100 bar;
 15% for pressure ranges over 100 bar.
Protection: IP 67 as per IEC 529.
Socket material: brass.
Elastic element:
 phosphor bronze C-shaped for pressure ranges ≤ 40 bar;
 phosphor bronze spiral for pressure ranges > 40 bar.
Case: AISI 304 st.st.
Ring: AISI 304 st.st. polished, crimped.
Window: Plexiglas
Movement: brass and stainless steel.
Dial: ABS, white with black markings.
Special dials: ranges different from standard, or custom artwork,
 available on request.
Pointer: aluminium, black painted.
Gasket: silicone rubber.
Blow out vent: EPDM.
Damping liquids: glycerine 98%, (optional silicon oil, Fluorolube
 see DAMPING LIQUIDS table for further information).

TYPE, DIMENSIONS AND WEIGHTS



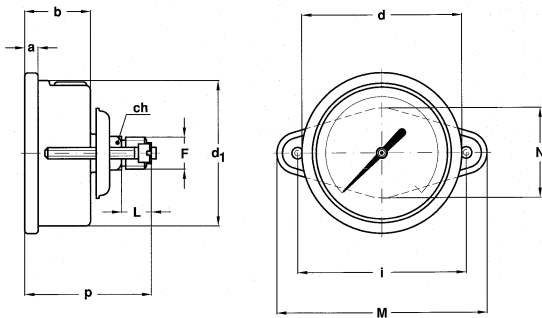
TYPE A
stem mounting;
lower connection.



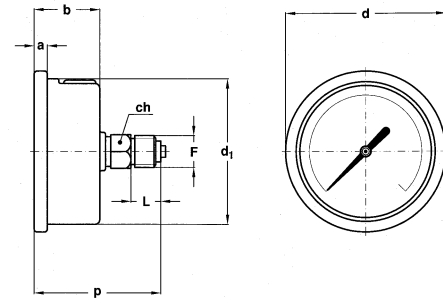
TYPE C
surface mounting, back flange;
lower connection.

MODEL	DS	TYPE	a	b	b ₁	c	c ₁	d	d ₁	d ₂	f	h ₁	D	E	Weight (kg)
1.10.2 (fillable)	63	A-C	5,6	28	34	10	16,2	68	62,6	63,5	3,6	34,5	85	75	0,13-0,17
1.10.3 (filled)															0,2-0,24

(dimensions : mm.)



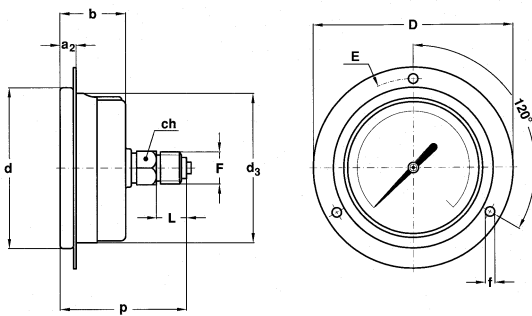
TYPE B
flush mounting, Bar-Clamp;
back connection.



TYPE D
stem mounting;
back connection.

MODEL	DS	TYPE	a	a ₂	b	d	d ₁	d ₃	f	i	D	E	M	N	Weight (kg)
1.10.2 (fillable)	63	B-D-E	5,6	6,6	28	68	62,6	64,6	3,6	72	85	75	90	38	0,18-0,14-0,17
1.10.3 (filled)															0,25-0,21-0,24

(dimensions : mm.)



TYPE E
flush mounting, front flange;
back connection.

F	Code	L	ch	h	p
G 1/4 A	21M	13	14 x 9	55,3	54,8
1/4-18 NPT	23M	13	14 x 8	54,3	53,8
R 1/4-ISO 7/1	22M	13	14 x 8	54,3	53,8
7/16-20 UNF	24M	14	14 x 9	56,3	55,8
G 1/8 A	11M	10	14 x 10	53,3	52,8
1/8-27 NPT	13M	10	14 x 10	53,3	52,8
M 10 x 1	86M	10	14 x 10	53,3	52,8

(dimensions : mm.)

liquid filled pressure gauges

MGS10 - DS 63

1.10

DAMPING LIQUIDS

Damping liquids	Limit ambient temperature
Glycerine 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 explosion. The use of fluorinated fluid is recommended in these cases.

RANGES

PRESSURE

TAB. 1

RANGE	bar	kPa	MPa	bar ext.	bar ext.	bar ext.
				psi int.	kPa int.	MPa int.
0...1	♦		♦	♦	♦	
0...1,6	♦		♦	♦	♦	
0...2,5	♦		♦	♦	♦	
0...4	♦		♦	♦	♦	
0...6	♦		♦	♦	♦	
0...10	♦		♦	♦		♦
0...16	♦		♦	♦		♦
0...25	♦		♦	♦		♦
0...40	♦		♦	♦		♦
0...60	♦		♦	♦		♦
0...100	♦	♦		♦		♦
0...160	♦	♦		♦		♦
0...250	♦	♦		♦		♦
0...300	♦			♦		
0...400	♦	♦		♦		♦
0...600	♦	♦		♦		♦
0...1000		♦				
0...1600		♦				
0...2500		♦				

VACUUM & COMPOUND

TAB. 3

RANGE	bar	kPa	bar ext.	bar ext.
			*psi int.	kPa int.
-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		♦		

* vacuum unit of measurement: "inHg"

TAB. 2

RANGE	psi	psi int.	psi ext.	psi ext.
		kPa est.	bar int.	kg/cm ² int.
0...15	♦	♦	♦	♦
0...30	♦	♦	♦	♦
0...60	♦	♦	♦	♦
0...100	♦	♦	♦	♦
0...160	♦	♦	♦	♦
0...200	♦	♦	♦	♦
0...300	♦	♦	♦	♦
0...400	♦	♦	♦	♦
0...500	♦	♦	♦	♦
0...600	♦	♦	♦	♦
0...1000	♦	♦	♦	♦
0...1500	♦	♦	♦	♦
0...2000	♦	♦	♦	♦
0...3000	♦	♦	♦	♦
0...4000	♦	♦	♦	♦
0...5000	♦	♦	♦	♦
0...6000	♦	♦	♦	♦
0...10000	♦	♦	♦	♦

TAB. 4

RANGE	* psi	* psi int.	* psi ext.	* psi ext.
		kPa ext.	bar int.	kg/cm ² int.
-30...0	♦	♦	♦	♦
-30...15	♦	♦	♦	♦
-30...30	♦	♦	♦	♦
-30...150	♦		♦	

* vacuum unit of measurement: "inHg"

TAB. 5 - FREON Triple scale ranges

bar
-1...+9
-1...+15
-1...+24
-1...+32
-1...+39

Are available single, double and multiple scales for gases R134a, R404a, R507, R22, R407c. For further informations pls. contact our Sales Department.

OPTIONS

DESCRIPTION	CODE	1.10.2 (fillable)	1.10.3 (filled)
Individual testing	C06	◆	◆
"Fluorolube" filling (4)	F30		◆
Knife-edge pointer	L03	◆	◆
Reference pointer MN7	L30	◆	
Suitable for filling with silicone and "Fluorolube" (4)	P01	◆	
Oxygen service	P02	◆ (2)	◆ (1)
Aluminium dial (3)	Q03	◆	◆
Black dial (3)	Q04	◆	◆
Restrictor ø 0,4mm	S06	◆	◆
Silicon filling (4)	S10		◆
Glass window	T30	◆	◆

(1) to be ordered with Fluorolube filling (option F30)

(2) to be ordered with option "P01"

(3) minimum quantity N. 100

(4) blow out vent: VITON.

HOW TO ORDER

During 2004 ordering guide could be modified. We regret for any inconvenience that could arise in ordering this product.

	CODE & DESCRIPTION
1	1- bourdon tube pressure gauges
10	10 - liquid filled pressure gauge MGS10
3	2 - fillable version 3 - filled version
C	A - lower connection - stem mounting B - back connection - flush mounting, "U"-clamp C - lower connection - surface mounting, back flange D - back connection - stem mounting E - back connection - flush mounting, front flange
C	C- DS 63
0/10 bar	see ranges table
23M	11M - G 1/8 A 13M - 1/8-27 NPT 21M - G 1/4 A 23M - 1/4-18 NPT 22M - R 1/4-ISO 7/1 24M - 7/16-20 UNF 86M - M 10 x 1
S10	see options table

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 gauges 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.