



MODELLO MTIP160SCLAMP

MODEL MTIP160SCLAMP



CODICE

CODE

MTIP160SCLAMP

1

0/10

2

B

3

1 CONNESSIONE AL PROCESSO

PROCESS CONNECTION

	Codice/Code
1/2" gas cilindrico	G1/2
1/2" gas conico	R1/2
1/2" NPT	N1/2
Altro/Another	*

3 UNITÀ DI MISURA

UNIT

	Codice/Code
Bar	B
Bar/Psi	B/P
Psi	P
Kpa	K
Mpa	M
Kg/cm ²	KG/CM ²
Altro / Another	*

2 SCALA

RANGE

SCALA

RANGE

RANGE	Codice Code	RANGE	Codice Code
-1... 0	-1/0	0... 12	0/12
-1... 0.6	-1/0.6	0... 16	0/16
-1... 1.5	-1/1.5	0... 20	0/20
-1... 3	-1/3	0... 25	0/25
-1... 5	-1/5	0... 40	0/40
-1... 9	-1/9	0... 60	0/60
-1... 15	-1/15	0... 100	0/100
-1... 24	-1/24	0... 160	0/160
0... 0.6	0/0.6	0... 200	0/200
0... 1	0/1	0... 250	0/250
0... 1.6	0/1.6	0... 315	0/315
0... 2.5	0/2.5	0... 400	0/400
0... 4	0/4	0... 600	0/600
0... 6	0/6	0... 1000	0/1000
0... 10	0/10	Altro / Another	

Manometro a molla bourdon con separatore a membrana con attacco CLAMP

Diametro cassa: 160 mm

Esecuzione: Posteriore Eccentrico

Normativa: EN 837-1

Classe di precisione: 1%

Attacco al processo: Acciaio Inox 316L

Elemento di misura: Acciaio Inox 316L

Movimento: Acciaio Inox 316L

Quadrante: In alluminio a fondo bianco, numerazione in nero con fermo sullo zero

Indice: in alluminio di colore nero

Trasparente: Vetro multistrato di sicurezza

Materiale della cassa e anello: Acciaio Inox

Foro di scarico posteriore

Bourdon tube pressure gauge with membrane separators for hygienic applications

Nominal Size: 160 mm

Eccentric Back

Design: EN 837-1

Accuracy Class: 1%

Process connection: Stainless Steel 316L

Pressure element: Stainless Steel 316L

Movement: Stainless Steel 316L

Dial: White aluminium with black marks

Black anodized aluminium

Window: Safety Glass

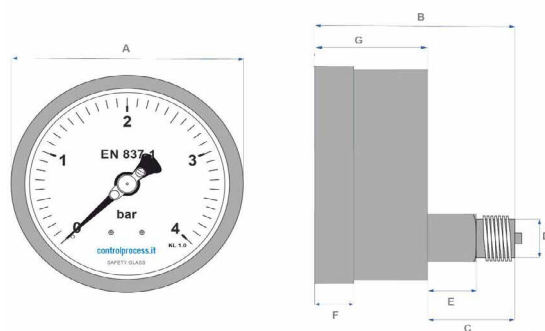
Case and Ring: Stainless Steel

With blow-out device at case circumference and on the back of the case



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+/- 0.1	A	B	C	D	E	F	G
DN40	47.2	50.4	22	9.55	12	5.1	27.1
DN50	57.6	60	29	12.95	16	6.3	29.5
DN63	68	60	29	12.95	16	6.3	29.5
DN100	100.8	83.5	35.5	20.8	16	17	48.7
DN160	160	158	44	20.8	22	17	49.8

CONDIZIONI DI ESERCIZIO	OPERATING CONDITIONS
Temperatura ambiente: -30 ... +60°C	Ambient Temperature: -30 ... +60°C
Temperatura fluido di processo: -30 ... +120°C	Process fluid temperature: -30 ... +120°C
Deriva termica: massimo $\pm 0.3\%$ dell'ampiezza di campo ogni 10°C di differenza dalla temperatura di riferimento di 20°C	Thermal drift: maximum $\pm 0.3\%$ of span every 10°C of deviation from the reference temperature of 20°C
Pressione d'esercizio costante: 75% del fondo scala	Operating pressure constant: 75% del F.S.V.
Pressione d'esercizio variabile: 60% del fondo scala	Operating pressure changeable: 60% F.S.V.
Sovrapressione fino a 60 bar: 25% del fondo scala	Overpressure up to 60 bar: 25% F.S.V.
Sovrapressione > 100 bar: 15% del fondo scala	Overpressure from > 100 bar: 15% F.S.V.
Grado di protezione IP65 conforme EN 60529 / IEC 60529	Protection EN 60529 / IEC 60529 IP65

OPZIONI

- Materiale Cassa e Anello in AISI 316L
- Staffa ad "U" in Acciaio Inox
- Flangia a 3 fori in Acciaio Inox

OPTION

- Case and Ring material AISI 316 L
- U - Clamp Stainless Steel
- Front Flange 3 hole Stainless Steel

CERTIFICAZIONI

CERTIFICATE

- **Certificato di taratura conforme a ISO/IEC 17025 3.1b**
Calibration report ISO / IEC 17025 3.1b
- **Certificato taratura organismo accreditato nazionale**
National Accredited Calibration Certificate
- **Certificato origine camera commercio**
Certificate of origin Chamber of Commerce
- **Certificazione di prova 2.2 conforme EN 10204 (produzione stato dell'arte, precisione indicazione)**
Certificate 2.2 EN 10204
- **Certificazione 3.1 conforme ad EN 10204 (cert. Materiale)**
Certificate 3.1 EN 10204 (material certificate)



Diaphragm seals for hygienic applications

Main Features

- Stainless steel 1.4404/1.4435 (316L)
- Hygienic connection according to several standards
- Sterilization in place (SIP)

- Cleaning in place (CIP)
- 3A
- FDA conform

Applications

- Food and Beverage
- Laboratory and Medical

Technical Data

This diaphragm seals are used to design hygienic process connections for pressure gauges and to protect pressure gauges from high temperatures and aggressive process fluids.

Hygienic process connections with flush diaphragm ensure efficient cleaning processes and avoid pollutions and developing of bacterias in hygienic production processes.

Diaphragm seals can be mounted to mechanical pressure gauges, switches or transmitters directly or with a flexible capillary. The filling fluid of the measuring system has to be chosen compatible to the application. For hygienic applications a choice of FDA conform filling fluids are available.

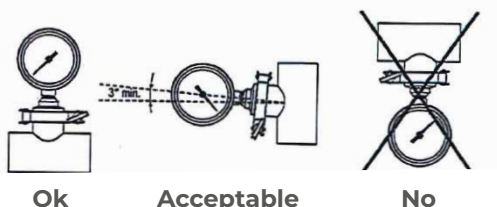
Pressure gauges and transmitters assembled with diaphragm seals can be ordered with 3A approval and marking (option 1985).

Min. pressure ranges	see table on page 4
Max. pressure	25 bar (DANC) 40 bar (others)
Body material	Stainless Steel 1.4404 (AISI 316L)
Diaphragm	Stainless Steel 1.4435 (AISI 316L) Option: Hastelloy C276 (2.4819)
Surface roughness	Wetted parts $Ra \leq 0.8 \mu m$ Option: $Ra \leq 0.4 \mu m$ (welding $Ra \leq 0.8 \mu m$)
Approvals	3A (option 1985) Available for diaphragm seals assembled with; -Pressure gauges MEX, MIX, MMX, MEP or Pressure switches TED/YTED including 3A marking of the product
Working temperature	-20... 225 °C (depending on the filling fluid)
Filling Fluid	LRS1: Vaseline (-15... 150 °C, FDA conform) LRS10: Vaseline (-20... 225 °C, FDA conform) other filling fluids on request
Gaskets	Not included

3A

- 3A option is not available with cooling element
- Only available with transmission fluid LRS1 or LRS10
- Only available with damping fluid H1, BH2 or BH10 in the pressure gauge
- Pressure gauges mounted on hygienic seals must have laminated safety glass (0751) or Polycarbonate window (0753)

- Gaskets must be self centering and in accordance with 3A material requirements
- Mounting must be self draining and as short as possible (see drawings)
- Welding to the piping should have a roughness $Ra \leq 0.8 \mu m$



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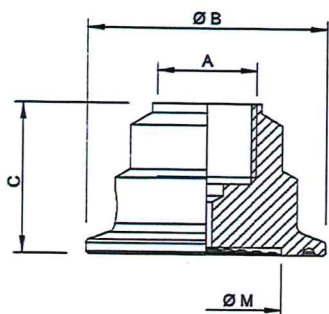
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Diaphragm seals for hygienic applications

Dimensions - Types of mounting

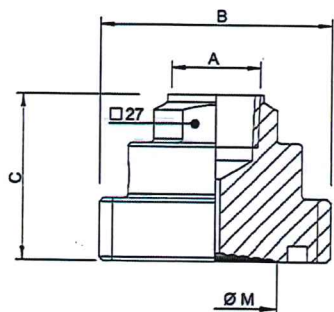
CLAMP



CODE	DN	A	ØB	C	ØM	WEIGHT KG
SCLAMP07	DN 25 ISO 2852	G1/2 or G1/4	50.5	32 ⁽¹⁾	19	0.20
SCLAMP01	DN 38 ISO 2852	G1/2 or G1/4	50.5	32 ⁽¹⁾	32	0.20
SCLAMP02	DN 51 ISO 2852	G1/2 or G1/4	64	32 ⁽¹⁾	45	0.32
SCLAMP03	DN 25 DIN 32676	G1/2 or G1/4	50.5	32 ⁽¹⁾	19	0.20
SCLAMP10	DN 40 DIN 32676	G1/2 or G1/4	50.5	32 ⁽¹⁾	32	0.20
SCLAMP13	DN 50 DIN 32676	G1/2 or G1/4	64	32 ⁽¹⁾	45	0.32

⁽¹⁾C=30 with instrument connection A = G 1/4

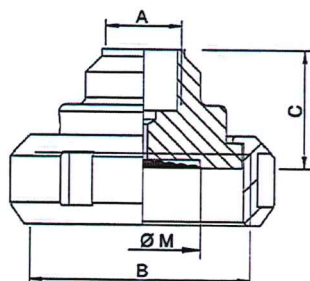
SMS 1147 with thread



CODE	DN	A	B	C	ØM	WEIGHT KG
SSMS09	DN 25 SMS 1147	G1/2 or G1/4	Rd 40 x 1/6	43 ⁽¹⁾	19	0.35
SSMS11	DN 38 SMS 1147	G1/2 or G1/4	Rd 60 x 1/6	43 ⁽¹⁾	32	0.52
SSMS14	DN 51 SMS 1147	G1/2 or G1/4	Rd 70 x 1/6	43 ⁽¹⁾	45	0.65

⁽²⁾C=41 with instrument connection A = G 1/4

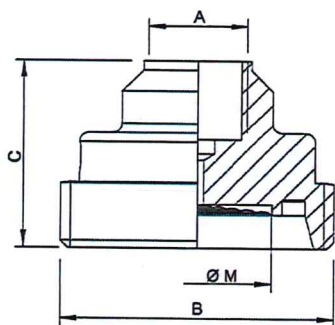
SMS 1147 with nut



CODE	DN	A	B	C	ØM	WEIGHT KG
SSMSN09	DN 25 SMS 1147	G1/2 or G1/4	Rd 40 x 1/6	35 ⁽³⁾	19	0.31
SSMSN11	DN 38 SMS 1147	G1/2 or G1/4	Rd 60 x 1/6	33 ⁽³⁾	32	0.55
SSMSN14	DN 51 SMS 1147	G1/2 or G1/4	Rd 70 x 1/6	33 ⁽³⁾	45	0.76

⁽³⁾C=28 with instrument connection A = G 1/4

DIN 11851 with thread



CODE	DN	A	B	C	ØM	WEIGHT KG
SDIN11851 06	DN 25 DIN 11851	G1/2 or G1/4	Rd 52 x 1/6	40 ⁽⁴⁾	19	0.31
SDIN11851 03	DN 32 DIN 11851	G1/2 or G1/4	Rd 58 x 1/6	40 ⁽⁴⁾	32	0.37
SDIN11851 04	DN 40 DIN 11851	G1/2 or G1/4	Rd 65 x 1/6	40 ⁽⁴⁾	32	0.48
SDIN11851 05	DN 50 DIN 11851	G1/2 or G1/4	Rd 78 x 1/6	42 ⁽⁴⁾	45	0.61

⁽⁴⁾C=35 with instrument connection A = G 1/4

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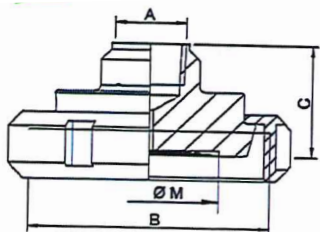
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Diaphragm seals for hygienic applications

Dimensions - Types of mounting

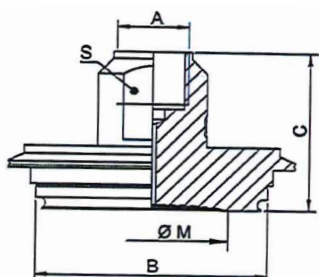
DIN 11851 with nut



CODE	DN	A	B	C	ØM	WEIGHT KG
SDIN11851N06	DN 25 DIN 11851	G1/2 or G1/4	Rd 52 x 1/6	37 ⁽⁵⁾	19	0.43
SDIN11851N03	DN 32 DIN 11851	G1/2 or G1/4	Rd 58 x 1/6	37 ⁽⁵⁾	32	0.52
SDIN11851N04	DN 40 DIN 11851	G1/2 or G1/4	Rd 65 x 1/6	37 ⁽⁵⁾	32	0.62
SDIN11851N05	DN 50 DIN 11851	G1/2 or G1/4	Rd 78 x 1/6	37 ⁽⁵⁾	45	0.90

⁽⁵⁾C=31 with instrument connection A = G 1/4

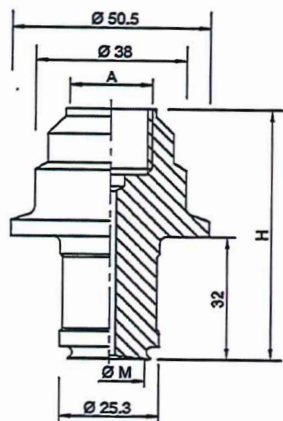
Varivent®



CODE	DN	A	B	C	ØM	WEIGHT KG
SVARIVENT23	DN 10/15	G1/2 or G1/4	31	47 ⁽⁶⁾	19	0.32
SVARIVENT19	DN 25	G1/2 or G1/4	50	47 ⁽⁶⁾	32	0.41
SVARIVENT20	DN 40/125	G1/2 or G1/4	68	47 ⁽⁶⁾	45	0.70

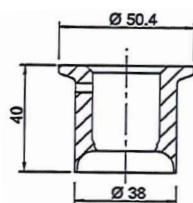
⁽⁶⁾C=40 with instrument connection A = G 1/4

3A extended clamp

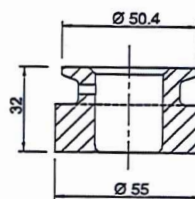


CODE	DN	A	H	ØM	WEIGHT KG
S3A29	DN 38	G1/2 or G1/4	65 ⁽⁷⁾	19	0.35

⁽⁷⁾C=35 with instrument connection A = G 1/4



Welding part
for pipe



Welding part
for tank

Minimum pressure ranges
depending on diaphragm
diameter ØM⁽¹⁾

ØM (mm)	DN 63		DN 100/150/160	
	gauge	compound	gauge	compound
19	0 ... 4 bar	-1 ... 3 bar	-	-
32	0 ... 2.5 bar	-1 ... 3 bar	0 ... 6 bar	-1 ... 5 bar
45	0 ... 1 bar	-1 ... 1.5 bar	0 ... 1.6 bar	-1 ... 3 bar

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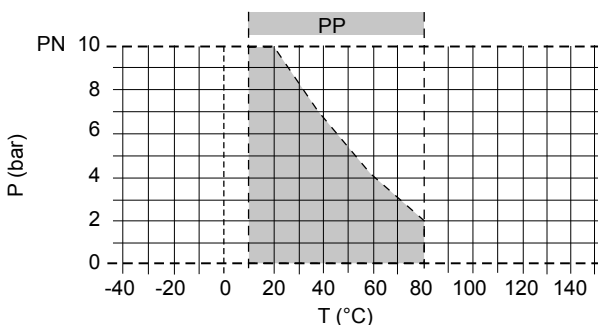
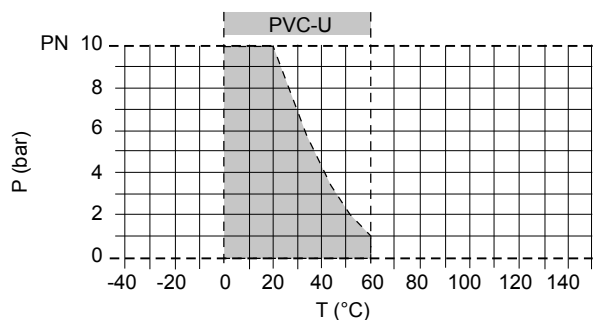


Diaphragm seals for hygienic applications

			XXXX	XX	-	X	X	X	X
Model									
Clamp		SCLAMP DANC							
SMS 1147 with thread		SSMS DAEF							
SMS 1147 with nut		SSMS DAEL							
DIN 11851 with thread		SDIN11851 DADF							
DIN 11851 with nut		SDIN11851 DADL							
Varivent		SVarivent DAVA							
3A extended clamp		S3A DAPH							
Nominal size									
Clamp DN 25 ISO 2852	SCLAMP	07							
Clamp DN 38 ISO 2852	-	01							
Clamp DN 51 ISO 2852	-	02							
Clamp DN 25 ISO 32676	-	08							
Clamp DN 40 ISO 32676	-	10							
Clamp DN 50 ISO 32676	-	13							
DN 25 SMS 1147	SSMS/SSMSN	09							
DN 38 SMS 1147	-	11							
DN 51 SMS 1147	-	14							
DN 25 DIN 11851	-	06							
DN 32 DIN 11851	-	03							
DN 40 DIN 11851	-	04							
DN 50 DIN 11851	-	05							
Varivent type B (for DN 10/15)	SVarivent	23							
Varivent type F (for DN 25)	-	19							
Varivent type N (for DN 40/125)	-	20							
3A extended clamp	S3A	29							
Bodi material									
Stainless Steel 1.4404 (AISI 316L)						2			
Instrument connection									
G 1/2							L		
G 1/4							H		
Membrane material									
Stainless Steel 316L (1.4435)								2	
Hastelloy C276 (2.4819)								6	
Surface finish									
Ra ≤ 0.8									A
Ra ≤ 0.4 (electropolished)									B

Diaphragm pressure gauge guard

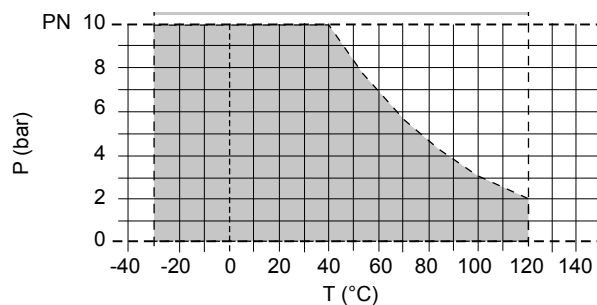
Pressure/temperature diagram



The pressure/temperature limits of the materials are valid for the stated nominal pressures and a service life of 25 years.

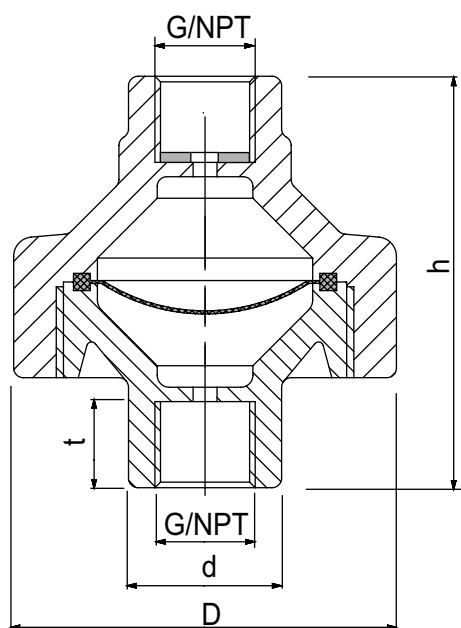
These values are guide values for flow medium types which do not negatively impact the physical and chemical characteristics of the valve material. It may be necessary to take diminution factors into consideration.

The operating life of the wear parts depends on the conditions of use.



Description

P	Operating pressure
T	Temperature



Connection spigot end

d (mm)	25	32
DN (mm)	20	25
G (inch)	1/4	1/2
D	80.0	80.0
d	25.0	32.0
G*	1/4	1/2
h	86.0	86.0
t	18.0	22.0

all dimensions in mm / * dimensions in inch

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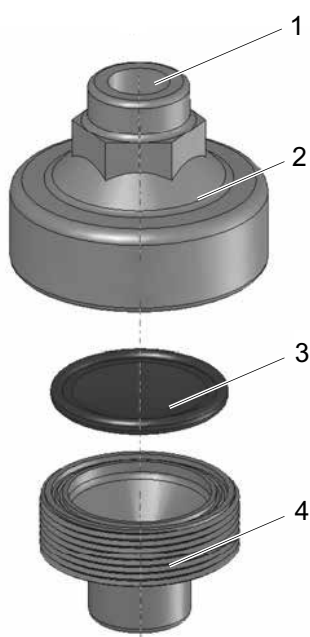
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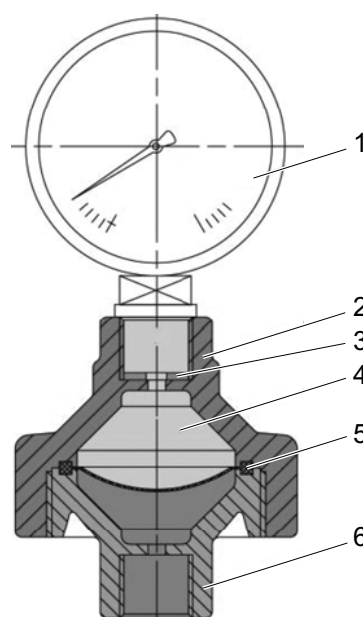
Diaphragm pressure gauge guard

Structure



Position	Designation
1	Connection, pressure gauge
2	Bonnet
3	Separating diaphragm
4	Bottom section

Components



Position	Designation
1	Pressure gauge
2	Bonnet
3	Flat sealing
4	Transmitter fluid
5	Separating diaphragm
6	Bottom section