

# Diaphragm Pressure Gauges

**RUEGER**

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## PMS100, PMS150 PMX100, PMX150



The sensing element is an elastic diaphragm, with concentric corrugations that drives the amplifying movement through a ball-joint. They are designed to measure pressure or vacuum of viscous, sedimentous, crystallisable or corrosive fluids. Compared to the bourdon tube system they are more robust and are better able to withstand overpressure or aggressive fluids.

### Functional and constructive characteristics

**PMS100..., PMS150..., carbon steel version**

**Accuracy class** : 1.6 as per EN 837-3.  
**Ambient temperature** : -25...+65°C.  
**Process temperature** : max. +100°C.  
**Overpressure limit** : 25% of full scale value.  
**Process connection** : zinc plated steel.  
**Elastic element** : AISI 316 st.st. diaphragm for pressure ranges  $\leq 2.5$  bar; carbon steel diaphragm for pressure ranges  $\geq 4$  bar.  
**Diaphragm gasket** : PTFE.  
**Case** : stainless steel.  
**Ring** : st.st., bayonet lock.  
**Window** : glass.  
**Movement** : stainless steel.  
**Dial** : aluminium, white with black marking.  
**Pointer** : aluminium.  
**Window gasket** : EPDM  
**Blow out vent** : EPDM.

**PMS100..., PMS150..., carbon steel PTFE coated version**

**Process connection** : zinc plated steel PTFE coated.  
**Elastic element** : diaphragm PTFE coated  
**Other characteristics** : as PMS100..., PMS150...

**PMX100..., PMX150..., AISI 316 st.st. version**

**Accuracy class** : 1.6 as per EN 837-3.  
**Ambient temperature** : -25...+65°C.  
**Process temperature** : max. +100°C.  
**Overpressure limit** : 25% of full scale value.  
**Process connection** : AISI 316 st.st..  
**Elastic element** : AISI 316 st.st. diaphragm.  
**Diaphragm gasket** : PTFE.  
**Case** : stainless steel.  
**Ring** : st.st., bayonet lock.  
**Window** : glass.  
**Movement** : stainless steel.  
**Dial** : aluminium, white with black marking.  
**Pointer** : aluminium.  
**Window gasket** : EPDM  
**Blow out vent** : EPDM.

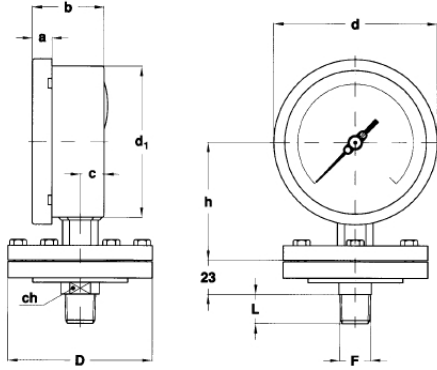
**PMX100..., PMX150..., AISI 316 st.st. PTFE coated version**

**Process connection** : AISI 316, PTFE coated  
**Elastic element** : AISI 316 st.st. diaphragm, PTFE coated.  
**Other characteristics** : as PMX100..., PMX150...

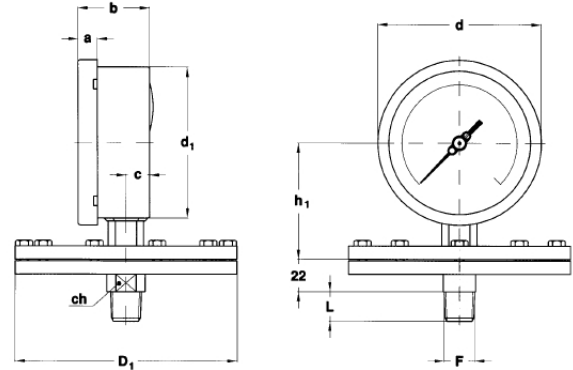
**Options** : on request

# PMS100, PMS150 PMX100, PMX150

## TYPES WITH THREADED CONNECTIONS



Ranges 0.6...25 bar

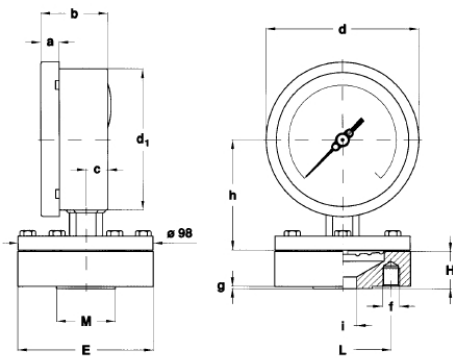


Ranges 25...400 mbar

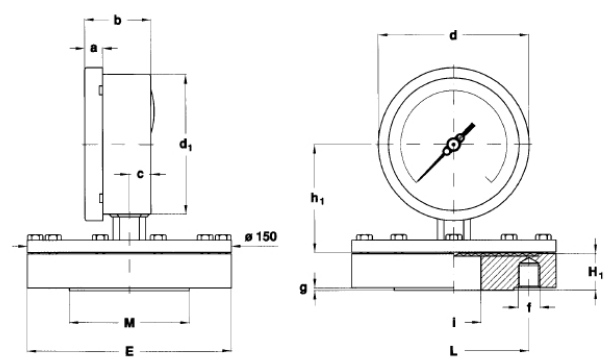
Range	DS	F	a	b	c	d	d <sub>1</sub>	h	h <sub>1</sub>	D	D <sub>1</sub>	ch	L
25...400 mbar	100	1/2" BSP or NPT	13	48.5	16.1	110.6	101	-	78.5	-	150	22	20
25...400 mbar	150	1/2" BSP or NPT	15	50.5	16.5	161	149.6	-	110.8	-	150	22	20
0.6...25 bar	100	1/2" BSP or NPT	13	48.5	16.1	110.6	101	79.5	-	98	-	22	20
0.6...25 bar	150	1/2" BSP or NPT	15	50.5	16.5	161	149.6	111.8	-	98	-	22	20

(dimensions in mm.)

## TYPES WITH FLANGED CONNECTIONS



Ranges 0.6...25 bar



Ranges 25...400 mbar

## TYPES WITH FLANGED CONNECTIONS : DIMENSIONS

DN	PN	H	H <sub>1</sub>	E	M	I	g	L	f	N (1)
15	6	34	27	80	40	15	2	55	M10	4
15	10...16	27	27	95	45	15	2	65	M12	4
15	25...40	27	27	95	45	15	2	65	M12	4
20	6	34	27	90	50	20	2	65	M10	4
20	10...16	27	27	105	58	20	2	75	M12	4
20	25...40	27	27	105	58	20	2	75	M12	4
25	16	27	27	100	60	25	2	75	M10	4
25	10...16	27	27	115	68	25	2	85	M12	4
25	25...40	27	27	115	45	68	2	85	M12	4
40	6	27	27	130	80	40	3	100	M12	4
40	10...16	27	27	150	88	40	3	110	M16	4
40	25...40	27	27	150	88	40	3	110	M16	4
50	6	27	27	140	90	50	3	110	M12	4
50	10...16	27	32	165	102	50	3	125	M16	4
50	25...40	27	32	165	102	50	3	125	M16	4

1) N° threaded holes.

Modifications reserved

# PMS100, PMS150

# PMX100, PMX150

## FLANGED CONNECTION AS PER ANSI

DN	PN		H	H <sub>1</sub>	E	M	I	g	L	f	N (1)
1/2"	150		34	27	89	34.9	15	1.6	60.3	1/2" 13UNC	4
1/2"	300		27	27	95	34.9	15	1.6	66.7	1/2" 13UNC	4
1/2"	600		48.5	27	95	34.9	15	6.3	66.7	1/2" 13UNC	4
3/4"	150		27	27	98.5	42.9	20	1.6	69.8	1/2" 13UNC	4
3/4"	300		38	27	117.5	42.9	20	1.6	82.5	5/8" 11UNC	4
3/4"	600		48.5	27	117.5	42.9	20	6.3	82.5	5/8" 11UNC	4
1"	150		27	27	108	50.8	25	1.6	79.4	1/2" 13UNC	4
1"	300		38	28	124	50.8	25	1.6	88.9	5/8" 11UNC	4
1"	600		48.5	28	124	50.8	25	6.3	88.9	5/8" 11UNC	4
1" 1/2	150		27	28	127	73	40	1.6	98.4	1/2" 13UNC	4
1" 1/2	300		27	30	155.5	73	40	1.6	114.3	3/4" 10UNC	4
1" 1/2	600		48.5	30	155.5	73	40	6.3	114.3	3/4" 10UNC	4
2"	150		27	32	152.5	92.1	50	1.6	120.6	5/8" 11UNC	4
2"	300		27	32	165	92.1	50	1.6	127	5/8" 11UNC	8
2"	600		48.5	32	165	92.1	50	6.3	127	5/8" 11UNC	8

(dimensions in mm) 1) N° threaded holes.

**RANGES** - «E» = Available for PMS100 & PMX100; «G» = available for PMS150 & PMX150.

### PRESSURE

TAB. 1

Range (1)	mbar	bar
0...0.6		EG
0...1		EG
0...1.6		EG
0...2.5		EG
0...4		EG
0...6		EG
0...10		EG
0...16		EG
0...25	EG (3)	EG
0...40	EG	
0...60	EG	
0...100	EG	
0...160	EG	
0...250	EG	
0...400	EG	
0...600	EG	

### VACUUM (2)

TAB. 2

Range (1)	mbar	bar
-0.6...0		EG
-1...0		EG
-25...0	EG	
-40...0	EG	
-60...0	EG	
-100...0	EG	
-160...0	EG	
-250...0	EG	
-400...0	EG	
-600...0	EG	
-1000...0	EG	

### COMPOUND (2)

TAB. 3

Range (1)	mbar	bar
-0.6...1		EG
-1...0.6		EG
-1...1.5		EG
-1...3		EG
-1...5		EG
-1...9		EG
-10...15	EG	
-15...10	EG	
-15...25	EG	
-25...15	EG	
-20...40	EG	
-40...20	EG	
-40...60	EG	
-60...40	EG	
-60...100	EG	
-100...60	EG	
-100...150	EG	
-150...100	EG	
-150...250	EG	
-250...150	EG	
-200...400	EG	
<b>-400...200 (4)</b>	EG	
<b>-400...600</b>	EG	
<b>-600...400</b>	EG	

(1) Others units of measurement upon request.

(2) Special dials : on request

(3) Overpressure limit : max 15% of the full scale value.

# PMS100, PMS150 PMX100, PMX150

## ACCESSORIES

### Valves :

On request.

### Pigtail and siphons :

Recommended with temperatures of 55°C or over.

**Modifications reserved**

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