

Pressure gauges

FT PBPSF115-E-01.03

RUEGER

Safety pressure gauges "solid-front"

Phenolic case

PBPSF115 (1.30)



These Solid-Front instruments are built in accordance with safety specification **ASME B40.1**.

The safety construction consists of a stainless steel solid-front" safety cell placed behind the scale, which welding to socket gives to instrument an exceptional strength. Whenever, due to leaks, an internal pressure is created or the elastic element is broken the safety cell protects the front and sides, meanwhile the blow out back is released from the case. These instruments are designed for use in food, beverage, pharmaceutical, cryogenic, chemical and petro-chemical processing industries, and in conventional and nuclear power plants. They are built to resist the most severe operating conditions created by the ambient environment and the process medium.

Functional and constructive characteristics

PBPSF115X... - Glycerine fillable - Lower connection only
(ref. 1.30.2.A)

Accuracy: Grade 2A as per ASME B40.1 ($\pm 0,5\%$ of span).

Ambient temperature: -25...+65°C.

Process temperature: -30...+150°C max.

Working pressure (referred to the full scale value): max 90% for pulsating pressure; 100% for static pressure.

Over pressure limit: 30% of full scale value.

Protection: IP 65 as per IEC 529.

Socket material: AISI 316L st.st.

Elastic element: AISI 316L st.st. by drawn tube without welding.

Welding: AISI 316 TIG.

Case and blow out disk: polyamide, fiberglass reinforced.

Ring: polypropylene, fiberglass reinforced.

Safety cell: AISI 304 st.st.

Window: Plexiglas.

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

Dial: aluminium, white with black markings.

Pointer: aluminium, micrometric adjustable.

Gaskets: EPDM.

PBPSF115L... - Liquid filled - Lower connection only
(ref. 1.30.3A)

Accuracy: Grade 1A as per ASME B40.1 ($\pm 1,0\%$ of span).
Ambient temperature: max +65 °C, (see "Damping Liquids" table).

Process temperature: max +65 °C.

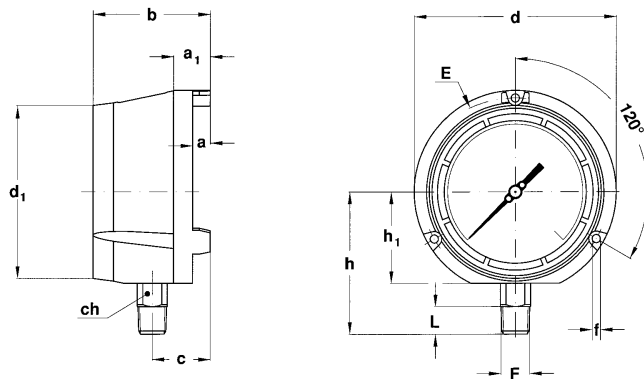
Damping liquid: glycerine 98% (see DAMPING LIQUIDS table on page 2 for others filling fluid).

Compensating device: EPDM.

Other features: as type PBPSF115X...

Safety pressure gauges "solid-front", phenolic case PBPSF115 (1.30)

TYPE, DIMENSIONS AND WEIGHTS



TYPE A

stem mounting; lower connection.

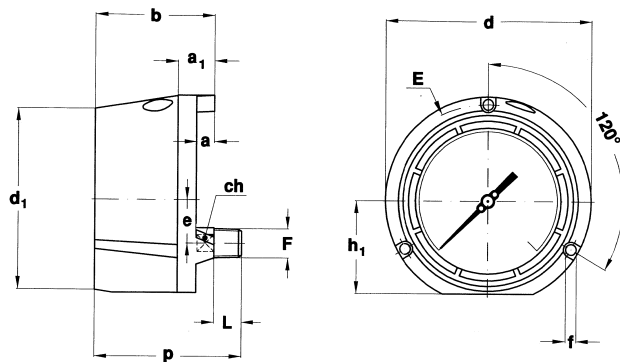
PROCESS CONNECTIONS

F	L	h
1/4" NPT	15	98.5
1/2" NPT	20	103.5

(dimensions in mm)

Type	a	a ₁	b	c	d	d ₁	E	f	h ₁	ch	Weight 01.30.2.A	Weight 01.30.3.A
A	13	27	86	42	148	126	137	6.5	66.5	22	0.81 kg	1.3 kg

(dimensions in mm)



TYPE D

stem mounting; back connection.

Dry version - Back connection only

Case: phenolic resin.

Ring and blow out disk: polypropylene, fiberglass reinforced.

Separating wall: AISI 304 st.st.

Safety cell: not available.

Other features: as per fillable version

Type	a	a ₁	b	d	d ₁	e	E	f	h ₁	p	ch	Weight 01.30.1.D
D	13	27	86	148	129	31	137	6	66.5	106	17	1.0 kg

(dimensions in mm)

DAMPING LIQUIDS

Damping liquids	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 exposition. The use of fluorinated fluid is recommended in these cases.

Safety pressure gauges "solid-front", phenolic case PBPSF115 (1.30)

RANGES

PRESSURE

TAB. 1

Range	bar	kPa	MPa	bar ext.
				psi int.
0÷0.6	◆(1)	◆	◆	◆(1)
0÷1	◆	◆	◆	◆
0÷1.6	◆	◆	◆	◆
0÷2.5	◆	◆	◆	◆
0÷4	◆	◆	◆	◆
0÷6	◆	◆	◆	◆
0÷10	◆	◆	◆	◆
0÷16	◆	◆	◆	◆
0÷25	◆	◆	◆	◆
0÷40	◆	◆	◆	◆
0÷60	◆	◆(1)	◆	◆
0÷100	◆	◆	◆	◆
0÷160	◆	◆	◆	◆
0÷250	◆	◆	◆	◆
0÷300	◆	◆	◆	◆
0÷400	◆	◆	◆	◆
0÷600	◆	◆	◆	◆
0÷1000	◆	◆	◆	◆
0÷1600	◆	◆	◆	◆
0÷2500	◆	◆	◆	◆

(1) not available for 01.30.3

(2) working pressure: max 75% of the full scale value; over pressure limit: 10% of the full scale value

TAB. 2

Range	psi	psi int.	psi ext.
		kPa ext.	bar int.
0÷15	◆	◆	◆
0÷30	◆	◆	◆
0÷60	◆	◆	◆
0÷100	◆	◆	◆
0÷160	◆	◆	◆
0÷200	◆	◆	◆
0÷300	◆	◆	◆
0÷400	◆	◆	◆
0÷600	◆	◆	◆
0÷800	◆	◆	◆
0÷1000	◆	◆	◆
0÷1500	◆	◆	◆
0÷2000	◆	◆	◆
0÷3000	◆	◆	◆
0÷4000	◆	◆	◆
0÷5000	◆	◆	◆
0÷6000	◆	◆	◆
0÷10000	◆	◆	◆
0÷15000	◆	◆	◆
0÷20000	◆	◆	◆
0÷30000 (2)	◆	◆	◆

VACUUM & COMPOUND

TAB. 3

Range	bar	kPa
-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		◆
-100÷2400		◆

TAB. 4

Range	psi*	psi int.*
		kPa ext.
-30/0	◆	◆
-30/15	◆	◆
-30/30	◆	◆
-30/60	◆	◆
-30/30	◆	◆
-30/150	◆	◆

* vacuum unit of measurement: "inHg"

OPTIONS

Description	Dry	Fillable	Filled
S6 version -MONEL 400 wetted parts (1)	◆	◆	◆
Panel mounting kit	◆	◆	◆
"Fluorolube" filling (2)			◆
Suitable for filling with Silicone oil and "Fluorolube" (2)		◆	
Oxygen service M049	◆	◆	◆
Blow out disk with compensating device		◆	
Silicone oil filling (2)			◆
Tropicalisation	◆	◆	◆
Stainless steel label	◆	◆	◆
Safety glass window	◆	◆	◆

(1) extended notes at page 4

(2) gaskets: VITON

SPECIAL VERSION PBPSF115 (1.30)

PBPSF115 MONEL

Monel 400 wetted parts for corrosives fluids (see "Diaphragm seal: introduction").
This option is applicable on model PBPSF115X..., PBPSF115L... and differ from them by:

Accuracy: Grade 1A as per ASME B40.1 ($\pm 1,0\%$ of span).

Process temperature: max +120°C; +65°C when filled.

Socket: MONEL 400.

Elastic element: MONEL 400 by drawn tube without welding.

Welding: MONEL 60 TIG.

Ranges: the same of std. version up to 600 bar (0/5000 psi not available).

Leak Test: Helium Test Search Test (1x10⁻⁷ mbar x l x s⁻¹).

Damping liquid (see "Damping Liquids" table, at page 2): Silicone oil, Fluorolube.

OPTIONS - for Monel 400 execution (1).

Description	Dry	Fillable	Filled
Panel mounting kit	◆	◆	◆
"Fluorolube" filling (2)			◆
Suitable for filling with Silicone oil and "Fluorolube" (2)		◆	
Blow out disk with compensating device		◆	
Silicone oil filling (2)			◆
Tropicalisation	◆	◆	◆
Stainless steel label	◆	◆	◆
Safety glass window	◆	◆	◆

(2) gaskets: VITON

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 our catalogues.

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 our catalogue MA48A-49A

Valves: for construction details and for use limits refer to our data sheet MA.

Pigtail and siphons: recommended with temperatures of 65° C (150° F) or over.
For further details refer to our catalogue MA 05/5.

Pressure snubbers: for further details refer to our data-sheet MA05/45-MA05/47.

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