

# Conversion table for standard pressure units

Unit	bar	mbar	Pa	kPa	MPa	kp/mm <sup>2</sup>	kp/cm <sup>2</sup>	atm	mmHg	mWC	mmWC	psi	"H <sub>2</sub> O	"Hg
<b>1 bar</b>	1	1000	100000	100	0.1	0.01019716	1.019716	0.986923	750.062	10.19716	10197.16	14.50377	401.463	29.53
<b>1 mbar</b>	0.001	1	100	0.1	0.0001	0.0000101972	0.001019716	0.000986923	0.750062	0.01019716	10.19716	0.01450377	0.401463	0.02953
<b>1 Pa</b>	0.00001	0.01	1	0.001	0.000001	0.000000102	0.000010197	0.000009869	0.00750062	0.0001019716	0.1019716	0.000145038	0.00401463	0.0002953
<b>1 kPa</b>	0.01	10	1000	1	0.001	0.01019716	0.01019716	0.00986923	7.50062	0.1019716	101.9716	0.1450377	4.01463	0.2953
<b>1 MPa</b>	10	10000	1000000	1000	1	0.1019716	1.019716	0.986923	7500.62	101.9716	10197.16	145.0377	4014.63	295.3
<b>1 kp/mm<sup>2</sup></b>	98.0665	98066.5	9806650	9806.65	9.80665	1	100	96.7841	7355.9	1000	1000000	142.2344	3937.08	2895.9016
<b>1 kp/cm<sup>2</sup></b>	0.980665	980.665	98066.5	98.0665	0.980665	0.01	1	0.967841	735.559	10	10000	14.22344	393.708	289.59016
<b>1 atm</b>	1.01325	1013.25	101325	101.325	0.101325	0.01033227	1.033227	1	760	10.33227	10332.27	14.6959	406.38858	29.92126
<b>1 mmHg</b>	0.001333224	1.333224	133.3224	0.1333224	0.000133322	0.000013951	0.00135561	0.001315789	1	0.01360	13.60	0.019336	0.53524	0.03937
<b>1 mWC</b>	0.0980665	98.0665	9806.65	980.665	0.00980665	0.000980665	0.001	0.0967841	73.556	1	1000	1.4223274	39.37008	2.8959016
<b>1 mmWC</b>	0.000098067	0.0980665	9.80665	0.00980665	0.000009807	0.000001	0.0001	0.000096784	0.073556	0.001	1	0.001422327	0.03937008	0.002895902
<b>1 psi</b>	0.06894757	68.94757	6894.757	689.4757	0.006894757	0.0006894757	0.070307	0.068046	51.715217	0.70307	703.07	1	2.768	2.03529
<b>1 "H<sub>2</sub>O</b>	0.00249089	2.49089	249.089	0.249089	0.000249089	0.0000254	0.00254	0.002456317	1.86832	0.0254	25.4	0.03613	1	0.07356
<b>1 "Hg</b>	0.0338639	33.8639	3386.4	338.64	0.0033864	0.000345312	0.0345312	0.03342104	25.4	0.345316	345.316	0.49115	13.595	1

# Information on the Pressure Equipment Directive 2014/68/EU (PED)

**The European Pressure Equipment Directive came into force on May 30, 2002. The following paragraphs provide some information on the Directive itself and on our activities within the framework of this Directive:**

- AFRISO-EURO-INDEX GmbH pressure gauges with a full scale value of greater than 0.5 bar are subject to the Pressure Equipment Directive and meet the appropriate requirements.
- Since the future application conditions of most pressure gauges are normally not completely known at the time of manufacture, we always manufacture our products in accordance with the most stringent criteria (gases of group 1).
- This way, our pressure gauges with a full scale value of 200 bar receive a CE mark according to the conformity assessment procedure.
- Pressure gauges with a connection flange of greater than DN 25 receive a CE mark with a full scale range of 0.5 bar and greater.
- The CE mark is attached to the outside of the housing (type designation plate).
- A declaration of conformity is provided on request.
- Detailed operating instructions and the appropriate data sheets are available at [www.afriso.com](http://www.afriso.com) in the download centre.
- Pressure gauges with a full scale value of less than 0.5 bar and loose chemical seals do not fall under the PED and must not carry a CE mark.
- Pressure gauges with a full scale value of between 0.5 bar and 200 bar fall under "Good Engineering Practice" and must not carry a CE mark (section 4, paragraph 3).
- We are not authorised to CE mark pressure gauges without a company name or a company logo.
- Pressure gauges which are used as a part of a safety system installed to protect against exceeding permissible limit values (equipment parts with a safety-related function) are treated separately.
- Our pressure gauges comply with the European Standards EN 837-1 and EN 837-3 and are manufactured and tested according to the appropriate requirements.

## Selection criteria/safety considerations for pressure gauges as per EN 837-2

Medium	Liquid							
Housing	Without filling				With filling			
Nominal size	40/50/63/80		100/160/250		40/50/63/80		100/160/250	
Range bar	≤ 25	> 25	≤ 25	> 25	≤ 25	> 25	≤ 25	> 25
Code for minimum safety version	0	0	0	0	S1	S1	S1	S1
AFRISO type designation	All	All	All	All	D6/D7/D8	D6/D7/D8	D7/D8	D7/D8
Medium	Gas or steam (attention: not applicable to oxygen + acetylene)							
Housing	Without filling				With filling			
Nominal size	40/50/63/80		100/160/250		40/50/63/80		100/160/250	
Range bar	≤ 25	> 25	≤ 25	> 25	≤ 25	> 25	≤ 25	> 25
Code for minimum safety version	0	S2	S1	S3	S1	S2	S1	S3
AFRISO type designation	All	"A"	D4/D9	RF 100/160 Si D4x2	D6/D7/D8	"B"	D6/D7/D8	RF 100/160 Si D8x2
<p><b>Explanations of key:</b></p> <p>"A"      RF 63 Ch D 9x2, RF 63 Si D 4x2, RF 50/63 ST, RF 50/63 GT, RF 63 MK/IK D 3x2</p> <p>"B"      RF 63 D 7x2, RF 63 Si D 8x2</p> <p>0          Pressure gauges without blow-out</p> <p>S1        Pressure gauges with blow-out</p> <p>S2        Safety pressure gauges without solid baffle wall</p> <p>S3        Safety pressure gauges with solid baffle wall (for higher safety level)</p> <p><b>Note 1:</b> Pressure gauges for oxygen and acetylene must meet the requirements for safety pressure gauges (NS 40 – 80 S2, NS 63/100/160 S3).</p> <p><b>Note 2:</b> Pressure gauges with glycerine filling must not be used for oxygen or other oxidation process fluids. High-concentration fluorine liquids and chlorinated liquids (for example, halocarbon) can be used for such applications.</p> <p><b>Note 3:</b> This table contains the standard safety version with the corresponding keys. Users must take into consideration any information they have concerning their special requirements and may also use safety pressure gauges at pressures below than 25 bar.</p>								

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Silicone-filled pressure measuring instruments may not be used in production facilities for paint and lacquer and in paint shop environments.