WILLBRANDT Pressure Units

Absolute and relative atmospheric pressure

In everyday use, pressure is often measured with reference to atmospheric pressure, i.e. when someone says their car tyres have a pressure of 2.3 bar, they are actually 3.3 bar, but 2.3 bar above atmospheric pressure (approx. 1 bar). So 2.3 bar relative atmosphere is the same as 3.3 bar absolute atmosphere.

The unit "bara" or "bar(a)" is used for absolute pressure.

Relative pressures is given in the unit "barg" (bar gauge [manometer]) or "barü" (bar over atmospheric pressure).

Unit symbol	Unit name	$Pa = N/m^2$	bar	m WS	Torr = mm Hg	lbf/in^2	in Hg
$1\ Pa = 1\ N/m^2$	Pascal	1	0.00001	0.0001	0.0075	0.00014	0.000295
1 bar	bar	100000	1	10.1972	750.062	14.5037	29.53
$1\ kp/m^2 = 1\ mm\ WC$	millimetre water column	9.80665	-	0.001	0.07356	0.00142	0.0029
1 m WC	metre water column	9806.65	0.09807	1	73.5559	1.42233	2.8959
$1\ kp/cm^2 = 1\ at$	technical atmosphere	98066.5	0.98067	10	735.559	14.2233	28.959
1 atm	physical atmosphere	101325	1.01325	10.3323	760	14.696	29.9213
1 Torr = 1 mm Hg	millimetre of mercury	133.322	0.00133	0.013595	1	0.01934	0.03937
$1\ lbf/in^2$	pound-force per square inch	6894.76	0.06895	0.70307	51.7149	1	2.03602
$1\ lbf/ft^2$	pound-force per square foot	47.8803	0.00048	0.00488	0.35913	0.00694	0.01414
1 in Hg	inch of mercury	3386.39	0.03386	0.34532	25.4	0.49115	1