## **Pressure Conversion Table**



Bar	КРа	PSI	kg/cm <sup>2</sup>	bar	КРа	PSI	kg/cm <sup>2</sup>
0.1	10	1.450	0.120	11	1100	159.50	11.22
0.2	20	2.900	0.204	12	1200	174.00	02.24
0.3	30	4.350	0.306	13	1300	188.50	13.26
0.4	40	5.800	0.408	14	1400	203.00	14.28
0.5	50	7.250	0.510	15	1500	217.50	15.30
0.6	60	8.700	0.612	16	1600	232.00	16.32
0.7	70	10.150	0.714	17	1700	246.50	17.34
0.8	80	11.160	0.816	18	1800	261.00	18.36
0.9	90	13.050	0.918	19	1900	275.50	19.38
1.0	100	14.500	1.020	20	2000	290.00	20.04
2.0	200	29.00	2.40	30	3000	435.00	30.60
2.5	250	36.250	2.550	35	3500	507.50	35.70
3.0	350	50.750	3.060	40	4000	580.00	40.80
3.5	350	50.750	3.570	45	4500	626.50	45.90
4.0	400	58.000	4.080	50	5000	725.00	51.00
4.5	450	65.250	4.590	55	5500	797.50	56.10
5.0	500	72.500	5.100	60	6000	870.00	61.20
5.5	550	79.750	5.610	65	6500	942.50	66.30
6.0	600	87.000	6.120	70	7000	1015.00	71.40
7.0	700	101.500	7.140	75	7500	1087.50	76.50
8.0	800	116.000	8.160	80	8000	1160.00	81.60
9.0	900	130.500	9.180	90	9000	1305.00	91.80
10.0	1000	145.000	10.200	100	10000	1450.00	102.00

## **Basic Graphic Symbols**

Denomination	Applications	Symbol	Denomination	Applications	Symbol
Circle, semicircle	Pumps, compressors, motors measurement equipments Non-return valves, rotating couplings Knuckles, rings Floating equipments	0 0 0	Non-return valve with neck	Valve allowing free flow in one direction and blocking (neck) in the other one.	*
Single-acting cylinder	Fluid pressure is applied in one sense only (forward stroke)  Back stroke : by undefined force  By means of a spring		Quick exhaust valve	In case of a pressure drop in the input duct, the output duct is connected with free air.	
Double-acting cylinder	Fluid pressure is applied alternatively in two directions (forward and back stroke) Single rod Double rod		Pressure control (security valve)	Pressure control at the input hole by means of the opening of the exhaust hole (e.g. connected to the receiver or the free air) against a counter force.	- w
Differential cylinder	The ratio between the cylinder section and the ring section of the piston near the rod is essential for the cylinder operation.		Pressure control (controlling device)	The pressure is controlled (security valve) to the counter force value or by means of a controlling device to a lower value.	
Cylinder with non- adjustable cushion	Acting from one side only  Acting from both sides		Pressure source  Hydraulic pressure source  Pneumatic pressure source		<ul><li>○-</li><li>•►</li><li>•►</li></ul>
Double-acting telescopic cylinder	Cylinder with several pistons which enter one into the other with forward and backward movement.		Pipes	Working, return and feeding pipe  Control pipe (straight line for simplified representations)  Escape pipe (blow-by)	

## Basic Graphic Symbols



Denomination	Applications	Symbol	Denomination	Applications	Symbol
Bleeder vent and air exhaust	Bleeder vent  Exhaust without connections  Exhaust with connections	<u></u>	Filter		$\Diamond$
Rapid connection	Connected : without return valve With return valve Disconnected : open pipe Closed pipe with non-return valve	→← →← → →	Condensate separator	With manual control exhaust With automatic exhaust	
Pneumatic accumulator*	Reservoir in which the air under pressure is stored up to a maximum fixed pressure		Dryer	Air dryer by means of chemical agents	$\Leftrightarrow$

Notes





















<sup>\*</sup>Not foreseen by ISO regulations