Partnership. With Guarantee.

Hose rupture safety valve
Series HB



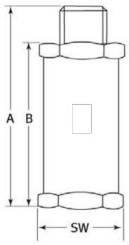




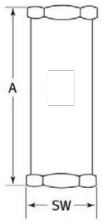
Design type	Hose rupture safety valve after EN ISO 4414, protects personnel and the working environment from possible damage caused by bursting of a compressed air system or hose, operation- and adjustment-secured, TÜV test mark 01-02-0145
Function	If damage occurs due to hose or pipe rupture, the system immediately throttles the flow down to a small residual flow rate.. Undamaged parts of the compressed air network remain under pressure. The affected segment or the hose can be replaced safely. After servicing, the residual flow slowly refills the affected segment to the operating pressure level. As soon as this level is reached again, the system reopens the line for normal operation.
Connection	G1/4"...G2" female/female or rather G1/4"...G1/2" internal/external according to ISO228/1
Materials	Body Aluminium, Piston POM (G1/4"...G1/2") or rather Aluminium (G3/4"...G2"), Spring Stainless steel, Seals NBR
Application range	filtered compressed air
Medium temperature	for G1/4"...G1/2": -20...+80°C for G3/4"...G2": -20...+120°C
Inlet pressure	max. 18bar
Pressure drop	0,1...0,4bar
Closing values	see tables
Flow direction	is marked by an arrow
Mounting type	Installation in rigid piping system
Mounting position	any
Special versions	other closing values, Stainless steel
Note	The hose rupture safety device must always be mounted on the permanently installed compressed air supply system (pipe, fittings, etc.) - Never on the hose itself!

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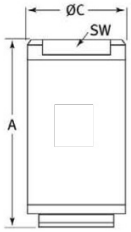
Dimensions



G1/4"..G1/2" internal/external



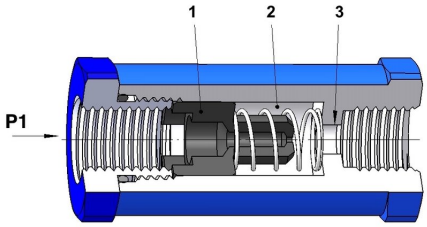
G1/4"...G1/2" female/female



G3/4"...G2" female/female

Connection	DN [mm]	A [mm]	B	ØC	SW	Pressure range [bar]	Connection type	Weight [g]	Type
1/4"	6	58,5	48,5	-	22	0...18	internal/external	36	HB01-14
3/8"	10	69,5	58	-	27	0...18	internal/external	62	HB01-38
1/2"	12	79	64	-	30	0...18	internal/external	85	HB01-12
1/4"	6	49	-	-	22	0...18	female/female	30	HB02-14
3/8"	10	58	-	-	27	0...18	female/female	58	HB02-38
1/2"	12	65	-	-	30	0...18	female/female	78	HB02-12
3/4"	19	76	-	36	30	0...18	female/female	107	HB02-34
1"	25	100	-	50	41	0...18	female/female	300	HB02-10
2"	40	130	-	80	70	0...18	female/female	775	HB02-20

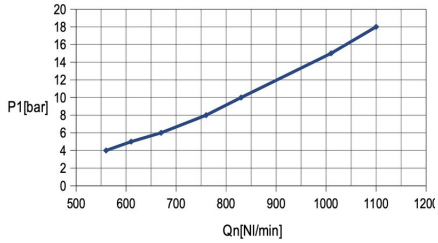
Functionality



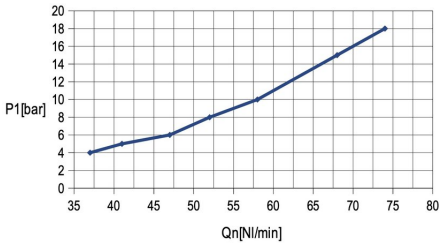
1		The air supply is via P1.
2		The air flow passes through the poppet (1) and flows through the seat (3).
3		The flow is slowed down by longitudinal grooves on the top side of the plunger.
4		In the event of excessive flow, the air cannot pass the plunger quickly enough and pushes it against the spring (2) underneath in the direction of the seat..
5		The maximum flow rate is shown on the diagrams "Closing values"
6		If the flow exceeds this value, the air supply is automatically blocked.

Closing values

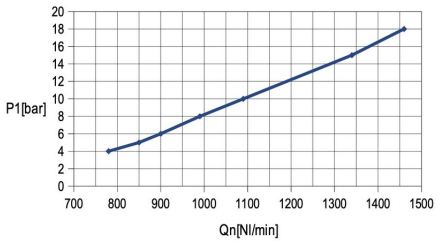
P1 [bar]	Δp [bar]	Closing values Qn [Nl/min]	Type HB..-14
4	0,4	560	
5	0,4	610	
6	0,4	670	
8	0,4	760	
10	0,4	830	
15	0,4	1010	
18	0,4	1100	



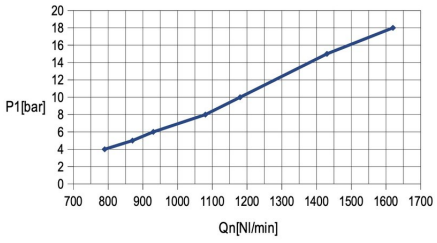
P1 [bar]	Δp [bar]	Closing values Qn [Nl/min]	Type HB..-14-LF
4	0,06	37	
5	0,06	41	
6	0,07	47	
8	0,06	52	
10	0,07	58	
15	0,07	68	
18	0,07	74	



P1 [bar]	Δp [bar]	Closing values Qn [Nl/min]	Type HB..-14-HF
4	1,0	780	
5	1,0	850	
6	0,9	900	
8	0,9	990	
10	0,9	1090	
15	0,9	1340	
18	0,9	1460	

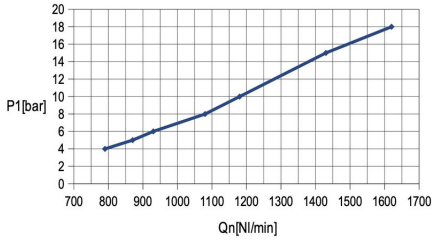


P1 [bar]	Δp [bar]	Closing values Qn [Nl/min]	Type HB..-38
4	0,19	790	
5	0,20	870	
6	0,19	930	
8	0,20	1080	
10	0,21	1180	
15	0,20	1430	
18	0,20	1620	

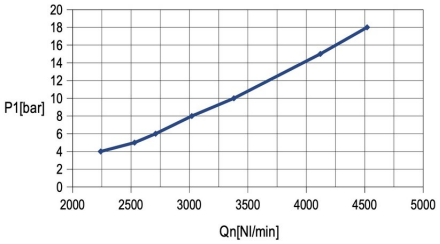


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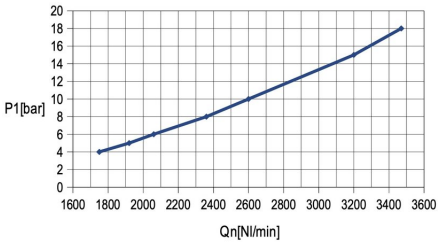
P1 [bar]	Δp [bar]	Closing values Qn [Nl/min]	Type HB..-38-HF
4	0,23	1090	
5	0,23	1200	
6	0,22	1290	
8	0,22	1450	
10	0,23	1620	
15	0,23	1960	
18	0,23	2150	



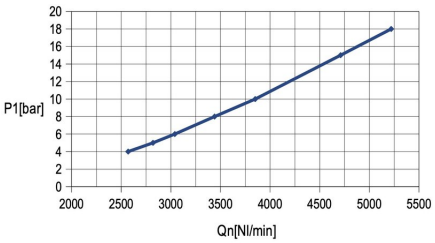
P1 [bar]	Δp [bar]	Closing values Qn [Nl/min]	Type HB..-12
4	0,35	2240	
5	0,35	2530	
6	0,35	2710	
8	0,36	3020	
10	0,37	3380	
15	0,37	4120	
18	0,36	4520	

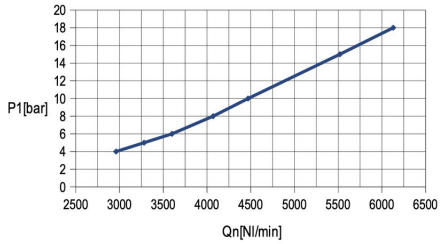


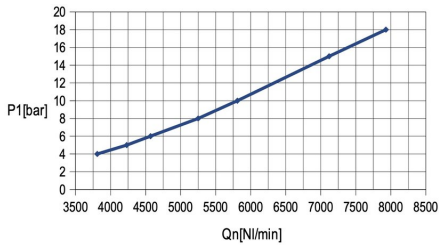
P1 [bar]	Δp [bar]	Closing values Qn [Nl/min]	Type HB..-12-LF
4	0,26	1750	
5	0,26	1920	
6	0,26	2060	
8	0,26	2360	
10	0,25	2600	
15	0,24	3200	
18	0,24	3470	

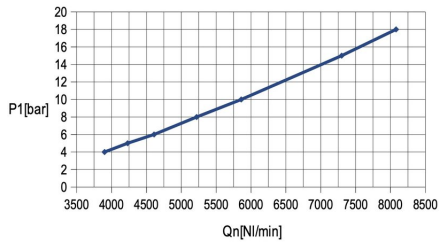


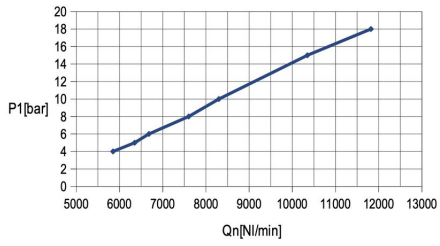
P1 [bar]	Δp [bar]	Closing values Qn [Nl/min]	Type HB..-12-HF
4	0,41	2570	
5	0,41	2820	
6	0,40	3040	
8	0,41	3440	
10	0,42	3850	
15	0,42	4710	
18	0,41	5220	



P1 [bar]	Δp [bar]	Closing values Qn [Nl/min]	Type HB..-34
4	0,24	6130	
5	0,24	5520	
6	0,25	4470	
8	0,24	4070	
10	0,25	3380	
15	0,25	4120	
18	0,25	4520	

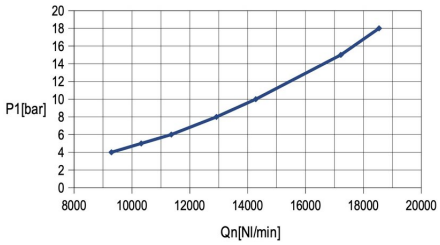
P1 [bar]	Δp [bar]	Closing values Qn [Nl/min]	Type HB..-34-HF
4	0,31	3810	
5	0,31	4230	
6	0,31	4570	
8	0,29	5250	
10	0,3	5810	
15	0,29	7120	
18	0,29	7930	

P1 [bar]	Δp [bar]	Closing values Qn [Nl/min]	Type HB..-10
4	0,20	3900	
5	0,20	4230	
6	0,21	4610	
8	0,22	5220	
10	0,21	5860	
15	0,20	7300	
18	0,21	8080	

P1 [bar]	Δp [bar]	Closing values Qn [Nl/min]	Type HB..-10-HF
4	0,26	5850	
5	0,27	6350	
6	0,27	6680	
8	0,27	7600	
10	0,27	8300	
15	0,27	10350	
18	0,27	11820	

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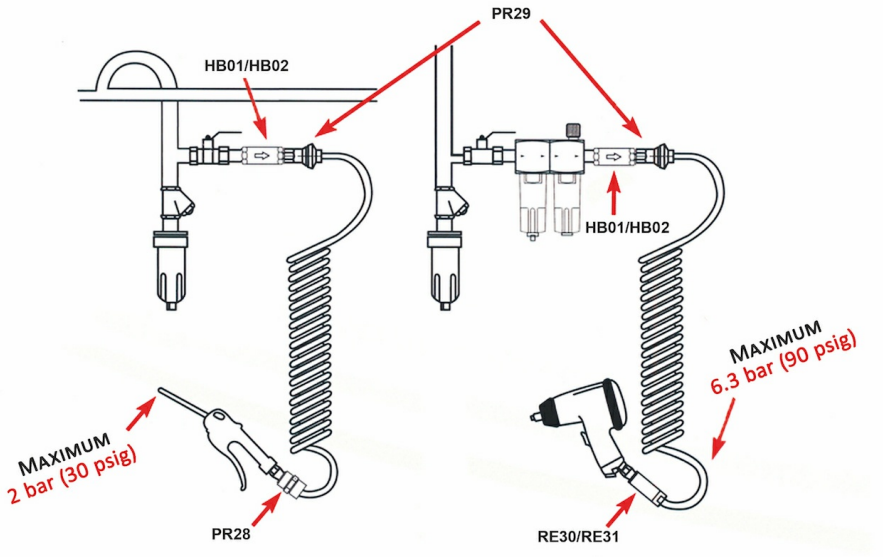
P1 [bar]	Δp [bar]	Closing values Qn [Nl/min]	Type HB..-20
4	0,13	9290	
5	0,13	10320	
6	0,13	11360	
8	0,13	12920	
10	0,13	14280	
15	0,13	17220	
18	0,13	18540	



Selection of the correct hose rupture safety valve

1	Choosing the correct size is of utmost importance. The flow rate must be sufficient for normal operation and, in the event of a hose or pipe rupture, the hose rupture safety device must trip. If the flow rate is too low, the hose rupture safety valve does not close. The correct size must be confirmed with a functional test. The hose rupture safety valve closes when the corresponding flow rate is reached with a tolerance of +/- 10%.
2	Relevant for size selection (sizing) are: Pressure at the hose rupture safety device (P1) Air consumption of the tool at which pressure Inner diameter of the hose Hose length Nominal size of compressed air fittings (pressure regulators, couplings, coupling plugs) upstream and downstream of the hose rupture safety device
3	Air consumption of the tool: The maximum air consumption of the tool and the required pressure are decisive for determining the correct hose rupture safety device. If the air consumption at the tool is not known, it must be measured. Theoretical specifications are insufficient and can lead to malfunctions. Using the flow rate value and the shut-off point table, the correct hose rupture safety valve can now be determined. As a rule of thumb, the hose rupture safety valve should provide at least 20% more flow rate, than the tool requires during normal operation.
4	Inner diameter of the hose: As guideline values for the minimum internal diameter, the following values must be observed. 1/4" = 6mm, 3/8" = 8mm, 1/2" = 13mm, 3/4" = 16mm, 1" = 19mm, 2" = 40mm
5	Length of the hose line: Very long hoses can cause a pressure drop at the hose end and lead to a reduction in flow rate. As a result, the function of the hose rupture safety device is no longer guaranteed. If the internal diameter is increased, the hose can be extended.
6	Nominal size of compressed air fittings (pressure regulators, couplings, coupling plugs): The nominal diameter of the compressed air valves must be at least equal to the nominal diameter (DN) of the hose rupture safety device.
7	Example: Air consumption Tool = 700Nl/min +20% Safety = 840Nl/min, Pressure 6bar Result: For the example, the hose rupture safety valve G3/8" is the correct size.

Application example



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