

		Air fuses »Hose Guard«	
		222.XX	223.XX
		G 1/4 to G 2, female / female G 1/4 to 1/2, female / male	
Max. input pressure 18 bar			
- TÜV - PED			

Efficient protection against ruptured hoses or tubes in a compressed air system. The flow rates are set to allow normal air consumption when using air tools.

Hose Guard detects a rupture in a hose or tube and restricts the supply of compressed air to a small but constant bleed in a fraction of a second. Unaffected parts of the system remain pressurised, so that the damaged hose or hose segment can be replaced without difficulty. Once the broken hose or tube has been repaired, the replaced segment is gradually repressurised to its previous working level. As soon as this is the case, Hose Guard reopens the hose and normal operation is resumed.

Standards / directives

DIN EN ISO 4414	Safety of machinery – Safety requirements for fluid power systems and their components
2014/68/EU	Unmarked (acc. to Annex II, Diagram 2, Art. 3, Section 3 is applicable)

Features

- Protects personnel, machinery and plant against damage if a compressed air system or hose ruptures
- Complies with EU standard DIN EN ISO 4414:2011-04; Art. 5.4.5.11
- Reliable and tamper-proof
- Compatible with all compressed air systems

Technical data

Max. primary pressure	
G 1/4 to G 2	18 bar
Temperature	
G 1/4 to G 3/4	-20 to +80 °C
G 1 to G 2	-20 to +120 °C
Mounting position	Horizontal / vertical

Materials

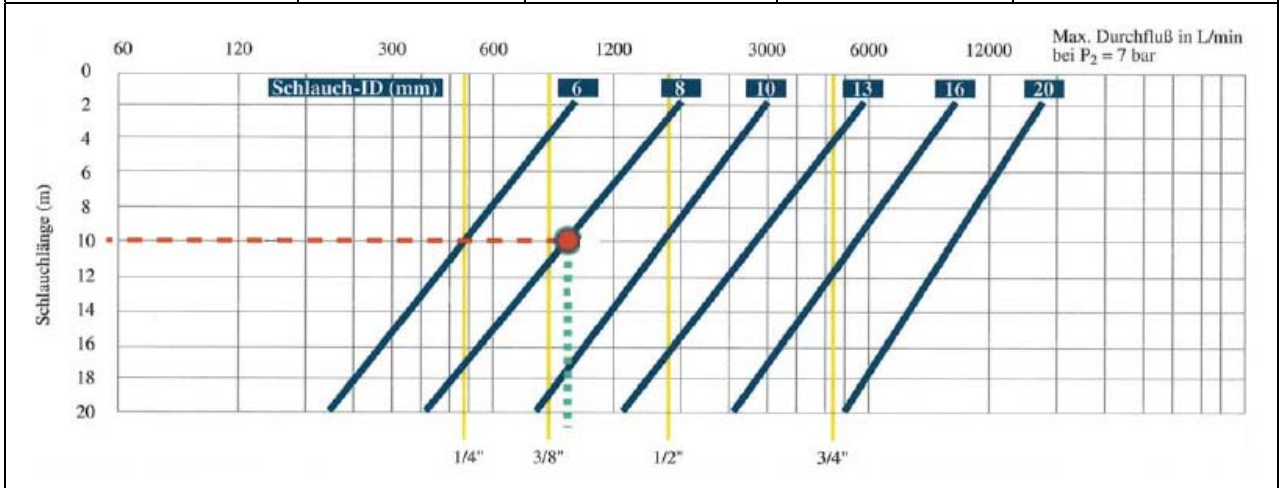
Body	Aluminium
Piston	
G 1/4 to G 1/2	Polyacetate (POM)
G 3/4 to G 2	Aluminium
Spring	Stainless steel
Seals	NBR

Convenient handling

Air quality	ISO 8573-1 Class 5
Min. Ø of supply line	≥ Ø of female thread (see table)
Position in the installation	The air fuse must always be fitted to the fixed-mounted compressed air supply system (tube, fittings, etc.). It should never be attached directly to the hose!! If the air fuse is installed upstream of a valve, quick disconnect coupling, etc., the diameter of its inner bore / female thread must be greater than or equal to the diameter of the coupling's female thread (see table).

Optimal assignment / sizing of the hose diameter / length

Thread	Hose length 0 to 10 m		Hose length 10 to 20 m	
	Inside Ø	Min. air flow	Inside Ø	Min. air flow
1/4"	7	480	8	480
3/8"	10	1100	12	1100
1/2"	12	2000	14	2000
3/4"	18	3800	20	3800
1"	24	6500	26	6500
2"	45	16000	50	16000



Operating principle

P is the inlet.

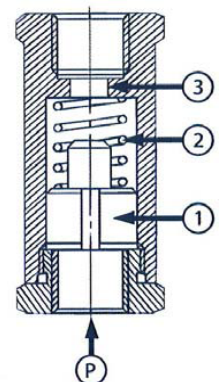
The air flows through the piston **1** and continues through the seat.

3 The air flow passing through the piston is slowed down by longitudinal grooves on the outer side. If the flow is too high, the air cannot pass through the piston quickly enough and the piston is pressed down against the spring **2** and towards the seat. The maximum flow is shown in the graphs (see below).

If the values indicated in the graphs are exceeded, the forces that are produced press the plunger against the seat and close the main bore.

The plunger has a tiny nozzle to allow a constant bleed of compressed air.

The system can thus be repressurised after the broken hose has been repaired. Once the "hose side" has been filled, the forces upstream and downstream of the valve are more or less in equilibrium and the piston is reset to the "zero" position by the spring.

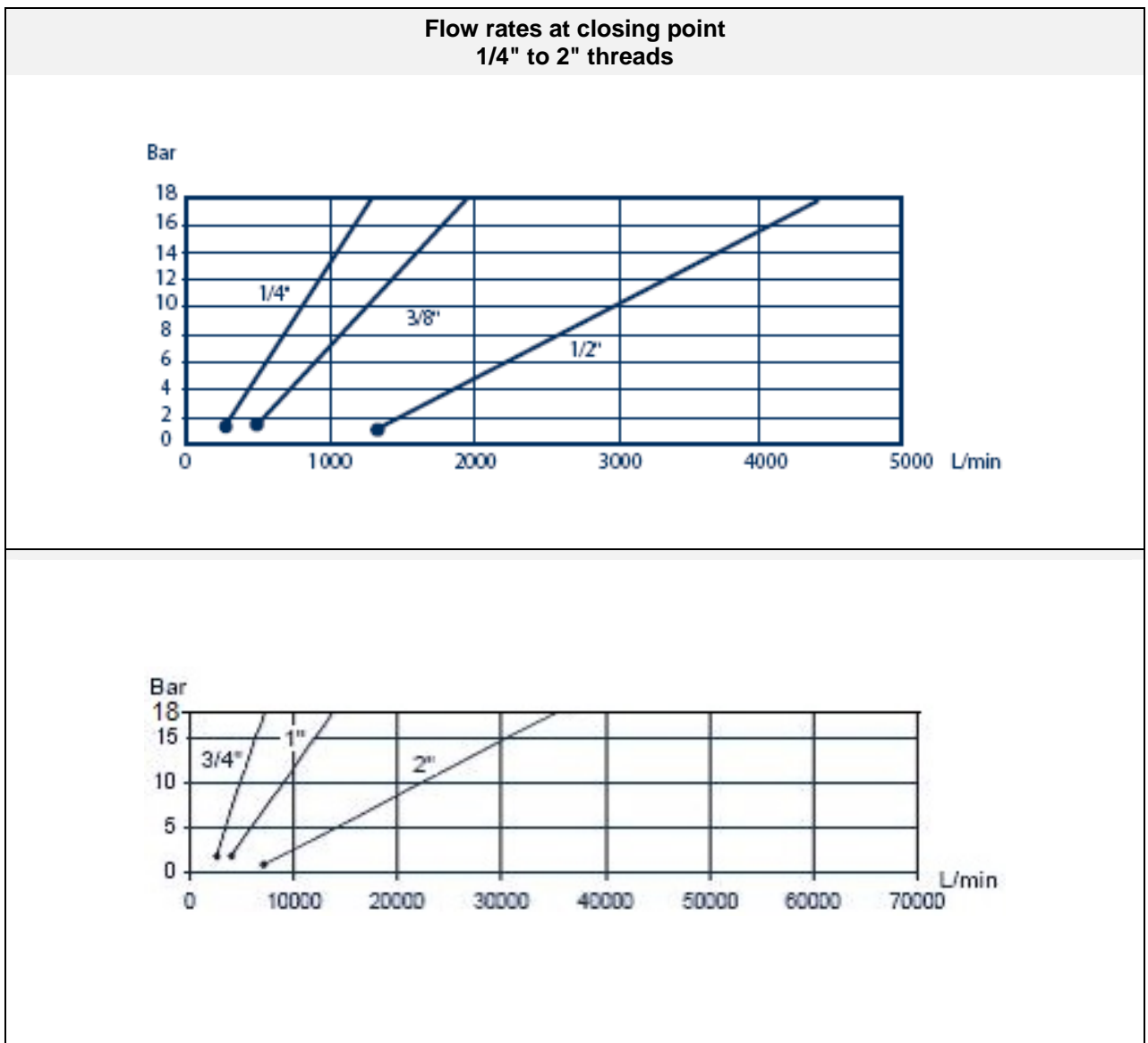


What needs to be taken into account:

All the following measurement values (flow for closing function) apply for a HoseGuard® (hose breakage safety device) charged with the appropriate pressure P1 **and with a free Pa outlet**.

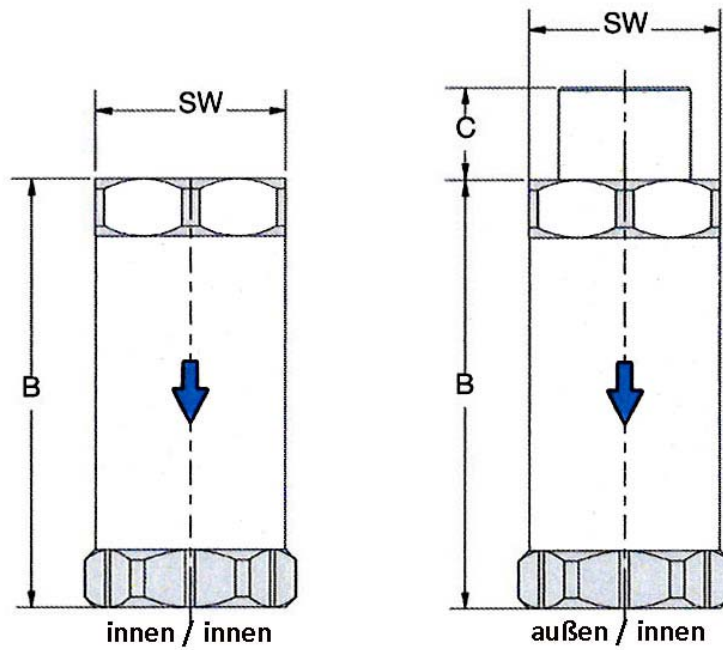
If a component is fitted after the HoseGuard® **which reduces the flow performance** (e.g. linkage, screw fitting, hose etc.), it is possible that the required flow for the defined closing point is no longer attained and that the HoseGuard® will not close.

In this case the application must be appropriately tested. It is possible that another component may have to be selected after the HoseGuard®, or a smaller HoseGuard®, depending on the test result.



Flow rate

Max. flow rate 8 bar	222.14 105650	222.38 105651	222.12 105652	223.14 105653	223.38 105654	223.12 105655	223.34 105656	222.10 105657	222.20 105658
l/min	700	1100	2600	700	1100	2600	4200	7000	20000
m³/h	42	66	156	42	66	156	252	420	1200



Art. No.	Ident No.	B mm	C mm	a/f mm
222.14	105650	48	10	22
222.38	105651	59	12	27
222.12	105652	65	15	30
223.14	105653	48	-	22
223.38	105654	59	-	27
223.12	105655	65	-	30
223.34	105656	76	-	30
222.10	105657	100	-	41
222.20	105658	130	-	70