

BURSTING DISCS FOR REFRIGERATION

BS

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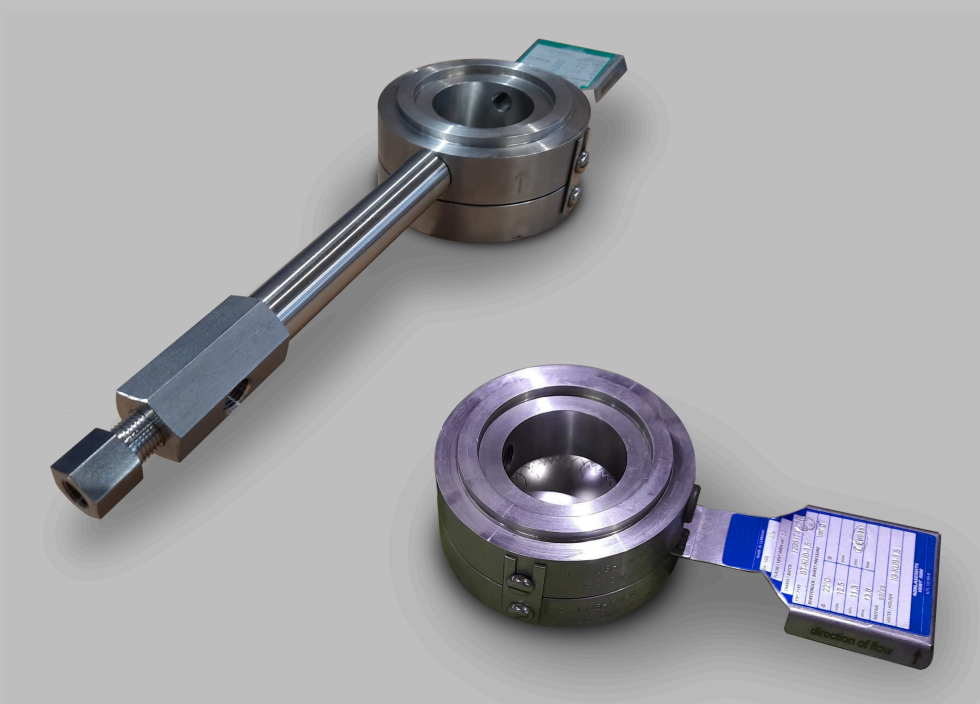


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1 BS

BS: Bursting disc - with holder unit

BS	Connection	Form	Material	Valve type
BS	Materials			
BS PS40 / PS63	Flange connection	Straight-way	NIRO	BT-KUB
				IG-KUB-FN-S
				EE NIRO G1/4"
	Threaded connection	Straight-way	NIRO	GG-UKB
				EE NIRO G1/8"
Information	Bursting discs in the holder unit with built-in vent valve			
	Legal notice			

NIRO = stainless steel 1.4401 or equivalent/higher quality ss316(L)

2 BS materials

GG-UKB-LS reverse acting bursting disc unit

KUB buckling pin reverse acting bursting disc

IKB reverse acting bursting disc

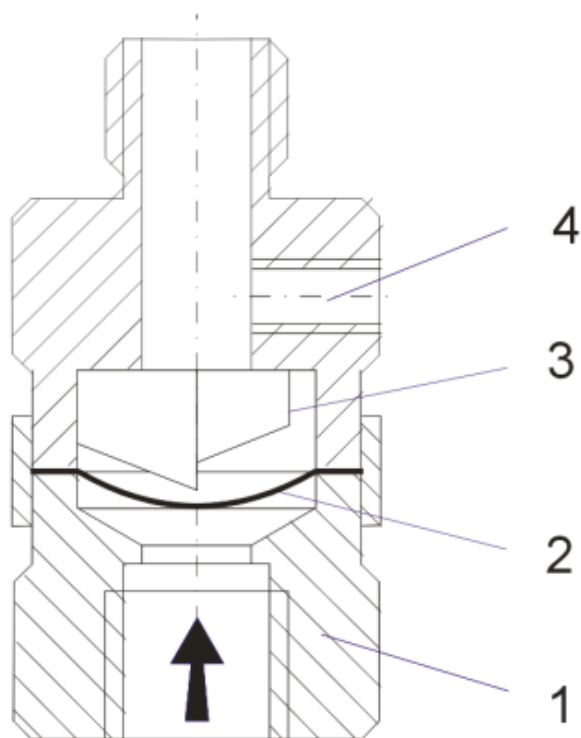


Illustration 1:

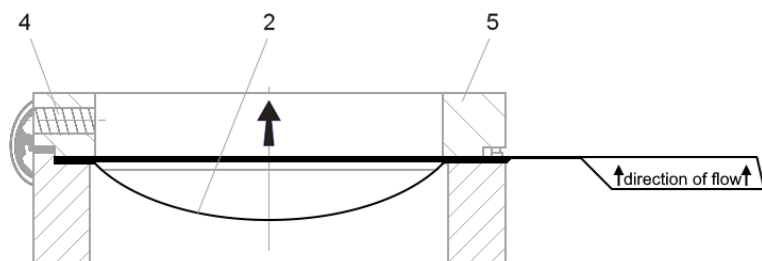
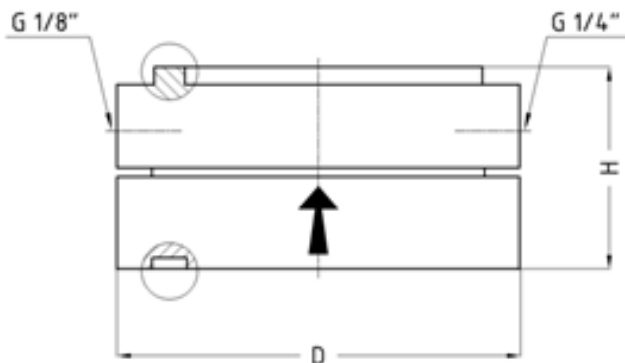


Illustration 2:

Part		Material stainless steel
1	Bursting disc unit	1.4301 (ss304)
2	Buckling pin reverse acting bursting disc	1.4401, 1.4404, 1.4435 (ss316/ss316L)
3	Three-part knife	Stainless steel
4	Connection for pressure chamber monitoring	G 1/4" + G 1/8"
5	Bursting discs - holder unit	1.4301 (ss304)

3 BT-KUB / BT-IKB / IG-KUB-FN-SS

BS stainless steel bursting disc - with holder unit for installation between flanges for natural refrigerants (NH₃, CO₂) and non-corrosive gases according to EN 378-1



Pressure/temperature operating limits:

PS: Max. allowable operating pressure in bar

TS: Permissible operating temperature in °C corresponding to the permissible operating pressures (PS)

PN: Nominal pressure rating

DN / INCH	PN	-60	-10	+50	+150	TS [°C]
DN 15...25 1/2"...2 1/2"	PN63	63	63	63	63	PS [bar]
DN 32...DN80 1 1/4"...3"	PN40	40	40	40	40	PS [bar]

Application:

Combinations of safety valves and bursting safety devices are used where special tightness is required, where the space between the bursting disc and the safety valve is monitored, and to protect the safety valve from harmful influences of the operating medium, e.g. contamination, sticking, corrosion. The permissible working pressure of the system must not exceed 90% of the lower bursting tolerance. The reverse acting bursting disc is suitable for gaseous media, not for liquid. The bursting tolerance is +/- 10% or optionally +/- 5%. /

Connections for pressure chamber monitoring

1 x G1/4", 1 x G1/8" female thread. The connections are sealed with a blind plug on delivery.

PN	DN	INCH	D	A0*)	H
40	15	1/2"	51	270	50
40	20	3/4"	61	270	50
40	25	1"	71	450	51
40	32	1 1/4"	92	850	*) Narrowest flow cross-section 51
40	40	1 1/2"	92	1100	51
40	50	2"	105	2200	56
40	65	2 1/2"	127	3500	60
40	80	3"	142	5000	61.5

Table 1: Dimensions

PN	DN	INCH	D	A0*)	H
63	15	1/2"	72	270	50
63	20	3/4"	72	270	50
63	25	1"	82	450	51

*) Narrowest flow cross-section

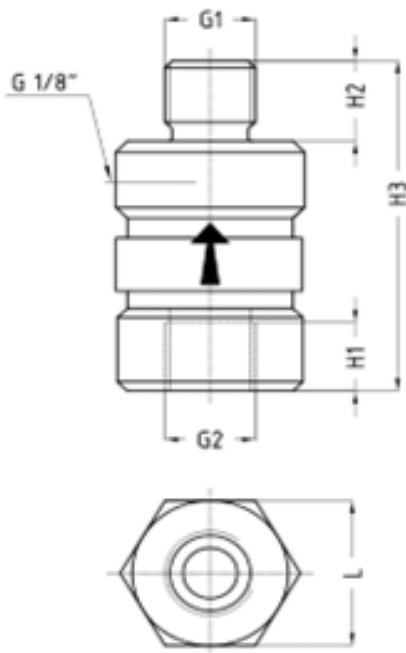
EE NIRO G1/4"

Vent valve unit

When combining a bursting disc and a safety valve, the pressure chamber between the two safety devices must be monitored. One possibility for this is, for example, the vent valve unit. For further information, see **Bursting discs in the holder unit with built-in vent valve** [► 9]

4 GG-UKB-LS

BS stainless steel reverse acting bursting disc unit with threaded connections for natural refrigerants (NH₃, CO₂) and non-corrosive gases according to EN 378-1



Pressure/temperature operating limits:

PS: Max. allowable operating pressure in bar

TS: Permissible operating temperature in °C corresponding to the permissible operating pressures (PS)

PN: Nominal pressure rating

DN / INCH	PN	-60	-10	+50	+150	TS [°C]
DN 15 G1/2"	PN40	40	40	40	40	PS [bar]

Application:

Combinations of safety valves and bursting safety devices are used where special tightness is required, where the space between the bursting disc and the safety valve is monitored, and to protect the safety valve from harmful influences of the operating medium, e.g. contamination, sticking, corrosion. The permissible working pressure of the system must not exceed 90% of the lower bursting tolerance. The reverse acting bursting disc unit is suitable for gaseous media, not for liquid. The bursting tolerance is +/- 10% or optionally +/- 5%.

Connections for pressure chamber monitoring:

1 x G1/4", 1 x G1/8" female thread. The connections are sealed with a blind plug on delivery.

DN	INCH	A0*)	G1	G2	H1	H2	H3	L
15	1/2"	120	G1/2"-LH	G1/2"-LH	17	20	82	SW36

Table 2: Dimensions

*) Narrowest flow cross-section

EE NIRO G1/8"

Vent valve unit:

When combining a bursting disc and a safety valve, the pressure chamber between the two safety devices must be monitored. One possibility for this is, for example, the vent valve unit. For further information, see **Bursting discs in the holder unit with built-in vent valve** [► 9].

5 Bursting discs in the holder unit with built-in vent valve

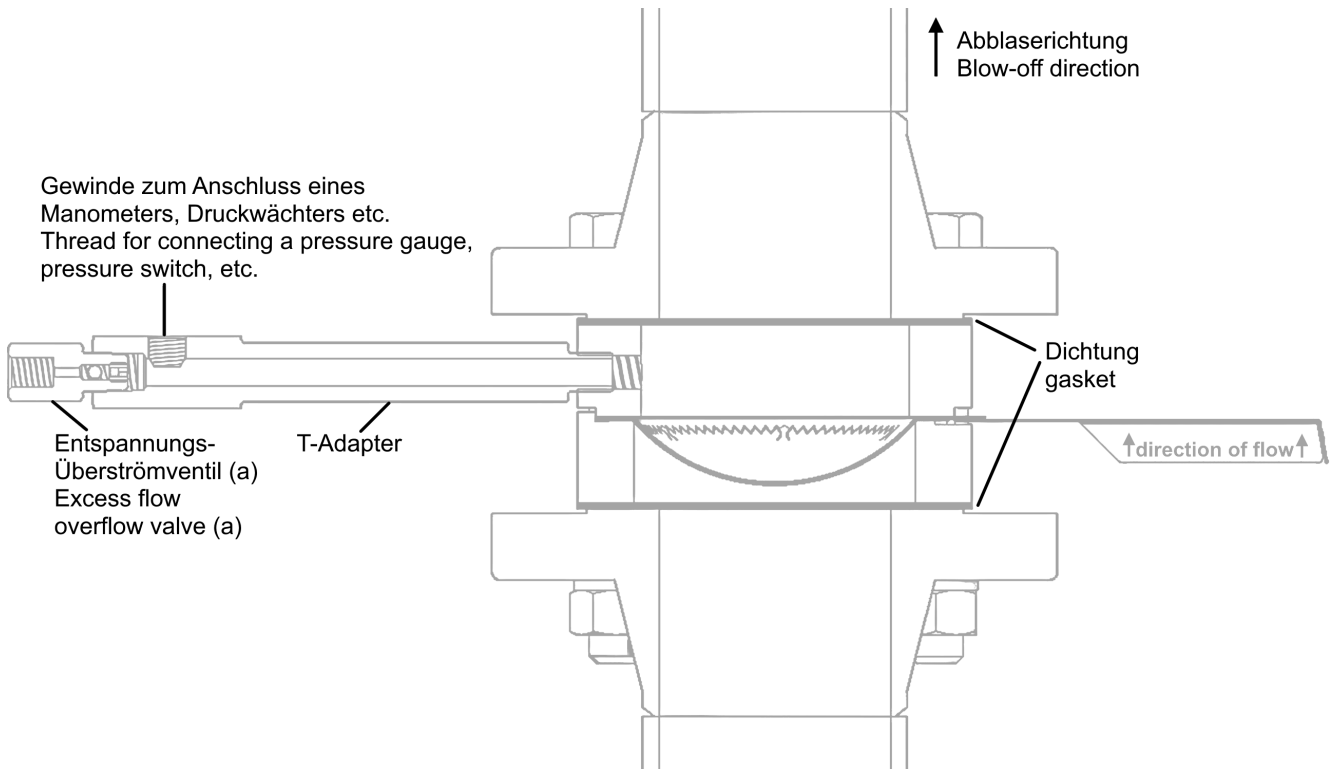
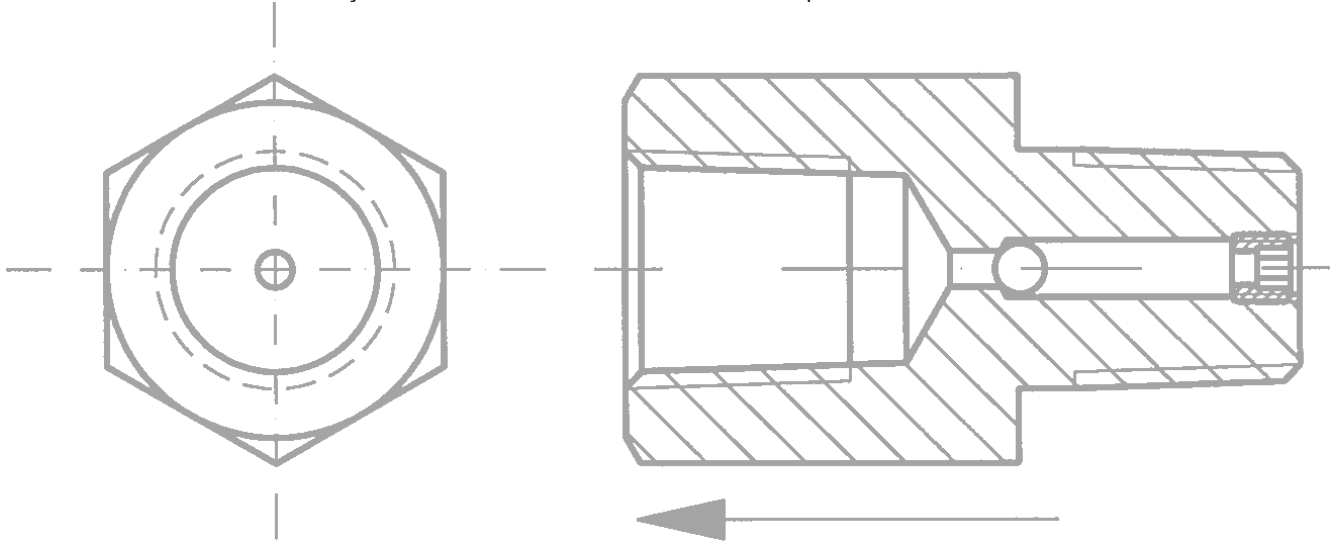


Illustration 3: Standard connection threads are G1/4" or 1/4" NPT.

Caution! The vent valve is only functional in a horizontal installation position.



Detail a: The valve unit shown is recommended according to AD-2000 data sheet A1 (equipment of pressure vessels) and the ASME data sheet when using bursting discs upstream of safety valves. The vent valve keeps the space between the bursting disc and the safety valve depressurised in the event of minor leaks. It prevents the generation of a back pressure. If overpressure occurs, e.g. when the bursting disc opens, the valve ball is pressed onto its seat. The venting process is prevented. In addition, there is a connection option for pressure gauges, pressure switches, etc.

6 Legal notices

- GEA AWP valves must be handled in accordance with the GEA AWP operating regulations.
- The safety instructions mentioned in the operating regulations must be observed.
- A hazard analysis is available for GEA AWP valves.
- GEA AWP valves must only be handled by authorised persons.
- The instructions for the use of personal protective equipment (PPE) must be observed.
- GEA AWP valves must be used for their intended purpose.
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