

SRK 22A

Non-Return Valve

SRK 22A
**suitable for clamp connections to DIN 32676,
for pipes to DIN 11866 (DIN 11850, ISO 1127, ASME-BPE)**
PN 10
Description

Non-return valve designed for clamp connections. With spring for installation in any plane. Without spring only for vertical lines with upward flow. Centering by means of joint clamp. For liquids, gases and vapours. Observe classification according to Pressure Equipment Directive (PED).

Particularly suitable for installation downstream of GESTRA steam traps type STERLine SMK 22-8x and as non-return valve for pumps.

Pressure & temperature ratings

SRK 22A	DIN 32676 / ISO 2852 / ASME BPE			Design
[°C]	-200	20	185	metal-to-metal (standard)
[bar] DN 15 – 50	10.0	10.0	6.0	

Valve disc sealing

SRK 22A	t _{min} [°C]	t _{max} [°C]	Application	Leakrate
Metal-to-metal DN 15 – 50	-200	+200	liquids, gases, steam	EN 12266-1, class C
EPDM (FDA approved)	-40	+150	water, condensate, steam	EN 12266-1, class A
FPM (FDA approved)	-25	+200	mineral oils, gases, air	EN 12266-1, class A

For additional information on chemical resistance go to www.gestra.de and click on "Technical Support" and then on "Chemical Resistance".

End connection

SRK 22A		
DIN	ISO	ASME
Flanges to DIN 32676 Pipes to DIN 11850	Flanges to ISO 2852 Pipes to ISO 1127	Flanges to ASME BPE-2007 Pipes to ASME BPE-2007

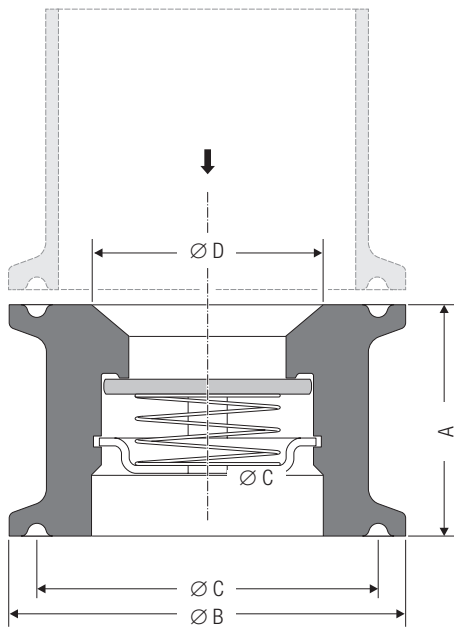
Materials

SRK 22A			
DN 15 – 50	DIN / EN	ASTM	Category
Body, seat and guide ribs	1.4408	A 351CF8M	Stainless steel
Valve disc, spring retainer, spring	1.4571	AISI 316Ti	Stainless steel

Surface roughness

SRK 22A		Surface roughness Ra [µm]
DN 15 – 50		
Body, plasma polished	Outside contour	1.2
	Inside contour	6.3

SRK 22A also available with electropolished surface.



Parts drawn in broken line are not supplied by GESTRA.

Dimensions (clamp pipe connection to DIN 32676 with flange)

SRK 22A							
Nominal size	DN	15	20	25	32	40	50
Length	A [mm]	23.0	29.5	33.5	38.0	43.0	54.0
Flange diameter	B [mm]	50.5	50.5	64.0	77.5	91.0	106.0
Groove diameter	C [mm]	43.5	43.5	56.5	70.5	83.5	97.0
Inside diameter	D [mm]	29.5	29.5	44.0	56.5	66.0	81.0
Dimensions of pipe end connections							
Pipe dimensions DIN 11850	DN 25 ¹⁾	29.0 x 1.5					
	DN 32 ¹⁾	35.0 x 1.5					
	DN 40	41.0 x 1.5					
	DN 50		53.0 x 1.5				
	DN 65					70.0 x 2.0	
	DN 80						85.0 x 2.0
Pipe dimensions ISO 1127	OD 21.3 ¹⁾	21.3 x 1.6					
	OD 26.9 ¹⁾	26.9 x 1.6					
	OD 33.7	33.7 x 2.0					
	OD 42.4 ¹⁾		42.4 x 2.0				
	OD 48.3		48.3 x 2.0				
	OD 60.3				60.3 x 2.0		
	OD 76.1					76.1 x 2.0	
	OD 88.9						88.9 x 2.0
Pipe dimensions ASME BPE	NPS 1" ¹⁾	25.4 x 1.65					
	NPS 1,5"	38.1 x 1.65					
	NPS 2"		50.8 x 1.65				
	NPS 2,5"				63.5 x 1.65		
	NPS 3"					76.2 x 1.65	

¹⁾ To ensure a gap-free connection for these pipe diameters a special clamp flange with transition piece (for inside diameter $\varnothing D$) is required. In this case a gasket with inside diameter $\varnothing D$ must be used.

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Opening Pressures

Differential pressures at zero volume flowrate

DN	Opening pressures [mbar]			
	without spring	Direction of flow		
		↑	↑	→
15	2.5	10	7.5	5
20	2.5	10	7.5	5
25	2.5	10	7.5	5
32	3.5	12	8.5	5
40	4.0	13	9	5
50	4.5	14	9.5	5

Special springs for given opening pressures available on request at extra cost.

Specification Text

GESTRA Non-return valve type SRK 22A for clamp connections to DIN 32676 PN 10.

Short overall length for sandwiching between flanges.

Suitable for clamp connections to DIN 32676 / ISO 2852 / ASME BPE

Centering via clamp connection. Broad sealing surfaces. Installation in any position. Springs are available with various closing forces. Metal-to-metal seat or soft seat (EPDM or FPM).

Designed in accordance with PED 97/23/EC, paragraph 3.3, for gases of fluid group 2. Specification of nominal pressure, size and body material according to EN 19.

Please note:

The selected non-return valve must ensure that the minimum volume flowrate keeps the valve disk in the open position (see Pressure Drop Chart, "Full opening / stable range"). The valves should not be used on compressors or where pulsating flow exists. For these applications please consult us.

Supply in accordance with our general terms of business.

Pressure Drop Chart

The curves given in the chart are valid for water at 20 °C. To read the pressure drop for other fluids the equivalent water volume flowrate \dot{V}_w must be calculated and used in the graph.

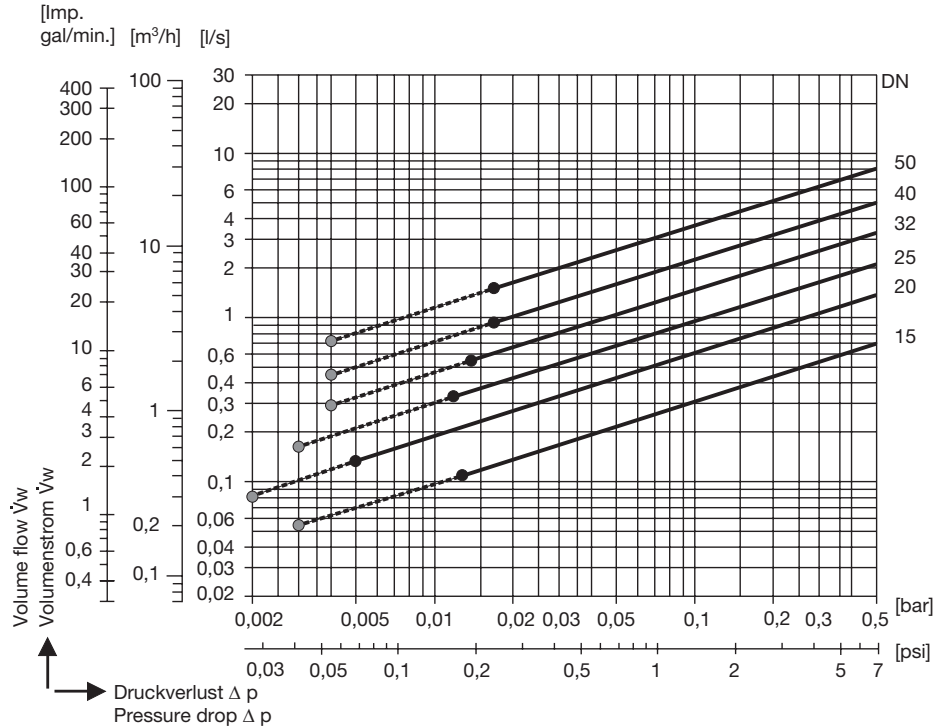
The values indicated in the chart are applicable for spring-assisted valves with horizontal flow and to valves without spring installed in vertical pipes with upward flow.

$$\dot{V}_w = \dot{V} \cdot \sqrt{\frac{\rho}{1000}}$$

\dot{V}_w = Equivalent water volume flow in [l/s] or [m³/h]

ρ = Density of fluid (operating condition) in [kg/m³]

\dot{V} = Volume of fluid (operating condition) in [l/s] or [m³/h]



- Required minimum volume flow \dot{V}_w for equipment without spring installed in vertical pipes with upward flow.
- Required minimum volume flow \dot{V}_w for equipment with standard spring and horizontal flow.

When ordering please state:

Fluid, flowrate, service pressure and temperature. Exact designation of the standard of the flanged clamp connection (standard, size, surface specification).

The following test certificates can be issued on request, at extra cost: In accordance with EN 10204-2.1, -2.2, 3.1 and 3.2. All inspection requirements have to be stated with the order. After supply of the equipment certification cannot be established. Charges and extent of the above mentioned certificates are listed in our price list "Test and Inspection Charges for Standard Equipment". For other test certificates please consult us.

PED (Pressure Equipment Directive)

The equipment fulfils the requirements of the Pressure Equipment Directive PED 97/23/EC. For use with fluids of group 2. With CE marking (apart from equipment that is excluded from the scope of the PED as specified in section 3.3). For more information please refer to our PED Declaration of Conformity.

ATEX (Atmosphère Explosible)

The equipment does not have its own potential source of ignition and is therefore not subject to the ATEX Directive 94/9/EC. Applicable in Ex zones 0, 1, 2, 20, 21, 22 (1999/92/EC). The equipment does not bear an Ex marking. For more information refer to our ATEX Declaration of Manufacturer.

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