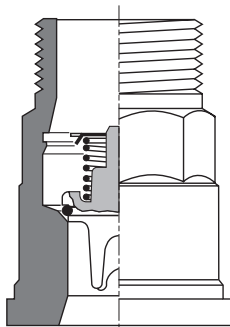
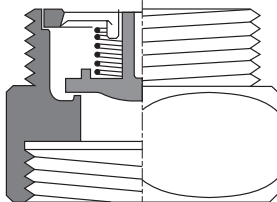


SBO 11



SBO 21



SBO 31

## Gravity Circulation Checks

### SBO 11, SBO 21, SBO 31

#### PN 6

#### DN ¾", 1", 1¼"

### Description

Check valve for installation downstream of circulating pumps in heating and hot water installations to prevent gravity circulation.

### Pressure & temperature ratings

Service pressure	bar	6
Operating temperature	°C	130 <sup>1)</sup>

<sup>1)</sup> Valve cone not under pressure

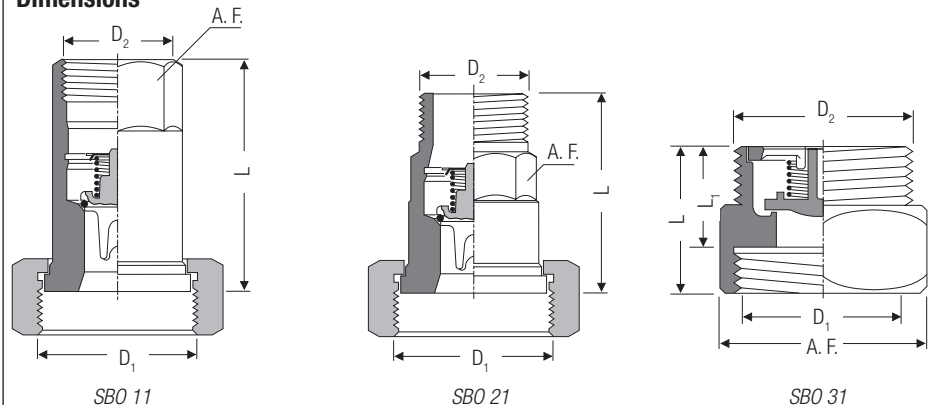
### End connection

**SBO 11: Vale inlet** provided with a collar for fitting the union nut of the circulating pump. Valve outlet screwed female for direct connection to the feed line.

**SBO 21: Vale inlet** provided with a collar for fitting the union nut of the circulating pump. Valve outlet screwed male for connecting an additional stop valve.

**SBO 31** Valve inlet screwed female for direct connection to the circulating pump. Valve outlet screwed male for fitting the nipple with gasket and union nut of the circulating pump.

### Dimensions



Type		SBO 11		SBO 21		SBO 31		
Nominal size	DN	1"	1¼"	1"	1¼"	¾"	1"	1¼"
Dimensions	L	66	82	57	70	39	40	45
	L <sub>1</sub>					25.5	26.5	31.5
	D <sub>1</sub>	G 1½	G 2	G 1½	G 2	G 1¼	G 1½	G 2
	D <sub>2</sub>	G 1	G 1¼	R 1	R 1¼			
	A. F.	36	46	36	46	50	55	65
Weight	[kg]	0.4	0.6	0.32	0.6	0.3	0.34	0.5

### Materials

Type	SBO 11	SBO 21	SBO 31
Body	CW614N		CW614N
Valve cone	Plastics PPO*)		
Spring to close	1.4310		
Seat gasket	EPDM		
Guide	1.4310		Hot-pressed brass (CW614N)

\*) Note that PPO is not resistant to glycol!

## Gravity Circulation Checks

### SBO 11, SBO 21, SBO 31

#### PN 6

DN ¾", 1", 1¼"

### Pressure Drop Chart

The curves given in the chart are valid for water at 20 °C.

The values indicated in the charts are based on readings taken at spring-loaded valves that are installed horizontally. With vertical flow insignificant deviations occur only within the range of partial opening.

### Opening Pressures

Differential pressures at zero volume flow.

Valve type	DN	Opening pressures [mbar]			
		Direction of flow			
		without spring	with spring		
		↑	↑	→	↓
SBO 11	1" 1¼"	1	7	6	6
SBO 21	1" 1¼"	1	7	6	5
SBO 31	¾" 1" 1¼"	2	9	7	5

### Specification Text

GESTRA gravity circulation checks, hot-pressed brass / plastics, spring-loaded.

Type SBO..., DN..., end connection G...

### Order Specifications

Type SBO..., DN... / G...

### Application of European Directives

#### Pressure Equipment Directive (PED)

The equipment conforms to this directive and can be used for the following media:

- Fluids of group 2

#### ATEX Directive

The equipment does not have its own potential ignition source and is not subject to this directive.

Static electricity: When installed, static electricity may arise between the equipment and the connected system.

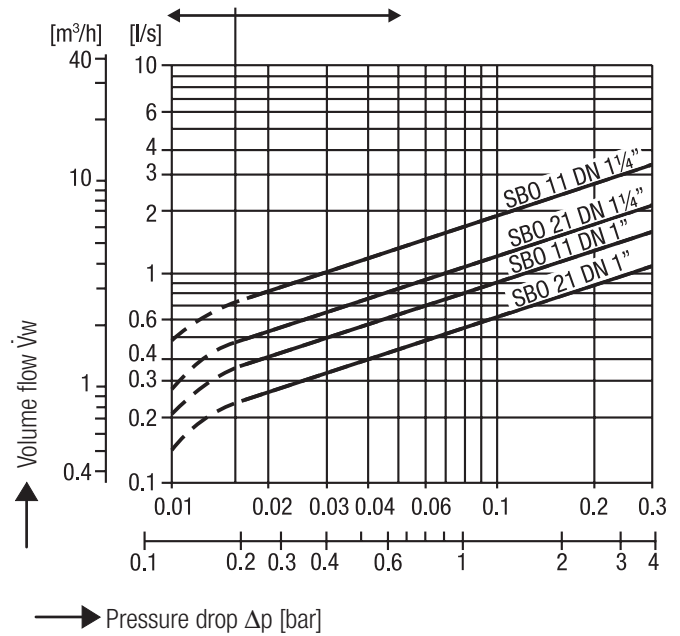
When used in potentially explosive atmospheres, the plant manufacturer or plant operator is responsible for discharging or preventing possible static charge.

If it is possible for medium to escape, e.g. through actuating mechanisms or leaks in threaded joints, the plant manufacturer or plant operator must take this into consideration when dividing the area into zones.

Supply in accordance with our general terms of business.

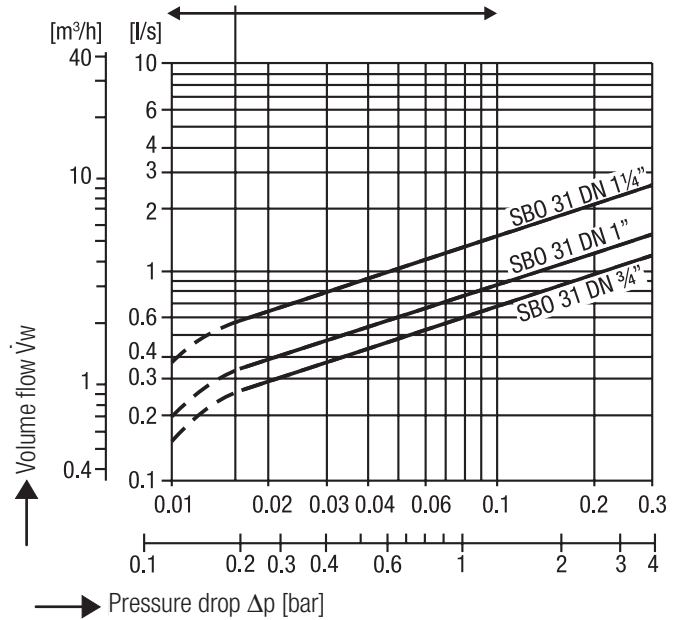
### SBO 11 and SBO 21

Partial opening / unstable range      Full opening / stable range



### SBO 31

Partial opening / unstable range      Full opening / stable range



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