

Swing Check Valve

## SISTO-RSK/RSKS

PN 16 / DN 25-300

Maintenance-free  
Soft-seated  
With or without Lining  
Flanged Ends

## Type Series Booklet



**SISTO**

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Type Series Booklet SISTO-RSK/RSKS

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## Check Valves and Strainers

### Swing Check Valves to DIN/EN

### SISTO-RSK/RSKS



#### Main applications

- Mining
- General irrigation systems
- Chemical industry
- Disposal
- Fire-fighting systems
- Domestic water supply
- Nuclear power stations
- Sewage treatment plants
- Fossil-fuelled power stations
- Seawater desalination/reverse osmosis
- Process engineering
- Water treatment
- Water supply systems

#### Fluids handled

- Abrasive fluids
- Faecal-free waste water
- Aggressive fluids
- Inorganic fluids
- Brackish water
- Service water
- Solids-laden fluids
- River, lake and groundwater
- Fluids posing a health hazard

- Toxic fluids
- Highly aggressive fluids
- Condensate
- Corrosive fluids
- Valuable fluids
- Cooling water
- Fire-fighting water
- Solvents
- Seawater
- Fluids containing mineral oils
- Organic fluids
- Radioactive fluids
- Cleaning agents
- Grey water
- Brine
- Drinking water
- Wash water
- Other fluids on request.

#### Operating data

Operating properties

Characteristic	Value
Nominal pressure	PN 16
Nominal size	DN 15-300
Permissible pressure	1-16 bar
Max. permissible temperature <sup>1)</sup>	-20 °C to +140 °C

#### Body materials

Overview of available materials

Material	Material number	Temperature limit
EN-GJS-400-18-LT	5.3103	-20 °C to +140 °C

#### Design details

##### Design

- Soft-seated swing check valve in straight-way pattern with straight-line flow path
- Soft rubber encapsulated disc with slanted seat
- Internal hinge pin
- Marked in accordance with DIN EN 19 (ISO 5209)
- The valves satisfy the safety requirements of Annex I of the European Pressure Equipment Directive 97/23/EC (PED) for fluids in Groups 1 and 2.
- The valves do not have a potential internal source of ignition and can be used in potentially explosive atmospheres, Group II, category 2 (zones 1+21) and category 3 (zones 2+22) to ATEX 94/9/EC.

<sup>1)</sup> The temperatures indicated are for orientation only; they are not valid for all operating conditions.

### Variants

- Body and cover lined with IIR (butyl); temperature limit: +120 °C
- Body and cover lined with NRH (hard rubber); temperature limit +100 °C
- Body and cover coated with ECTFE (Halar); temperature limit +90 °C
- Body and cover coated with PA (Rilsan)<sup>2)</sup>; temperature limit +90 °C
- IIR-encapsulated disc; temperature limit +120 °C
- CSM-encapsulated disc; temperature limit +100 °C
- EPDM-encapsulated disc; temperature limit +140 °C
- NBR-encapsulated disc; temperature limit +90 °C
- Certification to customer specification

### Product benefits

- Streamlined body design provides low flow resistance coefficient.
- The valve hydraulics without dead volume offer optimum conditions for high-purity fluids.
- Valve disc slightly pre-loaded to prevent pressure surges
- Maintenance-free due to internal hinge pin
- Soft rubber encapsulated valve disc ensures reliable shut-off.

### Related documents

- Operating manual 0570.821

### On all enquiries/orders please specify

1. Type
2. Nominal pressure
3. Nominal size

4. Operating pressure
5. Differential pressure
6. Operating temperature
7. Fluid handled
8. Pipe connection
9. Variants
10. Number of type series booklet
11. Certificate

### Flow characteristics

Flow coefficients for unlined valves

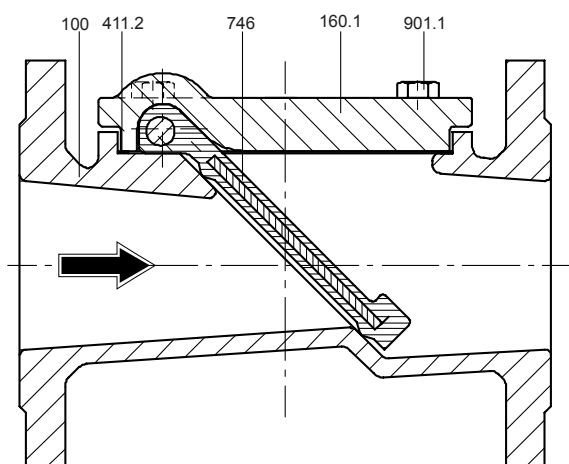
DN	RSK Kvs value [m³/h]	DN	RSKS Kvs value [m³/h]
25	16,0	25	16,0
40	40,0	40	-
50	63,0	50	63,0
65	-	65	97,0
80	160,0	80	160,0
100	230,0	100	230,0
125	391,0	125	391,0
150	532,0	150	532,0
200	-	200	1002,0
250	-	250	1384,0
300	-	300	2254,0

### Pressure/temperature ratings

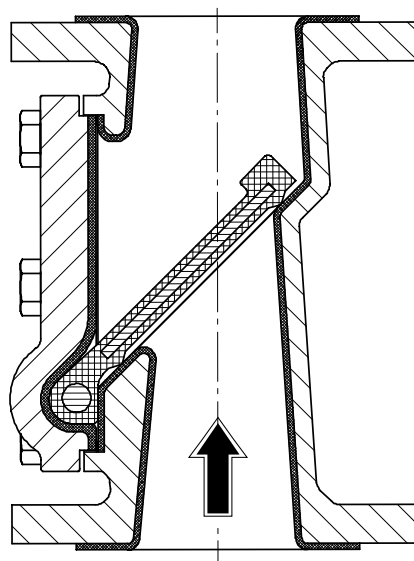
Permissible operating pressures in bar at temperatures of °C (to EN 1092-2/EN 1092-1)

Nominal pressure	Material	DN	-20 to +100	+120	+140
16	5.3103	25-300	16	12	8

<sup>2)</sup> In compliance with KTW recommendations for the use of elastomers in drinking water issued by the German Federal Office of Health.

**Materials**


Horizontal installation position  
 (Shown: variant without lining)



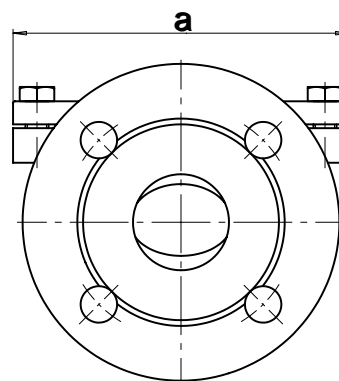
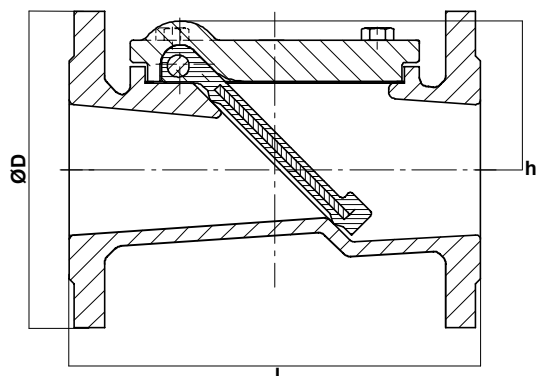
Vertical installation position <sup>3)</sup>  
 (Shown: variant with lining)

**Parts list**

Part No.	Description	Material	Material number	Note
100	Body	EN-GJS-400-18-LT/NRH	5.3103	Standard
160.1	Cover	EN-GJS-400-18-LT/NRH	5.3103	Standard
411.2 <sup>4)</sup>	Joint ring	EPDM		
746 <sup>4)</sup>	Valve disc	S355/IIR		Standard
901.1	Hexagon head bolt	A2-70		

<sup>3)</sup> Vertical installation is only permitted if the fluid does not contain any solids.

<sup>4)</sup> Recommended spare parts

**Dimensions**


Dimensions in mm

DN	l		a		h	ØD	[kg]	
	RSK	RSKS	RSK	RSKS			RSK	RSKS
25	160	-	84	84	43	115	4	4
40	200	180 <sup>5)</sup>	164	164	78	150	11	11
50	230	200	175	164	78	165	11	12
65	-	240	-	164	78	185	-	15
80	310	260	224	232	100	200	25	28
100	350	300	224	232	100	220	31	33
125	400	350	290	290	130	250	50	48
150	480	400	290	290	130	285	60	62
200	-	500	-	390	190	340	-	108
250	-	600	-	390	190	405	-	139
300	-	700	-	550	260	460	-	247

**Mating dimensions – Standards**

RSK face-to-face length: EN 558-1 R1  
 RSKS face-to-face length: EN 558-1 R48  
 Flange connection: DIN EN 1092-2  
 Flange facing: DIN EN 1092-2 type B

Vertical installation is only permitted if the fluid does not contain any solids.

If the valve is installed in vertical position, flow must be upwards.

The flow direction must correspond to the arrow indicated on the valve body.

**Installation instructions**

Swing check valves can be installed horizontally and vertically.

<sup>5)</sup> PN10 only





**SISTO Armaturen S.A.**  
Zone Industrielle • L-6468 Echternach  
Tel.: +352 325085-1 • Fax: +352 328956  
E-Mail: [sisto@ksb.com](mailto:sisto@ksb.com) • [www.sisto.lu](http://www.sisto.lu)

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