



# InterApp **IA**<sup>®</sup>



**Swing check valve**

## **RHEA R1C**



**FLUIDS UNDER CONTROL**

**InterApp AG**  
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Switzerland

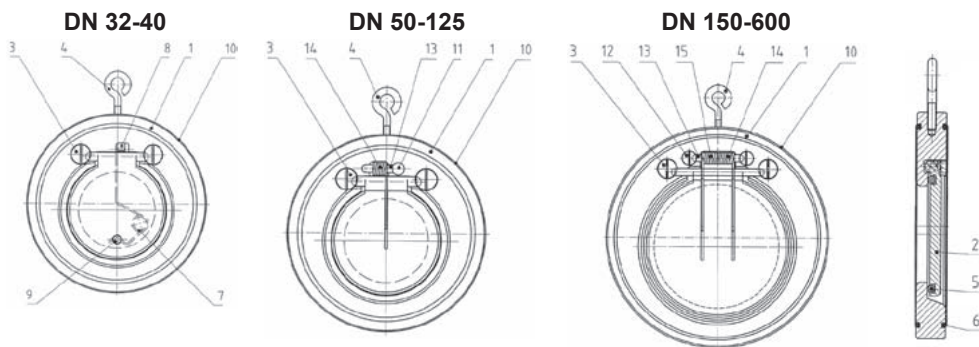
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## RHEA R1C Swing check valve DN32 - 600

### ● Characteristics:

<b>RHEA R1C</b>	Swing check valve, for mounting directly between flanges acc. to DIN. Maintenance not required.
<b>Application fields</b>	For liquid and gaseous fluids in the industrial range, general services, water treatment, ... Not suitable for media with solid components.
<b>Max. working pressure</b>	DN32-250 -> 16 bar, DN300-600 -> 10 bar
<b>Rating</b>	PN10, PN16, other ratings on request
<b>Temperature range</b>	-10°C ÷ 90°C with Nitrile (NBR) O-ring -10°C ÷ 120°C with EPDM O-ring, -10°C ÷ 150°C with Viton® (FPM) O-ring, -10°C ÷ 200°C with PTFE O-ring -10°C ÷ 400°C metal seated
<b>CE</b>	The check valves RHEA R1C meet the safety requirements of the pressure Equipments Directive 97/23/EC (PED) appendix 1 for fluids of the groups 1 and 2.

### ● Construction:



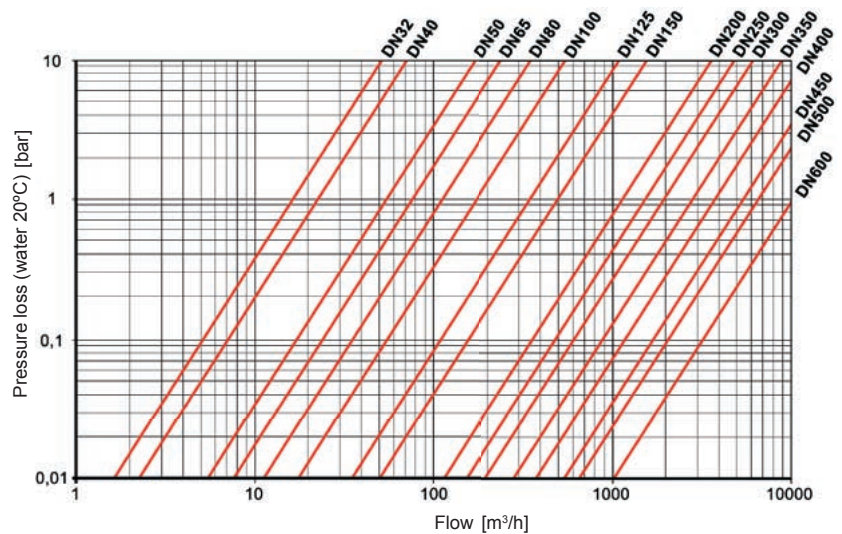
1	Body
2	Disc
3	Screw
4	Eye bolt
5	O-Ring (seat)
6	O-Ring (flange)
7	Spring (option)
8	Pivot
9	Jig
10	Plate
11	Jig for pin
12	Screws
13	Pin for spring
14	Spring right
15	Spring left

### ● Hydraulic characteristics:

DN [mm]	kv [m³/h]	Opening pressure [mbar] at flow direction			
		→		↑	
		without spr.	with spring	without spr.	with spring
32	16,2	~ 2	~ 15	~ 10	~ 25
40	22,2	~ 2	~ 15	~ 10	~ 25
50	54	~ 2	~ 15	~ 10	~ 25
65	75	~ 2	~ 15	~ 10	~ 25
80	112	~ 2	~ 15	~ 10	~ 25
100	172	~ 2	~ 15	~ 10	~ 25
125	342	~ 2	~ 15	~ 10	~ 25
150	490	~ 2	~ 15	~ 10	~ 25
200	1128	~ 4	~ 17	~ 14	~ 25
250	1500	~ 4	~ 17	~ 14	~ 25
300	2290	~ 4	~ 17	~ 14	~ 25
350	2890	~ 6	~ 18	~ 18	~ 27
400	3700	~ 6	~ 18	~ 18	~ 28
450	5000	~ 6	~ 18	~ 18	~ 28
500	6550	~ 6	~ 18	~ 24	~ 34
600	9500	~ 6	~ 18	~ 26	~ 36

$$c_v = k_v \times 1,16$$

A minimum back pressure of 0,3 bar is required to keep the swing check valve tight.



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## RHEA R1C Swing check valve DN32 - 600

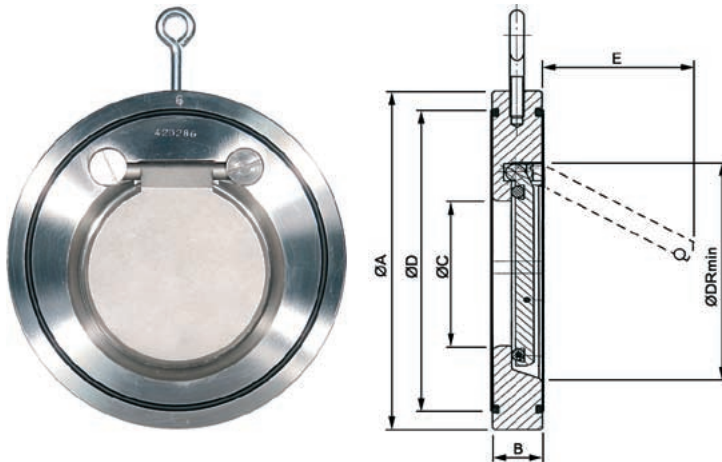
• Code key:

**R1C** **100** . **33** - **3IZ** . **4U0** . **N** . **(S)**  
 ① ② ③④ ⑤ ⑥ ⑦ ⑧

① Type	<b>R1C</b>	Swing check valve - wafer type	DN32-600
② Nominal diameter	<b>032-600</b> mm		
③ Working pressure	<b>2</b>	10 bar	DN300-600
	<b>3</b>	16 bar	DN32-250
④ Rating	<b>2</b>	PN10	DN300-600
	<b>3</b>	PN16	DN32-250
	andere Normen auf Anfrage (PN6/25/40, ANSI B16.5 Cl.150/300)		
⑤ Body	<b>3IZ</b>	galvanized steel C22.8	
	<b>4F0</b>	Stainless steel 1.4571 (AISI 316Ti)	
⑥ Disc	<b>3IZ</b>	galvanized steel C22.8	
	<b>4U0</b>	Stainless steel 1.4581 (~AISI 316Cb)	
⑦ O-Ring	<b>N</b>	Nitrile (NBR)	
	<b>E</b>	EPDM	
	<b>V</b>	Viton® (FPM)	
	<b>T</b>	PTFE	
	<b>M</b>	metal seated (without O-ring)	
⑧ Spring	<b>S</b>	Option: with spring, stainless steel 1.4571 (AISI 316Ti)	

Other executions on request !

• Dimensions:



DN	A (PN10)	A (PN16)	B	C	D	E	DR	[kg]
32	85	85	15	18	59	22	37	0,5
40	95	95	16	22	72	25	43	0,8
50	109	109	14	32	86	37	54	1,0
65	129	129	14	40	109	50	70	1,4
80	144	144	14	54	119	61	82	1,8
100	164	164	18	70	146	77	106	2,9
125	195	195	18	92	173	98	131	3,9
150	220	220	20	112	197	120	159	4,5
200	275	275	22	154	255	160	207	7,5
250	330	331	26	192	312	190	260	13,0
300	380	386	32	227	363	220	309	23,0
350	440	446	38	266	416	250	341	33,5
400	491	499	44	310	467	290	392	52,0
450	541	558	52	350	520	340	442	
500	596	621	58	400	550	390	493	94,0
600	698	738	62	486	660	470	595	

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## RHEA R1C Swing check valve DN32 - 600

### ● Operating instructions:

#### Appropriate use in accordance to designed capabilities:

RHEA R1C swing check valves are designed to block media on one side of the pipe within allowable pressure and temperature limits and to be installed in a pipe system only. They may be used only with media, which the material and the seals are resistant to. They are not suitable for media with solid components.

#### Storage:

Swing check valves include sealing elements consisting of organic material, that reacts to environmental effects. Therefore, they are to be stored in their original packaging in a place, which is also to be kept as cool, dry and dark as possible. The front and back sides of the swing check valves must not be mechanically damaged.

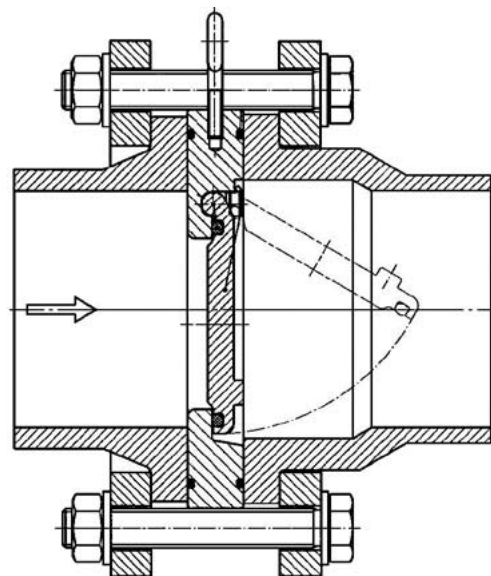
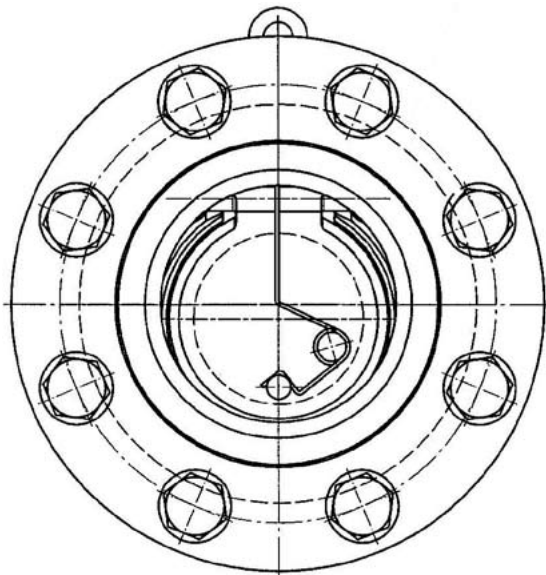
#### Transport:

The personnel must pay special attention, when big swing check valves (>DN 100) are unpacked and transported. The valve is to be held in a horizontal position in a way, that it can open at the top only. This is to avoid, that the valve unintentionally drops down and is damaged.



#### Installation:

- Possible damages to the swing check valves and O-rings are to be checked prior to installation. Check if the valve can be moved. Damaged parts must not be installed.
- Make sure that only those swing check valves are being installed, that meet the operational requirements regarding pressure category, chemical resistance, connection and dimensions.
- Make sure to install a minimum of 5 x nominal diameter of straight pipeline in front of and behind the swing check valve.
- Do not install the valves directly onto a pump flange.
- Avoid pulsation and pressure impact.
- Vertical throughput is allowable only if the valve can open at the top.
- In case of horizontal throughput, the ring screw must be at the top.
- Watch flow direction (see arrow on the plate) !
- The swing check valves are placed between the flanges by means of a ring screw. They are put in their central position according to the outer diameter of the case and the flange screw inner side.
- Tighten the flange screws crosswise.
- After the installation is finished, check the tightness of the connections by a pressure check.



#### Special risks:

Before the swing check valve is being removed, pressure has to be completely taken off the plant to avoid media escaping from the pipe. Fluid being left in the pipe must be drained off. Fluid, which has remained in the valve and comes out during removal, is to be collected. If hazardous fluids or gases are left in the valves, the safety measurements required must be taken.

The technical data are noncommittal and do not assure you of any properties. Please refer to our general sales conditions.

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