

# Check valves "wafer" type with porthole shutter



# RC

DIN PN 16 - 40 — DN 50 to 400 mm  
ANSI 125 - 300 — 2" to 16"

RC 11, 12, 33, 35

## Application

The RC check valves, with obturator in simple porthole form, are used in liquids, gases and steam. They are employed, mainly, in the chemical and petrochemical industries, in the sugar industry, in water supply lines and in steam installations in general.

## Main characteristics

- Reduced load loss;
- Compact valve;
- Installation in any position;
- Simple assembly and maintenance.

## Presentation

Straight passage one-way valve with Wafer type body for assembly between flanges, to be installed in any position. The extremely reduced size gives to the valve minimum weight and easy installation and maintenance. The passage orifice is calculated to supply a minimum load loss allied to a short closing time (Reduced closing blow).

It Can be installed in any kind of piping, but must be considered just the flow direction. The diameter D acts as centralization ring on the flanges.

When it is mounted in horizontal pipings or inclined the hosting hook must stay turned upwards.

The G model over 6", has deflector wedge in the external D to help the centralization.

## Optionals\*

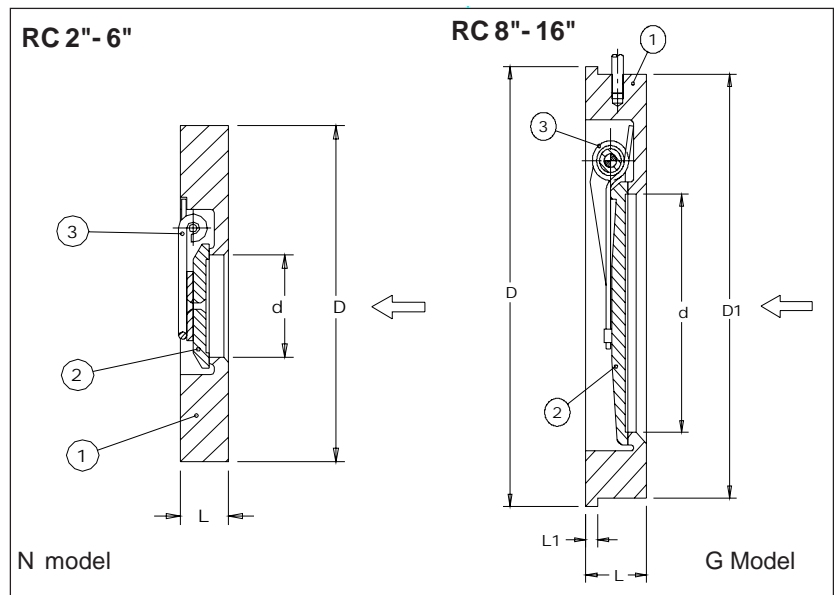
- BUNA-N synthetic rubber elastic sealing for maximum temperature of 120 °C, or Teflon sealing on the gauges 2" to 6";
- Other sealings and/or other materials can be supplied under consultation;

\*The optional items are supplied by means of price increase.

## Connections

The diameters from 2" to 6" can be mounted between flanges as per DIN PN 6/10/16/25/40 and ANSI 125/150/250/300 norms.

The diameters from 8" to 16" can be mounted between flanges as per DIN PN 10/16 and ANSI 125/150/250 norms.



## Main components

N°	Description	Quantity
1	Body	1
2	Porthole	1
3	Spring	1

## Measures and weights

Model		RC 11, 12, 33, 35									
ND	mm pol	d	L	D						D <sub>1</sub>	L <sub>1</sub>
				PN 6	PN 10	PN 16	PN 25/40	ANSI 125/150	ANSI 250/300		
50	2"	34	14	96	107	107	107	102	108	-	-
65	2.1/2"	44	14	116	127	127	127	121	127	-	-
80	3"	52	14	132	142	142	142	133	146	-	-
100	4"	70	17	152	164	164	168	171	178	-	-
125	5"	90	18	182	192	192	194	194	213	-	-
150	6"	112	21	207	218	218	224	219	248	-	-
200	8"	150	42	-	273	273	-	276	305	270	6
250	10"	185	52	-	328	329	-	337	358	324	6
300	12"	220	69	-	378	384	-	407	419	379	10
350	14"	258	69	-	438	444	-	447	482	439	10
400	16"	290	73	-	489	495	-	510	535	490	12

## Technical competence - Material

Model	Max. P.* (bar)		Max. T.* (°C)		DN 2" - 6" (N)		DN 8" - 16" (G)	
	N	G	N	G	Body	Porthole	Body	Porthole
RC 11	16	16	120	120	ASTM A	AISI 316	ASTM A	AISI 316
	13	13	300	300	126 Gr. B	ASTM B 62	126 Gr. B	ASTM B 62
RC 12	40	16	250	120	ASTM B 62		ASTM B 62	
	30	13	300	300	ASTM B 62		ASTM B 62	
RC 33	40	16	250	120	ASTM A	AISI 316	ASTM A	AISI 316
	30	13	300	300	285 Gr. C	ASTM B 62	216 WCB	ASTM B 62
RC 35	40	16	250	120	AISI 316		AISI 316	
	30	13	300	300	AISI 316		AISI 316	

\* Max. P. and Max. T. are inversely proportional. For intermediary values is valid linear interpolation.

### Flow chart

Corresponding values to water at 20 °C. To determine the load loss with other fluids, the equivalent volume of water must be calculated, as follows:

$$V_w = \sqrt{\frac{\delta}{1000}} \cdot V \quad \text{Where}$$

$V_w$  = Equivalent water flow in l/sec.  
 $\delta$  = Specific fluid weight (Service regimen) in kg/m<sup>3</sup>.  
 $V$  = Flow fluid (service regimen) in l/sec.

The values of the chart are based in measures taken in mounted valves in horizontal pipings. The verified offsets in case of partial opening of the installed valves in vertical pipings have no significance.

### Important

It must be also taken into consideration the fact that in 90% of the installations, the load loss of the check valves ( $\Delta P$ ) has no influence on fluid flow.

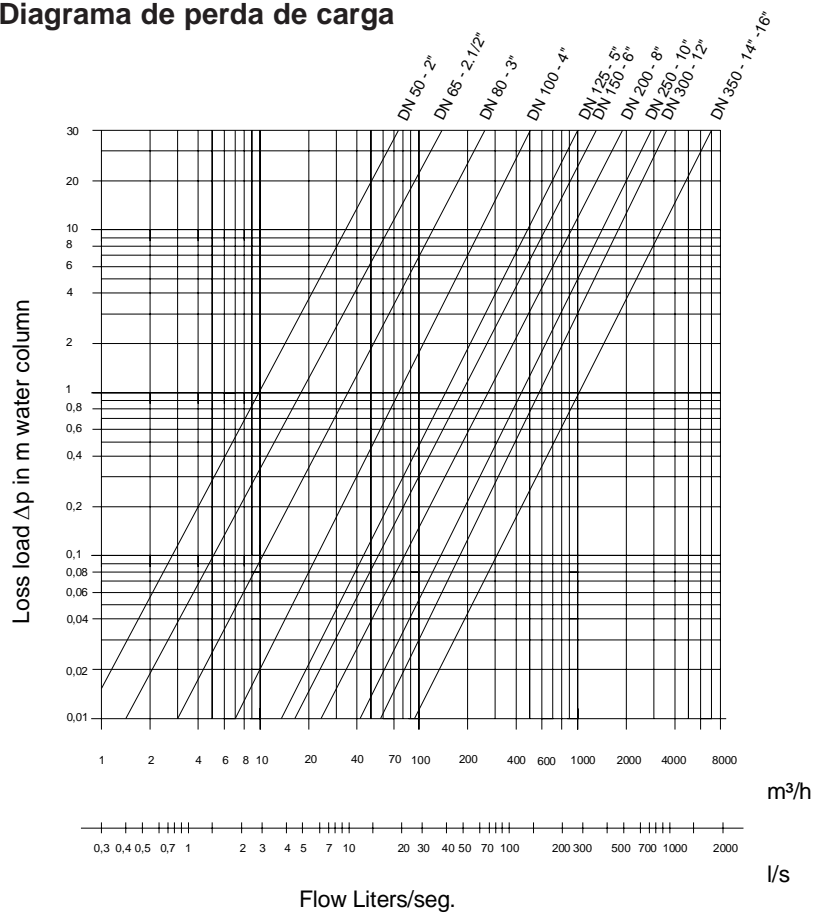
### Assembly

The screwed hook on the shell and the centralization ring (According to the flange standard used) becomes easy the assembly between the piping flanges. Just put the bolts on the flange's lower holes that they will serve to support during installation.

### Opening pressure table (in mbar)

DN		Flow direction			
		sem mola	com mola		
pol.	mm	↑	↑	→	↓
2"	50	4,8	14	9	3
2,5"	65	5	15	10	3
3"	80	5	15,5	10	3
4"	100	6	18	12	4
5"	125	6,3	19	13	4
6"	150	8	24	17	6
8"	200	9	26	17	8,5
10"	250	13	37	24	12
12"	300	15	38	26	13
14"	350	11	27	18	9
16"	400	12	31	20	10

### Diagrama de perda de carga



### Orders

Indicate type, norm of the flange and pressure rating as well as circulating fluid, flow, service pressure and temperature. Also mention the type of sealing.

ASCA will make pleasure the sizing.

For this purpose must be supplied:

- Pressure and service temperature;
- Circulating fluid;
- Nominal diameter;
- Norm and pressure class of the flanges between that the valves will be mounted.

### Standard specification

Check valves model RC..... from ASCA with simple pothole according to prospect **PR-02.40.20-I**

Sealing .....  
 "Wafer "type for assbly between flanges, as per norm .....  
 Pressure class.....  
 Nominal diameter.....  
 Optionals .....

### Resume

RC .....  
 Sealing .....  
 Wafer PN/CL .....  
 DN.....  
 Optionals .....



## ASCA INDUSTRIAL EQUIPMENTS LTDA.

202, Fernandes da Cunha Street- Vigário Geral - Rio de Janeiro - RJ - COD 21241-300  
 Tel.: (21) 2472-6900 - Fax (21) 3014-7622 - e-mail: office@asca.com.br  
 homepage: http://www.asca.com.br

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