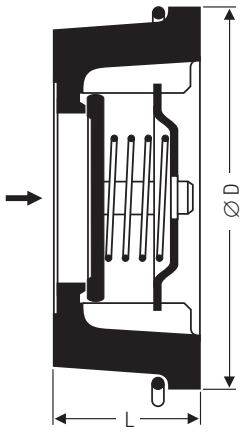
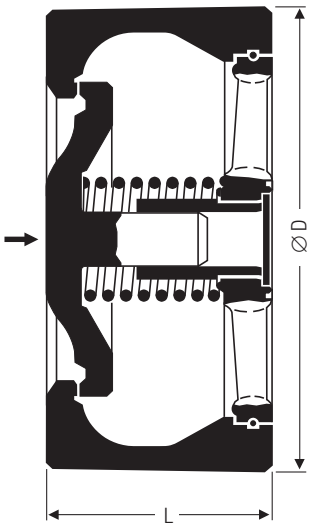


DN 15-100



DN 125-200

Non-Return Valve
RK 41
for Flanges PN 6/10/16

CE

Description

Wafer-type non-return (check) valve for sandwiching between flanges. Valve designed with spring for installation in any position. Without spring only for vertical lines with upward flow. Self-centering body or fitted with a spiral ring for centering. Suitable for liquids, gases and vapours (observe classification according to PED).

Pressure/Temperature Ratings for valves with metal-to-metal seat

Nominal sizes	DN	15-100			125-200		
Nominal pressure	PN	16					
Service pressure Service temperature	[barg] [°C]	16 120	14 200	13 250	16 120	14 200	13 300
Minimum temperature	[°C]	–60[1])			-10[1])		

[1]) Lowest service temperature at nominal pressure

Soft seals

EPDM: –40 to +150 °C for water, condensate and steam.
FPM (FKM): –25 to +200 °C for oils, gases and air.
These values are only applicable if they are within the rated limits for metal-to-metal seats.

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

End Connection of wafer-type valves [2])

Standard valves for fitting between flanges to		
DIN	BS	ASME
DIN EN 1092-1, PN 6/10/16	BS 10 Table D, E, F	ASME B 16.1 Class 125 FF ASME B 16.5 Class 150 RF [3])

[2]) DN 15–100 with spiral centering ring.
[3]) ASME 150 RF only suitable with DN 125 – 200.

Dimensions

Nominal size	[mm] [inch]	15 ½	20 ¾	25 1	32 1¼	40 1½	50 2	65 2½	80 3	100 4	125 5	150 6	200 8
Dimensions [mm]	L[4])	16	19	22	28	31.5	40	46	50	60	90	106	140
	D	40	47	56	72	82	95	115	132	152	184	209	264
Weight	[kg]	0.1	0.14	0.22	0.5	0.66	1.1	1.45	2.3	3.5	6.8	10	20

[4]) Short overall length to EN 558-1, series 49 (≙DIN 3202-3, series K4)

Materials

DN 15-100	EN designation		ASTM equivalent
Body, seat and guide ribs	CuZn35Ni3Mn2AlPb	CW710R	
Valve disc, spring retainer	X6CrNiMoTi17-12-2	1.4571	A 182 F 316
Spring to close			A 313 type 316
Centering ring	X10CrNI18-8	1.4310	A 313 type 302
DN 125-200			
Body, seat	EN-GJL-250	5.1301	A 126 Class B
Valve cone	X12Cr13	1.4006	A 182 F6A
Guide	GX8CrNi12	1.4107	A 217 – CA 15
Spring to close	X6CrNiMoTi17-12-2	1.4571	A 313 type 316

Old DIN material designations are stated in brackets

Non-Return Valve

RK 41
for Flanges PN 6/10/16

Opening Pressures

Differential pressures at zero volume flow.

DN	Opening pressures [mbar]			
	Direction of flow			
	without spring	with spring		
	↑	↑	→	↓
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
65	5.0	15	10	5
80	5.5	16	10.5	5
100	6.5	18	11.5	5
125	10.5	31.0	20.5	10
150	11.5	33.0	21.5	10
200	11.2	32.4	22.2	10

Special springs for given opening pressures available on request at extra cost. Between 5 and 1000 mbar for DN 15-50, 5 and 700 mbar for DN 65 and 80, 5 and 500 mbar for DN 100-200.

Specification Text

GESTRA Norn-return valve RK 41
PN 6/10/16
Wafer design with extremely short overall length to EN 558-1, series 49.

Suitable for fitting between pipe flanges to DIN, BS and ASME. Indications on pressure, nominal size and material. Metal-to-metal seat or soft seat (EPDM or FPM).

Order Specifications

Type RK 41, DN . . .
Metal-to-metal seat or EPDM or FPM.
Additional information: Fluid, flowrate, service pressure and temperature. Standard designation of pipe flanges.

Please note:

The valves should not be used on compressors or where pulsating flow exists.
For these applications please consult us.

CE

These products meet the requirements of the EC Pressure Equipment Directive (PED) no. 97/23/EC.
Rated for application with fluids of group 2 (non-hazardous substances). DN 65-200 with CE marking. DN 15-50 is excluded from the scope of the PED according to section 3.3 and must **not** bear a CE marking.

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.

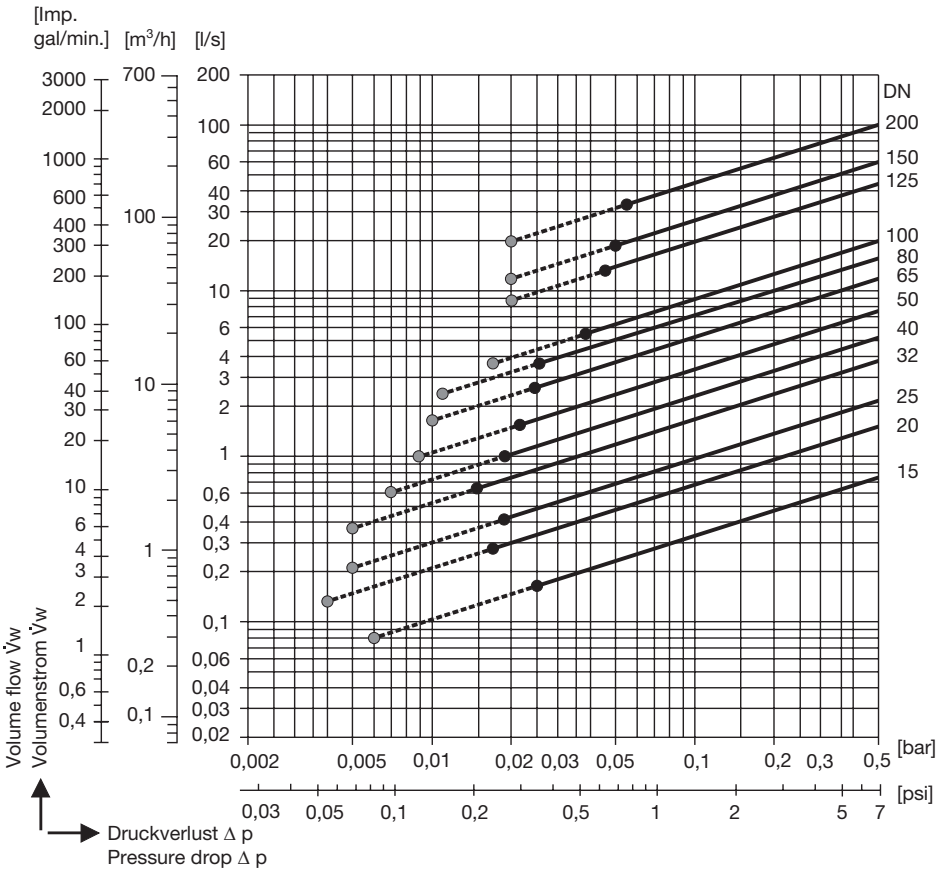
The pressure drops indicated in the chart are valid for valves fitted with a standard spring for installation in horizontal lines and for valfes without spring for vertical flow lines with the flow from bottom to top.

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

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

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

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



● Required minimum volume flowrate $\dot{V}_w$ for equipment without spring for installation in vertical lines with the flow form bottom to top.

● Required minimum volume flowrate $\dot{V}_w$ for equipment fitted with standard spring for installation in horizontal lines.

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