

GESTRA Steam Systems

Product Range A2

DISCO Non-Return Valves
RK 76
 for Flanges PN 6 / 10 / 16 / 25 / 40
 ASME 150 / 300

RK 76



Description

Non-return valve for liquids, gases and vapours.

Pressure / Temperature Rating

Nominal sizes DN	[mm]	15 – 100			
	[in]	½ – 4"			
Nominal pressure	PN	40 ¹⁾			
Max. service pressure for RK 76	[barg]	49.6	42.3	35.8	31.6
Related temperature	[° C]	20	100	200	300
	[° F]	68	212	392	572
Minimum temperature ²⁾		– 10 °C (14 °F)			

- ¹⁾ Strength rated for ASME Class 300.
 Linear interpolation between pressure and temperature ratings possible.
²⁾ Minimum temperature at nominal pressure rating.

Tight shut-off in accordance with DIN 3230, part 3, leakrate BN2 / B03.

Chemical resistance see GESTRA Database "Chemical Resistance"

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Connections of wafer-type valves ³⁾

Valves for universal fitting between flanges to		
DIN	BS	ASME
DIN 2501 PN 6/10/16/25/40	BS 10 Table D, E, F, H, J ⁴⁾ BS 4504	ASME B 16.1 Class 125 FF ASME B 16.5 Class 150, 300 RF

- ³⁾ With universal centering ring.
⁴⁾ Tables D / E, DN 65 mm and DN 80 mm (2½ and 3"): Choose nominal size one size smaller each.

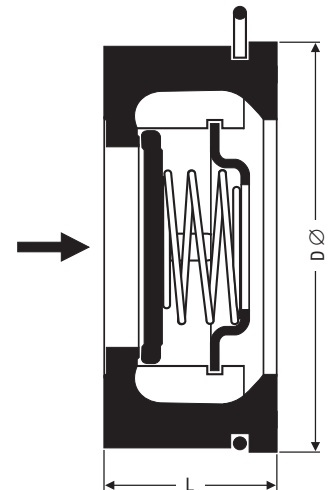
Dimensions

Nominal size DN	[mm]	15	20	25	32	40	50	65	80	100
	[in]	½	¾	1	1¼	1½	2	2½	3	4
Dimensions in mm	L ⁵⁾	16	19	22	28	31.5	40	46	50	60
	D	45	55	65	75	85	98	118	134	159
Weight	[kg]	0.18	0.3	0.45	0.7	0.9	1.5	2.1	3.4	5.2

- ⁵⁾ Overall length according to DIN EN 558-1, series 49 (≅ DIN 3202, part 3, series K4)

Materials

DN 15 – 100 mm (½ – 4")	DIN reference		ASTM equivalent
Body, seat and guide ribs	G-X8CrNi13	1.4008	A217-CA15
Valve disc, spring retainer	X6CrNiMoTi17-12-2	1.4571	A182F316
Spring			A313 Type 316
Centering ring	X12CrNi17-7	1.4310	A313 Type 302



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Opening pressures

Differential pressures at zero volume flow.

DN		Opening pressures [mbar]		
		Direction of flow with springs		
[mm]	[in]	↑	→	↓
15	½	25	22.5	20
20	¾	25	22.5	20
25	1	25	22.5	20
32	1¼	27	23.5	20
40	1½	28	24.0	20
50	2	29	24.5	20
65	2½	30	25.0	20
80	3	31	25.5	20
100	4	33	26.5	20

1 mbar \cong 0.0145 psi \cong 10 mm w.g. \cong 0.4 in w.g.

Enquiry Specification

GESTRA DISCO non-return valves RK 76,
 PN 6/10/16/25/40.

Wafer design with extremely short overall length to
 DIN EN 558-1, table 11, series 49 \cong DIN 3202, part 3,
 series K4.

Suitable for fitting between flanges to DIN, BS or
 ASME. Indications on pressure, nominal size (DN),
 body material.

Other Specifications

Typ RK 76, DN ...
 Metal-to-metal.
 Fluid, flowrate, pressure and temperature.
 Type of pipe flanges.

Note

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



These products comply with the requirements of the EC
 Pressure Equipment Directive (PED) 97/23/EC.
 DN 32 – 100 with CE marking. DN 15 – 25 mm are excluded
 from the scope of this Directive and **not entitled** to bear
 the 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 must be calculated and used in
 the graph.

The values indicated in the chart are applicable to
 spring-loaded valves with horizontal flow. With vertical
 flow insignificant deviations occur only within the range
 of partial opening.

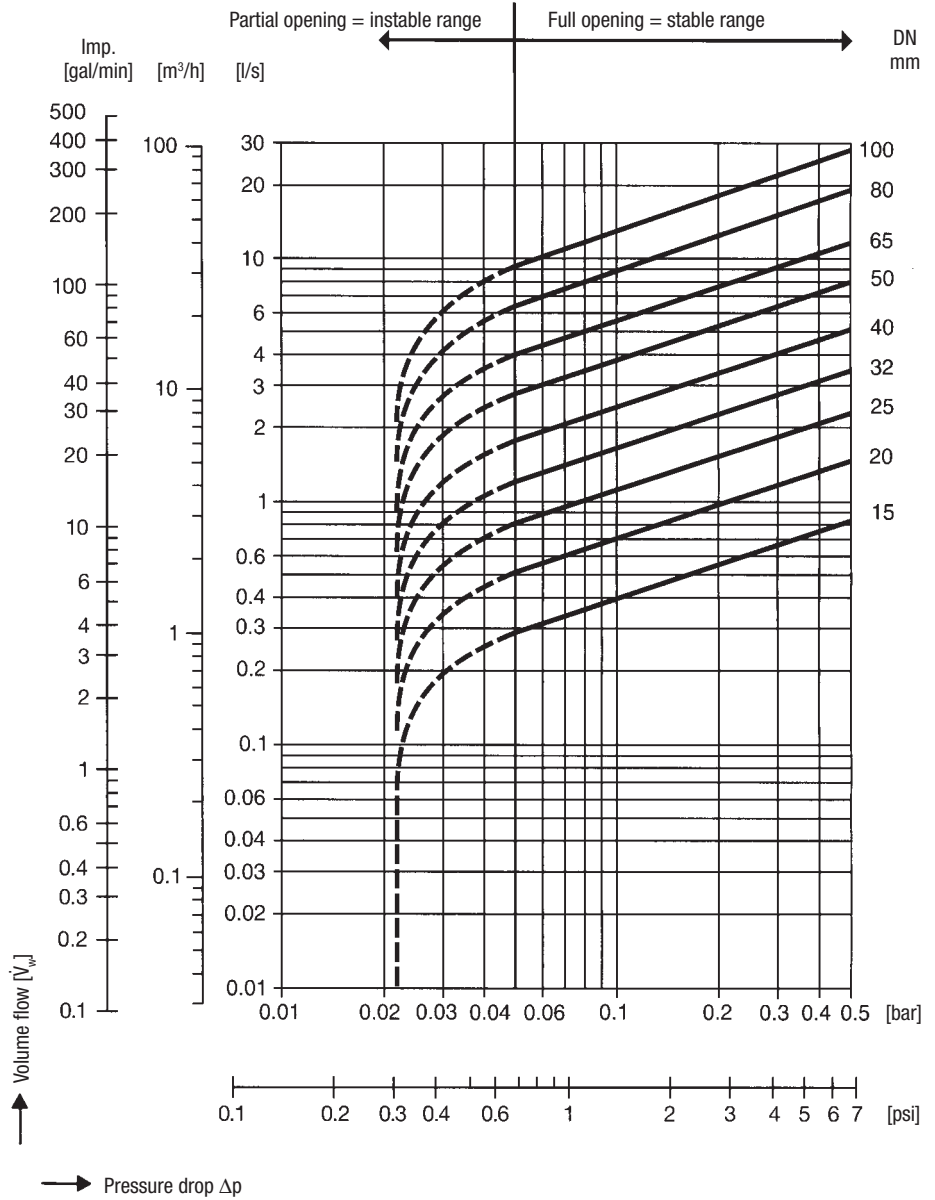
$$\dot{V}_w = \dot{V} \cdot \sqrt{\frac{\rho}{1000}}$$

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

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

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

**When selecting valve
 please consider:**



GESTRA AG

P. O. Box 10 54 60, D-28054 Bremen
 Münchener Str. 77, D-28215 Bremen
 Telephone +49 (0) 421 35 03 - 0, Fax +49 (0) 421 35 03-393
 E-Mail gestra.ag@flowsolve.com, Internet www.gestra.de

