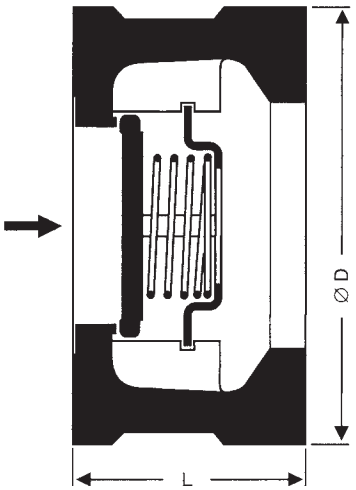
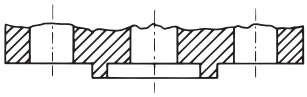
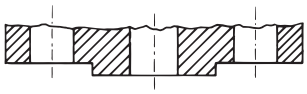


Machining of facings in accordance with requirements for counter-flanges to



DIN 2512 – tongue flanges



DIN 2513 – male flanges

Non-Return Valve RK 16A
ASME 150 / 300, PN 10 / 16 / 25 / 40
DN 15 – 100 mm (½" – 4")

Application for aggressive liquids, gases and vapours. Low temperatures.

Pressure/Temperature Rating for valves with metal-to-metal seat [1])

Nominal size	DN	15 – 100 (½–4")					
Nominal pressure	PN	40[2])					
Max. service pressure	[bar g]	46.6	42.3	35.8	31.6	29.3	24
	[psi g]	676	612	518	459	425	348
Related temperature	[°C]	20	100	200	300	400	550
Minimum temperature [3])		–200 °C (–328°F)					

[1]) For temperatures above 300 °C (572°F) use a Nimonic spring.
Linear interpolation between pressure and temperature ratings permitted.
[2]) In terms of resistance also rated for ASME Class 300.
[3]) Minimum temperature for nominal pressure rating.

Soft seats

EPDM: (ethylene propylene): –40 to +150°C (–40 to +302°F) for water, condensate and steam.
FPM: (fluoro rubber): –25 to +200°C (–13 to +392°F) for oils, gases and air.
Also note valve pressure/temperature rating in the above table.

Tightness with soft seats of EPDM and FPM in accordance with DIN 3230-3, leakage rates BN 1, BO 1. Permissible leakage rates with metal-to-metal seat in accordance with DIN 3230-3, leakage rates BN 2, BO 3.

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

Connections of wafer-type valves

Optionally for fitting between flanges to		
DIN	BS	ASME
DIN 2501 PN 10 – 40[4]) DIN 2512, 2513 2514	BS 10 tables D, E or table F or tables H, J	ASME B 16.1 class 125 FF ASME B 16.5 class 150 RF ASME B 16.5 class 300 RF

[4]) For valves of DN 100 mm (4") state PN 10/16 or PN 25/40.

Dimensions

DN		L[5])	Dimensions in [mm] ∅ D				Weight
			ASME		DIN		
					PN	2512	
[mm]	[in]	[mm]	150 RF	300 RF	10 – 40	2513	[kg]
15	½	25	46	52	52		0.25
20	¾	31.5	56	63	63		0.4
25	1	35.5	66	72	72		0.57
32	1¼	40	75	81	81		0.83
40	1½	45	85	93	93		1.2
50	2	56	104	108	108		2.15
65	2½	63	123	128	128		3.2
80	3	71	135	147	143		4.5
100	4	80	173	179	163/169[6])		6.9

[5]) Overall length according to DIN EN 558-2, table 11, series 52 (≙ DIN 3202, part 3, series K5)
[6]) For counter-flanges PN 25/40 with raised face ∅ D = 169 mm.

Materials*)

	DIN reference		ASTM equivalent
Body, seat, guide ribs, valve disc, spring retainer	X 6 CrNiMoTi 1712 2	1.4571	A182 F 316
Spring	X 6 CrNiMoTi 1712 2	1.4571	A313 Type 316

*) For the use in hygienic installations, foodstuff industry, pharmaceutical industry and similar applications please order RK 16A in pickled design.

Non-Return Valve RK 16A
ASME 150 / 300,
PN 10 / 16 / 25/40,
DN 15 – 100 mm (½" – 4")

Opening pressures

Differential pressures at zero volume flow.

DN		Opening pressures in [mbar]			
		Direction of flow			
		without springs	with springs		
[mm]	[in]	↑	↑	→	↓
15	½	2.5	10	7.5	5
20	¾	2.5	10	7.5	5
25	1	2.5	10	7.5	5
32	1¼	3.5	12	8.5	5
40	1½	4.0	13	9.0	5
50	2	4.5	14	9.5	5
65	2½	5.0	15	10.0	5
80	3	5.5	16	10.5	5
100	4	6.5	18	11.5	5

1 mbar ≙ 0.0145 psi ≙ 100 mm w.g. ≙ 0.4 in w.g.

On request at extra charge, special springs for opening pressures:

- between 5 and 1000 mbar for DN 15–50 mm (½–2"),
- between 5 and 700 mbar for DN 65, 80 mm (2½, 3"),
- between 5 and 500 mbar for DN 100 mm (4").

Enquiry Specification

GESTRA DISCO non-return valves RK 16 A.
Wafer design with extremely short overall length to DIN EN 558-2, table 11, series 52 (≙ DIN 3202, part 3, series K5).For installation between pipe flanges to ASME, DIN or BS. Indications on pressure, nominal size (DN), connection. Metal-to-metal seat of soft seat (EPDM or FPM).

Order Specifications

Type RK 16 A, DN…
Metal-to-metal or soft seat, EPDM or FPM.
For flanges to ASME… or DIN... or BS...
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.

CE

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

Test certificates to EN 10204 available on request.

Supply in accordance with our general terms of business.

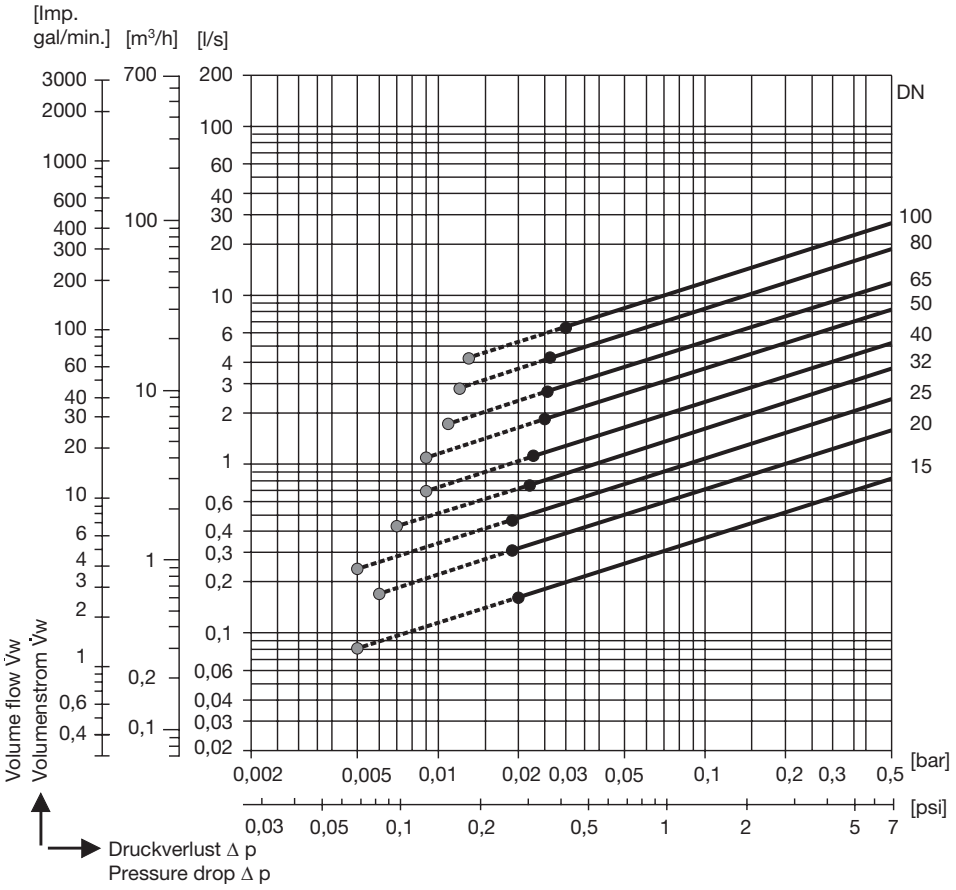
Pressure Drop Chart

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] etc.
ρ = Density of fluid (operating condition) in [kg/m³] etc.
$\dot{V}$ = Volume of fluid (operating condition) in [l/s] etc.



● 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.

1 US gallon ≙ ∨0.833 Imp. gallon

GESTRA AG
Münchener Straße 77, 28215 Bremen, Germany
Telefon +49 421 3503-0, Telefax +49 421 3503-393
E-mail info@de.gestra.com, Web www.gestra.de

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