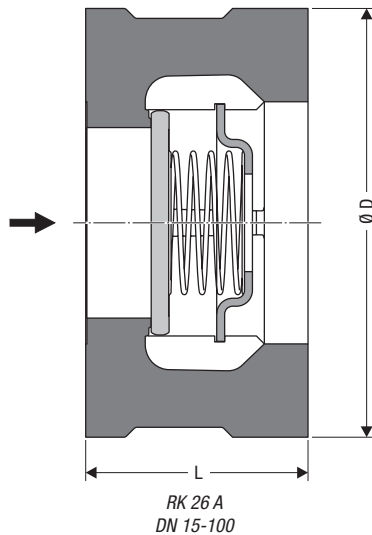
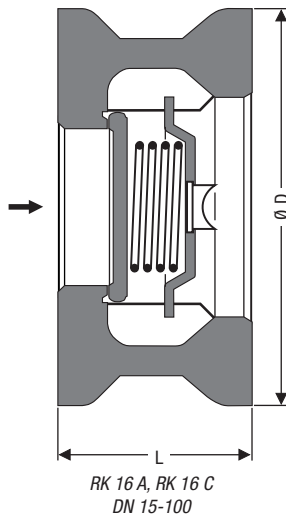


DISCO® Non-Return Valves RK, PN 40

Short overall length according to DIN EN 558-2, table 11, series 52
(Δ DIN 3202, part 3, series K5)



Application

Type	PN	
RK 16 A	40/class 300	For liquids, gases, vapours. Application as check valve, breather, foot valve, pressure-relief valve or pressure-maintaining valve. RK 26 A and RK 16 C for aggressive fluids and low temperatures.
RK 16 C	40/class 300	
RK 26 A	40/class 300	

Body Material

Type	Nominal sizes DN	EN reference	ASTM equivalent ¹⁾
RK 16 A	Body	15 – 100 mm	1.4571
	Valve disk		1.4571
RK 16 C	Body	15 – 100 mm	2.4610
	Valve disk		2.4610
RK 26 A	Body	15 – 100 mm	1.4408
	Valve disk		1.4571

¹⁾ ASTM material similar to EN material.
Observe different physical and chemical properties!

Dimensions

	DN	[mm]	15	20	25	32	40	50	65	80	100	125	150	200
		[in]	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8
	L	[mm]	25	31.5	35.5	40	45	56	63	71	80	110	125	160
RK 16 A	D	[mm]	52	63	72	81	93	108	128	143	163 ¹⁾ 169 ²⁾	–	–	–
RK 16 C	D	[mm]	52	63	72	81	93	108	128	143	163 ¹⁾ 169 ²⁾	–	–	–
RK 26 A	D	[mm]	52	63	72	81	93	108	128	149	163 ¹⁾ 169 ²⁾	–	–	–

¹⁾ PN 10/16 ²⁾ PN 25/40

Pressure/Temperature Ratings with metal-to-metal seat

Type	PN	Nominal sizes DN	PMA / TMA / [bar] / [°C]		
RK 16 A	40/Class 300	15 – 100 mm	49.6 / -200	35.8 / 200	24 / 550
RK 16 C	40/Class 300	15 – 100 mm	49.6 / -200	35.8 / 200	29.3 / 400
RK 26 A	40/Class 300	15 – 100 mm	49.6 / -200	35.7 / 200	25 / 550

Designs

Type	Seat				Spring			Earthing connection
	meta-to-metal	EPDM (–40 up to 150 °C) ¹⁾	FPM (–25 up to 200 °C) ¹⁾	PTFE (–190 up to 250 °C) ¹⁾	without spring	special spring	Nimonic spring ²⁾	
RK 16 A	X	0	0	0	0	0	0	0
RK 16 C	X	–	–	–	0	–	–	0
RK 26 A	X	0	0	0	0	0	0	0

¹⁾ Observe pressure/temp. ratings of the equipment

²⁾ Required for temperatures above 300 °C.

X : standard
0 : optional
– : not available



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DISCO® Non-Return Valves RK, PN 40

Short overall length according to DIN EN 558-2, table 11, series 52

(≙ DIN 3202, part 3, series K5)



Pressure Drop Charts

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]

Opening Pressures

Differential pressures at zero volume flow.

RK 16 A, RK 26 A

DN	Opening pressures [mbar]			
	without spring ↑	Direction of flow 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

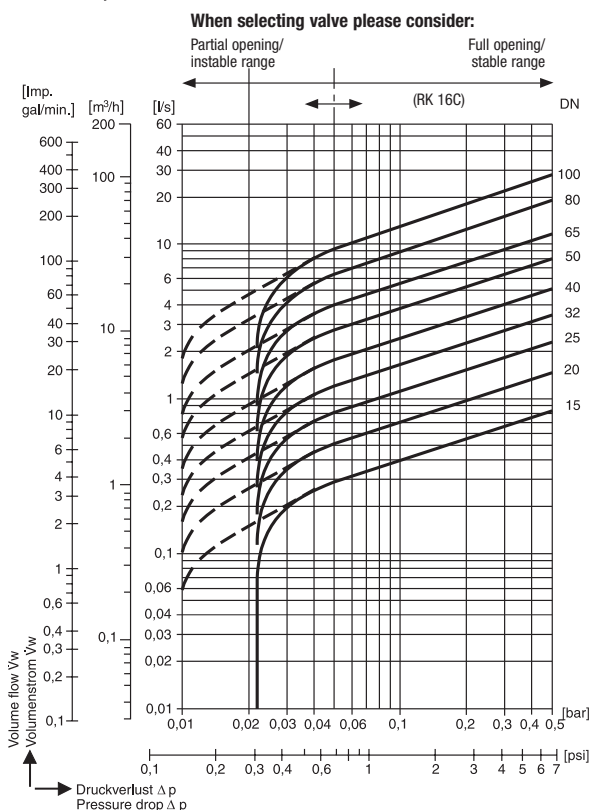
Opening Pressures

Differential pressures at zero volume flow.

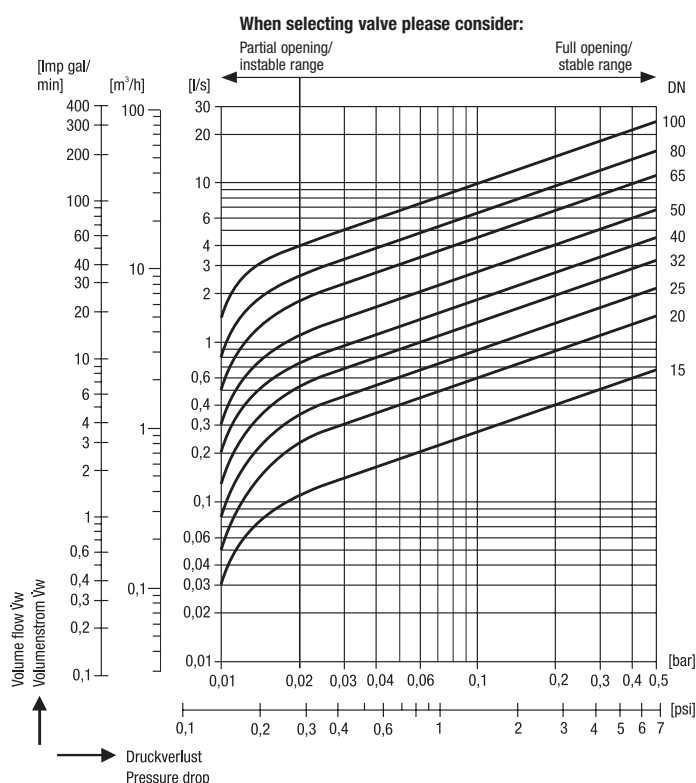
RK 16 C

DN	Opening pressures [mbar]			
	without spring ↑	Direction of flow with spring ↑ → ↓		
15	2.5	25	22.5	20
20	2.5	25	22.5	20
25	2.5	25	22.5	20
32	3.5	27	23.5	20
40	4.0	28	24.0	20
50	4.5	29	24.5	20
65	5.0	30	25.0	20
80	5.5	31	25.5	20
100	6.5	33	26.5	20

RK 16 A, RK 16 C (dash lines apply to RK 16 A)



RK 26 A



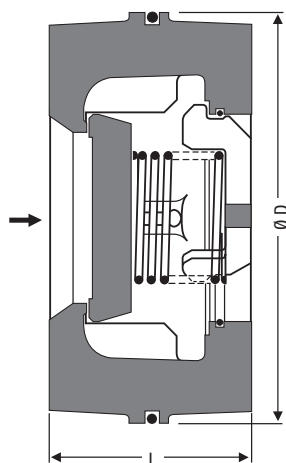
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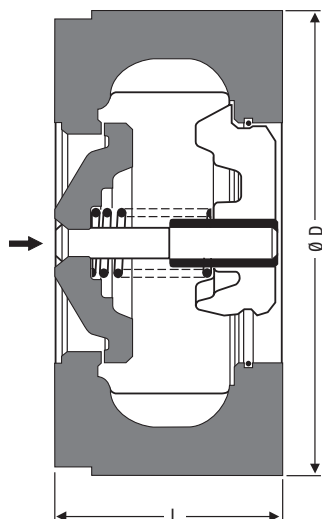
DISCO® Non-Return Valves RK, PN 63 to PN 160

Short overall length according to DIN EN 558-2, table 11, series 52

(≙ DIN 3202, part 3, series K5)



RK 49, DN 15 – 65 mm



RK 49, DN 80 – 200 mm

Application

Type	PN	
RK 49	160	For liquids, gases, vapours and aggressive fluids. Used as non-return valve (for unidirectional flow), vacuum breaker or priming foot valve. RK 49 for high pressures and temperatures

Body Material

Type		Nominal sizes DN	EN reference	ASTM equivalent ¹⁾
RK 49	Body	15 – 65 mm	1.4581	A351 CF8
	Valve disk		1.4986	–
	Body	80 – 200 mm	1.7357	A217 WC6
	Plug		1.4922	–

¹⁾ ASTM material similar to EN material.

Observe different physical and chemical properties!

Dimensions

	DN	[mm]	15	20	25	32	40	50	65	80	100	125	150	200
		[in]	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8
	L	[mm]	25	31.5	35.5	40	45	56	63	71	80	110	125	160
RK 49	D	[mm]	54	63	74	84	95	110	130	147	173	209	245	301

Pressure/Temperature Ratings with metal-to-metal seat

Type	PN	Nominal sizes DN	PMA / TMA / [bar] / [°C]		
RK 49	160	15 – 65	160 / -10	136.5 / 200	110.8 / 550
		80 – 200	160 / -10	160 / 200	55.3 / 530

Designs

Type	Seat				Springs			Earthing connection
	metal-to-metal	EPDM	FPM	PTFE	without spring	special spring	Nimonic spring ²⁾	
RK 49	X	–	–	–	0	–	X	0

²⁾ Required for temperatures above 300 °C.

X : standard

0 : optional

– : not available



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DISCO® Non-Return Valves RK, PN 63 to PN 160

Short overall length according to DIN EN 558-2, table 11, series 52

(≙ DIN 3202, part 3, series K5)



Pressure Drop Charts

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]

Opening Pressures

Differential pressures at zero volume flow.

RK 49

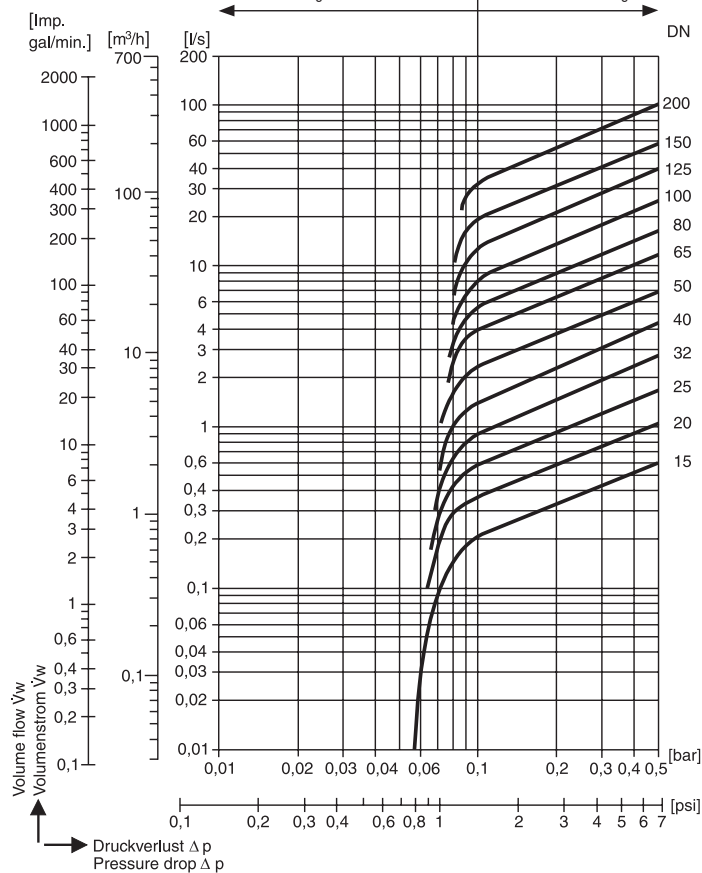
DN	Opening pressures [mbar]			
	without spring ↑	Direction of flow with spring		
		↑	→	↓
15	16.5	73	56.5	40
20	17.5	74	57.0	40
25	18.0	76	58.0	40
32	18.0	76	58.0	40
40	19.5	79	59.5	40
50	22.0	84	62.0	40
65	23.0	87	63.0	40
80	17.5	75	57.5	40
100	20.0	80	60.0	40
125	23.0	86	63.0	40
150	24.0	88	64.0	40
200	29.0	98	69.0	40

RK 49

When selecting valve please consider:

Partial opening/
instable range

Full opening/
stable range



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