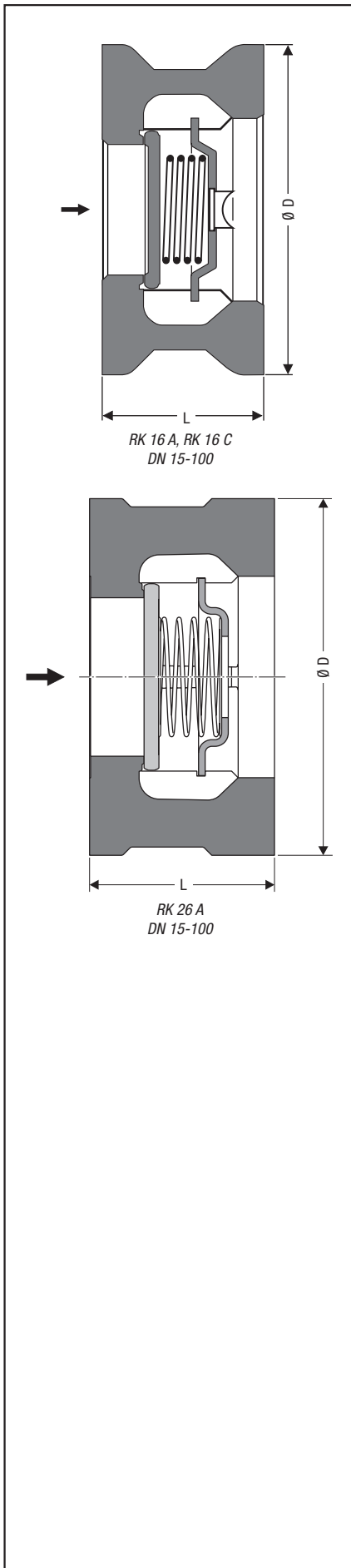


DISCO® Non-Return Valves RK, PN 40

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



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 16A	Body	15 – 100 mm	1.4571
	Valve disk		1.4571
RK 16C	Body	15 – 100 mm	2.4610
	Valve disk		2.4610
RK 26A	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
	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

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)

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]			
	Direction of flow			
	without 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

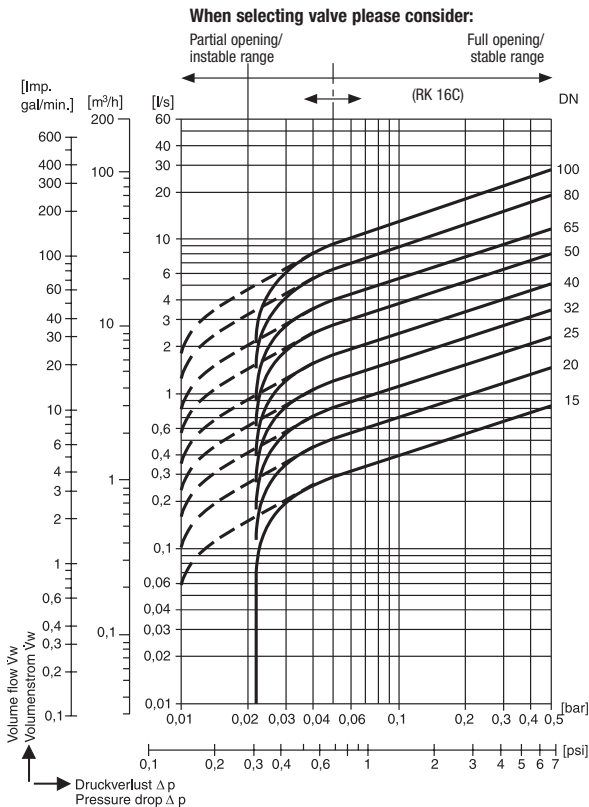
Opening Pressures

Differential pressures at zero volume flow.

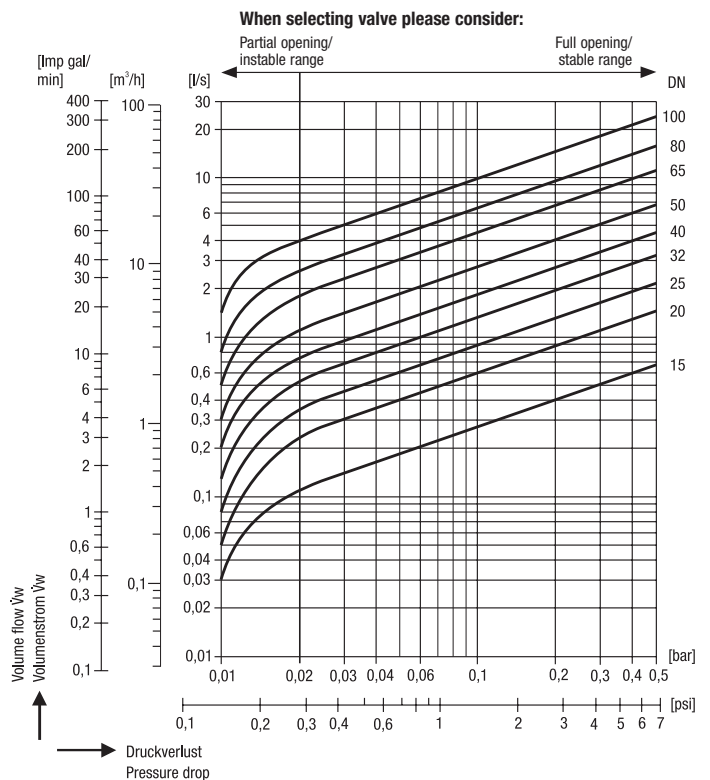
RK 16 C

DN	Opening pressures [mbar]			
	Direction of flow			
	without 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)



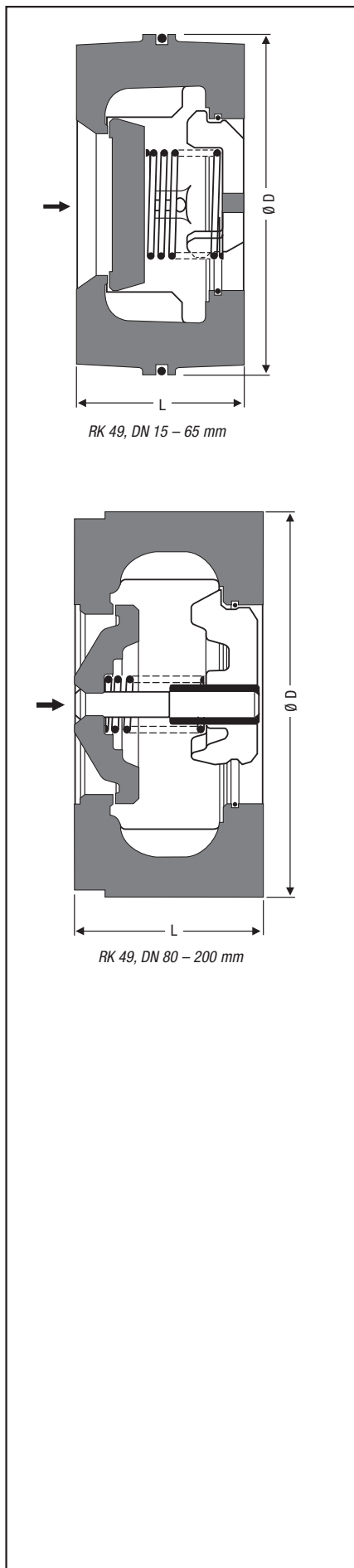
RK 26 A



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	–
RK 49 Body	80 – 200 mm	1.7357	A217 WC6
RK 49 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
	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	metal-to-metal	Seat			Springs			Earthing connection
		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

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		
		↑	→	↓
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

