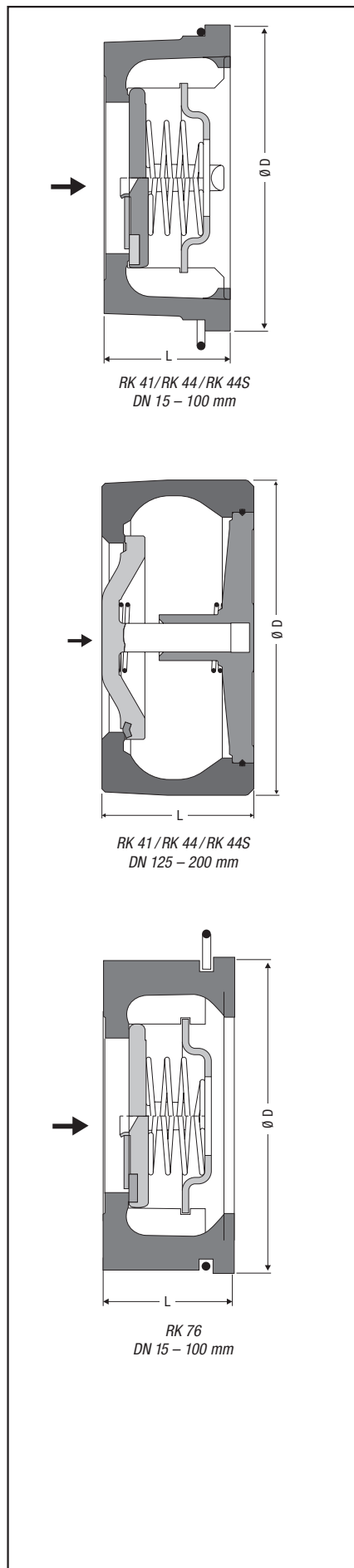


# DISCO Non-Return Valves RK, PN 6 to PN 40

Short overall length according to DIN EN 558-1, table 11, series 49

(Δ DIN 3202, part 3, series K4)



## Application and Features

Type	PN	Application	Features
		for liquids, gases and vapours	
RK 41	PN 16	particularly suitable for heating and hot-water installations	4 guide ribs for low-wear operation of the valve plate
RK 44	PN 16	for fresh water applications	
RK 44S	PN 16	for sea water applications	
RK 76	PN 40 Class 300	for industrial applications	specially designed spring cap provides centrally aligned spring support

## Body Material

Type		Nominal sizes (DN)	EN reference	ASTM equivalent <sup>1)</sup>
RK 41	Body	15 – 100 mm	Brass (CW 617 N)	Special Brass
	Valve disk		1.4571	AISI 316 Ti
RK 44	Body	125 – 200 mm	Grey cast iron (5.1301)	A126 Class B
	Plug		1.4006	A182 F6
RK 44S	Body	15 – 100 mm	Bronze (CC480 K-GS)	B584 C90500
	Valve disk		1.4571	AISI 316 Ti
RK 44S	Body	125 – 200 mm	Grey cast iron (5.1301)	A126 Class B
	Plug		Bronze (CC480 K-GS)	B584 C90500
RK 44S	Body	15 – 100 mm	Bronze (CC480 K-GS)	B584 C90500
	Valve disk		Bronze (CC483 K-GS)	B505 C90700
RK 44S	Body	125 – 200 mm	Bronze (CC483 K-GC)	B505 C90700
	Plug		Bronze (CC480 K-GS)	B584 C90500
RK 76	Body	15 – 100 mm	1.4107	A217-CA15
	Valve disk		1.4571	AISI 316 Ti

<sup>1)</sup> 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
	L	[mm]	16	19	22	28	31,5	40	46	50	60	90	106	140
RK 41	D	[mm]	40	47	56	72	82	95	115	132	152	184	209	264
RK 44	D	[mm]	42	49	58	74	84	97	117	132	152	184	209	264
RK 44S	D	[mm]	42	49	58	74	84	97	117	132	152	184	209	264
RK 76	D	[mm]	45	55	65	75	85	98	118	134	154	–	–	–

## Pressure/Temperature Ratings with metal-to-metal seat

Type	PN / Class	DN	p / T / [bar] / [°C]		
RK 41	PN 16	15 – 100	16 / -10	16 / 150	13.5 / 200
	PN 16	125 – 200	16 / -10	12.8 / 200	9.6 / 300
RK 44	PN 16	15 – 100	16 / -200	13.5 / 200	8 / 250
	PN 16	125 – 200	16 / -10	12.8 / 200	9.6 / 300
RK 44S	PN 16	15 – 200	16 / -200	13.5 / 200 <sup>2)</sup>	8 / 250 <sup>2)</sup>
RK 76	PN 40 / Class 300	15 – 100	49.6 / -10	35.7 / 200	31.6 / 300

<sup>2)</sup> If temperatures exceed 90 °C use valve without spring.

## Designs

Type	Seat				Springs			Earthing connection
	metal-to-metal	EPDM (-40 up to 150 °C) <sup>2)</sup>	FPM (-25 up to 200 °C) <sup>2)</sup>	PTFE (-190 up to 250 °C) <sup>2)</sup>	without spring	special spring	Nimonic spring	
RK 41	X	0	0	–	0	0	–	Use RK 86
RK 44	X	0	0	–	0	0	–	
RK 44S	X	0	0	–	0	–	–	
RK 76	X	0	0	0	0	0	0	

<sup>2)</sup> Observe pressure/temp. ratings of the equipment 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  $\dot{V}_w$ .

The values indicated in the chart are applicable for spring-assisted valves with horizontal flow and to valves without spring installed in vertical pipes with upward flow.

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

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

$\rho$  = 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.

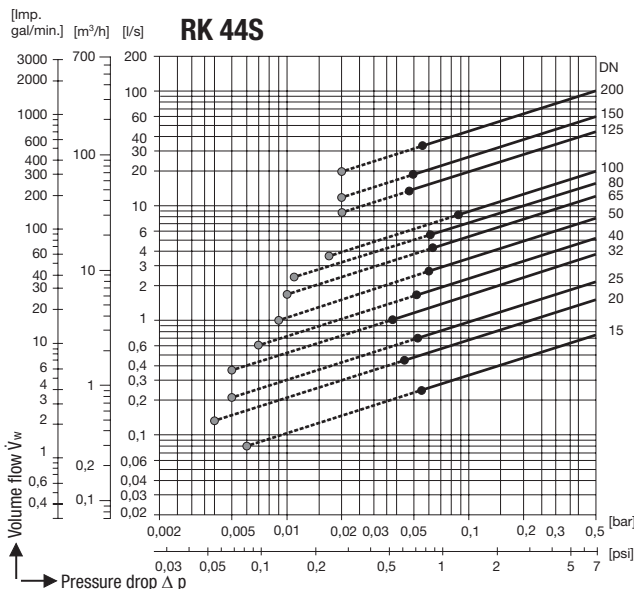
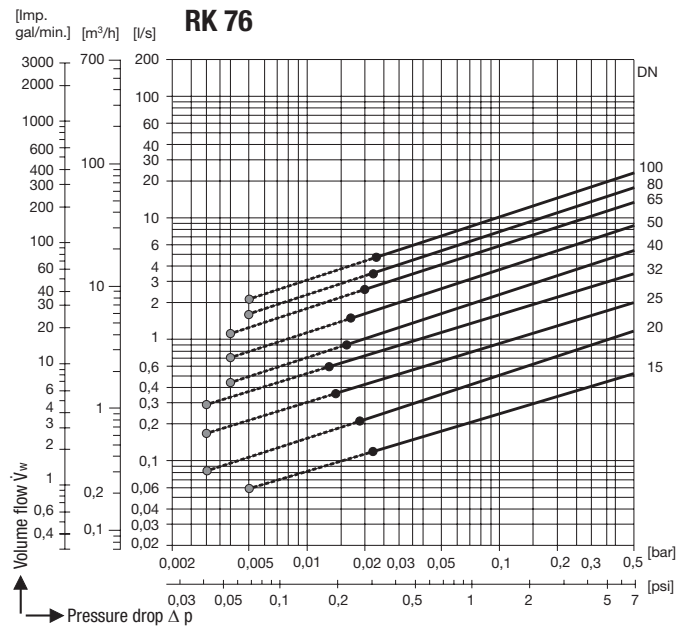
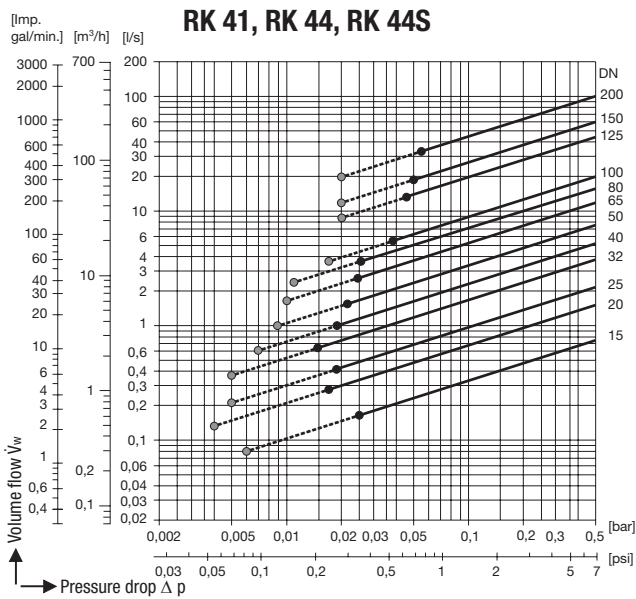
### RK 41, RK 44, RK 76<sup>1)</sup>

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	12.5	35	22.5	10
150	14.0	38	24.0	10
200	13.5	37	23.5	10

### RK 44S

DN	Opening pressures [mbar]			
	Direction of flow			
	without spring	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
125	12.5	35	22.5	10
150	14.0	38	24.0	10
200	13.5	37	23.5	10

<sup>1)</sup> only DN 15-100



- Required minimum volume flow  $\dot{V}_w$  for equipment without spring installed in vertical pipes with upward flow.
- Required minimum volume flow  $\dot{V}_w$  for equipment with standard spring and horizontal flow.