

Dual-plate check valve DR01 / DR02 / DR03 / DR04



Description:

Dual-plate check valves allow the medium to flow just in one direction. Check valve will close automatically, if the flow of the medium changes the direction.

Features:

- suitable for neutral and not neutral **gaseous & liquid media**
- short length acc to DIN EN or API
- low opening pressure
- direction of flow horizontal, vertical from below – up to DN200 also from above

Connection:

DN 50, 65, 80, 100, 125, 200, 250, 300, 350, 400, 450, 500, 600

Temperature:

-10°C to +200°C
- depending on design

Pressure:

0,0 bar – 16,0 bar
- depending on design

Material:

Parts:	type DR01	type DR02	type DR03	type DR04
Body	GGG40 (epoxy-covered)	GGG40 (epoxy-covered)	1.4408 / A 351 CF8M	GGG40 (epoxy-covered)
Plate	GGG40	1.4408 / A 351 CF8M	1.4408 / A 351 CF8M	Alu.-bronze C954
Stem	1.4401 / AISI 316	1.4401 / AISI 316	1.4401 / AISI 316	1.4401 / AISI 316
Spring	1.4571 / AISI 316 Ti	1.4571 / AISI 316 Ti	1.4571 / AISI 316 Ti	1.4571 / AISI 316 Ti

Seal

	type DR01	type DR02	type DR03	type DR04
NBR	-10°C - +90°C	-10°C - +90°C	-10°C - +90°C	-10°C - +90°C
EPDM*	-10°C - +120°C	-10°C - +120°C	-10°C - +120°C	-10°C - +120°C
FKM	-10°C - +150°C	-10°C - +150°C	-10°C - +200°C	-10°C - +150°C

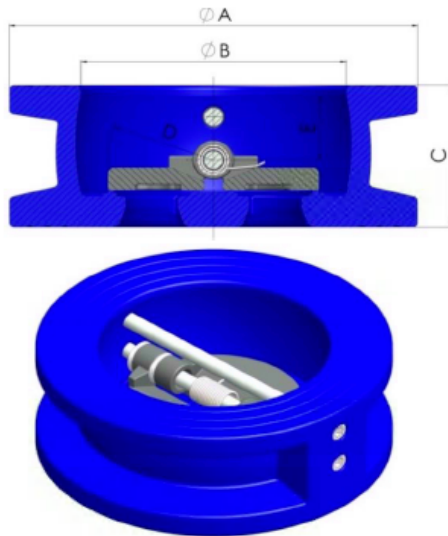
* approval for drinking water on EPDM sealing up to +85°C acc. to WRAS

Pressure-temperature-rating

type DR01 + DR04	temperature in °C					
	-10	20	50	100	150	
DN50 – DN250	16	16	15,6	14,9	14,7	pressure (bar)
DN300 – DN600	10	10	9,7	9,3	9,2	
type DR02	-10	20	50	100	150	
DN50 – DN250	16	16	14,8	12,9	11,6	
DN300 – DN600	10	10	9,2	8,1	7,2	
type DR03	-10	20	50	100	150	200
DN50 – DN250	16	16	14,8	12,9	11,6	10,2
DN300 – DN600	10	10	9,2	8,1	7,2	6,4

Please consider temperature ranges of the seals!

Dimensions:



DN		A*					B	C		D	E
Size		PN10	PN16	PN25	PN40	ANSI 150	mm	EN 558	API 594		
50	2"	107				101	70,5	43	60	28,8	19
65	2,5"	127				121	80	46	67	36,1	20
80	3"	142				134	98	64	73	43,4	28
100	4"	162		-		171	117	64	73	52,8	27
125	5"	192		-		193	145	70	83	65,7	30
150	6"	218		-		219	172	76	98	78,6	31
200	8"	273		-		276	221	89	127	104,4	33
250	10"	328		-		336	275,5	114	146	127	50
300	12"	378	-	-	-	406	325,5	114	181	148,3	43
350	14"	438	-	-	-	448	361	127	184	172,4	45
400	16"	489	-	-	-	511	412	140	191	197,4	52
450	18"	539	-	-	-	546	468	152	203	217,8	58
500	20"	594	-	-	-	603	515	152	219	241	58
600	24"	695	-	-	-	714	624	178	222	295,4	73

* flange centering rings can be used to achieve the flange connection dimensions

Face to face acc. to: DIN EN 558-1 row 16 (DIN3202 / K3)

Flange acc. to: DIN EN 1092-1 PN10/16/25/40

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Connection:	PN10/16/25/40			PN10/16				PN10						

Face to face acc. to: API 594

Flange acc. to: ANSI B16.5 ANSI 150

Maximal working pressure / opening pressure:

DN		Kv-Value	Working pressure in bar		Opening pressure at flow direction in mbar		
SIZE		m3/h	EN558	API 594			
50	2"	63	0 - 16	0 - 20	~15	~20	~10
65	2,5"	109	0 - 16	0 - 20	~15	~20	~10
80	3"	172	0 - 16	0 - 20	~15	~20	~10
100	4"	289	0 - 16	0 - 20	~15	~20	~10
125	5"	476	0 - 16	0 - 20	~15	~20	~10
150	6"	750	0 - 16	0 - 20	~15	~20	~10
200	8"	1330	0 - 16	0 - 20	~15	~20	~10
250	10"	2080	0 - 16	0 - 20	~15	~20	-
300	12"	3676	0 - 10	0 - 20	~15	~20	-
350	14"	5274	0 - 10	0 - 20	~15	~20	-
400	16"	7306	0 - 10	0 - 20	~15	~30	-
450	18"	9246	0 - 10	0 - 20	~15	~30	-
500	20"	11410	0 - 10	0 - 20	~15	~30	-
600	24"	17570	0 - 10	0 - 20	~15	~30	-

Test meeting the requirement of PED acc. to DIN EN 12266:

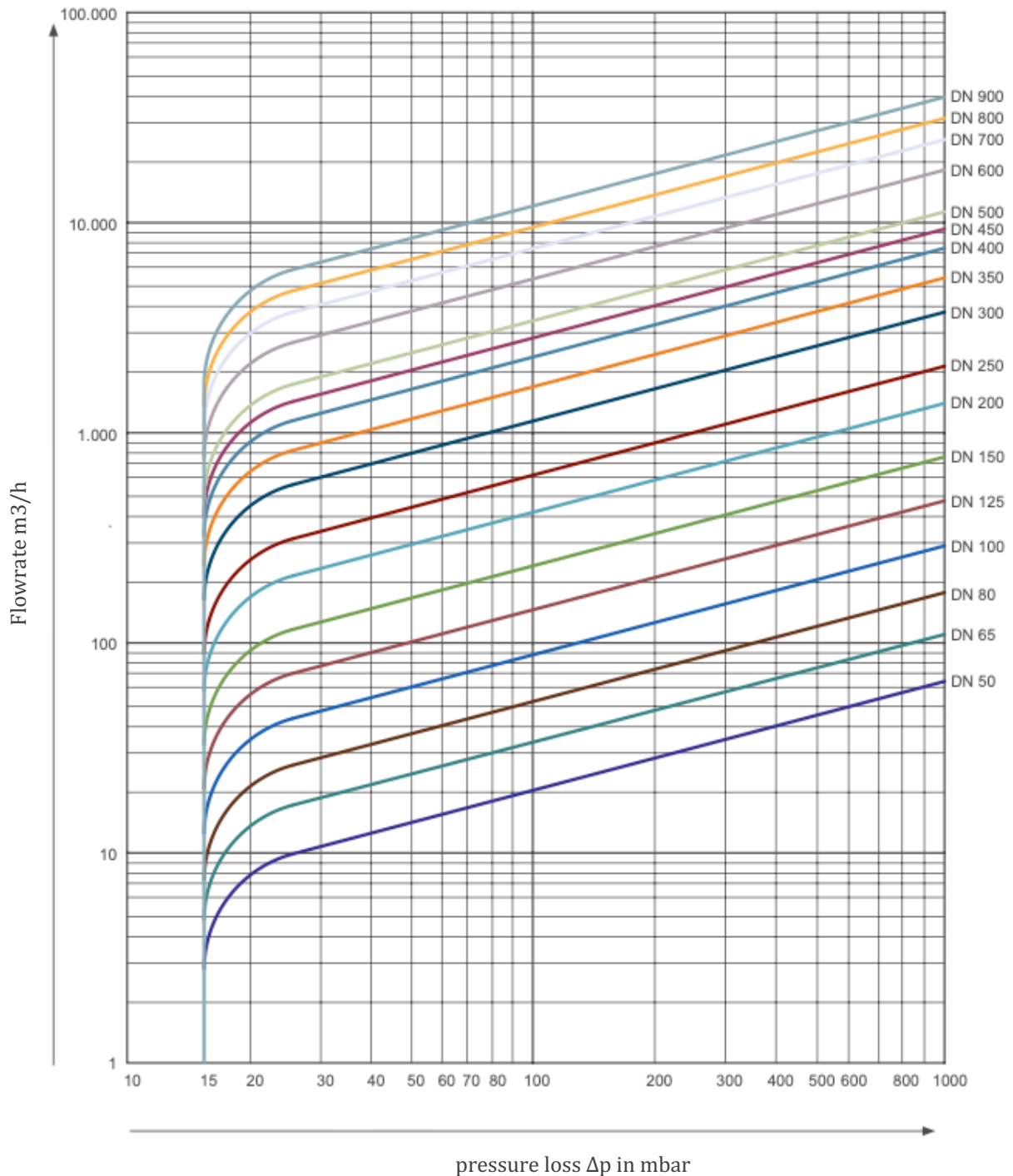
The tightness corresponds to the specified leakage rates:

Type	Soft seat (NBR, EPDM, FKM)
DR01	A*
DR02	A*
DR03	A*
DR04	A*

* acc. to EN 12266-1 / in order to achieve the specified leakage rate, a back pressure of at least 1 bar is required

Pressure loss:

The diagram values are applicable for water at a temperature of 20 °C. The characteristic curves apply to the operation in horizontal pipelines within the valve opening range. For calculations involving other fluids or temperatures, please contact us.



Installation:

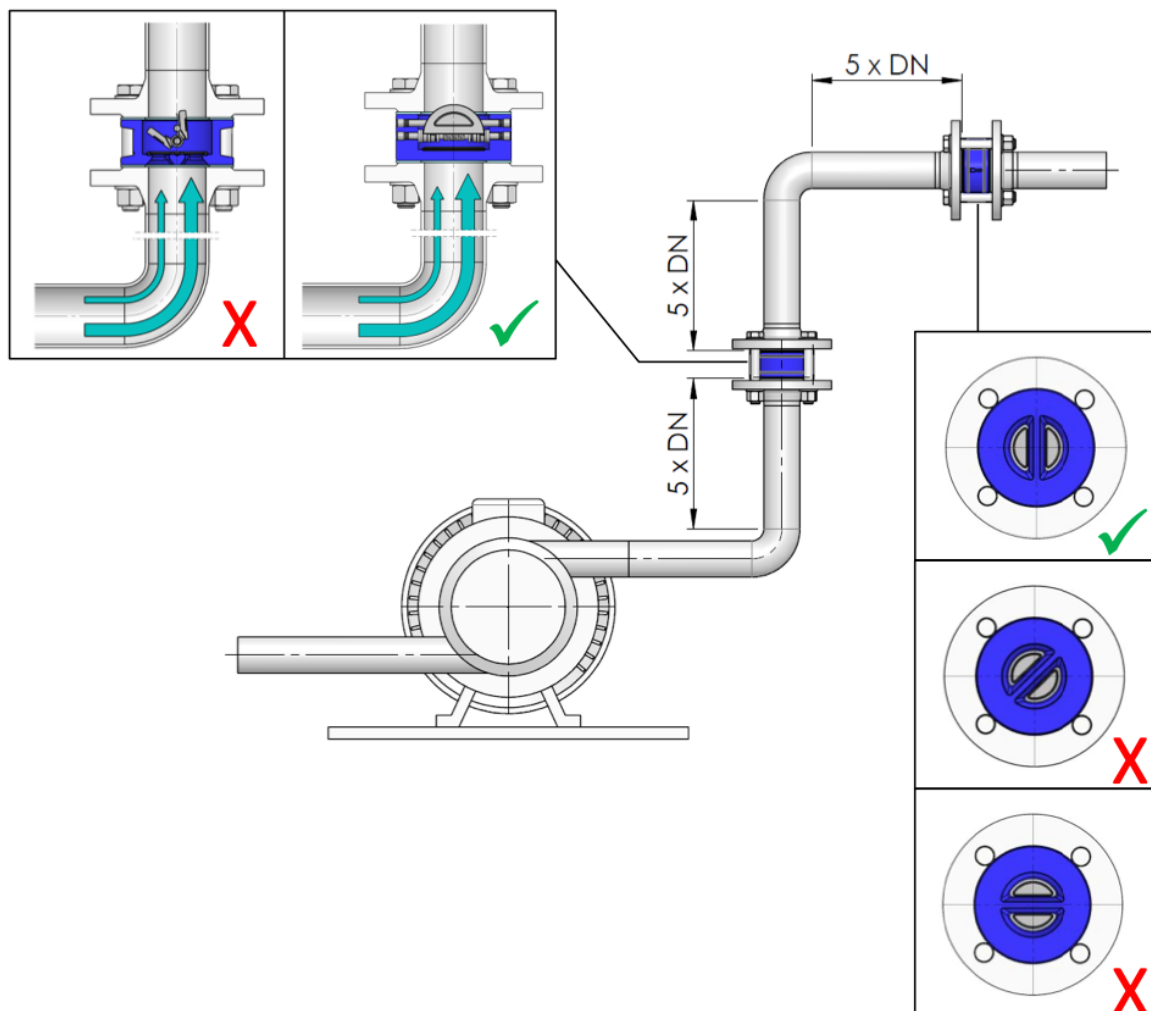
Please consider the operating manual. Shown here in abbreviated form only.

Dual plate check valves can be installed for flow directions in horizontal as well as vertical direction. To guarantee an optimal function, observe the following instruction which apply to horizontal and vertical flow directions. The correct installation position can be seen from the flow direction arrow on the body of the valve.

Horizontal flow direction: The valve must be installed in the correct installation position and properly centered between the two pipelines. The valve should be installed with the stems in a vertical position (see following illustration). If the valve has an eyebolt it should point upwards.

Vertical flow direction: The valve must be installed in the correct installation position and properly centered between the two pipelines. If there is a pipe bend in front of the valve, the valve must be installed in such a way that the stems of the valve are parallel to the horizontal pipeline in front of the pipe bend (see illustration). First check the suitability of the valve for flow direction from top to bottom.

The illustration shows options of how the valve should be installed in the piping system. The calming distance of $5 \times DN$ is shown as well as the correct positioning. This is necessary to guarantee correct functioning of the valve.



Structure article number:

type	connection	seal	diameter
DR01	00 – DIN / PN	01 – EPDM	08 – DN50
DR02	10 – ANSI 150 / API	02 – FPM	09 – DN65
DR03		04 – NBR	10 – DN80
DR04			11 – DN100
			12 – DN125
			13 – DN150
			14 – DN200
			15 – DN250
			16 – DN300
			17 – DN350
			18 – DN400
			19 – DN450
			20 – DN500
			21 – DN600

Example no. DR01000112:
DR01 | 00 | 01 | 12

Article no. DR01000112
Dual plate check valve
Body: GGG40
Plate: GGG40
Model: DIN
Seal: EPDM
Diameter: DN125

Image similar, subject change without notice.