

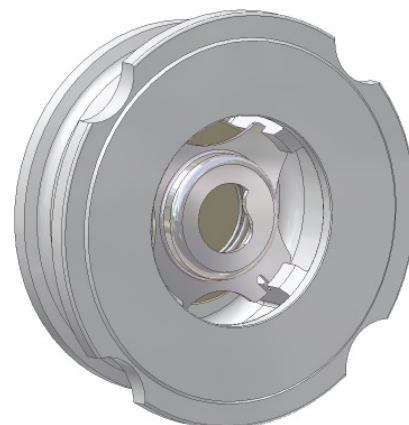


CE 0036



## Non Return Valve Type CSD DN015 - 100

Designation	Material
Body	see table
Valve Plate	1.4404
Spring Cap	1.4401
Spring	1.4401
Soft sealing	see table



### Technical Specifications

Classification of these products according to DGRL 97/23/EC, fluid group 1

Installation with sealing between flanges according to

DIN EN 1092-1 Form B1, PN 6-40 and ANSI B16.5 Class 150/ 300 RF

Nominal pressure max. PN40

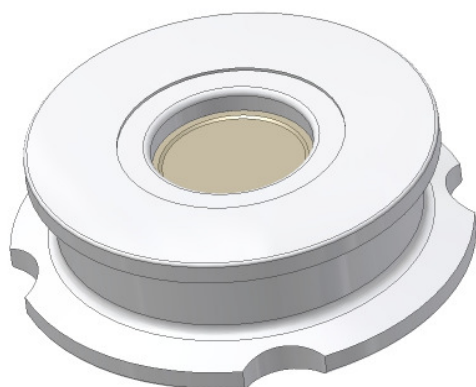
Operational limits according to DIN EN 1092-1 and AD-Merkblätter W10

Tightness according to DIN EN 12266-1, Leakage Rate D (Sealing M, T) and Leakage Rate A (Sealing E, P, V)

Overall lengths according to DIN EN 558-1, line 49

Identification according to DIN EN 19

Packed in separate card board boxes



### Utilisation

For liquids, gases and steams in all process technologies

### Constructional features

Centre ring integrated on the body

Guiding of valve plate by body ribs

New planed spring cap for an optimal safety

Serially adequate for PN 6-40 and ANSI Class 150/ 300

### Special Types

Hastelloy C4 springs (up to 400°C) and Nimonic (up to 500°C).

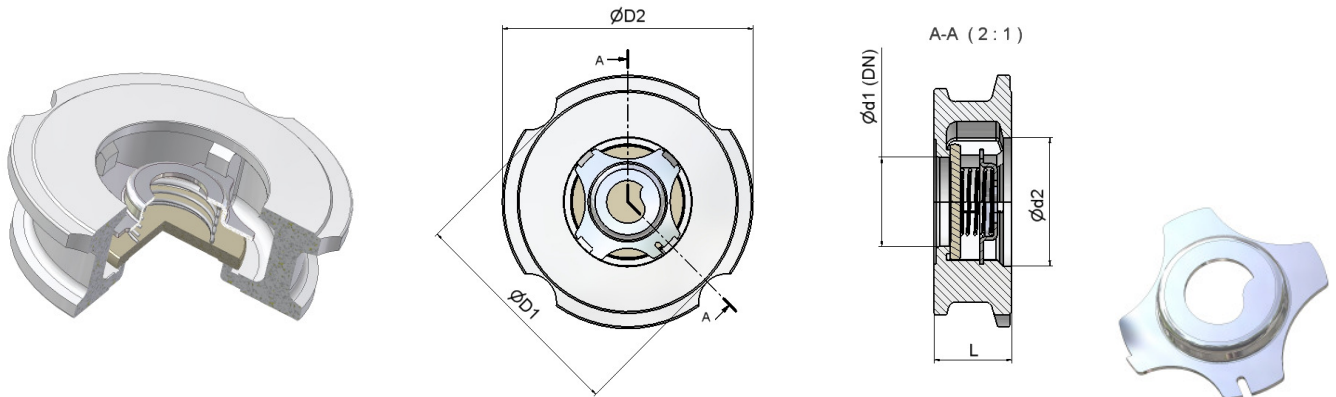
Special springs for different opening pressures up to max. 400 mbar

**Designation**      **CSD- 64      64 - M - 100**  
**CSD- □□ - □□ - □ - □□□**      →      **DN015 - 100**

Body			Valve plate			Soft sealing		
Material	Nr.	Code	Material	Nr.	Code	Material	Temperatur	Code
Steel	1.0619	27	Austenit	1.4404	64	Metal-seated	-200 to 500°C	M
Austenit	1.4408	64				EPDM	-50 to 130°C	E
						NBR	-30 to 120°C	P
						VITON	-20 to 200°C	V
						PTFE	-200 to 200°C	T



CE 0036



DN (mm)	015	020	025	032	040	050	065	080	100
DN ( Zoll )	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
Ø d1	15	20	25	32	39	48	62	72.5	89
Ø d2	26	31	36	44	51.5	62	77.5	92	107
Ø D1	44	54	63.5	73	82.5	96	116	132	152
Ø D2	51	61	71	79.5	92	107	127	142	162/168
L	16	19	22	28	31.5	40	46	50	60
weight	0.1	0.2	0.3	0.5	0.7	1.1	1.6	3.0	3.5

**Opening pressures (mbar)**

ΔP ↑	25	25	25	27	28	29	30	31	33
ΔP →	20	20	20	20	20	20	20	20	20
ΔP ↓	15	15	15	13	12	11	10	9	7

**Opening pressures without spring (mbar)**

ΔP ↑	5	5	5	7	8	9	10	11	13
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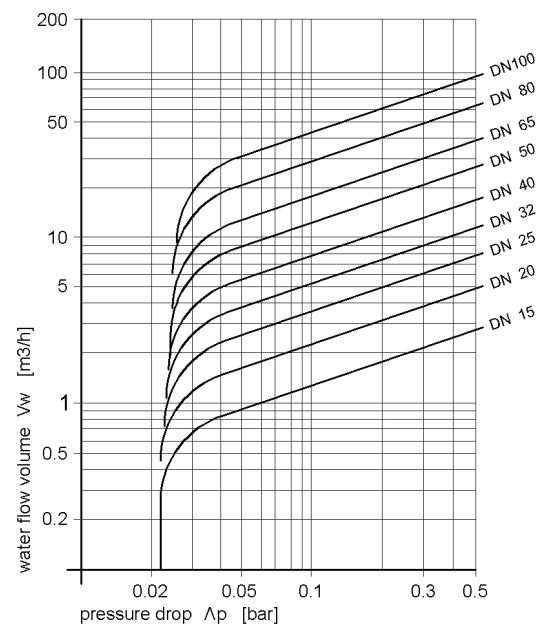
If lowest opening pressures are necessary, the valves without spring can be installed in vertical directions with direction of flow from bottom to top.

**Pressure drop diagram**

Pressure drop diagram for water at 20°C with opened valve and horizontal flow.  
For calculating the pressure drop of the medium the equivalent water flow volume has to be calculated.

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

- $\dot{V}_w$  = Equivalent water flow volume in m<sup>3</sup>/h
- $\rho$  = Density of the medium in kg/m<sup>3</sup>
- $\dot{V}$  = Flow volume of the medium in m<sup>3</sup>/h (working condition)



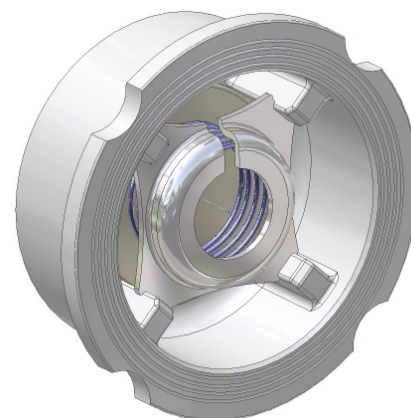


CE 0036



### Non Return Valve Type CVD DN015 - 100

Designation	Material
Body	see table
Valve plate	see table
Spring cap	1.4401
Spring	1.4401
Soft sealing	see table



#### Technical specifications

Placement between flange according to DIN EN 1092-1, PN 6-40

Nominal pressure max. PN40

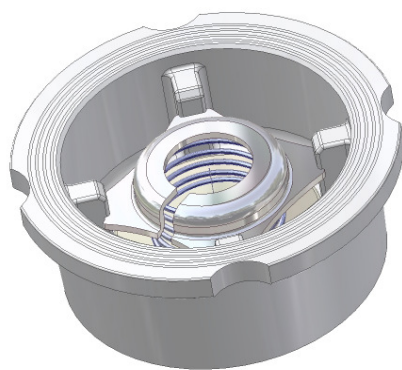
Overall lengths according to DIN EN 558-1, Gr. 49

Tightness according to DIN EN 12266-1, Leakage Rate D (Sealing M, T) and Leakage Rate A (Sealing E, P, V)

Operational limits according to DIN EN 1092-1

Identification according to DIN EN 19

Packed in separate card board boxes



#### Utilisation

For liquids, gases and steams in all process technology.

#### Constructional features

Centring integrated on the body

Guiding of valve plate by body ribs

#### Special types

Hastelloy C4 springs (up to 400°C) and Nimonic (up to 500°C).

Special springs for different opening pressures up to max. 500mbar

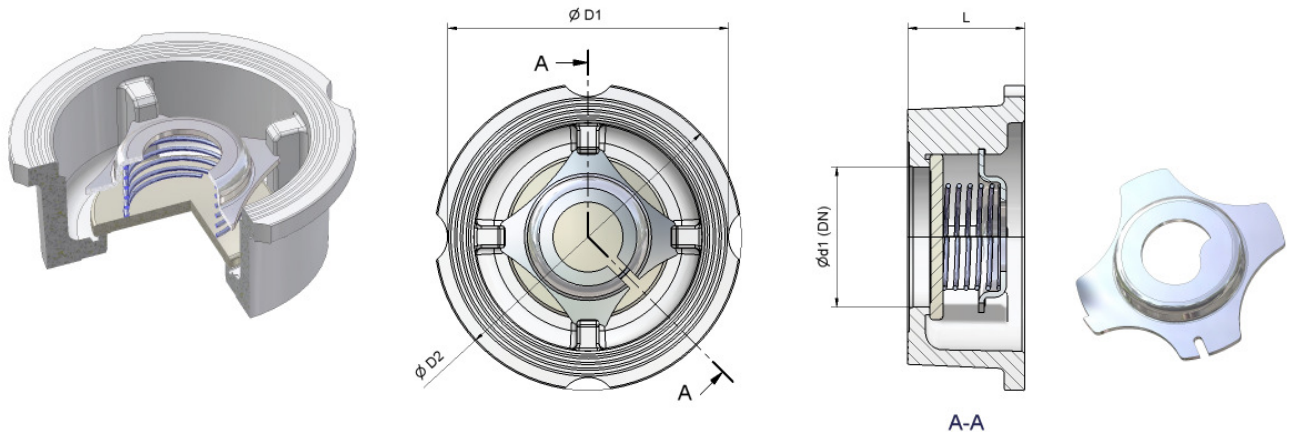
Holding flange on operation for ventilation or vacuum breaker

**Designation: CVD- 64 64 - M - 100**  
**CVD- □□ - □□ - □ - □□□ → DN015 - 100**

Body			Valve plate			Soft sealing		
Material	Nr.	Code	Material	Nr.	Code	Material	Temperatur	Code
Bronze	2.1050	33	Austenit	1.4404	64	Metal-seated	-200 up to 500°C	M
Austenit Mo-free	1.4301	65	Austenit Mo-free	1.4301	65	EPDM	-50 up to 130°C	E
Uranus	1.4539	68	Uranus	1.4539	68	NBR	-30 up to 120°C	P
Titanium	3.7035	90	Titanium	3.7035	90	VITON	-20 up to 200°C	V
Hastelloy B	2.4600	94	Hastelloy B	2.4600	94	PTFE	-200 up to 200°C	T
Hastelloy C	2.4883	95	Hastelloy C	2.4819	95	Depending on pressure and medium		



CE 0036



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Ø d1	15	20	25	32	39	48	62	72	89
Ø D1	43	53	63	75	86	96	116	133	154
Ø D2	50	60	70	81	91	105	126	148	164/170
L	16	19	22	28	31.5	40	46	50	60
Weight	0.1	0.2	0.3	0.5	0.7	1.1	1.6	3.0	3.5

**Opening pressures (mbar)**

ΔP ↑	25	25	25	27	28	29	30	31	33
ΔP →	20	20	20	20	20	20	20	20	20
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**Opening pressures without spring (mbar)**

ΔP ↑	5	5	5	7	8	9	10	11	13
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If lowest opening pressures are necessary, the valves without spring can be installed in vertical directions with direction of flow from bottom to top.

**Pressure drop diagram**

Pressure drop diagram for water at 20°C with opened valve and horizontal flow.  
For calculating the pressure drop of the medium the equivalent water flow volume has to be calculated..

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

- $\dot{V}_w$  = Equivalent water flow volume in m3/h
- $\rho$  = Density of the medium (in use) kg/m3
- $\dot{v}$  = Flow volume of the medium (in use) in m3/h

