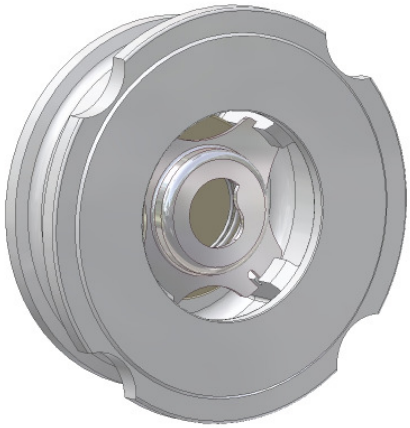
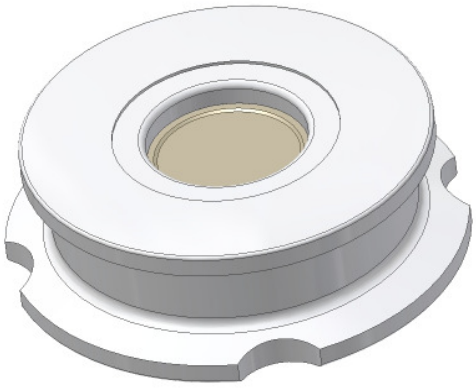
Non Return Valve Type CSD
DN015 - 100



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 6-40and 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

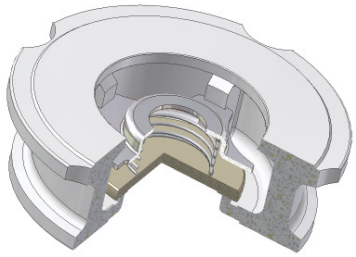
Constructional features
Centre ring integrated on the body
Guiding of valve plate by body ribs
New planed spring cap for an optimal safety
Serially adequate for PN 6-40 and ANSI Class 150/ 300

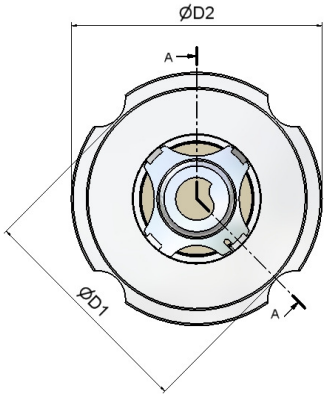
Special Types
Hastelloy C4 springs (up to 400°C) and Nimonic (up to 500°C).
Special springs for different opening pressures up to max. 400 mbar

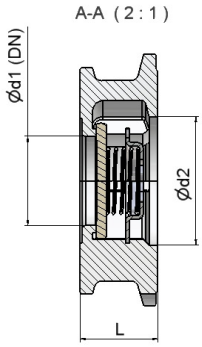
Designation **CSD- 6 4 6 4 - M - 1 0 0**

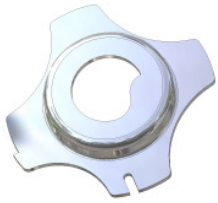
CSD- ❑❑ - ❑❑ - ❑ - ❑❑❑ → DN015 - 100

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









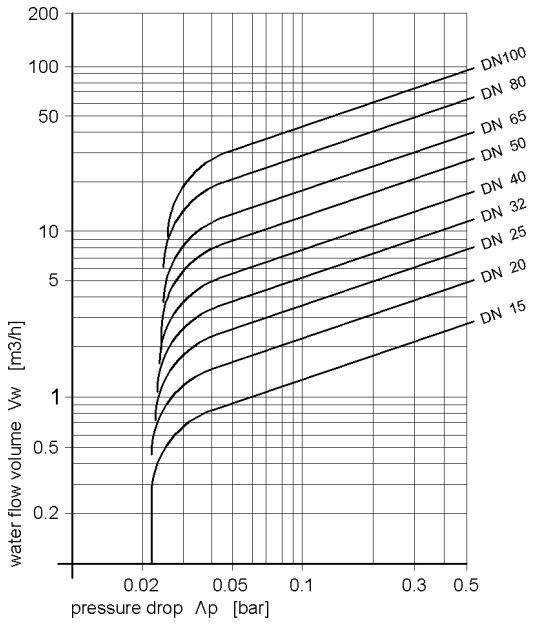
DN (mm)	**015**	**020**	**025**	**032**	**040**	**050**	**065**	**080**	**100**
DN (zoll)	½"	3/4"	1"	1 ¼"	1 ½"	2"	2 ½"	3"	4"
Ø d1	15	20	25	32	39	48	62	72.5	89
Ø d2	26	31	36	44	51.5	62	77.5	92	107
Ø D1	44	54	63.5	73	82.5	96	116	132	152
Ø D2	51	61	71	79.5	92	107	127	142	162/168
L	16	19	22	28	31.5	40	46	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

If lowest opening pressures are necessary, the valves without spring can be installed in vertical directions with direction of flow from bottom to top.

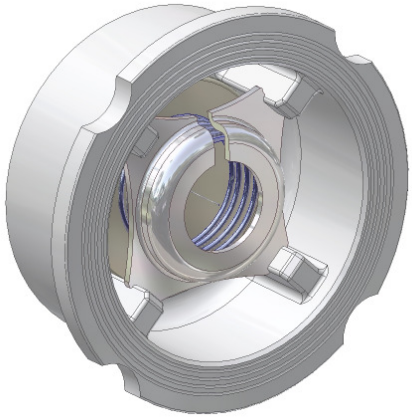
Pressure drop diagram
Pressure drop diagram for water at 20°C with opened valve and horizontal flow.
For calculating the pressure drop of the medium the equivalent water flow volume has to be calculated.

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

$\dot{V}w$ = Equivalent water flow volume in m3/h
ρ = Density of the medium in kg/m3
$\dot{v}$ = Flow volume of the medium in m3/h (working condition)

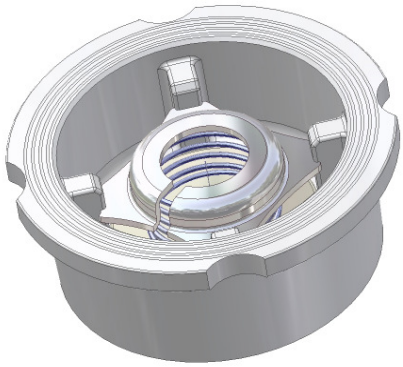


Non Return Valve Type CVD
DN015 - 100



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



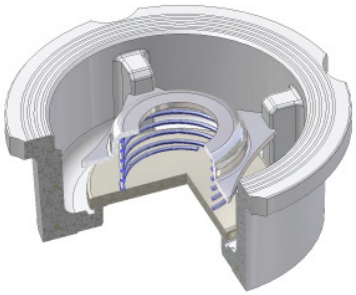
Utilisation
For liquids, gases and steams in all process technology.

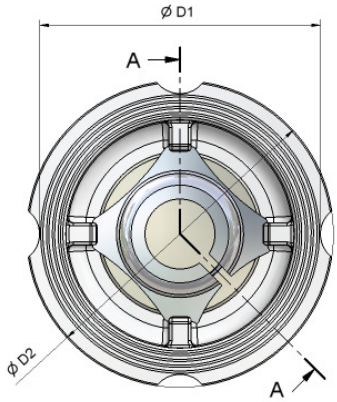
Constructional features
Centrering integrated on the body
Guiding of valve plate by body ribs

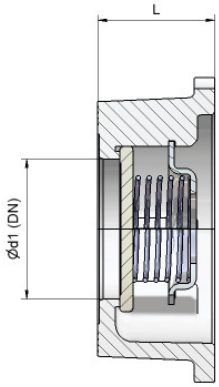
Special types
Hastelloy C4 springs (up to 400°C) and Nimonic (up to 500°C).
Special springs for different opening pressures up to max. 500mbar
Holding flange on operation for ventilation or vacuum breaker

Designation: **CVD- 6 4 6 4 - M - 1 0 0**
CVD- ❑❑ - ❑❑ - ❑ - ❑❑❑ → DN015 - 100

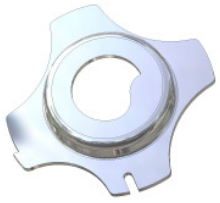
Body			Valve plate			Soft sealing		
Material	Nr.	Code	Material	Nr.	Code	Material	Temperatur	Code
Bronce	2.1050	33	Austenit	1.4404	64	Metal-seated	-200 up to 500°C	M
Austenit Mo-free	1.4301	65	Austenit Mo-free	1.4301	65	EPDM	-50 up to 130°C	E
Uranus	1.4539	68	Uranus	1.4539	68	NBR	-30 up to 120°C	P
Titanium	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		







A-A



DN (mm)	**015**	**020**	**025**	**032**	**040**	**050**	**065**	**080**	**100**
DN (zoll)	½"	3/4"	1"	1 ¼"	1 ½"	2"	2 ½"	3"	4"
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
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

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 diagramm

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
ρ = Density of the medium (in use) kg/m3
$\dot{v}$ = Flow volume of the medium (in use) in m3/h