DISCO
CHECK VALVES

SERIES
932

AWS
APPARATEBAU

GENERAL DESCRIPTION
DISCO CHECK VALVES

Description and intended purpose

AWS disco check valves are suitable for universal use in piping systems for the transport of liquid and gaseous substances as well as in plants or environments in which particularly high demands are placed on the material. They can be installed directly between flanges (PN 6 - PN 160 or Class 150 - Class 900).

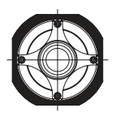
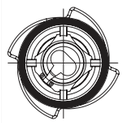
AWS disco check valves are maintenance-free.

Function

AWS disco check valves require a low opening pressure. The resulting opening force pushes the disc against a spring and, if necessary, also the weight force of the disc (depending on the installation position), so that the medium can flow. If the inlet pressure drops or if the backpressure exceeds the inlet pressure, the valve closes and seals against the medium by means of the soft seat or the metal seat.

OVERVIEW MATRIX
DISCO CHECK VALVES

DESCRIPTION

		930	931		932		932-HD	936
								
NOMINAL SIZES		DN 15 – DN 100	DN 15 – DN 100	DN 125 – DN 200	DN 15 – DN 100	DN 125 – DN 300	DN 15 – DN 100	DN 15 – DN 100
FLANGE CONNECTION *1		PN 6 *2 / PN 10 / PN 16 / PN 25 / PN 40 Class 150 *2	PN 6 / PN 10 / PN 16 Class 150		PN 6 / PN 10 / PN 16 / PN 25 / PN 40 Class 150 / Class 300	PN 10 / PN 16 / PN 25 / PN 40 Class 150 / Class 300 *2	PN 63 / PN 100 / PN 160 Class 600 / Class 900	PN 10
PRESSURE		max. 40 bar	max. 16 bar		max. 50 bar		max. 160 bar	max. 10 bar
TEMPERATURE RANGES		-20 °C to +300 °C	-10 °C to +200 °C	-20 °C to +300 °C	-196 °C to +400 °C *3		-200 °C to +450 °C *3	-20 °C to +120 °C
MATERIALS AVAILABLE *4	Stainless steel	x	–	–	x	x	x	–
	Brass	–	x	–	–	–	–	–
	Alu bronze	–	–	–	x	–	–	–
	Carbon steel	–	–	–	x	x	–	–
	Superduplex	–	–	–	x	x	x	–
	Ductile iron	–	–	x	–	–	–	–
	PVC	–	–	–	–	–	–	x
	PP	–	–	–	–	–	–	x
	PVDF	–	–	–	–	–	–	x
SEALS AVAILABLE		Metal, NBR, EPDM, FKM, PTFE	Metal, NBR, EPDM, FKM		Metal, NBR, EPDM, FKM, PTFE		Metal, NBR, EPDM, FKM, PTFE	NBR, EPDM, FKM, PTFE
DIFFERENT OPENING PRESSURES AS SPECIAL OPTION		–	–		x		x	x

*1 other flange connections on request *2 not for at all nominal sizes *3 higher or lower temperatures on request *4 other materials on request

WHY CHOOSE AWS
DISCO CHECK VALVES?

IN BRIEF:

Many years of experience in the production of check valves

In-house assembly department with maximum flexibility and expertise

Advice and technical design via in-house design and engineering team

High availability ensuring short delivery times of standard articles

QUALITY AND TESTING AT AWS:

Own test benches for pressure and leak tests in accordance with EN 12266-1, API 598 and other common standards

Experience and routine in the preparation of works and acceptance test certificates in accordance with DIN EN 10204 (2.2, 3.1 or 3.2 certificate)

Regular auditing of processes and quality mechanisms by TÜV Süd, discerning customers and other external bodies

In-house spectral analyses for metallic materials

Additional quality assurance measures (external and internal), for example corrosion testing, dye penetrant testing, X-ray testing, preparation of QCPs, etc.

... AND BECAUSE WE KNOW
WHAT MATTERS IN YOUR INDUSTRY!

HVAC

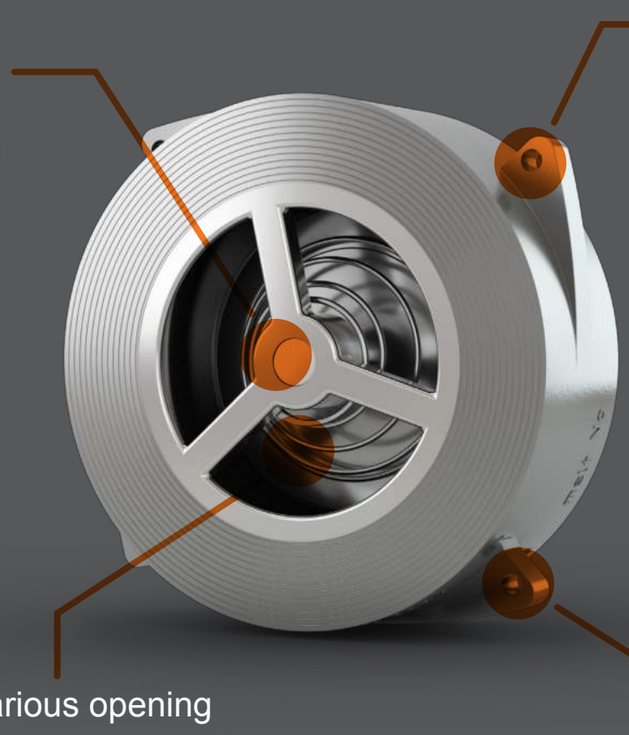
Shipbuilding

Water and waste water

Refineries

Industrial pipeline construction

Chemical and pharma industry



Nominal sizes
DN 15 - DN 100
Flange connection
PN 6 - PN 40 | Class 150 - 300
FTF (face-to-face) dimensions
DIN EN 558, Series 49
Temperature range
-196 °C to +400 °C

TECHNICAL DATA
DISCO CHECK VALVE | SERIES 932

1. Body
2. Disc
3. Spring
4. Spring cross

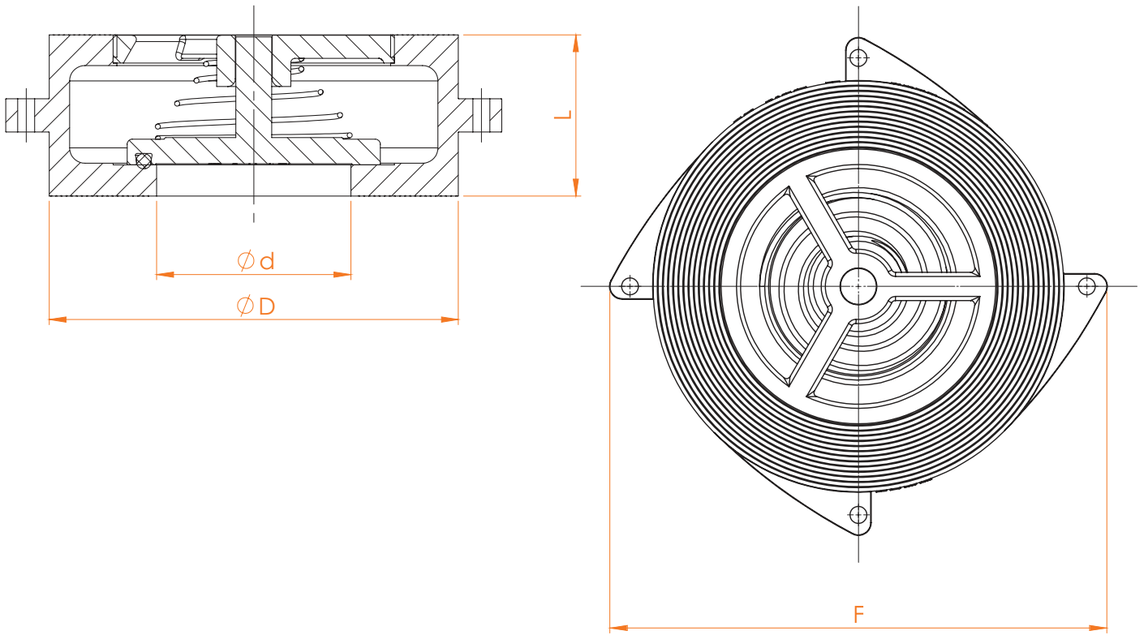
Design	Body	Disc	Spring cross	Spring	Pressure range*1
1	1.4408	1.4408	1.4408	1.4571	0 to max. 50 bar
4	CC333G (2.0975)	CC333G (2.0975)	CC333G (2.0975)	Hastelloy C4 (2.4610)	0 to max. 50 bar
4.1	CC333G (2.0975)	1.4408	1.4408	1.4571	0 to max. 50 bar
5	1.0619, zinc plated	1.4408	1.4408	1.4571	0 to max. 40 bar
6	1.4469 (Superduplex)	1.4469 (Super-duplex)	1.4469 (Superduplex)	Hastelloy C4 (2.4610)	0 to max. 50 bar
6.1	1.4469 (Superduplex)	1.4408	1.4408	1.4571	0 to max. 50 bar

*1 max. allowable pressure is dependent on size and temperature

Seal	Design	Temperature	Leakage rate*2
Metal seated	1 4 / 4.1 5 6 / 6.1	-196 °C to +400 °C*3 -10 °C to +350 °C*3 -10 °C to +400 °C*3 -10 °C to +250 °C	G
NBR*4	–	-30 °C to +100 °C	A
EPDM*4	–	-65 °C to+150 °C	A
FKM*4	–	-30 °C to +230 °C	A
PTFE*4	–	-196 °C to +250 °C	A

*2 acc. to EN 12266-1
*3 temperatures above 300 °C require spring material Hastelloy C4 (low temperature limit for design 1: -100 °C)
*4 for some designs, the temperature range is additionally limited by the temperature range of the metallic parts (see temperature range for metal seated)

Seals comply with the following approvals / conformities:
NBR: DIN EN 549, BAM, REACH, RoHS etc.
EPDM: KTW UBA, DVGW W 270, WRAS, NSF, FDA, BfR XXI Kat. 4, ADI-free, 3A, USP Cl. 6, BAM, REACH, RohS etc.
FKM: DIN EN 549, ADI-frei, REACH, RoHS etc.
PTFE: KTW UBA, DVGW W 270, WRAS, FDA, BfR, ADI-free, EU 10/2011, 3A, USP Cl. 6, REACH, RoHS etc.

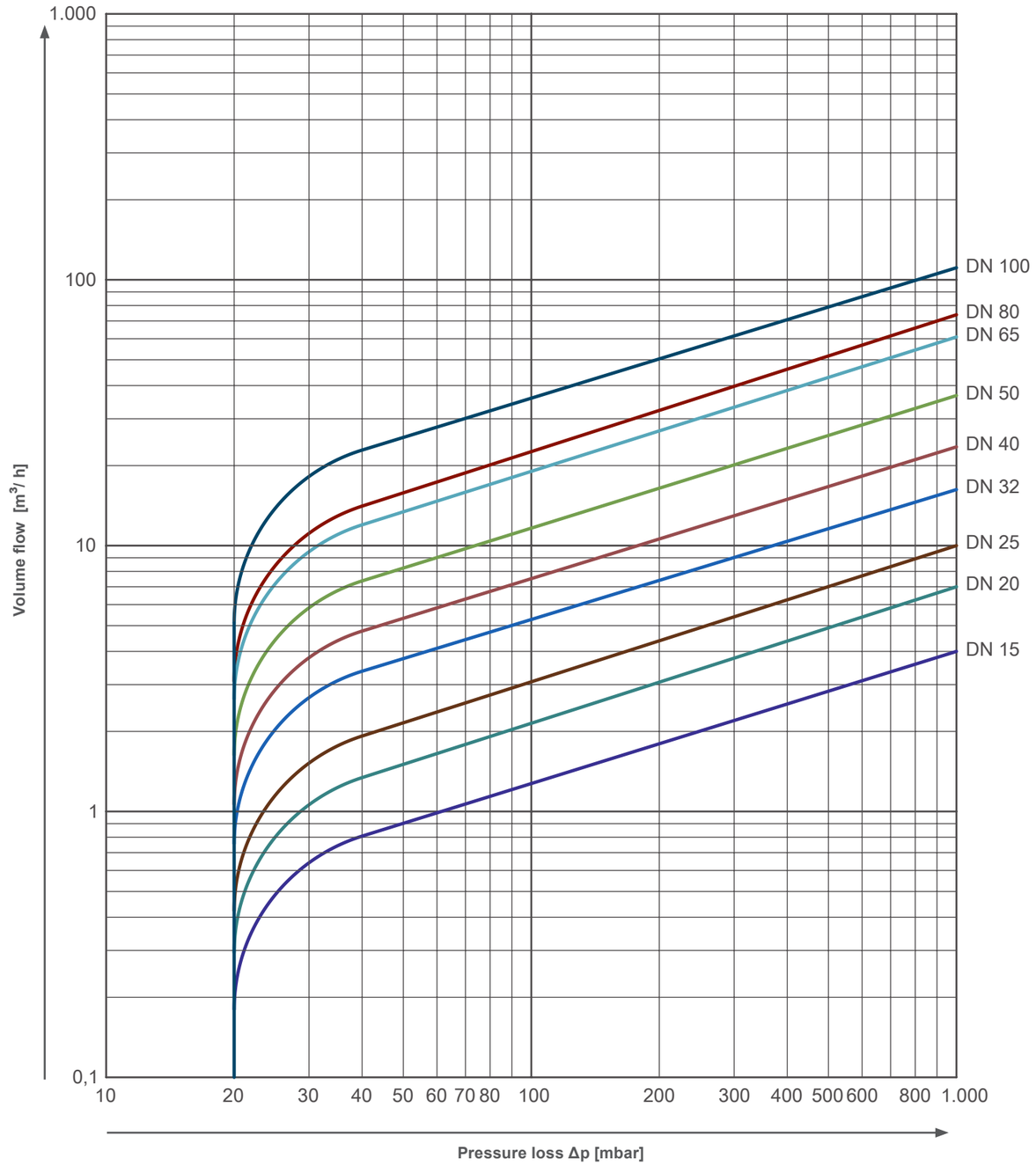


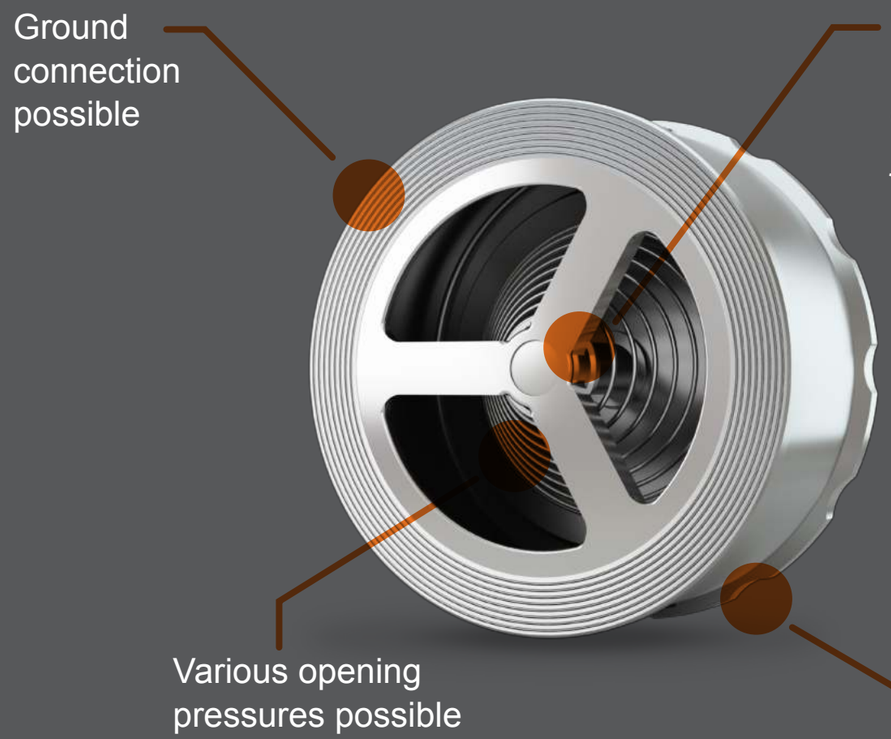
Nominal size	Ø D	Ø d	F	L	Kv value	Opening pressure*5 [mbar]			w/o spring	Weight*6
					[m³/h]	⟷	↑	↓	↑	[kg]
DN 15	43	15	57	16	4	~ 20	~ 24	~ 16	~ 4	0.12
DN 20	53	19	72	19	7	~ 20	~ 25	~ 15	~ 5	0.20
DN 25	63	25	79	22	10	~ 20	~ 25	~ 15	~ 5	0.32
DN 32	75	32	92	28	17	~ 20	~ 26	~ 14	~ 6	0.52
DN 40	80	38	97	31.5	24	~ 20	~ 27	~ 13	~ 7	0.62
DN 50	95	47	113	40	37	~ 20	~ 28	~ 12	~ 8	1.1
DN 65	115	63	137	46	61	~ 20	~ 29	~ 11	~ 9	1.7
DN 80	131	77	154	50	74	~ 20	~ 30	~ 10	~ 10	2.5
DN 100	150	97,5	186	60	115	~ 20	~ 33	~ 7	~ 13	4.0

*5 other opening pressures on request (for high opening pressures the Kv value may be reduced if disc springs must be used)
*6 weight may vary slightly, depending on the design

TECHNICAL DATA
DISCO CHECK VALVE | SERIES 932

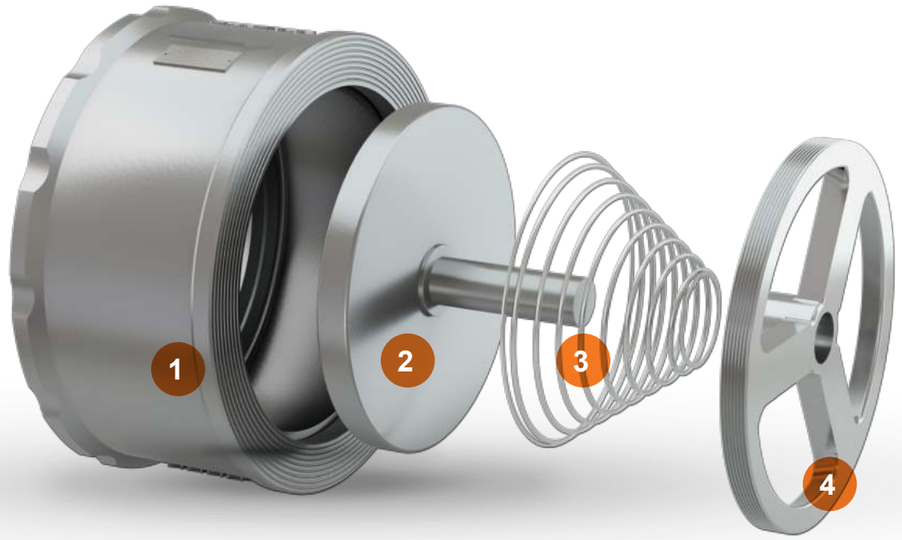
Pressure-Loss Diagram 932
The diagram values are valid for water at a temperature of 20 °C and for valves with face-to-face dimensions in accordance with DIN EN 558, suitable for flanges in accordance with PN 10 - PN 40. At the opening of the valve, the curves apply to operation in horizontal pipelines. For calculations for other fluids or temperatures, please contact us.





Nominal sizes
DN 125 - DN 300
Flange connection
PN 10 - PN 40 | Class 150 - 300
FTF (face-to-face) dimensions
DIN EN 558, Series 49 (DN 250 and DN 300 acc. to AWS company standard)
Temperature range
-196 °C to +400 °C

TECHNICAL DATA
DISCO CHECK VALVE | SERIES 932



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3. Spring
4. Spring cross

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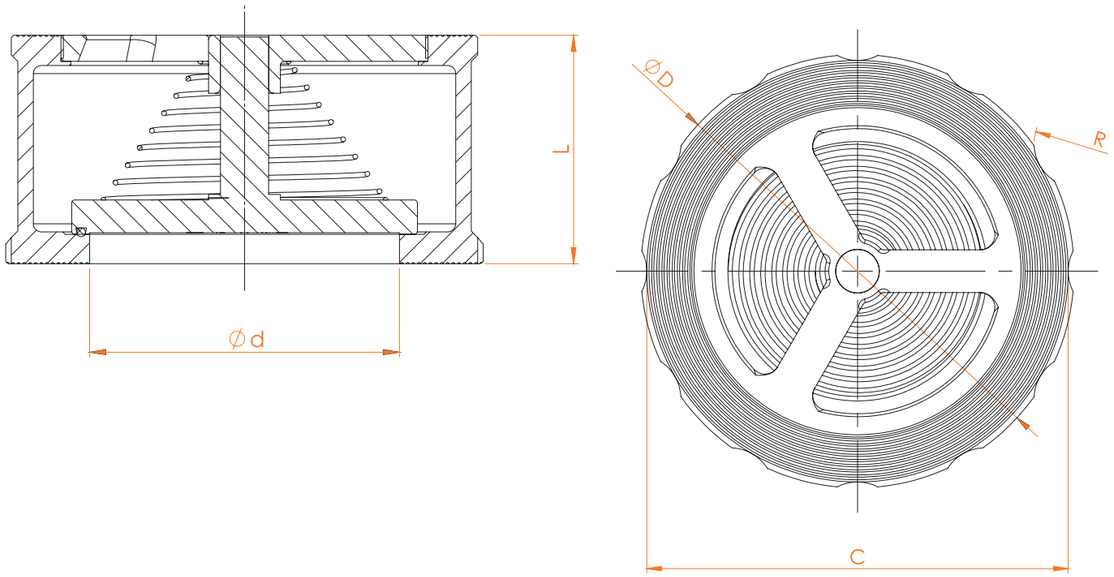

Nominal size	C	Ø D	Ø D	C	Ø D	R	R	Ø d	L	Kv value	Opening pressure*5 [mbar]			w/o spring	Weight*6
	PN 10/16	PN 10/16	150 lbs	PN 25	PN 40	PN 10/16	PN 25			[m³/h]	⟷	↑	↓	↑	[kg]
DN 125	194	194	194	194	194	-	-	118.5	90	201	~ 30	~ 46	~ 14	~ 16	8.4
DN 150	220	220	220	220	220	-	-	141	106	286	~ 30	~ 47	~ 13	~ 17	12.4
DN 200	275	280	280	286	294	11	30	190	140	553	~ 30	~ 51	~ 9	~ 21	23.9
DN 250	331	340	340	344	356	13	33	229	145	643	~ 40	~ 64	~ 16	~ 24	39.2
DN 300	380	386	404	404	421	11	33	280	160	867	~ 40	~ 68	~ 12	~ 38	58.3

*5 other opening pressures on request (for high opening pressures the Kv value may be reduced if disc springs must be used)

*6 weight may vary slightly, depending on the design

TECHNICAL DATA
DISCO CHECK VALVE | SERIES 932

Pressure-Loss Diagram Type 932

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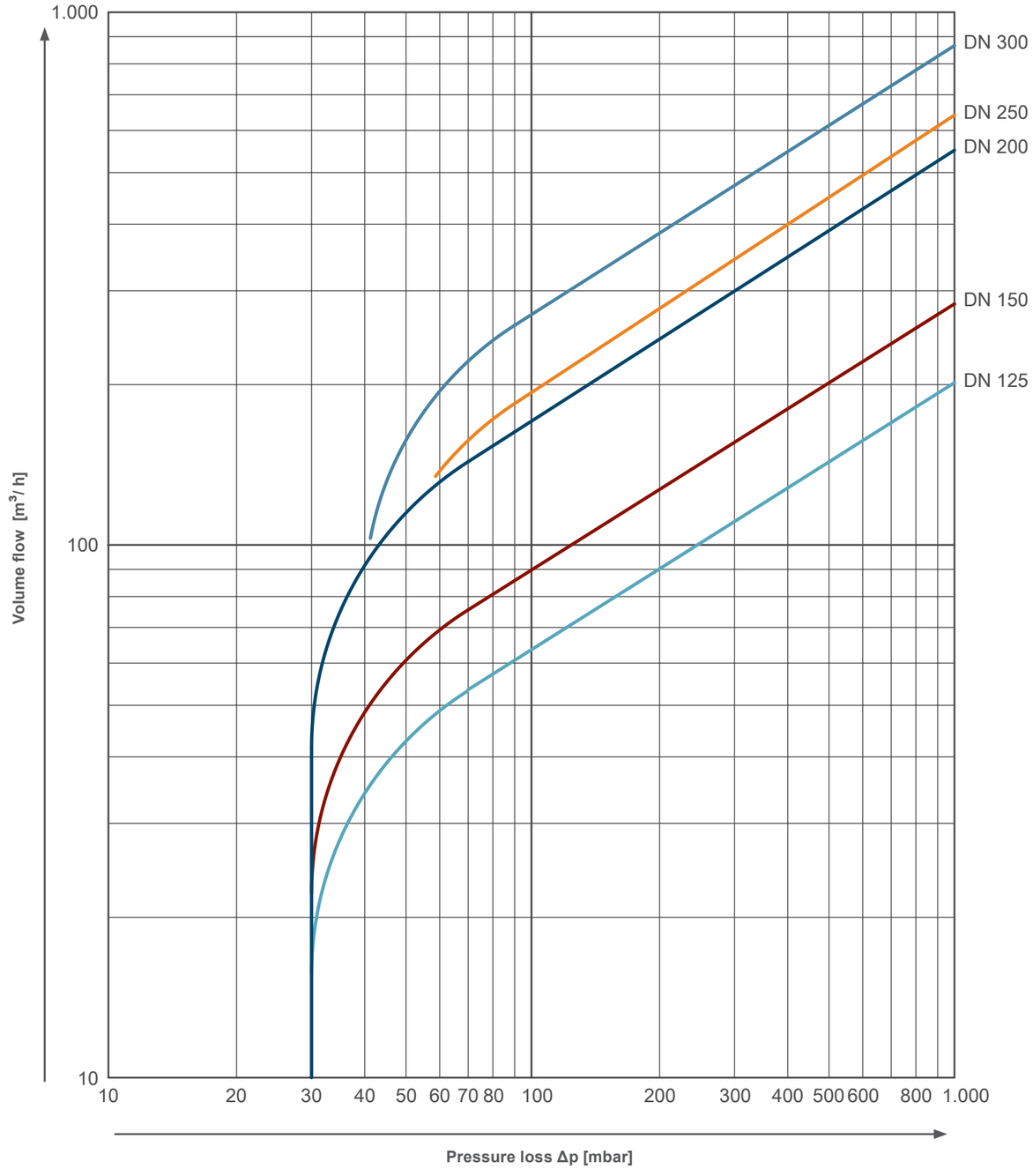


SPECIAL OPTIONS
DISCO CHECK VALVES

With many years of experience and our understanding of the demands of the market and the constantly rising expectations of our customers, we always strive to develop and implement solutions that go well beyond the standard. Here are just a few examples of special designs that we have created either in-house, based on our standard models, or with the help of our long-standing pool of partners. Here we adhere to the criteria of technical and economic feasibility combined with a healthy dose of pragmatism.

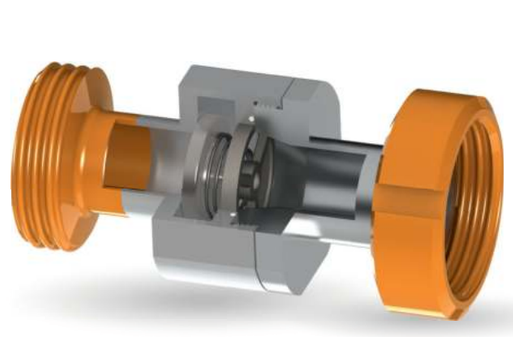
Various special bodies

With various forms of flange sealing surfaces acc. to diverse standards

With thread holes

With lug type body

With mounted connecting pieces for thread connections



With attached ground cable

Other special options:

- Special opening pressure (type 932, 932-HD, 936)
- Cleaned free of oil and grease
- Cleaned free of silicone
- Cleaned free of PWIS
- Seals with additional approvals which go beyond the standard
- Metal seated with reduced leakage rate acc. to DIN EN 12266-1 (type 932, 932-HD)
- Seal glued in for vacuum applications
- Other materials on request
- Other flange dimensions on request
- Other special options on request

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