Tilting Disc Check Valve Level and Counterweight & Hydraulic Damper TDCV Series (EN558 Series 14)

KV Controls (PTY) Ltd. Reg No: 2016/378940/07
KV CONTROLS
Control & Isolation Valves

KV Controls Brand Model TDCV Tilting Disc Check Valve is the non-return valve preferred in pipe networks where faster closure is required and water hammer affects needs to be absorbed. Through the counter lever and weight attached to its shaft via the hydraulic piston, ensures a soft open depending on the speed of the flow and maintains reduced closing times when flow stops.With its disc design where the center is shifted in two axis, this leads to a big improvement on decreasing operation torque values, lowering the friction on disc sealing area and extended service life.



Lever and Counterweight & Hydraulic Damper



Lever and Counterweight

Technical Data	
Size range	DN100-DN2400
Pressure range	PN10-16-25-40
Temperature	EPDM -10°℃ to +80℃ / NBR -10℃ to +60°℃
Design	EN 12334
Face to face	EN 558 Series 14 / BS 5155
Flange drilling	EN 1092-2 ISO 7005-2 Flanged
Coating	Thermoplastic Powder Epoxy
Testing	EN 12266-1
Marking	EN 19
Coating Blue Color	RAL 5005
	RAL 5010
	RAL 5015
	Custom made

Application Range

- Pump Stations
- Water Supply Systems
- Water treatment and distribution systems
- Tanks
- Power Station Cooling Lines

Operation Versions

- Hydraulic Damper

Testing

- Body Strength Test: BS EN 12266-1: 1.5 x PN
- Seat Tightness Test: BS EN 12266-1: 1.1 x PN ISO 5208 Rate A
- Operability Test: BS EN 12266-2

Features

- GGG40/50 Ductile Iron Body & Disc allows high impact and stretching resistance
- Double Eccentric / Double Offset Disc Design

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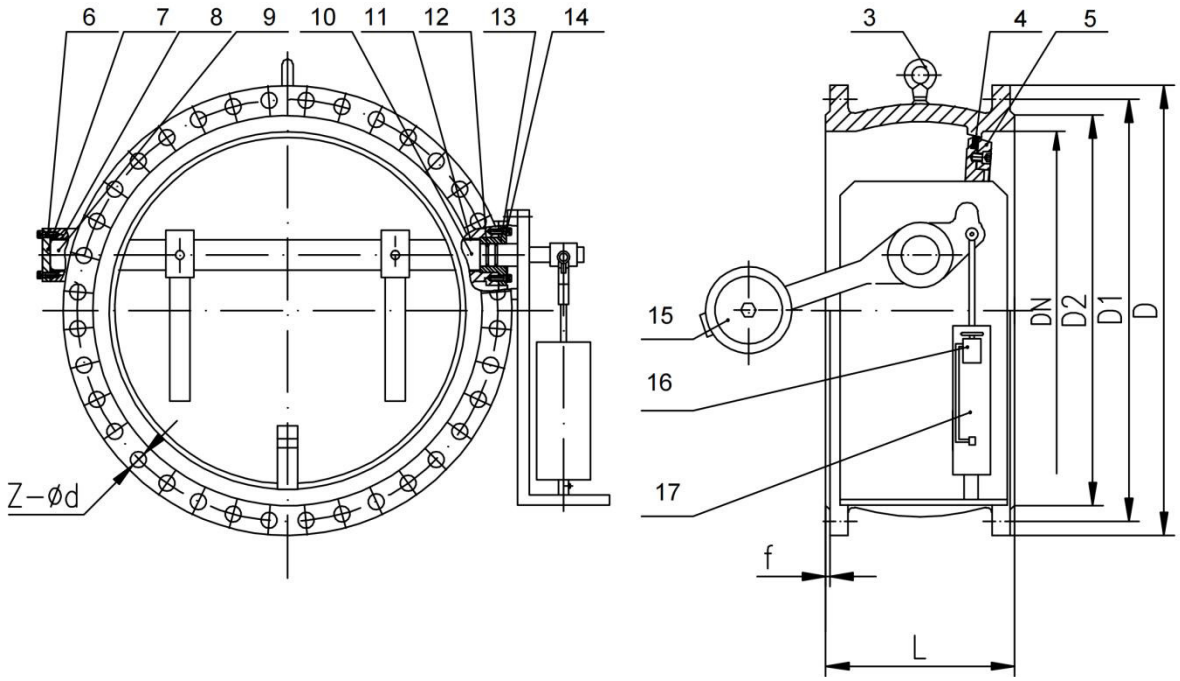
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- Resilient Seated Type (Metal seated type optional)
- Disc sealing ring EPDM as default. NBR or VITON options are available
- Block molded solid/one-piece T-shaped disc sealing ring extends drop-tight sealing life time
- The open/close speed can be adjusted by opening and closing the valve located on the hydraulic piston.
- Counter Lever & Weight position can be replaced on both sides. Two counter lever option is also available upon request.
- Possible to install on horizontal and vertical pipelines with varied flow directions. It is necessary to mention the lever positioning requirements according to your project in order to arrange the lever side and position during production.
- Easy to replace disc sealing ring without dismantling the valve from the pipeline and without dismantling the disc from the valve itself just by taking out the retaining ring through its bolts. It is easy to replace the disc sealing ring without any additional equipment's
- SS304/316 grade stainless steel welding seat on the body is manufactured through automatic welding machines and micro finished precise milling operation. When disc is fully closed, disc sealing ring applies equal pressure on every point on the welding seat.
- Drop-tight closure
- Triple O-ring feature on both shafts ensures high sealing
- Shafts are equipped with bronze bushings having high corrosion resistance
- Ensures minimized pressure loss and increased energy efficiency with double shaft design
- Low torque requirements during operation
- Easy to install on the line, light weight and occupies less space
- Full coating on the body and disc internally & externally with an average of 250 microns. Higher coating thicknesses are available when required.
- WRAS approved coating available upon request which meets hygienic requirements for potable water applications
- Maintenance free design
- For proper installation, direction arrow on the body should be considered.
- Balanced positioned lifting holes on the body ease transportation and installation
- Hydro-static test pressure for seat: PN x 1.1 , for shell: PN x 1.5 according to EN 12266-1

Material Specification

No.	Name	Material	No.	Name	Material
1	Body	GGG50	10	Up Shaft & Shaft Nut	Stainless Steel AISI 316 Bronze
2	Disc	GGG50	11	Bearing	Stainless Steel
3	Rings	Stainless Steel	12	O Rings	NBR
4	Disc Sealing	NBR	13	O Rings Gland	Stainless Steel
5	Sealing Cover	Stainless Steel AISI 316	14	Bolt	Stainless Steel AISI 316
6	Bolt	Stainless Steel AISI 316	15	Counter Weight	GGG50
7	Down Cover	Stainless Steel	16	Mini-adjustable Valve	Assembly
8	Down Bearing	Stainless Steel	17	Cushion Cylinder	Assembly
9	Down Shaft & Shaft Nut		Stainless Steel AISI 316 or Bronze		

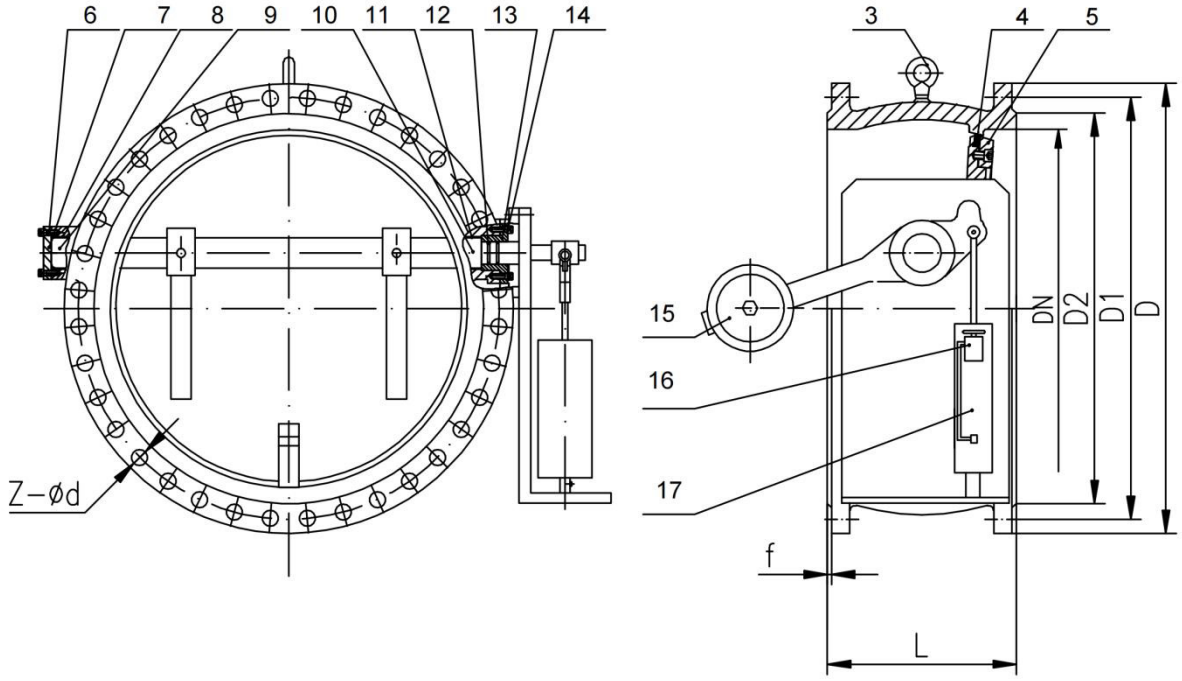
Dimension (mm)



Nominal Diameter	PN 10 (mm)					
DN	L	D	D1	D2	z-Φd	f
100	190	220	180	156	19x8	3
125	200	250	210	184	19x8	3
150	210	285	240	211	23x8	3
200	230	340	295	266	23x8	3
250	250	405	350	319	23x12	3
300	270	460	400	370	23x12	4
350	290	505	460	429	23x16	4
400	310	565	515	480	28x16	4
450	330	615	565	530	28x20	4
500	350	670	620	582	28x20	4
600	390	780	725	682	31×20	5
700	430	895	840	794	31×24	5
800	470	1015	950	901	34×24	5
900	510	1115	1050	1001	34x28	5
1000	550	1230	1160	1112	37x28	5
1100	590	1355	1270	1218	37x32	5
1200	630	1455	1380	1328	41x32	5

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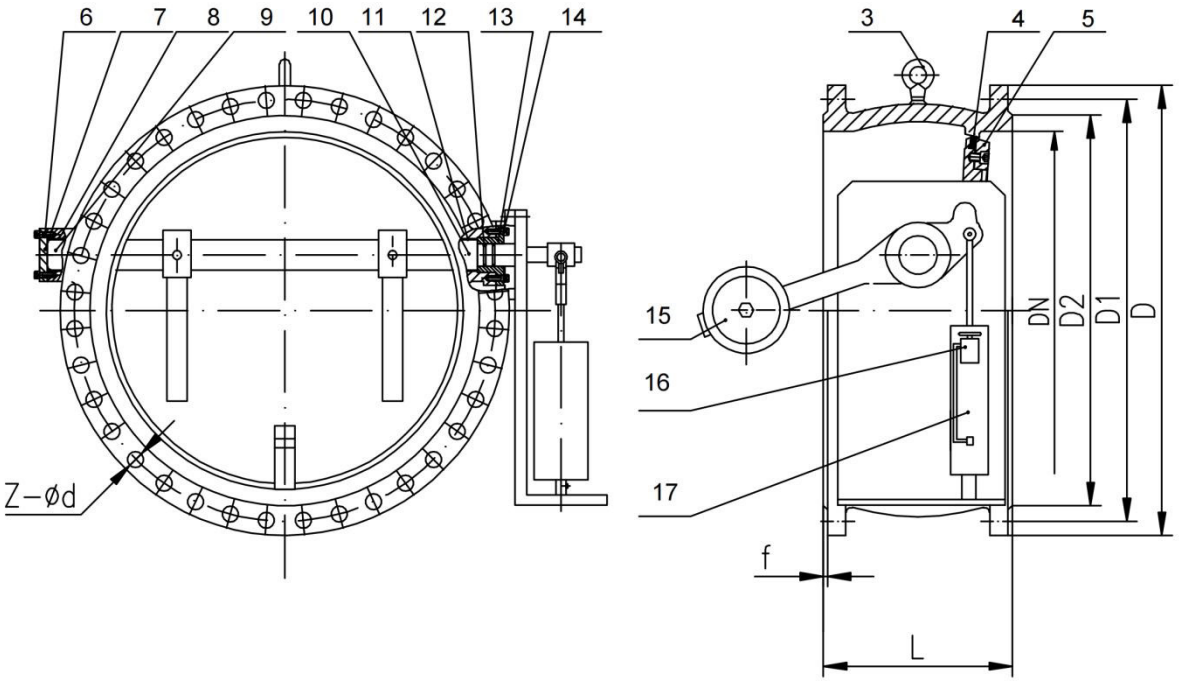
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Nominal Diameter	PN 16 (mm)					
DN	L	D	D1	D2	z-Φd	f
100	190	220	180	156	19x8	3
125	200	250	210	184	19x8	3
150	210	285	240	211	23x8	3
200	230	340	295	266	23x12	3
250	250	405	355	319	28x12	3
300	270	460	410	370	28x12	4
350	290	520	470	429	28x16	4
400	310	580	525	480	31x16	4
450	330	640	585	548	31×20	4
500	350	715	650	609	34x20	4
600	390	840	770	720	37×20	5
700	430	910	840	794	37x24	5
800	470	1025	950	901	41x24	5
900	510	1125	1050	1001	41x28	5
1000	550	1255	1170	1112	44×28	5
1100	590	1355	1270	1218	44x32	5
1200	630	1485	1390	1328	50x32	5

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Nominal Diameter	PN 25 (mm)					
DN	L	D	D1	D2	f	z-Φd
100	190	235	190	156	3	23×8
125	200	270	220	184	3	28x8
150	210	300	250	211	3	28x8
200	230	380	310	274	3	28x12
250	250	425	370	330	3	28x16
300	270	485	430	389	4	31×16
350	290	555	490	448	4	34x16
400	310	620	550	503	4	37x16
450	330	670	600	548	4	37×20
500	350	730	660	609	4	37×20
600	390	845	770	720	5	41×20
700	430	960	875	820	5	44x24
800	470	1085	990	928	5	50×24
900	510	1165	1090	1028	5	50×28
1000	550	1320	1210	1140	5	57x28
1100	590	1420	1310	1240	5	57x32
1200	630	1530	1420	1350	5	57x32

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DIAGRAM OF FLOW COEFFICIENT

