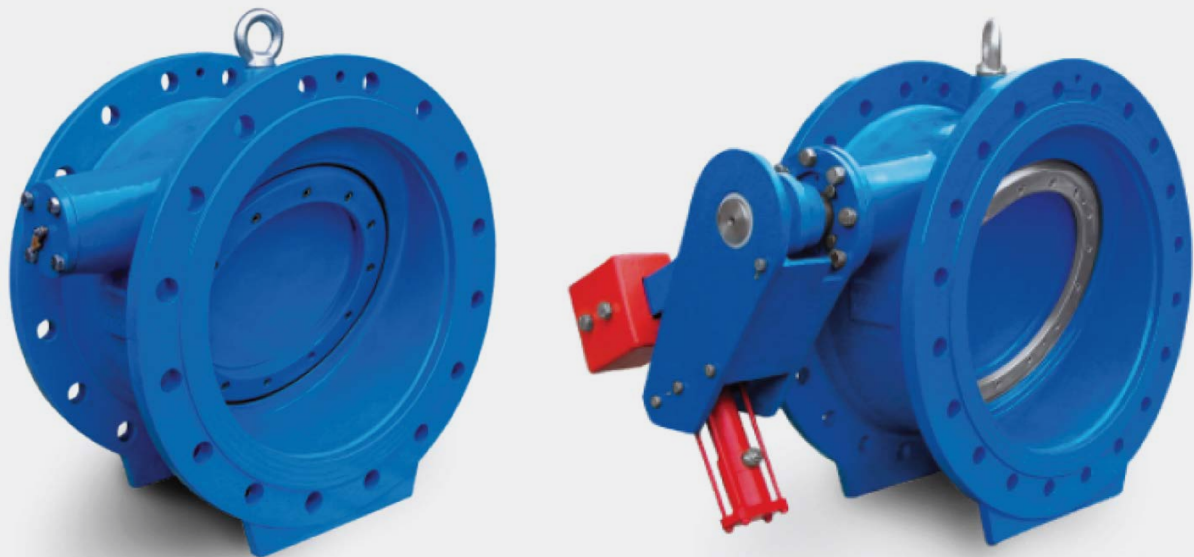


ÖZKAN Slanted Seat Check Valve

Technical Guide W4.41

Designed to prevent backflow in severe applications through a slanted seat design to reduce the closing time. Ideal for pump stations.



10.21 | W4.41 HAWLE ÖZKAN SLANTED SEAT CHECK VALVE

Applications

Raw water
 River water
 Grey water
 Screened effluent

Product Attributes

Improved closing performance
 Slam resistant
 Metal seated or resilient seated
 Swinging disc with or without hydraulic damper
 High corrosion resistance

Approvals/Standards

EN 558-1 Series 13 and 14 face to face dimensions
 Working tests to EN 1074 EN 12266
 AS4087, EN 1092 Flanges

Quality

ISO 9001:2008 Quality Management

We are the supply partner of choice for New Zealand's civil construction industry, specialising in water and infrastructure based solutions.

Özkan Slanted Seat Check Valves

Design Specifications

- Özkan Slanted Seat Check Valves are designed so that the seating plane is at an angle to the vertical. This reduces the swing angle and closing time to reduce potential for slam and can be used in most check valve applications.
- In addition to the reduced seating angle and shorter closing time, this valve utilises a triple offset disc design to enhance fast opening, lower head loss and better closing.
- The standard design valve does not require levers and counter weights in most applications, avoiding the need for additional safety guards or protection. Should the application be more extreme, lever, weighted and dampened versions of this valve are available with both metal seat and soft seat options.

Diameter	Pressure
DN200-1200	PN 10-25

Design Features

TABLE 1 Design Features

Part No.	Description	Material
1	Body	Ductile iron EN-GSJ-400-15
2	Disc	Ductile iron EN-GSJ-400-15
3	Retaining ring	Steel S235JR
4	Sealing ring	EPDM
5	Hex. socket head cap screw	Stainless steel A2
6	Shaft	Stainless steel X20Cr13
7	Hex. socket set screw	Stainless steel A2
8	Bearing bush	Bronze
9	'O'-ring	EPDM
10	Cover	Ductile cast iron EN-GJS-400-15
11	Hex. bolt	Stainless steel A2
12	Lifting lug	-

* Other material grades are available upon request.

Quality

- ISO 9001:2008 Quality Management
- ISO 14001:2004
- Environmental Management
- OHAS 18001:2007 Health and Safety

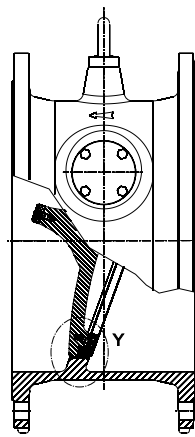


FIG. 1 Closed Position

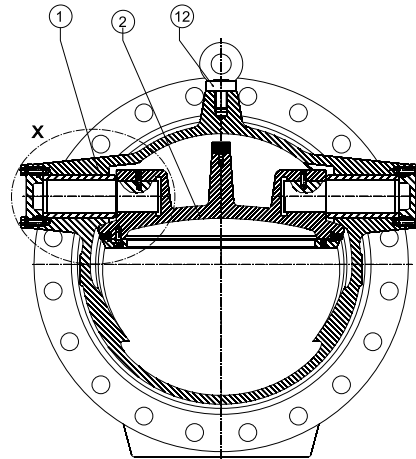


FIG. 2 Opened Position

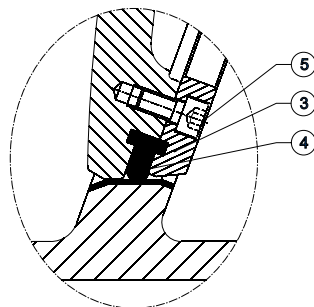


FIG. 3 Detail Y

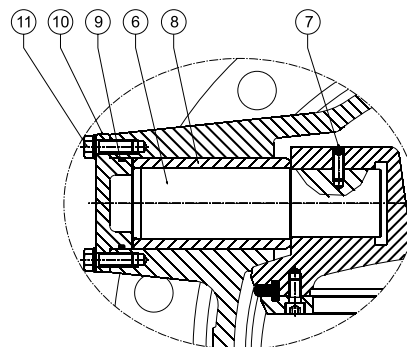


FIG. 4 Detail X

Technical specifications

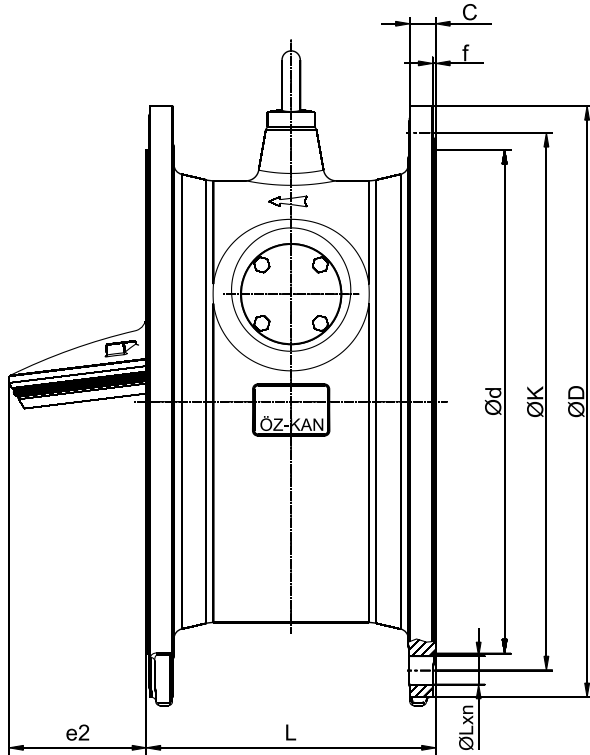


FIG. 5 Slanted Seat Check Valve Side View

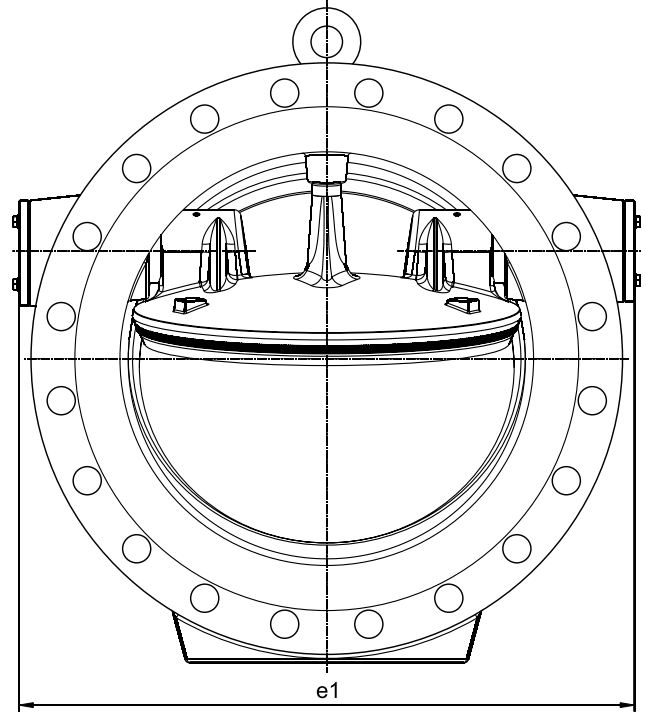


FIG. 6 Slanted Seat Check Valve Front View

TABLE 2 Slanted Seat Check Valve PN10 Technical Information

DN	PN	ØD	Øk*	Ød	C	f	ØLxn	L	e1	e2	Weight (kg)
200	10	340	295	266	20	3	23x8	230	370	17	60
250	10	405	350	319	22	3	23x12	250	444	48	75
300	10	455	400	370	24.5	4	23x12	270	484	63	105
350	10	520	460	429	26.5	4	23x16	290	554	90	140
400	10	580	515	480	28	4	28x16	310	624	115	152
450	10	640	565	530	25.5	4	28x20	330	684	145	185
500	10	715	620	582	31.5	4	28x20	350	744	166	244
600	10	840	725	682	36	5	31x20	390	882	217	360
700	10	910	840	794	32.5	5	31x24	430	978	256	550
800	10	1015	950	901	35	5	34x24	470	1071	323	735
900	10	1125	1050	1001	46.5	5	34x28	510	1120	360	1270
1000	10	1255	1170	1112	50	5	37x28	550	1374	417	1780
1200	10	1485	1390	1328	57	5	41x32	630	1630	530	2315

Note: Please contact us for other sizes and pressure rates.

* EN1092 Flange pattern shown. Multiple flange standards available.

TABLE 3 Slanted Seat Check Valve PN16 Technical Information

DN	PN	ØD	Øk*	Ød	C	f	ØLxn	L	e1	e2	Weight (kg)
200	16	340	295	266	20	3	23x12	230	370	17	60
250	16	405	350	319	22	3	28x12	250	444	48	75
300	16	455	410	370	24.5	4	28x12	270	484	63	105
350	16	520	470	429	26.5	4	28x16	290	554	90	140
400	16	580	525	480	28	4	31x16	310	624	115	152
450	16	640	585	548	30	4	31x20	330	684	145	185
500	16	715	650	609	31.5	4	34x20	350	744	166	244
600	16	840	770	720	36	5	37x20	390	882	217	360
700	16	910	840	794	39.5	5	37x24	430	978	256	550
800	16	1015	950	901	35	5	41x24	470	1071	323	735
900	16	1125	1050	1001	46.5	5	41x28	510	1220	360	1270
1000	16	1255	1170	1112	50	5	44x28	550	1374	417	1780
1200	16	1485	1390	1328	57	5	50x32	630	1630	530	2315

Note: Please contact us for other sizes and pressure rates.

* EN1092 Flange pattern shown. Multiple flange standards available.

Özkan Slanted Seat Check Valve with Hydraulic Damper

Design specifications (with Hydraulic Damper)

- Özkan Slanted Seat Check Valves are equipped with hydraulic end stage dampers in order to reduce the water hammer effect in pumping stations. The end stage damper is active at the last 10% of closing stroke.
- In case of power failure at the pumping station the disc closes until reaching the damper, slow closing prevents slamming and surge in extreme events. Damping effect can be adjusted by the help of integrated needle valve on damper according to the pumping characteristics and working conditions.

The end stage damper is not linked to the disc and therefore headloss of this type is less than the types with the dampers linked to the levers.

Diameter	Pressure
DN200-1200	PN 10-25

Design Features

TABLE 4 Design features with hydraulic damper

Part number	Description
1	Check Valve body
2	Damper chassis
3	End-strap damper
4	Lever
5	Weight

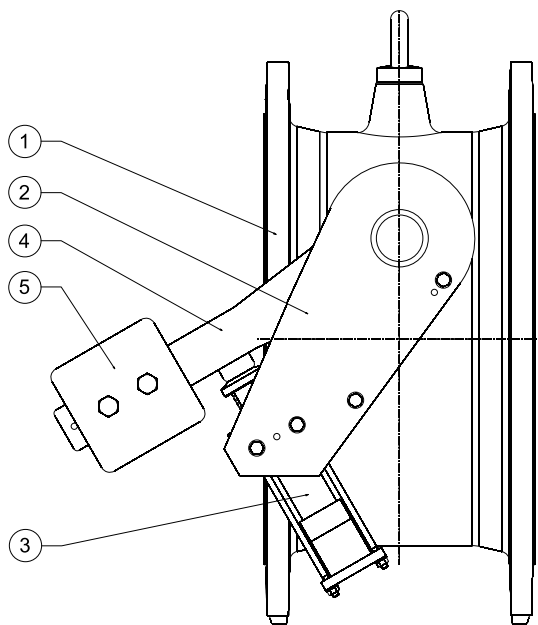


FIG. 7 Closed Position

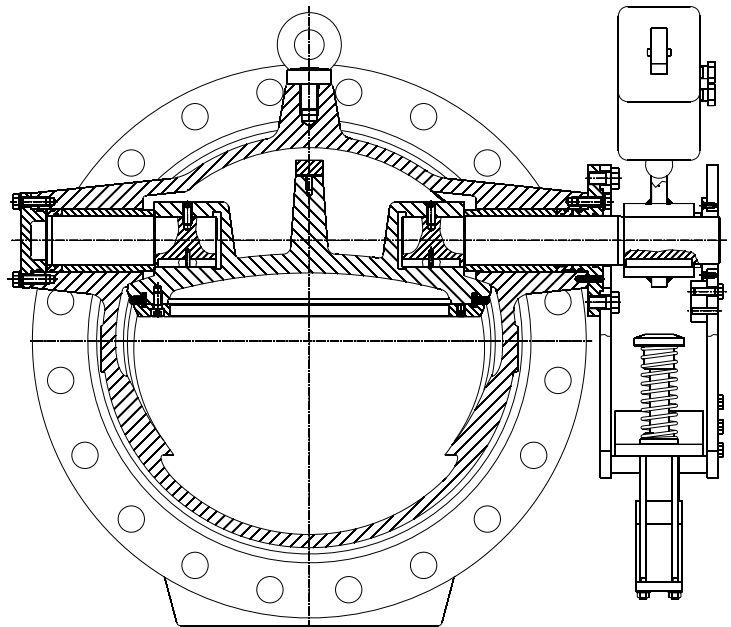


FIG. 8 Opened Position

Technical Specifications (with Hydraulic Damper)

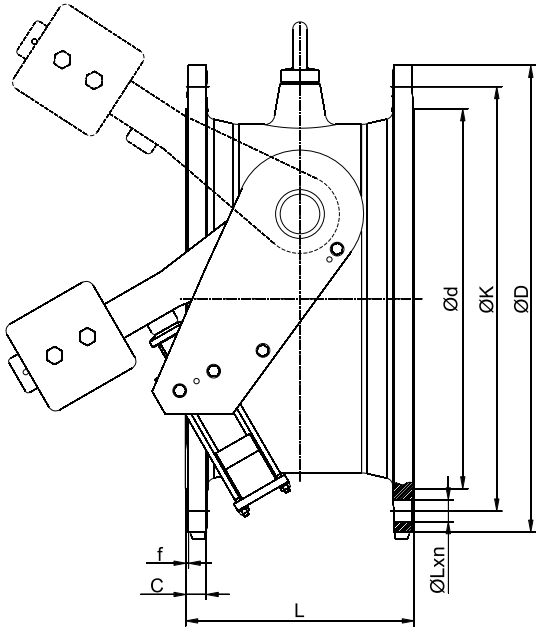


FIG. 9 Slanted Seat Valve with Hydraulic Damper Side View

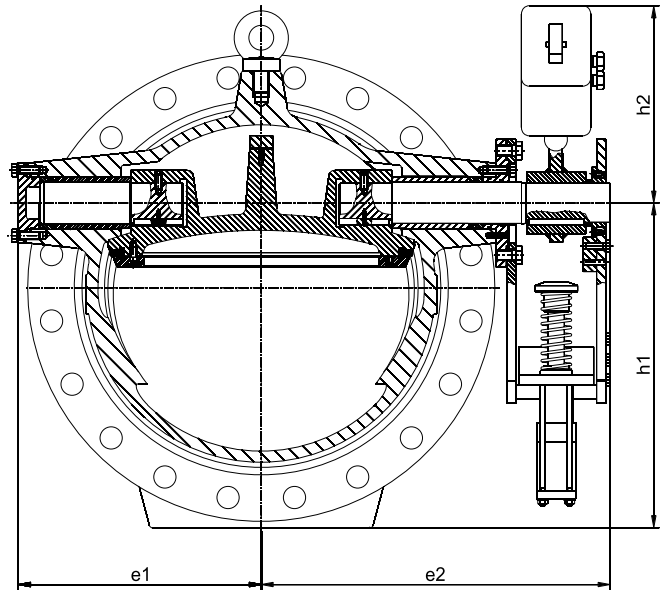


FIG. 10 Slanted Seat Valve with Hydraulic Damper Front View

TABLE 5 Slanted Seat Check Valve PN10 with Hydraulic Damper Technical Information

DN	PN	ØD	Øk*	Ød	C	f	ØLxn	L	e1	e2	h1	h2	Weight (kg)
200	10	340	295	266	20	3	23x8	230	185	318	225	218	70
250	10	405	350	319	22	3	23x12	250	222	355	280	267	80
300	10	460	400	370	24.5	4	23x12	270	242	374	320	280	105
350	10	520	460	429	26.5	4	23x16	290	277	413	363	350	155
400	10	580	515	480	28	4	28x16	310	312	446	405	362	185
450	10	640	565	530	25.5	4	28x20	330	342	505	445	396	230
500	10	715	620	582	31.5	4	28x20	350	372	530	498	451	285
600	10	840	725	682	36	5	31x20	390	441	603	585	531	420
700	10	910	840	794	32.5	5	31x24	430	489	724	645	617	650
800	10	1015	950	901	35	5	34x24	470	536	783	723	730	925
900	10	1125	1050	1001	46.5	5	34x28	510	610	853	813	585	875
1000	10	1255	1170	1112	50	5	37x28	550	687	992	903	780	1300
1200	10	1485	1390	1328	57	5	41x32	630	815	1208	1063	1042	1590

Note: Please contact us for other sizes and pressure rates.

* EN1092 Flange pattern shown. Multiple flange standards available.

TABLE 6 Slanted Seat Check Valve PN16/25 with Hydraulic Damper Technical Information

DN	PN	ØD	Øk*	Ød	C	f	ØLxn	L	e1	e2	h1	h2	Weight (kg)
200	16	340	295	266	20	3	23x12	230	185	318	225	218	70
250	16	405	355	319	22	3	28x12	250	222	355	280	267	80
300	16	460	410	370	24.5	4	28x12	270	242	374	320	280	105
300	25	485	430	389	27.5	4	31x16	270	262	395	333	337	-
350	16	520	470	429	26.5	4	28x16	290	277	413	363	350	155
400	16	580	525	480	28	4	31x16	310	312	446	405	362	185
450	16	640	585	548	30	4	31x20	330	342	505	445	396	230
500	16	715	650	609	31.5	4	34x20	350	372	530	498	451	285
600	16	840	770	720	36	5	37x20	390	441	603	585	531	420
700	16	910	840	794	39.5	5	37x24	430	489	724	645	617	650
800	16	1015	950	901	35	5	41x24	470	536	783	723	730	925
900	16	1125	1050	1001	46.5	5	41x28	510	610	853	813	585	875
1000	16	1255	1170	1112	50	5	44x28	550	687	992	903	780	1300
1200	16	1485	1390	1328	57	5	50x32	630	815	1208	1063	1042	1590

Note: Please contact us for other sizes and pressure rates.

* EN1092 Flange pattern shown. Multiple flange standards available.

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