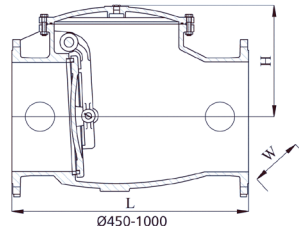


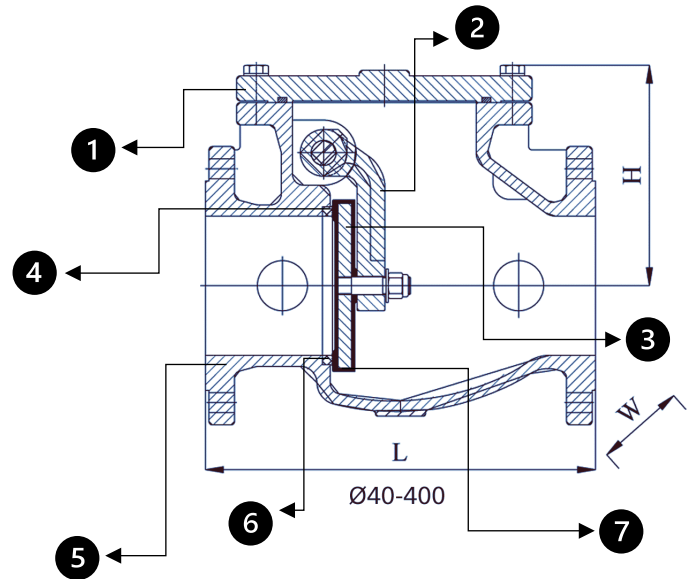
**Description:** Swing Type Check Valves, utilizing a pivoting disc mechanism, function as an automatic control system to prevent reverse fluid flow. Upon a decrease in upstream pressure, these valves close, mitigating the risk of backflow. Their robust design contributes to their extensive application across industries, marking them as a crucial element in maintaining system integrity and fluid dynamics.



PART NO.	PART
1	Cover (Bonnet)
2	Lever
3	Disc
4	Valve Gasket
5	Body
6	Body Seat
7	Body Seat Ring

## Material Specification

Parts	Main Materials	Optional Materials
Body	Ductile Iron	Carbon Steel
Cover		Stainless Steel
Lever		Nickel Aluminum Bronze
Disc	Steel + EPDM (Ø 40-400), Ductile Iron (Ø 450-1000)	Carbon Steel, Stainless Steel, Nickel Aluminum Bronze
Shaft	X20Cr13	SS 304, SS 316, Nickel Aluminum Bronze
Nuts	Bronze	Brass, SS 304, SS 316, Nickel Aluminum Bronze
Rings	Bronze	Brass, SS 304, SS 316, Nickel Aluminum Bronze
Seals	EPDM	NBR
Fasteners	8:8 (Galvanized)	SS 304, SS 316



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# CORVALVE

## SWING CHECK VALVE

EN 558-1 SERIES 48 - (DIN3202-F6)

### Application:

Swing Type Check Valves are designed to have minimum head loss in normal operation and to have drip tight sealing in case of backflow. These check valves are commonly used in the downstream of pump stations, protecting crucial devices

### Features:

- **Versatile Installation:** Suitable for both horizontal and vertical system design and layout.
- **Wide Application Range:** Ideal for potable water and sewage applications.
- **Customizable Accessories:** Options for lever & counterweight or spring accessories to suit specific needs.
- **Enhanced Operational Control:** Single or double-sided lever & counterweight mechanisms for precise valve control.
- **Protective Cover Option:** Available for safeguarding lever movement, reducing external damage risks.
- **SCADA Integration:** Optional limit switch accessories enable improved monitoring and alarm capabilities.
- **Non-slam Operation:** Dashpot accessory allows smooth valve operation without excessive noise or pressure surges.
- **Adaptability:** Optional bypass valve for larger systems facilitates efficient flow control and maintenance.

### Operating Principles

The swing check valve's disc and the rocker connect, allowing them to revolve at an angle around the pin shaft. When input pressure to the disc exceeds resistance pressure, fluid flows in the prescribed direction. While the valve opens, the disc separates from its seat and rotates around the pin to a fully open position.

When the flow rate drops the valve disc will rotate back to the closed position. This prevents backward fluid flow.

### Swing Check Valve Installation: An Essential Overview

In industrial and engineering processes, the precise installation of swing check valves plays a significant role in maintaining efficient operations. These valves are most commonly installed horizontally, and their functionality depends heavily on the direction of fluid flow. The connection types involved, such as threaded, flanged, or welded, dictate the specifics of the installation process.



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## Preliminary Steps for Swing Check Valve Installation

Before beginning the installation of a swing check valve, it is crucial to ensure the valve is devoid of any foreign substances that could compromise its function, such as packing material. For the optimal functioning of the valve, the disc should be checked by pushing it away from the seat. Subsequently, the valve needs to be oriented correctly in the piping system, ensuring the arrow indicating flow direction aligns with the actual direction of fluid movement.

## Installation Procedures for Threaded Connection

When working with threaded connections, the valve is secured by screwing its ends into the piping. After reaching a hand-tight state, the valve should be further tightened by a half-turn using an appropriate wrench. It's of utmost importance to avoid over-tightening, which may damage the valve. Also, careful alignment of the valve and pipe threading is required to prevent cross threading, which can lead to long-term damage.

## Guidelines for Flanged Connection Installation

For flanged connections, the utilization of a dismantling joint is a beneficial practice, as it simplifies the process of installation and subsequent maintenance or repairs. To prevent undue stress on the valve, ensure that the pipe flanges are parallel before bolting the valve flanges to the pipes. The bolting procedure should be executed in a crosswise pattern, which helps distribute the stress evenly across the valve.

## Welded Connection Installation Methodology

The preparation for welded connection installation involves cutting the piping squarely, a technique where cuts are made perpendicular to the valve surface. This process is followed by deburring and cleaning the pipe ends, both internally and externally. Further cleaning should be done using solder flux on the pipe ends and inside the valve end connections. To avoid stressing the valve, it's crucial to provide suitable support to the pipes during these operations.

During the soldering process, care should be taken to direct the torch away from the valve body to shield its components from excessive heat. Continuous movement of the flame is recommended to evade the creation of heat spots, which could lead to localized damage.

## Post-Installation Checks and Validation

Following the installation, it's important to carry out a series of tests to ascertain the valve's performance. Run media through the valve to confirm the correct direction of flow and check meticulously for any leakage points.



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## Considerations for a Successful Swing Check Valve Installation

A meticulous approach is essential during the installation of swing check valves due to the high stakes associated with their functioning. Incorrect installation can lead to disastrous system failures. Owing to the pressure requirements and to mitigate gravity's impact, swing check valve installations are often performed horizontally, making it the preferred installation position.

## Swing Check Valves: Uniquely Engineered Design

Swing Check Valves boast a unique, fully vulcanized, single-piece disc design that promises easy cleaning and maintenance. Exceptional resistance to corrosion is another feature, due to the superior sealing capabilities of the vulcanized disc. This disc is also capable of providing effective sealing under minimal back-pressure conditions as low as 2mwc, eliminating the need for a lever and counterweight. A defining feature is the guarantee of long-lasting operation with zero concern for corrosion in metal parts, made possible by rigorous compression testing to prevent rubber deformation.

## Precision-Crafted Sealing System

The design doesn't stop at the disc. Swing Check Valves are further enhanced with a carefully crafted body ring and a disc ring. These two components work together to provide a flawless, drip-tight seal. For Metal-Metal Swing Check Valves, a drip-tight seal of high quality requires expert skills and precision manufacturing. The seal's effectiveness hinges on factors such as design quality, selection of materials, precise machining, and professional ring installation onto the valve body.

## Customizable Installation & Material Options

Addressing varied needs based on size, pressure rating, and application, the installation of the rings can be customized. Techniques like press-fitting, threading, or welding processes are available for flexibility in application. Material options are also diverse, including brass, bronze, nickel aluminum bronze, and stainless steel variants such as 304 and 316. These choices are readily available upon request, ensuring a tailored solution to diverse needs across various applications and sectors worldwide.

### Notes:

1. Different flange drillings are available, including ISO, EN, ANSI, and others.
2. The standard operating temperature range is -10°C to +80°C.
3. All RAL Colors are available.
4. Potable water certified coating is available.
5. Both thermoset and thermoplastic coatings are available.



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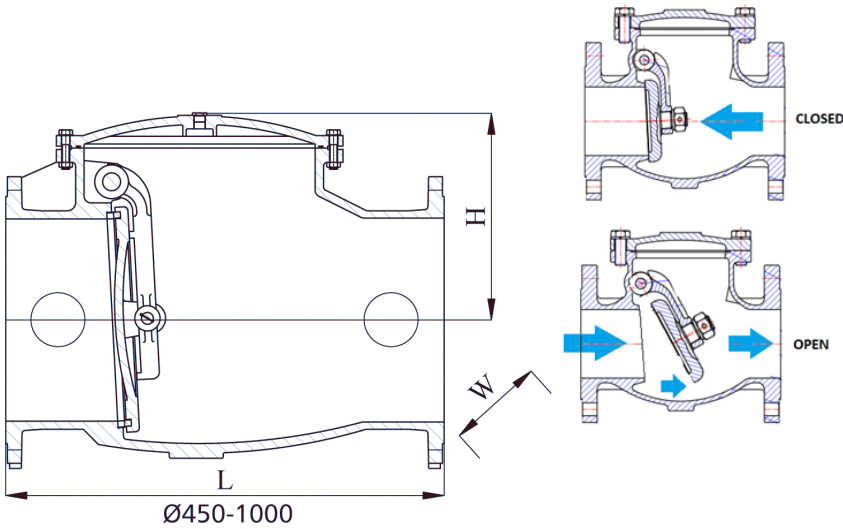
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### Dimension (mm) & Weight

DN		40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000
<b>Height</b>	-	100	110	120	140	140	200	215	265	285	370	375	550	515	660	610	765	810	910	975
<b>Width</b>	PN10	150	165	185	200	220	250	285	340	395	445	505	595	615	670	780	895	1015	1115	1230
	PN16	150	165	185	200	220	250	285	340	405	460	520	580	640	715	840	910	1025	1125	1255
	PN25	150	165	185	200	235	270	300	360	425	485	555	620	670	730	845	960	1085	1185	1320
	PN40	150	165	185	200	235	270	300	375	450	515	580	660	685	755	890	995	1140	1250	1360
<b>Length</b>	-	180	200	240	260	300	350	400	500	600	700	800	900	1000	1100	1300	1500	1700	1900	2100
<b>Weight (Kg)</b>	PN10/16	9	12	19	20	23	35	47	135	165	287	393	500	660	800	1102	1700	2200	2900	3650
	PN25	10	13	21	22	25	40	52	149	182	316	432	550	670	880	1102	1800	2250	3000	-
	PN40	11	14	23	24	28	43	56	162	198	344	472	600	755	960	1200	-	-	-	-



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