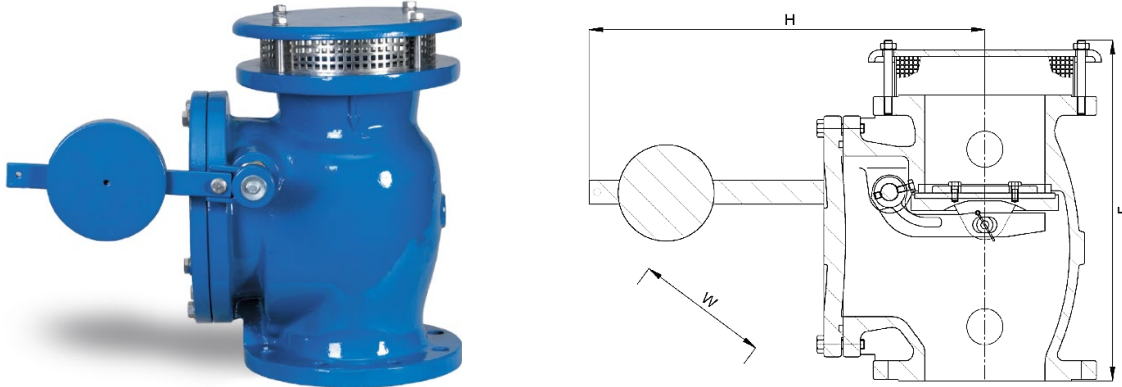


Description: Corvalve's Vacuum Air Valve is a high-performing, robust solution designed for effective air intake during pipe draining or sudden pipeline bursts. This valve maintains system integrity by preventing the formation of a vacuum within the pipeline, thus safeguarding against potential damage and operational disruptions. Compact yet powerful, it stands as a vital component in optimizing system longevity and efficiency.



Application:

Vacuum Valves are designed to perform one main function:

Intake of large quantities air of in short time

- on shut-off of the system, while pipelines are drained.
- on column separation due to pipeline burst or flow fluctuation.

Features:

- **Versatile Usage:** Designed for both potable water and sewage applications, ensuring flexibility and adaptability.
- **Isolation Valves:** Provision for the addition of isolation valves as per customer requirements, enhancing safety and operational control.
- **Integrated Installation:** Integral Air Release Valve installation options available upon request, ensuring seamless and efficient integration within systems.
- **Operational Customization:** Offering options for single or double-sided lever & counterweight, allowing for operational customization to suit various requirements.
- **Protection Cover:** Availability of protection cover accessory upon request, safeguarding the lever movement for enhanced durability.
- **Limit Switch Accessory:** Offering a limit switch accessory upon request, facilitating SCADA communications and alarms for improved system monitoring.
- **Parallel Installation:** Manifolds can be availed upon request for parallel installation, ensuring efficient performance in larger systems.



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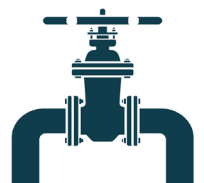
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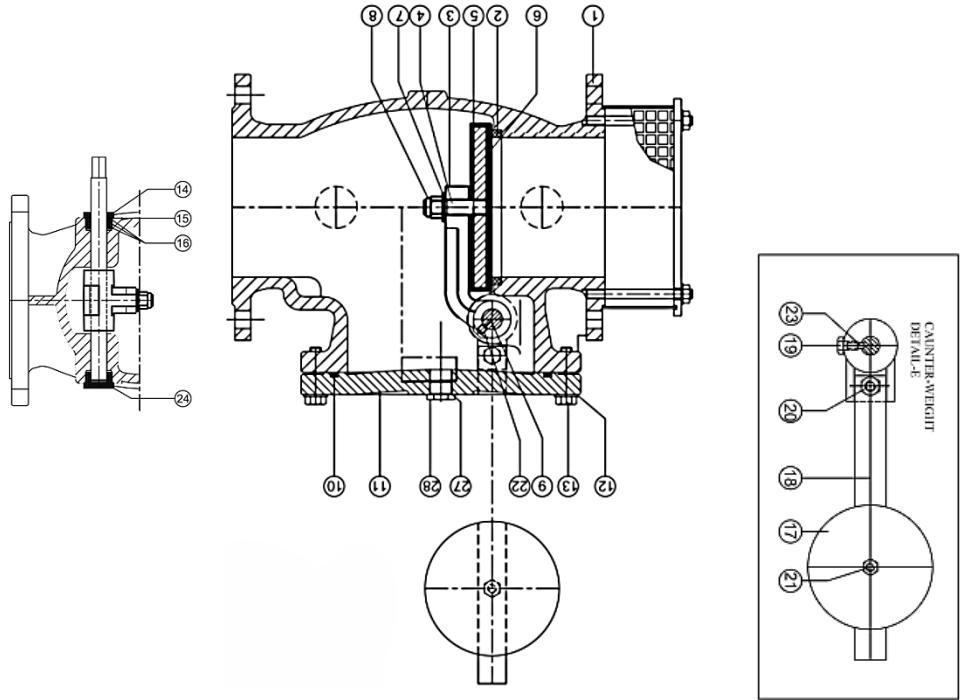


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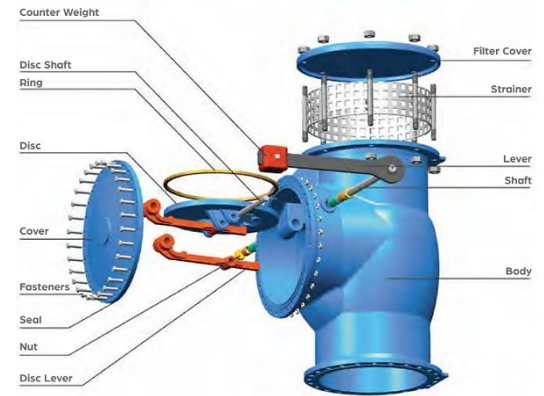
Construction

PART NO.	PART
1	Body
2	Body Seal
3	Sealing Disc Lever
4	Stem
5	Sealing Disc
6	Sealing Disc Seal
7	Washer
8	Nut
9	Shaft
10	O-Ring
11	Cover
12	Washer
13	Screw
14	Threaded Nut
15	O-Ring
16	O-Ring
17	Counter Weight
18	Counter Weight Lever
19	Screw
20	Screw
21	Screw
22	Setscrew
23	Key
24	Threaded Nut



Material Specification

Parts	Main Materials	Optional Materials
Body Cover Lever	Ductile Iron	Carbon Steel Stainless Steel Nickle Aluminum Bronze
Disc	Steel + EPDM (Ø 40-400) Ductile Iron (Ø 40-400)	NAB
Shaft	X20Cr13	SS 304, SS 316, NAB
Nuts	Bronze	Brass, SS 304, SS 316, NAB
Ring	Bronze	Brass, SS 304, SS 316, NAB
Seals	EPDM	NBR
Fasteners	8:8 (Galv.)	SS 304, SS 316
Strainer	SS 304	SS 316



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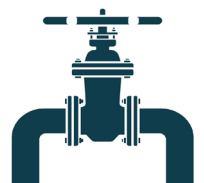
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Benefits of Single Vacuum Air Valves

- **Enhanced System Efficiency and Longevity:** Vacuum Type Air Valves optimize fluid flow, preventing potential pipeline collapse and air locks. This not only boosts system performance but also contributes to the durability of the pipeline system.
- **Cost and Safety Optimization:** These valves minimize system disruptions, resulting in reduced maintenance costs. Additionally, by managing pressure imbalances and preventing undue strain on pipeline structures, operational safety is significantly enhanced.
- **Versatile Application:** Ideal for a multitude of applications, Vacuum Type Air Valves provide a reliable solution for maintaining optimal flow and pressure within diverse pipeline systems.

Installation:

1. **Positioning the Valve:** Install the T-connected pipeline flange horizontally and the Air Valve vertically to the ground.
2. **Managing Load Forces:** Make sure load forces to the Valve from the pipeline don't exceed the EN 1074-2 standard.
3. **Securing the Connection:** Attach the Valve flange to the pipeline flange using bolts, nuts, and washers, ensuring equal fastening on opposing bolts.
4. **Using Steel Reinforced Gaskets:** Place these gaskets correctly between flanges and adhere to EN 1591 Standard for flange bolting.
5. **Location of Air Valves:** Install them close to the main pipeline and keep the T-connection length minimal.
6. **Protecting the Valve:** Shield the Valve from external factors such as construction work or coating.
7. **Cleaning the Pipeline:** Flush and clean the pipeline from all foreign particles before Valve installation.

Operating Principles:

1. **Keeping the Medium Clean:** Ensure cleanliness as small air discharge orifices can clog.
2. **Maintaining Cathodic Protection:** For steel pipeline applications, cathodic protection is vital to prevent Galvanic Corrosion.
3. **Inspecting the Valve:** Check for foreign particles and the condition of the sealing surfaces before installation.
4. **Re-coating On-site:** If needed, protect the sealing surfaces (gaskets, o-rings, stainless steel surfaces, etc.) during the process.



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Air Intake-Discharge Capacity

Vacuum Valves are uniquely tailored to meet the high air intake capacity requirements of a transmission line, which typically surpass the air discharge capacity needs. By pairing these with smaller air release valves, an optimal balance is achieved, ensuring a swift response to vacuum conditions. These valves are strategically placed at key points vulnerable to column separation caused by abrupt pump stops, valve closure, or pipeline ruptures.

Valve Design Options

Corvalve offers two design alternatives for Vacuum Valves: the lever & counterweight design, which enables indication and alarm output, and the more compact, protected, internal spring driven design. Please consult with a Corvalve representative for more details about the internal spring driven design.

Valve Function and Combination

Vacuum Valves are primarily engineered to intake substantial volumes of air, not for air release. However, for those needing an air release functionality, we can factory-install air release valves directly onto the Vacuum Valve, creating a comprehensive unit for high intake capacity and modest air discharge capacity. If needed, Isolation Valves can be installed upstream of these integral air release valves. For additional information on these design options, please connect with a Corvalve representative.

Prevention of Pipeline Collapse

Designed to counter vacuum conditions that could lead to pipeline collapse, Vacuum Valves contain a freely movable disc attached to a lever & weight, providing a quick response to pressure changes in the system. In vacuum situations, the disc moves down, admitting large volumes of air into the system. Once critical conditions are resolved and water flow resumes, the rising pressure allows the disc to close tightly, preventing leakage.

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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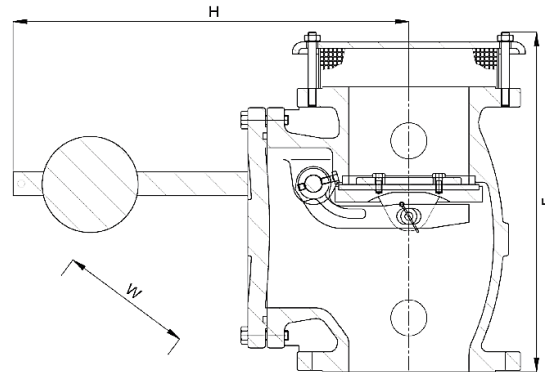


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DIMENSIONS (mm)

DN	40	50	65	80	100	125	150	200	250	300	350	400	450	500
Height	120	150	200	225	300	375	500	600	825	990	1150	1320	1485	1650
Width (PN 10)	150	165	185	200	220	250	285	340	395	445	505	565	615	670
Width (PN 16)	150	165	185	200	220	250	285	340	405	460	520	580	640	715
Width (PN 25)	150	165	185	200	235	270	300	360	425	485	555	620	670	730
Width (PN 40)	150	165	185	200	235	270	300	375	450	515	580	660	685	755
Length	200	230	275	295	370	420	485	650	750	800	1000	1050	1150	1235
Weight (PN 10/16)	14	20	24	27	33	45	60	115	140	185	415	600	660	900
Weight (PN 25)	14	20	24	27	36	50	65	122	149	200	435	633	695	920
Weight (PN 40)	14	20	24	27	36	50	65	128	161	218	452	670-	700	960



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