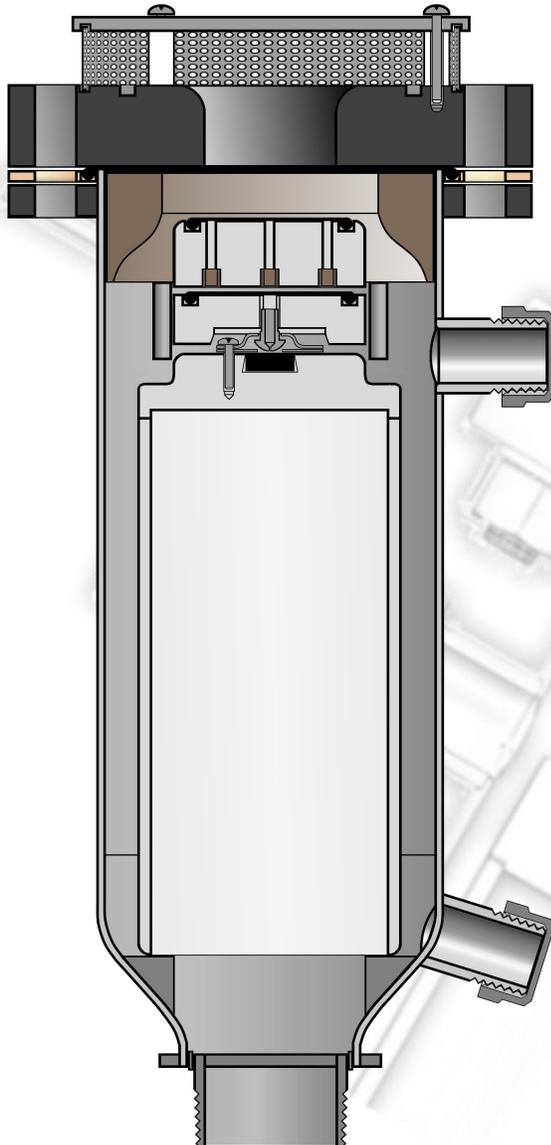


## Vent-Tech Model SSG—Series C

145 psi (10 Bar) 232 psi (16 Bar)—Combination Air Valve for Wastewater

### GENERAL SPECIFICATION

- Optimized for High Vacuum Flow
- Compact Design: < 25-inch installed height.
- 30% shorter than Model SWG™
- Vacuum Relief Capacity: 640 scfm
- Patented technology designed for Vent-Tech™ Z-Valves™



- 304 Stainless Steel Body
- Made in the U.S.A.
- ISO 9001: 2015 Certified QMS
- UL Inspected Facility
- 10-Year Warranty
- 50-Year Targeted Design Life

## Model SSG Standard Water Valve—Overview

The **Vent-Tech Model SSG** sewer valve is essentially a shorter version of the Model SWG air/vacuum relief valve, but with improved flow performance, less weight and better self-cleaning. In applications where clearance height is ample or valve weight is not a factor, specify the Model SWG valve, otherwise we recommend specifying the Model SSG.

### APPLICATION

- Waste Water Systems
- Force Mains
- High Points
- Lift Stations

### FUNCTION

	Market Application	Large Air Release at Start-Up	Controlled Air Release at Start-Up	Air Release Under Pressure	Full Port Vacuum Relief	Surge Control
Series C	95%	X		X	X	X
Series B	5%		X	X	X	X
Series V	< 1%	X		X		X
Series N	< 1%				X	

### PURPOSE

- Minimize pumping energy by removing air plugs
- Protect from pipeline collapse due to vacuum
- Control water hammer velocity
- Manage water column rejoining transients
- Internal anti-surge device

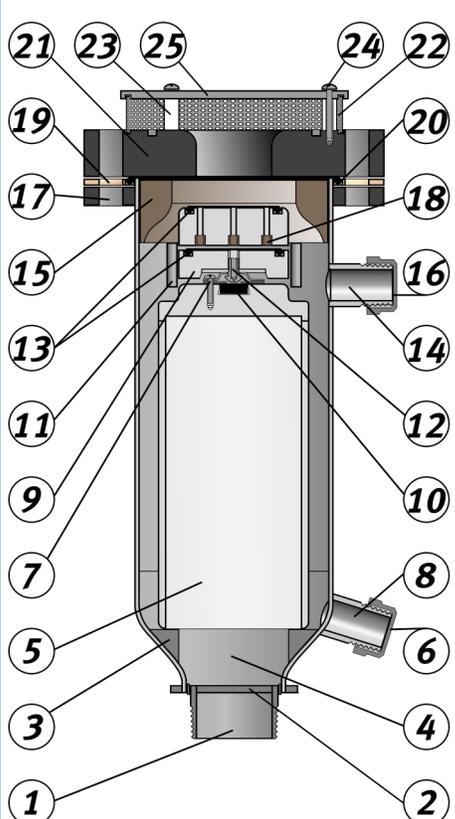
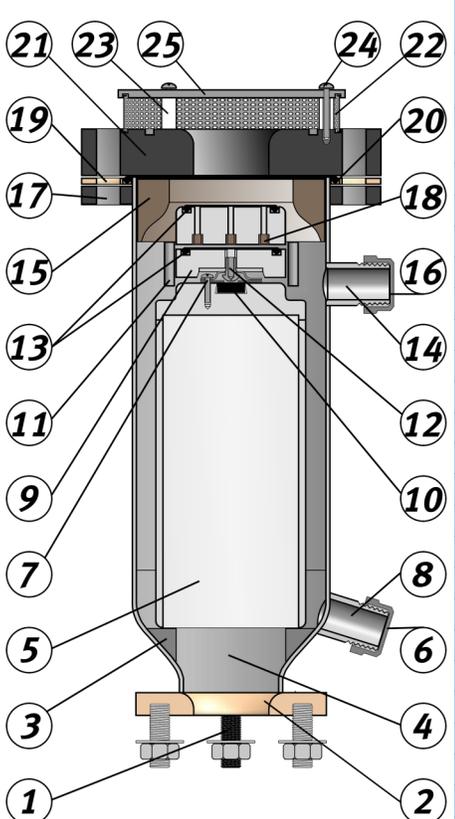
### FEATURES

- Features
- Performance
- Designed and manufactured for wastewater applications.
- Reduced height versus full height flat float designs (e.g. 02SSG is 24.25-inches tall installed: 02SWG is 32-inches tall).
- Reduced weight versus other flat float designs (e.g. 02SWG is 48 lbs. while 02SSG is 37.5 lbs.).
- Manufactured in 304 and 316 Stainless Steel.
- Rated for pressures of 10 bar (145psi).
- Minimum sealing pressure at three (3) psi.
- Compact tubular design with direct acting floats.
- Includes two side ports.
- Self-flushing at pump shut-down and valve emptying.
- High efficiency screens prevent ingestion of airborne debris and bugs.
- Available with connection to odor control units
- Inlets, outlets, and internal clearances have a cross-sectional area at least equal to that of the valve's nominal size.
- Valve flanges are designed to minimize energy losses at the transition to the valve body air passages.
- Composite or Polymer top flange improves balance and handling
- The anti-shock/surge floats automatically limit surge and transient pressure.
- Multi-orifice anti-shock/surge floats with evenly spaced orifices distribute pressurized air across the face of the float.
- The anti-shock/surge floats respond directly to any negative pressure by fully opening the large orifice of the valve.
- Orifices fitted with inserts protect from heat softening and abrasive wear.
- Performance verification by independent testing facility.

Made In the USA

**Model SSG: Series C—Materials of Construction**

145 psi (10 Bar); 232 psi (16 Bar)

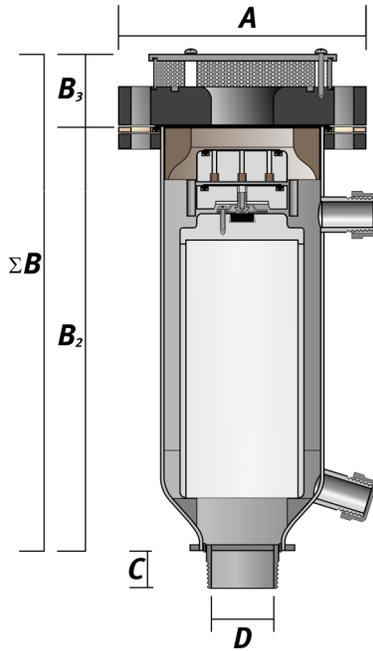
NPT Threaded Nipple		ANSI B16.5 Stud Pattern		No.	Description	Standard
				1	Male NPT Nipple	304 SS
				2	ANSI B16.5 Stud Pattern	304 SS
				2	Wrenching Hex for NPT Connections	304 SS
				2	Streamlined Base Flange for Studded Connections	3104 SS
				3	Control Float Stand-Offs	304 SS
				4	Tubular Valve Body	304 SS
				5	Control Float	UHMW-PE
				6	Side Port Cap	3104 SS
				7	Nozzle Assembly	316 SS
				8	Lower Side Port	304 SS
				9	Nozzle Float	UHMW-PE
				10	Nozzle Seat	EPDM Rubber
				11	Guide Rail	304 SS
				12	Air Release Nozzle	316 SS
				13	Dynamic O-Ring Seal	Viton
				14	Upper Side Port Cap	Plastic (Temporary)
				15	Air Spacer	Nylon, UHMW-PE
				16	Upper Side Port Cap	Plastic (Temporary)
				17	Support Flange	Nylon
				18	Protected Orifice Insert	316 SS
				19	Body Flange	304 SS
				20	Static O-Ring Seal	Viton, Buna N
				21	Streamlined Sealing Flange	Nylon
				22	Punched Screen Guard	304 SS
				23	Screen Standoff Spacers	Polypropylene
				24	Screen Lid Fasteners	304 SS
				25	Screen Lid	UHMW-PE, HDPE
<b>Information Subject to Change without Notice</b>						

<b>Body</b>	Tubular, single chamber, short body capable of accepting a smooth bonded low density lining to minimize adhesion of fats and debris and manufactured of Type 304L (or optionally Type 316L) Stainless Steel. The valve body shall be internally constructed to provide an unobstructed circular space between the UHMW floats and inner valve body wall. Valves shall include an upper gauge port and lower flushing port and these ports shall be of the same material as the valve body. Designed with a minimum 6x safety factor per AWWA and ASME		
<b>Operating Pressure</b>	<b>Minimum Design</b>	< 1 psi (< 0.1 Bar)	
	<b>Test</b>	145 psi (10 Bar)	
<b>Maximum Temps</b>	<b>Operating Intermittent</b>	Exceeds 145° F (62° C)	
	<b>Intermittent</b>	180° F (82° C)	
<b>Connections</b>	<b>Inlet (Upper)</b>	Streamlined sealing flange with perforated Screen Guard 2-inch with optional adapter for customized discharge configurations	
	<b>Inlet (Lower)</b>	2-inch with Male NPT threaded connection Other connection types available on request including studded flange, trophy and cam/groove	
<b>Orifices</b>	<b>Large</b>	Streamlined air flow design At minimum, equal to the nominal diameter of the valve	
	<b>Anti-Surge</b>	Multiple tubular orifices to evenly distribute pressurized air across the face of the float 316 SS wear-resistant inserts in tubular orifices to protect against heat softening and abrasive wear	
	<b>Nozzle</b>	1.2 mm to 2.0 mm to match operating pressures	
<b>Side Port Connections</b>	Full port ball valves recommended. (Available on request.)		
<b>Isolation Valve</b>	Supplied by others (Full port ball valve recommended and available on request)		
<b>Certifications / Registrations</b>	ISO 9001: 2015 Registered Management System		
<b>AIS Compliant</b>	When specified, raw material is controlled for USA Country of Origin Machining, fabrication, assembly, and coating always in USA		
<b>Options</b>	Side Port Ball Valve (s)—Code N (NN)	Custom Orifices—Code X	
	Full Port Isolation Valve—Code B	AIS Compliant—Code A	316L SS—Code 6
Basic valve body can be pressure rated to 235 psi without changing the valve dimensions. Modified internal components may be required.			
<b>Valve Tests</b>	<b>Each Unit</b>	Leak test to 1.5x rated pressure	Pressurized air release (Drop Test) Low Pressure Seal test
	<b>Each Design</b>	Certified — Air Release Nozzle Orifice Flow Tested	Certified - Pressurized Air-Release Anti-Surge Activation (Switch Point) Certified - Vacuum Relief CFD & Physically Flow Tested
<b>Material Specs</b>	304L SS, 316 L SS, HDPE, UHMW-PE, Viton, Buna-N		

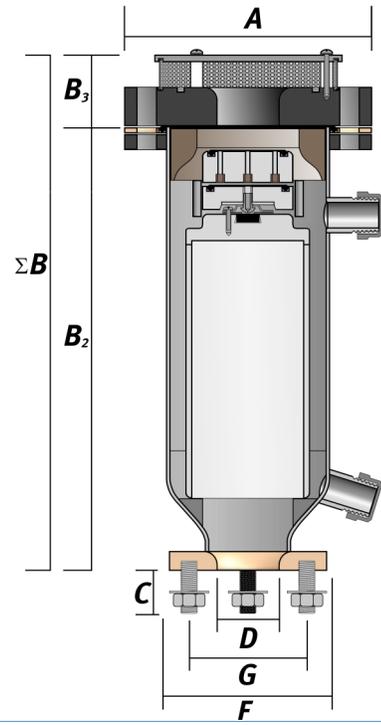
**Model SSG: Series C—Dimensions**

145 psi (10 Bar); 232 psi (16 Bar)

**NPT Threaded Connection**



**ANSI B16.5 Studded Connection**



Valve Part Number	Valve Size	Pressure Rating	Top Flange Dia.	Valve Height					Nipple or Stud Length	Base Flange Dia.	Stud Circle Dia.	# of Studs	Stud Size	Weight
	D		A	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	ΣB	H	C	F	G			
	inch	psi	inch	inch	inch	inch	inch	inch	inch	inch	inch	each	inch	lbs.
<b>NPT Threaded Connection</b>														
12SSG10TCS	2	145	10	-	21	3 1/4	24 1/4	-	2	5	-	0	-	34
02SSG10TCS	2	145	10	-	21	3 1/4	24 1/4	-	2	7 1/8	-	0	-	34
12SSG16TCS	2	232	10	-	21	3 1/4	24 1/4	-	2	5	-	0	-	34
02SSG16TCS	2	232	10	-	21	3 1/4	24 1/4	-	2	7 1/8	-	0	-	34
<b>ANSI B16.5 Studded Connection</b>														
12SSG10SCS	2	145	10	-	21	3 1/4	24 1/4	-	2 1/4	5	4 3/4	4	5/8	34
02SSG10SCS	3	145	10	-	21	3 1/4	24 1/4	-	2 1/4	5	4 3/4	4	5/8	34
12SSG16SCS	2	232	10	-	21	3 1/4	24 1/4	-	2 1/4	5	4 3/4	4	5/8	34
02SSG16SCS	3	232	10	-	21	3 1/4	24 1/4	-	2 1/4	5	4 3/4	4	5/8	34

**Model SSG: Series C—Flow Data**

145 psi (10 Bar); 232 psi (16 Bar)

Valve Code	Pipe Connection*			Nom Valve Size	Operating Pressure Range	Small Nozzle Orifice Diameter	Anti-Surge Orifices†			Controlled Air Release Thru Anti-Surge Orifices ‡	Vacuum Relief Capacity §
	T	S	R				Count	Size	Single Hole Equivalent		
	code			inch	psi	mm	each	mm	mm	max. scfm	min. scfm
12SSG	T	S	R	2	< 1 - 232	1.5	1	4.5	4.5	68	149
02SSG	T	S	R	3	< 1 - 232	1.5	4	4.5	9	271	642

\* T = Male NPT Thread, S = Studded Flange, R = Trophy Connection  
 † Quantity and sizes of orifices are customizable. Please contact factory for additional information  
 ‡ At pressure of 145 psig  
 § Standard cubic feet per minute (ft<sup>3</sup>/min) at 70° Fahrenheit, 14.7 psi absolute and 5.08 psi differential