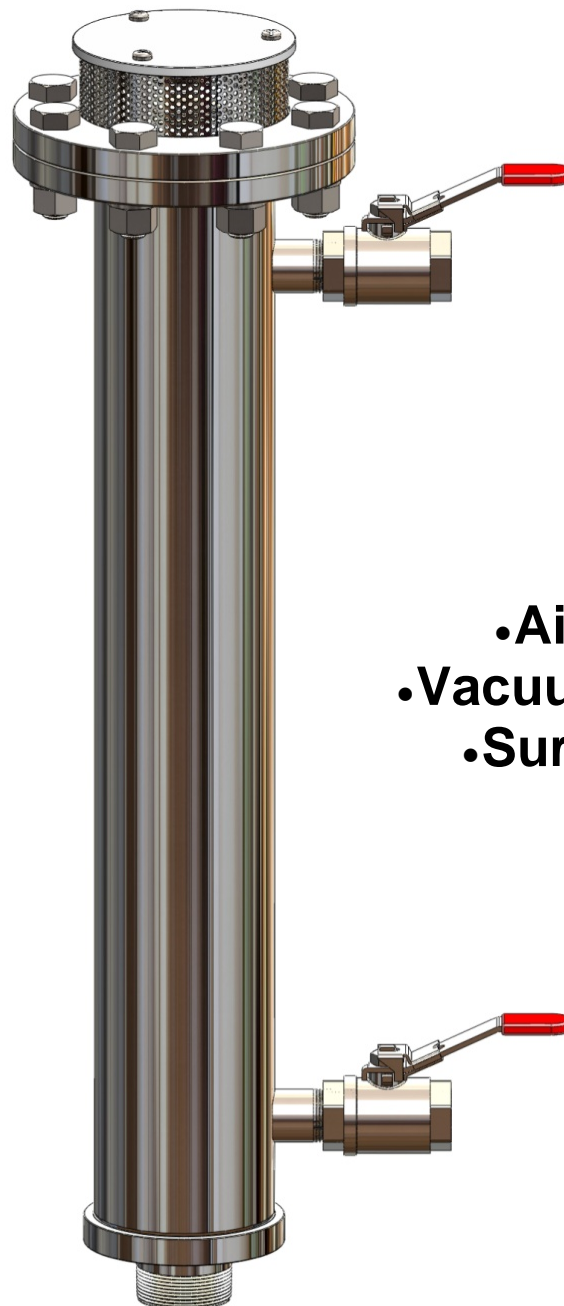


Summer 2010



Vent-Tech  
Combination Sewage Air Relief Valve  
**SWG-C Series**

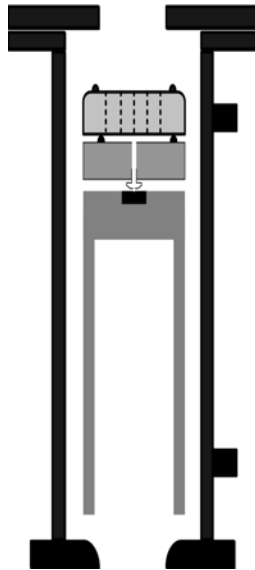


- Air Release
- Vacuum Protection
- Surge Control

**High Air Flow Intake and Discharge  
With Surge Control**

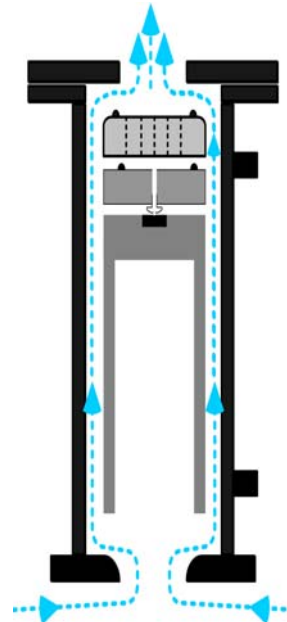
Vent-Tech  
 SWG-C Series –High Air Flow Intake and Discharge with Surge Control  
**Operating Description**

**1. VALVE PRE-OPERATION**



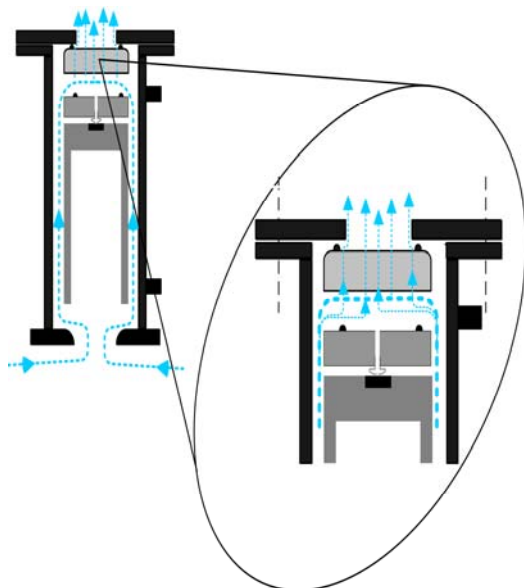
- Floats at rest
- Pumps off

**2. PUMP START-UP**



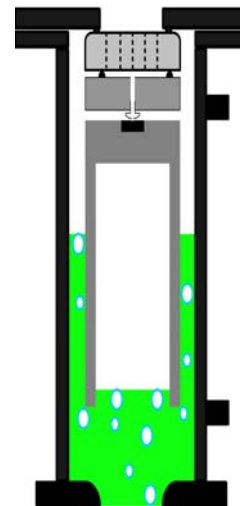
- Air enters valve body
- Floats are at rest
- Air escapes between annulus of Valve Chamber and Floats

**3. HIGH FLOW ACTIVATES SURGE FLOAT**



- High air flow lifts Surge Float and seats it against the top flange
- Air escapes through multiple orifices in Surge Float
- Partial closure creates backpressure, slows approaching fluid
- Dynamic closure avoided, controls water hammer

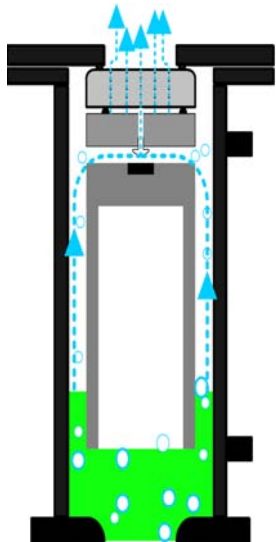
**4. FLUID ARRIVAL CLOSSES VALVE**



- Buoyancy lifts Control Float
- Seats Control and Nozzle Floats against Anti-Surge Float
- Valve body is now pressurized

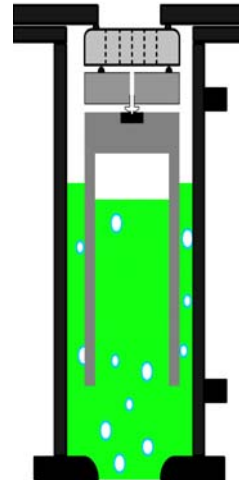
Vent-Tech  
 SWG-C Series –High Air Flow Intake and Discharge with Surge Control  
**Operating Description**

**5. TRAPPED GASES ACTIVATE NOZZLE FLOAT**



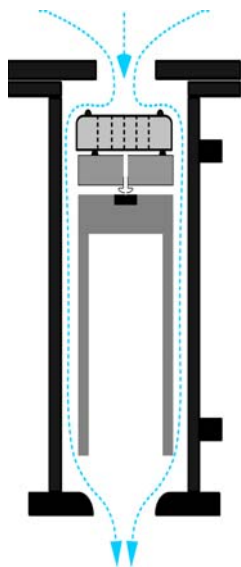
- Entrapped gases accumulate in Valve Chamber
- Control Float loses buoyancy and drops from Nozzle Float
- Accumulated air escapes through Nozzle and Surge Floats

**6. AIR EVACUATION CLOSES VALVE**



- Fluid replaces escaped air and buoyancy lifts Control Float
- Control Float seats Nozzle Floats against Surge Float
- As more gas accumulates, Control Float loses buoyancy and Steps 4 through 6 repeat

**7. PUMP SHUT DOWN**

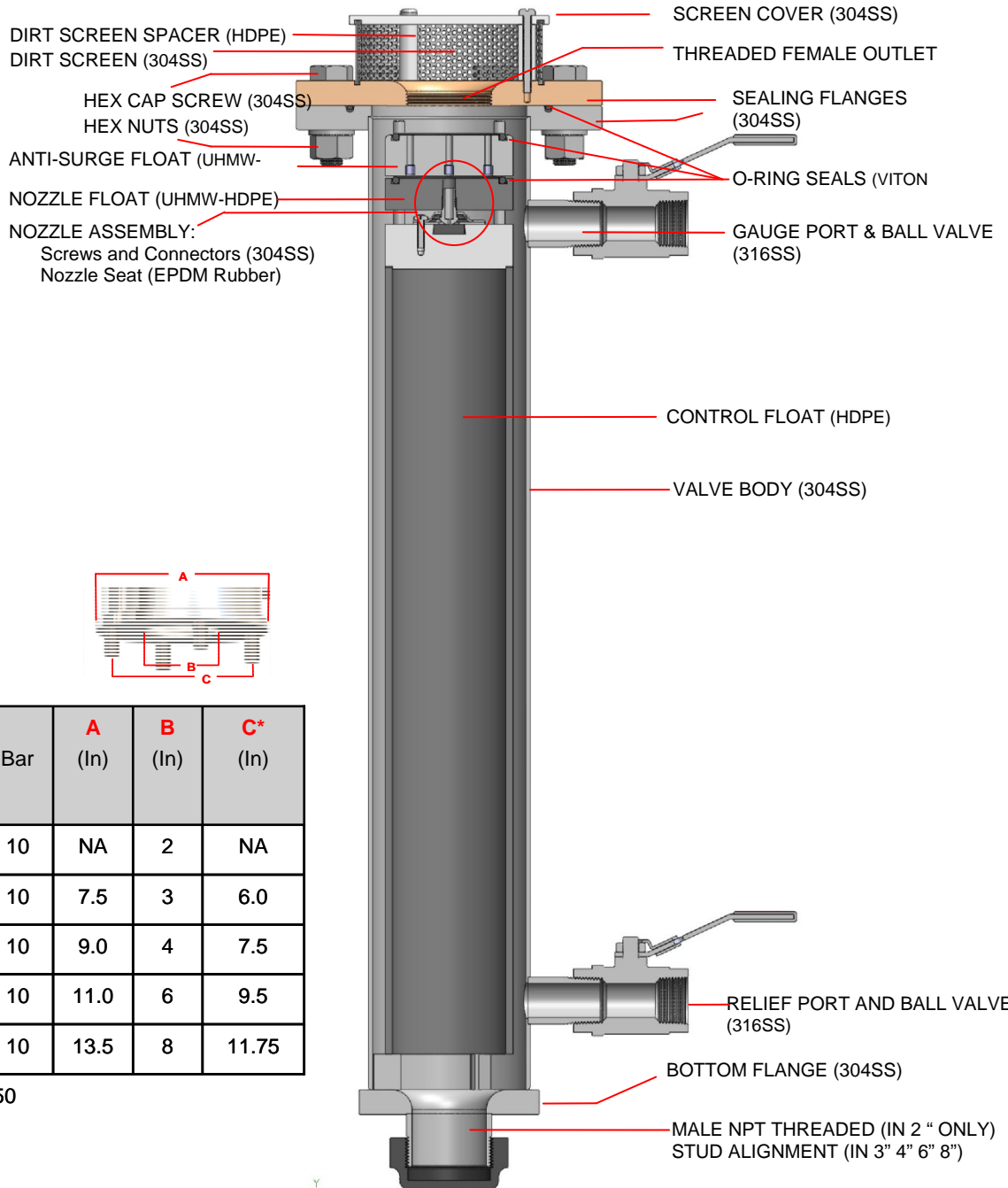


- Fluid evacuates from valve and floats drop
- Vent-Tech improved flow design increases efficiency, yielding greater vacuum protection

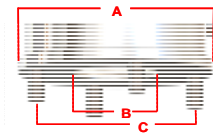
**IMPROVED VENT TECH DESIGN ELEMENTS**

- Anti-wear inserts installed in the Surge Float inhibit wear from high temperatures and abrasion
- Critical edges of the Surge Float and Valve Chamber are rounded to increase air flow
- Multiple orifices in the Surge Float enable dynamic surge control
- Valve Chamber is designed to maximize air flow, reducing valve size requirements
- Overall design improves vacuum protection of the pipeline
- Debris evacuation improved through faster and more aggressive air intake

Vent-Tech  
 SWG-C Valve - STANDARD BODY  
**Material Specifications**



**STUD ALIGNMENT**



Valve size (In)	DN (mm)	Bar	A (In)	B (In)	C* (In)
2	050	10	NA	2	NA
3	080	10	7.5	3	6.0
4	100	10	9.0	4	7.5
6	150	10	11.0	6	9.5
8	200	10	13.5	8	11.75

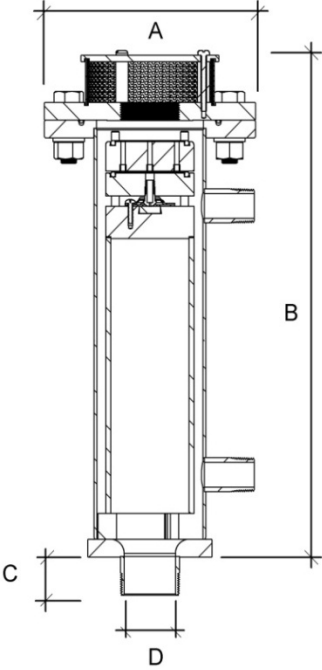
\*ANSI B16.5 Class 150



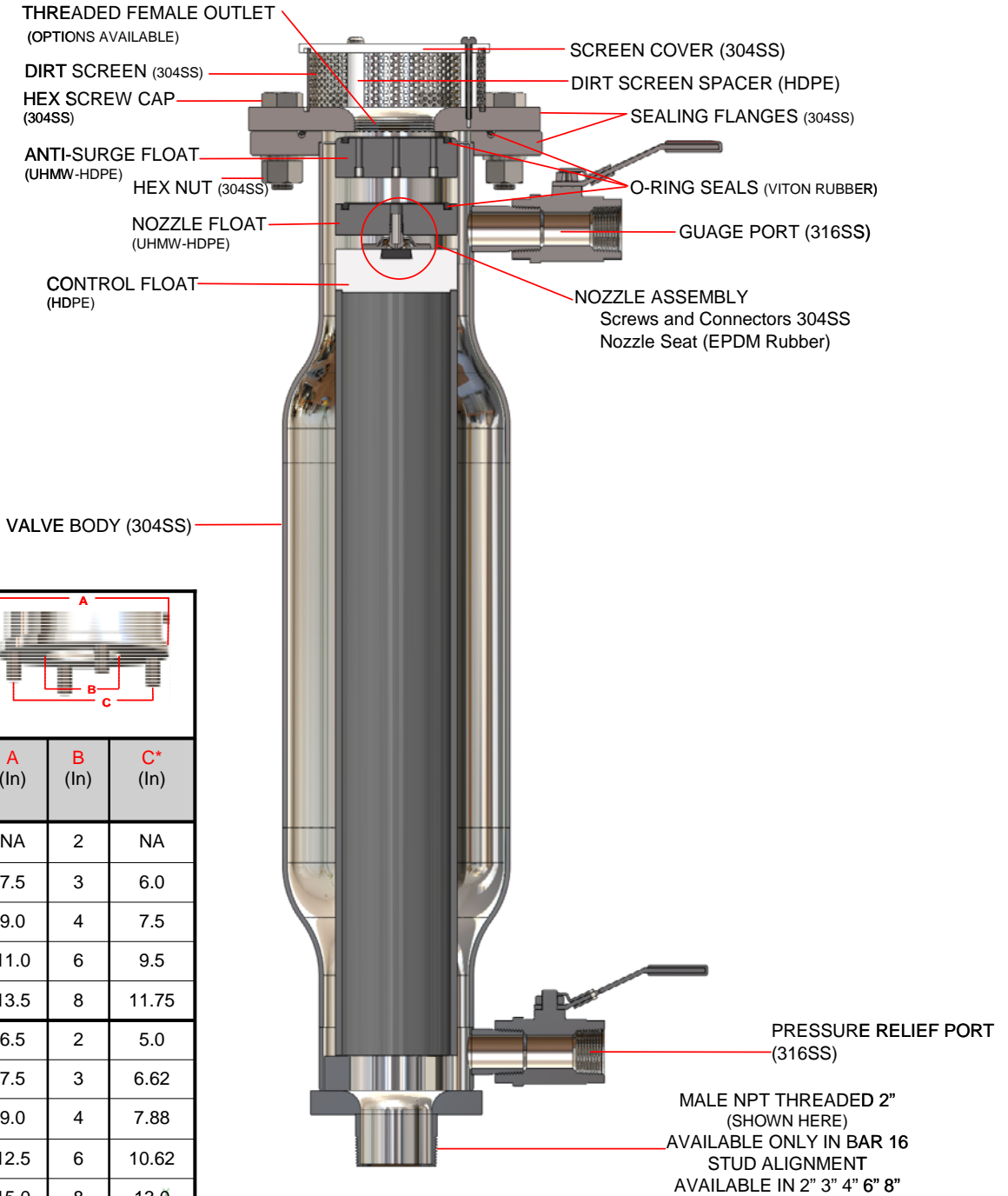
INFORMATION SUBJECT TO CHANGE WITHOUT NOTICE

VENT-TECH SEWAGE AIR RELIEF VALVE	
Series:	Size:
<b>SWG-C</b>	2" 3" 4" 6" 8"
	Date: 6-2010
<b>MATERIAL SPECIFICATIONS</b>	

Vent-Tech  
 SWG-C Valve - STANDARD BODY  
**General Specifications**

VALVE TYPE	<b><u>COMBINATION AIR RELIEF VALVE</u></b> <b><u>STANDARD SWG-C Series</u></b>						
	<b>VALVE OPERATIONS:</b> <ol style="list-style-type: none"> <li>1. High volume air evacuation while pipeline fills</li> <li>2. High volume vacuum relief during pump shutdown</li> <li>3. Discharge of air/gas from pressurized pipeline</li> <li>4. Surge abatement for high velocity start up conditions, column separation and fluid oscillation</li> </ol>						
<b>VALVE SIZES</b>	2-3-4-6-8 (inches) 10-12 inch available with special order						
<b>STANDARD OPERATING PRESSURES</b>	10 Bar: 3 to 147 (psi)						
<b>VALVE CONNECTIONS</b>	INLET:	<ul style="list-style-type: none"> <li>• Male NPT threaded 2" only</li> <li>• 3" to 8" studded for ANSI B16.5 Class 150</li> <li>• Number of Flange Screw Studs (4 to 8)</li> </ul>					
	OUTLET	<ul style="list-style-type: none"> <li>• Swivel flanges available</li> <li>• Female connection</li> </ul>					
<b>MATERIAL SPECIFICATIONS</b>	ANSI B16.5 CLASS 150, EXCEEDS AWWA C 512 304SS, 316SS, HDPE, UHMW-HDPE, Viton, EPDM						
<b>VALVE TESTS</b>	<ul style="list-style-type: none"> <li>• Leak test up to 1.5 valve rated pressure</li> <li>• Pressurized air release</li> <li>• Low pressure leak test</li> </ul>						
<b>DIMENSIONS (INCHES)</b> <b>WEIGHTS (LBS)</b>	<b>SIZE</b>	<b>MODEL</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>WT.</b>
	2	02SWG10TCS	8.66	30.5	1.66	2	40
	3	03SWG10RCS	11.25	30.7	2.125	3	82
	4	04SWG10RCS	11.25	30.7	2.125	4	80
	6	06SWG10RCS	15.5	41.7	2.125	6	182
	8	08SWG10RCS	17.5	41.7	2.125	8	226

Vent-Tech  
 SWG-C Valve - HIGH PRESSURE BODY  
**Material Specifications**



STUD ALIGNMENT

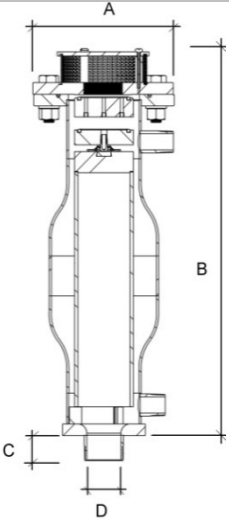
Valve size (In)	DN (mm)	Bar	A (In)	B (In)	C* (In)
2	050	16	NA	2	NA
3	080	16	7.5	3	6.0
4	100	16	9.0	4	7.5
6	150	16	11.0	6	9.5
8	200	16	13.5	8	11.75
2	050	25	6.5	2	5.0
3	080	25	7.5	3	6.62
4	100	25	9.0	4	7.88
6	150	25	12.5	6	10.62
8	200	25	15.0	8	13.0

\*16 Bar: ANSI 16.5 Class 150  
 25 Bar: ANSI 16.5 Class 300

VENT-TECH SEWAGE AIR RELIEF VALVE	
Series:	Size:
<b>SWG-C</b>	2" 3" 4" 6" 8"
HP	Date: 6-2010
<b>MATERIAL SPECIFICATIONS</b>	

INFORMATION SUBJECT TO CHANGE WITHOUT NOTICE

Vent-Tech  
 SWG-C Valve - HIGH PRESSURE BODY  
**General Specifications**

<b>VALVE TYPE</b>	<b><u>COMBINATION AIR RELIEF VALVE</u></b> <b><u>HIGH PRESSURE SWG-C Series</u></b>						
	<b>VALVE OPERATIONS:</b>  <ol style="list-style-type: none"> <li>1. High volume air evacuation while pipeline fills</li> <li>2. High volume vacuum relief during pump shutdown</li> <li>3. Discharge of air/gas from pressurized pipeline</li> <li>4. Surge abatement for high velocity start up conditions, column separation and fluid oscillation</li> </ol>						
<b>VALVE SIZES</b>	2-3-4-6-8 (inches) 10-12 inch available with special order						
<b>STANDARD OPERATING PRESSURES</b>	16 BAR: 7 to 232 psi 25 BAR: 7 to 363 psi						
<b>VALVE CONNECTIONS</b>	INLET: BAR 16:	<ul style="list-style-type: none"> <li>• Male NPT threaded 2" available</li> <li>• 3" to 8" studded ANSI B16.5 Class 150</li> <li>• Number of Flange Screw Studs (4 to 8)</li> </ul>					
	INLET: BAR 25	<ul style="list-style-type: none"> <li>• 2" to 8" Studded ANSI B16.5 Class 300</li> <li>• Number of Flange Screw Studs (8 to 12)</li> </ul>					
	OUTLET	<ul style="list-style-type: none"> <li>• Swivel flanges available</li> <li>• Female connection</li> </ul>					
<b>MATERIAL SPECIFICATIONS</b>	ANSI B16.5 CLASS 150 and 300 EXCEEDS AWWA C 512 304SS, 316SS, HDPE, UHMW-HDPE, Viton, EPDM						
<b>VALVE TESTS</b>	<ul style="list-style-type: none"> <li>• Leak test up to 1.5 valve rated pressure</li> <li>• Pressurized air release</li> </ul> <p style="text-align: center;">Low pressure leak test</p>						
<b>DIMENSIONS (INCHES) WEIGHTS (LBS)</b>	<b>SIZE</b>	<b>MODEL</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>WT.</b>
	2	02SWG16TCS	8.66	30.5	1.66	2	25
	3	03SWG16SCS	11.25	30.7	2.125	3	84
	4	04SWG16SCS	11.25	30.7	2.125	4	83
	6	06SWG16SCS	15.5	41.7	2.125	6	189
	8	08SWG16SCS	17.5	41.7	2.125	8	236
	2	02SWG25SCS	8.66	30.5	2.125	2	46
	3	03SWG25SCS	11.25	30.7	2.125	3	86
	4	04SWG25SCS	11.25	30.7	2.125	4	85
	6	06SWG25SCS	15.5	41.7	2.125	6	190
	8	08SWG25SCS	17.5	41.7	2.125	8	238