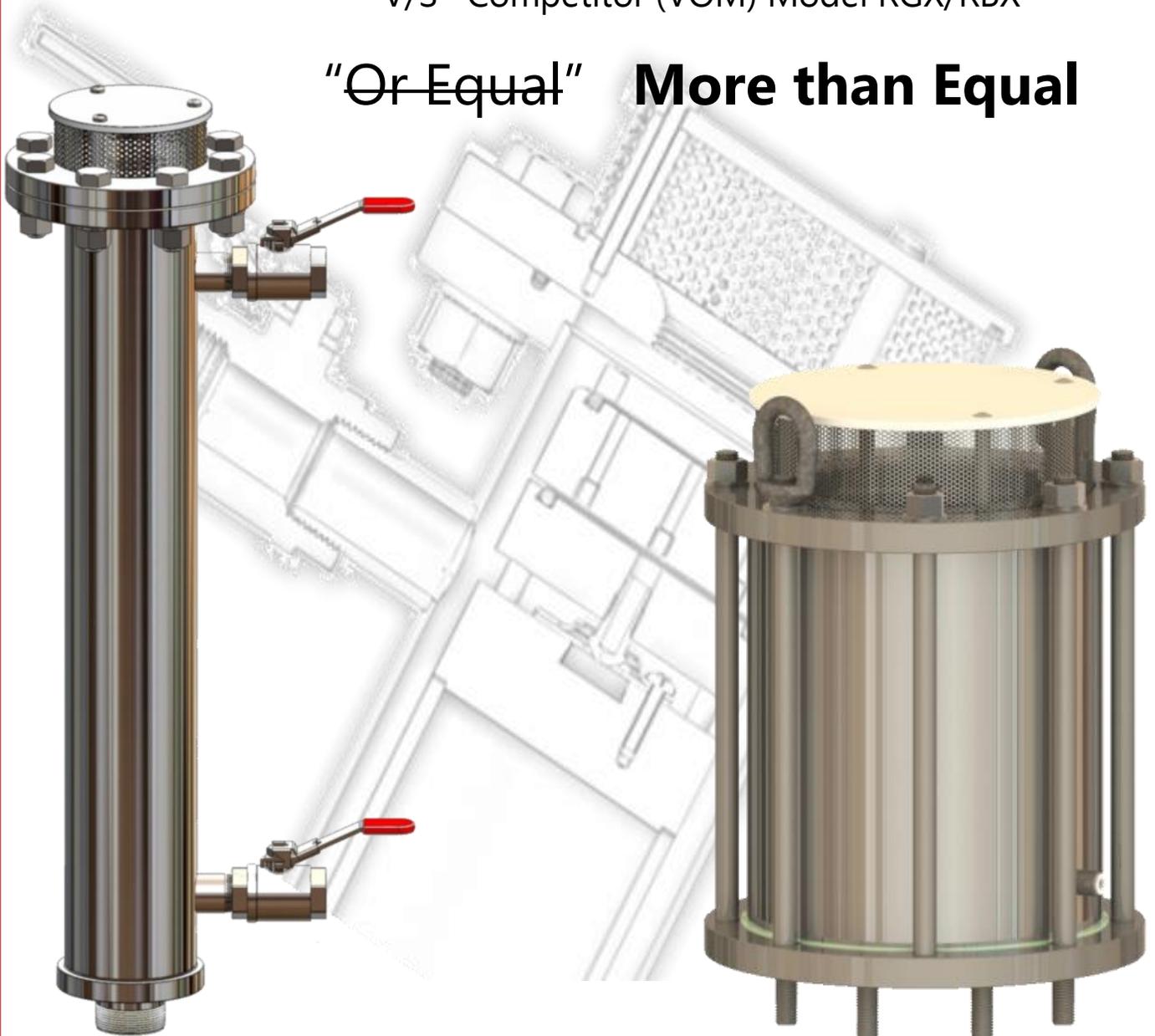




Vent-Tech (VT) Air Release valves

V/S Competitor (VOM) Model RGX/RBX

~~"Or Equal"~~ **More than Equal**



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Unique Vent-Tech Advantages

GENERAL

Made in America

Unlike other valve companies that manufacture overseas and only assemble components in the United States, **Vent-Tech valves 100% designed, machined, assembled and tested in the USA.**

Our valves can meet all 'Made in America' standards including:

- The requirements of 49 U.S.C. 5323(j)(1) and the applicable regulations in 49 C.F.R Part 661 (Buy America Requirements) including the Surface Transportation Assistance Act of 1982 Section 165a, as amended, and the regulations adopted pursuant thereto.
- The requirements of 23 U.S.C. Section 313 and the applicable regulations in 23 C.F.R Part 635.410 (Buy America) and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) sections 1041(a) and 1048(a), as amended, and the regulations adopted pursuant thereto.
- The Buy American provisions (Section 1605) of the American Recovery and Reinvestment Act (ARRA) which include the requirements of H.R.547 Division G, Title IV "Consolidated Appropriations Act, 2014," enacted January 17, 2014.
When ordering, please specify which requirement(s) apply.

10-year Warranty

International Valve Marketing Inc. was the first in the USA, and we continue to offer with a 10-year warranty

Long Design Life

The design life for our 316SS valves is fifty years.

PERFORMANCE

Model Specific Data

Vent-Tech specifies the pressure and flow conditions under which its **Anti-Surge Float activates for each model size.**

Physical Flow Testing

Vent-Tech valve's vacuum flow performance is now physically tested and the results confirm our earlier CFD design predictions.

Improved Flow

Vent -Tech valves flow 20 to 40% more air than any other flat float cylindrical valve on the market. Our valves are streamlined and come with toroidal inlets to minimize energy losses and turbulence which substantially increases each valve's rated capacity.

Optimized Design

We have reviewed and **optimized each of our designs**, and in some cases, developed new, improved configurations. Our 54-SWG is a new design, which uses our U.S. Patented Air Spacer. This 4" CRV is not only 10% shorter, it also achieves a vacuum flow performance of 2,560 CFM (an improvement of over 200% compared to older industry designs).

Better Screens

All Vent-Tech SWG valves come equipped with **perforated 316 stainless steel screens**, whereas many industry valves use expanded metal mesh. Experience has shown perforated stainless steel screens stay cleaner because they accumulate less bio-mass and are more generously sized. The open area of a Vent-Tech perforated dirt screen is greater than our competition. The open area of a Vent-Tech screen is approximately 200% of the cross-sectional area of the valve's nominal size.

Easier Maintenance

Our design upgrades **simplify service and minimize the effort required in maintenance**, including the removal of excess metal weight, self-retaining mesh spacers that don't fall off into the valve during reassembly, easy to remove nozzles, light weight lids, and where possible, using thread sizes applicable to the end-user.

Zero Pressure Sealing

All of our SWG and WTR valves are available in a "Z" configuration, which **provides zero pressure sealing for applications where low pressure leaks are not acceptable.** Our SWG valves have a 130% compression zone even when taken from zero to max pressure with a low density fluids like 0.96 sg fat/water mixture.

BODY

Stainless Steel

Valves are made using 304SS or 316SS or exotics as requested. We also provide as an option, fusion-bonded Epoxy linings.

FLOATS

Float Materials

Vent-Tech's direct acting **Control Floats are made of UHMW-PE** and are manufactured to achieve better sealing efficiency over our competition. Vent-Tech has changed from HDPE to UHMW-PE because it is lighter and the impact strength of UHMW-PE is eight (8) times greater than HDPE.

Solid Anti-Surge Float

The anti-surge float will lift into the closed position when the flow of pressurized exhaust air becomes excessive. When this happens, the exhaust air is forced to flow through a set of small orifices with combined area only ~1/36th the nominal flow area of the valve. Vent-Tech uses a set of small orifices rather than one larger hole which enables **better distribution of the heat generated when the air undergoes rapid compression.**

Solid Nozzle Floats

Vent-Tech's Nozzle Float is a **new improved design** that reduces the voids within the valve body, improving the compression zone, and helps keep liquids away from the sealing elements. This feature also removes slop in the nozzle mechanism allowing more consistent and reliable valve closure.

Solid Large Orifice

Vent-Tech's Nozzle Float and Control Float closing pucks are all flat face designs with optimized and streamlined geometry to **decrease turbulence and increase valve flow rating.**

INTERNAL MECHANISMS

- Stainless Steel Nozzle** Vent-Tech's nozzle is designed so that damage to the rubber sealing button is prevented and it is equipped with slotted end for ease of installation and removal.
- Better Rubber Seals** All Vent-Tech SWG dynamic sealing applications use Viton™ rubber seals because they offer **better service life than nitrile (Buna N) which we use only in static sealing applications (e.g. flange to flange)**. VITON is DuPont's trade name for Fluorocarbon Elastomers; while costly, these compounds offer superior resistance to a wide variety of chemicals and excellent compression set resistance over a wider temperature range.
- Orifice Protection** Orifice size is used in surge analysis software because it is critical to a valve's anti-surge performance. However, orifice sizes can grow because of abrasion and melting due to high pressure exhaust. All Vent-Tech Anti-Surge orifices are **fitted with anti-wear inserts to protect the orifices from growing larger over time.** (Vent-Tech Pat. App.)

FLANGES

- Intake orifice sizing** You can be sure that the **flow pathway and diameter of our intake orifice is equal to or greater than the nominal size of the valve.**
- Port & Isolation Valves** Vent-Tech CARVs options including one or two 316 SS full-bore side-port ball valves & 316 SS full-bore isolation valves on request. Note: CARVs should not be placed into operation without at least one side-port valve, to relieve pressure prior to servicing.

QC/QA TESTING

- Lower sealing pressure** Improvements in manufacturing technique and internal design allow Vent-Tech **valves to close at less than 3 psi**, which minimizes low pressure leakage and subsequent clean-up costs. Our standard valves are rated for pressures of 10 Bar (147 psi), 16 Bar (232 psi) and 25 Bar (362psi). For operating conditions that are not consistently greater than 3psi, we have designed a range of Vent-Tech 'Zero Pressure Sealing' CARVs that are also available.
- Individually Tested** All Vent-Tech SWG valves are **individually tested after manufacture for leakage and deformation at 150%* working pressure.** All Vent-Tech valves are also tested for performance at working pressure and pressurized air-release ("Drop-Test"). *200% is optional.

OTHER ADVANTAGES

- Better Polymers** Vent-Tech floats are constructed from Ultra-high-molecular-weight Polyethylene (UHMW), which compared to HDPE, is:
- 8x more impact resistant
 - Lighter = more float buoyance
 - Less prone to abrasion
 - Teflon like friction
 - Less prone to fat adhesion
- Larger Air Pocket** Dead space has been minimized and float more buoyant to keep liquids further away from the float seals.
- Internals Reduce Drag** Our valves have improved float guide designs which reduce drag by as much as 85% and **increase the effective flow area.**
- More Float Guides** We have increased the number of float guides from three (3) to four(4). Holding the floats on-axis better allows for tighter machining tolerances and **increases the cross-section of flow area.**
- Easy Vent Conversion** Simply add vent pipework to the top of any valve (post-installation), because all top flanges are drilled and grooved to use a *Top-Hat and O-ring adaptor.* Our 1" and 2" valves come with both pre-threaded and Top-Hat designs. The Top Hat allows for the preferred one-size-up pipe sizing for the vent to avoid affecting the valve's flow rating.
- "Z" Valve Distinctive Look** Full width screen encloses the flange bolts and offers lower screen height while still offering **200% flow area.**
- Stay Clean Finish** Vent-Tech valves are specially surface treated to resist dirt and grease marks during installation. This means **less time is spent in post-installation clean-up**, and results in a better looking job.
- QA/QC** All valves are **individually tested** at pressure to ensure proper, leak free operations. Each valve is proudly hand signed by a trained testing technician.

Optional

- Spool Piece Base Adaptor** Vent-Tech valves can be adapted to Butterfly Isolation valves using our optional spool piece.
- Easy to Use Lid Hardware** Vent-Tech has moved away from the use of cumbersome hex-bolts on their lids, in favor of the easier to use Philips-drive head. The lid spacers stay attached to the lid, preventing lost time when loose spacers falling inside the valve

Vent-Tech

Development of the Vent-Tech CARV

The Vent-Tech design was initiated in 2009 for the express purpose of improving the quality and incorporating technological advances into the flat float, cylindrical body combination air release valve. The Vent-Tech design offers significant advancements in multi-orifice anti-surge air relief technology (Pat. App.), combined with more efficient air flow and increased compression zone volume to better keep liquids away from the sealing surfaces.

Additionally, our 'Air Spacer System' (Patented) provides for more compact valve designs, minimizes turbulent energy losses and when combined with our superior float technology, has created our special 'Zero-Pressure Sealing' valves for the many occasions when low pressure operation is just unavoidable.

Decades of input from the field (Thank you!) combined with input from an internationally awarded fluid-dynamists, years of R&D efforts and use of flow simulation technology has redefined the CARV. Giving you "**Made in America**" products that outperform our competition. With features specifically targeted to provide the benefits of reduced energy loss, less frequent valve replacement, lower maintenance costs, and longer operating life. (design life target = 50 Yr.

Up to 40% greater venting capacity, in many cases, allowing for valves to be downsized - further reducing your installed costs.

Vent-Tech
More than
EQUAL

	Valve Comparison	Vent-Tech	VOM
General			
	Made in America	✓	
	<i>Made in South Africa</i>	✗	✓
	10-year warranty	✓	✓
	Pump Start-up	✓	✓
	High flow activates anti-surge float	✓	✓
	Fluid arrival closes valve	✓	✓
	Trapped Gases activate nozzle float	✓	✓
	Air evacuation closes valve	✓	✓
	Pump shut-down		
Body			
	Manufactured in 316 SS or 304 SS	✓	✓
	Compact, tubular all stainless steel body	✓	✓
	Dirt inhibitor screen	✓	✓
Floats			
	Hollow direct-acting flat float design	✓	✓
	Solid Nozzle Floats	✓	✓
	Solid Large Orifice Floats	✓	✓
Internals			
	Stainless steel nozzle	✓	✓
	Nitrile rubber seals	✓	✓
	Integral anti-surge orifice mechanism	✓	✓
Flanges			
	Intake orifice diameter shall be equal to or greater than the nominal valve size	✓	✓
	Stainless steel hardware	✓	✓
	Over pressure protection gaskets (incl. on WTR)	✓	✓
Testing			
	Minimum sealing pressure of 3 psi	✓	✗ 7.5 psi
	No deformation, leaking or damage at 150% of working pressure.	✓	✓
	No deformation, leaking or damage at 200% of working pressure. (on request)	✓	✓