SERIES VB, VBM, VBS VACUUM BREAKERS

ASSEMBLY, INSTALLATION & OPERATING INSTRUCTIONS

1. IMPORTANT – BEFORE INSTALLING

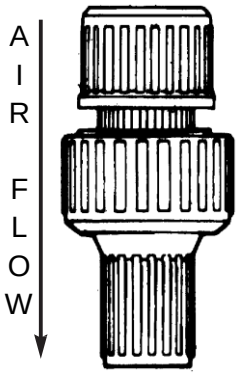
Vacuum Breakers will open to allow air into a pipeline or vessel preventing siphoning, cavitation, or vacuum, when properly installed and used within the recommended ranges of pressure, temperature, and chemical compatibility. The ultimate determination of material compatibility is previous successful use in the same application. Minimum service temperature is 40°F. Call our Technical Support for information about your application.

Caution: Plastic materials will degrade in ultraviolet (UV) light or sunlight.

Caution: Polypropylene and PVDF (Kynar) often look similar. Do not install in your system if you are not sure.

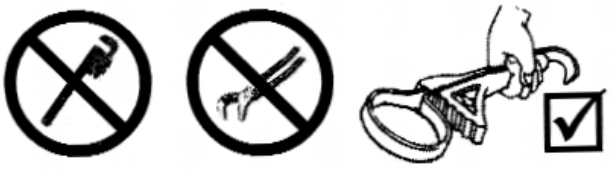
2. INSTALLATION

For best results, Plast-O-Matic recommends placing vacuum breakers upright (see illustration) at the highest point in the piping system. For anti-siphon applications, Plast-O-Matic recommends locating the vacuum breaker on a U-bend 5 feet above the liquid level to assure opening, because the vacuum breaker will begin to open when the pressure in the pipe drops 1 PSI below atmospheric pressure.



Caution: A diaphragm failure under pressure, combined with a hazardous liquid, could cause dangerous spraying through the vacuum breaker, or hazardous fumes. Plast-O-Matic suggests Series CK, CKM or CKS check valves instead of VBM or VBS, with the inlet piped to an open drain or containment for these applications.

Threaded Connections – A suitable thread sealant (ex. Teflon® tape) should be applied to male tapered threads to assure a "leak-tight" seal. The assembly need only be made "hand-tight" followed by a quarter (1/4) turn with a strap wrench. Do not over tighten or use pipe wrenches on plastic pipe and components.



Caution: Teflon® tape will "string" as pipe threads are jointed. Loose "strings" could lay across the seating surface and prevent the valve from completely closing. To avoid this problem, clean out old tape, and do not apply tape to the first thread.

Caution: Connections should be made only to plastic fittings: metal pipe should only be installed with an intervening plastic nipple. Metal pipe and straight threaded pipe tend to cut, stretch, and distort the plastic bodies, which could result in cracking or leaking over time.

Non-Threaded Connections – For solvent cementing or heat fusion, follow instructions supplied with the cement or fusion equipment, or contact your distributor.

Caution: When using solvent cement for socket connections on PVC and CPVC check valves care should be taken. If primer or cement gets past welding area of the socket it can cause the valve to malfunction. The primer or cement may cause the seals to fail or moving parts to bind and restrict proper movement of internal parts. Keep valve right-side up when welding so that solvent and primer don't drip and destroy the valve.

Never trim the flat end of the Teflon encapsulation on the spring. This may cause spring to be wetted by the process fluid.

3. MAINTENANCE

Plast-O-Matic recommends keeping a spare diaphragm or O-ring set available for repairs. Seal life will vary with applications due to cycles, temperature, pressures, chemicals and concentrations. Based on the application, a periodic inspection and maintenance plan should be established.

Note: Disassembly will void warranty.

USA Engineered USA Made

VBL-0721-I-1

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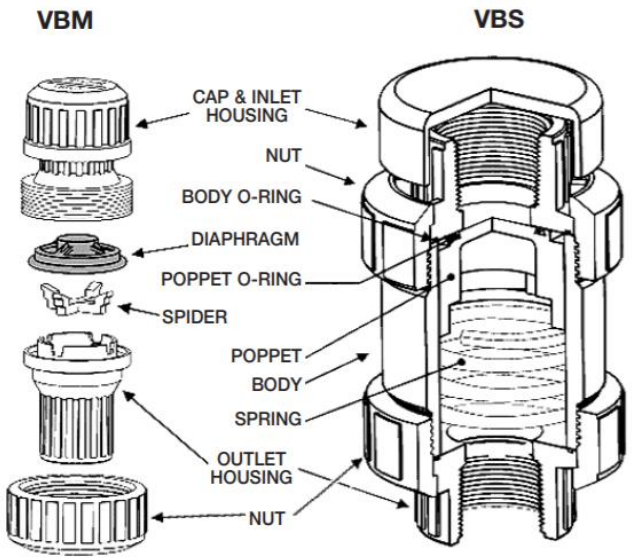
4. PARTS AND ILLUSTRATION



Series VB, not shown, has no SPIDER or NUT, and six (6) screws and nuts are used for assembly.

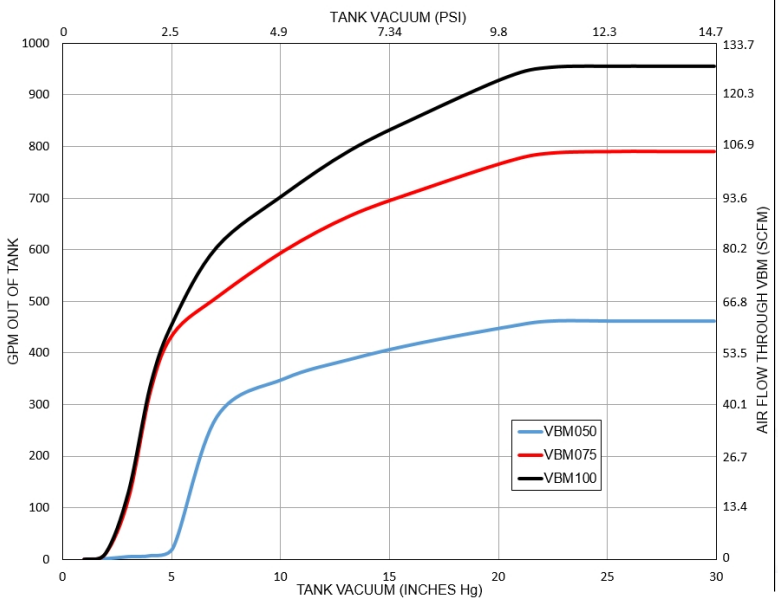
PART NUMBERS

VBM and VB Diaphragm - *one required per valve*			
VBM050 1/2"	VBM 3/4" & 1"	VB 3/4" & 1"	Diaphragm Material
1021EP	4054 EP	0721 EP	EPDM
1021V	4054 V	0721 V	Viton
VBS O-RINGS- *2nd Number requires two per valve*			
VBS050 1/2"	VBS200 2"	VBS300 3"	O-Ring Material
0224EP 0040EP	0224 EP 0040EP	0230EP 0155EP	EPDM
0224V 0040V	0224 V 0040V	0230V 0155V	Viton

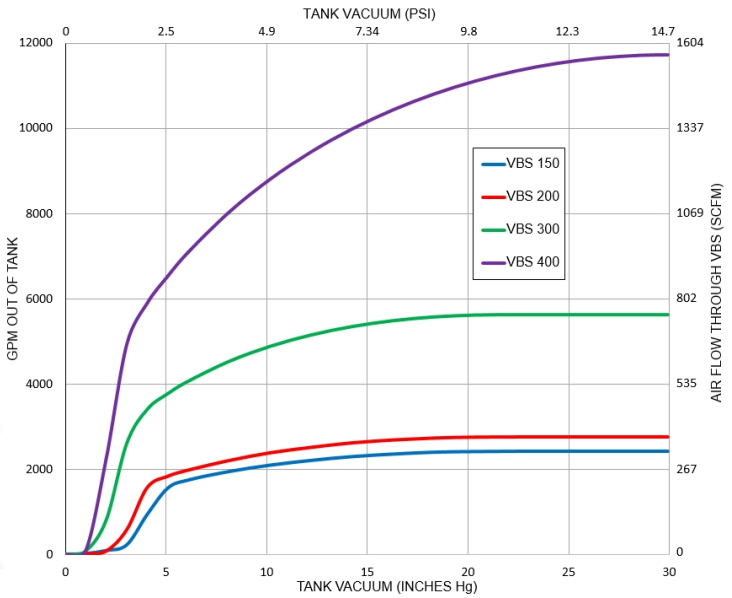
VBS400 4"	O-Ring Material
0241EP 0258EP	EPDM
0241V 0258V	Viton

5. PERFORMANCE CHARTS

VBM AIR FLOW CHART - CALCULATED DATA AT 70°F



VBS AIR FLOW CHART - CALCULATED DATA AT 70°F



USER SHOULD APPLY A SIGNIFICANT SAFETY FACTOR OF AT LEAST 2X, BASED ON APPLICATION REQUIREMENTS.