



**SHERMAN-TANK**  
Rotational Molding

SHERMAN ROTO TANK, LLC

## IBC Venting – What Buyers Need to Know

### YOUR SAFETY IS OUR PRIORITY

At Sherman Tank your safety is our highest priority, which is why we want to make sure all of our customers understand the importance of properly venting your packaging, reducing the chances for an incident to occur. Without proper ventilation, IBCs are at risk of failure due to changing environmental temperatures.

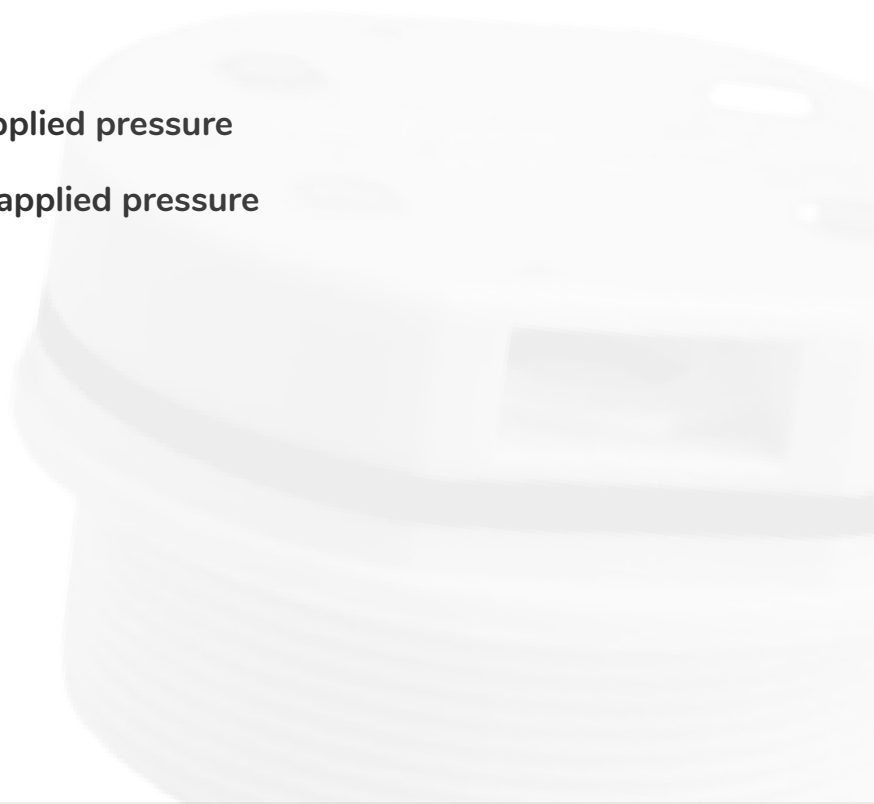
Venting considerations should extend beyond components and environmental influences, and should be addressed in your operational procedures.

### VENTING OPTIONS

Hazardous material regulations require the shipper or offerer for shipment determines the vacuum or pressure relief requirements.

Sherman Roto Tank, LLC offers several venting options for those products our customers have determined require pressure or vacuum relief.

- **Low Flow –  $\geq 900$  ml/min at 1.5 psig applied pressure**
- **High Flow -  $\geq 2000$  ml/min at 1.5 psig applied pressure**








## TYPES OF VENTS

### Mechanical Check Valve Type Vents

A mechanical check valve type vent is a non-reclosing pressure relief safety device that, in most uses, protects a pressure vessel, equipment, or system from overpressurization or potentially damaging vacuum conditions.

### Microporous Vent Filters

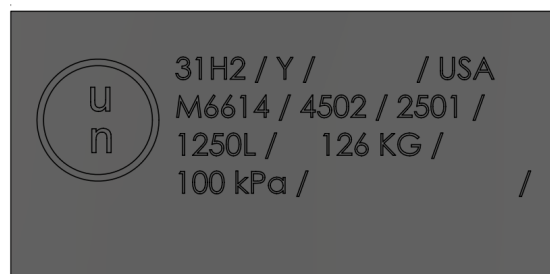
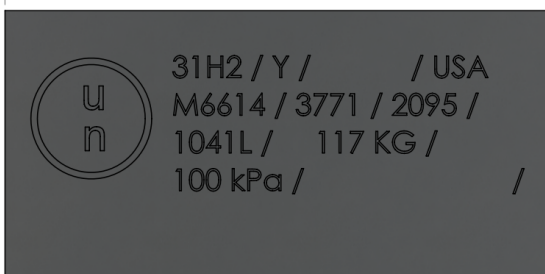
Microporous vent filters allow two-way venting for either pressure or vacuum relief allowing air and gas molecules to pass through the membrane, continually equalizing pressure so containers won't bulge or collapse. These vents maintain airflow even after contact with high-viscous or low surface-tension liquids and prevent leakage of dangerous and hazardous liquids.

	MFG	VENT TYPE	HI/LOW	THREAD	GASKET	SKU / SHERMAN SKU	DESCRIPTION
	TriSure	Mechanical Plug Pressure	Low	NPS	EPDM	CLPL00087CC20001 SRT-CLPL00087CC20001	Poppet valve (EPDM) installed in drum plug
	TriSure	Microporous Vacuum and Pressure	Hi	NPS	EPDM	CLPL00319CC20001 SRT-CLPL00319CC20001	Gore D38SC5 Installed in drum plugs
	Mauser	Mechanical/Vacuum Plug Pressure	Low	NPS	EPDM	L16V-9WL SRT-L16V-9WL	Zitex G115 (or equiv) MP tape installed on drum plug

## WHAT BUYERS NEED TO KNOW

The following outlines what buyers need to know regarding IBC ventilation:

- The UN Design type is 31H2 which is a rigid all plastic IBC in which the body bears any stacking weight.
- The IBC is authorized for Packing Group II, Packing Group III, and non-regulated (no UN number or ID number) chemicals that are allowed in IBCs. The user must reference columns 7 & 8 of the Hazardous Material Table in 49CFR 172.101 and the Special Provisions in 49 CFR 172.102 to see if the intended filling goods are allowed (authorized) [eCFR :: 49 CFR 172.101 -- Purpose and use of hazardous materials table](#) and [eCFR :: 49 CFR 172.102 -- Special provisions](#). **The Regulations require (49CFR173.22) that the user determines the specifications, compatibility, and suitability of the IBC for the intended loadings.** The UN Ratings in a Sherman Workhorse (R) available are



The maximum permissible gross mass 2095 and 2501 kg respectively assumes a specific gravity maximum of 1.9 gm/cc at rated maximum fill capacity. Heavier materials may be filled, but the fill volume would need to be reduced such that the 2095 or 2501 gross mass is not exceeded.

- Compatibility of the filling goods with the LLDPE (Linear Low-Density Polyethylene) or HDPE (High Density-Polyethylene) material the IBC is made from is the responsibility of the filler. Basically very aggressive solvents and acids have limited LLDPE or HDPE resistance to deterioration. Good information on plastics and elastomers (gaskets) can be found at [Buerkle Pumps, samplers, sampling systems, laboratory equipment - Bürkle GmbH \(buerkle.de\)](#). For only LLDPE resistance, a good guide is [Microsoft Word - Chemical Resistance Chart \(globaltanks.com.au\)](#).



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- The standard 275-gallon or 330-gallon IBCs are fitted with a solid 7-inch cap. An **optional** cap is available with a 2-inch standard drum-type plug--American buttress or NPS threads per customer specification. The top of the standard IBC may be fitted with two, three, or four **optional** 2-inch top ports for customer-specified installation of accessories
- Elastomers-gaskets and o-rings for valves, caps, and plugs are FKM (Viton(R)) or EPDM/EPT are both standard with an upcharge for Viton. TPO (Santoprene (R)) and other materials are available by special order, minimum quantities apply.
- Venting is required for chemicals that exhibit a high vapor pressure that may cause deformation or rupture of the IBC. **Pressure and/or vacuum relief is not required on all IBCs, only those with filling goods that require it--vapor pressure values, if available, are in Section 9 of the chemical's SDS.** Venting options that are installed in the cap or top ports are 2-inch spring-loaded pressure relief valves; or 2-inch combination pressure and vacuum relief valves (used for hot fill); or 2-inch microporous continuous flow membrane filters for vacuum and pressure relief. Other options are available--minimum quantities apply. Venting, compatibility, pressure and/or vacuum relief, UN rating, and fittings are determined by the user (filler or offeror from shipment) in accordance with 49 CFR 173.22. The filler or offeror is required to close all caps and plugs in accordance with the manufacturer's closing instructions provided with the IBC (or any packaging for that matter). Contact Sherman Roto Tank for venting devices available.
- The standard valve is a 2-inch ball valve with a Teflon(R) ball and seat. Discharge standard is a 2-inch male QD or NPS. Check valves are available as an option. All valves have tamper evidence.
- Extraction tubes and valves for closed system operation are available through MicroMatic and can be factory installed by Sherman Roto-Tank, LLC.
- Sherman Roto-Tank can assist in finding companies that will remove and repurpose or recondition old and used tanks and IBCs.
- **Sherman Roto Tank, LLC does not provide consulting services for a fee. The information and data herein are provided as an accommodation and without warranty, guarantee, or assurance as to its accuracy, completeness, or suitability for any purpose. It is not intended for public dissemination, or for any purpose involving the issuance, maintenance, or infringement of patents or intellectual property of others. Any use or non-use of this information is at the sole risk and discretion of the recipient.**