

# Secondary Containment Vacuum Sensing System

Simplify compliance and maximize protection with a vacuum monitored secondary containment.

## The Importance of SCVS

The Secondary Containment Vacuum Sensing System (SCVS) for the TLS-450PLUS Automatic Tank Gauge (ATG) is designed to detect leaks in double-walled fuel tank, sump and piping systems. It helps contain the release of product while under vacuum.



## ► SYSTEM REQUIREMENTS

- Vacuum Sensors connect to tank, sump and piping interstices. Each Vacuum Sensor must have an associated Liquid Sensor, which is included in the pre-assembled Vacuum Sensor Monitoring Kits.
- Vacuum source - Submersible Turbine Pump (STP) to create suction.
- Atmospheric Pressure Sensor (ATM) for measuring ambient pressure.
- Universal Sensor Module (USM) for sensor inputs.
- Universal Input / Output Module (UIOM) for pump control.

*In certain markets, monthly inspections and three-year sump integrity tests are not required when the Veeder-Root Secondary Containment Vacuum Sensing System is used.*

The Vacuum Sensors are connected to a TLS-450PLUS ATG, via intrinsically safe (IS) wiring. The TLS-450PLUS provides system status, replenish rates, alarms and diagnostic information.

### The Vacuum Sensors are manufactured in mountable kits of 1 to 4 sensors available for monitoring:

- Double-walled sump and piping interstices
- Double-walled steel tanks
- Double-walled fiberglass tanks

An inline kit mounted Liquid Sensor is used for Vacuum Sensors monitoring sumps and piping. An external Liquid Sensor (to be installed at the bottom of the tank interstice) is provided with Vacuum Sensors for steel and fiberglass tank kits.

## ► FEATURES AND BENEFITS

### SATISFY REGULATIONS

- Certified to meet California's requirement for secondary containment monitoring for tanks and lines as required by AB 2481
- Satisfies the requirements for Class 1 Leak Detection as defined by the European Standard EN 13160-2

### REDUCE EXPOSURE TO RISK

- TLS-450PLUS alarms when the vacuum cannot be maintained or when replenish rates exceed 85 liters per hour
- The system alarms when liquid is detected in the secondary space
- Facilitates periodic operability testing



### LEVERAGE EXISTING VEEDER-ROOT SYSTEMS

- Uses Red Jacket® STP as the vacuum source
- Installs in the STP sump
- Able to share wiring conduit with other Veeder-Root intrinsically safe (IS) probes and sensors, including sump and line leak sensors
- Provides for positive shutdown of pressurized lines when required
- Simple installation, no need to mess with brine

# SPECIFICATIONS

## Secondary Containment Vacuum Sensing System

### Secondary Containment Vacuum Sensing System Specifications

Description	Measurement
Operating Temperature Rating	-25 °C to +70 °C
Cable Length	8'
Sensor Dimensions	5" H x 5" W x 2" D
Console Capability	TLS-450PLUS
Software Version	Supported with Version 9.A and higher software

Vacuum Sensors are sold in kits with 1, 2, 3 or 4 sensors. The following table outlines the kits and sensor groupings by number of tanks, sumps/pipes.

### Vacuum Sensor Monitoring Kits (Pre-Assembled)

Vacuum Sensor Kit P/Ns begin with 330020-, followed by the 3-digit grouping ID (i.e. 330020-467)

Description	Sensors	Tanks	Sumps & Pipes	No Tank	Steel	Fiberglass
4 Vacuum Sensor Kit With Tank	4	1	3		-467	-471
4 Vacuum Sensor Kit Without Tank	4	0	4	-486		
3 Vacuum Sensor Kit With Tank	3	1	2		-472	-476
3 Vacuum Sensor Kit Without Tank	3	0	3	-485		
2 Vacuum Sensor Kit With Tank	2	1	1		-479	-484
2 Vacuum Sensor Kit Without Tank	2	0	2	-480		
1 Vacuum Sensor Kit With Tank	1	1	0		-549	
Vacuum Sensor Kit Without Tank	1	0	1	-495		

### Vacuum Sensor Modules (Unassembled)

Description	Part Number
Vacuum Sensor for 1 Sump or 1 Pipe	857280-100
Vacuum Sensor for 1 Steel Tank	857280-200
Vacuum Sensor for 1 Fiberglass Tank up to 10' Dia.	857280-304
Vacuum Sensor Mounting Kit (Cage Holds up to 4 Sensors)	330020-448
Vacuum Sensor Relief Valve Assembly (Required for Fiberglass Tanks)	332217-002

### Vacuum Sensor Accessories

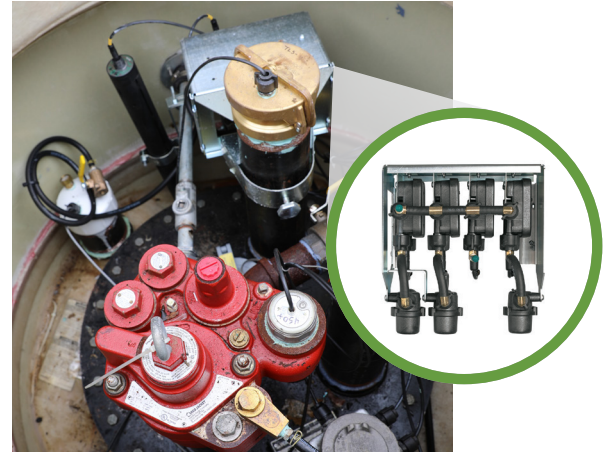
Description	Part Number
Fittings, NPT Barbed, 1/4" (Qty. 3)	330020-487
Fittings, NPT Barbed, 1/4" (Qty. 15)	330020-488
Fittings, NPT Barbed, 1/4" (Qty. 25)	330020-489
Elbow, 90 Degree 1/4" Barbed (Qty. 1)	576008-656
Tee, Barbed (Qty. 1)	576008-657
Hose, Vacuum, 25'	332310-001
Hose, Vacuum, 50'	332310-002
Hose, Vacuum, 100'	332310-003
Valve, 3-Way Brass Ball (Qty. 1)	576008-649
Valve, 3-Way Plastic Ball (Qty. 1)	332367-001
Schraeder Valve Barbed Fitting (Qty. 3)	330020-496
Schraeder Valve Barbed Fitting (Qty. 15)	330020-497

### TLS-450PLUS USM and UIOM Modules

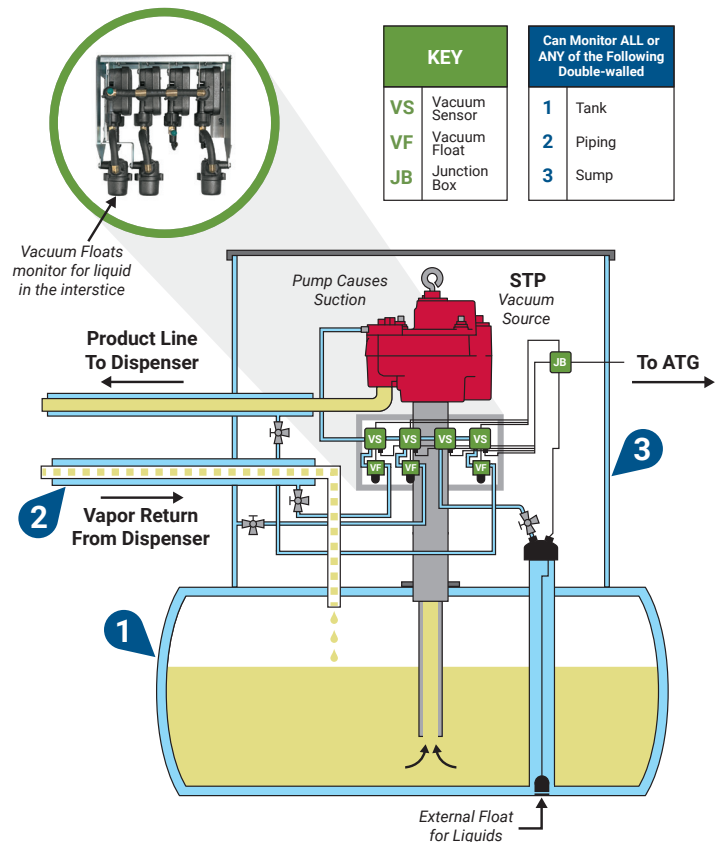
Description	Part Number
USM/ATM Module Group for TLS-450PLUS	332812-006
Kit - USM/ATM Module	330020-846
Kit - ATM Pressure Board	330020-847
Universal Input/Output Interface Module (UIOM)	332813-001

### Software Enhancement

Description	Part Number
Software Enhancement Feature - Secondary Containment Vacuum Monitoring (SCVS)	332972-029



### Secondary Containment Vacuum Sensing System



KEY		Can Monitor ALL or ANY of the Following Double-walled	
VS	Vacuum Sensor	1	Tank
VF	Vacuum Float	2	Piping
JB	Junction Box	3	Sump

A USM is required to connect the Vacuum Sensors and Liquid Sensors.  
 A UIOM is required to connect Red Jacket pump relays for pump control and the hook-off signal.