

OPW 53VML (30MV) Ball Float Vent Valves

The OPW 53VML Ball Float Vent Valves protrude into underground storage tanks from OPW 233 Series Extractor Fittings at the Stage I vapor return riser pipe or tank vent line. During a product delivery, as the tank level rises, a counterweight stainless steel ball seats on the valve body and restricts flow of vapors back to the transport truck. As the vapors become compressed in the tank (ullage), product flow into the tank is severely restricted. The 53VML Series Ball Float meets the U.S. EPA 90% requirement for product flow restriction into underground storage tanks. The 53VML-0060 and 53VML-0065 are designed as "back-up" overfill protection for overfill prevention valves, and to minimize product mixing with underground manifold vent lines.

Ordering Specifications and Dimensions

Product #	Pipe Dia.	Length (A)		Weight	
		in.	mm	lbs.	kg
53VML-0060	2*	6 1/8	157	2	0.9
53VML-2070	2	7	178	3	1.5
53VML-0120	2	12	305	4	1.8
53VML-0160	2	16	407	5	2.3
53VML-0180	2	18	457	6	2.7
53VML-3050	3	5	127	5	2.3
53VML-3110	3	11	279	7.6	3.5
53VML-3120	3	12	305	7.7	3.5

* 1/16" Vapor Flow Orifice

30MV-KIT Ordering Specifications

Part #	Description
30MV-KIT	O-Ring 1/16" Brass orifice insert

Materials

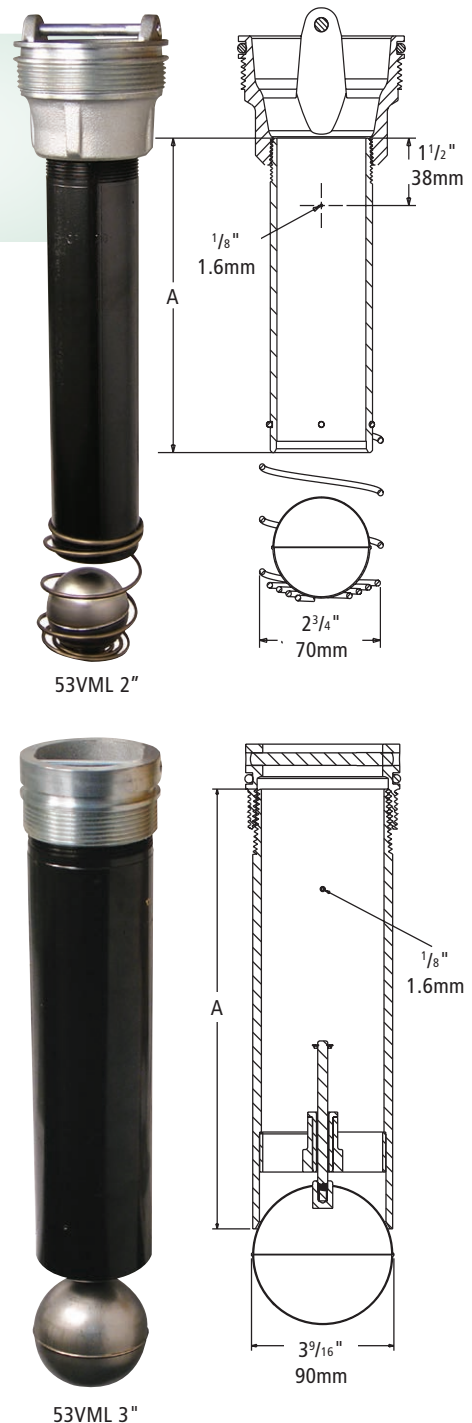
Pipe Nipple: Steel
Coating: Black Duragard®
Basket: Stainless steel
Ball: Stainless steel

Features

- ◆ Stainless Steel Counterweight Ball Float – corrosion-resistant for a long service life. Counterweight ensures proper seating of the ball for precision "slow-down" of product flow into the tank.
- ◆ Vapor Flow Orifice – a "bleed" hole machined into the body of the valve, sized to properly "slow-down" the delivery flow rate.
- ◆ Duragard® Body Coating – helps prevent rust and corrosion build-up for a smooth seating surface and long service life.
- ◆ Various Body Lengths – accommodate virtually any size tank.
- ◆ 2" and 3" Body Sizes – 3" size increases vapor flow to reduce product delivery time.
- ◆ Easy Installation, Service and Testing – both 2" and 3" valves install in OPW 233 Series Extractor Fittings and are easily removed for inspection or tank testing with OPW 89 Extractor Wrench.
- ◆ Compatible with 85% Ethanol (E85) or Methanol (M85)

Convert your 53VML into the 30MV Ball Float

The 30MV Series ball float has the same function as the 53VML, but allows for higher storage capacity in larger volume tanks. The 30MV meets the U.S. EPA 30-minute warning requirement for product flow restriction in the underground storage tank. Using the Tank Ullage calculation on page 111, convert your desired length 53VML by adding the 30MV-KIT.



53VML/30MV Instruction Sheet
 Order Number: H14111PA

Warning OPW Overfill Warning Systems should only be used on submerged pumping systems, not suction pump systems. For special applications, contact OPW Fueling Components. OPW Overfill Warning Systems should only be used on gravity drop systems. DO NOT use where Pump-Off Unloading or coax fills are used.

Specifying the Proper Length 53VML or 30MV Series Ball Float

Step 1: Determine Dimension "X": Consult the tank chart (provided by the tank manufacturer) to determine the distance that corresponds to 10% of the total tank capacity for 53VML or 308 gallons for 30MV.

Step 2: Determine Dimension "Y": Measure the dimension from the inside top of the tank to the top of the 4" threaded tank "bung" fitting.

Step 3: Add measurements "X" and "Y". Then subtract 1/4" and round up to the nearest length ball float.

Tank Ullage Calculator

- ◆ 30 minutes x 5GPM = 150 gallons
- ◆ Ullage compression rate* is 27% after the ball seats
- ◆ $150 \text{ gallons} \div .73 \text{ (1- ullage compression rate)} = 205.48 \text{ gallons}$
- ◆ $205.48 \times 1.5 \text{ (OPW recommended safety factor)} = 308.22 \text{ gallons}$
- ◆ Approximately 308 gallons required ullage

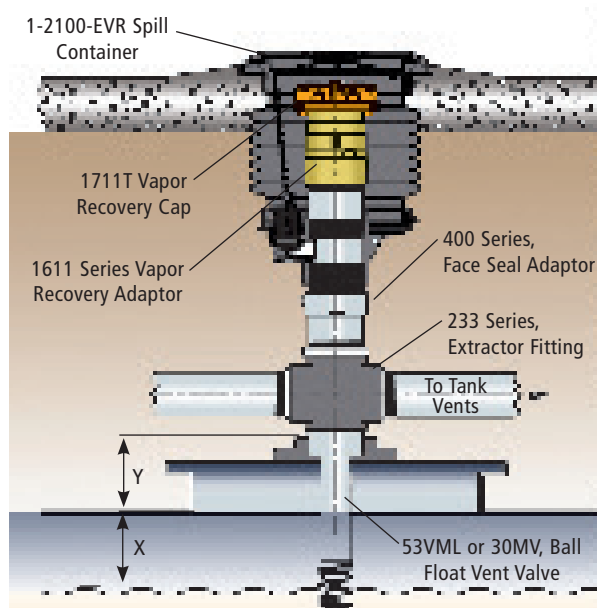
*Ullage compression rate will vary with head pressure.

OPW 53VML and 30MV Ball Float Sizing / OPW 89 Extractor Wrench

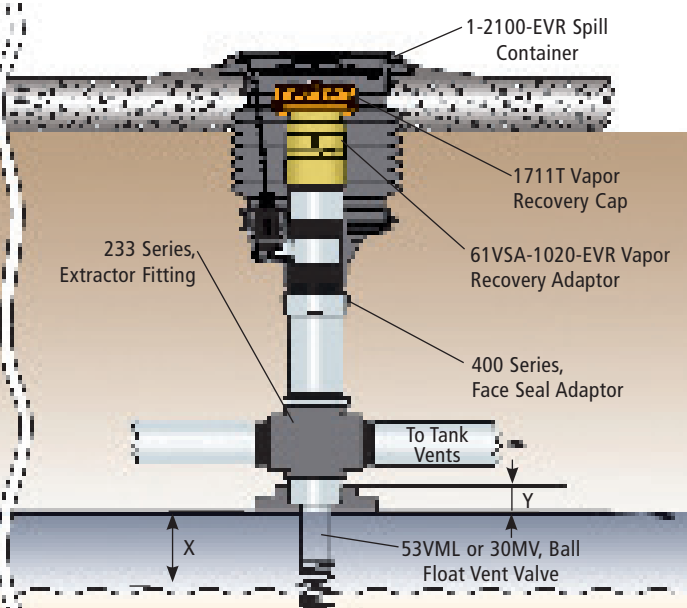
IMPORTANT:

Installing the incorrect length OPW 53VML or 30MV Ball Float Vent Valve for your specific application may result in delivery flow restriction at unacceptable levels. Always consult the appropriate tank charts and determine the specifics of your tank installation to determine the appropriate length OPW 53VML or 30MV. The illustration and instructions below are intended to serve as a guide in this determination.

Tank Manway Mounted Extractor

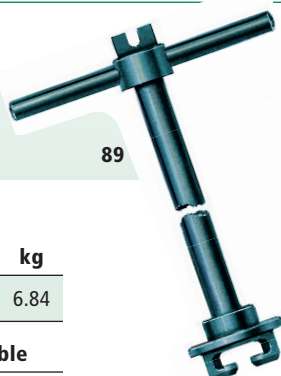


Tank Top Mounted Extractor



Materials

Pipe: Extra heavy black iron
Handle and Hook: Ductile iron



Ordering Specifications

Product #	in.	mm	lbs.	kg
89-0044	2	51	3	6.84

Size	Wrench	Product Compatible
2"	89-0044	233E, 88E Series

OPW 89 Extractor Wrench

The OPW 89 Extractor Wrench is designed to install or remove OPW 53VML and 30MV Ball Float Vent Valves or OPW 233VP and 233VMP Test Plugs in OPW 233, 233V, and 233VM Extractor Fittings. The 89 is also designed to work with the cage assemblies on the 233E Suction Tube Extractor Fitting and 88E Extractable Angle Check Valve in suction system applications. The 89 wrench consists of a 4 foot section of pipe welded to a "T" handle with a 2" hook section. The 2" hook section mates with current OPW ball floats and extractable cages.