Appendix C

HOW TO LOCATE THE POSITION OF THE 71SO FOR COMPLETE SHUT-OFF AT A GIVEN TANK CAPACITY

Note: This Appendix only applies when AHJ requirements call for complete shut-off at a given tank capacity. See page 4 for standard measurements.

The length of the upper tube and the placement of the 71SO valve body determine the shut-off point. The sample calculation below will provide for **complete shut-off** at 95%. In all cases, the upper tube length must be a minimum of 6-1/2" plus the length of the riser pipe. All length measurements are in inches.

INSTRUCTIONS

1. Find the tank capacity (in gallons) from the tank calibration chart provided by the tank manufacturer.
2. Calculate 95% of capacity.
3. Locate the 95% volume number on the tank calibration chart.
4. Find the dipstick number (X) which corresponds to the 95% tank volume. And, find the dipstick number (Y) which corresponds to the 100% volume.
5. Subtract the dipstick number (X) from the tank diameter (Y) to find the upper tube reference number (Z).
   (Y) - (X) = (Z)
6. **Add 1.5"** to (Z) to find the upper tube depth E.
   (Z) + 1.5" = E
7. Is E less than 6-1/2"?

NO Upper tube length is E plus the distance from the top of the Face Seal Adaptor installed on the riser pipe to the inside, top lip of the storage tank (A).

Upper Tube Length = E + (A)

For testable models only, ending in "T":
Upper Tube Length = E + (A) – 1-1/2"

YES Upper tube length is 6-1/2" plus the riser pipe measurement (A).

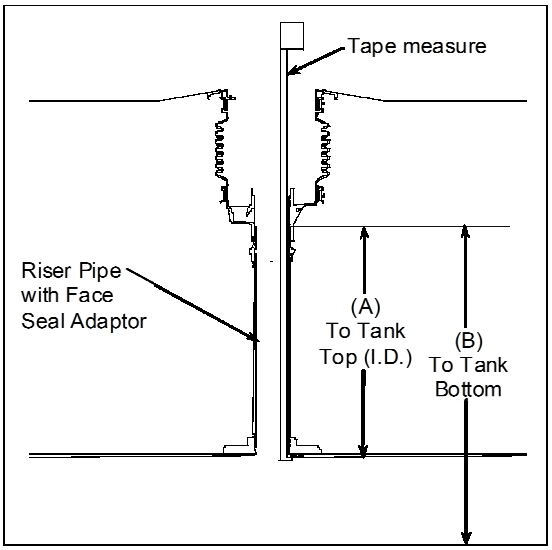
Upper Tube Length = 6-1/2" + (A)

For testable models only, ending in "T":
Upper Tube Length = 6-1/2" + (A) – 1-1/2"

NOTE: You must find the actual tank capacity number that correlates to the 6-1/2" + (A) depth for the station records. This number may also be used or the purposes of calibrating an electronic tank level system.

EXAMPLE

1. For an Owens-Corning Model G-3 Fiberglass® Tank Calibration Chart:
   Tank Capacity - 10,000 gal., nominal 9,403 gal.
   NOTE: Use actual capacity only



2. 95% of actual tank capacity = 0.95 x 9403 gal. = 8933 gal.
3. The closest number which is less than 8933 gal. Is 8910 gal. Choosing the closest number less than 95% of actual capacity ensures that complete shutoff will occur when the tank is no more than 95% full.
4. The calibration chart reading of 8910 gal. corresponds to a dipstick measurement of 82".
5. Dipstick number (X) = 82"
   Tank diameter (Y) = 92"
   (Y) - (X) = (Z) (92 "- 82" = 10")
   (Z) = 10"
6. (Z) + 1.5" = E (10" + 1.5" = 11.5")
   E = 11.5"
7. Is 11.5" less than 6-1/2"?

NO Measure the distance from the top of the FSA-400 Face Seal Adaptor installed on the riser pipe to the inside, top lip of the storage tank and obtain measurement (A).

Upper tube length = E + (A)

For testable models only, ending in "T":
Upper Tube Length = E + (A) – 1-1/2"

Appendix C (continued)

71SO Overfill Valve in Tank Complete Shut Off Level Worksheet

Important: This is meant to be supplemental worksheet and not a substitute to following the installation manual instructions. All length measurements are in inches. Please contact the Authority Having Jurisdiction (AHJ) and review local, state, and national codes to determine the regulatory requirements governing shut-off capacity in your region, as well as take into account other considerations such as extreme tank tilt.

Take the following measurements with the valve installed in the tank:

Distance from the 71SO inlet tube flange to the cast lug in the 71SO body (see figures), upper tube length.
Note: the Upper Tube Length must be at least 16" to include the protective bend in the tube.

(D) = _____

Distance from the 71SO inlet tube flange to the top and bottom of lower tube, valve length.
(W) = _____
(U) = _____

Distance from the 71SO inlet tube flange to the bottom of the tank. Note: If a tank bottom protector is present it may be necessary to add this thickness to dimension (OPW 6111 & 61TP models add 0.6")
(B) = _____

From the tank calibration chart provided by tank manufacturer find the dipstick number (Y) which corresponds to the 100% volume.
(Y) = _____

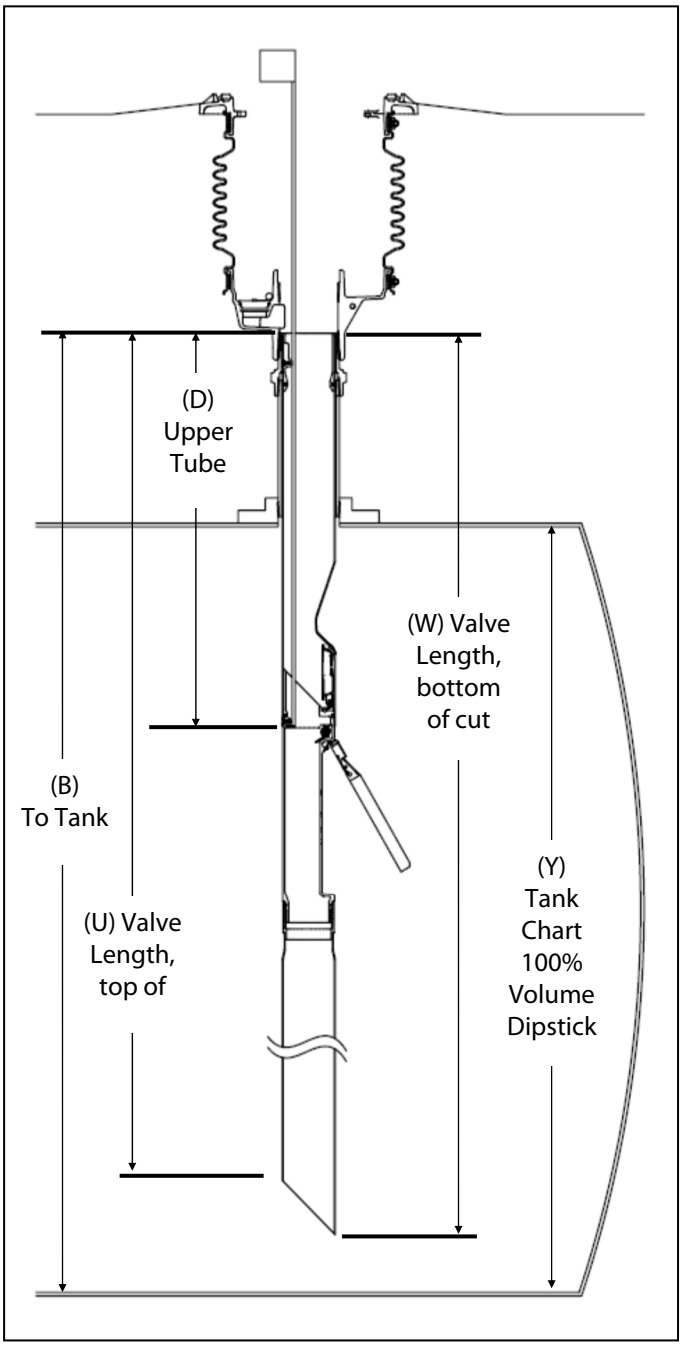
1. To determine complete shut-off percentage:
Subtract upper tube length (D) from distance to tank bottom (B)
(X) = (B) – (D) + 1.5" =_____

Using the tank calibration chart provided by the tank manufacturer determine the tank capacity at the calculated (X) dimension and the 100% volume (Y) tank capacity.

(X) tank capacity in gallons = _____

(Y) tank capacity in gallons = _____

Complete SO% = (X) capacity / (Y) capacity x100 =
_____



Note: The overfill valve must be installed per AHJ requirements and all applicable local, state, and national codes. If the overfill valve is set above the allowable shut-off percentage the overfill valve must be removed and replaced.

Note: This Appendix only applies to valves installed per Appendix C. See Appendix B for the standard valve installation tank shut off level worksheet.