Table 1 - Above Shear Valve

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Supplied By</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor Flow Meter, TS-VFM</td>
<td>INCON</td>
<td>1</td>
</tr>
<tr>
<td>Sensor Installation Kit, 020-1509</td>
<td>INCON</td>
<td>1</td>
</tr>
<tr>
<td>Weatherproof Junction Box</td>
<td>Contractor</td>
<td>1</td>
</tr>
<tr>
<td>1.5” to 1” reducing bushing</td>
<td>Contractor</td>
<td>1</td>
</tr>
<tr>
<td>1.5” to ___ reducing bushing*</td>
<td>Contractor</td>
<td>1</td>
</tr>
<tr>
<td>1” pipe nipple</td>
<td>Contractor</td>
<td>1</td>
</tr>
<tr>
<td>___ pipe nipple*</td>
<td>Contractor</td>
<td>1</td>
</tr>
<tr>
<td>Pipe Union</td>
<td>Contractor</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 2 - Below Shear Valve

<table>
<thead>
<tr>
<th>Item Description</th>
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<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor Flow Meter, TS-VFM</td>
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<td>1</td>
</tr>
<tr>
<td>Weatherproof Junction Box</td>
<td>Contractor</td>
<td>1</td>
</tr>
<tr>
<td>1.5” pipe nipple</td>
<td>Contractor</td>
<td>2</td>
</tr>
<tr>
<td>1.5” pipe union</td>
<td>Contractor</td>
<td>1</td>
</tr>
</tbody>
</table>

* - piping size is dependent on vapor piping size inside the dispenser. Typically the connection to a Healy VP1000 is a ½” NPT. Thus, the bushing size will be 1.5“ to 0.5“.

Installation Steps

Above Shear Valve
1. Lock and tag out power to the dispenser and the console before attempting any work on the dispenser.
2. Refer to Figure 1 for reference.
3. Do not remove the protective caps on the Vapor Flow Meter until you are ready to thread the nipples into the Flow Meter.
4. Begin by connecting the tape to the 1.5“ to 1” reducing bushing to the Vapor Flow Meter’s body. Be sure to use only Teflon tape when sealing these threads. Take special precaution not to let any foreign material fall inside of the Vapor Flow Meter.
5. Next, start assembling the hardware from the bottom up. Connect a short, ½” NPT threaded nipple to the top of the vapor shear valve and to the 1.5“ to 1” reducing bushing on the flow meter.
6. Connect another ½” pipe nipple to the top reducing bushing followed by a 1” pipe union. The existing dispenser piping can now connect to the top of the union.
7. If there is not already a watertight junction box for the intrinsically safe cables, then install one as described earlier in Tools Required.
8. Pull the black Vapor Flow Meter cable through the supplied cable grip and into the junction box. Using the supplied crimp connectors, splice the flow meter cable to the field cable. The color codes on the black flow meter cable are: Red = + (plus) and Black = – (minus)

Below Shear Valve
1. Lock and tag out power to the dispenser and the console before attempting any work on the dispenser.
2. Refer to Figure 2 for reference.
3. Do not remove the protective caps on the Vapor Flow Meter until you are ready to thread the nipples into the Flow Meter.
4. Begin by connecting two 1.5“ NPT pipe nipples to the Vapor Flow Meter’s body. Be sure to use only Teflon tape when sealing these threads. Take special precaution not to let any foreign material fall inside of the Vapor Flow Meter.
5. Next, prepare the piping inside of the dispenser sump to connect to the Vapor Flow Meter. If flexible piping is currently installed, make sure, when adding the Vapor Flow Meter, that there are no bend radii that are too sharp, kinks, or traps. The contractor may need to replace the existing flexible piping with a shorter length in order to avoid potential flow restrictions.
6. Add the Vapor Flow Meter between the existing piping in the sump and the bottom of the vapor shear valve. In most cases the vapor shear valve will need to be temporarily removed in order to assist with making the connection. Add a union to either the top of the shear valve or below the shear valve.
7. If there is not already a watertight junction box for the intrinsically safe cables, then install one as described earlier in Tools Required.
8. Pull the black Vapor Flow Meter cable through the supplied cable grip and into the junction box. Using the supplied crimp connectors, splice the flow meter cable to the field cable. The color codes on the black flow meter cable are: Red = + (plus) and Black = – (minus)
**Figure 1**  
Flow Meter Above Shear Valve

- Gasoline Vapor IN from Existing Dispenser Piping
- Pipe Union
- 1.5” NPT Reducing Bushing
- 1” NPT Pipe Nipple
- Intrinsically Safe Conduit to Tank Sentinel Console
- Weatherproof Junction Box
- 1.5” NPT Nipple

- 1" NPT Pipe Nipple
- Cord Grip

**Figure 2**  
Flow Meter Below Shear Valve

- Gasoline Vapor IN from Existing Dispenser Piping
- Vapor Shear Valve
- 1.5” NPT to 1” NPT Reducing Bushing
- 1” NPT Pipe Nipple

- 1.5” Pipe Union
- Approximately 10” Cord

3 Wire Cable From Console

2 Wire Cable to VFM

3 Position, No-Strip Electrical Connectors

(WHT - (RED) or (YEL)

SHLD - (BLK)

To splice: Insert unstripped wires and use a slip-joint pliers to seat the black piece.

A 3/4 to 1/2 NPT bushing is required for the compression gland/cord grip fitting when a 3/4 junction box is used.

Cable from Console EYS Fitting (epoxy filled seat fitting is not shown)

Cable to VFM

(see wiring above)

Weatherproof junction box’s cover and gasket are installed after the VFM has been tested.

Cable from Console EYS Fitting

(see wiring above)

Weatherproof junction box’s cover and gasket are installed after the VFM has been tested.