Overview
This document provides descriptions and procedures for the quick installation of Honeywell SmartLine Manifolds.

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Reference Documents
This document 34-ST-25-64, Revision 1 – January 2020

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<thead>
<tr>
<th>Document Name</th>
<th>Document number</th>
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</thead>
<tbody>
<tr>
<td>SmartLine Manifolds Specification</td>
<td>34-ST-03-149</td>
</tr>
<tr>
<td>SmartLine Pressure Specifications</td>
<td>34-ST-03-XX, 34-ST-03-XXX</td>
</tr>
</tbody>
</table>

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The SmartLine manifold range includes:
- Block and Bleed manifolds for use with In-Line Gauge or Absolute Pressure Transmitter
- Two Valve Compact manifold for use with Dual Head Gauge or Absolute Pressure Transmitter
- Two Valve Wide Body manifold for use with Dual Head Gauge or Dual Head Absolute Pressure Transmitter and Two
- Three or Five Valve manifolds for use with Differential Pressure Transmitters.
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Section 1:

Block and Bleed Manifolds for use with In-Line Gauge or Absolute Pressure Transmitter

- 2 valve single block and bleed / Inline – Model STMSB-A
- 2 valve single block and bleed / Inline – Model STMSB-B
- 2 valve single block and bleed / Inline – Model STMSB-C
- 2 valve double block and bleed / Inline – Model STMDB-A
- 2 valve double block and bleed / Inline – Model STMDB-B
- 2 valve double block and bleed / Inline – Model STMDB-C

Honeywell SmartLine Two Valve Single Block and Bleed or Two Valve Double Block and Bleed manifolds are typically connected to Honeywell Gauge or Absolute InLine pressure transmitters. The function of the Block and Bleed manifold is to allow the user to remove the transmitter from the process via an isolation valve and a vent valve to de-pressurize the transmitter prior to removal. A Honeywell Single Block and Bleed SmartLine Manifold is shown in Figure 1. The manifold shown has a 1/2” Male NPT process connection to fit Honeywell Gauge and Absolute Inline Pressure transmitters with ½” Female NPT ports. It is also available with ½” Female NPT process connection to fit Inline transmitters with ½” Male NPT ports.

1. Wrap the ½” Male NPT connector threads with two layers of PTFE tape or substitute liquid sealant as required by the process medium.

2. Thread the Block and Bleed Manifold into the Honeywell transmitter process connection bonnet and rotate to hand tightness.

3. Hold the transmitter by the bonnet flats and continue to rotate the Block and Bleed Manifold a minimum of two more rotations. This will uniformly tighten the manifold to the transmitter.

4. The isolation valve on the manifold should be facing forward. If it is not, continue to tighten the manifold until the valve is aligned.

Note: The same procedure applies to all the manifolds stated in this section

Figure 1: Block and Bleed Manifold Model STMSB-A
Section 2:

Two Valve Compact Manifold for use with Dual Head Gauge or Absolute Pressure Transmitter

- 2 Valve Compact Body – Model STMD2-E
- 2 Valve Wafer Body – Model STMD2-G
- 2 Valve Compact Body (x Flange) – Model STMD2-H

Honeywell SmartLine Two Valve Compact manifolds are shown in Figure 2 and Figure 3. These manifolds are paired to a Honeywell Dual Head Gauge or Absolute pressure transmitter and attached using two bolts. PTFE or optional graphite gaskets supplied with the manifold are used to prevent leakage between the transmitter meter body and the manifold.
Installation for Manifolds with two attaching bolts:

1. Insert the gasket into the manifold on the flanged instrument side.
2. Place the manifold flange on the Honeywell Differential Pressure transmitter.
3. Coat threads of supplied bolts with a suitable anti-seize compound.
4. Insert the two supplied bolts through the manifold flange and into the transmitter process head.
5. Tighten the bolts uniformly to hand tightness.
6. Tighten the bolts to 6.8 Newton*meters [5 foot*pounds]
7. Tighten the bolts to 32.6 Newton*meters [24 foot*pounds]
8. Tighten the bolts to 48.9 Newton*meters [36 foot*pounds]
Section 3:

Two Valve Wide Body Manifold for use with Dual Head Gauge or Dual Head Absolute Pressure Transmitter.

- 2 Valve Wide Body – Model STMD2-F
- 2 Valve Wide Body (x Flange) – Model STMD2-J

Honeywell SmartLine Two Valve Wide Body manifold is shown in Figure 4. These manifolds are paired to a Honeywell Dual Head Gauge or Absolute pressure transmitter and attached using four bolts. PTFE or optional graphite gaskets supplied with the manifold are used to prevent leakage between the transmitter meter body and the manifold.

*Refer to Section 4: for Wide Body Manifold installation instructions.
Section 4:

Two, Three or Five Valve Manifolds for use with Differential Pressure Transmitters.

- 2 Valve Wide Liquid Level – Model STMD2-D
- 3 Valve Wide Body – Model STMD3-K
- 3 Valve Wide Body (x Flange) – Model STMD3-O
- 3 Valve Wide Body (x Flange) with bleed ports – Model STMD3-P
- 5 Valve Wide Body with bleed port at bottom – Model STMD5-Q
- 5 Valve Wide Body with bleed port at front – Model STMD5-R
- 5 Valve Wide Body (x Flange) with bleed port at bottom – Model STMD5-T
- 5 Valve Wide Body (x Flange) with bleed port at bottom – Model STMD5-U
- 3 Valve Wafer Style – Model STMD3-M
- 3 Valve Wafer Style with bleed ports – Model STMD3-N
- 5 Valve Wafer Style – Model STMD5-S

Honeywell SmartLine Two, Three and Five Valve manifolds are paired with Honeywell Differential Pressure Transmitters.

The function of the manifold is to allow the user to isolate the transmitter from the process via two isolation valves. On three and five valve manifolds an additional valve is used to equalize the pressure between the two sides of the meter body for use in calibrating the differential pressure transmitter. On five valve manifolds two extra vent valves can be used to depressurize the transmitter prior to removal.

These manifolds are attached to a Honeywell differential pressure transmitter using four bolts. PTFE or optional graphite gaskets supplied with the manifold are used to prevent leakage between the transmitter meter body and the manifold.
Installation for Manifolds with four attaching bolts:

1. Insert the gaskets into the manifold on the flanged instrument side.
2. Place the manifold flange on the Honeywell Differential Pressure transmitter.
3. Coat threads of supplied bolts with a suitable anti-seize compound.
4. Insert the four supplied bolts through the manifold flange and into the transmitter process heads.
5. Tighten the bolts as shown in Figure 4 uniformly to hand tightness.
6. Tighten the bolts as shown in Figure 4 to 7 Newton*meters [5 foot*pounds]
7. Tighten the bolts as shown in Figure 4 to 33 Newton*meters [24 foot*pounds]
8. Tighten the bolts as shown in Figure 4 to 49 Newton*meters [36 foot*pounds]

Figure 13: Bolt Tightening sequence
## Section 5:

### Installation Drawings

Table 1: Installation Drawings

<table>
<thead>
<tr>
<th>General Arrangement Description</th>
<th>Drawing Number</th>
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<tbody>
<tr>
<td>Single Block and Bleed Manifold</td>
<td>50158364</td>
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<tr>
<td>Double Block and Bleed Manifold</td>
<td>50158365</td>
</tr>
<tr>
<td>2 Valve Liquid Level Manifold</td>
<td>50158366</td>
</tr>
<tr>
<td>2 Valve Compact Dual Head 1/2&quot; F NPT Process Connection Manifold</td>
<td>50158367</td>
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<tr>
<td>2 Valve Compact Dual Head Flange Process Connection Manifold</td>
<td>50158368</td>
</tr>
<tr>
<td>2 Valve Wide Dual Head 1/2&quot; F NPT Process Connection Manifold</td>
<td>50158369</td>
</tr>
<tr>
<td>2 Valve Wide Dual Head Flange Process Connection Manifold</td>
<td>50158370</td>
</tr>
<tr>
<td>2 Valve Wafer Dual Head 1/2&quot; F NPT Process Connection Manifold</td>
<td>50158371</td>
</tr>
<tr>
<td>3 Valve Wide Dual Head 1/2&quot; F NPT Process Connection Manifold</td>
<td>50158372</td>
</tr>
<tr>
<td>3 Valve Wide Dual Head Flange Process Connection Manifold</td>
<td>50158373</td>
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<tr>
<td>3 Valve Wafer Dual Head 1/2&quot; F NPT Process Connection Manifold</td>
<td>50158374</td>
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<tr>
<td>5 Valve Wafer Dual Head 1/2&quot; F NPT Process Connection Manifold</td>
<td>50158375</td>
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<tr>
<td>5 Valve Wide Dual Head Flange Process Connection Manifold</td>
<td>50158376</td>
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<tr>
<td>5 Valve Wafer Dual Head 1/2&quot; F NPT Process Connection Manifold</td>
<td>50158377</td>
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Section 6:
Spare Parts and Accessories

Table 2: Spare Parts and Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Futbol Adapter 1/2&quot; NPT-F IEC61518 316 SS PTFE - QTY 2</td>
<td>51156563-501</td>
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<tr>
<td>Key for anti-tamper taps - 316 SS - QTY 1</td>
<td>50154757-502</td>
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<tr>
<td>Bolt Kit - Traditional - Carbon Steel - QTY 4</td>
<td>50154755-501</td>
</tr>
<tr>
<td>Bolt Kit - Traditional - 316 SS - QTY 4</td>
<td>50154755-502</td>
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<tr>
<td>Bolt Kit - Traditional - Grade B8M - QTY 4</td>
<td>50154755-503</td>
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<tr>
<td>Bolt Kit - Traditional - Monel ® - QTY 4</td>
<td>50154755-504</td>
</tr>
<tr>
<td>Bolt Kit - Wafer - Carbon Steel - QTY 4</td>
<td>50154755-505</td>
</tr>
<tr>
<td>Bolt Kit - Wafer - 316 SS - QTY 4</td>
<td>50154755-506</td>
</tr>
<tr>
<td>Bolt Kit - Wafer - Grade B8M - QTY 4</td>
<td>50154755-507</td>
</tr>
<tr>
<td>Bolt Kit - Wafer - Monel ® - QTY 4</td>
<td>50154755-508</td>
</tr>
<tr>
<td>Gasket Kit - PTFE - QTY 2</td>
<td>50154756-501</td>
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<tr>
<td>Gasket Kit - Graphite - QTY 2</td>
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<tr>
<td>Bracket Kit - Traditional - Compact Body - 316 SS</td>
<td>50136042-507</td>
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<tr>
<td>Bracket Kit - Traditional - Wide Body - 316 SS</td>
<td>50136042-508</td>
</tr>
<tr>
<td>Bracket Kit - InLine (common) - 316 SS</td>
<td>50136042-504</td>
</tr>
<tr>
<td>Bracket Kit - InLine (Female process entry, extra strength) - 316 SS</td>
<td>50136042-505</td>
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<tr>
<td>Bracket Kit - InLine (Male process entry, extra strength) - 316 SS</td>
<td>50136042-506</td>
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<tr>
<td>Bracket Kit - Traditional - Compact Body - Carbon Steel</td>
<td>50136042-522</td>
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<tr>
<td>Bracket Kit - Traditional - Wide Body - Carbon Steel</td>
<td>50136042-523</td>
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<tr>
<td>Bracket Kit - InLine (common) - Carbon Steel</td>
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<tr>
<td>Bracket Kit - InLine (Female process entry, extra strength) - Carbon Steel</td>
<td>50136042-520</td>
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<tr>
<td>Bracket Kit - InLine (Male process entry, extra strength) - Carbon Steel</td>
<td>50136042-521</td>
</tr>
<tr>
<td>Bracket Kit - Wafer - 3 and 5 Valve - 316 SS</td>
<td>50136042-502</td>
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<tr>
<td>Bracket Kit - Wafer - 3 and 5 Valve - Carbon Steel</td>
<td>50136042-517</td>
</tr>
<tr>
<td>Bracket Kit - Wafer - 2 Valve - 316 SS</td>
<td>50136042-510</td>
</tr>
<tr>
<td>Bracket Kit - Wafer - 2 Valve - Carbon Steel</td>
<td>50136042-525</td>
</tr>
</tbody>
</table>
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