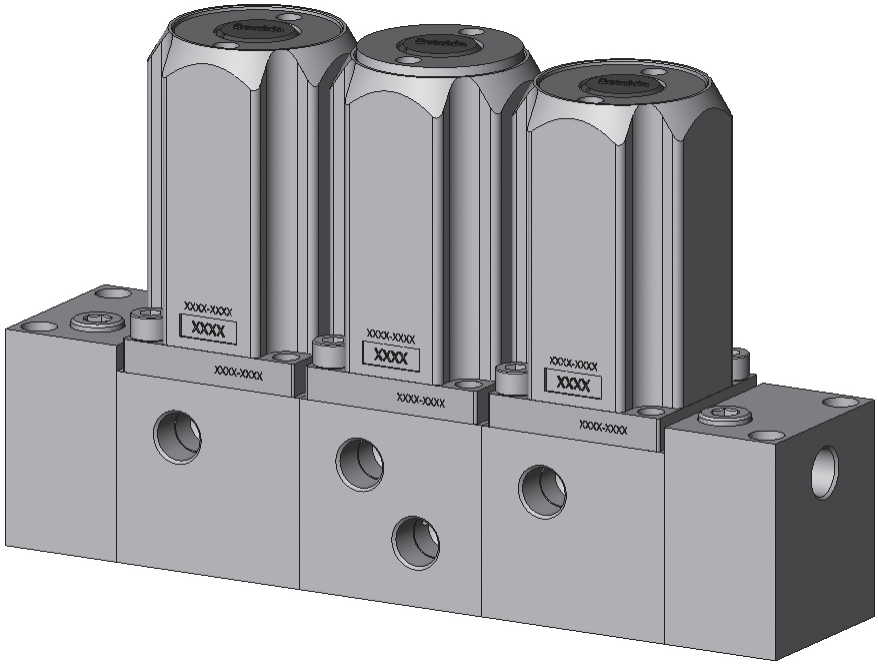
SSV Series
Assembly and Service Instructions



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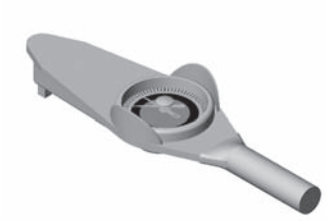
Tool Requirements

Torque Wrench, 0 to 45 in.·lb (0 to 5.1 N·m) with hex drivers:

- 7/64 in.
- 9/64 in.
- 5/32 in.

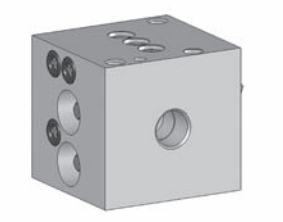


O-Ring Pick (or similar tool)

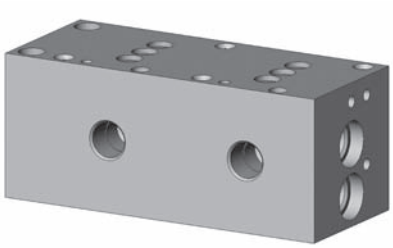
Components and Hardware

Base Block

· Standard
· Outlet
· MPC Standard
· MPC Outlet



ARV Base Block



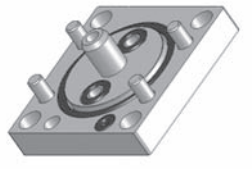
End Base Block

· Right
· Left

Module

· DBB
· ARV

Flange



Cap

· Ten per bag of chosen color

Screws

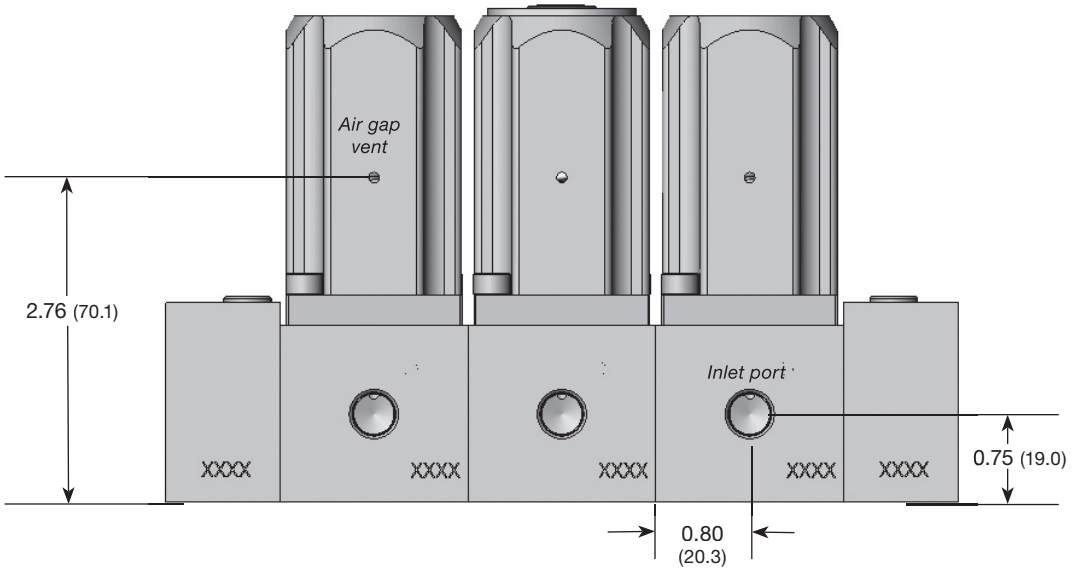
· Standard
· MPC mounting
· Flange
· Insert

O-Rings

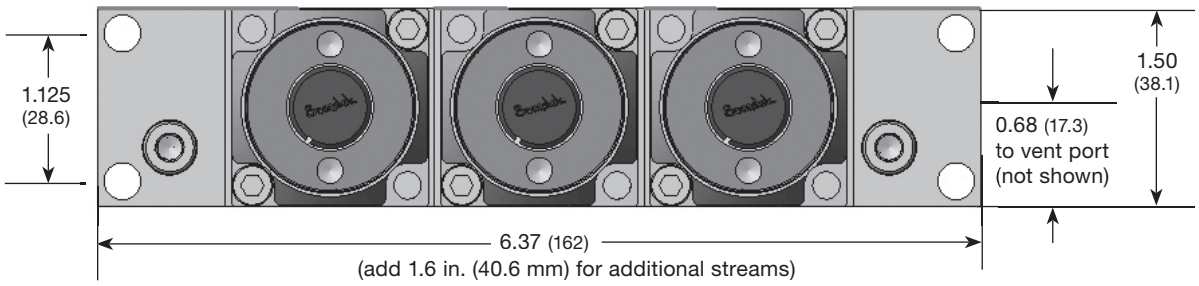
· Three 9-004
· Eight 9-007
· One 9-022

Port and Mounting Dimensions

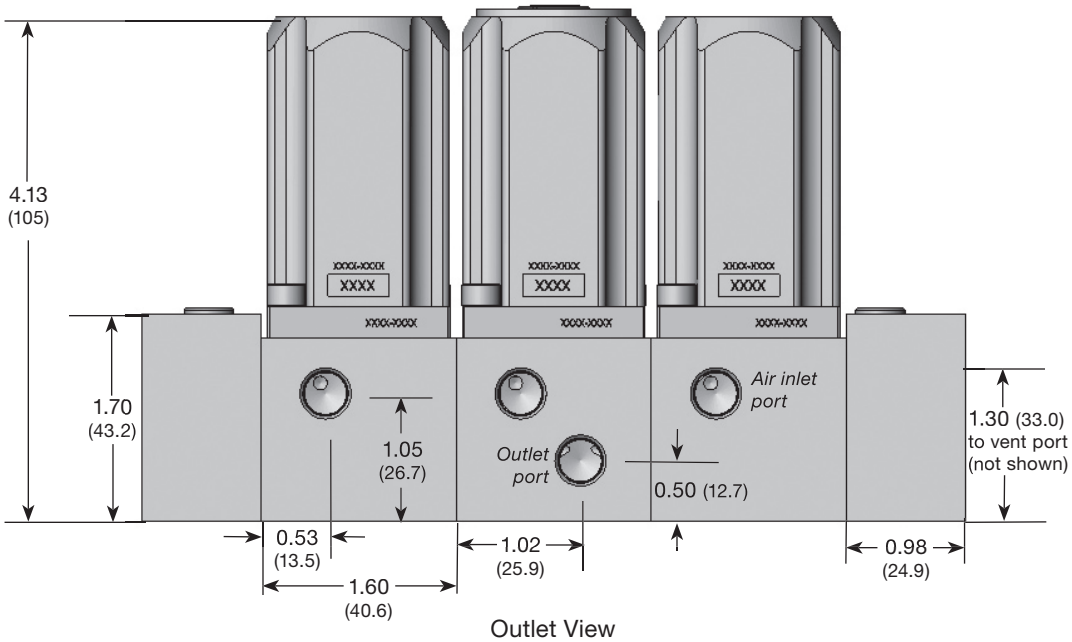
Dimensions, in inches (millimeters), are for reference only and are subject to change.



Inlet View



Top View



Outlet View

General SSV Assembly

1. Place a **left end base block** in a vise.
   Note: For assemblies using an ARV base block, the ARV block is in place of a left end base block.
2. Place a **base block** on the **left end base block**, aligning the **O-rings** (9-007) with the through ports. The square end of the left end base block inserts will be located in the counterbores of the base block. See Fig. 1.
3. Tighten the two base block insert screws to the two left end base block inserts using a 9/64 in. **hex torque wrench** placed through the **base block inserts** to 35 to 45 in.·lb (4.0 to 5.1 N·m). See Fig. 2.
4. Continue building the **base block** assembly by repeating steps 2 and 3, tightening the base block insert screws to the adjacent **base block inserts**. Place the **outlet base block** in the desired position within the base block assembly.

   ⚠ **Caution**
   Do not intermix standard and MPC-style base blocks.

   Note: It is recommended that the outlet base block be assembled close to the center of the assembly for the most consistent flow results.
5. Assemble a **right end base block** to the assembly, aligning the right end base block **O-rings** (9-007) with the through ports on the last base block. Tighten the right end base block insert screws to the base block inserts to 35 to 45 in.·lb (4.0 to 5.1 N·m) using a 9/64 in. hex torque wrench placed through the end base block. See Fig. 3.
6. Install a **DBB module** on each **base block** with the **alignment pin** fitting into the alignment hole on the DBB module. Using two **mounting screws** (#10-32 x 1/2 in. with standard 5/32 in. hex drive) tighten the DBB module to the base block to 25 to 35 in.·lb (2.8 to 4.0 N·m). See Fig. 4.
   Note: For ARV assemblies, install only ARV modules to the ARV base blocks.

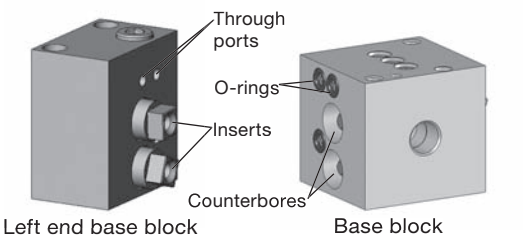


Fig. 1

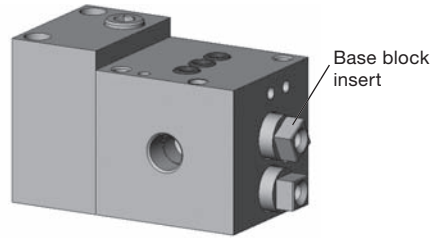


Fig. 2

Fig. 3

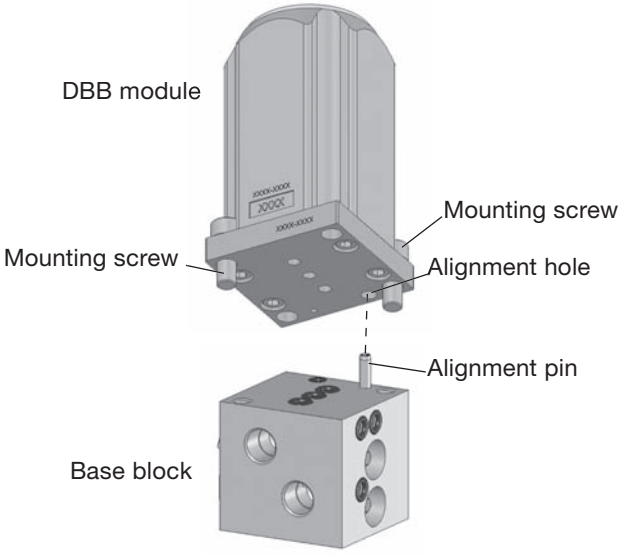


Fig. 4

Mounting MPC-Style Assemblies

For MPC-style assemblies, install the entire **SSV assembly** to the panel using **MPC mounting screws** (#10-32 x 2.0 in. with standard 5/32 in. hex head), aligning the **fluid port holes** on the SSV assembly and the **panel**. Torque the screws to 25 to 35 in.·lb (2.8 to 4.0 N·m). See Fig. 5.

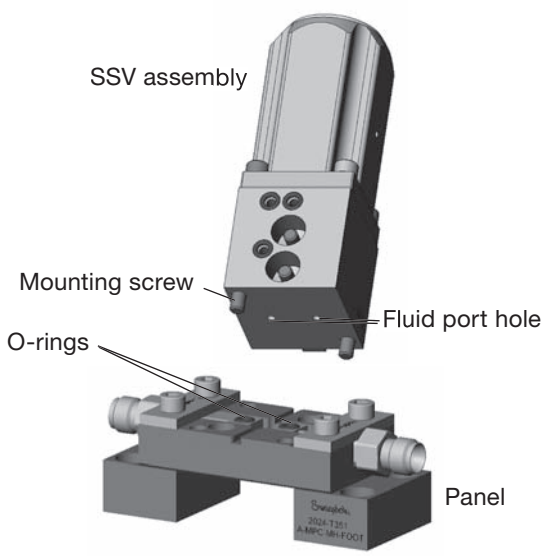


Fig. 5

Adding / Removing Base Blocks

1. Remove the insert screws from the right end base block. Add (according to step 4 of **General SSV Assembly**) or remove the desired number of base blocks using a 9/64 in. hex tool.
2. Replace the right end block according to step 5 of **General SSV Assembly**.
3. Install any needed DBB modules per step 6 of **General SSV Assembly**.

⚠ WARNING

Before servicing any installed valve you must:

- **depressurize the system**
- **cycle the valve**
- **purge the valve.**

Flange Replacement

1. Using a 5/32 in. hex torque wrench, loosen the **mounting screws** and remove the **DBB module** from the base block.
2. Using a 7/64 in. hex torque wrench, loosen the **flange screws** and remove the **flange** from the **DBB module**.
3. Align the **air inlet** and **alignment pin holes** on the new **flange** with those on the bottom of the DBB module. See Fig. 6.

⚠ CAUTION

The air inlet and alignment pin holes on the flange and valve must be oriented correctly for the DBB module to function correctly after reassembly.

4. Replace the **flange screws** and tighten (10 to 15 in.·lb, 1.1 to 1.7 N·m).
5. Attach the **DBB module** to the **base block** per step 6 of **General SSV Assembly**.

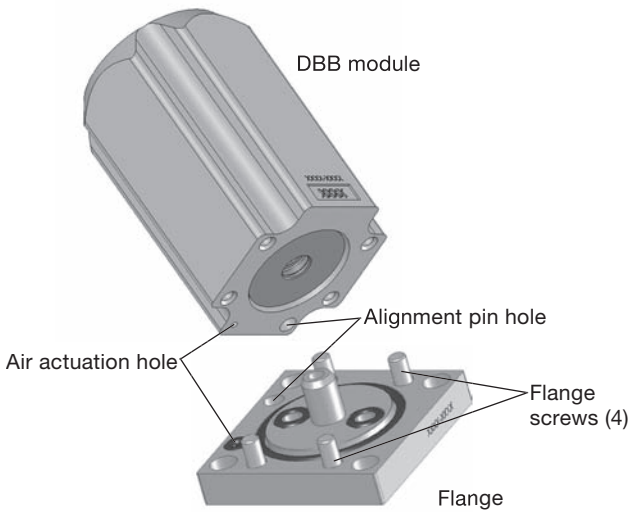


Fig. 6

Cap Replacement

1. Use an O-ring pick or similar tool to remove the existing cap.
2. Press the new **cap** into the **groove** so that the **tabs** are compressed within the **undercut** of the **piston**. See Fig. 7.

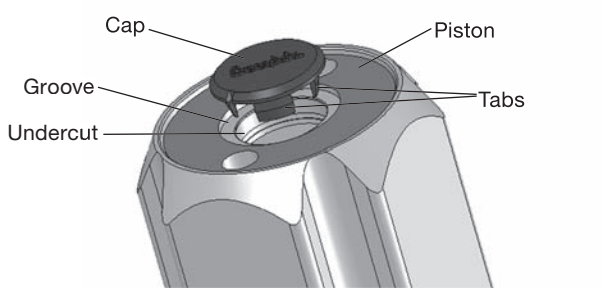


Fig. 7

O-Ring Replacement

1. To replace **base block seals** or **right end base block seals** (9-007), remove block(s) according to **Adding/Removing Base Blocks**. See Fig. 8.
2. To replace the **DBB module face seals** (9-007), remove the module from the base block according to step 1 of **Flange Replacement**. See Fig. 8.
3. To replace the **DBB module body seal** (9-022) or **actuation air seal** (9-004), remove the module and flange according to steps 1 and 2 of **Flange Replacement**. See Fig. 9.
4. Remove the O-ring from the counterbore using an O-ring pick or similar tool.

   ⚠ **CAUTION**
   Be careful not to scratch the counterbore surface with the removal tool. System performance could be affected by any scratches.

5. For the **DBB module body seal** (9-022) only, lubricate the new O-ring with the provided lubricant.
6. Press the new O-ring(s) into the appropriate counterbore.
7. Reassemble the SSV assembly according to the section followed for disassembly.

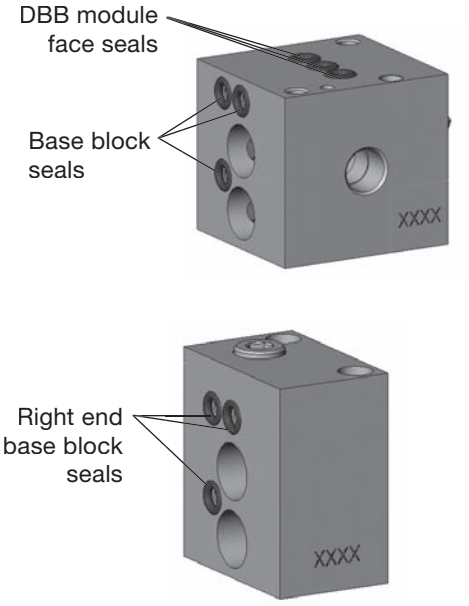


Fig. 8

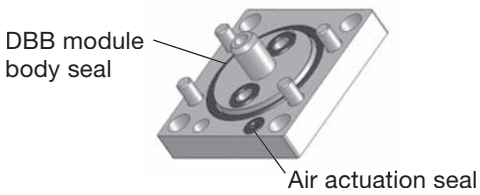


Fig. 9

Testing

Perform a shell test and check for proper operation prior to system installation.

Safe Product Selection

When selecting a product the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

Caution: Do not mix or interchange parts with those of other manufacturers

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