

⚠ WARNING

To avoid unpredictable system behavior that can cause personal injury and property damage:

- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer's specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

Introduction

Follow these instructions when installing, operating, or servicing the product.

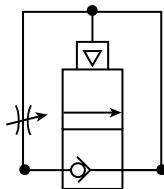
Application Limits

These products are intended for use in general-purpose compressed air systems only. These units should not be used as shut-off valves, as they do not shut off completely and must always be placed after a shut-off valve.

| | | | |
|----------------------------|------|------|------|
| Operating Pressure: | kPa | PSIG | bar |
| Maximum Inlet Pressure | 1035 | 150 | 10.0 |
| Minimum Inlet Pressure | 210 | 30 | 2.0 |

Ambient Temperature Range: 4°C to 54°C (40°F to 130°F)

Symbol



Installation

The Auto-Pilot Soft Start valves should be installed with reasonable accessibility for service and adjusting needle valve with a screwdriver. Keep pipe or tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe – never into the female port. Do not use PTFE tape to seal pipe joints – pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction. Care should be taken to avoid undue strain on valve. Air applied to the valve must be filtered with a 40 micron filter to realize maximum component life.

Life Expectancy - Normal multi-million cycle life expectancy of these valves is based on the use of properly filtered and lubricated air at room temperature. These valves are also designed to operate under non-lubricated conditions and will yield millions of maintenance free cycles.

Factory Pre-Lubrication - Valves are pre-lubricated at assembly with a petroleum based grease which has a lithium content.

In-Service Lubrication - In-service lubrication is not required; however, if lubrication is to be used, F442 oil is recommended. This oil is specially formulated to provide peak performance and maximum service life from all air operated equipment. Otherwise, use an air line lubricant (compatible with Nitrile & Polyurethane seals) which will readily atomize and be of the medium aniline type. Aniline point range must be between 180° and 220°F. Viscosity at 100°F: 140 - 170 SUS.

⚠ CAUTION: Do not use synthetic, reconstituted, or oils with an alcohol content or detergent additive.

⚠ CAUTION: Do not restrict the inlet of valves having an internal pilot supply. Pressure supply piping must be the same size as the inlet port or larger to insure that the pilot valve receives sufficient pressure supply during high flow conditions.

Function

When pressure is supplied to the inlet port, gradual filling of the downstream system occurs through the adjustable needle valve. Upon reaching 70% of the supply pressure, the valve switches from metered flow to full flow. The ramp up time to reach 70% of supply pressure is adjustable via the needle valve in the cover (See Figure 1).

⚠ WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from The Company, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure and review the information concerning the product or systems in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by The Company and its subsidiaries at any time without notice.

EXTRA COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FOR INCLUSION IN EQUIPMENT / MAINTENANCE MANUALS THAT UTILIZE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE.

Adjustment

The filling speed and pressurization of downstream circuit is accomplished by a Needle Valve located in the Cover (See Figure 1). Adjustment is performed using a standard flat blade screwdriver as indicated in Figure 1. Adjustments can be made by performing start-up test and adjusting the Needle Valve from zero to a maximum of 4 turns open until desired equipment speed is reached.

⚠ Caution: Do not turn needle valve more than 4 turns out from closed position as it is a pressure circuit and could blow out with force.

The adjustment of the initial airflow rate into the downstream side of the soft-start valve is done with the Needle Valve. Turning Needle Valve counterclockwise will decrease amount of time to fill downstream circuit. Turning Needle Valve clockwise will increase amount of time to fill downstream circuit.

Once the desired start-up speed of the downstream circuit has been reached, the adjustment area can be blocked off to prevent tampering by inserting the Lockout Pin provided in the package. Any further adjustments will require the removal of the Lockout Pin as shown in Figure 2.

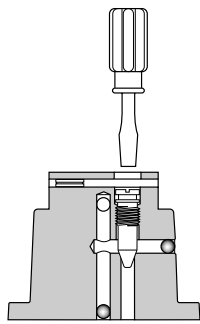


Figure 1 Adjustment

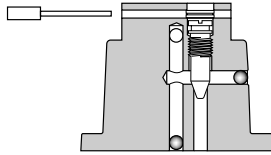
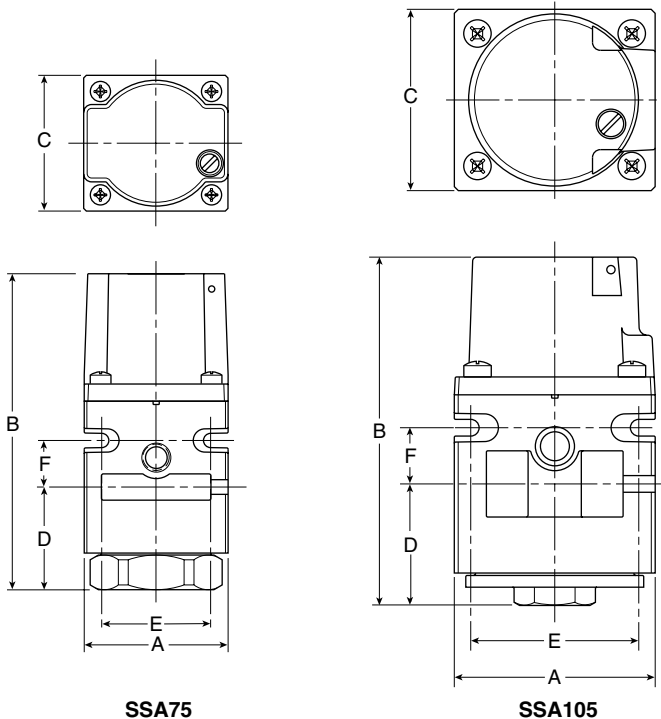


Figure 2 Lockout Pin Removal

Dimensions:



| Model | Port Size | A | B | C | D | E | F |
|--------|-----------|--------------|---------------|--------------|--------------|--------------|-------------|
| SSA75 | 3/8" | 2.19 (56) | 4.72 (120) | 2.06 (52) | 1.50 (38) | 1.66 (42) | .72 (18) |
| SSA105 | 1/2" | 3.03 (77) | 5.25 (133) | 2.75 (70) | 1.84 (47) | 2.53 (64) | .84 (21) |

Inches (mm)

Service

⚠ Caution: Disconnect or shut off air supply and exhaust pressure before servicing unit.

⚠ Caution: Grease packets are supplied with kits for lubrication of seals. Use only mineral based grease or oils. Do not use synthetic oils such as esters. Do not use silicones.

Note: After servicing unit, turn on air supply and check for leaks. If leakage occurs, do not operate – conduct repairs and retest.

Note : Items marked with an * are included in the service kit.

1. Remove the four Screws that retain the Cover and remove Cover. Next remove Plunger with Seals from Body.
2. Remove Bottom Plug by unscrewing it from the Body. Next remove Bottom Spring, Disc Holder Assembly and Gasket.
3. Clean, and carefully inspect parts for wear and / or damage. If replacement is necessary, use parts from service kit.
4. Lubricate O-rings and U-cup with grease (supplied with kit).
5. Install Gasket into Body. Then install Disc Holder, Bottom Spring and Bottom Plug in to Body. See Figure 3 for torque value.
6. Install Plunger with Seals into the Body. Install two O-rings between Body and Cover (make sure air passages are aligned properly), install four Screws and tighten per Figure 3.

Service Kits Available:

| Description | SSA75 | SSA105 |
|-------------|--------|---------|
| Service Kit | RKSS75 | RKSS105 |

There may be extra parts in the kit.

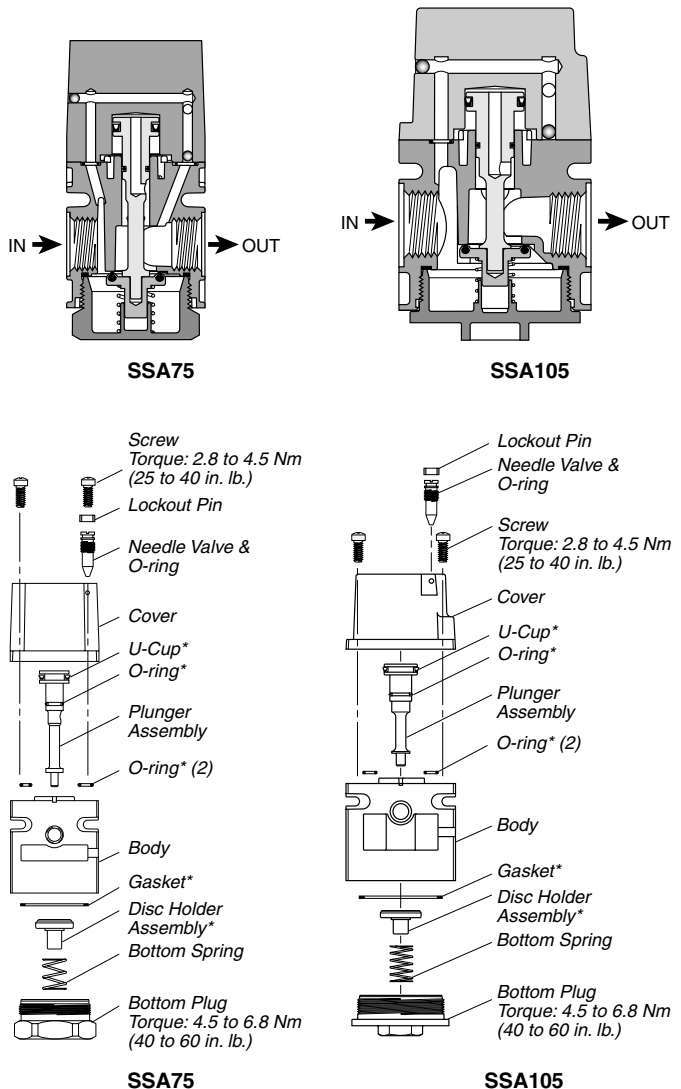


Figure 3