



## **SMA-2000C**

# **Switchover Module**

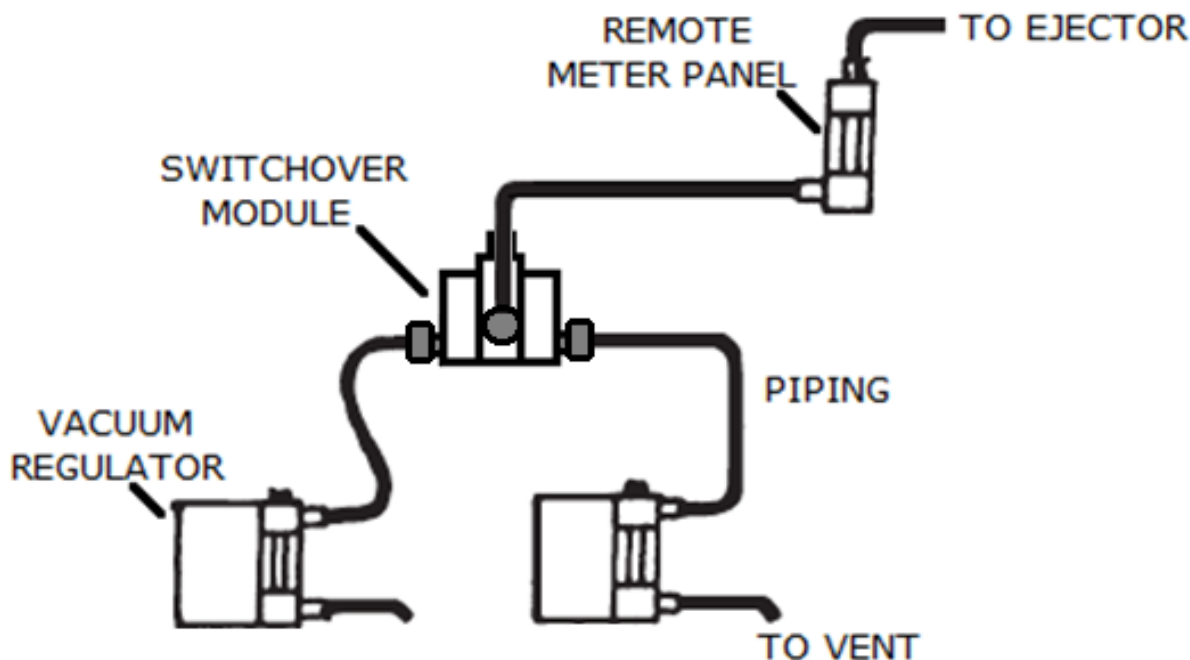
Installation, Operation & Maintenance

**General:** The Archer Instruments SMA series of switchover modules are designed to provide isolating automatic switchover from a depleted gas source to a standby gas source.

### **Installing the SMA-2000C Switchover Module:**

- 1) The switchover module is installed on a wall or panel using the supplied mounting bracket. The module is installed in the system between the gas sources (vacuum regulators) and the remote meter panel. See the illustration on the next page.
- 2) Note that the gas flows in from the sides of the switchover module (one side at a time) and out through the center body union.
- 3) Once the switchover module is mounted and the piping connected, the system can be placed in operation.

**NOTE:** In systems incorporating a switchover module, the system rate valve (whether it be either a manual or an automatic rate control valve) must be located between the switchover module and the ejector.



### **Operating the SMA-2000C Switchover Module:**

- 1) The switchover module will isolate one gas source and allow gas flow from the other. Once installed and connected, the switchover module can be manually switched to feed from whichever side is desired. This is done by closing the chlorine cylinder valve(s) from one side of the system at a time (the side to be used as stand-by) and waiting for the module to switch.
- 2) Verify that gas is being fed from the desired gas source.

**Important Note:** The internal moving parts of any switchover module are in direct contact with the gaseous chemical being fed. During normal operation, internal parts tend to accumulate deposits / residue from the flowing gas. Over time, these deposits can lead to “freezing” of the pivot assembly in the switchover module. In applications where the module switches with a reasonable frequency (several times per month) this is generally not a concern. However, in applications where switching occurs infrequently, “freezing” can eventually occur. For this reason, it is highly recommended that in such applications the module be routinely manually “exercised” in order to keep the pivot assembly moving freely. This is accomplished by closing the on-line cylinder valve(s) to simulate an empty gas source, waiting for the unit to switch and then re-opening the valve(s). Repeat the process with the other gas source to switch the module back to the original gas source.

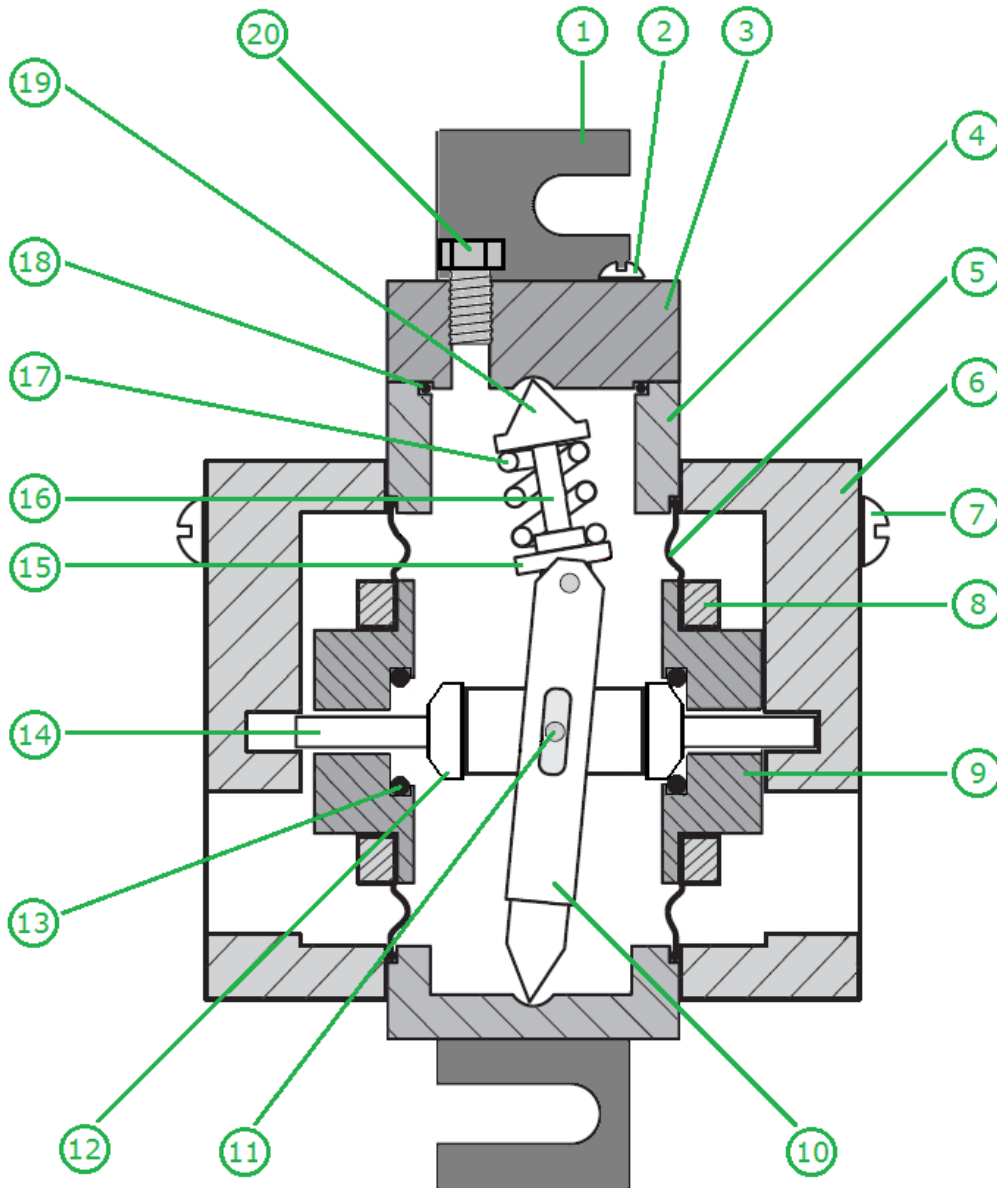
## **Maintaining the SMA-2000C Switchover Module:**

Recommended Maintenance Frequency: Archer Instruments recommends routine maintenance once per year.

-Refer to the following parts diagram when performing maintenance on the switchover module.

- 1) To disassemble the switchover module, first shut the cylinder valves and evacuate the gas inside by disconnecting the vacuum line between the switchover module and the vacuum regulators. Then remove the module from the system.
- 2) Next unscrew the (4) BTA-130 screws from one end cap and remove the end cap, screws and diaphragm assembly from that side.
- 3) Unscrew the (4) BTA-126 screws from the top cap and remove the top cap and screws.
- 4) Repeat step 2 for the opposite side of the module.
- 5) Next remove the pivot assembly.
- 6) The diaphragm assembly consists of a rubber diaphragm between two threaded parts (diaphragm bolt and diaphragm nut). These can be unscrewed from one another, allowing the SMA-112 diaphragm to be removed.
- 7) Clean all parts carefully. Reassemble in reverse order using new o-rings and diaphragms. Apply a thin film of Fluorolube grease to each o-ring and diaphragm.

*-Should you have any questions during maintenance of your switchover module, please contact your local service provider or Archer Instruments for support.*



Item#	Qty.	Part #	Description	Item#	Qty.	Part #	Description
1	1	SMA-109	Mounting Bracket	12	2	SMA-219	Valve
2	4	BTA-126	#10-24 x 1" Screw	13	2	OA-VIT-207	O-Ring
3	1	SMA-106-250	Top Cap	14	1	SMA-200	Valve Plug
4	1	SMA-208	Center Body w/ Union	15	1	SMA-103	Spring Pivot
5	2	SMA-112	Diaphragm	16	1	SMA-105	Spring Guide Pin
6	2	SMA-207	End Cap w/ Union	17	1	SPA-SM-104	Spring
7	8	BTA-130	¼-20 x 1-1/4" Screw	18	1	OA-VIT-023	O-Ring
8	2	SMA-111	Diaphragm Nut	19	1	SMA-104	Spring Pin Guide
9	2	SMA-210	Diaphragm Bolt	20	1	PLA-108	¼" NPT Plug
10	1	SMA-102	Pivot Arm	*NOT SHOWN (unions connected to SMA-207 & SMA-208)			
11	2	SMA-101	Hinge Pin	*	3	OA-VIT-215	O-Ring (inside unions)

**Notes:** Union inlet & outlet connections are 1" socket Schedule 80 PVC. The (3) unions are permanently connected to the SMA-208 center body and (2) SMA-207 end caps.



Date: Jan 2019  
Drawing Number: SM2000