



SMA-10C / SMA-25C / SMA-50C Switchover Module

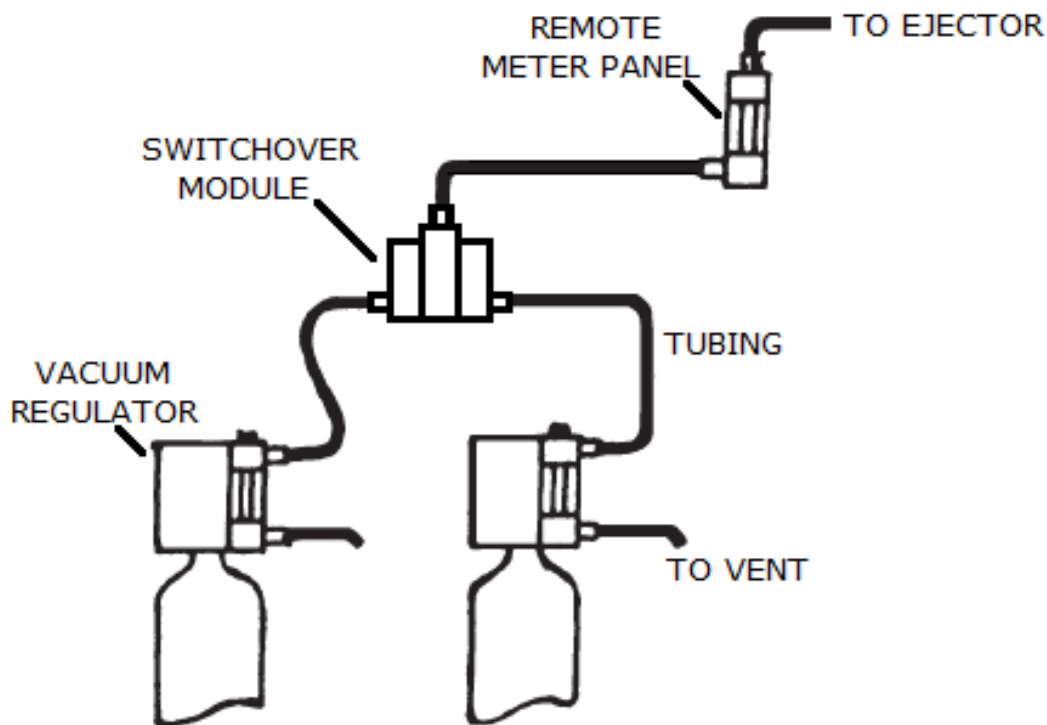
Installation, Operation & Maintenance

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-10C / SMA-25C / SMA-50C 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 top.
- 3) Once the switchover module is mounted and the tubing connected, the system can be placed in operation.

NOTE: In systems incorporating a switchover module, the vacuum regulators should NOT have built in rate valves, as these will interfere with the proper operation of the module. The system rate valve must be located between the module and the ejector.



Operating the SMA-10C / SMA-25C / SMA-50C 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 one chlorine cylinder valve 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 to simulate an empty container, waiting for the unit to switch and then re-opening the valve. Repeat the process with the other gas source to switch the module back to the original gas source.

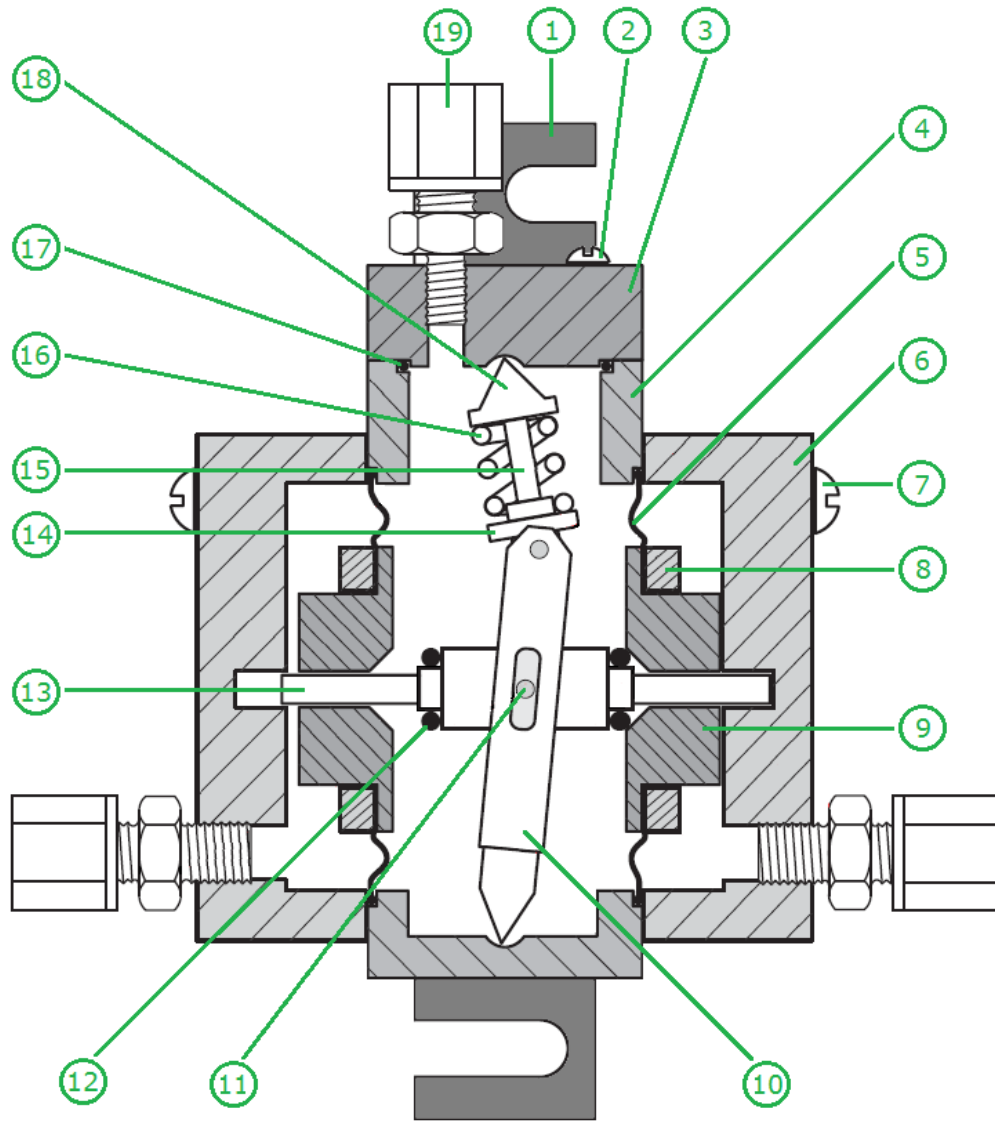
Maintaining the SMA-10C / SMA-25C / SMA-50C Switchover Module:

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	11	2	SMA-101	Hinge Pin
2	4	BTA-126	#10-24 x 1" Screw	12	2	OA-VIT-203	O-Ring
3	1	SMA-106-XXX 250 / 500	Top Cap ¼" NPT / ½" NPT	13	1	SMA-100	Valve Plug
4	1	SMA-108	Center Body	14	1	SMA-103	Spring Pivot
5	2	SMA-112	Diaphragm	15	1	SMA-105	Spring Guide Pin
6	2	SMA-107-XXX 250 / 500	End Cap ¼" NPT / ½" NPT	16	1	SPA-SM-104	Spring
7	8	BTA-130	¼-20 x 1-1/4" Screw	17	1	OA-VIT-023	O-Ring
8	2	SMA-111	Diaphragm Nut	18	1	SMA-104	Spring Pin Guide
9	2	SMA-110	Diaphragm Bolt	19	3	TCA-XXX 64 / 84 / 108	Tube Connector 100 / 250 / 500 PPD
10	1	SMA-102	Pivot Arm	*Not Shown (2) ¼-20 x ½" Mounting Bracket Screw (FHMS)			

Notes: Vacuum Tube Connector supplied as follows: 3/8" tubing for 100 PPD & below (TCA-64), ½" tubing for 250 PPD (TCA-84) and 5/8" tubing for 500 PPD (TCA-108).



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Drawing Number: SM