



## chlorinators

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# REGAL SERIES A-550 SWITCHOVER MODULES

A-551 (100 PPD) • A-552 (250 PPD) • A-555 (500 PPD)

## INTRODUCTION

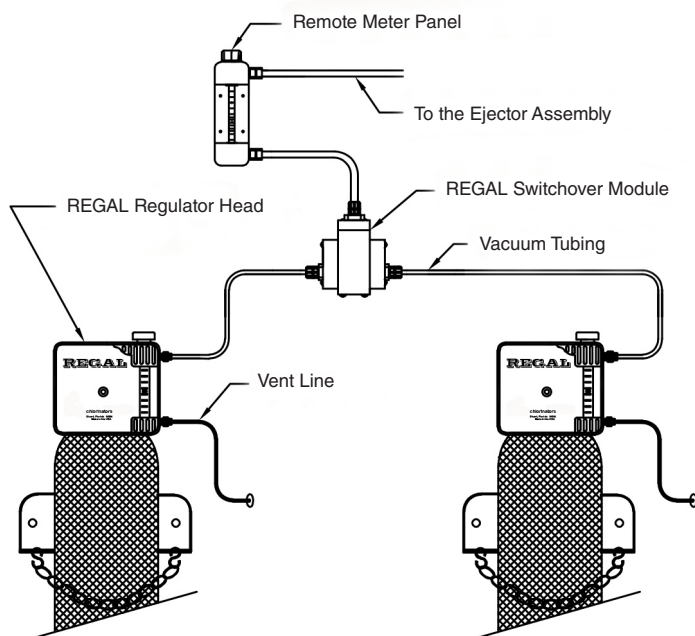
The REGAL Series A-550 switchover modules are designed to automatically change the gas supply from one vacuum regulated source (cylinder or ton container) to a second, standby source. Once the initial source is incapable of supplying the necessary demand for the

system, an increase in vacuum activates the module to close that source while simultaneously opening the standby. This allows for continuous feeding of gas for the system. The depleted source of gas can then be safely and easily replaced using the normal procedure.

## INSTALLATION

As indicated in the drawing below, the switchover module is easily mounted on a wall and located between the two sources of gas. The fittings located on the left and right sides of the module are used to connect vacuum tubing to the regulator heads which are mounted

on each gas supply source. The top fitting connects the tubing to the input of a remote (manual and/or automatic), gas feed rate valve. The tubing then runs from the rate valve output to the vacuum fitting on the ejector assembly.



## OPERATION

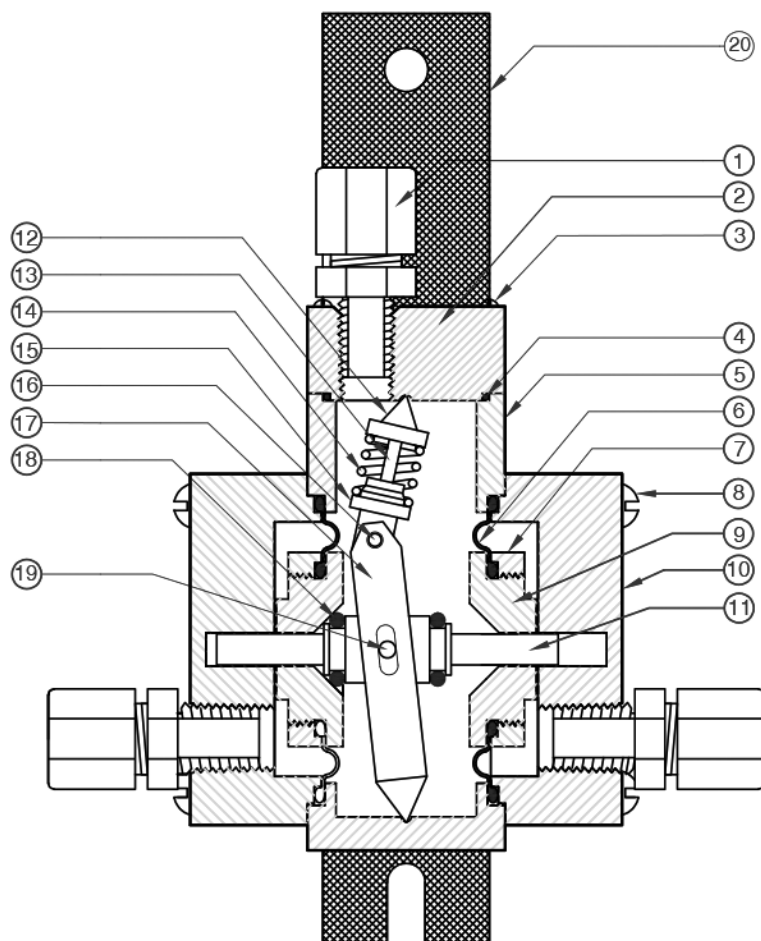
After the system has been installed and the main valves on each gas source are still closed, then open the valve on the preferred, initial gas source. Turn the system on to create vacuum. If the module does not switch, then it is already open for gas to flow from the initial source. Once the gas is flowing, open the main valve on the

second supply source which will now be in standby mode and ready to automatically switch over to when needed. After the module switches to the standby source, the depleted source can then be replaced. Simply turn off the main valve of the depleted source and follow the normal procedure to replace it.

## MAINTENANCE

As with all mechanical equipment, the maintenance of the REGAL Switchover Modules depends on many factors such as the frequency of use and the purity of the gas supply. Overall, it is recommended to service the module once a year. It may be sent to REGAL for service or if done in the field, use the following procedure.

- 1) Before removing the module from its location, shut off all main valves of the gas sources. Disconnect the vacuum lines from the module while being aware of any remaining gas dissipating from the lines.
- 2) Remove one of the side bodies by unscrewing the four Z-220 screws that hold it in place. Be careful not to drop the diaphragm assembly located in the side body.
- 3) First, remove the diaphragm and then examine the inside of the body for any noticeable residue buildup. If so, the module should be cleaned.
- 4) Repeat step 2 to remove the other side body and diaphragm assembly.
- 5) Remove the cap by carefully loosening the four screws (Z-241) that hold it in place. Since the spring loaded pivot assembly is pressing against the bottom of the cap, alternately loosen each screw in slight increments until they are all removed. Then remove the o-ring from under the cap.
- 6) Remove the top spring guide and spring through the top opening of the main body. Then remove the pivot assembly from the side opening.
- 7) Disassemble the two diaphragm assemblies by unscrewing the diaphragm nut and bolt to remove the diaphragm.
- 8) Use a mild soap and water solution to clean all internal parts carefully.
- 9) Replace the a-rings and diaphragms if necessary. Apply just enough fluorocarbon grease to the o-rings and diaphragms to create a gloss finish. An excess amount may clog openings that restrict the gas flow.
- 10) The module is now ready to reassemble in reverse order.



| Ref. No. | Part No.                         | Quantity | Description                                                                            |
|----------|----------------------------------|----------|----------------------------------------------------------------------------------------|
| 1        | ZZ-250<br>or ZZ-260<br>or ZZ-271 | 3        | 1/4" NPT Fitting (100 PPD)<br>1/2" NPT Fitting (250 PPD)<br>5/8" NPT Fitting (500 PPD) |
| 2        | M-573<br>or M-573-5              | 1        | Cap (0-250 PPD)<br>Cap (500 PPD)                                                       |
| 3        | Z-241                            | 4        | Cap Screw                                                                              |
| 4        | S-501                            | 1        | Cap O-Ring                                                                             |
| 5        | M-571                            | 1        | Main Body                                                                              |
| 6        | CS-510                           | 2        | Diaphragm                                                                              |
| 7        | M-575                            | 2        | Diaphragm Nut                                                                          |
| 8        | Z-220                            | 8        | Body Screw                                                                             |
| 9        | M-574                            | 2        | Diaphragm Bolt                                                                         |
| 10       | M-572<br>or M-572-5              | 2        | Side Body<br>Side Body (500 PPD)                                                       |
| 11       | M-576                            | 1        | Valve Plug                                                                             |
| 12       | M-579                            | 1        | Top Spring Guide                                                                       |
| 13       | M-580                            | 1        | Top Spring Guide Pin                                                                   |
| 14       | M-583                            | 1        | Spring                                                                                 |
| 15       | M-578                            | 1        | Bottom Spring Guide                                                                    |
| 16       | M-581                            | 1        | Pivot Shaft                                                                            |
| 17       | M-577                            | 1        | Pivot Arm                                                                              |
| 18       | S-412                            | 2        | Valve Plug O-Ring                                                                      |
| 19       | M-581                            | 1        | Valve Plug Pivot Shaft                                                                 |
| 20       | M-582                            | 1        | Mounting Bracket                                                                       |
| 21       | Z-248                            | 2        | Bracket Mounting Screw<br>(not pictured)                                               |

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