# Mooney* FlowMax HP

## High-pressure reducing regulator for natural gas pipelines

The Mooney FlowMax HP regulator is a high-pressure reducing regulator that offers bubble tight shut-off at all pressure differentials and full capacity at very low differential pressures. This innovative BHGE design compliments the Mooney Flowgrid* regulator and FlowMax regulators. The FlowMax HP regulator maximizes capacity, speed of response, and accuracy while incorporating many of the same original maintenance and performance features for which the Flowgrid regulator is renowned.

### Features

- Top-entry design for ease of maintenance
- High-Pressure Class 300 & Class 600 body and actuator ratings
- Sizes range: 2”- 6”
- One actuator for all pressure control ranges
- Oversized balanced diaphragm for improved sensitivity
- Full port design for ultra high capacity
- Positive bubble tight shut-off at all pressure differentials
- Control range - 3 to 900 psig (0.21 to 62 bar) *(Consult Factory for higher set pressure requirements)*
- Full open differential - as low as 3 psig (0.21 bar)
- Quick acting two-path pilot control system
- Lightweight and compact design

### Applications

- District regulator
- Monitor, first stage, or second stage regulator
- City gate station
- Industrial service regulator
- Boiler/burner fuel gas regulator
- High pressure/high volume applications


Simple, Proven, and Safe for Our Environment.

# Mooney FlowMax HP

Designed for bubble tight shut-off at all pressures and full capacity at very low differential pressures.

## Pressure Reducing Valve

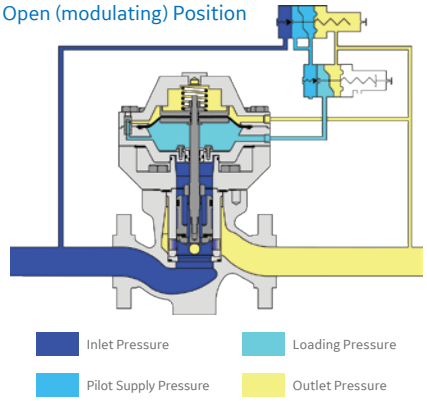
When the downstream pressure is greater than the set point of the pilot, the pilot is closed, resulting in equal pressure above and below the main diaphragm. With a balanced plug area slightly larger than the seat area, the resulting closing force, along with the force of the main spring, forces the plug against the seat.

With an increase in demand, the outlet pressure will begin to drop and decrease the pressure above the main diaphragm. The drop of the outlet pressure below the pilot set point will cause the pilot to open. As the pilot opens, pressure increases underneath the main diaphragm faster than pressure can bleed through the internal restrictor. The imbalance in pressure on the main diaphragm overcomes the spring force and the additional closing force from the plug, causing the plug to rise off the seat and satisfy the flow demand.

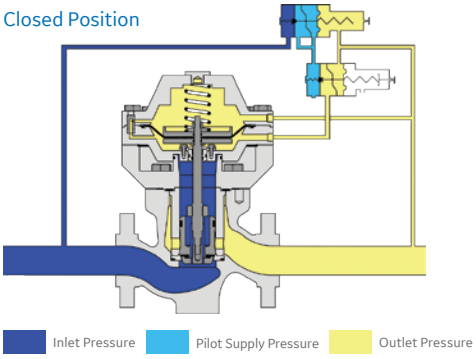
Once the flow demand is satisfied and the downstream pressure begins to increase, the pressure above the main diaphragm and in the pilot sense cavity rises.

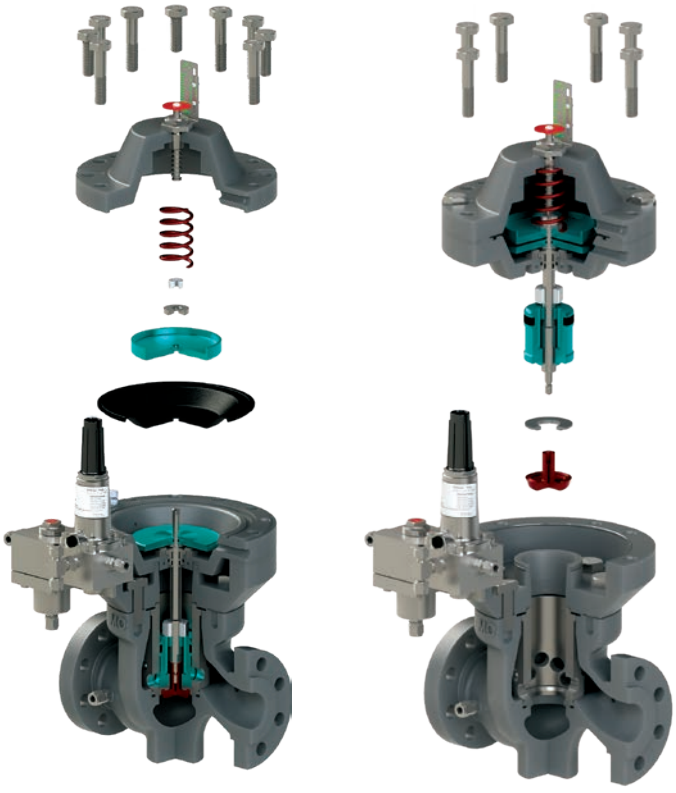
This causes the pilot to close. The pressure below the main diaphragm bleeds through the internal restrictor until pressure equalizes above and below the main diaphragm. The forces of the main spring and the over-sized balancing diaphragm then close the plug on the seat.

Open (modulating) Position




Closed Position



## Simple in-line maintenance:

Modular construction allows for simplified in-line maintenance and repair. Diaphragm replacement requires only the removal of the top cover, without disturbing the pressure boundary seals or regulator internals. Internal trim can be accessed and replaced by removing alternate bolts on the actuator and lifting the actuator section off intact. All without the need to remove the pilot assemblies or remove the regulator from the piping, greatly reducing the time to repair and disruption to service.

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