

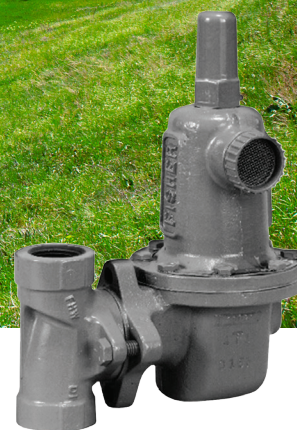
Type 627BM balanced trim regulator

Closing the gap between direct-operated and pilot-operated regulators



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High pressure direct-operated regulator with balanced trim



Introduction

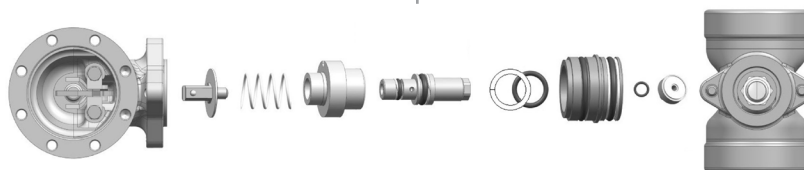
The high-flowing capacity of small pilot-operated regulators is combined with the speed of a direct-operated regulator with the addition of the balanced trim design of the 627BM. The balanced trim neutralizes inlet sensitivity to optimize inlet pressure ratings and maximize flow rates. With this design, a large 9/16 in. orifice can be used for all 627BM applications without reduced inlet pressure ratings.

The 627BM is ideal for gas applications which require the following:

- High flow rate applications that would normally require multiple direct-operated or a pilot-operated
- Class 600 positive shutoff protection
- Fast speed of response
- High shock and vibration resistance
- Easy in-line maintenance with top entry design, saving time and manpower

This new product modification offers:

- **Increased capacity and lower installation cost** - Eliminate the need for a pilot-operated or multiple direct-operated regulators to save cost and simplify startup
- **One orifice for all applications** - The balanced trim enables the 627BM to use a 9/16 in. orifice without reducing the inlet pressure rating of 1500 psig
- **Eliminates inlet sensitivity** - The balanced trim prevents setpoint drift due to fluctuating inlet pressures
- **Prevents low flow instability** - Pilot-operated regulators can experience instability if they are oversized. The direct-operated 627BM has superior rangeability in low flow applications
- **Easy maintenance** - Lightweight, top-entry design, making disk and orifice replacement quick and easy
- **Easy field conversions** - The 627BM uses many of the same components as the 627M, including the body, which can make field conversions quick and simple

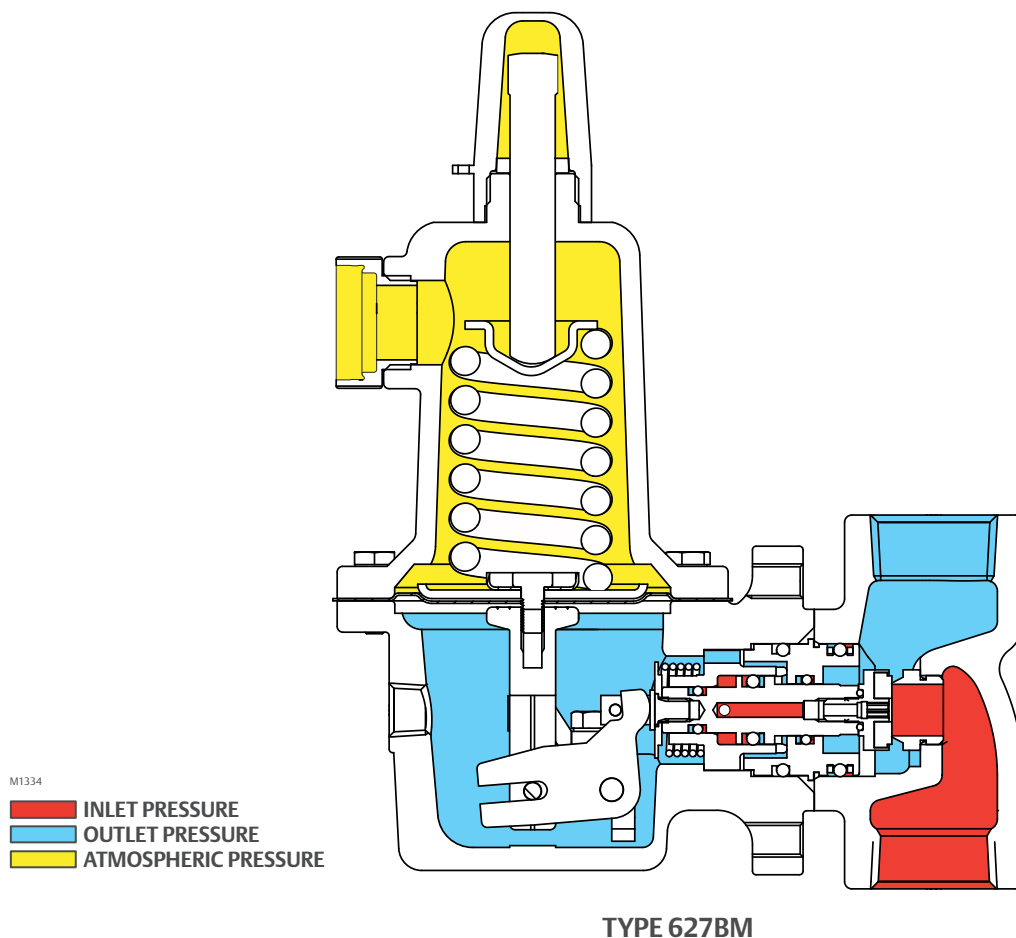



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Operational schematic

The 627BM is an external sensing direct-operated regulator with a balanced port design. Inlet pressure is transferred through the center of the orifice, into a pressure chamber, which applies the inlet pressure in an equal but opposite force to the flow to open design. This operation is key to enable the 627BM to achieve a 1500 psig inlet pressure rating with a 9/16 in. orifice. Thus, inlet sensitivity is minimized and flow rates are maximized to allow for displacement of oversized pilot-operated regulators or multiple parallel runs of direct-operated regulators.



Type 627BM features

- **Body sizes:** NPS 1 and 2 / DN 25 and 50
- **End connections:** NPT, 150RF, 300RF, 600RF
- **Inlet pressure rating (Class 600):** 1440 psig / 101 bar
- **Set pressure range:** 5 to 500 psig / 0.34 to 34.5 bar
- **Outlet pressure:** 500 psig / 34.5 bar
- **Orifice size:** 9/16 in.
- **Pressure registration:** External
- **Temperature capabilities:** -40 to 180°F / -40 to 82°C
- **Pressure sensing connection:** 1/4 NPT

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