

AMERICAN METER COMPANY

The American Meter 1803/1883 PFM Series Industrial Regulator

Precise pressure control for fixed factor measurement (1803 PFM is the standard regulator – 1883 PFM is with OPSO)

The American Meter PFM Series is a 1 1/2" or 2" industrial regulator (38mm, 50mm) designed for applications requiring medium-to-high flow capacity and precise outlet pressure control in the 1/2 PSIG to 30 PSIG Range (35 mB to 2 bar outlet range)



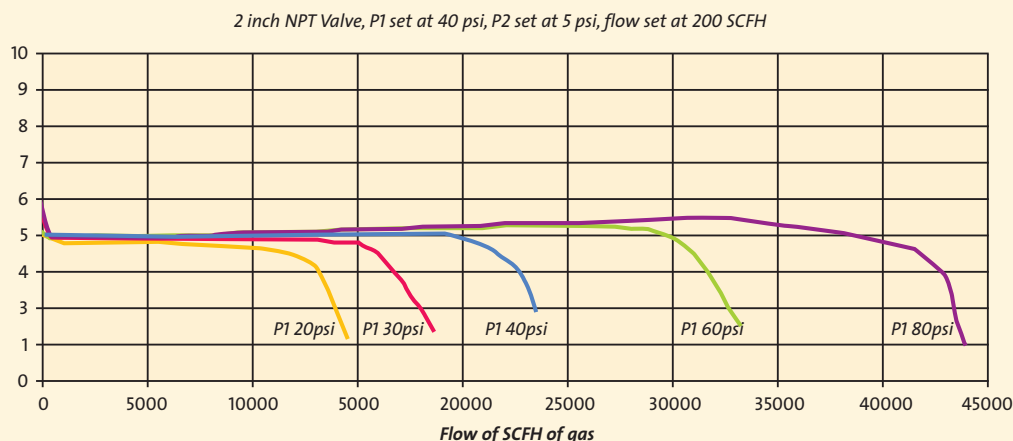
PFM regulators are used in fixed factor applications; the superior outlet pressure control allows a single fixed pressure factor to be applied to a (downstream) gas meter total, eliminating the need for an (expensive) pressure/temperature volume correcting Instrument for each installation; a PFM regulator and temperature controlled meter makes an accurate measurement.

1803/1883 PFM regulators are accurate to better than +/- 1% of absolute set pressure over a wide range of inlet pressures and over a wide range of flow rates. Figure 1 shows a typical just-off-the-assembly-line 1883 PFM regulator.

Shown: AMCO 2" NPT Version 1883 PFM regulator with ELSTER-JEAVONS USSA over pressure shut off, integral pilot filter, and NEW removable main orifice.

Definition: Fixed factor measurement – a measurement method that uses a constant multiplier as a pressure factor; usually with a temperature-compensated gas meter. Fixed factor measurement requires an accurate regulator to provide a constant meter inlet pressure.

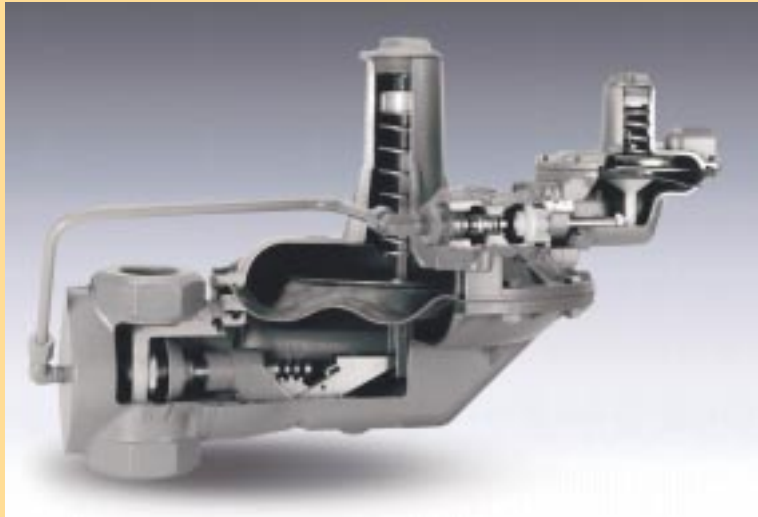
Fig. 1: 1883 PFM Regulator



Note the constant outlet pressure delivery from 0 flow to 25,000 SCFH (700 NM3/Hr).

Three features that keep the AMCO 1803/1883 PFM regulator in peak performance:

1) The EC (Elevation Compensation) orifice



- ▶ All PFM pilot regulators use the EC orifice
- ▶ EC orifices are spring loaded
- ▶ Higher inlet pressures move the orifice nozzle toward the seat disc
- ▶ EC orifices assure more constant outlet pressures on applications in which the inlet pressure varies

Increased inlet pressure pushes in the EC orifice snout

2) The new PFM removable main orifice



- ▶ 1803/1883 PFM orifices are mounted with (2) 6-32 Allen wrenches
- ▶ Screws – No large hex head socket required
- ▶ 1803/1883 PFM orifices are sealed with (2) O-rings
- ▶ 1803/1883 PFM orifices are removed with (2) jacks

Screws as shown

New PFM orifice is serviced with a single Allen wrench.

3) Choice of AMCO over pressure shut off or ELSTER-JEAVONS over pressure shut off (OPSO)

AMCO Ball Cage OPSO



Non-integral shut off valve

ELSTER-JEAVONS USSA OPSO

