

# Fisher™ Type CS800IQ Reduces Meter Set Cost by \$535 and Footprint by 55%

## RESULTS

- Saved \$535 per meter set by eliminating the pressure loaded regulator, external relief valve and associated vent piping
- Reduced the installation and commissioning time by two hours per meter set
- Eliminated the manual seasonal adjustment



*Fisher Type CS800IQ with Flow Shroud*

## CUSTOMER

A Top 25 North American Local Distribution Company (LDC) by customers served

## APPLICATION

Fixed factor measurement for commercial and light industrial distribution service

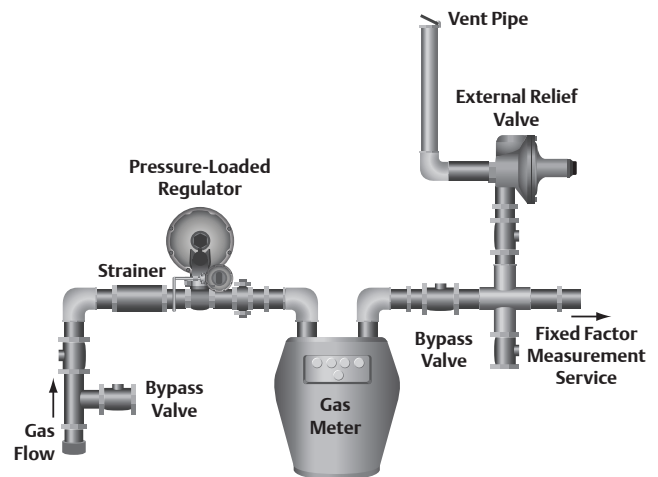
**Inlet pressure:** 20 to 60 psig / 1.38 to 4.14 bar

**Delivery pressure:** 2 psig / 0.14 bar

Pressure-loaded regulator with external relief valve

## CHALLENGE

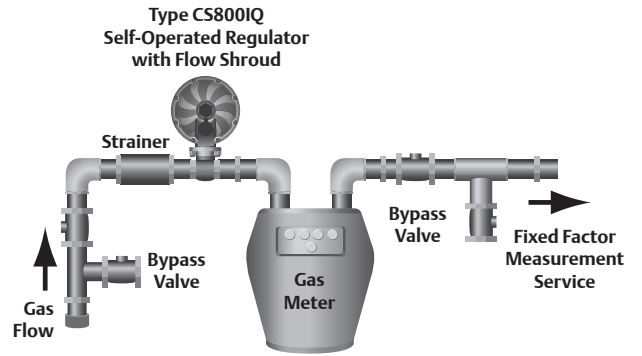
The LDC used a pressure loaded regulator to provide fixed factor service to a commercial end user. Although the pressure loaded regulator is more difficult to install, commission and maintain than a self-operated regulator, the pilot-operated device was used due to its accuracy over a wide range of inlet pressures. Unfortunately, this required the use of an external relief valve and vent stack to provide adequate overpressure protection. In addition, the installation site was small, so the meter set needed to be as compact as possible to fit within the allocated space. The LDC also wanted to eliminate the manual seasonal adjustment the pressure loaded regulator requires to maintain fixed factor measurement service between the low flow summer months and the high flow winter period.



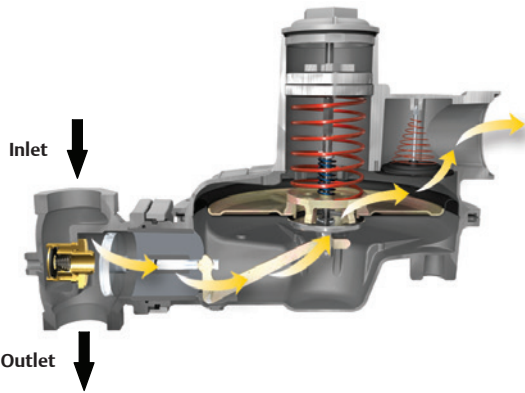
*Original Meter Set Design*

## SOLUTION

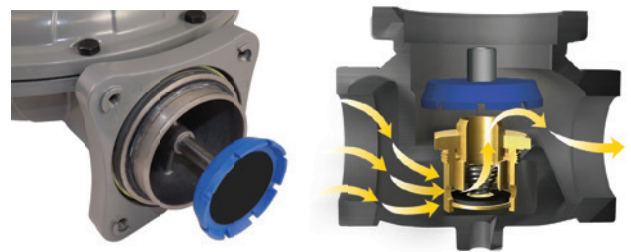
The Fisher™ Type CS800IQ self-operated regulator with flow shroud provides accurate fixed factor service replacing the more complex pressure loaded regulator. Since the Type CS800IQ flow shrouds do not require manual seasonal adjustment to maintain fixed factor service accuracy like the original pressure loaded device, the LDC was able to eliminate the seasonal service trips previously required to ensure fixed factor measurement compliance. The Type CS800IQ's high capacity internal relief eliminated the need for a stand-alone relief valve and associated piping. Per the economic analysis shown in Table 1, this saved the LDC \$535 per meter set and reduced the meter set footprint by over 55%.



*Meter Set Design Using the Type CS800IQ Self-Operated Regulator with Flow Shroud.*



*The Type CS800IQ enlarged throat and relief port provides the capacity necessary to protect the downstream from overpressure situations.*



*The Type CS800 Flow Shroud shapes the flow profile to provide fixed factor service.*

## ECONOMIC ANALYSIS

**Table 1. Economic Analysis**

	Total Cost Savings per Meter Set
Type CS800IQ Replacing Pressure-Loaded Regulator and External Relief Valve	\$ 265
External Relief Piping	\$ 50
External Relief and Vent Pipe Installation and Commissioning (Two people for one hour at \$110/hr labor cost)	\$ 220
<b>Cost Savings</b>	<b>\$ 535</b>

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The distinctive swirl pattern cast into every actuator casing uniquely identifies the regulator as part of the Fisher brand Commercial Service Regulator family and assures you of the highest-quality engineering, performance, and support traditionally associated with Fisher, Francel™ and Tartarini™ regulators. Visit [www.fishercommercialservice.com](http://www.fishercommercialservice.com) to access interactive applications.

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