ITEM OPPORTUNITY SYNOPSIS

Scouting Number:	2024-040
Name of the item to be scouted:	Excell Flow Valve
State item to be used in:	Massachusetts
Describe the Item:	
Please describe the item application/the end use of the item.	Looking for Build America Buy America (BABA) compliant excess flow valves equivalent to Perfection Excess Flow Valves SCFH: 400, 600, 800, 1100, 1800.
Supplier Information:	
Type of Supplier Being Sought (select from the list below):	
Manufacturer	x
Contract Manufacturer	
Distributor	
Other (Please Specify)	
Reason for Scouting Submission (select from the list below)	
2nd Supplier	
Price	
Re-Shore	
Past supplier no longer available	
New Product Startup	
BABA	x
Other (Please Specify)	
Summary of Technical Specifications and Performance Requirements:	
Describe the manufacturing processes (elaborate to provide as much detail as possible)	Valve Body - The valve body is stamped from stainless steel. Port Tube - The port tube is molded from acetal copolymer. The spring is manufactured from stainless steel. The ball is manufactured from nylon and is precision ground. This elastomeric component is Buna-Nitrile and complies with U.S. DOT CFR Title 49, Part 192 and ASTM D 2000.
Provide dimensions / size / tolerances / performance specifications of the item	• Automatic reset when line pressure is equalized • Consistent trip flow rate • Maintenance free • Easy to install • Available in a variety of Perfection fittings such as: mechanical tapping tees, shut off valves, sticks and Permaserts 2.0 Sizes from 1" to 1-1/4" CTS
List required materials needed to make the product, including materials of product components, if applicable	Valve Body - The valve body is stamped from stainless steel. Port Tube - The port tube is molded from acetal copolymer. The spring is manufactured from stainless steel. The ball is manufactured from nylon and is precision ground. This elastomeric component is Buna-Nitrile and complies with U.S. DOT CFR Title 49, Part 192 and ASTM D 2000.
Are there applicable certification requirements?	
Yes	x
No	
Please explain:	ISO 9001
Are there any applicable regulations that apply to the production of this item?	
Yes	
No	x
Please explain:	
Are there any other standards / requirements?	
Yes	x
No	
Please explain:	U.S. DOT CFR Title 49, Part 192.381 Testing performed in accordance with ASTM F 2138 and ASTM F 1802.
Additional Comments:	
Additional technical comments:	
Volume and Pricing:	
Estimated Potential Business Volume (i.e. #units per day, month, year):	500-1,000 units
Estimated Target Price/Unit Cost Information:	to be determined

Delivery Requirements:	
When is it needed by? (Immediate, 30 days, 6 months, etc.)	3 months
Describe packaging requirements (i.e. individually/group packaging, etc.)	Packages individually
Where will this item be shipped?	Westfield, Massachusetts
Additional Comments:	
Is there other information you would like to include?	

Perfection Excess Flow Valves

SCFH: 400, 600, 800, 1100, 1800

Product Specification

This manual details the qualification and design testing that has been performed during the development of the Perfection Excess Flow Valve with Bleed-by Reset (EFVB). The information disclosed herein is intended to aid in the evaluation and qualification of the Perfection Excess Flow Valve for use in gas distribution systems. These valves offer the following beneficial features:

- Automatic reset when line pressure is equalized
- Consistent trip flow rate
- Maintenance free
- Easy to install
- Available in a variety of Perfection fittings such as: mechanical tapping tees, shut off valves, sticks and Permaserts
- Customer specified trip flow ranges also available

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Perfection

Materials of Construction

SCFH 400 & 600

Valve Body - The valve body is stamped from stainless steel.

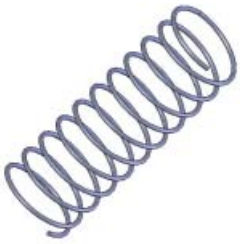
Port Tube - The port tube is molded from acetal copolymer.

SCFH 800, 1100 & 1800

Valve Body - The valve body is stamped from stainless steel.

Port Tube - The port tube is molded from acetal copolymer.

Spring



The spring is manufactured from stainless steel.

Note: Some spring assemblies also incorporate a stainless steel ball seat.

Ball

The ball is manufactured from nylon and is precision ground.

O-ring

This elastomeric component is Buna-Nitrile and complies with U.S. DOT CFR Title 49, Part 192 and ASTM D 2000.

Qualification Testing

General
The tests listed below were conducted to verify compliance of the Perfection EFV to U.S. DOT CFR Title 49, Part 192.381. Additionally, all units are 100% performance tested before shipment.

Test Method and Apparatus
Testing was performed in accordance with ASTM F 2138 and ASTM F 1802.

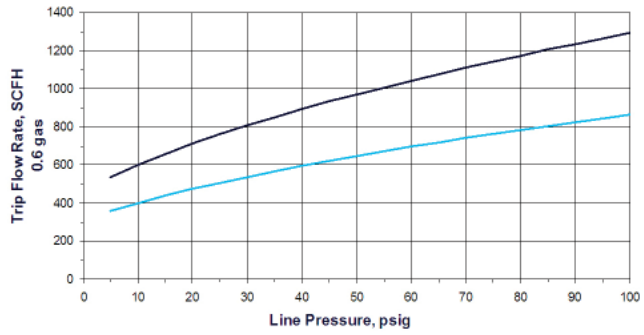
- Closure flow test
- Bleed-by flow rate/leak rate after closure test
- Pressure drop across EFV test
- Pressure drop just prior to closure
- Valve resetability test
- Snap-acting load test
- Cycle test

Results
The performance data provided on the following pages is given in SCFH of 0.6 specific gravity gas. The laboratory testing was performed using dry air, and the results were mathematically converted for 0.6 specific gravity gas.

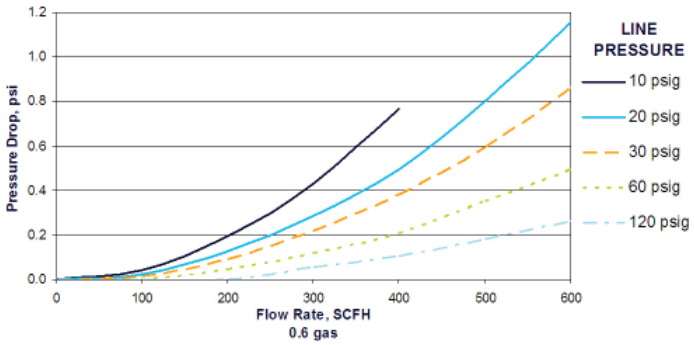
Performance Curves

Elster Perfection 400 SCFH EFV

Trip Flow Rate vs Line Pressure

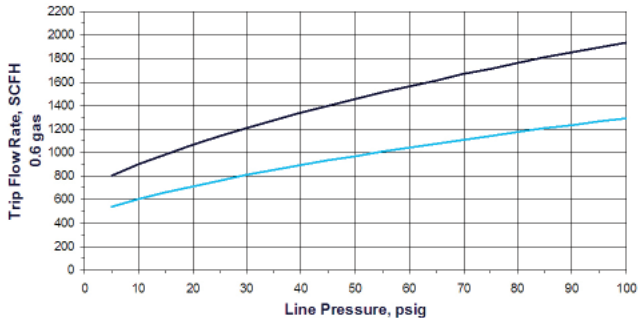


Pressure Drop vs Flow Rate

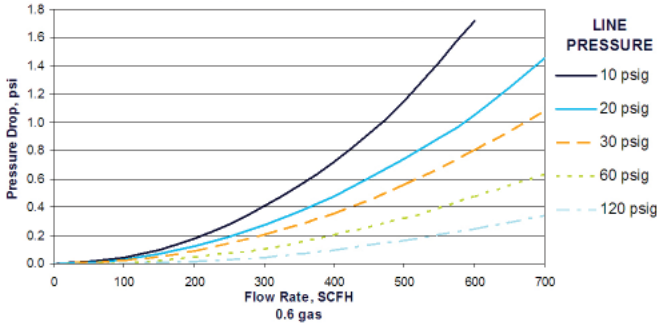


Elster Perfection 600 SCFH EFV

Trip Flow Rate vs Line Pressure



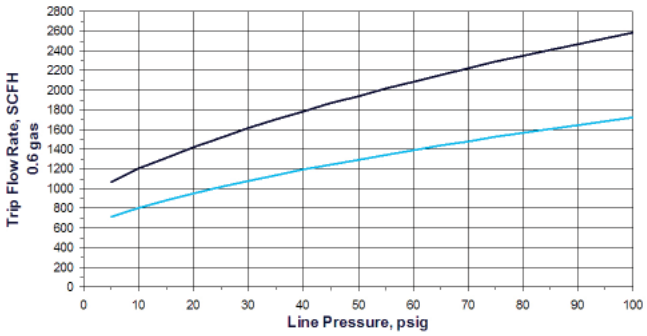
Pressure Drop vs Flow Rate



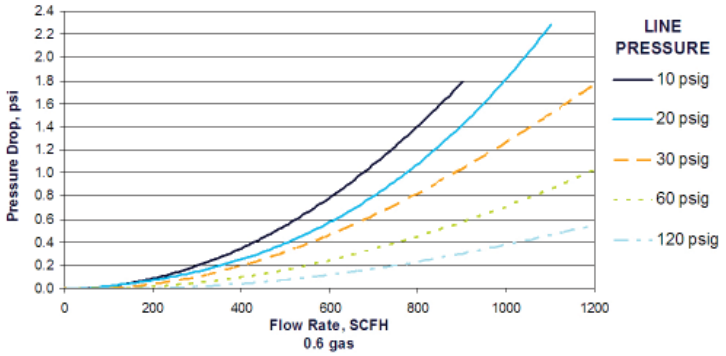
Performance Curves

Elster Perfection 800 SCFH EFV

Trip Flow Rate vs Line Pressure

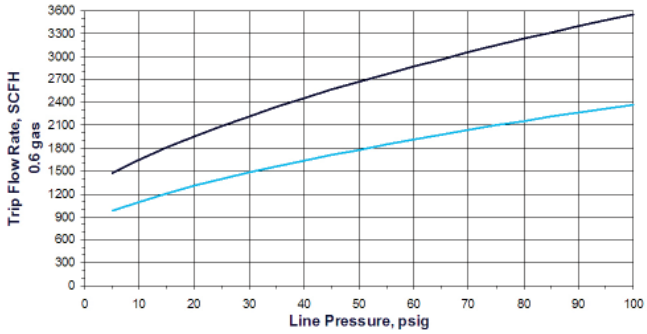


Pressure Drop vs Flow Rate

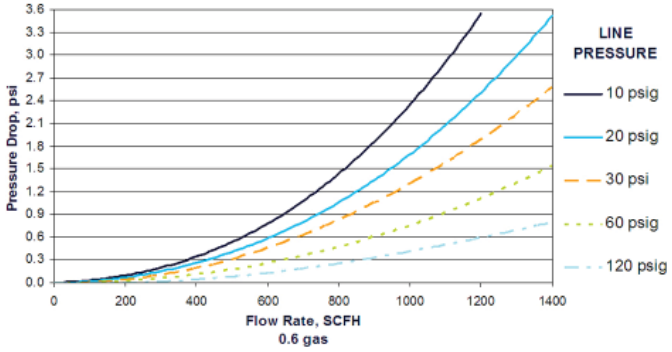


Elster Perfection 1100 SCFH EFV

Trip Flow Rate vs Line Pressure

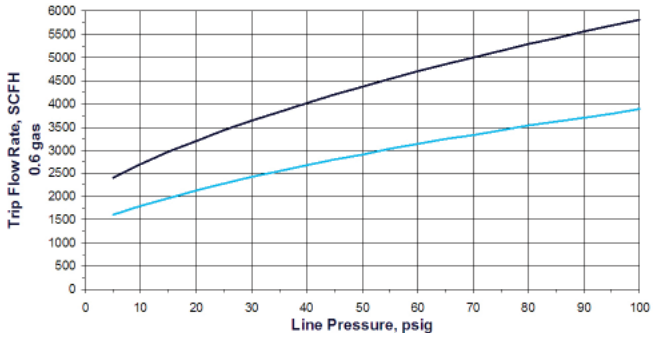


Pressure Drop vs Flow Rate

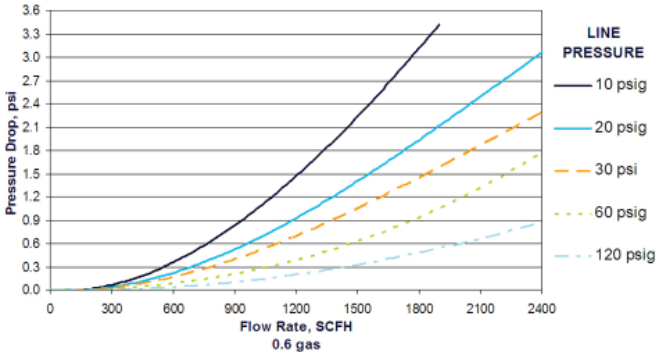


Elster Perfection 1800 SCFH EFV

Trip Flow Rate vs Line Pressure



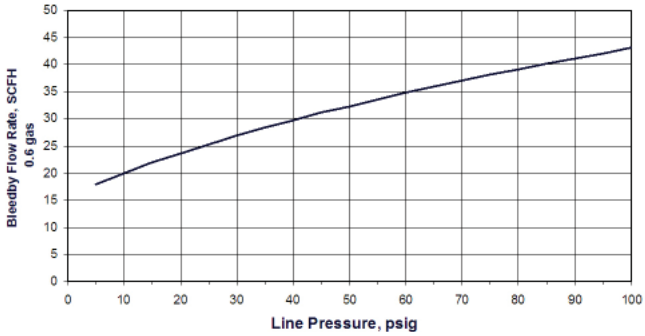
Pressure Drop vs Flow Rate



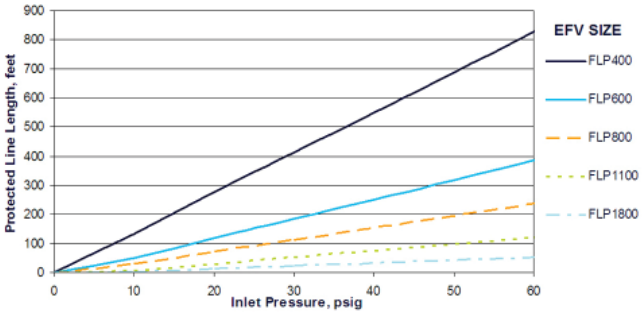
Performance Curves

Elster Perfection EFV - All Sizes

Max Bleedby Flow vs Line Pressure

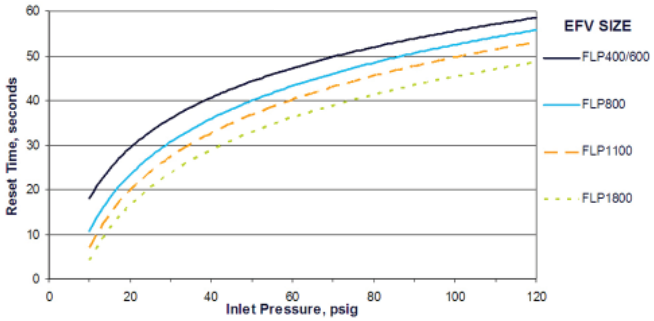


Protected Line Length vs Inlet Pressure
1/2 CTS -0.90 Wall



Elster Perfection EFV - All Sizes

Reset Time* vs Inlet Pressure
1/2 CTS x 0.090 Wall PE Tubing, 60 FT (112 in^3)



* Reset time may vary slightly depending on specific gravity of gas.

Additional Service Line Diameters

To estimate a maximum reset time for 60 feet of 3/4 IPS, 1 CTS or 1 IPS service lines, reference the graph above and multiply the time by the given factor:

Tubing Size	Multiplication Factor
3/4 IPS	3.7
1 CTS	3.9
1 IPS	5.9

About Elster Group

Elster Group is the world's leading manufacturer and supplier of highly accurate, high quality, integrated metering and utilization solutions to the gas, electricity and water industries. In addition, through its subsidiary Ipsen International, it is the leading global manufacturer of high level thermo-chemical treatment equipment.

The group has over 8,500 staff, operations in 38 countries and serves over 115 markets around the world. Elster's high quality products and systems reflect the wealth of knowledge and experience gained from over 170 years of dedication to measuring precious resources and energy.

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EP-PS0001-EN-P - January 2008