

Corrosion-Resistant Visual Flow Indicators Described in Short-Form Catalog Sheet

Lined Visual Flow Indicators Resist Corrosive Chemicals

Data Sheet 01-0070 Rev. 08/02



Designed to handle a wide variety of common corrosive chemicals, the new lined L.J. Star visual flow indicators are offered in Teflon® PFA, Tefzel® and Kynar® models. These new flanged units provide clear viewing and dependable service even at high pressures and at temperatures up to 500 F. Also, for particularly demanding applications, glass shields of FEP®, KEL F® or mica are available as an option.

Seven sizes of these new lined visual flow indicators are available, ranging from 1 inch to 8 inches. A user can select either 150 psi or 300 psi versions, and models that incorporate drip tube or flutter flow indicators are also available. All models are full ANSI rated and most feature ultra-sturdy investment cast bodies fitted with independently bolted glass retainers.

Standard material of construction is acrylic-enamel coated carbon steel but, for especially aggressive environments, stainless steel can be specified. Standard seal gasket is Teflon with other materials as options.

For the ultimate in safety, L.J. Star lined visual flow indicators are also available with Metaglas® sight windows...providing the optics of glass and the strength of steel.

For additional information and applications assistance contact:
L.J. Star Incorporated, P.O. Box 1116, Twinsburg, OH 44087
Phone: (330) 405-3040 • Fax: (330) 405-3070
E-mail: view@ljstar.com • Website: www.ljstar.com

L.J. STAR
INCORPORATED

Sight-glass discs or viewports typically fail because the glass cannot tolerate a particular combination of shock and the bending forces they encounter when operating under pressure. When under stress is applied to conventional glass - both the stress introduced by system pressure and that indirectly induced during reinstallation after cleaning - the force is concentrated along tensile stress lines. At some point the lines develop into cracks which can immediately compromise the barrier. Worse, a general pattern of cracking can occur suddenly, either spontaneously or as the result of a slight impact, compromising the physical integrity of the glass. So, when a conventional glass element fails, it can do so with absolutely no warning, suddenly developing a leak or shattering into fragments with explosive force.

Metaglas windows accept a much higher level of stress without damage because, being uniformly prestressed, they are more uniformly elastic. Cracks are absorbed by the homogeneous compression stress that is imposed across the full section of the glass. When further stressed to failure, by either extreme pressure or by impact, the reaction is a progressive pattern of spalling or slivering, usually on the external surface of the glass, and the barrier is uncompromised.

* U.S. Patent # 4,961,628

A short-form catalog sheet describes a line of corrosion-resistant visual flow indicators from L.J. Star Inc. The units are similar in most respects to the flanged L.J. Star visual flow indicators designed for non-corrosive service. These corrosion-resistant models, however, are lined with a choice of Teflon®, PFA, Tefzel® or Kynar®. The linings cover the entire inner surface of the units so that corrosive process fluids never make contact with any metallic parts.

The catalog sheet features a typical example of the design shown in detailed cut-away and the many available options are described in text. Among these options are a choice of either drip or flutter-flow indicators if required, 150 psi or 300 psi versions, and body materials of either investment cast carbon steel or stainless steel. Like the similar standard-service L.J. Star visual flow indicators, they are suitable for use at high pressures and temperatures to 500° F. (260°C) All are full

ANSI rated and include independently bolted glass retainers.

For the ultimate in safety these units are available equipped with Metaglas® sight windows, mechanically prestressed borosilicate glass that is shock resistant and essentially immune to sudden disastrous failure under pressure. A brief description of the design and capabilities of Metaglas windows is also included.

For additional information, contact L.J. Star Incorporated, P.O. Box 1116, Twinsburg, OH 44087. Phone: 330-405-3040. Fax: 330-405-3070. Email: view@ljstar.com. These and other visual flow indicators are available on-line at our web site: www.ljstar.com