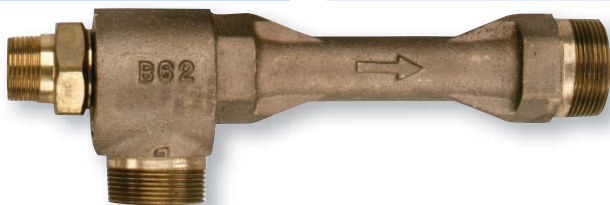
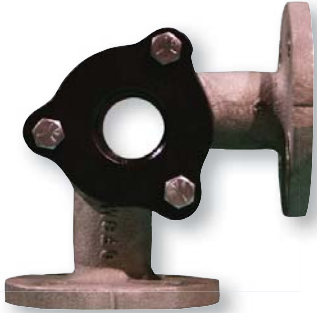




# JACOBY-TARBOX®





# JACOBY-TARBOX®

Over 95 years of Quality!



Jacoby-Tarbox® Sight Flow Indicators are manufactured by the Clark-Reliance Corporation. They are distributed world-wide to meet routine as well as the most punishing applications. All major Sight Flow Indicator styles are offered in a variety of sizes with threaded, flanged or other connections, ranging from 1/4" (DN8) to 16" (DN400). Operating pressures range from full vacuum to 3000 PSIG (207 Bar) depending on style and model. ALL sight flow indicators are hydrostatically tested to 150% of rated pressure and are guaranteed free of material and manufacturing defects.

Standard Jacoby-Tarbox® Sight Flow Indicators and Sight Windows can be specified to accommodate almost all application requirements. Special indicators can be designed and manufactured to meet unique installation, processing or flow criteria. A wide range of indicator body and gasket materials, glass types and window designs, non-wetted parts and materials, plus special corrosion-resistant lined indicators are available. All units are "built to order" with "off the shelf" deliveries.

## Compliance... "Out of the Box"

Sight Flow Indicators and Sight Windows, properly applied and maintained, are valuable assets to production facilities throughout the world. Jacoby-Tarbox® will work with your staff to increase the duty cycle of the units in your application. Minimizing down time, will help maximize process output. Material choice, use of linings, gasket pick, window material or style, and shielding to protect the window are some of the attributes reviewed to evaluate the unit for a given process.

To help with proper application, Jacoby-Tarbox® sight flow indicators and sight windows are designed to meet or exceed application specifications right "out of the box". Units are available for the following specifications:



Section VIII B2.1 B16.5 B31.1 B31.3 BPE



ASTM

CRN



FDA

USDA



DIN flanged

JIS flanged

MIL flanged

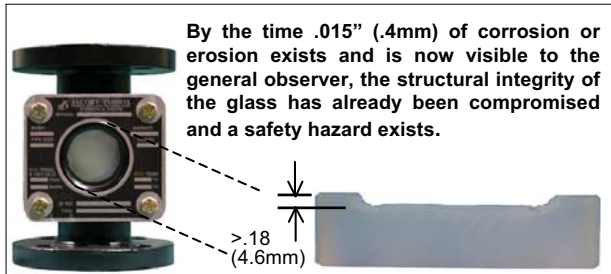
PED

If your application has other requirements contact your Jacoby-Tarbox® representative or a Jacoby-Tarbox Application Specialist. All units are shipped with maintenance notes attached directly to the unit.

# Innovative Solutions...

## Shielding: UniShield® Window Protection

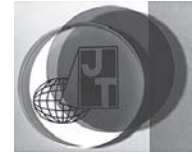
Only Jacoby-Tarbox® offers UniShield® Window Protection as a unique alternative to traditional shielding methods with excellent clarity and without minimizing view due to darkening. More aggressive chemicals and the addition of negative pressures during, or between, processes pose a unique problem for shielding, often limiting the life of the shield. UniShield will extend the duty cycle of the window, increasing “up time” for the process.



UniShield, if permeated, shows a change in the assembly before glass integrity is compromised, allowing UniShield to work as an “early warning” device. Small whitish dots indicate to the operator that the shield has been permeated long before any changes in unit integrity occur, allowing time for safe convenient replacement during the next scheduled outage.



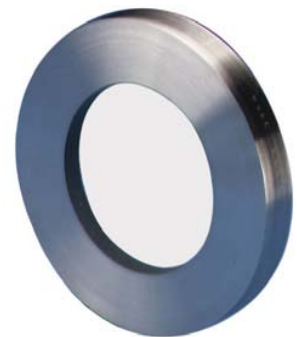
UniShield



Mica

## Glass Safety: UniGlas® Safety Sight Window Glass

UniGlas® discs are the only glass discs that may be placed back into service safely after use. UniGlas discs have glass fused to metal, and only the metal is placed in a compressive load by the assembly. **Ordinary glass discs**, stressed by this type of load within an assembly, **must be discarded** after use. Hidden damage within the glass is not visible by the naked eye. This damage make predicting performance impossible. Use UniGlas in all applications where flat borosilicate glass discs are installed. Only replacement gaskets are needed, which decreases the spare parts held in stores. Minimize handling errors and improper installation by removing glass material misidentification as well as any possibility of placing dangerous, used glass, back into service.



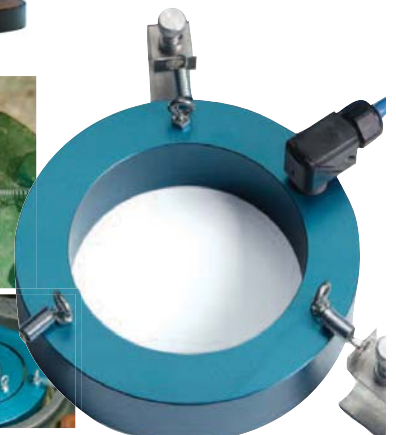
## Lighting: Phaeton® XTL & SL Explosion Proof Lights

The Phaeton® XTL (X-treme Tank Light) and SL (Sight Light), are examples of products designed with the customer's needs first. The XTL decreases the number of windows required on a vessel by enabling viewing and lighting in one window and can backlight 4" and larger sight flow indicators. The SL fits on smaller openings, often replacing “light pipes” and will fit sight flow indicators down to size 1/2”.



Phaeton SL

The LED light source is cool to the touch, and will not cause products to “bake on” the glass. This minimizes glass replacement and maximizes tank service time, while eliminating any risk of personal injury from burning. Power consumption is less than 1/20<sup>th</sup> of a 100 watt bulb. The mounting apparatus facilitates installation in minutes on most manufacturers sight windows and sight flow indicators with no disassembly or modification of the existing units required.



Phaeton XTL

# Sight Flow Indicators

## Full ASME Lines

– Designed to ASME B31.1 & B31.3 Requirements  
Pressure vs. Temperature Ratings *and*  
Materials of Construction



**Medium Pressure**  
– Class 150                      910-FA

**High Pressure**  
– Class 300                      F-910HPA -300  
– Class 600                      F-910HPA -600



935-FA

F-960HPA -300  
F-960HPA -600



608-FA

F-608HPA -300  
F-608HPA -600

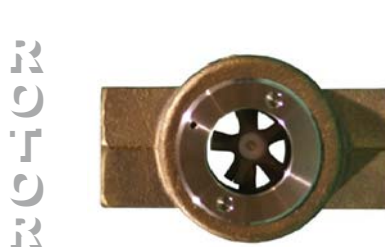
## Nominally Rated

– Threaded, Socket Weld, and Butt Weld  
Units to 3000 psig (207 Bar)



**Medium Pressure**  
– 150 psig (10.3 Bar) 100-S  
– Class 150                      100-SFA

**High Pressure**  
– 600 to 3000 psig S-100HP -600 / -1000  
(41.3 to 207 Bar g) S-100HP -2000 / -3000



300-S  
300-SFA

S-300HP -600 / -1000  
S-300HP -2000 / -3000



200-S  
200-SFA

S-200HP -600 / -1000  
S-200HP -2000 / -3000

## Indicators

**Flapper** - Horizontal & Upward Vertical Flow

**Plain or “No Flapper”** – Any Flow Direction

**Rotor** - Any Flow Direction

**Drip** - Downward Vertical Flow  
- “less than full” horizontal lines

**Flutter** - Low Volume Horizontal & Vertical Flow



100-S-FLTR  
FLTR = Flutter



910-FA (NF)  
(NF) = No Flap, or “Plain”

# Specialty Units

## 90° Angle

90° angle models are recommended when space or system characteristics make straight line indicators unsuitable. Angle models can be supplied plain, model 90, or with a drip tube, 90-D. Drip tubes are positioned into the center of the window area for easy observation. Plain models will operate effectively with solution flows in any direction.



90-D

## Jacketed

Jacketed models are recommended for improved temperature control at visual inspection stations along jacketed processing lines. Jackets are clamped on or welded on.



910-FA (NF) With  
Clamp-on Steam Jacket

## Tubular

Tube models are recommended where maximum visibility is required. They may be used only in systems that do not place mechanical strains on pipelines. Pressure ratings are 150 psig (10.3 Bar) or less depending on size. Models vary in length and are available up to 48" in length for flange sizes from 1/2" to 12".



805-S  
Threaded connection



830-F  
Flanged connection

## Sheathed Tubular

Cylindrical Sheathed Tube models are recommended for applications where increased visibility is required. They may be used in pipe line systems that operate under some degree of mechanical strain. Models are constructed using borosilicate tube glass and various "head" metals depending on application. Pressure ratings are 150 psig (10.3 Bar) or less depending on size.



4000-S  
Threaded Connection



860-F  
Flanged connection

# Hygienic Units

Patented special purpose hygienic models designed in accordance with ASME BPE and the 3-A<sup>®</sup> sight flow and window standard 65-00 are imperative for biotechnological, pharmaceutical, and food & beverage processing systems.



6000-C



7000-C

## TruSan™ 6000

Bulls-eye style made using a custom short-stack cross available with ISO Clamp and butt weld ends.

## TruSan™ 7000

Tubular style made using custom formed glass cylinder seals with standard ISO clamp gasket. Weld-free design eliminates ovality concerns.

## UniSan™ 6500

Glass fused to metal construction is incredibly impact resistant, allowing process viewing while protecting it from contamination.



6500

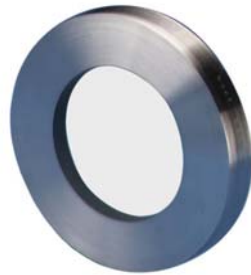
# Severe Service Solutions

## UniGlas® & Other Glass Materials

Jacoby-Tarbox® **UniGlas®** windows are designed with the highest safety factor, and are the strongest sight windows presently in use and are highly recommended. UniGlas, capable of handling most high pressure systems at temperatures from -435°F (-259C) to 600°F (316C), employs no glass bonding agents and requires no shims, packing, or adjusting screws for installation.

**Quartz** is available for applications above 500°F (260C) up to 2000°F (1100C).

**Borosilicate glass** remains standard in all Jacoby-Tarbox® sight flow indicators, **however, the far superior performance of UniGlas® is available on all models.**



### DUAL WINDOW OPTION

When FM Approval is required, include Dual Window tempered glass in your specification. Two identical windows are independently mounted at each opening, providing 100% redundancy for greater safety factors in applications where thermal shock or other upset conditions are a concern.

UniGlas® is also available as a Dual Window as shown here.



**SAFETY NOTE: ALL standard window options in Jacoby-Tarbox units maintain original ASME pressure rating. This unparalleled safety feature results from Jacoby-Tarbox's proprietary glass designs.**

## Body (head) Materials

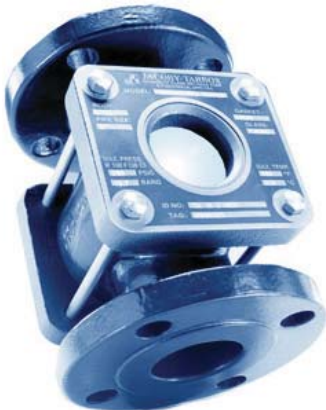
To meet specific performance requirements Jacoby-Tarbox® Sight Flow Indicators and Sight Windows, indicators can be manufactured from Carbon Steel, 316 stainless steel, Bronze, Alloy 20, Duplex, Hastelloy®, Inconel®, Monel®, other stainless steels and special alloys.

## Gasket Materials

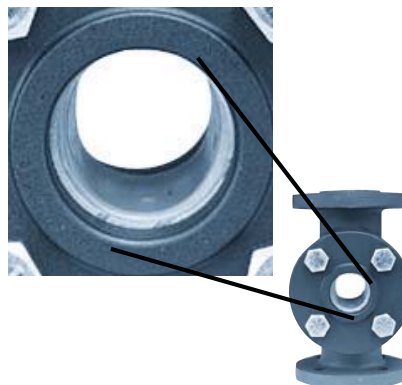
Jacoby-Tarbox® Sight Flow Indicators and Sight Windows employ neoprene as the standard gasket material. Other gaskets are available for compatibility with special fluids or operating/system characteristics. Choices include PTFE Gylon® 3545, Garlock® IFG 5500.

## Linings – Fluoropolymer lined sight flow indicators and More

Flanged sight flow indicators supplied with either a flutter or drip tube indicator, or with no indicator are available with a choice of corrosion-resistant linings. PFA Teflon®, PTFE Teflon, other specialty fluoropolymers, plastics, and rubber are available. In certain applications, these linings provide cost savings over indicators manufactured from high performance body materials. Linings are available in various application methods to specialize the lining for different service conditions from full vacuum to high pressures.



**910-FA-PFA**  
Carbon steel encapsulated  
in PFA Teflon



**910-FA-TFE**  
Ductile iron with blow-  
molded PTFE liner



**830-F-TFE**  
Tubular unit with  
replaceable PTFE liner

# Sight Windows

Jacoby-Tarbox® Sight Windows allow effective and economical viewing of tank, pressure vessel and piping system interiors. Models are available for all major Sight Window applications and connections.

## Security Sight Window

Security Sight Windows incorporate the safety features of the patented Factory Mutual® approved Dual Window, resulting in additional protection against stress concentration, thermal shock, corrosion or erosion, over-pressure, and external mechanical forces. Models are available with TFE (Teflon®), PFA or rubber lining. Bolt-on connection is designed to fit ASME standard flanges or studding outlets with ASME flange connection dimensions. Units available to 1500 psig (103 Bar).



5005-DW

## Bolt-on

**NEW, Model 5800 UniGlas Sight Windows** are two-piece, ASME rated units, each with a UniGlas window insert plus a separate retaining flange. Bolt-on connection is designed to fit ASME standard flanges or studding outlets with ASME flange connection dimensions.



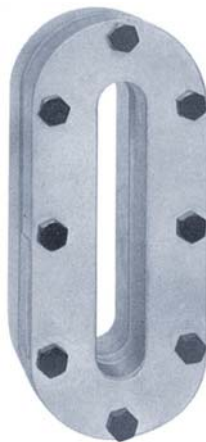
5800

## Pressure Vessel

Pressure Vessel Sight Windows, round and obround, are fabricated from code metals. They attach to pressure vessels conforming to Section VIII of the ASME Boiler & Pressure Vessel Code. Usable in any orientation, models are available with flat or curved pads. Round models, 5200-PVQ, may be specified with UniGlas®, Dual Windows, or UniGlas Dual Windows, and Quartz, all up to 600 psig (41.3 Bar). Obround models, 5300-PVQ, may be specified with Dual Windows and quartz. Both have flat weld pads standard, but are available with cylindrical and spherical radius cuts pads. Higher pressure available upon request.



5200-PVQ



5300-PVQ

## Weld-on

Weld Neck Sight Windows are welded directly to pipe ends or into tank and vessel walls. They provide a single-position viewing station.

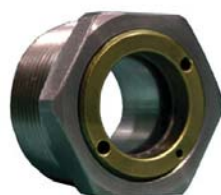


W-5000

Weld Pad Sight Windows are designed to be welded directly to tank or vessel walls or covers to become single-position viewing stations. Models are available with flat, cylindrical or spherically shaped pads. Standard 5200 windows are for use on non-ASME vessels up to 150 psig (10.3 Bar), and are available with flat, cylindrical, or spherical cut pads.

## Threaded

Threaded Sight Windows are available with male threads, S-5400, and female threads, S-5100 for threading directly to pipe ends or couplings. They provide a single-position viewing station.



S-5400



S-5100



5200

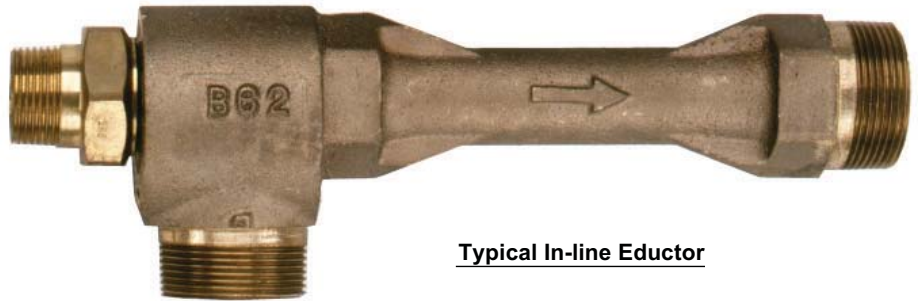
# Eductors

Jacoby-Tarbox® Eductors deliver a great value for your investment. Their advanced design provides superior flow paths for optimum performance, while the rugged construction is your assurance of reliability in demanding applications. Experienced applications personnel and flexible manufacturing capability enable Jacoby-Tarbox to meet tight delivery schedules without expedited manufacturing charges.

**Designed to ASME B31.1 & B31.3 Requirements...**

## In-line Eductors

Jacoby-Tarbox® Eductors are the most efficient way to pump many kinds of liquids, gases, and even solids. Applications are typically categorized as follows: Pumping Liquids, Pumping Gases, and Heating Liquids.



Typical In-line Eductor

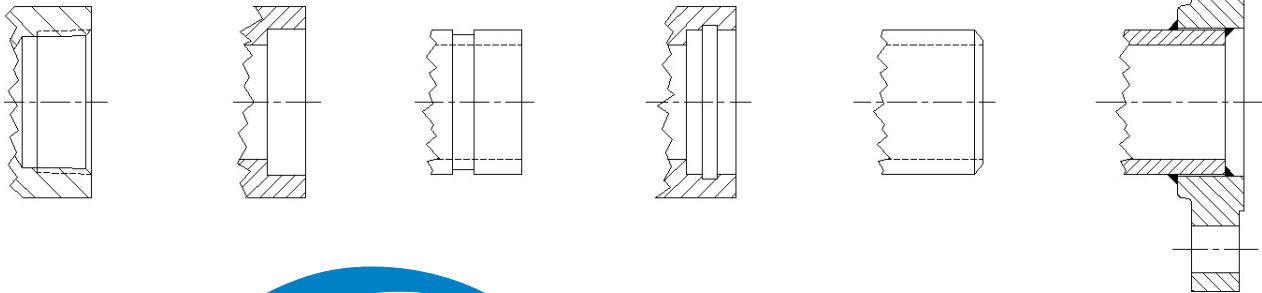
## In-Tank Eductors

The Jacoby-Tarbox® Tank Liquid Agitator (TLA) is designed for mixing, blending, suspension of solids and heating within tanks. The design amplifies pump capabilities in one application, quietly and efficiently heats in others, and all while saving operators time and utility costs.



TLA – Tank Liquid Agitator

**...with the connections your application requires.**



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