

METAGLAS®

SIGHT GLASSES

GLASS FUSED TO METAL

The Ultimate In Sight Window Safety

Resistant
To
Impact,
Pressure,
Thermal
and
Mechanical
Stresses.



U.S. Patent #4,961,628



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Metaglas Sight Glass Discs (DIN7079)

Glass Specifications: Borosilicate (DIN7080)

Metal Ring: Duplex Stainless Steel
Carbon Steel, Hastelloy "C"
(Material Test Reports Available)

Special Features

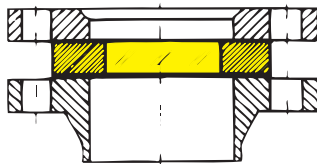
- Reliability against total failure due to the mechanically prestressed glass.
- Avoid the difficulty of insuring careful and complicated stress-free installation.
- Extremely long and continuous service.

Applications in:

- Flanged Sight Port
- Circular Weld Pad
- Visual Flow Indicators
- Threaded Ferrule Sightport
- Sanitary Clamps

Reusable

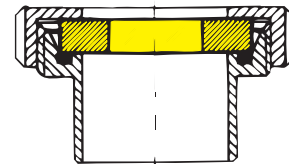
Metaglas can be reused in the same or other applications after removal from service; conventional borosilicate glass cannot.



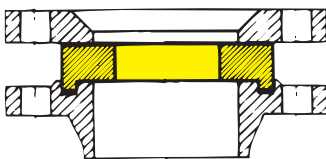
ANSI RAISED FACE BOLT-ON
Drawing 176



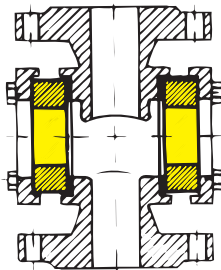
CIRCULAR WELD PAD
Drawing 173



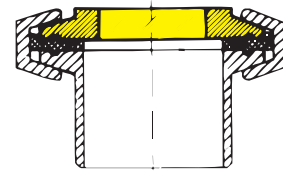
THREADED FERRULE SIGHTPORT
Drawing 182



ANSI TONGUE AND GROOVE BOLT-ON
Drawing 174



VISUAL FLOW INDICATOR
Drawing 177



SANITARY CLAMP FITTING
Drawing 180



Metaglas Threaded Sight Glasses

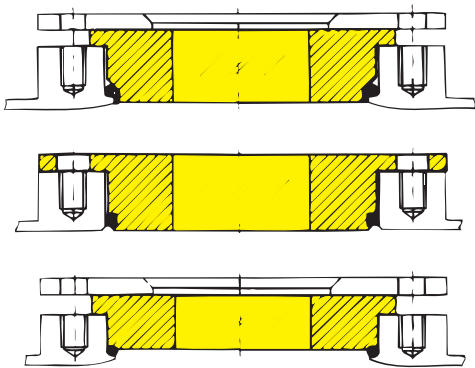
Hex and Round Style Heads
Screw threads, NPT Threads

Uses

- In hazardous locations
- Compression chambers
 - Sight glass lights
 - Fluid measurement
 - Turbulence in gear housings

Metaglas Sight Glass

Designed for aseptic use

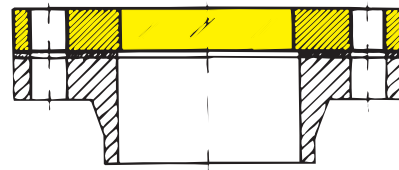


Advantages

Flush surfaces - no re-entrant corners



Metaglas ANSI Flanges (bolt-on)



Drawing 11.006-11.040 / ANSI 13A15 - 13A60

Uses (special applications only)

Only for flat-face flanges
Full face gasket required

Advantages

- No dirt build-up
- Surfaces are flush
- Decreased height
- Increased view diameter
- Eliminates cover flange

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GREATER SAFETY BY USE OF MECHANICALLY PRESTRESSED SIGHT GLASSES

To enable visual inspection of fluid flow, chemical reactions, mixing and other operations, pipe lines, reactors and many other types of process equipment are fitted with sight glasses. Accidents resulting from failure of sight glasses indicate that these components require special attention. For this reason, users and suppliers have long searched for new types of construction, which are easy to install and insure safe and uninterrupted operation.

METAGLAS sight glasses provide a solution. These mechanically prestressed glasses, fused with a dimensionally adapted metal frame - ring, constitute an alternative to conventionally annealed or thermally prestressed (tempered) glass discs. A principal advantage lies in the fact that the possibility of sudden, unexpected rupture is totally excluded and any crack that may develop at worst may slightly affect visibility.

Rupture tests have demonstrated that mechanically prestressed glass even after formation of a large number of cracks remains leak tight at pressures far exceeding the design pressure due to the homogeneous compressive stress constant throughout the entire cross section. This means, that in the event a crack does occur, the equipment can safely be kept on-stream. The glass in question need not be replaced until after completion of the production run.

In addition to the unsurpassed pressure and impact resistance, the metal frame provides rigidity to prevent breakage in the event of uneven bolt tightening during installation.

In accordance with safety criteria, METAGLAS sight windows have been subjected to the most rigorous tests by specific testing facilities in the chemical industry, and have subsequently been incorporated in their design standards.

METAGLAS sight glasses can be supplied for all mating faces (incl. ANSI, DIN, B.S.).

Technical specifications available on request.

Data Sheet 03-0010 4/00

Manufactured by **Herberts Industrieglas GmbH & Co. KG**, Germany

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