

WELD TO TANK  
SIGHT GLASS ZW15  
150 PSI

**Douglass**

See more, see better

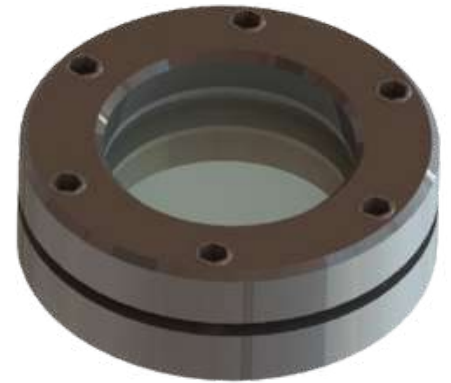


# WELD TO TANK

## SIGHT GLASS ZW15 - 150 PSI

### Overview:

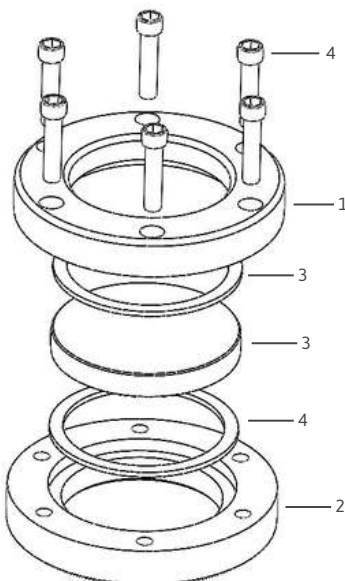
The Douglass ZW15 Weld-to-Tank Sight Glass is a robust and versatile solution designed for industrial applications that demand reliable visibility into tank processes. Engineered for tanks operating under 150 PSI, this sight glass combines ease of installation with a sleek, professional appearance. Its durable construction and compatibility with various materials make it ideal for a wide range of environments, from chemical processing to food and beverage production. The ZW15 offers both standard and customizable options, ensuring it meets the specific needs of any project, while its aesthetically pleasing design enhances the overall look of the installation.



### Advantages:

- **Ease of Installation:** The ZW15 is designed for quick and straightforward installation, reducing downtime and labor costs during setup. Its user-friendly design ensures that even complex installations can be completed efficiently.
- **Aesthetic Design:** The screws are positioned into the upper flange, giving the ZW15 a clean and professional appearance. This makes it an excellent choice for installations where visual appeal is important.
- **Customizable Options:** While the ZW15 comes in standard sizes, it offers customization options to meet specific project requirements, including adjustments to metal thickness, glass type, and gasket materials.
- **Cost-Effective Solution:** The ZW15 provides a reliable and durable sight glass solution at a competitive price, making it an excellent choice for industries looking to balance performance with cost-efficiency.
- **Durable Construction:** Built from high-quality materials like carbon steel or stainless steel, the ZW15 is resistant to corrosion and wear, ensuring long-term performance even in challenging environments.
- **Versatility:** Suitable for a wide range of industrial applications, from chemical processing to food and beverage production, the ZW15 can be adapted to various operating conditions and requirements.
- **Optional LED Lighting:** For installations in dark environments, the ZW15 can be equipped with an optional LED light, enhancing visibility and safety. The light is protected by a polycarbonate layer to prevent damage from potential explosions inside the tank.

Satisfaction Guarantee

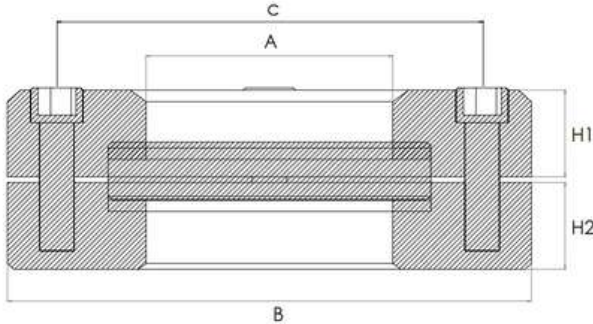


### Parts and Materials:

| Item | Part name              | Material options  |
|------|------------------------|---|
| 1    | Cover Flange           | <ul style="list-style-type: none"> <li>Stainless Steel 316L</li> <li>Stainless Steel 304</li> <li>Carbon Steel w/ anti-corrosion coating</li> </ul>   |
| 2    | Weld Pad               | <ul style="list-style-type: none"> <li>Stainless Steel 316L</li> <li>Stainless Steel 304</li> <li>Carbon Steel w/ anti-corrosion coating</li> </ul>   |
| 3    | Sight Glass (max temp) | <ul style="list-style-type: none"> <li>DIN7080 Tempered Borosilicate (280°C)</li> <li>DIN8902 Tempered Soda Lime</li> <li>Quartz, Min. 95% Fused Silica (1450°C)</li> </ul>                         |
| 4    | Gaskets* (max temp)    | <ul style="list-style-type: none"> <li>Non Asbestos (200°C)</li> <li>Exp Graphite (450°C)</li> <li>Graph/Kevlar (450°C)</li> <li>FKM (260°C)</li> <li>PTFE (260°C)</li> <li>EPDM (140°C)</li> </ul> |
| 5    | Bolts                  | <ul style="list-style-type: none"> <li>Stainless Steel 304</li> </ul>   |

\*Can have a combination in cushion / Gasket

# WELD TO TANK SIGHT GLASSES ZW15



| TECHNICAL INFORMATION       |  |        |        |        |        |        |        |        |
|-----------------------------|--|--------|--------|--------|--------|--------|--------|--------|
| ID                          |  | ZW15-2 | ZW15-3 | ZW15-4 | ZW15-5 | ZW15-6 | ZW15-7 | ZW15-8 |
| Visible Diameter (A)        |  | 2"     | 3"     | 4"     | 5"     | 6"     | 7"     | 8"     |
| Total Diameter (B)          |  | 4"     | 5"     | 6"     | 7-1/2" | 9"     | 10"    | 11"    |
| <b>Flange Thickness</b>     |  |        |        |        |        |        |        |        |
| Cover (H1)                  |  | 5/8"   | 5/8"   | 5/8"   | 3/4"   | 3/4"   | 1"     | 1"     |
| Weld Pad (H2)               |  | 3/4"   | 3/4"   | 3/4"   | 1"     | 1"     | 1-1/4" | 1-1/4" |
| <b>Glass Size*</b>          |  |        |        |        |        |        |        |        |
| Ø                           |  | 2-3/4" | 3-3/4" | 4-3/4" | 6"     | 7"     | 8"     | 9"     |
| Thickness                   |  | 5/8"   | 5/8"   | 3/4"   | 3/4"   | 3/4"   | 1"     | 1"     |
| Bolt Circle Diameter (C)    |  | 3-3/8" | 4-3/8" | 5-3/8" | 6-3/4" | 8"     | 9"     | 10"    |
| Tightening Torque* (ft/lbs) |  | 17     | 17     | 19     | 19     | 21     | 25     | 25     |

\*Glass Sizes are for Tempered Borosilicate glass only. Please contact us for details regarding any other glass material.  
\*Torque values may vary depending on gasket material. Please contact us for details regarding specific torque for your application.

## Tools and Materials Required:

- Welding machine
- Welding rods/electrodes (appropriate for materials)
- Torque wrench
- Gaskets (as specified)
- Bolts and nuts (as specified)
- Protective gear
- Optional: LED light kit

## Installation Instructions:

1. Preparation:
  - Clean the tank surface and align the sight glass with the tank's opening. Ensure all necessary components are available.
2. Position the Sight Glass:
  - Position the ZW15 sight glass on the tank and mark the weld locations if needed.
3. Welding:
  - Weld the sight glass flange to the tank using the appropriate technique. Ensure a continuous weld for a secure seal. Allow to cool naturally.
4. Install Glass and Gaskets:
  - Place the gasket on the flange, center the glass on it, and add a second gasket if required.
5. Secure the Assembly:
  - Align the upper flange, insert bolts, and tighten evenly using a criss-cross pattern. Use a torque wrench to achieve the specified torque.
6. Final Checks:
  - Inspect for secure welding, even gasket compression, and proper alignment. Check for any signs of damage.
7. Optional LED Light:
  - Install the LED light according to the manufacturer's instructions, and ensure proper connection and operation.
8. Testing:
  - Conduct a pressure test to check for leaks and ensure the sight glass is securely installed.

## Do's:

1. Do inspect regularly: Conduct routine inspections to ensure the sight glass, gaskets, and welds are in good condition.
2. Do replace gaskets as needed: Always use new, undamaged gaskets when performing maintenance or if leaks are detected.
3. Do clean the glass: Keep the sight glass clean both inside and outside to maintain clear visibility.
4. Do follow torque specifications: Use a torque wrench to evenly tighten bolts to the specified torque value during installation and maintenance.
5. Do depressurize the tank: Always depressurize the tank before performing any maintenance or replacement on the sight glass.

## Don'ts:

1. Don't reuse gaskets: Never reuse old gaskets; this can lead to leaks or improper sealing.
2. Don't overtighten bolts: Over-tightening can damage the glass or gaskets, leading to potential leaks or failure.
3. Don't ignore signs of damage: If you notice any cracks, chips, or other damage to the glass, replace it immediately to avoid safety hazards.
4. Don't use abrasive cleaners: Avoid using abrasive materials or harsh chemicals to clean the glass, as they can scratch or weaken it.
5. Don't skip regular maintenance: Failing to maintain the sight glass can lead to decreased performance, leaks, and potential safety issues.

## How to order:

To make the ordering and specification of your ZW15 easier, please ask your sales representative for a model by filling out the following chart: Keep in mind these are for standard items, any custom-made application can be tackled directly with your sales representative.

