

WELD TO TANK
SIGHT GLASS ZW15
OVAL DESIGN

Douglass

See more, see better



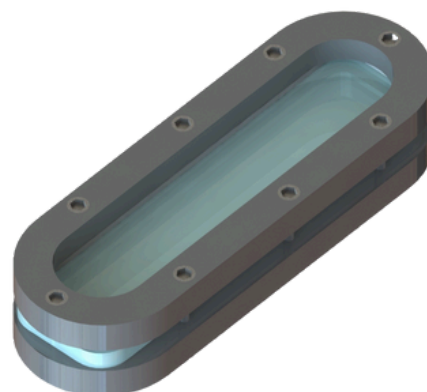
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Overview:

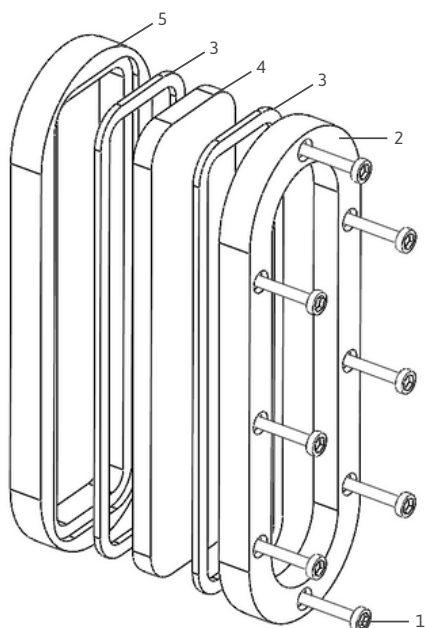
The Douglass Weldable oval Sight Glass is designed to provide a clear and reliable view of the internal processes within industrial tanks and vessels. This sight glass is engineered for durability and efficiency, making it an essential component for industries requiring real-time monitoring of liquid levels, temperatures, and other critical factors.

The Douglass Weldable oval Sight Glass is ideal for use in various industries, including chemical processing, oil and gas, pharmaceuticals, food and beverage, and more. It allows for the continuous observation of processes where safety and precision are paramount.



Advantages:

- **Ease of Installation:** The ZW15 is designed for quick and simple installation, minimizing downtime and labor costs during setup. Its intuitive design ensures even complex installations can be completed efficiently.
- **Aesthetic Design:** The screws are placed on the upper flange, giving the ZW15 a sleek and professional appearance. This makes it an ideal choice for installations where visual appeal is important.
- **Customizable Options:** While the ZW15 comes in standard sizes, it can be customized to meet specific project needs, including adjustments in metal thickness, glass type, and gasket materials.
- **Cost-Effective Solution:** The ZW15 offers a reliable and durable sight glass at a competitive price, making it a great option for industries aiming to balance performance and cost-efficiency.
- **Durable Construction:** Constructed from high-quality materials like carbon steel or stainless steel, the ZW30 is resistant to corrosion and wear, ensuring long-lasting performance even in challenging environments.
- **Versatility:** Suitable for a broad range of industrial applications, from chemical processing to food and beverage production, the ZW15 can adapt to various operating conditions and requirements.
- **Optional LED Lighting:** For installations in low-light 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.



Parts and Materials:

Item	Part name	Material options
1	Allen Bolts	<ul style="list-style-type: none">· Stainless Steel 316L· Stainless Steel 304
2	Cover Flange	<ul style="list-style-type: none">· Stainless Steel 316L· Stainless Steel 304· Carbon Steel w/ anti-corrosion coating
3	Gasket	<ul style="list-style-type: none">· Buna· Neoprene· Teflon· Sanitary Rubber· EPDM· Viton
4	Sight Glass	<ul style="list-style-type: none">· DIN7080 Tempered Borosilicate· DIN8902 Tempered Soda Lime· Polycarbonate· Quartz
5	Weld Pad	<ul style="list-style-type: none">· Stainless Steel 316L· Stainless Steel 304· Carbon Steel w/ anti-corrosion coating

Satisfaction



Guarantee

WELD TO TANK

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TECHNICAL INFORMATION			
50 PSI			
PART ID	Visible dimensions (internal) E x H	Weldable dimensions (external) F x B	Flange thickness (C x D)
ZW15-CO-200X50	200 x 50	270 x 120	15 x 25
ZW15-CO-270X50	270 x 50	340 x 120	15 x 25
ZW15-CO-340X50	340 x 50	410 x 120	15 x 25
ZW15-CO-410X50	410 x 50	480 x 120	15 x 25
ZW15-CO-480X50	480 x 50	550 x 120	15 x 25
ZW15-CO-550X50	550 x 50	620 x 120	15 x 25
ZW15-CO-620X50	620 x 50	690 x 120	15 x 25
ZW15-CO-690X50	690 x 50	760 x 120	15 x 25

TECHNICAL INFORMATION			
150 PSI			
PART ID	Visible dimensions (internal) E x H	Weldable dimensions (external) F x B	Flange thickness (C x D)
ZW15-CO-200X30	200 x 30	270 x 100	15 x 25
ZW15-CO-270X30	270 x 30	340 x 100	15 x 25
ZW15-CO-340X30	340 x 30	410 x 100	15 x 25
ZW15-CO-410X30	410 x 30	480 x 100	15 x 25
ZW15-CO-480X30	480 x 30	550 x 100	15 x 25
ZW15-CO-550X30	550 x 30	620 x 100	15 x 25
ZW15-CO-620X30	620 x 30	690 x 100	15 x 25
ZW15-CO-690X30	690 x 30	760 x 100	15 x 25

Installation Instructions for Oval Sight Glass (Douglass Brand):

Tools and Materials Required:

- Welding machine
- Welding rods/electrodes (appropriate for materials)
- Torque wrench (calibrated)
- Gaskets (as specified, typically non-reusable)
- Bolts and nuts (as specified)
- Protective gear (welding mask, gloves, etc.)
- Optional: LED light kit

1. Preparation:

- Clean the tank surface and ensure the opening is clear of any debris or rust.
- Ensure all necessary components (oval sight glass, gaskets, bolts, nuts, etc.) are available and in good condition.

2. Position the Oval Sight Glass:

- Place the Douglass Oval Sight Glass onto the tank's opening.
- Align the longer and shorter axes of the oval properly with the tank opening to ensure a proper fit.
- Mark the locations for welding if required.

3. Welding:

- Weld the oval sight glass neck or flange to the tank using an appropriate welding technique (TIG/MIG), ensuring the weld follows the curves of the oval shape uniformly.
- Pay special attention to the narrow ends of the oval to avoid uneven stress.
- Ensure a continuous, full-penetration weld to create a secure, leak-proof seal.
- Allow the welded area to cool naturally to avoid stress or warping.

4. Install Glass and Gaskets:

- Place the first gasket onto the flange of the oval sight glass, ensuring proper alignment along the entire oval shape.
- Carefully center the oval glass onto the gasket.
- Add a second gasket on top of the glass if required by the design.

5. Secure the Assembly:

- Align the upper flange with the oval neck/flange.
- Insert bolts into the designated holes, ensuring they are evenly spaced around the oval.
- Tighten the bolts gradually in a criss-cross (star) pattern to ensure even compression of the gasket around the entire oval.
- Use a torque wrench to tighten the bolts to the specified torque values, avoiding over-tightening, especially around the narrower ends of the oval.

6. Final Checks:

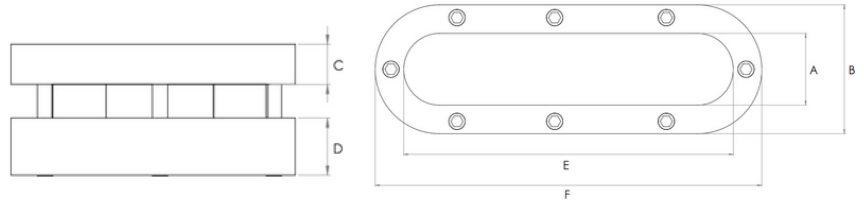
- Inspect the welding for any gaps, cracks, or defects.
- Ensure the gasket is evenly compressed along the entire oval shape and that the sight glass is securely aligned with no signs of stress or damage.

7. Optional: Install LED Light:

- Install the optional LED light kit according to the manufacturer's instructions.
- Ensure the light is properly connected and functional.

8. Testing:

- Perform a pressure test to verify that there are no leaks and the oval sight glass is securely installed.
- Inspect for any potential misalignments or weak points, especially around the narrower ends of the oval.



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.

ZW15-CO -	-	-	-	-	-	-	-	-
	↑	↑	↑	↑	↑	↑	↑	↑
	Visible Diameter	Flange Material:		Gasket Material:		Sight Glass Material:		
		• S6: SS316		• EG: Expanded Graphite		• TB: Tempered Borosilicate		
		• S4: SS304		• NA: Non Asbestos		• QZ: Quartz		
		• CS: Carbon Steel		• PT: PTFE		• SL: Tempered Soda Lime		
				• GK: Graphite/Kevlar				