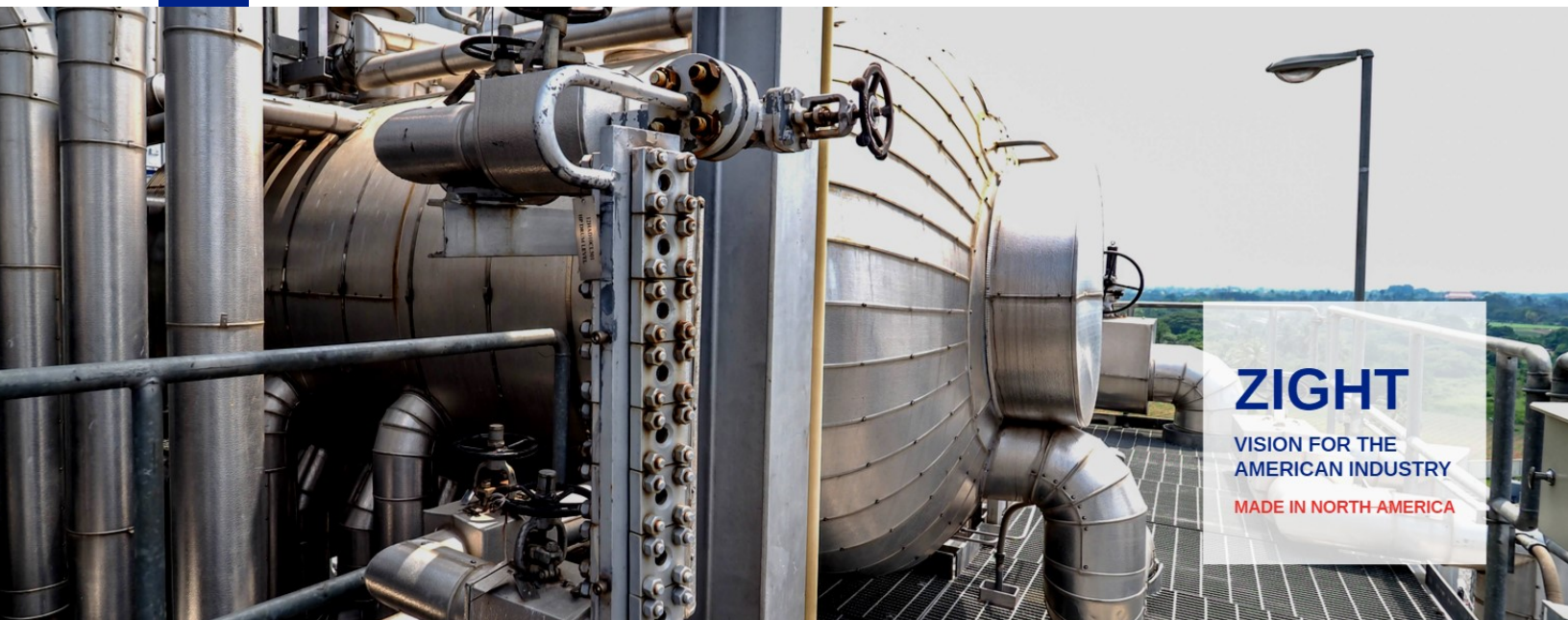


ZIGHT

MADE IN NORTH AMERICA



ZIGHT

VISION FOR THE
AMERICAN INDUSTRY

MADE IN NORTH AMERICA

INDUSTRIAL GLASS

VISION FOR THE AMERICAN INDUSTRY

ZIGHT
MADE IN NORTH AMERICA

QUARTZ SIGHT GLASS

FUSED SILICA FOR HIGH TEMPERATURE

MIN 95%

ZIGHT



QUARTZ SIGHT GLASS

FUSED SILICA

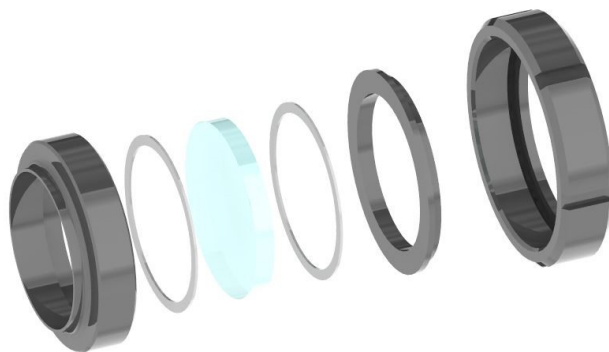
MIN 95%

ZIGHT GLASS

Manufactured in Quartz Glass, these sight glasses are used in several applications where the operating temperature ranges above 1000F, and thermal shock is greater than 280 F

Special dimensions of glasses are available upon request, where the minimum diameter is 10mm, and the maximum diameter is 350mm. The thickness can be manufactured to a minimum of 3mm and a maximum of 25mm. Do not hesitate to contact us for recommendations as to which sight glass fits your application the best.

Please do not hesitate to contact us for any inquiry you may have, we would be happy to provide you with prices for specific requests.





QUARTZ SIGHT GLASS

FUSED SILICA

MIN 95%

TECHNICAL INFORMATION

PHYSICAL PROPERTY	TESTING METHOD	VALUE OBTAINED
THERMAL EXPANSION COEFFICIENT	ISO 7991	$6.2 \times 10^{-7} \text{°K}$
DENSITY AT 25°C	SN 7005 13	2.20 g/cm ³
REFRACTIVE INDEX ($\lambda = 587.6\text{nm}$) _{nd}		1.425
TRANSFORMATION TEMPERATURE	ISO 7884-8	1500°C
HIGHEST SHROT-TERM WORKING RANGE	ISO 7884-7	1450°C
THERMAL SHOCK RESISTANCE	ISO 7884	500 K
YOUNGS MODULUS		68 MPa
POISSON CONSTANT		0.17
THERMAL CONDUCTIVITY	20°C - 100°C λ	0.003 CAL
PHOTOELASTIC CONSTANT	DIN 52314	$(4.00 \times 10^{-6}) (\text{mm}^2/\text{N})$
SPECIFIC ELECTRIC RESISTANCE	DIN 52326	250°C
DIMENSIONAL TOLERANCES DIAMETER	DIN 8902	PASS (SEE ANEX B1)
DIMENSIONAL TOLERANCES THICKNESS	DIN 8902	PASS (SEE ANEX B1)

OPTICAL PROPERTY	TESTING METHOD	VALUE OBTAINED
BUBBLE ON GLASS	DIN 7080	PASS (SEE ANEX A1)
MARKINGS ON GLASS	DIN 7080	NO MARKING
EDGE TOLERANCES (CHAMFER ON GLASS)	DIN 7080	PASS (SEE ANEX B2)
VISCOUS KNOTS	DIN 7080	NON-VISIBLE NO EYE
CRYSTALLINE INCLUSIONS	DIN 7080	LESS THAN 0.2MM



QUARTZ SIGHT GLASS

FUSED SILICA

MIN 95%

Special dimensional design upon request is available

(DIAM MIN 10mm MAX 350mm) / (THICKNESS MIN 3mm Max 35MM)

	Glass Diameter	Glass Thickness	Visible Diameter	Pressure Resistance (BAR)	Pressure Resistance (PSI)
AMERICAN UNITS, MOST STANDARD SIZES	4"	3/4"	3-1/4"	25 BAR	362 PSI
	5"	3/4"	4"	16 BAR	232 PSI
	6"	3/4"	5"	10 BAR	145 PSI
	6-3/4"	3/4"	5-3/4"	10 BAR	145 PSI
	8-3/8"	3/4"	7-3/8"	8 BAR	116 PSI
INTERNATIONAL UNITS, MOST STANDARD SIZES	63 mm	10 mm	48 mm	16 BAR	232 PSI
	80 mm	12 mm	65 mm	16 BAR	232 PSI
	100 mm	15 mm	80 mm	16 BAR	232 PSI
	125 mm	15 mm	100 mm	10 BAR	145 PSI
	125 mm	20 mm	100 mm	16 BAR	232 PSI
	150 mm	20 mm	125 mm	10 BAR	145 PSI
	150 mm	25 mm	125 mm	16 BAR	232 PSI
	175 mm	20 mm	150 mm	10 BAR	145 PSI
	175 mm	25 mm	150 mm	16 BAR	232 PSI
	200 mm	20 mm	175 mm	8 BAR	116 PSI
	200 mm	25 mm	175 mm	10 BAR	145 PSI
	200 mm	30 mm	175 mm	16 BAR	232 PSI
	250 mm	25 mm	225 mm	8 BAR	116 PSI
250 mm	30 mm	225 mm	10 BAR	145 PSI	

d1	TOTAL GLASS DIAMETER
d2	VISIBLE GLASS DIAMETER
p	PRESSURE IN BAR
δ	SAFETY FACTOR (5 RECOMMENDED)
σ	SURFACE COMPRESSIVE STRESS (70N/mm2)

$$Thickness\ in\ mm \geq 0.55 \cdot \frac{d_1 + d_2}{2} \sqrt{\frac{p \cdot \delta}{10 \cdot \sigma}}$$

**QUARTZ SIGHT GLASS****ANEX A****A1 -**

Bubble diameter, d_3	Permissible number of bubbles
$d_3 < 0,3$	3 per cm ² of sight glass
$0,3 \leq d_3 \leq 0,5$	10 per sight glass
$0,5 < d_3 \leq 1$	4 per sight glass
$1 < d_3 \leq 2$	2 per sight glass

A2 - MARKINGS ON GLASS

**BECAUSE OF THE THERMAL RESISTANCE, THIS
GLASS IS NOT MARKED**



QUARTZ SIGHT GLASS

ANEX B

B1 - DIMENSIONAL TOLERANCES

Dimensions in mm

Diameter d_1			Thickness s	
$d_1 \leq 135$	$150 \leq d_1 \leq 200$	$d_1 > 200$	$10 \leq s \leq 20$	$s > 20$
$\pm 0,5$	$\pm 0,8$	± 1	+0,5 -0,25	+0,8 -0,4

B2 - EDGE TOLERANCES

Diameter d_1	Edge dimensions
≤ 100	-1,0 -0,3
> 100	-1,5 -0,3