

ZIGHT

MADE IN NORTH AMERICA

A photograph of a male worker with a beard, wearing a red hard hat, safety glasses, and a red jacket. He is looking intently at a large piece of industrial machinery, which includes a blue valve with a handwheel and a large silver cylindrical component. The background is slightly blurred, showing other industrial structures.

ZIGHT

VISION FOR THE
AMERICAN INDUSTRY

MADE IN NORTH AMERICA

INDUSTRIAL GLASS

VISION FOR THE AMERICAN INDUSTRY



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TUBULAR LEVEL GAUGE GLASS

RED LINE AND TRANSPARENT TUBE



LEVEL GAUGE GLASS

RED LINE AND TRANSPARENT

ZIGHT GAUGE GLASS

Manufactured in 3.3 Borosilicate Glass, these level gauge glass tubes are used in several applications where a good chemical resistance and low thermal expansion coefficient are required. Outside Diameters go from 1/2" to 1-1/2", and length of the tubes from 1" to 144". Ends are cut with a special diamond equipment in order to assure sealing and avoid sharp edges.

ZIGHT BOROSILICATE TUBES are available in different wall thicknesses according to customer specifications, and both in Red Line and Transparent. The Red Line tube is treated with a special Paint (two White lines and one red line) which creates an optical effect that magnifies the level of the fluid, and allows a distant and quick inspection.

Indication Types

Red Line - High Contrast

Creates an optical effect where the red line among two white lines is magnified, allowing distant observation of the fluid.

Transparent - Clear Tube

Transparent tube, recommended for when the fluid is not translucent or the color in the level is important for the process at hand.





LEVEL GAUGE GLASS

GLASS PROPERTIES

Acc DIN3585

TECHNICAL INFORMATION

PHYSICAL PROPERTY	TESTING METHOD	VALUE OBTAINED
THERMAL EXPANSION COEFFICIENT	ISO 7991	$3.3 \times 10^{-6} \text{°K}$
DENSITY AT 25°C	SN 7005 13	2.23 g/cm ³
REFRACTIVE INDEX ($\lambda = 587.6\text{nm}$)nd		1.472
TRANSFORMATION TEMPERATURE	ISO 7884-8	560°C
HIGHEST SHROT-TERM WORKING RANGE	ISO 7884-7	500°C
THERMAL SHOCK RESISTANCE	ISO 7884	180 K
YOUNGS MODULUS		63.150 MPa
POISSON CONSTANT		0.20
THERMAL CONDUCTIVITY	20°C - 100°C λ	$(1.2)(\text{W}\cdot\text{m}^{-1})(\text{K}^{-1})$
PHOTOELASTIC CONSTANT	DIN 52314	$(4.00 \times 10^{-6})(\text{mm}^2/\text{N})$
SPECIFIC ELECTRIC RESISTANCE	DIN 52326	250°C
DIMENSIONAL TOLERANCES DIAMETER		± 0.018
DIMENSIONAL TOLERANCES THICKNESS		± 0.010
CHEMICAL PROPERTIES	TESTING METHOD	VALUE OBTAINED
HYDROLITIC RESISTANCE	ISO 719	HGB 1
ACID RESISTANCE	ISO 1776	CLASS S1
ALKALINE RESISTANCE	ISO 695	SLASS A2
CHEMICAL COMPOSITION	SiO ₂	Min 80% Content
	B ₂ O ₃	Min 13% Content
	Na ₂ O + K ₂ O	Min 4,5% Content



LEVEL GAUGE GLASS

PRESSURE RATING

Special dimensional design upon request is available

OUTSIDE DIAMETER MIN 5mm / MAX 350mm

THICKNESS MIN 1mm / MAX 12mm

LENGHT MIN 1cm / MAX 3700mm

Most common used sizes of gauge glasses, for other dimensions, please consult with authorized ZIGHT agent.

OPERATING PRESSURE				
OD	WT	LENGHT	LOW TEMPERATURE UP TO 90°C	STEAM SERVICE 100-200°C
1/2"	1/8"	12"	450 PSI	340 PSI
		24"	320 PSI	310 PSI
		36"	245 PSI	190 PSI
		48"	200 PSI	100 PSI
		60"	150 PSI	NOT RECOMMENDED
		72"	115 PSI	NOT RECOMMENDED
5/8"	7/64"	12"	325 PSI	275 PSI
		24"	250 PSI	180 PSI
		36"	200 PSI	150 PSI
		48"	170 PSI	100 PSI
		60"	130 PSI	NOT RECOMMENDED
		72"	100 PSI	NOT RECOMMENDED
5/8"	1/8"	12"	400 PSI	300 PSI
		24"	315 PSI	250 PSI
		36"	240 PSI	170 PSI
		48"	200 PSI	120 PSI
		60"	150 PSI	NOT RECOMMENDED
		72"	100 PSI	NOT RECOMMENDED
5/8"	7/32"	12"	600 PSI	350 PSI
		24"	550 PSI	300 PSI
		36"	500 PSI	220 PSI
		48"	350 PSI	150 PSI
		60"	250 PSI	NOT RECOMMENDED
		72"	150 PSI	NOT RECOMMENDED

FOR INTERMEDIATE MEASURES, USER MUST CONSIDER THE ONE DIRECTLY ABOVE



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OPERATING PRESSURE				
OD	WT	LENGHT	LOW TEMPERATURE UP TO 90°C	STEAM SERVICE 100-200°C
3/4"	7/64"	12"	325 PSI	275 PSI
		24"	250 PSI	180 PSI
		36"	200 PSI	150 PSI
		48"	170 PSI	100 PSI
		60"	130 PSI	NOT RECOMMENDED
		72"	100 PSI	NOT RECOMMENDED
3/4"	1/8"	12"	400 PSI	300 PSI
		24"	315 PSI	250 PSI
		36"	240 PSI	140 PSI
		48"	190 PSI	100 PSI
		60"	145 PSI	NOT RECOMMENDED
		72"	100 PSI	NOT RECOMMENDED
3/4"	1/4"	12"	600 PSI	350 PSI
		24"	550 PSI	300 PSI
		36"	500 PSI	220 PSI
		48"	350 PSI	150 PSI
		60"	250 PSI	NOT RECOMMENDED
		72"	150 PSI	NOT RECOMMENDED
7/8"	5/32"	12"	400 PSI	300 PSI
		24"	315 PSI	250 PSI
		36"	240 PSI	150 PSI
		48"	190 PSI	100 PSI
		60"	145 PSI	NOT RECOMMENDED
		72"	100 PSI	NOT RECOMMENDED

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OPERATING PRESSURE				
OD	WT	LENGHT	LOW TEMPERATURE UP TO 90°C	STEAM SERVICE 100-200°C
1"	5/32"	12"	300 PSI	125 PSI
		24"	250 PSI	100 PSI
		36"	220 PSI	70 PSI
		48"	180 PSI	NOT RECOMMENDED
		60"	140 PSI	NOT RECOMMENDED
		72"	100 PSI	NOT RECOMMENDED
1"	1/4"	12"	600 PSI	350 PSI
		24"	550 PSI	300 PSI
		36"	500 PSI	220 PSI
		48"	350 PSI	NOT RECOMMENDED
		60"	250 PSI	NOT RECOMMENDED
		72"	150 PSI	NOT RECOMMENDED
1-1/4"	5/32"	12"	220 PSI	100 PSI
		24"	200 PSI	80 PSI
		36"	170 PSI	70 PSI
		48"	150 PSI	NOT RECOMMENDED
		60"	125 PSI	NOT RECOMMENDED
		72"	100 PSI	NOT RECOMMENDED
1-1/2"	5/32"	12"	200 PSI	70 PSI
		24"	175 PSI	50 PSI
		36"	150 PSI	NOT RECOMMENDED
		48"	125 PSI	NOT RECOMMENDED
		60"	100 PSI	NOT RECOMMENDED
		72"	75 PSI	NOT RECOMMENDED

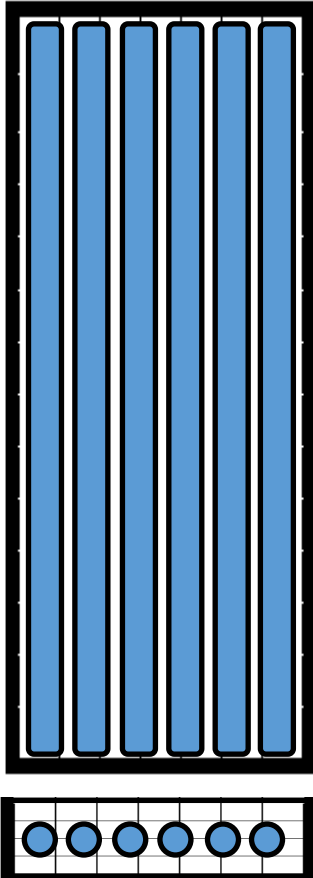
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LEVEL GAUGE GLASS

GLASS PACKAGING



At ZIGHT we understand the importance of a proper packaging in the tube.

All tubes are packaged individually inside a set of patented polyurethane foam, which prevents scratches and glass breakage. All tubes are also packed inside a plywood box, which gives support to the overall packaging and tightens the foam with the tubes.

A standard box consists of 6 tubes in each layer (the base). In case less than 6 tubes are ordered, the same box and the same set of foams are used. In case 7 tubes are ordered, one box with 6 tubes and one box with 1 tube are shipped.

Special packaging instructions in terms of packaging material and quantity are available upon request.

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