

## ULB GLASS PLATE LEVEL GAUGE

### Summary

The glass plate level gauge is a field indication instrument produced according to the principle of connector, which draws the medium inside the container into the external glass plate level gauge and reads the actual height of the level from the transparent glass surface. Barrel type glass level gauge belongs to the large diameter glass level gauge, suitable for large viscosity or a strong bubble medium. Anti-frost fins are used for low temperature media, using the principle of temperature gradient, adding anti-frost fins on both sides of the window, through the anti-frost fins to observe the level.



The flanges of the upper and lower connections for the level of the glass plate without blind spots are visible.

### Technical Parameters

The distance between the flanges' center L: 500mm, 800mm, 1100mm, 1400mm, 1700mm or on request.

Visual range: Blind Zone Glass Plate Level Gauge:  $H=L-250$ ; No Blind Zone Glass Plate Level Gauge:  $H \geq L$ .

Nominal pressure: Refer to Model Selection Table.

Medium temperature: Refer to Model Selection Table.

Needle valve automatically close pressure:  $\geq 0.3$  MPa.

Wetted material: 20, 304, 316 or on request.

Non-wetted material: Carbon steel.

Heating steam jacket joints: R3/8 (male thread) or on request.

Heating steam pressure:  $\leq 1$ MPa.

Flange: HG/T20592-2009, HG/T20615-2009 or on request.

Glass material table

Glass Types	Borosilicate glass	Alumino borosilicate glass	Aluminosilicate glass	Alkali-resistant glass
Medium temperature °C	$-160 \leq t < 250$	$-160 \leq t < 380$	$-160 \leq t < 450$	$-160 \leq t < 450$
Nominal pressure MPa	$\leq 6.3$	$\leq 6.3$	$\leq 25$	$\leq 32$

Parallel table of Low-Temp Frost-proof Type Temperature and Fin height

Medium temperature°C	Fin height (mm)	Fin color
$-20 \leq t < 0$	50	Gray
$-40 \leq t < -20$	100	Purple
$-70 \leq t < -40$	150	Dark blue
$-160 \leq t < -70$	200	Light blue

Product Selection Table

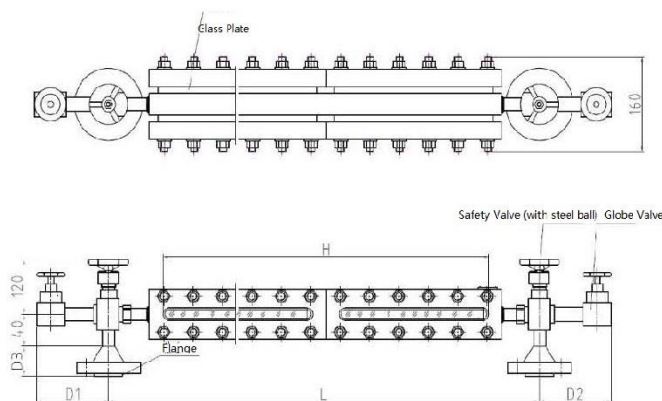
Model	Code		Content
ULB-			Glass Plate Level Gauge
	0		Basic type
	3		
	M		Non-blind zone type (Nominal pressure $PN \leq 11\text{Mpa}$ )
	T		Cylinder type (Nominal Pressure $PN \leq 6.3\text{Mpa}$ )
	A		Transmissive
	C		Reflex (Nominal Pressure $PN \leq 6.3\text{Mpa}$ )
	R		Translucent two-color (Nominal Pressure $PN \leq 6.3\text{Mpa}$ )
	U		Reflex two-color (nominal pressure $PN \leq 6.3\text{Mpa}$ )
		B	With self-sealing steel balls
		D	Without self-sealing balls
		0	Without heating
		1	Steam tracing
		-*	Range
			F1 With anti-frost fins, medium temperature $-20 \leq t < 0^\circ\text{C}$ (Nominal pressure $PN \leq 6.3\text{Mpa}$ )
			F2 With anti-frost fins, medium temperature $-40 \leq t < -20^\circ\text{C}$ (nominal pressure $PN \leq 6.3\text{Mpa}$ )
			F3 With anti-frost fins, medium temperature $-70 \leq t < -40^\circ\text{C}$ (nominal pressure $PN \leq 6.3\text{Mpa}$ )
			F4 With anti-frost fins, medium temperature $-160 \leq t < -70^\circ\text{C}$ (nominal pressure $PN \leq 6.3\text{Mpa}$ )
			W5 Medium temperature $t \leq 180^\circ\text{C}$
			W6 Medium temperature $t \leq 250^\circ\text{C}$
			W7 Medium temperature $t \leq 380^\circ\text{C}$
			W8 Medium temperature $t \leq 450^\circ\text{C}$
		Y2	Nominal pressure $PN \leq 10$

							Y3	Nominal pressure PN≤16
							Y4	Nominal pressure PN20(Class150)
							Y5	Nominal pressure PN≤25
							Y6	Nominal pressure PN≤40
							Y7	Nominal pressure PN50(Class300)
							Y8	Nominal pressure PN63
							Y9	Nominal pressure PN100
							Y10	Nominal pressure PN110(Class600)
							Y11	Nominal pressure PN150(Class900)
							Y12	Nominal pressure PN160
							Y13	Nominal pressure PN250
							Y14	Nominal pressure PN260(Class1500)
							(1)	Alkaline media: alkali-resistant glass (non-alkaline media do not require labeling)
							(2)	Alkaline media: mica pads (no labelling required for non-alkaline media)
ULB-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

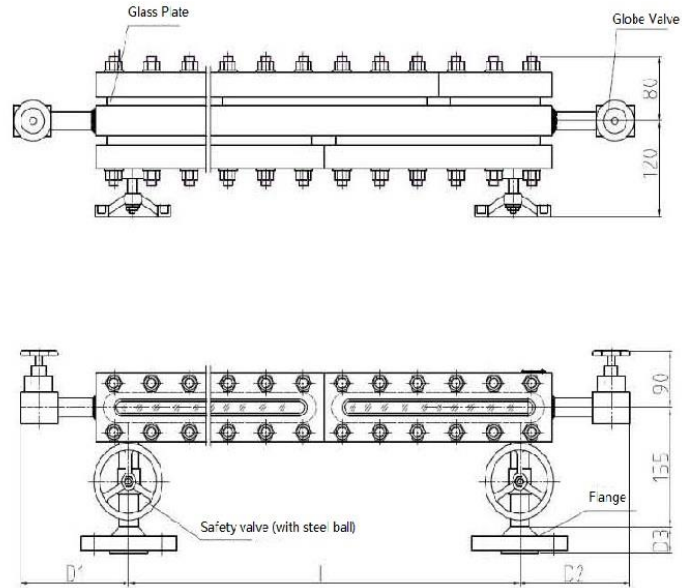
### Example of Selection

ULB-MRB1-1100W6Y7(1) is a blind-zone type translucent two-color, with self-sealing steel ball, with steam heating, measuring range 1100mm temperature less than 250 °C, nominal pressure PN50(Class300), with alkali-resistant glass level meter.

### Outline Drawing

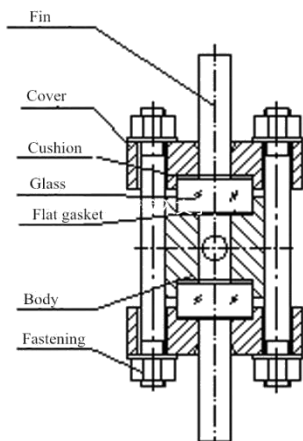


The above diagram applies to a non-blind side-view level gauge with self-sealing steel bead glass plate, discharge with 1/2" shut-off valve.

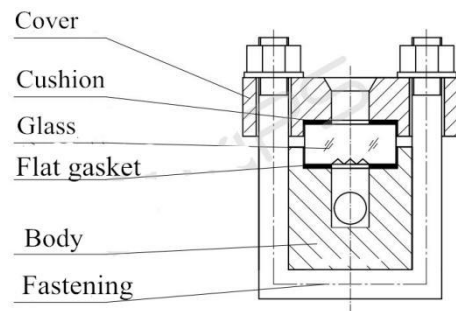


The above diagram applies to blind-side-view level gauge with self-sealing steel ball glass plate, discharge with 1/2" shut-off valve.

**Note:** The contact surface of the contact flange of the non-blind zone type glass plate level gauge is parallel to the direction of vision, and continuous observation is achieved through the staggered arrangement of glass on both sides.



Translucent cross-section  
(Reference drawing, subject to availability)



Cross-sectional reflections  
(Reference chart, in kind)

**External dimension**

Structural form		With blind zone with 1/2" shut-off valve		Blindless with 1/2" shutoff valve		Flange height
Range (mm)	Nominal pressure	D1	D2	D1	D2	D3
L1	PN ≤ 63	165	165	195	195	<75
L2		165	165	243	195	
L3		165	165	243	243	
L1	PN ≤ 110	165	165	205	205	<70
L2		165	165	253	205	
L3		165	165	253	253	
L1 value	500, 800, 1100, 1400, 1700, 2000					
L2 value	300, 600, 900, 1200, 1500, 1800, 2100					
L3 value	400, 700, 1000, 1300, 1600, 1900, 2200					

Note: 1/2" globe valve is 70mm long and 90mm high, other discharge forms can be used as required.