

## ULB GLASS LEVEL GAUGE

### Summary

The glass level gauge is a local indicating instrument produced according to the principle of the connector, which leads the medium in the container to the external glass level gauge, and reads the actual height of the liquid level from the transparent glass.

The cylinder type glass level gauge belongs to large diameter glass level gauge, which is suitable for the medium with high viscosity or strong air bubbles.

Anti-frost fins are used for low-temperature medium. Using the principle of temperature gradient, anti-frost fins are added on both sides of the window, and the liquid level is observed through the anti-frost fins.

The upper and lower process connection flanges of no blind zone glass level gauge are all within visible range.



### Main Technical Data

- **Measuring range ( C-C distance L )** : 1500mm, 800mm, 1100mm, 1400mm, 1700mm or as customer requirement
- **Visual range H** : type with blind area  $H=L-250$ ; type without blind area  $H \geq L$
- **Pressure rating of level gauge** : see selection table
- **Medium temperature** : see selection table
- **Needle valve automatic closing pressure** :  $\geq 0.3\text{MPa}$
- **Wetted material** : 20, 304, 316 or as customer requirement
- **Non-wetted materia** : carbon steel
- **Glass material** : borosilicate glass, aluminoborosilicate glass, aluminosilicate glass, alkali-resistant glass, choose according to working conditions or specified by the user
- **Heated steam jacket joint** : R3/8 (male thread) or according to user requirements
- **Tracing steam pressure** :  $\leq 1.0\text{MPa}$
- **Connecting flange** : HG/T20592-2009, HG/T20615-2009 or according to user requirements

### Main Technical Data

Glass Type	Borosilicate Glass	Aluminoborosilicate Glass	Aluminosilicate Glass	Alkali-resistant Glass
Medium Temperature °C	$-160 \leq t < 250$	$-160 \leq t < 320$	$-160 \leq t < 450$	$-160 \leq t < 450$
Pressure Rating MPA	$PN \leq 6.3$	$PN \leq 6.3$	$PN \leq 26$	$PN \leq 32$

### Comparison table of low temperature frost resistance temperature and fin height

Medium temperature °C	Fin height mm	Fin coloring
$-20 \leq t < 0$	50	Grey
$-40 \leq t < -20$	100	Purple
$-70 \leq t < -40$	150	Deep blue
$-160 \leq t < -70$	200	Light blue

### Model Selection Table

Model	Code				Content
ULB-					Glass level gauge
	03				Standard type
	M				No blind zone type (side view; pressure rating PN ≤ 11Mpa)
	03T				Standard cylinder type (pressure rating PN ≤ 6.3Mpa)
	MT				No blind zone cylinder type (pressure rating PN ≤ 6.3Mpa)
	MP				No blind zone type (front view; pressure rating PN ≤ 11Mpa)
	A				Transparent type
	C				Reflex type (pressure rating PN ≤ 6.3Mpa)
	R				Transparent double color type (pressure rating PN ≤ 6.3Mpa)
	U				Reflex double color type (pressure rating PN ≤ 6.3Mpa)
	B				With self-sealing steel ball
	D				Without self-sealing steel ball
		0			Without heating
		1			Steam tracing
			-*		Measuring range
				F1	With frost-resistant fins, Medium temperature $-20 \leq t < 0^{\circ}\text{C}$ (Pressure rating PN ≤ 6.3Mpa)
				F2	With frost-resistant fins, Medium temperature $-40 \leq t < -20^{\circ}\text{C}$ (Pressure rating PN ≤ 6.3Mpa)
				F3	With frost-resistant fins, Medium temperature $-70 \leq t < -40^{\circ}\text{C}$ (Pressure rating PN ≤ 6.3Mpa)
				F4	With frost-resistant fins, Medium temperature $-160 \leq t < -70^{\circ}\text{C}$ (Pressure rating PN ≤ 6.3Mpa)
				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	Pressure rating PN10
				Y3	Pressure rating PN16
				Y4	Pressure rating PN20(Class150)
				Y5	Pressure rating PN25
				Y6	Pressure rating PN40
				Y7	Pressure rating PN50(Class300)
				Y8	Pressure rating PN63
				Y9	Pressure rating PN100
				Y10	Pressure rating PN110(Class600)
				Y11	Pressure rating PN150(Class900)
				Y12	Pressure rating PN160
				Y13	Pressure rating PN250
				Y14	Pressure rating PN260(Class1500)
				(1)	Alkaline medium: Alkali-resistant glass (non-alkaline medium does not need to be marked)
				(2)	Alkaline medium: mica pad (non-alkaline medium does not need to be marked, only for single color transparent type)
ULB-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

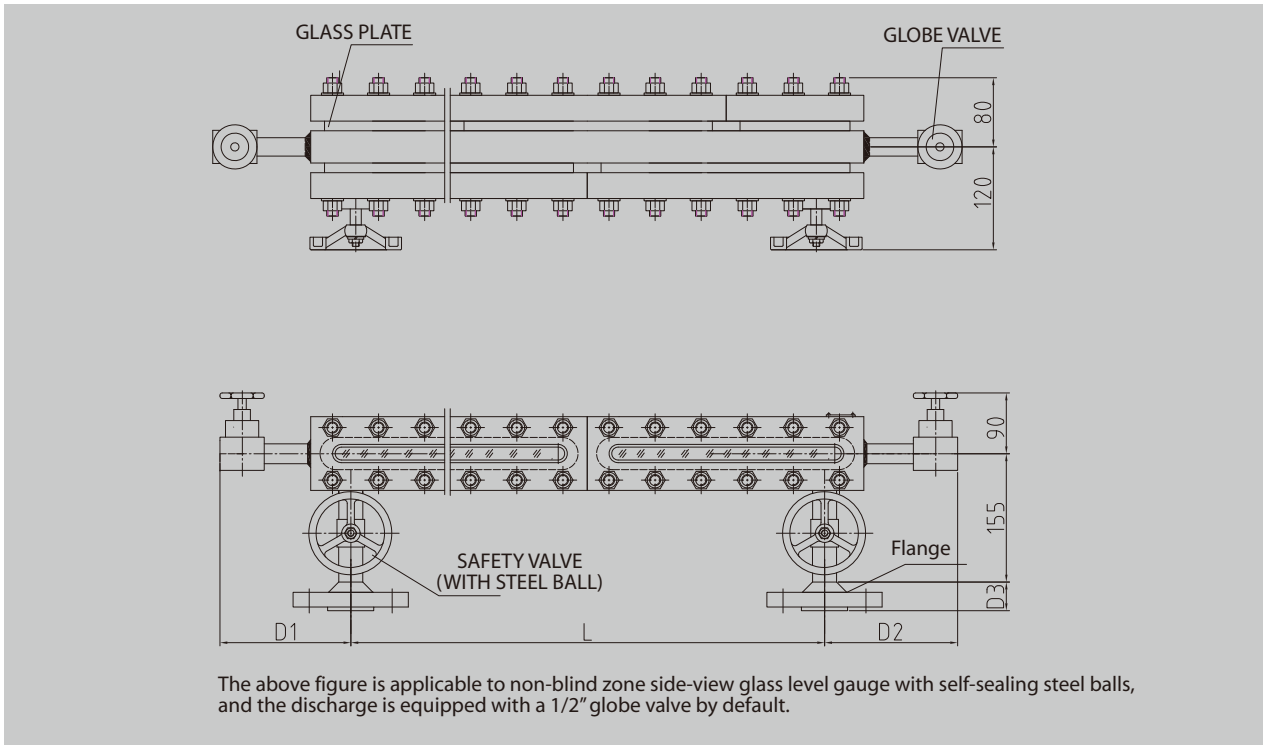
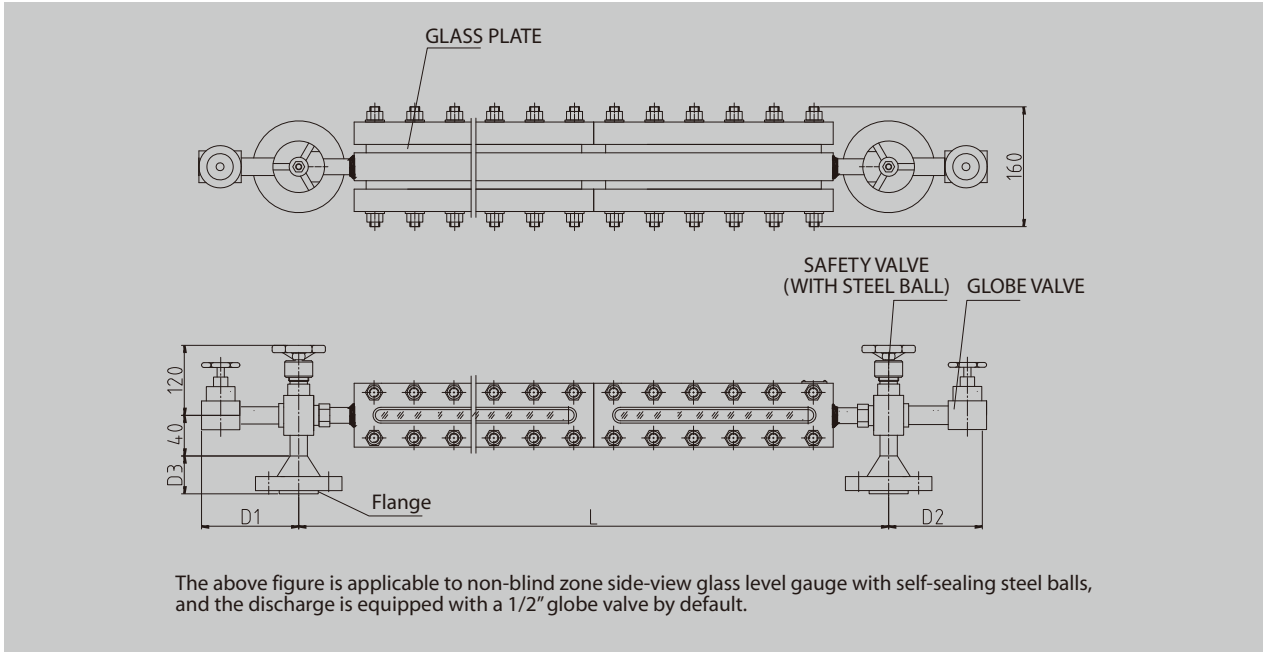
### Example of Model Selection

ULB-MRB1-1100W6Y7(1) is a no blind zone transparent two-color type glass level gauge, with self-sealing steel ball, with steam heat tracing, measuring range 1100mm, temperature less than 250 °C, pressure rating CL300, with alkali-resistant glass.

### Note:

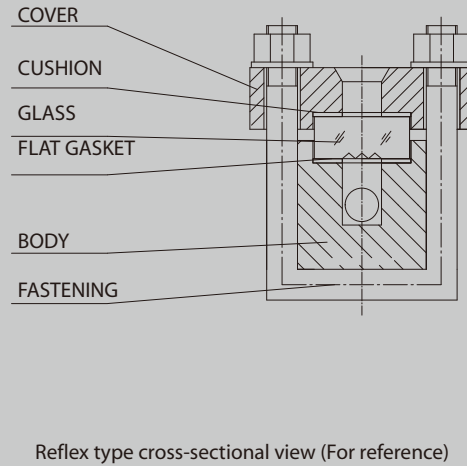
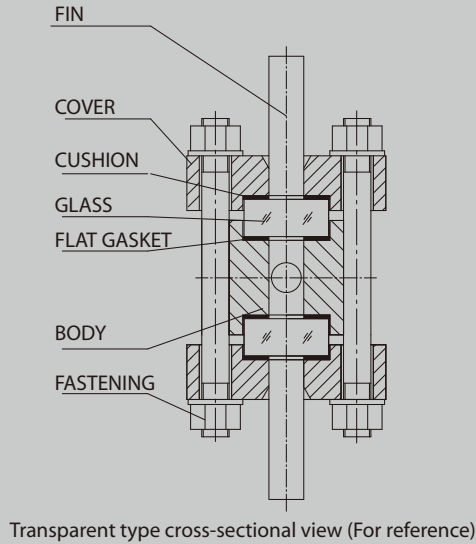
If the range is greater than 2000mm, cylinder type is selected by default.

**Outline Drawing**



**Note:**

The contact surface of the connecting flange of the non-blind zone glass level gauge is parallel to the direction of sight, and the continuous observation can be realized from two sides through the staggered arrangement of glass on both sides.



**Dimensions**

Structure Type		With Blind Zone and 1/2" Globe Valve		No Blind Zone With 1/2" Globe Valve		Flange Height
Measuring Range(mm)	Pressure Rating	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:**

The contact surface of the connecting flange of the non-blind zone glass level gauge is parallel to the direction of sight, and the continuous observation can be realized from two sides through the staggered arrangement of glass on both sides.