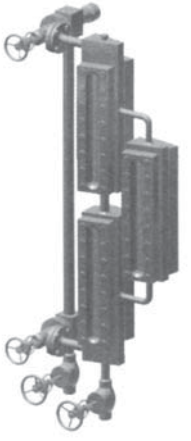
Transparent and two-color type level gauge
Model : L500

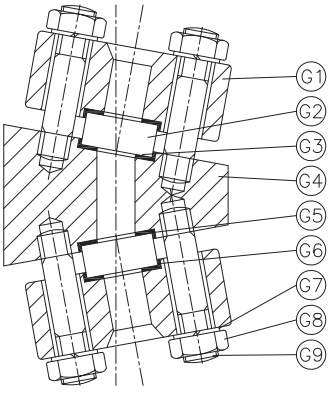
Spec. sheet no. LD05-02

Description

Body of the two color type gauges are V shaped on it's angle, as you see in the following cross sectional view, in order split light from illuminator (installed behind the gauge) into two colors which are green and red.
The cover plates of these models are all provided with rib reinforcement.

Model





G1. Cover plate
G2. Gauge glass
G3. Mica gasket
G4. Gauge body
G5. Sealing gasket
G6. Cushion gasket
G7. Washer
G8. Nut
G9. Bolt

Specification

Size of glass
No.6 ~ No.9

Material
Carbon steel, Stainless steel

Max. pressure
10 MPa

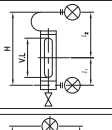
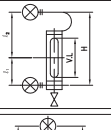
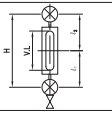
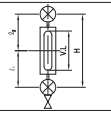
Connection
¾" or 1" flanged, Socket welds

Max. temperature
Sat. temperature

Dimension

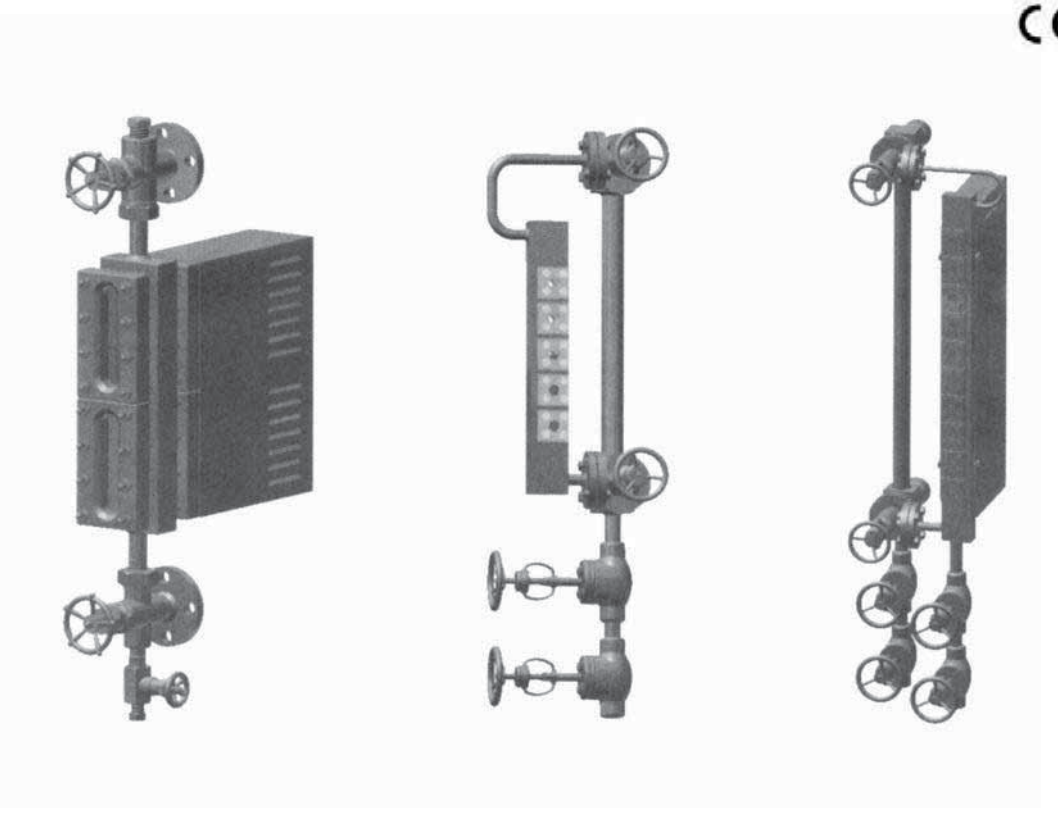
Dimmensions

Unit : mm

Model	Side of Gauge mounting against boiler drum		Direction of Gauge Front	Glass No.	Dimmensions			
	Left-Hand	Right-Hand			H	ℓ_1	ℓ_2	V. L
L500			Front Only	No. 6	510	195	315	225
				No. 7	530	200	330	255
				No. 8	570	220	350	295
				No. 9	590	230	360	315
L500			Free Choice	No. 5	540	270	270	225
				No. 6	570	285	285	225
				No. 7	610	305	305	295
				No. 8	630	315	315	315

Two - color type level gauge
Model : L500, L510

Spec. sheet no. LD05-01



Features of two colors water level gauge

■ Distinct water level
The water level is markedly distinct and confirmed from far distance since an illuminator is fitted at the rear of water level gauge by which visible surface is separated into two section, one is red-steam space, and another green-boiler water.

■ Correct water level is indicated
As the two-color separation is based on the principle of optical science, normal water level can be indicated always even in an instantaneous variance of water level.

■ Remote observation possible
The water level appeared on the visible surface can be transferred to the operation (Control) room by fitting several reflex mirrors (To the most convenient place for an operator to watch).
As the most improved method, television observation is utilized, therefore, we have also researched and developed those water level gauges suitable for television observation and obtained good experimental results by changing filter glass of two colors (Red and green) and employed in great numbers.

Main order — Ordering information

1. Base model

L500	Two color transparent type level gauge
L510	Two color multi-port type level gauge

2. Vessel connection size

AR	1" socket welding
OH	Other

3. Hook-up

TB	Top and bottom
SL	Top and bottom, flanged loop (Left)
SR	Top and bottom, flanged loop (Right)
OH	Other hook-up

4. Gauge valve

SS	Marker standards
OH	Other

5. Center to center (mm)

XXXX

6. Chamber material

A	A105
C	Carbon steel
O	Other

7. Illuminator case material

CS	Carbon steel
SS	304SS
ZZ	Other

8. Drain end

DP	Dust-proof cap inserted
WP	With plug
OH	Other
NO	None

1	2	3	4	5	6	7	8
L500	**AR**	**OH**	**SS**	**XXXX**	**A**	**ZZ**	**NO**

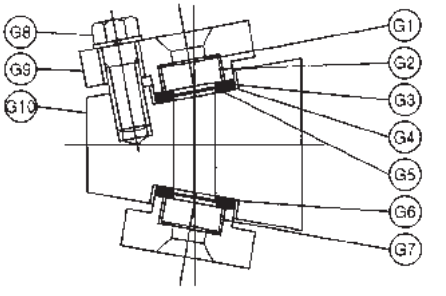
Sample ordering code

Multi-port type two-color level gauge
Model : L510

Spec. sheet no. LD05-03

Description
This multi-window two color level gauge is provided with from 5 or 7 round windows or ports and is designed to handle the pressures and temperatures higher than the single window type level gauges. Impacts from external pressure and heat are distributed to each of the ports, thereby eliminating or minimizing the glass breakage and increasing the structural durability.

Model



G1. Cushion gasket
G2. Gauge glass
G3. Protective gasket
G4. Mica gasket
G5. Sealing gasket
G6. Protective gasket
G7. Packing strip
G8. Hex. bolt
G9. Gauge cover
G10. Gauge body

Specification

No. of ports
No.5 ~ No.15

Max. pressure
21.5 MPa

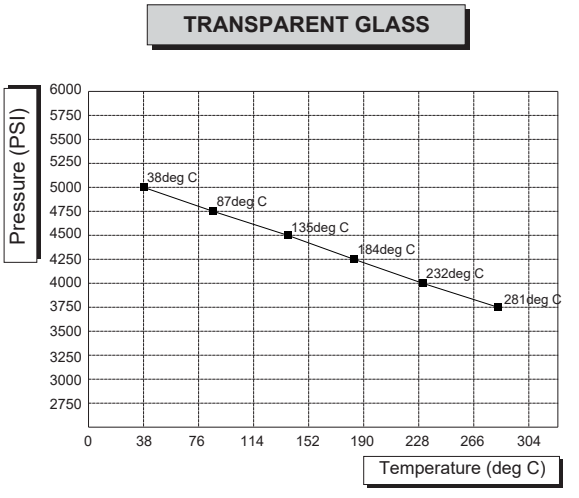
Max. temperature
Sat. temperature

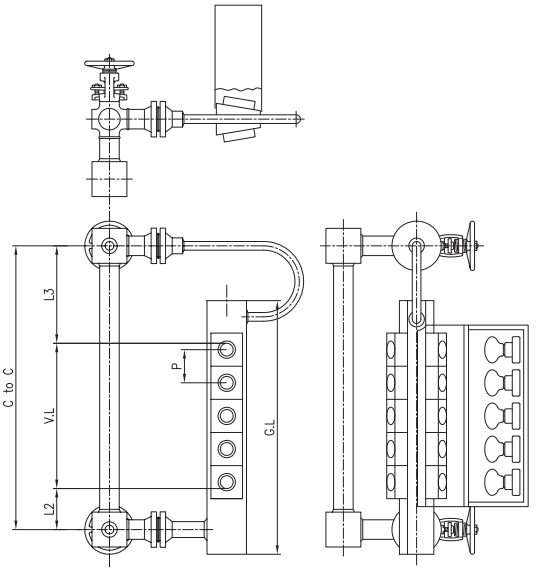
Material
Carbon steel, Stainless steel

Connection
¾" or 1" flanged, Socket welds

Pressure and temperature rating for L510

Spec. sheet no. LD05-04





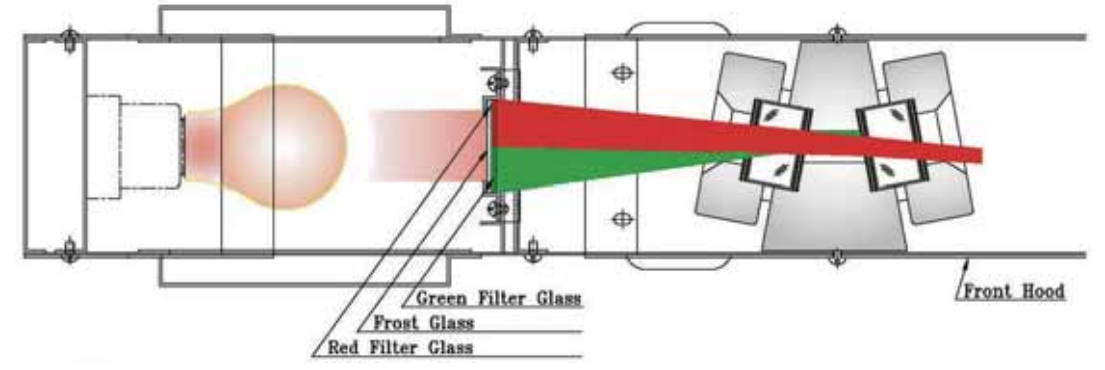
No. of ports	Visual length (VL)	Gauge length (G.L)	Installation length (C ~ C)	L1	L2	Port pitch (P)
5P	320	480	520	140	60	75
6P	395	555	595	140	60	75
7P	470	630	670	140	60	75
8P	545	705	745	140	60	75
9P	620	780	820	140	60	75
10P	695	855	895	140	60	75
11P	770	930	970	140	60	75
12P	845	1,005	1,042	140	60	75
13P	920	1,080	1,120	140	60	75
14P	995	1,155	1,195	140	60	75
15P	1,070	1,230	1,270	140	60	75

Note : We can also manufacture items with different number of ports to the above.

Construction and functioning

Two-color water level gauge applies the principle of optical science that the reflective index of light is different when it passes through steam space and boiler water section, separating red (steam space) and green (boiler water section). The gauge is of construction that a special lamp, colored glass plate (red, green) and a condensing lens are provided inside the illuminator installed at the rear of water level gauge. The light separated into two colors by passing through the colored plates (red, green) enters into visible window of water level gauge after traveling angle is changed a little by the next condensing lens. Then, when the light passes through the trapezoid chamber which consists of two sheets of gauge glass when it is steam green light reflected in the chamber and does not appear outside interrupted by gauge cover and only red reflected ray appears on the visible face after passed through inside of water level gauge. And when it is boiler water in the chamber, contradictions phenomenon will occur, that is, the red reflected ray does not appear outside interrupted and only green refracted ray appears on the visible face. As mentioned above, the filter glass, a condensing lens, gauge glass are combined in the optically position so that correct water level may appear by instantaneously sensing the level variance.

In the case of steam (Red)



In the case of boiler water (Green)