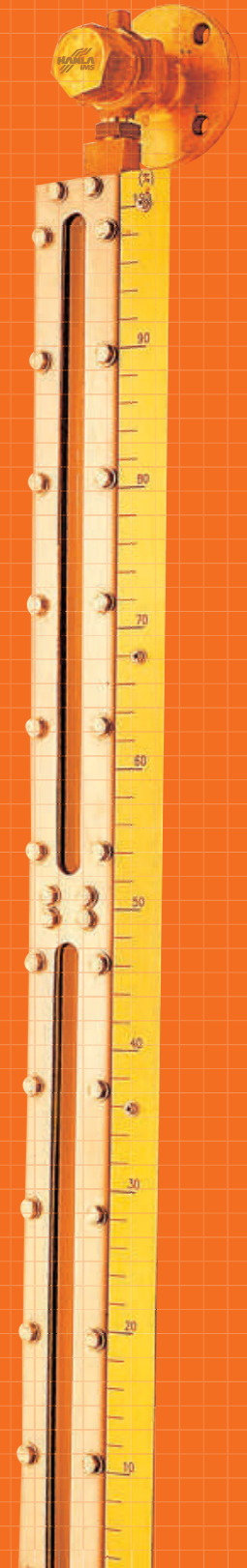
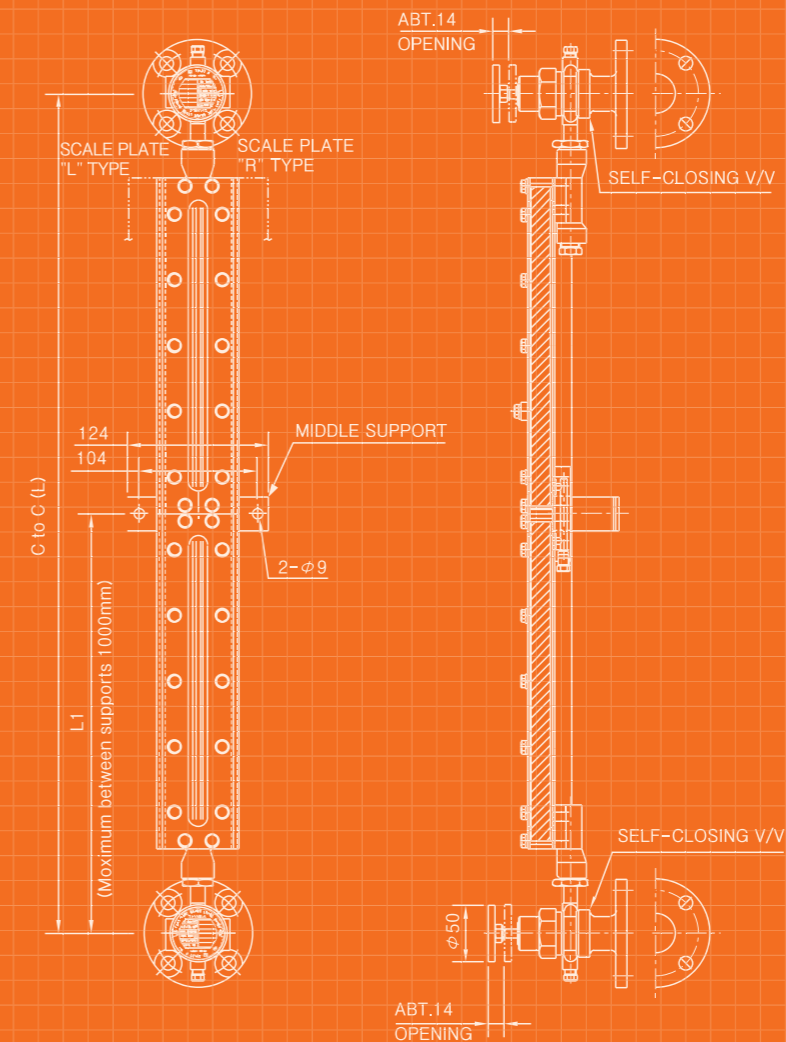


Level Measurement Systems & Instrumentations

Level Gauges

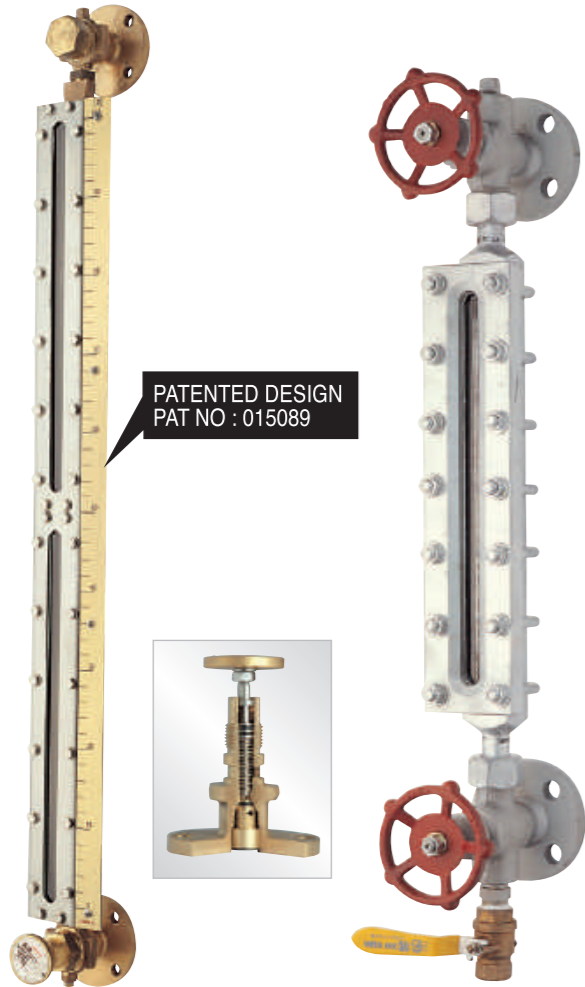
- Flat Type Glass Level Gauge
- Tubular Type Glass Level Gauge
- Marine Float Type Level Gauge
- Magnetic Float Type Level Gauge
- Self-Powered Content Gauge
- Dial Type Float Level Gauge



Level Gauges

Flat Type Glass Level Gauge

Model : RLG Series



RLG-LP Series

RLG-HP Series

Hanla marine gauge

Flat type glass level gauges have been developed to comply with the requirements of the SOLAS 1981, 1983, 1996, 1997, 1998 amendments. The gauges have been reviewed and a suitable construction is accepted by marine classification authorities throughout the world.

Flat glass design

The toughened borosilicate glass window is housed and protected in a robust stainless steel column. The excellent level indication even of colourless liquids is provided by reflex glass viewing windows.

Application

Flat type glass level gauges are used for water tanks, all oil tanks and boiler drum etc.

Easy maintenance for rlg-lp series

When required, the liquid chambers can be cleaned with the gauge on the tank, alternatively the isolating valves will be able to remove the column without drain of the tank.

Model number code system

RLG - [] - [] - [] - []

Symbol of Flat Type Glass Level Gauge

- Type of Level Gauge
 - LP : Flat Type Used for Low Press. & Temp.
 - HP : Armored Type Reflex Level Gauge Used for High Press. & Temp.
- Type of Valve
 - N : Tank Welding Flange With Check Valve (applied to the RLG-series)
 - W : Wide Measuring (applied to the RLG-LP-14)
 - T : Manual Operating Device
 - [] : With Scale board SR: Right at Your Sight SL: Left at Your Sight

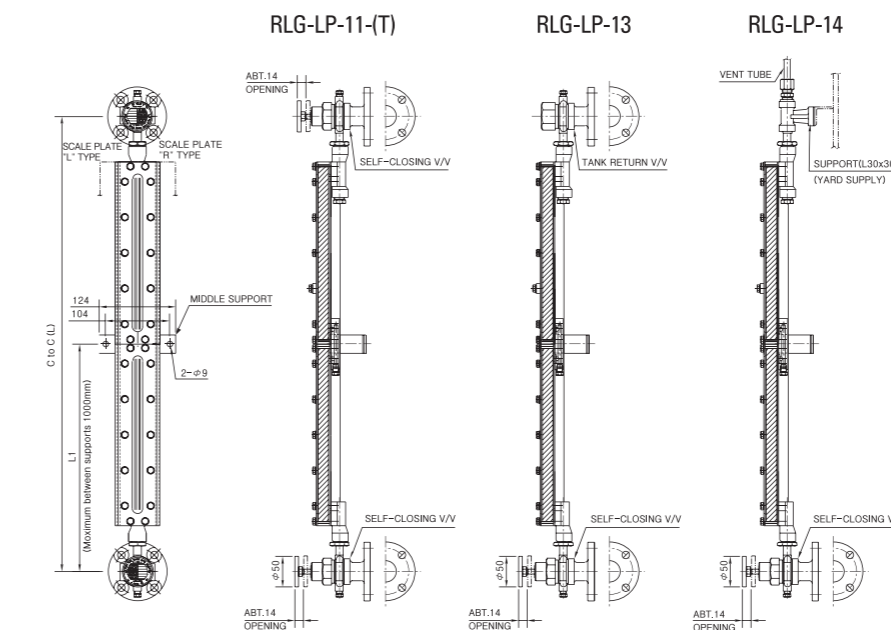
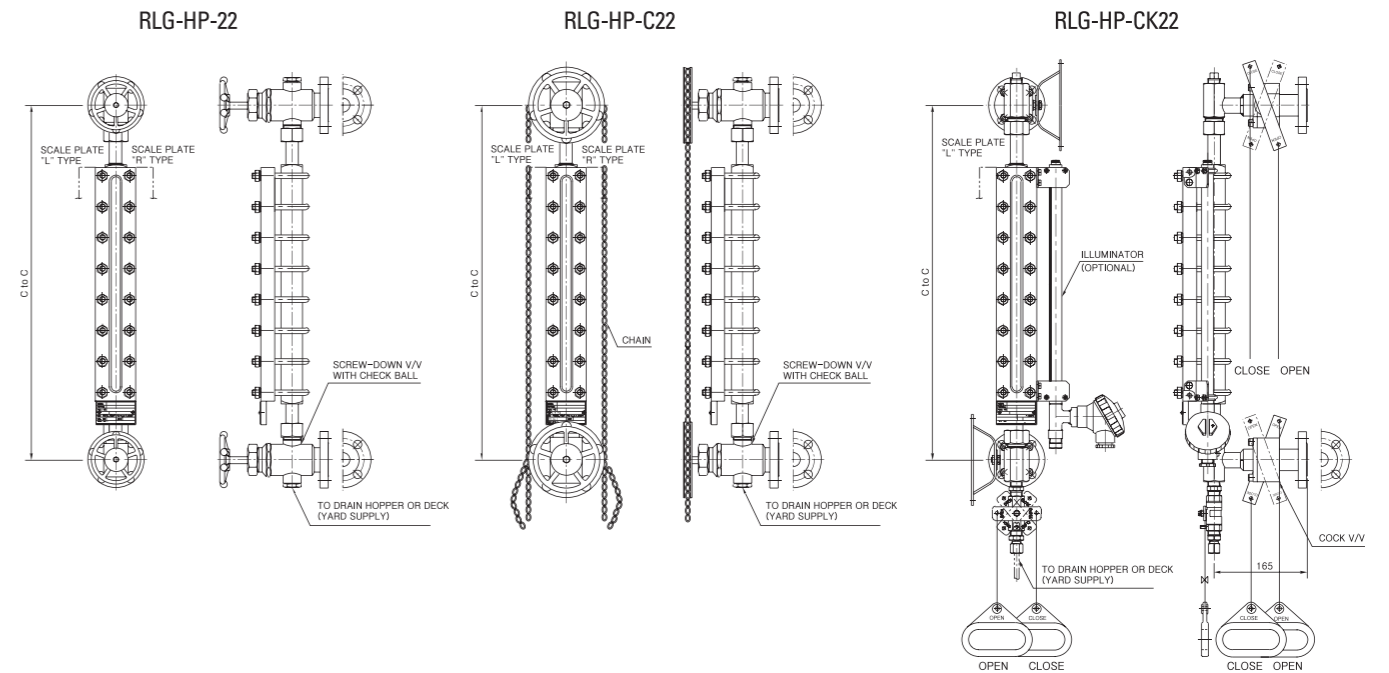
APPLICATION	MODEL	VALVE TYPE	
		Upper	Lower
LP	11	Self-closing	Self-closing
	13	Tank return	Self-closing
	14	Top vent	Self-closing
HP	22	Screw-down valve	Screw-down valve with checkball
	C22	Chain valve	Chain valve with check ball
	CK22	Cock valve	Cock valve

Standard model and specification

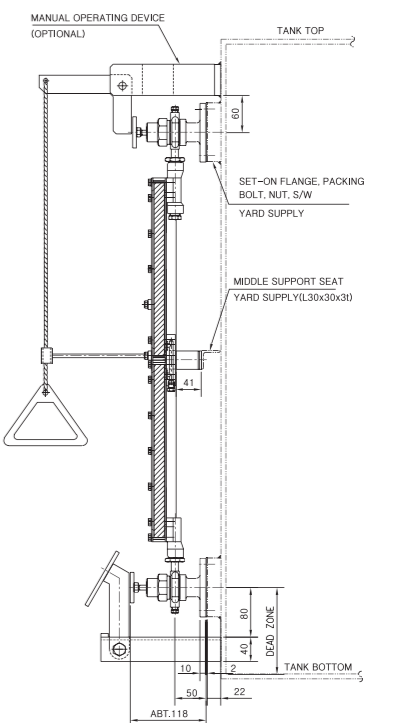
Model	Valve type		Connection size	Range of pressure	Range of temp.	Material				Center to Center
	Upper	Lower				Valve	Front channel	Back channel	Glass	
RLG-LP-11	Self-closing	Self-closing	JIS 5K20A, 25A	3kg/cm ²	150°C	HBsCl	SUS201	SUS201	Borosilicate	285
RLG-LP-13	Tank return	Self-closing	JIS 5K20A, 25A	3kg/cm ²	150°C	HBsCl	SUS201	SUS201	Borosilicate	~ 5100
RLG-LP-14	Top vent	Self-closing	JIS 5K20A, 25A	3kg/cm ²	150°C	HBsCl	SUS201	SUS201	Borosilicate	(m/m)
RLG-HP-22	Screw-down valve	Screw-down valve WITH CHECK BALL	JIS 16K20A	50kg/cm ²	300°C	C,S	C,S	C,S	Borosilicate	320
RLG-HP-C22	Chain valve	Chain valve WITH CHECK BALL	JIS 16K20A	30kg/cm ²	300°C	C,S	C,S	C,S	Borosilicate	~ 2870
RLG-HP-CK22	Cock valve	Cock valve	JIS 16K20A	20kg/cm ²	300°C	C,S	C,S	C,S	Borosilicate	(m/m)

- The level gauges shall be classified into three types 11, 13, 14 according to the shape of the upper body.
- Please consult with our factory when other conditions are required.

Outline / Dimensions



INSTALLATION OF THE FLAT TYPE GLASS LEVEL GAUGE



Level Gauges

Tubular Type Glass Level Gauge

Marine Float Type Level Guage



Hanla marine gauge

Tubular type glass level gauges have been developed to comply with the requirement of the SOLAS 1981 1983, 1996, 1997, 1998 amendments.

Limitation

- The tubular type glass level gauges, RLG-TB-12/13/14 can be used for following condition.
- Fuel oil tank of which the capacity is less than 1000 liter.
- In ship with class notation "Coasting Service" or whose gross tonnage is less than 500 tons.

Standard model and specification

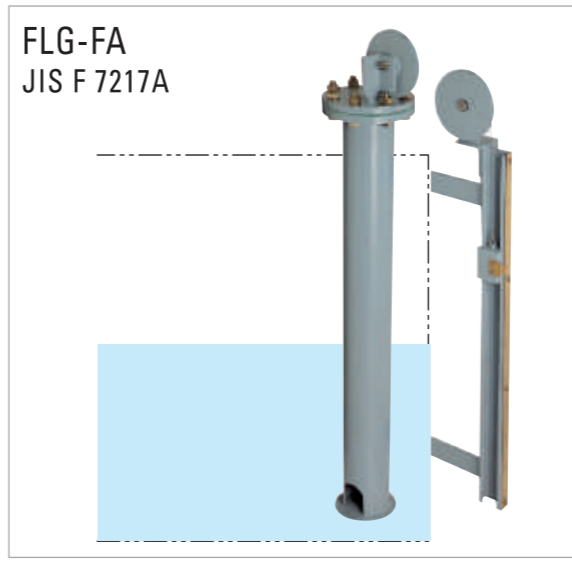
JIS Code	Model	Upper body type	Valve type		Connection size	Material			Protector type	Center to center	Range of pressure	Range of Temp.
			Upper	Lower		Protector	Glass	Valve				
JIS F 7211	RLG-TB-24	A-type	Vent	Shut-off	5K 10A	SS41	HARD	BC6	K-type	325 ~ 3765 (mm)	0~3kg/cm ²	0~100°C
	RLG-TB-23	B-type	Tank return	Shut-off								
	RLG-TB-22	C-type	Shut-off	Shut-off								
JIS F 7212	RLG-TB-14	A-type	Vent	Self closing	10K 10A (16K 10A)							
	RLG-TB-13	B-type	Tank return	Self closing								
	RLG-TB-12	C-type	Shut-off	Self closing								

- The level gauges shall be classified into three types A.B.C according to the shape of the upper body.
- Please consult with our factory when other conditions are required.
- The scale board is an optional item.

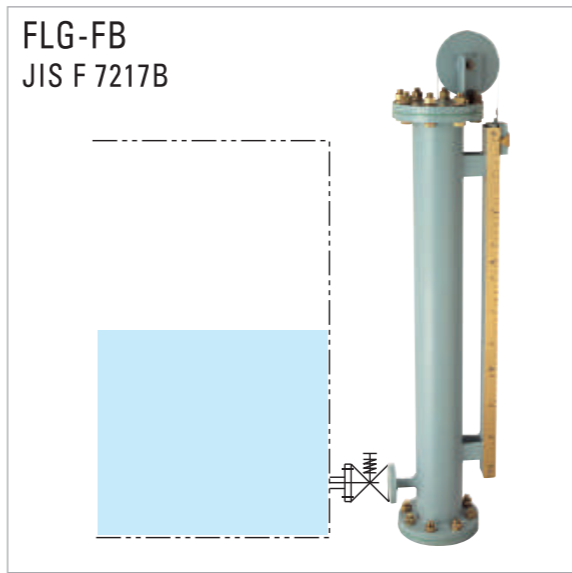
Application

These type level gauges are used for water tanks except for fuel oil tanks.

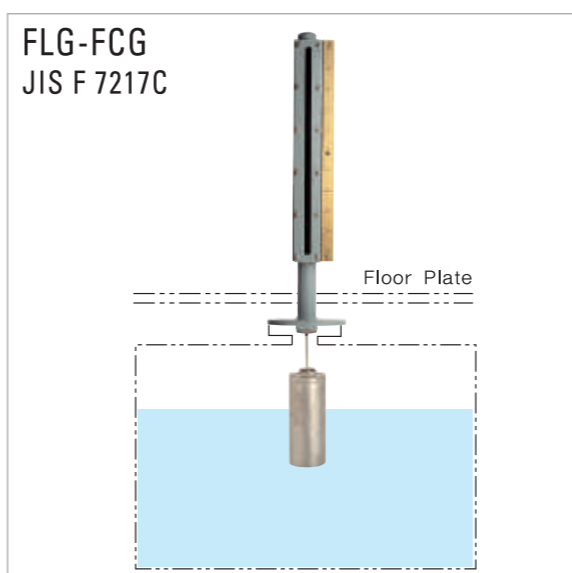
FLG-FA
JIS F 7217A



FLG-FB
JIS F 7217B



FLG-FCG
JIS F 7217C



General

These float level gauges specified in Japan's Industrial Standard are used for all kinds of tanks in ship.

Feature

- FLG-FCG type is a gas tight
- Easy reading
- Easy maintenance
- Exact indication
- Easy installation

Classification

Model	Mounting type	Nominal dia.	Application
FLG-FA-100	Inner balance weight	100	Medium tanks
FLG-FA-150	Inner balance weight	150	Large tanks
FLG-FB-100L FLG-FB-100R	Outer balance weight	100	Large and medium tanks
FLG-FCG-100	Direct acting	100	Removable tanks
FLG-FCG-150	Direct acting	150	Double bottom (Lubricating oil, water)tanks
FLG-FCG-200	Direct acting	200	

Standard model and construction material

Model	Chamber	Float	Sheave	Spindle	Flange	Wire rope	Sight glass
FLG-FA	SGP	SUS304	SS41	N/A	SS41	SUS304	N/A
FLG-FB	SGP	SUS304	SS41	N/A	SS41	SUS304	N/A
FLG-FCG	SGP	SUS304	N/A	SUS304	SS41	N/A	Hard

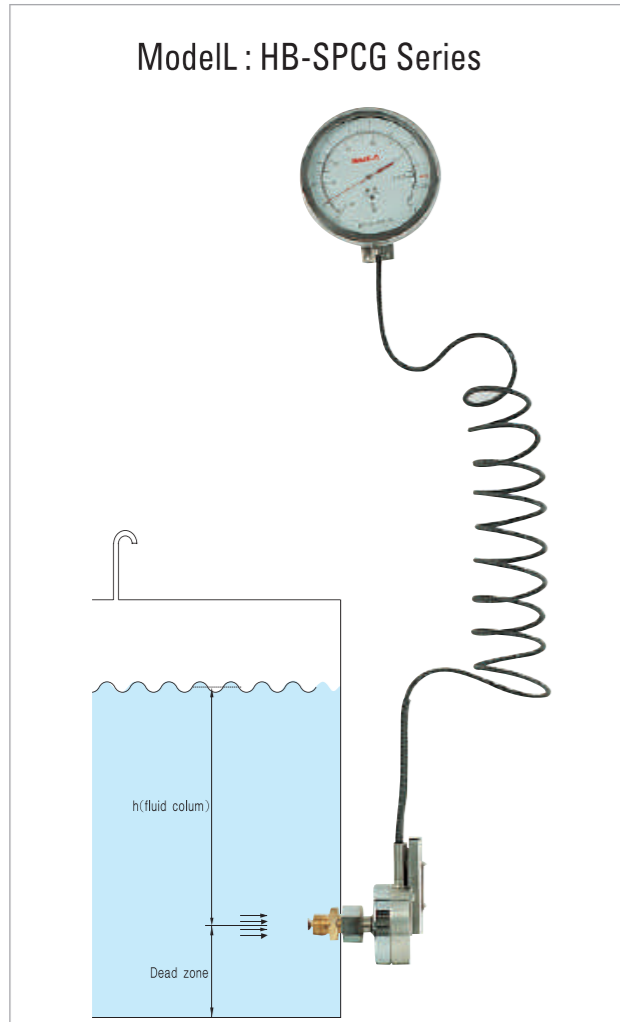
Operating condition

Model	Working condition		Conn. size	Chamber size	Max. Measuring range at Sp.Gr 0.92
	Press.	Temp.			
FLG-FA-100	Atm.	80°C	5K100A	100A	-
FLG-FA-150	Atm.	80°C	5K150A	150A	-
FLG-FB-100	Atm.	80°C	5K100A	100A	-
FLG-FCG-100	3kg/cm ²	80°C	5K100A	100A	3000m/m
FLG-FCG-150	3kg/cm ²	80°C	5K150A	150A	6000m/m
FLG-FCG-200	3kg/cm ²	80°C	5K200A	200A	10000m/m

- The scale board is an optional item.
- The JIS F 7216 angle valve for FLG-FB is an optional item.

Level Gauges

Self-Powered Content Gauge



Operating principle

Self-powered content gauge unit consists of transmitter chamber, capillary tube and indication gauge. The weight of the fluid column in the tank will be transformed into gas pressure in the transmitter chamber. The gas pressure is transferred to the indicating gauge through the capillary tube. That means, the weight of the fluid column in the tank is directly proportional to the indication. In case of over or under-pressure in the tank, it is impossible to compensate the value of gauging.

Features

- No floats.
- Completely automatic.
- Local indication.
- No requires external power.

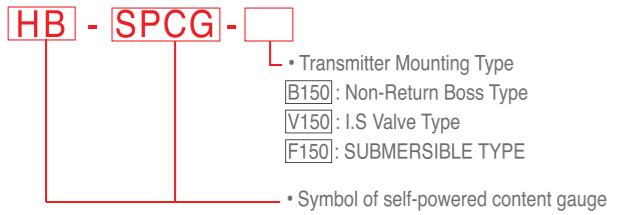
Application

Self-powered content gauge is widely used for Diesel oil, Lub. oil, Heavy fuel oil, Solvents gas oil, Fresh water, and all no corrosive liquid.

Specifications

- Range(Tank depths): From 1 to 12 meters
- Over load : 120% above maximum range
- Operating temperature
- Indication gauge : -40 to +70°C
- Transmitter chamber : -40 to +120°C
- Indication gauge
- Mounting : Wall mounting
- Diameters : ϕ 150mm
- Gauge body mat'l : SUS 304
- Graduation : Height or Volume/Dual scale available
- Capillary tube
- Material : SUS 304
- Available other length on request

Model number code system

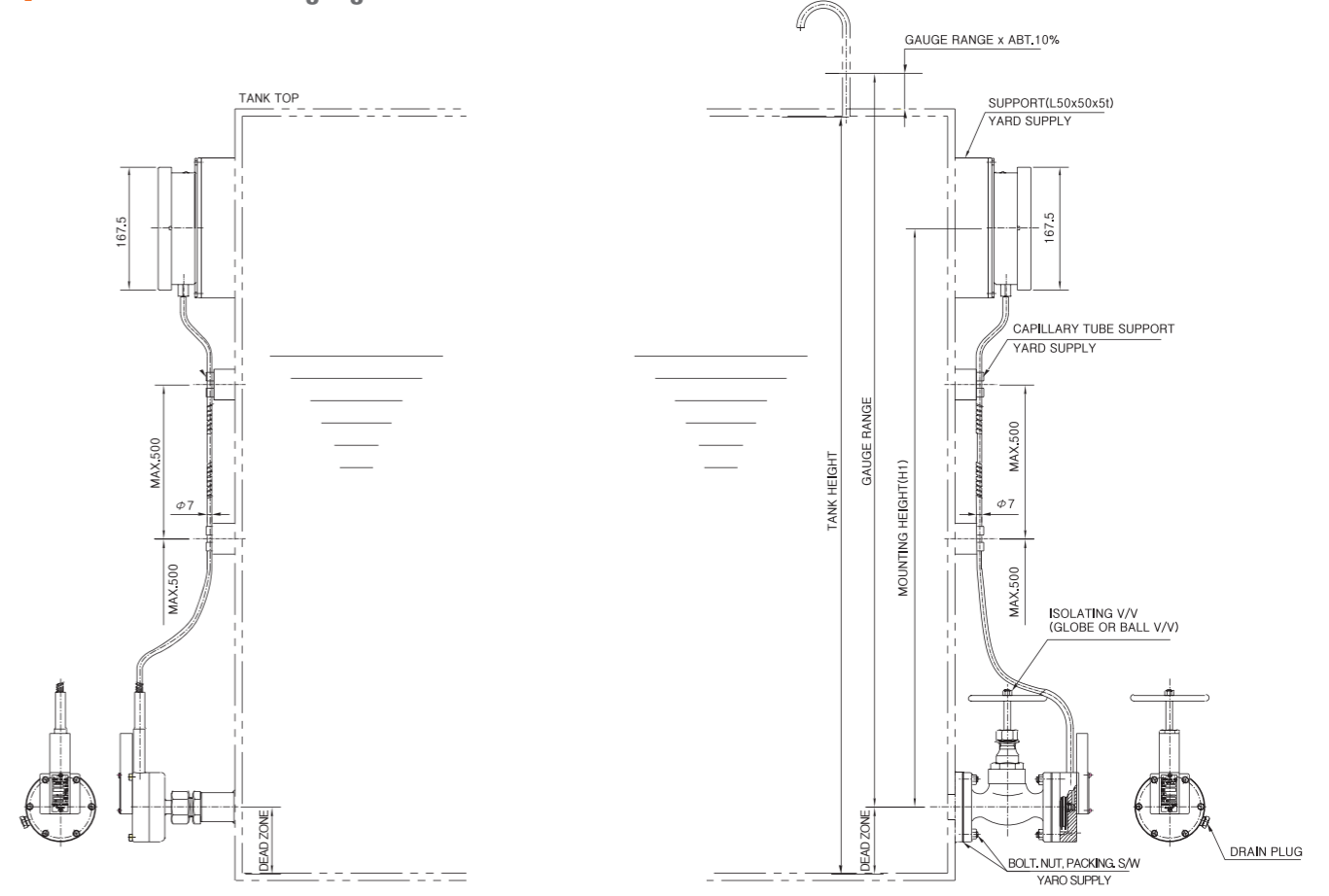


Standard model and specification

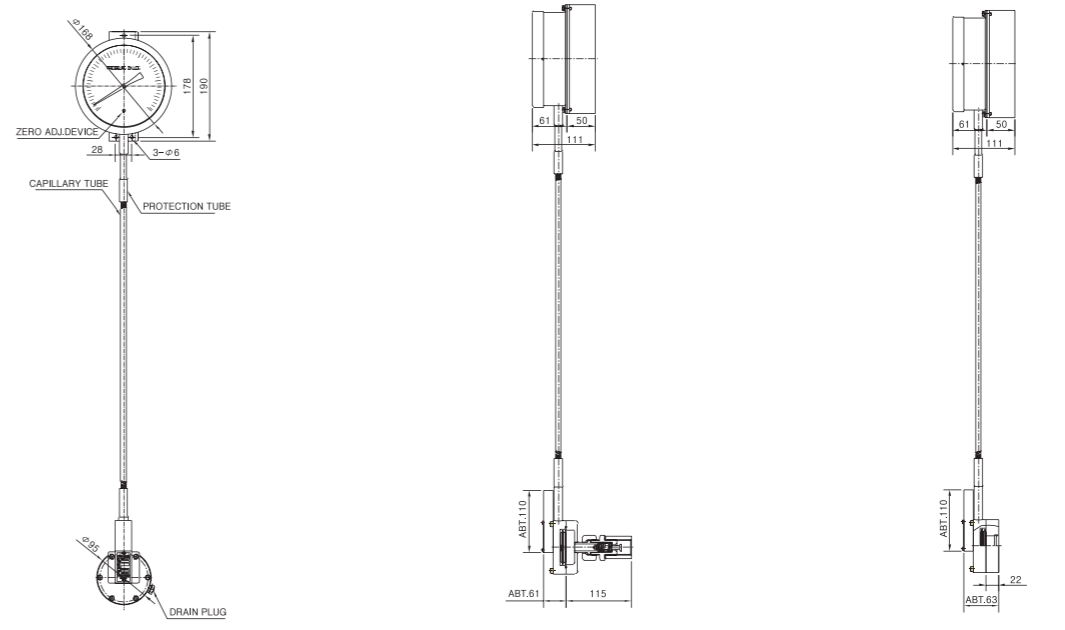
Model	Application	Connection Size	Accuracy	Capillary tube Length	Material			
					Indication Gauge	Capillary Tube	Flexible Tube	Diaphragm
HB-SPCG-B150	General liquid (Oil, Water)	PF3/4"	$\pm 1.0\%$ of Full Range	STD. 3M/MAX.16M	SUS304	COPPER	SUS304 WITH P.V.C COATING	PBP/ SUS316L
HB-SPCG-V150	General liquid (Oil, Water)	JIS 5K / 10K / 16K 25A / 40A	$\pm 1.0\%$ of Full Range	STD. 3M/MAX.16M	SUS304	COPPER	SUS304 WITH P.V.C COATING	PBP/ SUS316L
HB-SPCG-F150	General liquid (Oil, Water)	JIS 5K 100A / 125A / 150A	$\pm 1.0\%$ of Full Range	STD. 3M/MAX.16M	SUS304	COPPER	SUS304 WITH P.V.C COATING	PBP/ SUS316L

Please consult with factory when other condition are required

Installation of content gauge



Outline / dimensions



Level Gauges

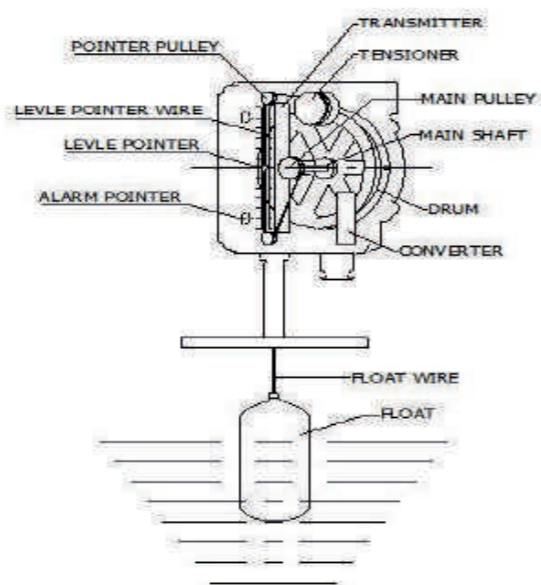
Dial Type Float Level Gauge

Model : FW-DF Series FW-DF-T-C



Operating principle

A float type level gauge is composed of a float, a float wire and a head. The drum and the float wire are connected to the float. It moves along on the liquid level inside a tank. The drum and the main pulley are directly connected to the main shaft. So, the drum, and the main pulley rotate together. The level pointer is connected with the main pulley and the pointer wire. It visually informs the tank liquid level to user. According to the installation height, the main pulley of the different size is applied for.



Model number code system



- Model Name
FL : Float Type Level Gauge
- Option
 - 0 : No Options
 - 1 : Alarm Switches(High & Low)
 - 2 : Transmitter
 - 3 : Alarm Switches(High & Low) & Transmitter
- Mounting Type
 - 1 : Top mounting
 - 2 : Side mounting
 - 3 : Side mounting with seal port

Application

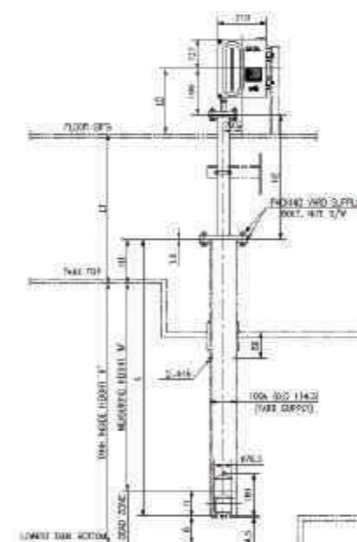
The float type level gauge is used for H.F.O / D.O / L.O tanks, Water tanks, and Sewage collecting tanks etc. Product structure is simple and maintenance is easy. Also, HIGH/LOW SWITCH, TRANSMITTER functions are applicable by the user as an option.

Product Information

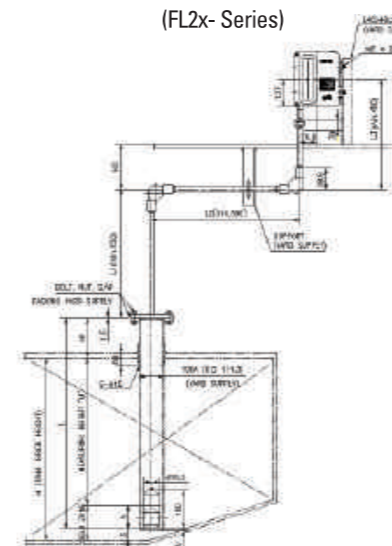
Model	Mounting type	Measuring Range	Indication system	Specific gravity	Accuracy (Full range)	Material		
						Head	Float wire	Float
FL1x	Top	0~6m	One point	0.7~1.5	±1.5%	ADC	SUS316	SUS304
FL2x	Side	0~6m	One point	0.7~1.5	±1.5%	ADC	SUS316	SUS304
FL3x	Side with Seal pot	0~6m	One point	0.7~1.5	±1.5%	ADC	SUS316	SUS304

Outline / Dimensions

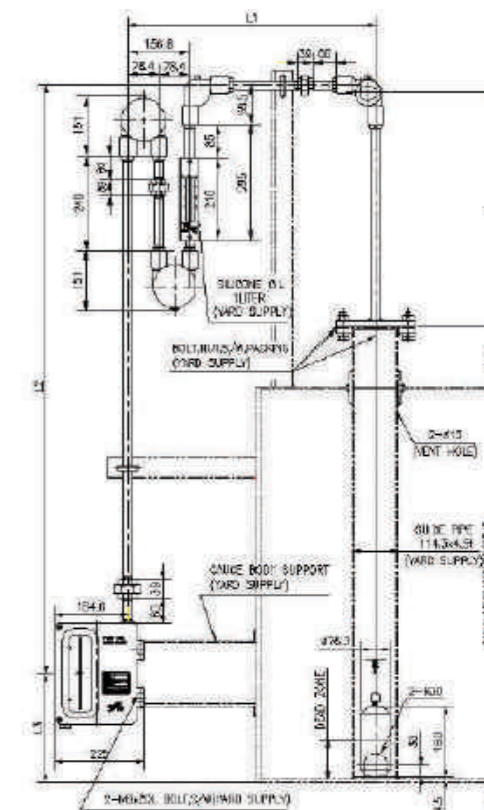
TOP MOUNTING (FL1-Series)



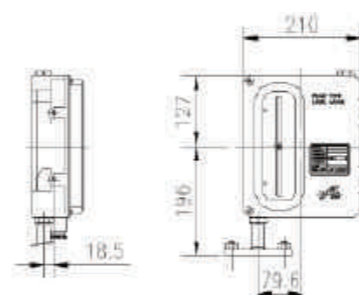
SIDE MOUNTING (FL2x-Series)



SIDE MOUNTING WITH SEAL PORT (FL3-Series)



Detailed dimensions for indicator body



Detailed dimensions for float

