



MAGNETIC BRIDLE LEVEL INDICATORS

MAGNETIC "BRIDLE" LEVEL INDICATORS

Magnetic "Bridle" Level Indicators (or cage, isolating column, bypass pipe, external chamber, etc.) is a vertical pipe connected to the side of a storage tank or process vessel typically with side-side or side-bottom connections. Because the fluid inside the bridle will rise and fall equally with the level of fluid inside the tank or vessel, the bridle has been adapted for level measurement on a broad scale. The use of the term "bridle" refers to a bypass chamber on a larger process vessel on which the level instrumentation for that vessel is mounted. Bridles usually do not have level equipment extending into the bridle itself. Level equipment is typically placed in its own cage or nozzle attached to the bridle.



BRIDLE ADVANTAGES

Bridle level measurement has provided industrial users with distinct advantages:

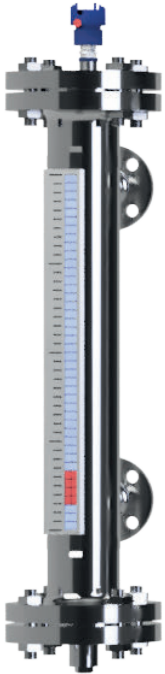
- **Fewer Connections:** A bridle reduces the number of connections necessary on the process vessel. This is especially important on boiler code vessels that require qualified welders and procedures.
- **Prudent Design:** Level instrumentation is often the last consideration on a project. Mounting the instrumentation on a bridle eliminates the need for planning multiple instrumentation connections on the vessel.
- **Saves Time:** Because instrumentation is typically left until the end, ordering a bridle with all the level instrumentation cuts down on the time necessary to add connections and install the instrumentation at the project deadline.
- **Avoids Obstructions:** When a tank has mixers, agitators, aerators, ladders, or structural bracing, a bridle avoids any interference between these objects and the level controls.
- **Reduces Turbulence, Foam:** In a highly agitated vessel, a bridle calms the surface to be measured and reduces foam to improve measurement accuracy.

BRIDLE ARRANGEMENT OPTIONS

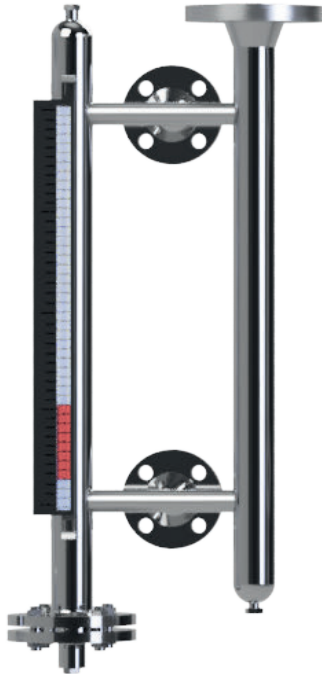
- A bridle is connected to the side of a tank or vessel. Level equipment is typically placed in its own cage that is attached to the bridle.
- A Magnetic Level Indicator (MLI) can provide both local and remote level indication as well as redundant level control for optimum reliability. The transmitter is shown with a local remote extension which offers more convenient access to the transmitter.
- A cage-mounted Guided Wave Radar transmitter is an ideal solution for many new and retro fit bridle applications.
- Isolation valves are often located between the instrument cage and the bridle so that the instrument can be isolated from the process for maintenance or repair.

TYPICAL STYLES OF A MAG-RADAR: SHRIDAN - O

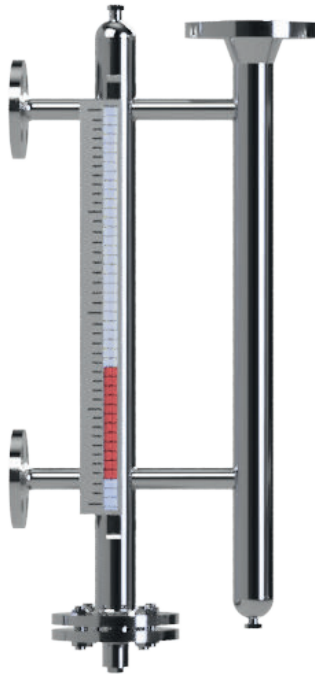
S



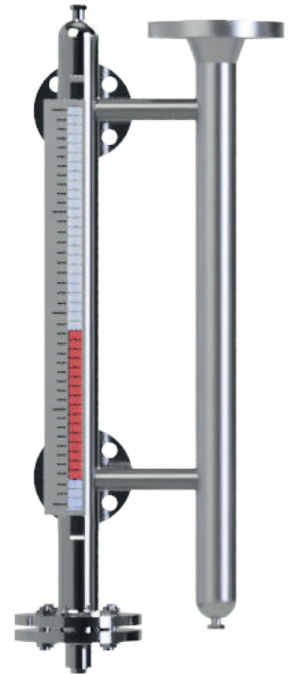
H



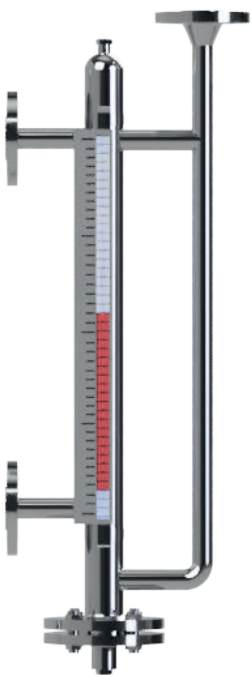
R



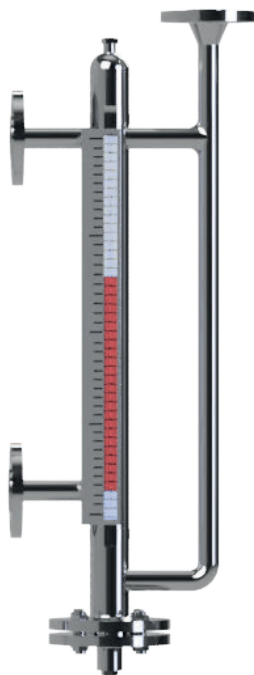
I



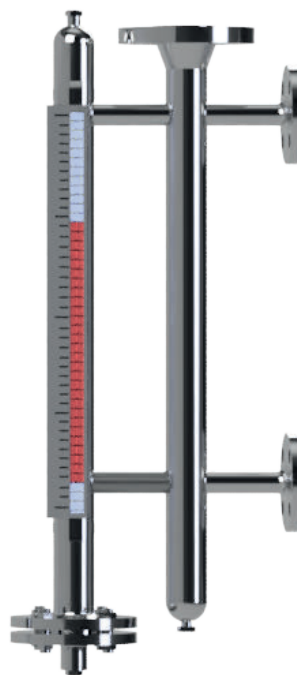
D



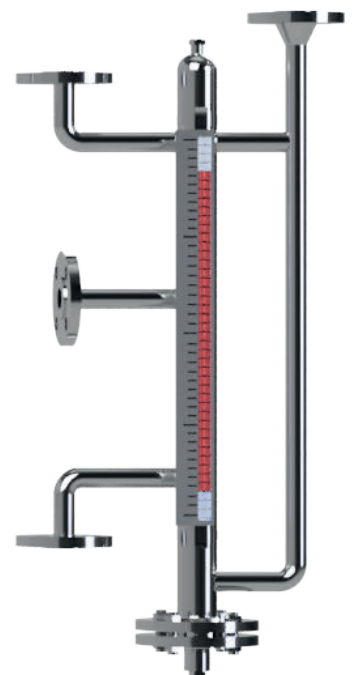
A



N



O



ORDERING INFORMATION FOR MBLI SERIES

SPECIFY PART NO. →

MBLI 1 2 3 4 5 6 7 8 9 10 11 12 13

MBLI

1	STYLE
S	SOLO Series
H	DUO - Process connection on Nozzle
R	DUO - Process connection on MLI (180°) *
I	DUO - Process connection on MLI (90°) *
D	DUO - Secondary Chamber through Elbow
A	DUO - Secondary Chamber through Elbow and Tee
N	DUO - Process connection on Secondary Chamber (180°) *
O	Others

2	MATERIAL OF CONSTRUCTION
A	304 SS
B	316 SS
C	316L SS
D	316/316L SS (Dual Certified)
E	Titanium
F	Hastelloy C276
G	Inconel 625
H	Inconel 825
I	PVDF / Kynar
J	PP
O	Others

3	APPLICATION
L	Total Level
I	Interface Level
F	Flashing ¹
O	Others

4	FLOAT MATERIAL
A	316 / 316L SS
B	Titanium
C	Hastelloy
D	Inconel
E	PVDF / Kynar
F	PP
O	Others

5	INDICATION TYPE
A	Rotating Flappers (Red / White)
B	Shuttle
C	Hermetically Sealed Flappers
D	Broad Indicators ²
E	Custom Color Flappers
O	Others

¹ In case of SOLO design, "D" is standard supply.

6	CHAMBER SIZE
For DUO Series	
	MLI Secondary Chamber
1	2" / DN 50 A 1" / DN 25
2	2½" / DN 65 B 1½" / DN 40
3	3" / DN 80 C 2" / DN 50
O	Others D 2½" / DN 65
	E 3" / DN 80
	F 4" / DN 100
	O Others
4	For SOLO Series N NONE
	4" / DN 100 ³

¹ min. shall be Sch. 40 and no secondary chamber
² for flashing application, choose 3" chamber size.

7	CHAMBER SCHEDULE
For DUO Series	
	MLI Secondary Chamber
1	Schedule 10 A Schedule 10
2	Schedule 40/STD. ⁴ B Schedule 40/STD. ⁴
3	Schedule 80/XS C Schedule 80/XS
4	Schedule 160 D Schedule 160
O	Others O Others
	N NONE

⁴ for SOLO Series: Code 2N and above

8	INSTRUMENT CONNECTION
Flanged	
1	½" / DN 15 A 150# / PN16
2	¾" / DN 20 B 300# / PN40
3	1" / DN 25 C 600# / PN64
4	1½" / DN 40 D 900# / PN100
5	2" / DN 50 E 1500# / PN160
6	3" / DN 80 F 2500# / PN250

Threaded (F) (with End Cap)	
7	½" / DN 15 G NPT
8	¾" / DN 20 H BSP
9	1" / DN 25 O Others
O	Others

* Note: 90° / 180° is in reference with the secondary chamber

ORDERING INFORMATION FOR MBLI SERIES

SPECIFY PART NO. → MBLI 1 2 3 4 5 6 7 8 9 10 11 12 13

MBLI

9 PROCESS CONNECTION			
Flanged			
1	½" / DN 15	A	150# / PN16
2	¾" / DN 20	B	300# / PN40
3	1" / DN 25	C	600# / PN64
4	1½" / DN 40	D	900# / PN100
5	2" / DN 50	E	1500# / PN160
6	3" / DN 80	F	2500# / PN250
Threaded			
7	½" / DN 15	G	NPT
8	¾" / DN 20	H	BSP
9	1" / DN 25	O	Others
0	Others		

10 VENT CONNECTION			
Flanged/Plugged/Valves			
1	½" / DN 15	A	150# / PN16
2	¾" / DN 20	B	300# / PN40
3	1" / DN 25	C	600# / PN64
4	1½" / DN 40	D	900# / PN100
5	2" / DN 50	E	1500# / PN160
		F	2500# / PN250
		G	NPT Plug
		H	BSP Plug
		I	Threaded valves
0	NONE	J	SW Valve
		K	SW Valve w/ Flange ⁵
		L	Flanged Valve ⁵
		N	NONE
		O	Others

⁵ in case of SW Valve w/ Flange OR Flanged valves, rating of flanges shall be as per process / instrument connection

11 DRAIN CONNECTION			
Flanged/Plugged/Valves			
1	½" / DN 15	A	150# / PN16
2	¾" / DN 20	B	300# / PN40
3	1" / DN 25	C	600# / PN64
4	1½" / DN 40	D	900# / PN100
5	2" / DN 50	E	1500# / PN160
		F	2500# / PN250
		G	NPT Plug
		H	BSP Plug
		I	Threaded valves
0	NONE	J	SW Valve
		K	SW Valve w/ Flange ⁶
		L	Flanged Valve ⁶
		N	NONE
		O	Others

⁶ in case of SW Valve w/ Flange OR Flanged valves, rating of flanges shall be as per process / instrument connection

12 OPTIONS / ACCESSORIES	
NN	None
SW	Switches for MLI
RX	REED Chain Level Transmitter
MX	Magnetostrictive Transmitter for MLI
RO	Radar Transmitter (GWR / Free Space), OEM Supply
RS	Radar Transmitter (GWR / Free Space), SAPL Supply ⁷
IN	Thermal Insulation Jacket
CY	Cryogenic Insulation with anti-frost ext.
FR	Anti-frost extension
HT	Tracing (Electrical / Steam)
IV	Isolation Valves
XX	Multiple options (as specified on TDS)
OO	Others

⁷ outsourced / 3rd party sourcing

13 AREA CLASSIFICATION	
0	Non-Hazardous
1	Hazardous



Head office and Manufacturing - 1

SHRIDHAN Automation Pvt. Ltd.
#B-54, KSSIDC Industrial Estate,
Kumbalgotu, Mysore Road,
Bangalore-560074. India.
+91-80-28437847, +91 80 - 28437848
info@shridhan.com

Manufacturing - 2

SHRIDHAN Automation Pvt. Ltd.
#D-13 KIADB Industrial Area,
Kumbalgotu, Mysore Road,
Bangalore-560074. India.
+91-80-28437847, +91 80 - 28437848
info@shridhan.com

Middle East

ORBIT Automation FZE
#R4-40 A, PO Box - 122828,
SAIF Zone, Sharjah, UAE.

A 100% Subsidiary of
SHRIDHAN Automation Pvt. Ltd., India.
Ph:+97155 - 9347963,+97155 - 1883375
me@shridhan.com

