

MAC-WELD Level Chamber for External Process Level Measurement



MAC-WELD Manufactures high quality chambers allowing external mounting of Radar level measurement on process vessels.

Design & built in accordance with ASME B31.3 or B31.1, allowing users to buy an integrated bolt-on instrument solutions, or simply a chamber for use with existing instrumentation.

Various Process Connections are available.

Drain & Vent options are available.

Our chambers use only certified and traceable materials and are manufactured using full penetration welds with procedures qualified to ASME.

All chambers are hydro tested upon completion, with a full range of NDT or customer inspection options available to order.

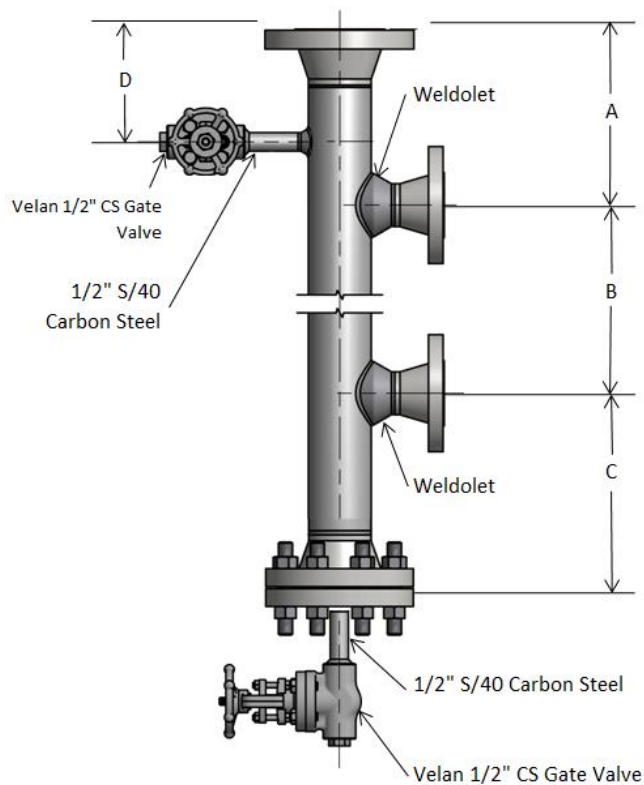
MAC-WELD LVL series Level Chamber

MAC-WELD Level Chamber is an external Chamber designed and manufactured to measure Process Level measurements on a vessel. The Chamber is designed for Horizontal or vertical vessel. External Level measurements avoid multiple difficulties faced in the vessel measurements. The following constraints that are eliminated are:

- Turbulent process parameters
- Hazardous Liquids
- Agitators
- Easy and Live maintenance
- Isolation of the instrument
- Safety
- Heat Exchangers

Chamber Design

- Designed to ASME B31.3. (ASME B31.1 available upon request)
- All Material used to build Chambers are fully traceable.
- Standard sizes from 1.5 inches to 4 inches with S40 or S80 CS or 316SS (L) available. Other sizes and material are available upon request. Various process sizes and connection types are available.
- Chambers are manufactured using full penetration welds with welders and welding procedures qualified to ASME standards.



Ordering Information

Model Code		Code Description	
LVL	Chamber Code		
Chamber (Size/Schedule/Material)			
Code	Description	Code	Description
E1-1.500-B	1 ½" S40 CS	E1-3.000-B	3" S40 CS
E1-1.500-C	1 ½" S80 CS	E1-3.000-C	3" S80 CS
L2-1.500-B	1 ½" S40 SS316L	L2-3.000-B	3" S40 SS316L
L2-1.500-C	1 ½" S80 SS316L	L2-3.000-C	3" S80 SS316L
E1-2.000-B	2" S40 CS	E1-4.000-B	4" S40 CS
E1-2.000-C	2" S80 CS	E1-4.000-C	4" S80 CS
L2-2.000-B	2" S40 SS316L	L2-4.000-B	4" S40 SS316L
L2-2.000-C	2" S80 SS316L	L2-4.000-C	4" S80 SS316L

Top Connection (Size/Rating/Schedule)			
Code	Description	Code	Description
CZ-B	2" 150# WNRF S40	CZ-C	2" 150# WNRF S80
DJ-B	3" 150# WNRF S40	DJ-C	3" 150# WNRF S80
DP-B	4" 150# WNRF S40	DP-C	4" 150# WNRF S80
DA-B	2" 300# WNRF S40	DA-C	2" 300# WNRF S80
DK-B	3" 300# WNRF S40	DK-C	3" 300# WNRF S80
DQ-B	4" 300# WNRF S40	DQ-C	4" 300# WNRF S80
DB-B	2" 600# WNRF S40	DB-C	2" 600# WNRF S80
DL-B	3" 600# WNRF S40	DL-C	3" 600# WNRF S80
DR-B	4" 600# WNRF S40	DR-C	4" 600# WNRF S80
CP-A	Cap, select the size		

Dimension A - Centre to Centre Distance (Top Flange to Top Process Flange) in Inches	
00000	Example for 9.5 inches select 09500

Process Connection (Size/Rating/Schedule)			
Code	Description	Code	Description
CZ-B	2" 150# WNRF S40	CZ-C	2" 150# WNRF S80
DJ-B	3" 150# WNRF S40	DJ-C	3" 150# WNRF S80
DP-B	4" 150# WNRF S40	DP-C	4" 150# WNRF S80
DA-B	2" 300# WNRF S40	DA-C	2" 300# WNRF S80
DK-B	3" 300# WNRF S40	DK-C	3" 300# WNRF S80
DQ-B	4" 300# WNRF S40	DQ-C	4" 300# WNRF S80
DB-B	2" 600# WNRF S40	DB-C	2" 600# WNRF S80
DL-B	3" 600# WNRF S40	DL-C	3" 600# WNRF S80
DR-B	4" 600# WNRF S40	DR-C	4" 600# WNRF S80
CP-A	Cap, select the size		

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Dimension B - Centre to Centre Distance (Between the two Process Flanges) in Inches	
00000	Example for 11.0 inches select 11000

Bottom Connection (Size/Rating/Schedule)			
Code	Description	Code	Description
CZ-B	2" 150# WNRF S40	CZ-C	2" 150# WNRF S80
DJ-B	3" 150# WNRF S40	DJ-C	3" 150# WNRF S80
DP-B	4" 150# WNRF S40	DP-C	4" 150# WNRF S80
DA-B	2" 300# WNRF S40	DA-C	2" 300# WNRF S80
DK-B	3" 300# WNRF S40	DK-C	3" 300# WNRF S80
DQ-B	4" 300# WNRF S40	DQ-C	4" 300# WNRF S80
DB-B	2" 600# WNRF S40	DB-C	2" 600# WNRF S80
DL-B	3" 600# WNRF S40	DL-C	3" 600# WNRF S80
DR-B	4" 600# WNRF S40	DR-C	4" 600# WNRF S80
CP-A	Cap, Select the size		

Dimension C - Centre to Centre Distance (Bottom Process to Bottom Flange) in Inches	
00000	Example for 3.000 inches select 03000

Option - A			
Vent			
Vent (size/ Schedule/ Material)			
Code	Description	Code	Description
V-E1	½" S40 CS	V-E5	1" S40 CS
V-E2	½" S80 CS	V-E6	1" S80 CS
V-L1	½" S40 SS316L	V-L5	1" S40 SS316L
V-L2	½" S80 SS316L	V-L6	1" S80 SS316L
V-E3	¾" S40 CS	V-E7	1½" S40 CS
V-E4	¾" S80 CS	V-E8	1½" S80 CS
V-L3	¾" S40 SS316L	V-L7	1½" S40 SS316L
V-L4	¾" S80 SS316L	V-L8	1½" S80 SS316L
V-NR	Not required		

Vent Valve	
Code	Description
VV-NV0	No Valve Required
VV-05E	Velan ½" CS Gate Valve
VV-05L	Velan ½" SS Gate Valve
VV-050	½" NPT Threadolet w/plug
VV-075	¾" NPT Threadolet w/Plug

Dimension D - Centre to Centre Distance (Vent Flange to Top Flange) in Inches	
V-00000	Example for 1.500 inches select V-01500

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Drain			
Drain (size/ Schedule/ Material)			
Code	Description	Code	Description
D-E1	½" S40 CS	D-E5	1" S40 CS
D-E2	½" S80 CS	D-E6	1" S80 CS
D-L1	½" S40 SS316L	D-L5	1" S40 SS316L
D-L2	½" S80 SS316L	D-L6	1" S80 SS316L
D-E3	¾" S40 CS	D-E7	1½" S40 CS
D-E4	¾" S80 CS	D-E8	1½" S80 CS
D-L3	¾" S40 SS316L	D-L7	1½" S40 SS316L
D-L4	¾" S80 SS316L	D-L8	1½" S80 SS316L
D-NR	Not Required		

Drain Valve	
Code	Description
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DD-05E	Velan ½" CS Gate Valve
DD-05L	Velan ½" SS Gate Valve
DD-050	½" NPT Threadolet w/plug
DD-075	¾" NPT Threadolet w/Plug

Option - B	
Specify line options as required	
Code	Option
GT	Gasket
DP	Dye Penetration
HY	Hydrotest
SP	Shop Primer
SPP	Shop Painting
HT	Heat Treating
XR	X-Ray Butt Weld Joint
SR	Special Requirements

MAC-WELD Level Chamber for External Process Level Measurement



MAC-WELD Manufactures high quality chambers allowing external mounting of level measurement on process vessels.

The chambers are suitable for

- Magnetic level indication (Flag & Float type)
- Guided Wave Radar
- Dual Chambers built to combine above technologies for Redundancy.

Design & built in accordance with ASME B31.3 or B31.1, allowing users to buy an integrated bolt-on instrument solutions,

or simply a chamber for use with existing instrumentation.

Various Process Connections are available.

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Chamber Design

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Specifications

- Chamber Flange Rating; 150# to 2500#
- Chamber Configuration: Side-side standard. Other options also available
- Pipe Schedule: Pipe Schedules 10, 40, 80 or 160 welded or Seamless.
- Chamber Material: Stainless Steel and CS material standard. Other material available as optional.
- Chamber Sizes: 1.5" to 4" standard. Other sizes available as an option.
- Chamber Welding: In-house with Welders & welding procedures Certified & qualified to ASME standards.
- Indicator: Standard Red and White, Metric/Imperial Scale. Highly visible.
- Measuring Range: 6" to 20'. Other lengths available as an option.
- Float: To obtain Highest Accuracy, Floats are Designed & Weighed.

Testing & Documentation

- Hydro test
- PMI(Positive Material identification)
- Dye Penetration test
- CRN(Canadian Registration Number)
- Material Traceability
- Heat Treating
- X-Ray, Butt Weld Joint
- ASME B31.3 (B31.1 available as an option)
- Additional special requirements available upon request
- Nace

Images

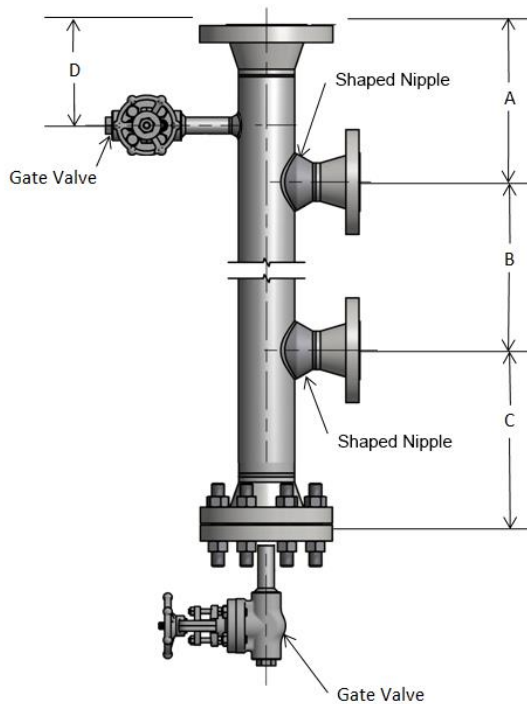


Fig 1. Drawing with dimensions



Fig 2. Level Chamber

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Fig 3. Level Chamber with Float



Fig 4. Dual Level Chamber with Float