



**BLISS ANAND**

# Instrument Chambers



**MJ Systems, LLC**  
**Authorized Bliss Distributors**  
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# Instrument Chambers

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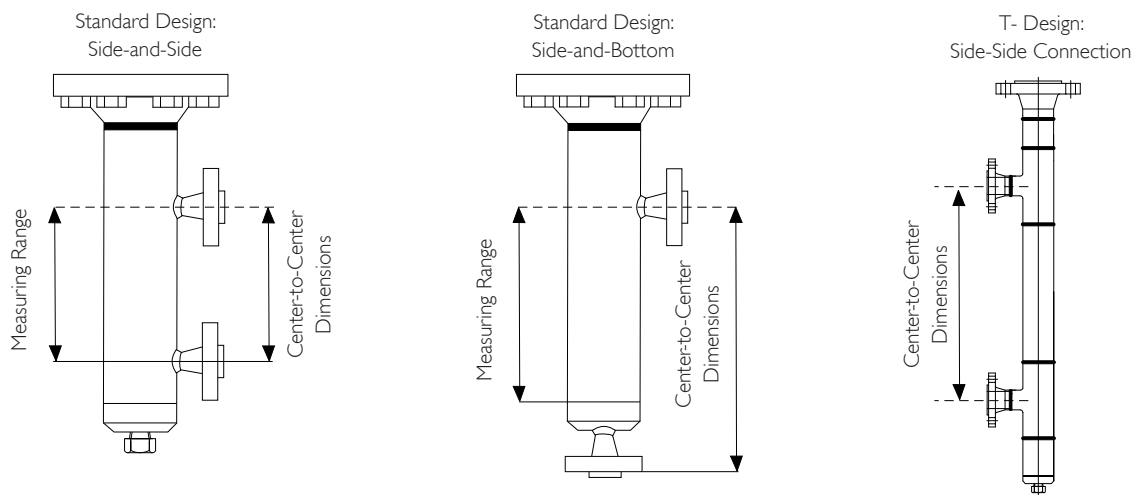
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## Introduction to Bliss Instrument Chambers

Also known as a cage, it houses the liquid process being measured and instrument's sensing element. There are many types of process connections on the body of the chamber which allow mounting to the vessel.

Figure below show the most common configurations.



This configuration allows an instrument to be isolated with valves for maintenance without disturbing plant operation. It is also useful for in-tank restrictions that do not allow mounting of the instrument in a vessel. This approach offers many advantages when solving application challenges. The instrument is mounted on top of the chamber with the flanged or threaded instrument connection. A thread version is available for the vertical float level switch.

■ When ordering, specify the center-to-center dimension in feet and inches, or meters and millimeters.

# INSTRUMENT CHAMBER SELECTION GUIDE BAC 92 SERIES

Selection	Suffix Codes												Description	
A Instrument Type	G													GWR
	V													Vertical Level Switch
	H													Horizontal Level Switch
B Mounting Style	SS													Side-Side
	SB													Side-Bottom
	XX													Special (Specify)
C Chamber Material	CS													A106 Gr. B
	LF													A333
	S2													SS-316 / 316 L
	S8													Inconel 825
	XX													Special (Specify)
D Instrument Chamber Size			2											2"
			3											3"
			4											4"
			X											Special (Specify)
E Instrument Chamber Pipe Schedule				A										Sch. 10
				B										Sch. 40
				C										Sch. 80
				D										Sch. 160
				X										Special (Specify)
F Instrument Connection Size (Flanged)					2									2"
					3									3"
					4									4"
					X									Special (Specify)
G Instrument Connection Rating (Flanged)					A									150#
					B									300#
					C									600#
					D									900#
					E									1500#
					F									2500#
					X									Special (Specify)
H Instrument Connection Finish (Flanged)					RF									RF
					WN									WNRF
					SJ									SORTJ
					WJ									WNRTJ
					XX									Special (Specify)
I Chamber Bottom Style					D									Dished End
					B									Bottom cover
					X									Special
J Process Connection Size						1								1/2"
						2								3/4"
						3								1"
						4								1.5"
						5								2"
						6								2.5"
						7								3"
						8								4"
						X								Special (Specify)
K Process Connection Rating										A				150#
										B				300#
										C				600#
										D				900#
										E				1500#
										F				2500#
										T				NPT(F) - 3000#
										X				Special (Specify)
L Process Connection Type										TH				Threaded
										RF				RF
										WN				WNRF
										SJ				SORTJ
										WJ				WNRTJ
										XX				Special (Specify)

# INSTRUMENT CHAMBER SELECTION GUIDE BAC 92 SERIES

Selection		Suffix Codes												Description		
M	Vent Connectio													PL	Plugged	
															FL	Flanged
															FV	Flanged with Valve
															SV	Screwed with Valve
															XX	Special
N	Vent Connection Size													1	1/2"	
														2	3/4"	
														3	1"	
														X	Special (Specify)	
O	Vent Connection Rating													A	150#	
														B	300#	
														C	600#	
														D	900#	
														E	1500#	
														F	2500#	
														T	NPT(F) - 3000#	
													X	Special (Specify)		
P	Vent Connection Type													TH	Threaded	
														RF	RF	
														WN	WNRF	
														SJ	SORTJ	
														WJ	WNRTJ	
													XX	Special (Specify)		
Q	Drain Connection													PL	Plugged	
														FL	Flanged	
														FV	Flanged with Valve	
														SV	Screwed with Valve	
														XX	Special	
R	Drain Connection Size													1	1/2"	
														2	3/4"	
														3	1"	
														X	Special (Specify)	
S	Drain Connection Rating													A	150#	
														B	300#	
														C	600#	
														D	900#	
														E	1500#	
														F	2500#	
														T	NPT(F) - 3000#	
													X	Special (Specify)		
T	Drain Connection Type													TH	Threaded	
														RF	RF	
														WN	WNRF	
														SJ	SORTJ	
														WJ	WNRTJ	
													XX	Special (Specify)		
U	Mounting Accessories													OO	No Accessories	
														SN	Studs & Nuts	
														GS	Gasket Spiral Wound	
														GF	Gasket Flat (Gra.)	
													GX	Gasket Special		
V	C to C or C to B Distance													XXXX	Specify with unit	



# INSTRUMENT CHAMBERS

## BLISS ANAND Instrument Chambers

- \* Allows external mounting of process level instrumentation
- \* Ideal for critical area and general purpose applications
- \* Power, Petro-Chemical, Refining, Oil & Gas, Chemical and Process Steam
- \* 38 years of experience in designing and manufacturing chambers in accordance with international codes
- \* Variety of process connections and optional drain and vent connections
- \* Used by major industries worldwide
- \* Enables live maintenance
- \* Designed to ASME B31.3
- \* Pressure Equipment Directive (PED) compliant
- \* Custom designs service available
- \* For use in applications up to ASME B16.5 Class 2500 and EN1092 PN250
- \* Available in carbon steel, stainless steel and other alloys

### Chamber Design

The Bliss instrument chamber is designed to the ASME B31.3 standard, and is Pressure Equipment Directive (PED) compliant. Weld neck flanges and full penetration welds in accordance with EN ISO 15614-1:2004 and ASME Boiler and pressure Vessel Code Section IX are used throughout. All welders are qualified to EN 287-1:2004 and ASME Boiler and pressure Vessel code section IX. All construction materials have full traceability in accordance with the EN 10204 type 3.1 certificates. Every chamber is hydro-tested as standard. There are two designs available: the Standard Design and T-piece Design.

### Standard Design

With the standard design, the process connections are welded directly onto the chamber body. This keeps the number of welds to a minimum for increased Safety.

Pressure ratings up to and including ASME B16.5 Class 2500.

### T-Piece Design

T-Piece design is used, Unequal T's are used so the larger process connections can fit on the smaller chamber body.

Pressure ratings of up to and including ASME B16.5 Class 2500.

### Drain and Vent (Optional)

A drain allows liquid to be drained away and allows maintenance of the instrument. It is always specified for a side-and-side chamber. A vent is optional and allows gas in the upper zone above the liquid to be vented off. Both the drain and vent are available as threaded or flanged in a variety of sizes. Special types are also available upon request.





## Special Requirements & Testing

- H2 Compliance
- PMI
- D.P. Test
- Radiography
- Ultra Sonic
- Approved Weld Procedures & Welder Certifications
- Nace Compliance
- HIC Compliance
- SP. Alloy Weldings (Alloy 825, StSt, Monel, LF2 etc.)
- Other testing available as required







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