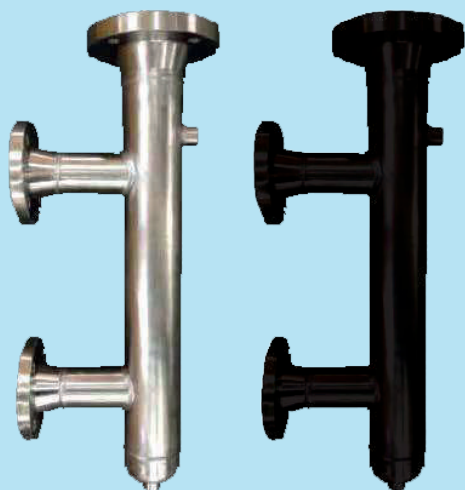




**EXTERNAL  
CHAMBERS**



ISO - 9001-14001-45001 Certified

**PED**  
2014/68/EU

Pressure Equipment Directive  
2014/68/EU

**IBR**  
Approved

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### EXTERNAL CHAMBERS

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## 1.1 INTRODUCTION

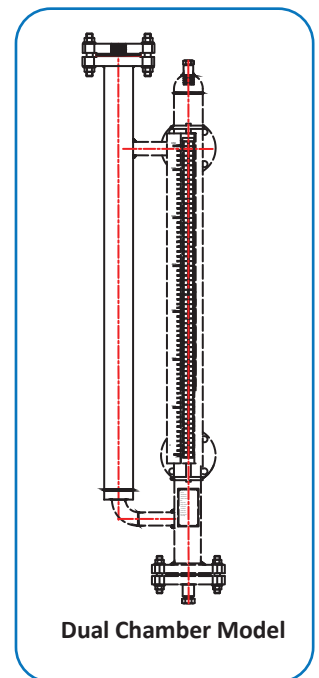
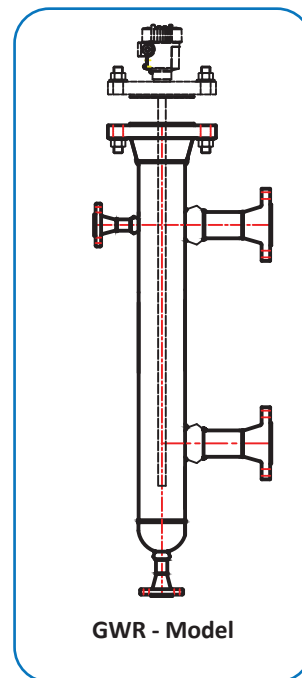
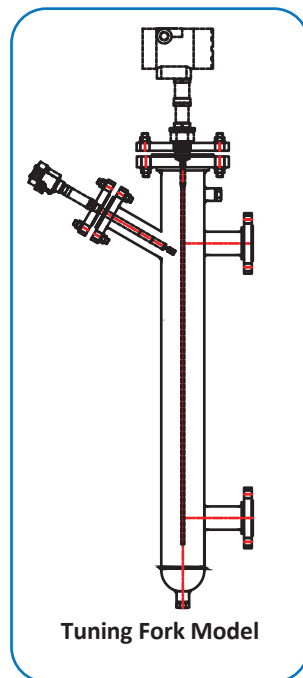
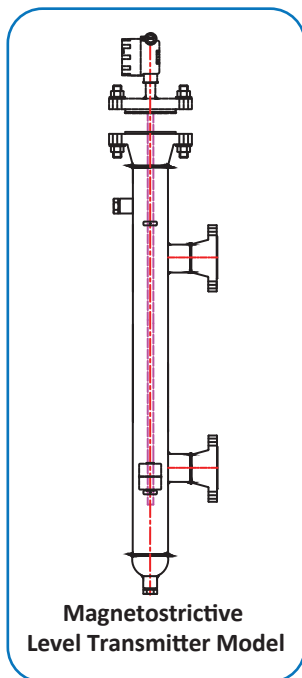
Bypass chambers manufactured by Shridhan offers fast delivery, easy installation and are manufactured according to various International Standards / Codes.

The bypass chambers are mounted directly to tanks with two or more connections which ensures that the liquid level inside the tanks match the level inside the chambers. Guided Wave Radars are the most commonly used instrument on these chambers.

Chambers are used to obtain a level or interface measurement from the outside of a process vessel. Custom solutions are offered for high temperature and corrosion resistance, including special high temperature resistant painting on them.

Chambers are used in many applications for following types of instruments -

- Radar transmitters - Guided Wave and Non-Contact
- Tuning fork switches
- Vertical float switches
- Horizontal float switches
- Magnetostrictive level transmitters
- Displacer level switches and transmitters
- Hydrostatic level transmitters
- With Magnetic level gauges (dual chamber assemblies)



## FEATURES

- Global quality assured design and manufacturing according to various International standards.
- Conforms to Pressure Equipment Directive (PED) 2014/68/EU for liquids in Groups 1 and 2.
- Industry standard weld neck flanges are used throughout, increasing safety by minimizing stress levels and the number of welds.
- All welds are full penetration - to increase integrity and reduce corrosion.
- Drain options for even easier maintenance of the instrument.
- Optional vent allows gas in the upper zone above the liquid to be vented off.

## 1.2 EXTERNAL CHAMBERS - STYLES : SHRIDAN - O

S



H



R



I



D



A



N



O





## 1.3 ORDERING INFORMATION FOR EXTERNAL CHAMBERS

SPECIFY PART NO.	—	EXCS	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
		EXCS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example EXCS			<b>S</b>	<b>1</b>	<b>A</b>	<b>3B</b>	<b>3B</b>	<b>5B</b>	<b>0N</b>	<b>1G</b>	<b>NN</b>	<b>0</b>

1	STYLE
S	Standard (Flanged/Threaded)
H	TEE Piece
R	Bottom Flanged
I	Top Capped (for threaded connections only)
D	PTFE Lined
A	Stilling Wells (Perforated)
N	Multiple process connection
O	Others

2	FOR INSTRUMENT TYPE
1	Guided Wave Radar Transmitter
2	Free Space Radar Transmitter
3	Vertical Float Switches
4	Magnetostrictive Level Transmitter
5	Displacer Level Switch / Transmitter
6	Bridle Arrangement for existing MLI
O	Others

3	MATERIAL OF CONSTRUCTION
A	Carbon Steel
B	Low Temperature Carbon Steel
C	304 SS
D	316 SS
E	316L SS
F	316/316L SS (Dual Certified)
G	Titanium
H	Hastelloy C276
I	Inconel 625
J	Inconel 825
K	Monel 400
L	PVDF / Kynar
M	PP
O	Others

4	CHAMBER SIZE
1	1" / DN 25      A      Sch. 10
2	1½" / DN 40      B      Sch. 40 / STD.
3	2" / DN 50      C      Sch. 80 / XS
4	2½" / DN 65      D      Sch. 160
5	3" / DN 80      O      Others
6	4" / DN 100
O	Others

5	INSTRUMENT CONNECTION
	<b>Flanged</b> <b>Threaded (F)</b>
1	1" / DN 25      A      150# / PN16      7      ½" / DN 15      G      NPT
2	1½" / DN 40      B      300# / PN40      8      ¾" / DN 20      H      BSP
3	2" / DN 50      C      600# / PN64      9      1" / DN 25      O      Others
4	2½" / DN 65      D      900# / PN100      O      Others
5	3" / DN 80      E      1500# / PN160
6	4" / DN 100      F      2500# / PN250
O	Others      O      Others

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

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

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

<sup>1</sup> in case of SW Valve w/ Flange OR Flanged valves, rating of flanges shall be as per process / instrument connection

## 1.3 ORDERING INFORMATION FOR EXTERNAL CHAMBERS

SPECIFY PART NO. — EXCS 1 2 3 4 5 6 7 8 9 10

EXCS                    

Example EXCS S 1 A 3B 3B 5B 0N 1G NN 0

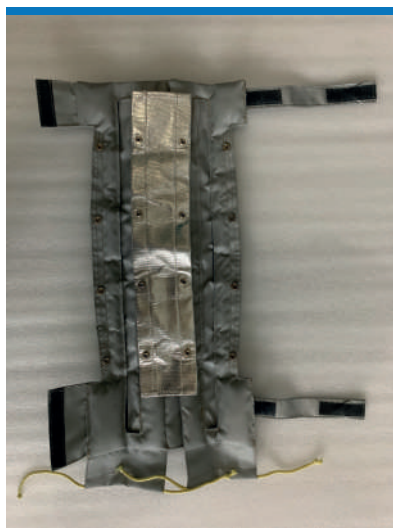
9	OPTIONAL ACCESSORIES
NN	None
IN	Thermal Insulation Jacket
CY	Cryogenic Insulation
HT	Tracing (Electrical / Steam)
IV	Isolation Valves
XX	Multiple options (as specified on TDS)
OO	Others

10	AREA CLASSIFICATION
0	Non-hazardous
1	Hazardous

## 1.4 ACCESSORIES

- Tracing - Electrical / Steam - for viscous process liquids
- Thermal Insulation - for high temperature applications
- Cryogenic Insulation - for cold temperature applications / cryogenic services
- Isolation valves - for easy maintenance

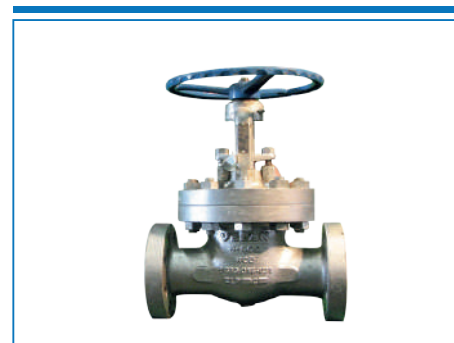
**Thermal Insulation**



**Cryogenic Insulation**



**Isolation valves**



**Electrical Tracing**



**Steam Tracing**



### **HQ and Manufacturing - 1**

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