



**INSTRUCTION MANUAL FOR CHA-SERIES CHAMBERS FOR GUIDED
WAVE RADARS**

1. INSTRUMENT DESCRIPTION

Chambers for guided wave radars of the CHA series are designed to be fitted on the external sides of vertically-standing pressure vessels. Connexions can be side-side, side-flanged bottom or side-threaded bottom with measurement and rating as a function of the various applications. The same flanges can be SW or WN. The upper flange is correlated in size and rating to the guided wave radar to be installed.

They can be manufactured in various materials depending on the applications they serve.

2. MODEL IDENTIFICATION

Example CHA80SW -150- A - LL-25 - A - 1000 - XX

CHA80SW model

- 150** body rating ANSI 150 #
- 300** body rating ANSI 300 #
- 600** body rating ANSI 600 #
- 900** body rating ANSI 900 #
- 1500** body rating ANSI 1500 #
- 2500** body rating ANSI 2500 #

- A** carbon steel body
- LF2** ASTM A333 body gr.6 (LF2)
- J** AISI 316 body

- LL** Side-side connections
- LF** Side-bottom connections

- 25** dn 25 or 1" connections
- 40** dn 40 or 1.1/2" connections
- 50** dn 50 or 2" connections

- A** flanged connections, ANSI type
- U** flanged connections, UNI type
- D** flanged connections, DIN type
- N** threaded connections, NPT F type
- G** threaded connections, GAS F type
- SW** connections of the "weld-in pocket" type

- 1000** distance between connections (in mm)

- XX** specialities to be described separately (e.g. RTJ flanges)

3. OPERATING PRINCIPLE

Comply with the instructions provided with the radar installed.

4. INSTALLATION

The instrument shall only be installed and used by qualified staff.

Before installing it, check vessel and chamber connections for compatibility.

It is strictly forbidden to load the chamber with external loads and it is the user's obligation to protect it from all stress; never use it as a point of support.

To avoid galvanic corrosion effects, the use of materials with a different electrochemical potential is forbidden. The user shall take all technical measures required to preserve the unit from such an event.

The system shall be equipped with the prescribed safety valve, to remedy overpressure beyond the expected maximum values.

We suggest you use shut-off valves allowing you to easily dismount the chamber and the bleeders to remove any settlement possibly forming inside the chamber.

In the event of formation of air or steam bubbles, please apply air-relief valves on the upper connections.

For installation on vessels exposed to strong vibration, please contact our customer service.

The entire process of connection to the system shall be accurate so that all parts (flanges, gaskets and tie rods) perfectly match to avoid sealing problems and bringing useless mechanical stress to the system and/or to the chamber.

5. PUTTING INTO SERVICE

Make sure that the use of the chamber does not exceed the intended conditions of use (higher temperature and pressure values).

The user shall ensure that any material that comes into contact with the fluid is compatible with the latter and is in compliance with the ageing characteristics of the fluid as the work environment.

6. MAINTENANCE

We recommend a periodic inspection (once every six months approximately) to confirm the operating efficiency of the chamber.

6.1 WARNINGS

- NEVER use the pressure chamber at a pressure, temperature or flow rate value that exceeds the values specified on the rating plate;
- NEVER perform settings or replace parts without having carefully read the instructions beforehand; in case of doubts, please contact our customer service department;
- NEVER lubricate any parts of the chamber;
- NEVER use tools that are likely to damage the edges and the internal surfaces of the chamber body while cleaning the chamber;
- If the chamber is used with very high temperature values, take all precautionary measures required to guarantee personal protection to the personnel on duty during the various maintenance stages.
- For chambers exceeding 6 metres in length, a further fastening point for the chamber is highly recommended.

6.2 PERIODICAL INSPECTION

Ensure that the chamber is shut off from the system and drained of all fluid.

- Open the chamber by unscrewing the bolts and pull out the radar.
- Inspect the body column and check it is clean from all encrustation or settlement. (if not, perform a thorough cleaning of the area);

7. DIMENSIONAL DRAWINGS OF THE BODY

TABLE OF DIMENSIONS

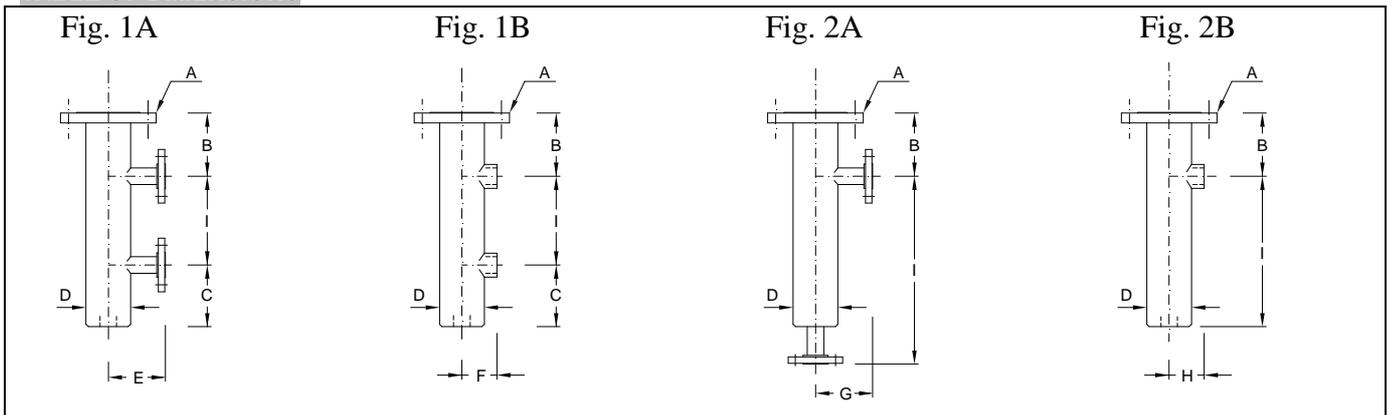


	Fig.	A	B	C	D	E	F	G	H	I
CHA 50SW										
Side / Side	1A/1B	2"	200	200	60	145	145	145	145	Range
Side / Bottom	2A/2B	2"	200		60	145	145	145	145	Range
CHA 80SW										
Side / Side	1A/1B	3"	200	200	89	145	82	145	82	Range
Side / Bottom	2A/2B	3"	200		89	145	82	145	82	Range
CHA 100SW										
Side / Side	1A/1B	4"	200	200	114	145	82	145	82	Range
Side / Bottom	2A/2B	4"	200		114	145	82	145	82	Range

N.B.: The values given apply to 1" connections.

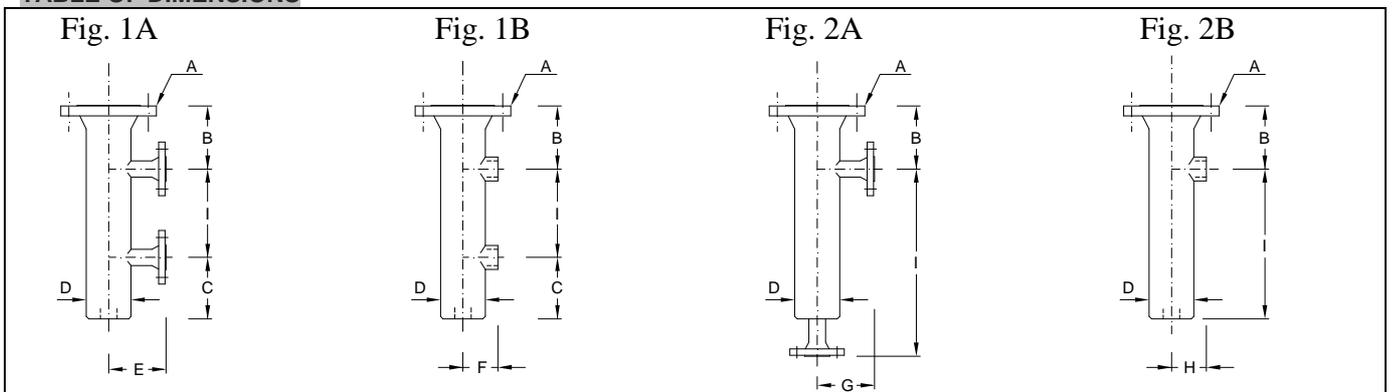
TABLE OF DIMENSIONS


	Fig.	A	B	C	D	E	F	G	H	I
CHA 50WN										
Side / Side	1A/1B	2"	200	200	60	145	145	145	145	Range
Side / Bottom	2A/2B	2"	200		60	145	145	145	145	Range
CHA 80WN										
Side / Side	1A/1B	3"	200	200	89	172	75	172	75	Range
Side / Bottom	2A/2B	3"	200		89	172	75	172	75	Range
CHA 100WN										
Side / Side	1A/1B	4"	200	200	114	172	88	172	88	Range
Side / Bottom	2A/2B	4"	200		114	172	88	172	88	Range

N.B.: The values given apply to 1" connections

8. RECOMMENDED SPARE PARTS

Always mention the serial number of your device in your request for spare parts.

This number is provided on the rating plate that is fastened to the chamber body and is a five-digit number preceded by the letter "F" (e.g.:F45678).

9. TROUBLESHOOTING

Guided wave radar chambers of the CHA series are not normally subject to faults.

10. DISPOSAL

When the chambers reach the end of their service life, they need to undergo disposal. Always comply with the applicable regulations in force.

During disposal, pay special attention to polymers, resins and rubbers used in the manufacture (such as PVC, PTFE, PP, PVDF, neoprene, Viton, etc.).

All metal parts, after the removal of seals and gaskets, special protective coatings requested by the customer and all other plastic parts, can be recycled.



11. GUARANTEE

All guided wave radar chambers of the CHA series are guaranteed to be free from manufacturing faults over a period of 18 operating months, and, all in all, not beyond 24 months from the date of delivery.

In the event of failures, implying return of goods within the limit specified above, OFFICINE OROBICHE will replace (shipment fees not included) all damaged parts free, provided that the failure does not ensue from incorrect use.

OFFICINE OROBICHE shall never be held responsible for any incorrect use of their products when these are used for purposes other than those mentioned in the specifications approved at the order stage.

In these cases, no complaints will ever be taken into consideration.

No damage and/or fee, whether direct or indirect, ensuing from an incorrect installation or use shall ever be debited to OFFICINE OROBICHE.

The chamber can be used for a maximum life period of 10 years dating from delivery.

When this period is over, there are two alternative options:

- 1) Replace it with a new chamber.
- 2) Have the old chamber overhauled by OFFICINE OROBICHE.

INSTRUMENT RETURN PROCEDURE

The instrument returning to the factory shall bear, in attachment, the following data:

- 1) Buyer's name.
- 2) Description of the material.
- 3) Detected fault.
- 4) Process data.
- 5) Specification of the fluids that have been used with the instrument.

The chamber shall be returned perfectly clean and free from dust or settlements. Otherwise, OFFICINE OROBICHE reserve the right not to carry out the servicing and return the chamber to the sender.

FINAL REMARKS

Each chamber is supplied fully assembled and equipped with all the accessories needed.

Some parts are sold separately under special circumstances only.

Therefore, we warn you to carefully inspect the supply and notify us at once if discrepancies are found.