

GITRAL Expansion Vessels

Instruction Manual

1. General

Expansion vessels with a fixed or replaceable membrane are designed in compliance with the principal safety requirements of the Pressure Equipment Directive 97/23/EC (PED).

2. Description and purpose of the equipment

Expansion vessels with a fixed membrane, MB line, are designed for operation in heating systems or in closed cooling circuits (type dependent) and enable to absorb volume fluctuations caused by heating fluid temperature changes. These vessels shall not be used in systems with DHW heating or for technologies with incoming fresh (oxygenated) water.

Expansion vessels with a fixed membrane, HYB line, or with a replaceable membrane, VVEF line, are designed for operation in systems with DHW heating. Besides volume fluctuations they absorb also water hammer effects, prolonging the lifetime and increasing the reliability of DHW tanks and entire systems.

3. Technical data

The vessels are made of high-quality steel, with fully automated welding, in a certified procedure in compliance with valid technical standards. A non-permeable, flexible rubber membrane is mounted inside the vessels that is very elastic and resistant to high temperatures.

Outer protection is realized with a primer and a final paint or by powder coating.

4. Installation

a) MB expansion vessel: Prior to installation, make sure the volume of the expansion vessel meets the requirements of the project. An expansion vessel shall be mounted between a boiler and a mixing valve, and preferably on a boiler return line. It shall be connected using a special valve that will enable isolating it in case its charge pressure needs to be checked. The valve shall remain locked open during operation. The vessel should be installed in such a position that keeps its air inlet valve easily accessible for charge pressure check.

After filling and air-bleeding the system, make sure the air pressure is a bit higher than the static pressure inside the system.

b) HYB and VVEF expansion vessels for DHW shall be mounted on the cold water pipe before a storage water heater, in the same manner as the MB line, also using a special valve.

Any system containing an expansion vessel shall be equipped with a safety valve ensuring that the max. permissible pressure (PS) of the vessel cannot be exceeded.

5. Maintenance

Maintenance should be done by a qualified person. At least every 6 months it shall be checked via the air inlet valve that the gas pressure inside remains within the right range. Always compare the values under the same temperature. Prior to performing gas pressure check and/or dismantling the vessel, the pressure in the system shall be released.

6. Safety instructions

The following instructions shall be respected unconditionally:

- The gas pressure shall never exceed the max. permissible pressure (PS)
- It is forbidden to puncture the vessel, bore into it or weld any elements onto it.
- Avoid exceeding the max. working temperature (TS) and/or the max. permissible pressure (PS).

- The manufacturer accepts no responsibility for damage caused by improper transport, nor for damage to health or property caused by wrong installation or improper use.

Expansion vessels for heating systems - MB line



Code	Type	Model	Volume [l]	Diamete [mm]	Height [mm]	Connection	Weight [kg]	Pre/charge pressure [bar]	Max. working pressure [bar]
8496	MB 12	IN LINE	12	267	334	3/4"	3,2	1,5	3
8497	MB 18	IN LINE	18	317	350	3/4"	4	1,5	3
8498	MB 25	IN LINE	25	317	448	3/4"	4,8	1,5	3
8499	MB 35	IN LINE	35	368	440	3/4"	7	1,5	3
8909	MB 35	LEGS	35	368	540	3/4"	7	1,5	3
8500	MB 50	LEGS	50	418	577	3/4"	9,1	1,5	3
8501	MB 80	SKIRT	80	450	608	3/4"	14	2	6
8502	MB 105	SKIRT	105	500	665	3/4"	16	2	6
8503	MB 150	SKIRT	150	500	897	3/4"	21	2	6
8504	MB 200	SKIRT	200	600	812	3/4"	34	2,5	6
8505	MB 250	SKIRT	250	630	957	3/4"	34	2,5	6
8506	MB 300	SKIRT	300	630	1105	3/4"	43	2,5	6
8507	MB 400	SKIRT	400	630	1450	3/4"	54	2,5	6
8508	MB 500	SKIRT	500	750	1340	1"	60	2,5	6
8926	MB 600	SKIRT	600	750	1555	1"	76	2,5	6
8927	MB 700	SKIRT	700	750	1755	1"	84	2,5	6
8928	MB 800	SKIRT	800	750	1855	1"	100	2,5	6
8929	MB 900	SKIRT	900	750	2105	1"	110	2,5	6

Expansion vessels for potable water - HYB line



Code	Type	Model	Volume [l]	Diamete [mm]	Height [mm]	Connection	Weight [kg]	Pre/charge pressure [bar]	Max. working pressure [bar]
8491	HYB 5	IN LINE	5	160	320	3/4"	1,7	3	10
8492	HYB 8	IN LINE	8	200	330	3/4"	2,3	3	10
8493	HYB 12	IN LINE	12	270	314	3/4"	3,5	3	10
8494	HYB 18	IN LINE	18	270	400	3/4"	4,4	3	10
8495	HYB 24	IN LINE	24	300	440	1"	5	3	10
8908	HYB 35	IN LINE	35	380	370	1"	7,7	3	10

Expansion vessels for potable water with replaceable bladder

- VVEF line



Code	Type	Model	Volume [l]	Diamete [mm]	Height [mm]	Connection	Weight [kg]	Pre/charge pressure [bar]	Max. working pressure [bar]
10912	VVEF 8	IN LINE	8	199	342	3/4"	2,4	1,5	10
10913	VVEF 12	IN LINE	12	270	316	3/4"	3,2	1,5	10
10914	VVEF 25	IN LINE	25	270	355	1"	4,5	1,5	10
10915	VVEF 50	LEGS	50	380	790	1"	13,5	1,5	10
10916	VVEF 60	LEGS	60	380	870	1"	12,3	1,5	10
10917	VVEF 80	LEGS	80	450	850	1"	17,5	1,5	10
10918	WEF 100	LEGS	100	450	930	1"	21	1,5	10
10919	WEF 200	LEGS	200	550	1285	6/4"	47	1,5	10
10920	WEF 300	LEGS	300	630	1415	6/4"	61	1,5	10

EC Declaration of Conformity

Manufacturer Identification:

GITRAL S.A.
Zi de Bourmat
F-63190 Orleat
France

Product Identification:

GITRAL expansion vessels
types: MB, HYB, VVEF

Description of the pressure equipment:

Expansion vessels with fixed membrane, MB line, are designed for operation in heating systems or closed cooling systems. Expansion vessels with fixed membrane, HYB line, or with replaceable bladder, VVEF line, are designed for operation in DHW heating systems.

The method used for conformity evaluation:

B+D modules for categories III. and IV.

Notified Body:

TÜV SÜD Industrie Service GmbH
Notified Body No. 0036
Westendstraße 199
D-80686 München
Germany

Certificates:

Certificate No. Z-IS-DDK-MUC-11-06-396876-001 dtd. 13.06.2011
Certificate No. Z-IS-DDK-MUC-11-06-396876-004 dtd. 13.06.2011
Certificate No. Z-IS-DDK-MUC-11-06-396876-003 dtd. 13.06.2011

The relevant Directives:

DIRECTIVE 97/23/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the approximation of the laws of the Member States concerning pressure equipment (PED)

The relevant standards:

EN 13831:2007; AD-2000; TRD 702

Date and place of issue, name of authorized person:

Orleat 13.06.2011



Lucia Nalon

WARRANTY CERTIFICATE

for GITRAL expansion vessels

WARRANTY CONDITIONS

1. The warranty period is 24 months from the date of purchase.
2. When claiming warranty, this Warranty Card must be submitted together with the purchase receipt.
3. The warranty is valid only when the technical conditions set by the Manufacturer are maintained.
4. The warranty does not cover defects caused by tampering, improper handling, using the product to other purposes than designed for, installing the appliance in unsuitable environment, or by a natural disaster.
5. Your claim will be dealt with by your seller at the address shown.

Date of Purchase:.....

Rubber stamp print and signature of the seller::

v. 2.1, 10/2013



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