TYNEHAM HP BUFFER TANK

U0701356-B / 18.07.2022

500L

900L

1500L

Installation, use and maintenance instructions

Hamworthy

WARNING

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ATLANTIC reserves the right to change the features of equipment described in this manual at any time without prior notice.

The primary water tank is not a domestic hot water tank. It serves as a storage tank for the production of domestic hot water or secondary heating networks between a heat pump and a plate heat exchanger. It is intended to operate in a closed circuit only.

CONTENTS

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1. CERTIFICATION

- Eco-design (2009/125/EC): from 26/09/2015

In application of the directive and according to the requirements of EU regulation no. 814/2013 of 02 August 2013, the technical parameters of storage tanks with a volume less than or equal to 2,000 litres are available in appendix B.

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2. DESCRIPTION OF THE TYNEHAM BUFFER TANK

In the manual, we will use the term “Tyneham buffer tank” to designate the tanks in the range.

Tyneham buffer tanks are used on the primary network of heat pump installations. Depending on the connection, they perform the following functions:

- Decoupling of heat pumps from the heating network, or from the primary domestic hot water production network.
- Respect of the minimum volumes of the installations to guarantee the performance and longevity of the heat pumps.
- For balloons equipped with flanges, allow the installation of electrical appoints and a temperature probe.
  The connection of the primary balloons must be done according to the schematic (see T3100).

The connection of the Tyneham buffer tanks must be done in accordance with the schema library related to your application (see manual T3100).

Tyneham buffer tanks are steel tanks without internal protection against corrosion, the circuit must be a closed circuit with controlled pH.
Tyneham buffer tanks have an external rust protection.

The **M1** thermal insulation of the Tyneham buffer tanks is made of a flexible insulating jacket consisting of a 100mm thickness of glass wool covered with a flexible PVC envelope (non-flammable).

The addition of shielded electric appoints must be in accordance with the pre-established study as part of the hardware installation.

Heating elements can be added (see section 5: electric elements).

Maximum water temperature in use: 95°C
Tank operating pressure: 6 bar

WARNING: **It is essential to respect the service pressure of the associated generators (EFFIPAC = 6 bar).**

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A data plate listing all the information about the tank is located on the foot of the tank in line with the thermometer sleeve and on the casing. Please take note of these details before contacting After-Sales Service.

Composant BA065095
Type
n°série SPECIMEN
Capacité L
Puissance kW
Tension V 3~ / V 3~
Surface échangeur m2
Pression de service MPa (bar)
Protection
Fabriqué en 9999

MADE IN FRANCE

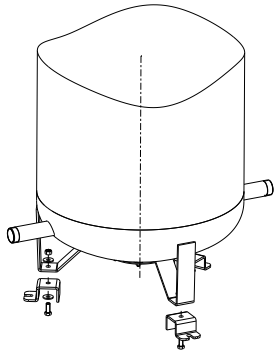
Un dispositif limiteur de pression doit être mis en place dans l'installation et doit être manoeuvré périodiquement

YGNIS industrie, Route de Solesmes, F- 59400 CAUROIR

3. INSTALLING THE EQUIPMENT

- **Two lifting rings at the top of the tank allow it to be moved by crane.**
- Position it as close as possible to the primary hot water heater.
- Ensure that the support element is correctly positioned to support the weight of the primary tank when it is full of water.
- Install the retention tank with the drainer under the primary tank when it is placed in an attic or above inhabited dwellings.
- The bottom drain is to be equipped with a valve in order to carry out regular flushes to evacuate a possible sludge deposit and allow a total emptying of the tank.
- The primary water tanks only work when in vertical position.

Three risers are provided to assist in connecting the drain:



4. HYDRAULIC CONNECTION

The installation must be done according to current standards.
Do not forget to put a deaerator or a purger at the top of the primary water tank.

IMPORTANT : **Refer to the study of your installation to know the hydraulic mounting principle to be carried out.**

4.1. Sizing and positioning of the safety valve(s)Water quality

All installations must include hydraulic safety against:

1. Overpressures in the distribution network,
2. Overpressures due to the rise in temperature (expansion during heating),
3. Overpressure due to the failure of a thermostat or contactor relay.

Flow due to overpressure must not be impeded. This implies that the tube of drain has a continuous and sufficient slope and a diameter adapted to the network.

WARNING: **Never mount a valve or non-return valve between the valve and the tank.**

4.2. Water quality

The characteristics of the water used, as soon as it is put into service, and for the lifetime of the installation must comply with the recommendations of the generators associated with the primary flask.

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• Water supply

The water supply can cause corrosion related to:

- Acidity at the source,
- The presence of oxygen,
- The heterogeneity of metals present

To avoid these phenomena, *the water supply must be treated,* according to the following parameters:

- PH: 8.2 to 9.5
- Oxygen scavenger: in excess.

The chemical products used must be carefully and thoroughly introduced. We suggest that you hire the services of a business specialized in water treatment; they are able to offer:

- Appropriate treatment for the nature of the installation.
- A follow-up contract and performance guarantee.

4.3. Renovation of boilers

For old boilers being renovated, before installing a new element in the unit, **be sure to rinse the tank fully** to eliminate all airborne and waterborne particles.

This procedure can be insufficient, especially with very old units equipped with heating floors.

A complete sludge removal might then be necessary.
Like with water treatment, this procedure must be carried out by a specialized company that can define, prescribe and implement treatment products, according to a prior analysis of the water source parameters and the risk of leaks in the water distribution system.
Before proceeding with the water connection, it is essential to clean the water-supply pipe properly to avoid introducing metallic or other particles in the tank.

A pressure of 1 bar when cold is recommended. Check when hot that the hot pressure is not higher depending on the generator with the lowest operating pressure, example: PSM Effipac = 6 bar).

4.4. Hydraulic connection diagram

Refer to the Navistem T3100 manual in connection with your application.

5. ELECTRIC ELEMENTS

Volume (L)	Power (kW)	Assembly flange (mark C1, C2, C3 in "Appendix A - Technical Characteristics")
500	6,15 or 30 on each flange	0,1,2 or 3 on DN 112
900	6,15 or 30 on each flange	0,1 or 2 on DN 112
1500	6,15 or 30 on each flange	0,1 or 2 on DN 112

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See instructions for electrical resistance

6. COMMISSIONING

- Ensure that all the connections are attached and/or fastened (including the drain at the bottom).
- Fill the tank
- Use the pressure gage to check the water pressure. It must be at least 1 bar for cold and no more than 8 bars on the default hot setting .
- Ensure that the primary tank has been properly drained.
- Check that the primary tank extensions are watertight.

7. MAINTENANCE

The device you have just purchased should provide satisfactory service for many years as long as this advice is followed:

- Regular flushing helps evacuate accumulated sludge.
- If the tank is to remain without operating over the winter in premises where there is a risk of freezing, the water must be kept above freezing point.

8. WARRANTY

For all operations on components containing artificial siliceous mineral fibres (ceramic fibres, glass wool, rock wool), the operator must wear suitable protective clothing and a breathing mask to avoid any risk specific to these products.

The equipment must be installed by a qualified professional in accordance with best practice, the standards, regulations and technical documents in force and the instructions in our technical manuals.

It must be used in accordance with the instructions and regularly maintained by a specialist. In no case will operations under the warranty confer eligibility for the payment of damages or extend the warranty period.

In the event of a clearly established manufacturing fault or defective materials (which must be proved by the purchaser) acknowledged by Groupe Atlantic, the manufacturer's liability is limited to:

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- **Removable boiler parts:** supplying a replacement for the part acknowledged to be faulty including transport costs, but excluding the labour costs associated with removing and replacing the part, for a period of two years from the date of commissioning or, failing this, the invoice date, without exceeding a period six months longer than the time since the manufacturing date.

Warranty periods:
Tank: 5 years (extendable to 10 years)
Removable parts: 2 years
The provisions above do not invalidate the legal warranty covering hidden defects.

Equipment presumed to have caused damage must remain in place for inspection by experts, and the claimant must inform his insurer.

9. END OF LIFE

The apparatus must be dismantled and recycled by a specialist service provider.
The apparatus must never be disposed of with household waste, large objects or in landfill.
When the apparatus reaches the end of its life, please contact your installer or the local representative in order to proceed with the dismantling and recycling of the apparatus.

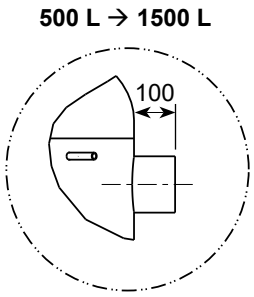
10. SPARE PARTS

List of parts that can be replaced:

	Reference
Thimble lg. 160mm (x1)	555535
Flange gasket DN112	551237
Rise extension for buffer tank D790 (x3)	552187
Rise extension for buffer tank D1000 à D1500 (x3)	552188
Flange insulation DN112 "soft M1"	551231
Full black side flange with gasket	555534

APPENDIX A

EN TECHNICAL SPECIFICATIONS 1,2 or 3 flanges



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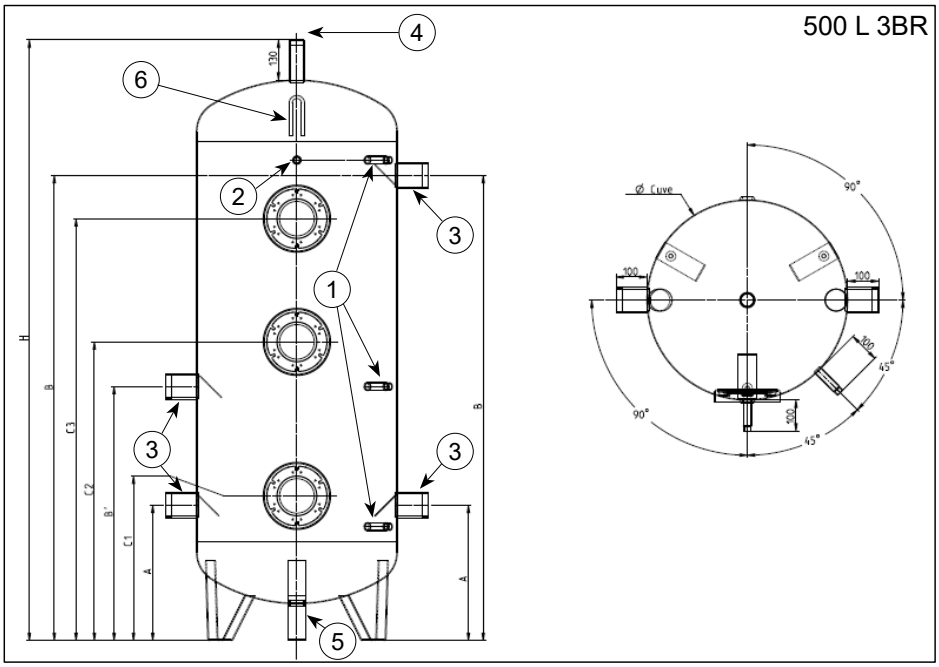
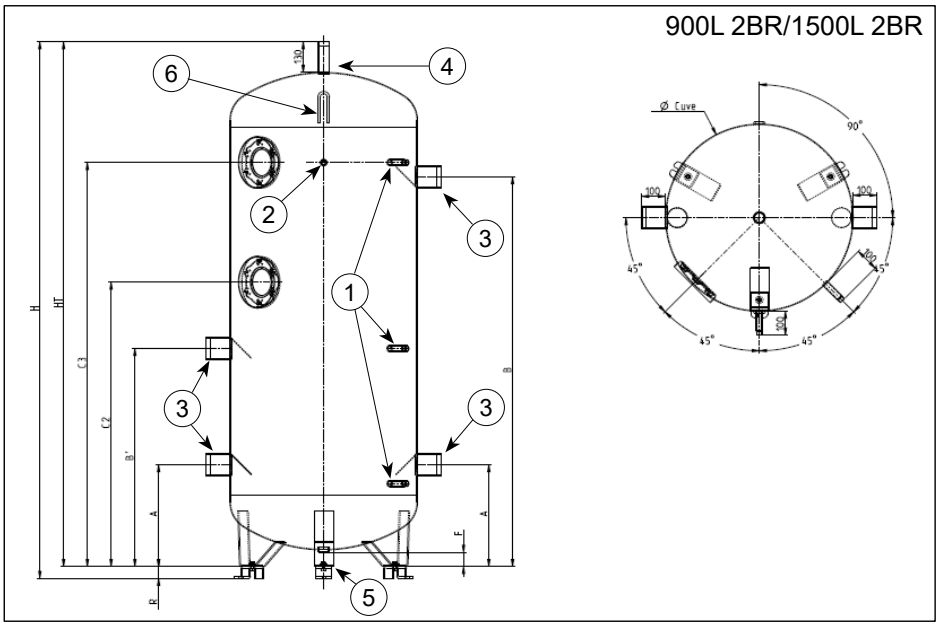
1. Thermostat gage or temperature sensor
2. Thermometer gage
3. Primary / secondary supply connection
4. Purge connection
5. Drainage connection
6. 2 lifting rings at 180°





	Ecomod HP buffer tank		
	500	**900**	**1500**
Vn	500	900	1500
Vu	517	904	1425
Pv	72	140	180
Cr M1	0,077	0,059	0,047

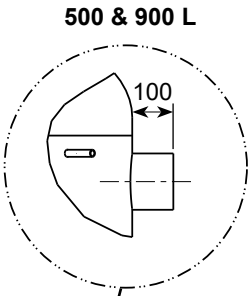
DN	650	790	1000
A	440	430	500
B	1510	1645	1460
B'	825	920	915
C1	470	-	-
C2	970	1200	1077
C3	1370	1705	1630
F	110*	60	
HT	1950	2215	2215
H	1950	2265	2265
R	--**	50	
1	F 15 / 21		
2	F 15 / 21		
3	F 66 / 76	F 80 / 90	
4	M 40 / 49		M 50 / 60
5	F 33 / 42		

* Height available to perform the tank drain connection with its isolation valve (not supplied).
**No riser provided with the tank

EN
Vn: Nominal capacity
Pv: Tank weight
Cr : Cooling constant of the 100mm M1, NC and M0 jackets (Wh/24h/L/°K)

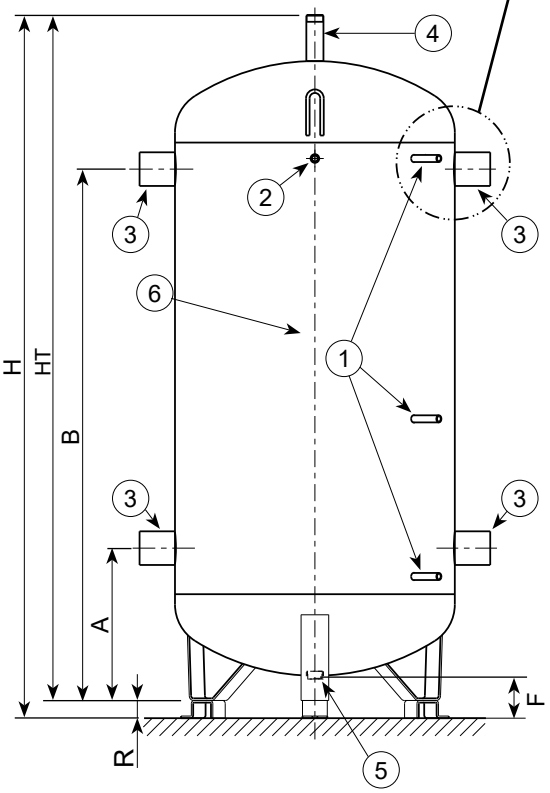
EN TECHNICAL SPECIFICATIONS without flange

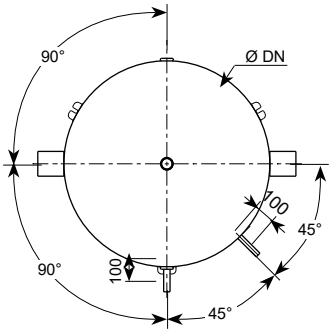
EN
1. Thermostat gage or temperature sensor
2. Thermometer gage
3. Primary / secondary supply connection
4. Purge connection
5. Drainage connection
6. 2 lifting rings at 180°



	500 L	900 L
Vn	500	900
Vu	517	904
Pv	72	140
Cr M1	0.066	0,054

DN	650	790
A	440	430
B	1510	1645
F	110	60
HT	1950	2215
H	1950	2265
R	--	50
1	F 15 / 21	
2	F 15 / 21	
3	F 66 / 76	F 80 / 90
4	M 40 / 49	
5	F 33 / 42	F 33 / 42





EN
Vn: Nominal capacity
Pv: Tank weight
Cr : Cooling constant of the 100mm M1, NC and M0 jackets (Wh/24h/L/°K)

EN OVERALL DIMENSIONS

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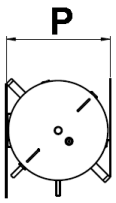
The overall dimensions represent the minimum width required to move the tank without rotating it within a building.
The values given do not take any account of the type of handling equipment used or of the type of support on which the tank is placed.



	Ecomod HP buffer tank		
	500	**900**	**1500**
Ø DN (mm)	650	790	1000
P (mm)	680	795	1015

Ecomod HP Buffer Tank:
P = Side mini tank without cladding

EN HEIGHT WHEN TILTED (CB)

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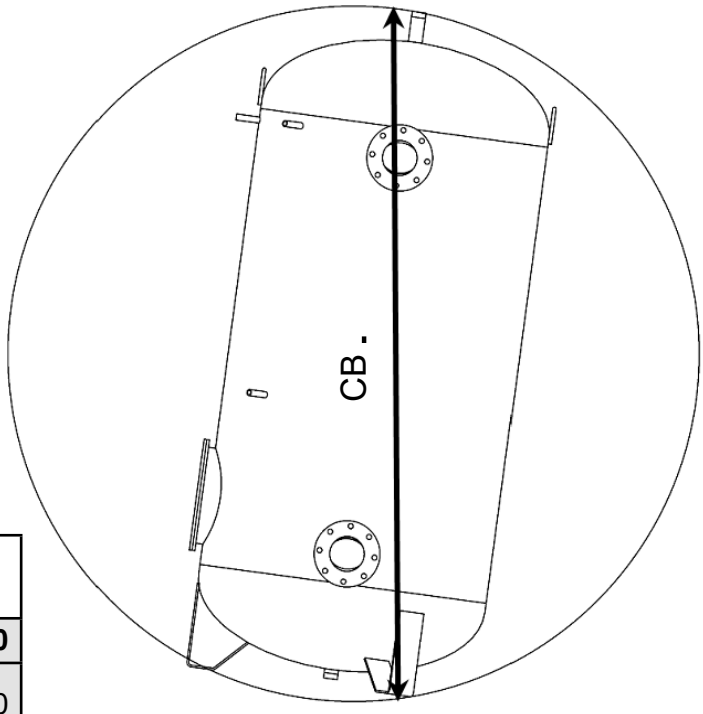
The dimensions for lifting equal the minimal height needed for the tank to be moved from the horizontal to the vertical position.
The values indicated do not account for the type of lifting used.



	Ecomod HP buffer tank		
	500	**900**	**1500**
CB (mm)	1980	2240	2270

EN HYDRAULIC DIAGRAM

Refer to the Navistem T3100 notice in connection with your application.

APPENDIX B

TYNEHAM HP BUFFER TANK

Data on products

≤ 2000 L

Trade mark	Models		Static losses	Storage volume
	Name	**Code**	**S** *(W)*	**V** *(L)*
Hamworthy	TYNEHAM HP BUFFER TANK 500L 3F SM1	520 358	74,6	517
	TYNEHAM HP BUFFER TANK 900L 2F SM1	520 359	100,4	904
	TYNEHAM HP BUFFER TANK 1500L 2F SM1	520 360	125	1425

Data on products

Trade mark	Models		Static losses	Storage volume
	Name	**Code**	**S** *(W)*	**V** *(L)*
Hamworthy	TYNEHAM HP BUFFER TANK 500L 0F SM1	520 357	62,08	517
	TYNEHAM HP BUFFER TANK 900L 0F SM1	520 370	92,08	904

UPKEEP

DATES	TYPE	HOOD

HAMWORTHY HEATING LIMITED
Customer Service Center
Wessex House
New Fields Business Park
Stonsford Road, Poole
Dorset BH17 ONF
Tel.: 01202 662500
Fax.: 01202 662522
service@hamworthy-heating.com
www.hamworthy-heating.com

Others countries, contact your local retailer

Hamworthy

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