5485

wall mounted buffer tanks

altecnic

CALEFFI group

5485 wall mounted buffer tanks

Application

The Altecnic 5485 wall mounted buffer tanks have a stainless steel inertial hydraulic separator which has a dual function, hydraulic separation and inertial storage.

Hydraulic separation ensures the flow rates for the primary circuit (for the heat pump) and secondary circuit (to the terminals) are independent of one another.

The volume of the inertial hydraulic separator, guarantees the minimum water content in the system for the heat pump to work properly.

This wall-mounted series is designed for both vertical and horizontal wall installation and heating-cooling operation.

Operating Principle

In some operating modes the heat pump needs to dispose of the energy in the heat pump compressor utilising the circulation of the medium, or it has to perform a heat exchanger defrost cycle in specific outdoor ambient conditions.

In these cases the heat pump needs an amount of thermal energy to always be available and a minimal water flow rate which would be less in the event that the zone valves in the secondary circuit are closed.

An inertial storage installed in line within the system can be used to ensure the required thermal energy.

To ensure the minimum flow rate in this configuration a bypass valve must be fitted between the flow and return.

The alternative is to have a built-in volume of liquid in the separator itself which also ensures the minimum flow rate required.

Product Range

Ref No		Volume	Connection
548515	S/S buffer tank	15 litre	1”
548520	S/S buffer tank	20 litre	1”
548525	S/S buffer tank	25 litre	1”
548530	S/S buffer tank	30 litre	1”
548550	S/S buffer tank	50 litre	1”
502067	1” Minical automatic air vent		

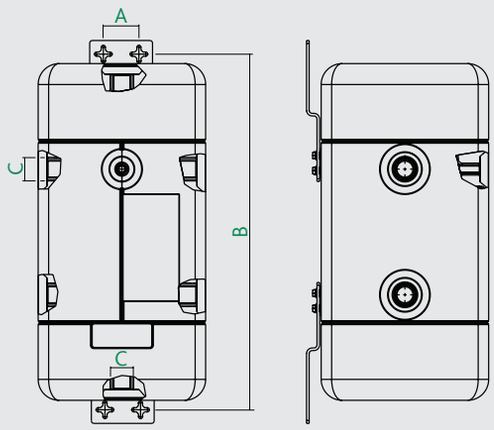
Materials

Body:	stainless steel	AISI 304

Technical Specification

Medium:		water, glycol mixture
Max. percentage glycol:		30%
Max. working pressure:		4 bar
Working temperature range:		-10 to 95°C
Connections:	15 to 30 litre	1” F
	50 litre	1¼” F
Front probe holder connection:		¼” F

Dimensions



Ref No	A	B	C	kg
548515	68	651	G1	11
548520	68	814	G1	12
548525	68	977	G1	13.5
548530	68	1140	G1	14.5
548550	68	888	G1¼	17

Insulation

Material:	PPE
Thickness:	45mm - minimum
Density:	30 g/l
Thermal conductivity:	30%
Max. working pressure at 10°C:	0.039 W/(m.K)
Working temperature range:	0 to 110°C

IMPORTANT: Insulation cannot be removed.

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Sizing

The buffer tank hydraulic separator should be sized in accordance with the **maximum recommended flow rate value** at the inlet.

The selected value should be the **sum of the primary circuit flow rates** or the sum of the secondary circuit flow rates, whichever is greater.

The Inertial volume, however, depends on the minimum volume of water required by the manufacturer to guarantee proper heat pump operation even in the defrosting phases.

The minimum volume of water available is influenced by the features of the system;

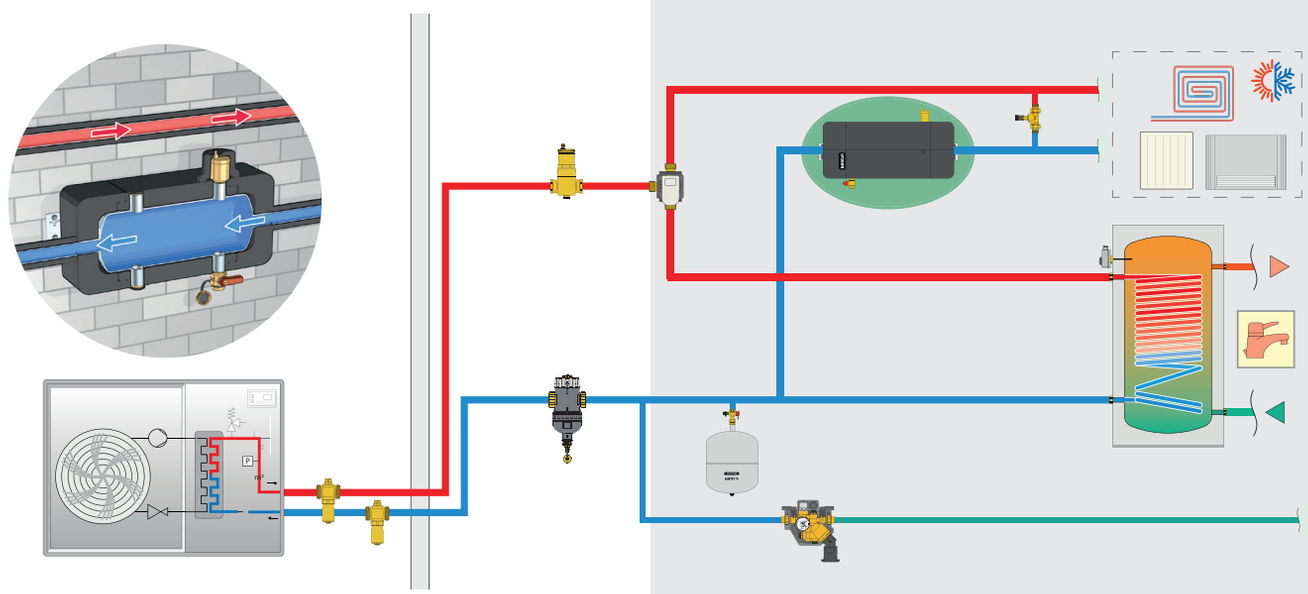
- it's extension
- management method

The minimum volume of water available should be guaranteed regardless of the water content of the heat pump and the delivery system.

For example, with two-way zone regulation the water content of the delivery system should be excluded from the total volume of the system when the ambient temperature is reached.

Application Diagrams

Installation on the Return as Inertial Storage



Sizing Continued

Generally, with more modern heat pumps, it can assume an average value calculated on the basis of heat pump power, which varies from **2.5 to 3.5 litre/kW o**f heat pump heating capacity.

Ref No	Volume	C	Max Flowrate	HP Nom.Power
548515	15 litre	G1	58.3 l/m	3 to 5 kW
548520	20	G1	58.3 l/m	3 to 5 kW
548525	25	G1	58.3 l/m	6 to 8 kW
548530	30	G1	58.3 l/m	9 to 12 kW
548550	50	G1¼	91.6 l/m	13 to 25 kW

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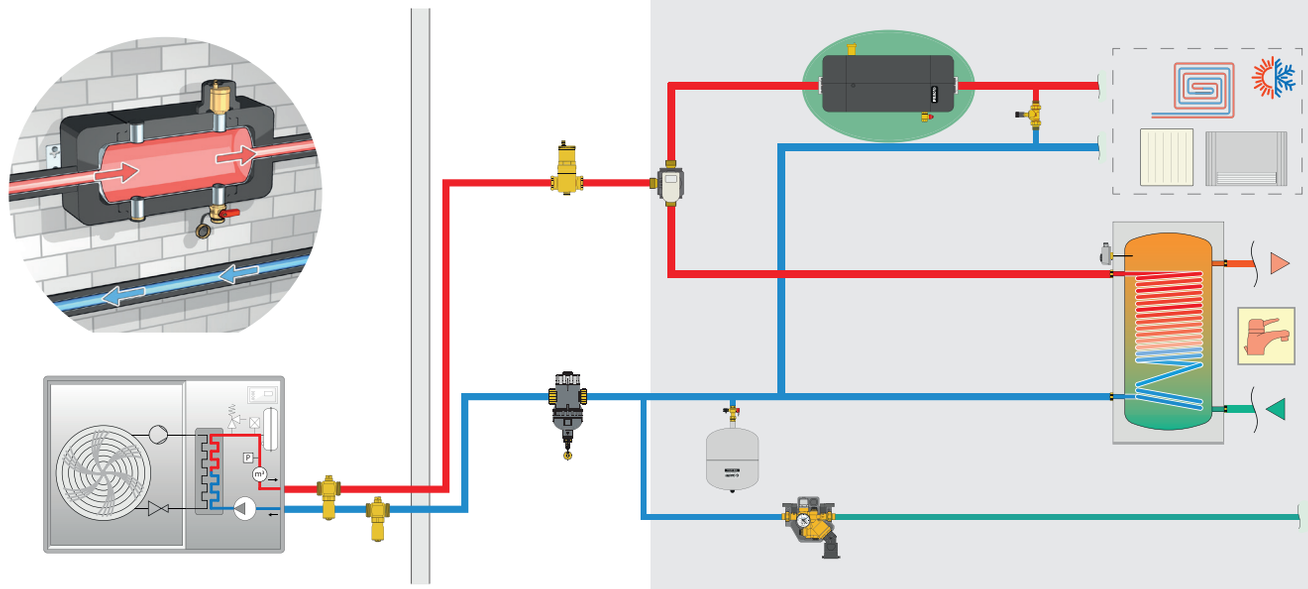
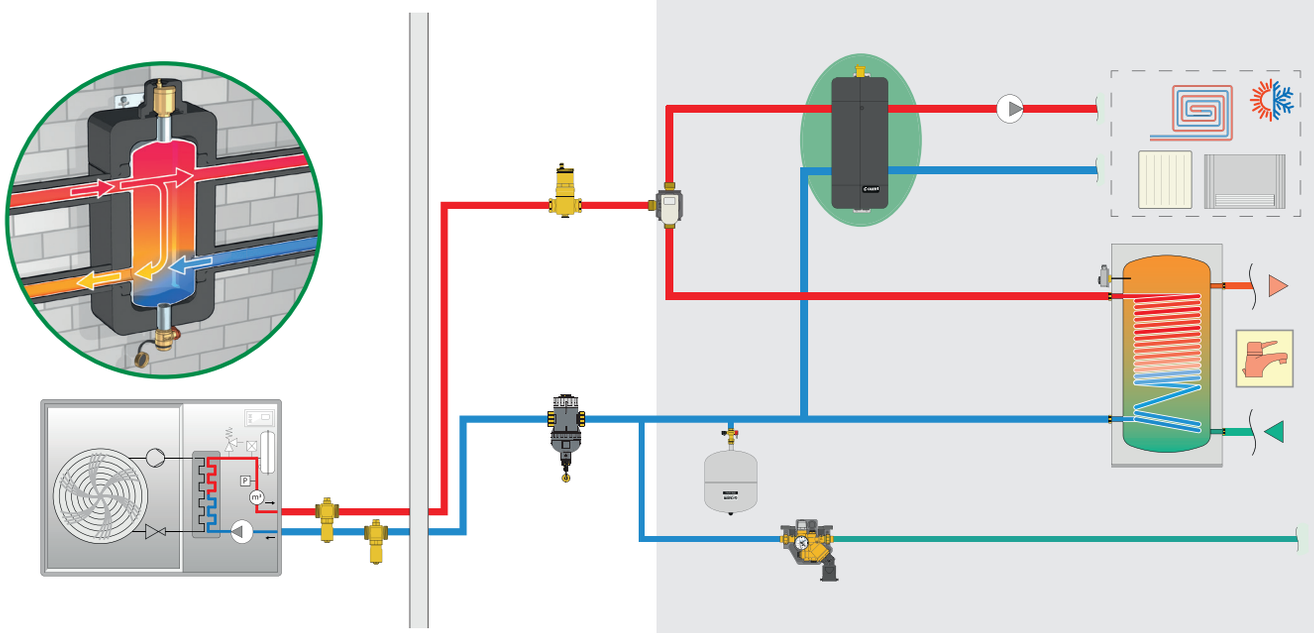
Application Diagrams

Installation on the Flow as Inertial Storage



Installation as a Hydraulic Separator



Altecnic Ltd Mustang Drive, Stafford, Staffordshire ST16 1GW
T: +44 (0)1785 218200 E: sales@altecnic.co.uk
Registered in England No: 02095101
altecnic.co.uk

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