Cetetherm

Cetetherm Primary Tank

5 BAR

Thermal storage vessel for Primary side / 300-3000 litres

The Cetetherm Primary Tank is suitable to store large quantities of heated **primary** water from different heat sources such as boilers, hydraulic networks, solar heaters or any other heat recovery system. The Tank is designed for use in combination with a tap water system like Cetetherm AquaFirst, AquaEfficiency or AquaFlow/Store and also high efficient heat interface units, such as type Mini City.

APPLICATIONS

The Primary Tank stores energy to generate hot primary water on demand in facilities where sudden high demands occur on a fairly regular basis such as:

- apartment blocks
- hospitals, retirement and nursing homes
- hotels
- schools
- leisure centres
- any other collective building

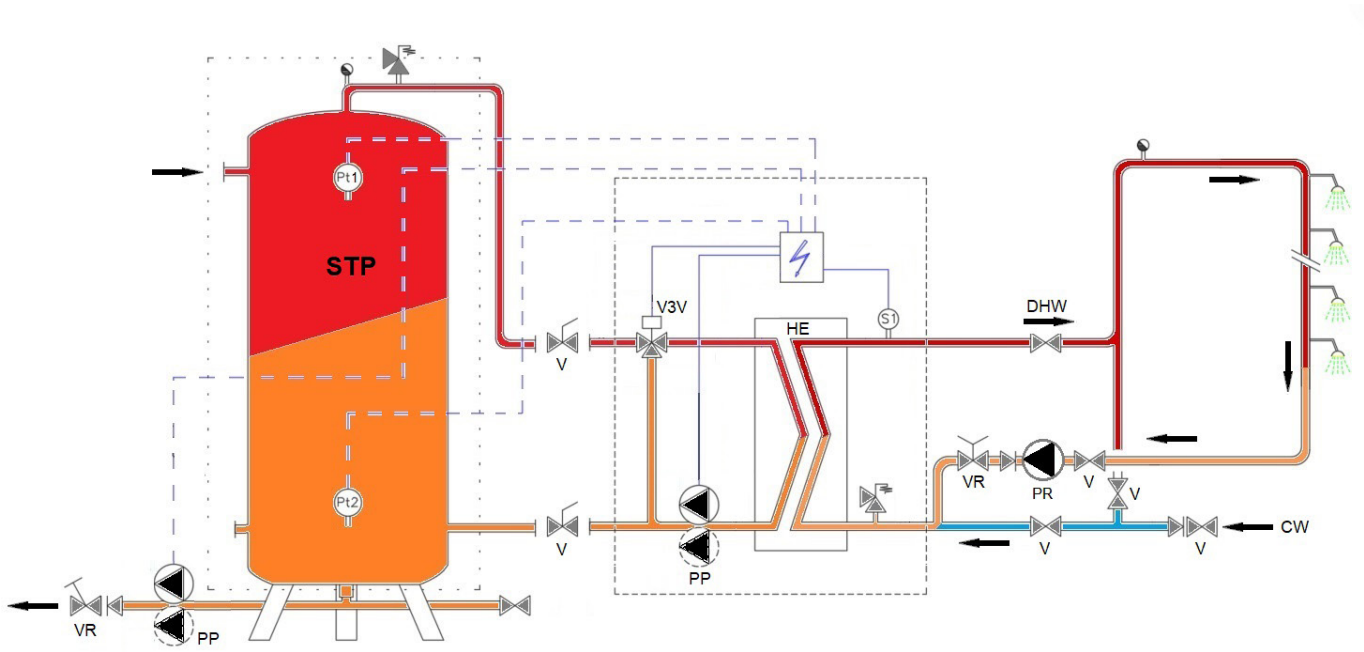
BENEFITS

- Energy saving solution as reduces the boiler or network capacity
- Hygienic solution: no riks of legionella, even at low temperature thanks to the water being stored on the primary side
- Maximum hot water production thanks to its specific internal tube arrangement avoiding mixing of the cold water return loop with the stored hot water
- Easy handling thanks to 2 ring bolts on top of the Primary Tank
- Delivered with feet to facilitate the cold water inlet connection and emptying, and to maximize the total available volume
- Insulation - standard 100mm - easy to remove and refit
- Reduces the risk of lime scaling if combined with the 3-port mixing valve of the AquaFirst, AquaEfficiency or AquaFlow/Store unit, especially if combined with thermal solar installation
- Additional connections to optimize condensation and the heating of boilers
- Low total cost of ownership

CHARASTERISTICS

Volumes	300 to 3000 litres
Material	Carbon steel, conform PED 2014/68/EU
Outer coating	Painted
Insulation	M1: 100mm polyester fiber covered with PVC jacket, European fireclass B
	M0: 100mm rockwool cladded with aluminium metal plate, European fireclass A
Maximum operation temperature	99°C
Maximum operating pressure bar gauge	5 bar g
Connections	All connections are female threads
	All 1/2" connections are dedicated for additional instruments like temperature sensors

FLOWCHART AND WORKING PRINCIPLE



A	Primary inlet
B	Primary outlet
CW	Cold water inlet
DC	Draining valve
DHW	Domestic Hot Water
HE	Heat exchanger (PHE)
PC	Charging pump (one or two)
PP	Primary pump (single or double)
Pt1 - Pt2	primary tank sensors
PR	Recycling pump (on installation)
PRV	Pressure relief valve
S	DHW temperature sensor
STS	Storage tank (Buffer vessel) secondary
STP	Storage tank (Buffer vessel) primary
V	Manual gate valve
VR	Balancing valve
V3V	Mixing 3-port control valve with actuator

In the tap water system (G), energy is exchanged through a heat exchanger from the primary (I) to the DHW side (J). On the primary side, the DHW unit has to be fed by a heating source that can be provided for example by a local boiler (E) and the Cetetherm Primary Tank 5 bar. In the case of the Primary Tank, the required DHW unit primary flow rate comes from the top of the Primary Vessel. This flow rate (H) is a combination of the flow rate coming from the bottom of the vessel (F) and the additional flow rate (A) coming from the boiler. This storage tank ensures that DHW primary flowrate supply is met during peak demand periods.

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COMBITHERM SOLUTION

1.

AquaEfficiency Neo

Sensor(s)

Primary tank

Recycling pump

2.

AquaFirst Neo*

Sensor(s)

Primary tank

Recycling pump

3.

AquaGenius Neo*

Sensor(s)

Primary tank

Recycling pump

WHY COMBITHERM ?

Combitherm optimises the advantages of both instantaneous and semi-instantaneous, providing

- **Maximum hygiene**
  secondary storage is avoided, along with the risk of legionella, as the thermal capacity is transferred to the primary side.
- **Greater cost-effectiveness**
  a greater return of investment is generated, by allowing reduced power from the primary source.
- **Full suitability**
  the solution is suitable for all domestic hot water loops and high circulation flow rates, like in hospitals and other collective applications.
- **Easy maintenance**
  periodic maintenance is not needed at the secondary side, like storage tank and sanitary charging pumps.
- **Optimal reliability and robustness**
  the tank charging pump is located on the heating side, so there is no risk of scaling the recycling pump or corrosion.
- **Thermal efficiency**
  Combitherm significantly reduces return temperatures.

Contact Cetetherm to calculate the Combitherm solution best suited to your needs.

* Brochures for these products are available at www.cetetherm.com

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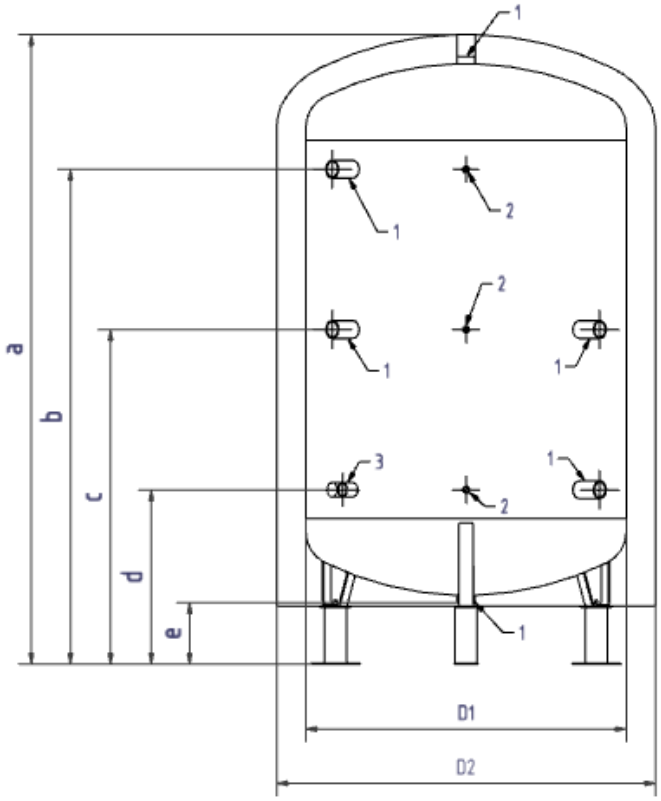
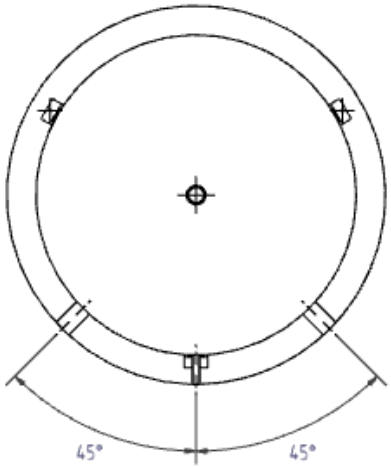
DRAWING & SELECTION TABLE





1. Rp 2"
2. Rp 1/2"
3. Rp 1"1/2

Volume (L)	Insulation (100 mm)	Dimensions ** (mm)						ErP class ***	Heat loss coefficient UA (W/K)	Weight (kg)	Article Numbers
		a	b	c	e	D1	D2				
300	M1	1410	1150	458	200	630	830	B	1.35	68	**AQTVP030M1100**
500	M1	2012	1753	464	205	630	830		1.30	96	**AQTVP050M1100**
750	M1	1907	1600	500	193	790	990		1.60	155	**AQTVP075M1100**
750	M0								2.15	190	**AQTVP075M0100**
1000	M1	2260	1953	500	193	790	990		1.90	175	**AQTVP100M1100**
1000	M0							C	2.52	220	**AQTVP100M0100**
1500	M1	2083	1699	599	212	1100	1300		2.15	349	**AQTVP150M1100**
1500	M0								2.85	433	**AQTVP150M0100**
2000	M1	2274	1887	599	212	1100	1300		2.2	407	**AQTVP200M1100**
2000	M0								2.89	481	**AQTVP200M0100**
2500	M1	2145	1679	679	214	1400	1600		2.8	414	**AQTVP250M1100**
2500	M0								3.7	501	**AQTVP250M0100**
3000	M1	2274	1809	679	214	1400	1600	E	3.2	516	**AQTVP300M1100**
3000	M0								4.10	603	**AQTVP300M0100**

* 10 bar on request

** Dimensions are provided for information purposes only. Please refer to drawings.

*** EN 12897 : 2006

D1 = External diameter, excluding insulation **D2** = External diameter, inclusing insulation

Primary tank options	Power (kW)	Article Numbers
Electric top-up kit for 230 V+T mono primary tank	3	**KITVP3KW**
Electric top-up kit for TRI+N+T primary tank	6	**KITVP6KW**
Electric top-up kit for TRI+N+T primary tank	9	**KITVP9KW**
Electric top-up kit for primary tank TRI+N+T vol>500L	12	**KITVP12KW**

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