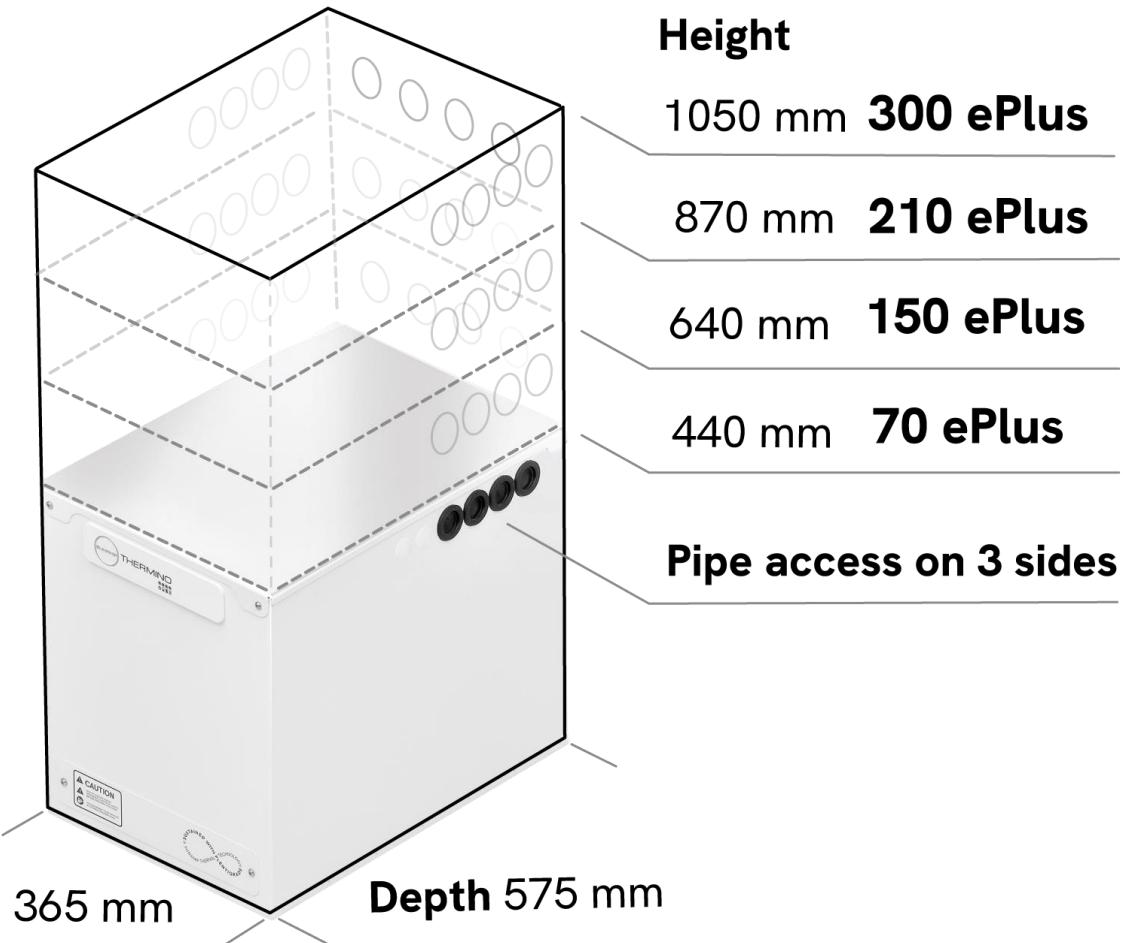




Thermino ePlus
Series & Parallel Connections
June 2025

Thermino ePlus - Dimensions



Thermino ePlus - Technical Specification



Unit	70 ePlus	150 ePlus	210 ePlus	300 ePlus	
Fresh water content ¹	L	3.2	3.2	6	12.8
Equivalent Hot Water Cylinder Size ²	L	74	140	212	306
Volume of hot water available at 40°C (V40) ³	L	105	199	301	436
Heat loss	kWh/24h (W)	0.48 / (20)	0.67 / (28.1)	0.77 / (32.1)	0.84 / (34.9)
Energy label class ⁴	-	C	C	C	C
Maximum HW flow rate ⁵	L/Min	6	15	20	25
Minimum supply pressure at Heat Battery inlet	MPa (Bar)	0.15 (1.5)	0.15 (1.5)	0.15 (1.5)	0.15 (1.5)
Recommended operating pressure/PRV set point	MPa (Bar)	0.3 (3)	0.3 (3)	0.3 (3)	0.3 (3)
Maximum operating pressure/PRV set point	MPa (Bar)	0.5 (5)	0.5 (5)	0.5 (5)	0.5 (5)
BERV recommended set point	MPa (Bar)	0.6 (6)	0.6 (6)	0.6 (6)	0.6 (6)
Maximum design pressure / BERV maximum set point	MPa (Bar)	1.0 (10)	1.0 (10)	1.0 (10)	1.0 (10)
Pressure loss characteristics	-	See Figure 3			
Recommended TMV setting	°C	45-55			
Connected load at ~ 230 V, 50Hz	W	2800*/1800**			
Minimum MCB requirement (type A or B only)	A	16*/10**			
Power supply Standby consumption	W	1 PH AC 230 V 7			
Electrical efficiency (η _{elecwh}) ⁶	%	81.4	89.6	93.8	93.3
Annual electricity consumption (AEC) ⁶	kWh/yr	542	1,398	2,690	2,701
Tapping cycle ⁶	-	S	M	L	L

Table 1 - Thermino ePlus technical specifications

Table 1 Notes:

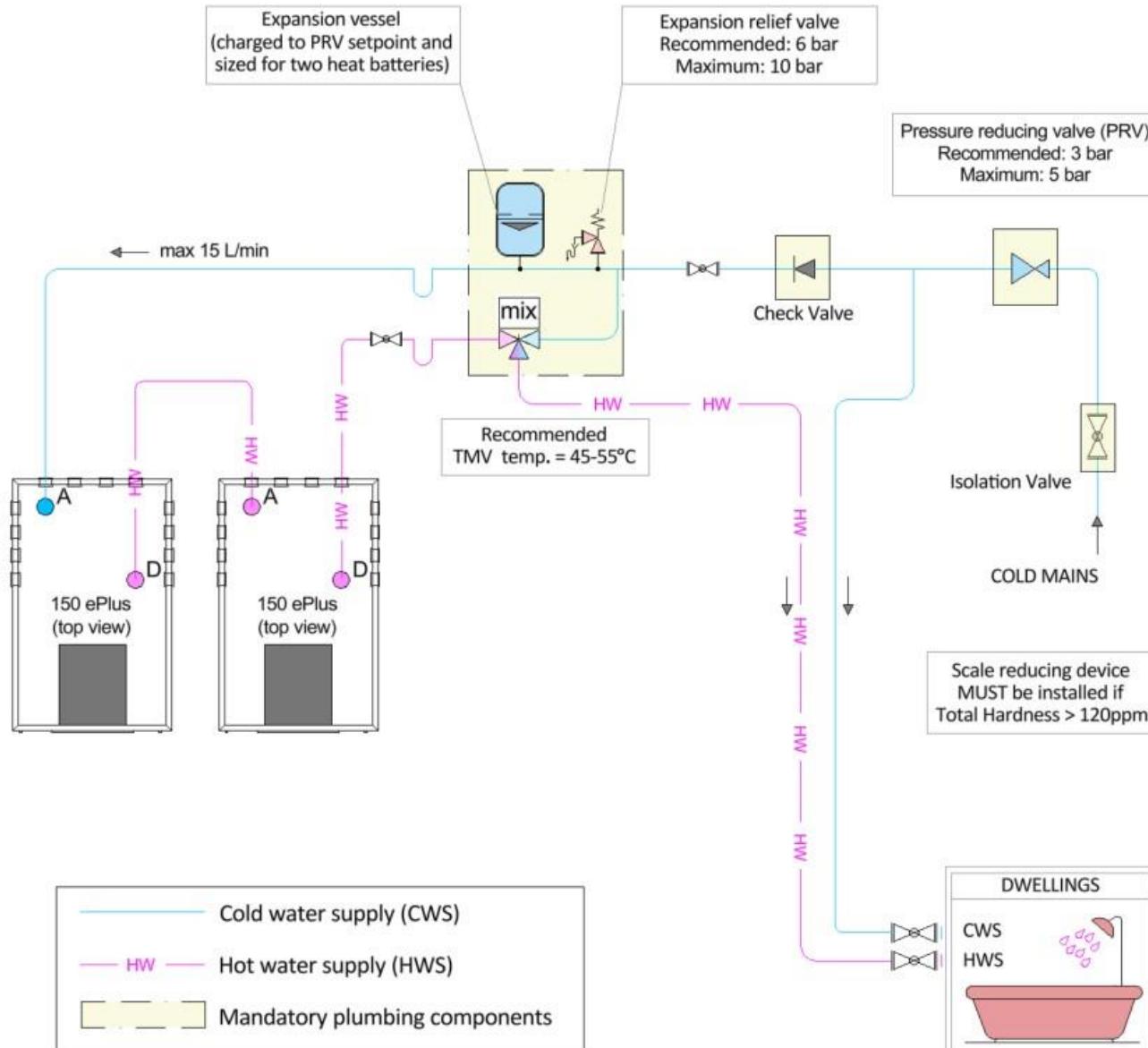
- * Applies to Thermino ePlus products with MPNs beginning with SGP, SKP, SRP & DRP
- ** Applies to Thermino ePlus products with MPNs beginning with AGP, AKP, ARP & BRP
- 1. Water content of the Heat Battery for sizing expansion vessels.
- 2. Calculated from the storage capacity of the Heat Battery and assuming that the equivalent hot water cylinder thermostat is set at 60°C, mains cold water inlet temperature is at 10°C and the stored energy utilisation factor of the cylinder is 0.85.
- 3. The hot water volume available from the Heat Battery normalised to an average outlet temperature of 40°C when it is fully charged by the electric heating element.
- 4. When installed as an alternative to an electric water heater.
- 5. While the Heat Battery can deliver higher flow rates than those listed, doing so will result in reduced performance in terms of duration of discharge and energy provided.
- 6. Based on standard: BS EN 50440:2015

The following abbreviations are used in the manual:

- BERV - Back-Expansion Relief Valve
- DSR - Demand Side Response
- EV - Expansion Vessel
- HW - Hot Water
- PCBA - Printed Circuit Board Assembly
- PCM - Phase Change Material
- PRV - Pressure Reducing Valve
- TMV - Thermostatic Mixing Valve
- VIP - Vacuum Insulation Panel

Thermino ePlus Connected in Series

Hot water-only application



This configuration offers the advantage of maximising the heat battery utilisation coefficient.

- The discharge duration and the amount of available water double.
- The final flow rate remains the same as that of a single heat battery.
- Since the heat batteries cannot be physically isolated, installing only one expansion vessel and one PRV on the mains line is possible.
- The expansion vessel needs to be correctly sized for the number of HBs in the system configuration
- Pay attention to pressure losses (refer to the table on the next slide).
- Refer to the installation manual for a comprehensive list of all mandatory plumbing components which must be installed:

A small, cylindrical valve with a grey body and a silver handle.	A brass valve with a red, rounded top and a silver handle.	A grey, bulbous vessel with a black cap and a small vent tube.	A multi-directional valve with a grey body and a silver handle.	A large, multi-directional valve with a grey body and a blue handle.
Mains cold water pressure reducing valve (PRV)	Mains back-expansion relief valve (BERV)	Expansion vessel	Hot water tempering valve	Heat battery isolation valve

Pressure Losses

	70 ePlus	150 ePlus	210 ePlus	300 ePlus
Max recommended flow rate (L/min)	6	15	20	25
Pressure loss (One unit)	0.02 bar (2 kPa)	0.18 bar (18 kPa)	0.23 bar (23 kPa)	0.4 bar (40 kPa)
Pressure loss (Two units)	1.15*(2+2) = 4.6 kPa	1.15*(18+18) = 41.4 kPa	1.15*(23+23) = 49.5 kPa	1.15*(40+40) = 92 kPa

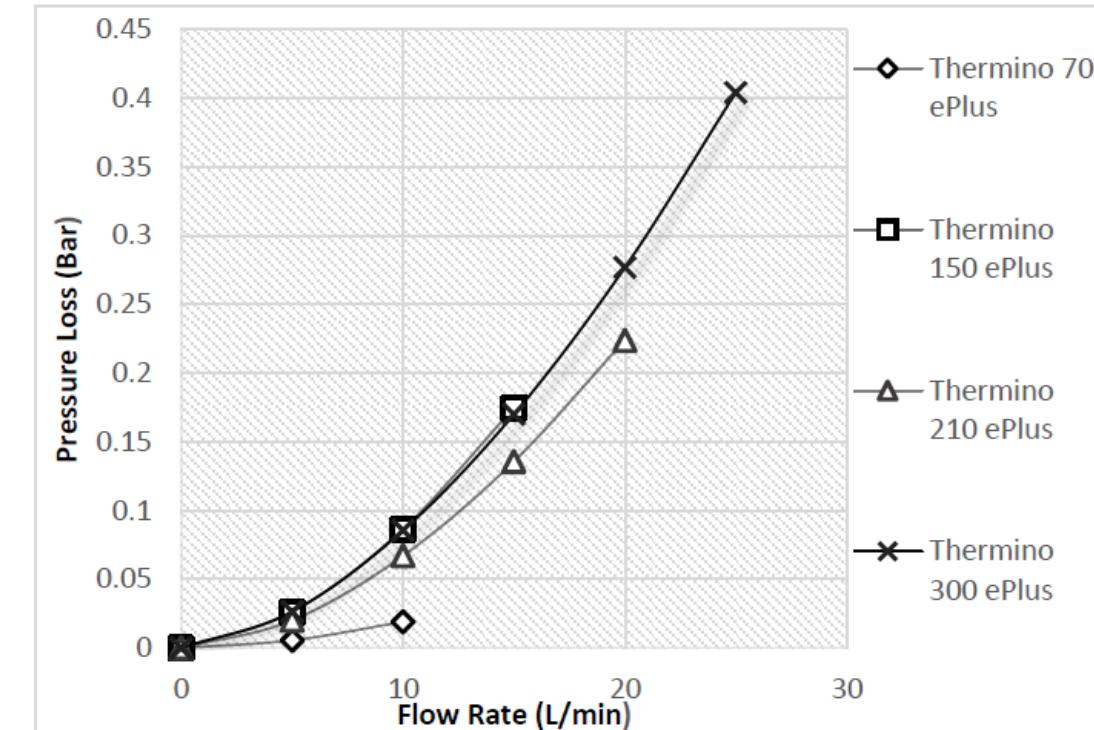


Figure 3 – Thermino ePlus Heat Batteries pressure loss

Check the available network pressure before proceeding with the series connection.

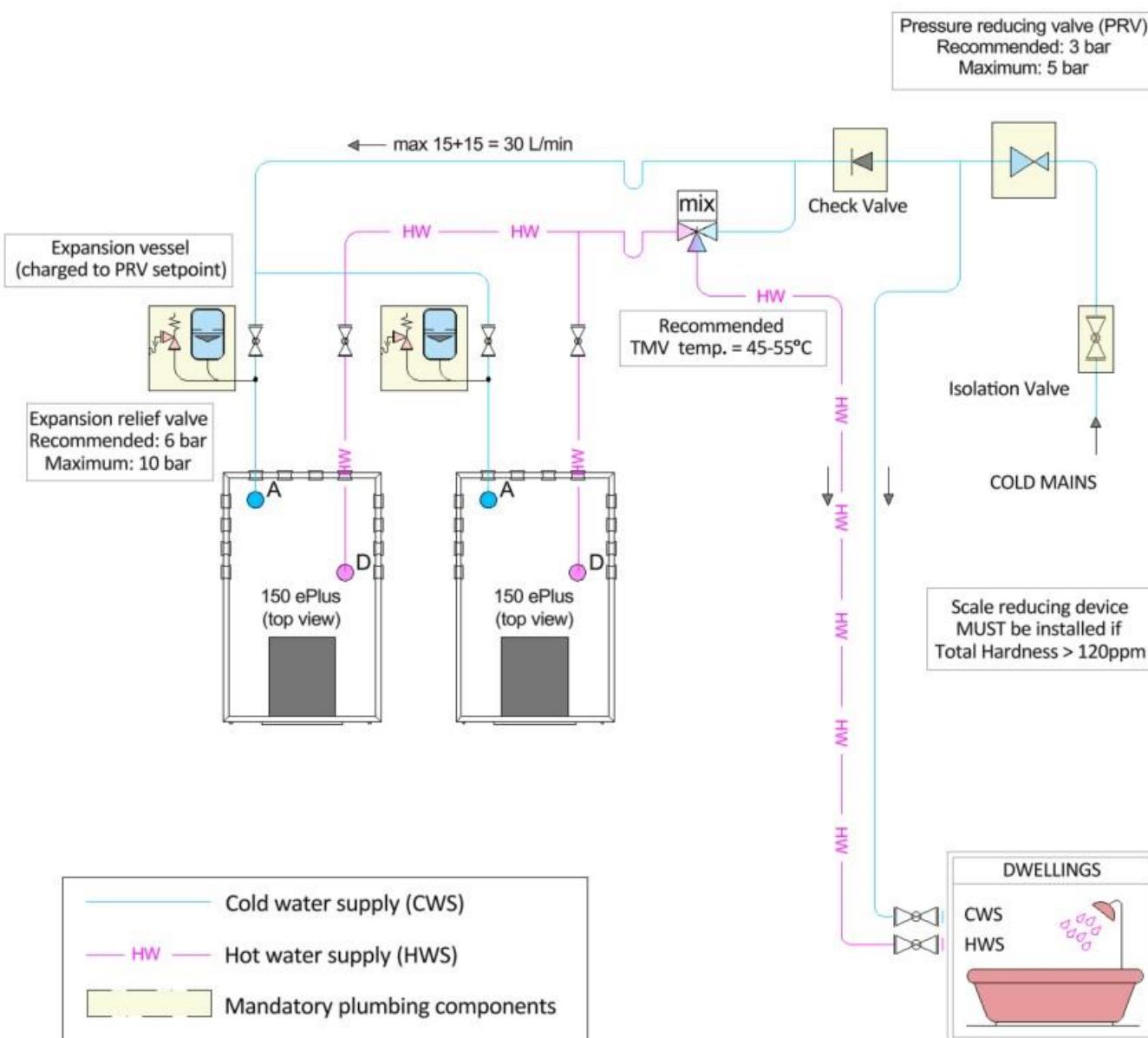
Thermino ePlus Connected in Parallel



Hot water-only application

- High flow rate at available pressure.
- Low pressure drop.
- Can be helpful if the main pressure is not ideal.
- However, If one heat battery fails or is undercharged, the system will generally fail because cold water from one heat battery will mix with hot water from the second heat battery.
- Since the heat batteries can be physically excluded, mandatory safety equipment (including plumbing components) must be installed on each unit.
- Refer to the installation manual for a comprehensive list of all mandatory components which must be installed:

Mandatory plumbing components for all Sunamp Thermino Products				
Please check the following components have been installed				
Mains cold water pressure reducing valve (PRV)	Mains back-expansion relief valve (BERV)	Expansion vessel	Hot water tempering valve	Heat battery isolation valve



Self-Consumption Device/ Power diversion controller



If two heat batteries are joined (in series or parallel) and connected to a self-consumption device like a Myenergi eddi PDC,

Please note the following:

- Myenergi eddi is rated at 16A which is ~ 3 kW connected load
- Both heat batteries will require separate independent fuses with their dedicated isolator.
- Therefore, a **Myenergi eddi can be connected to ONE heat battery only!**
- If connecting both heat batteries in parallel – the connected load will be 6kW, fuses will go, and electricity from one isolator will feed into the second isolator resulting in a **VERY UNSAFE and Dangerous installation**.
- If you treat them as two immersion heaters in a tank, there will be cross-feed power from one heat battery controller to the second heat battery controller.

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