

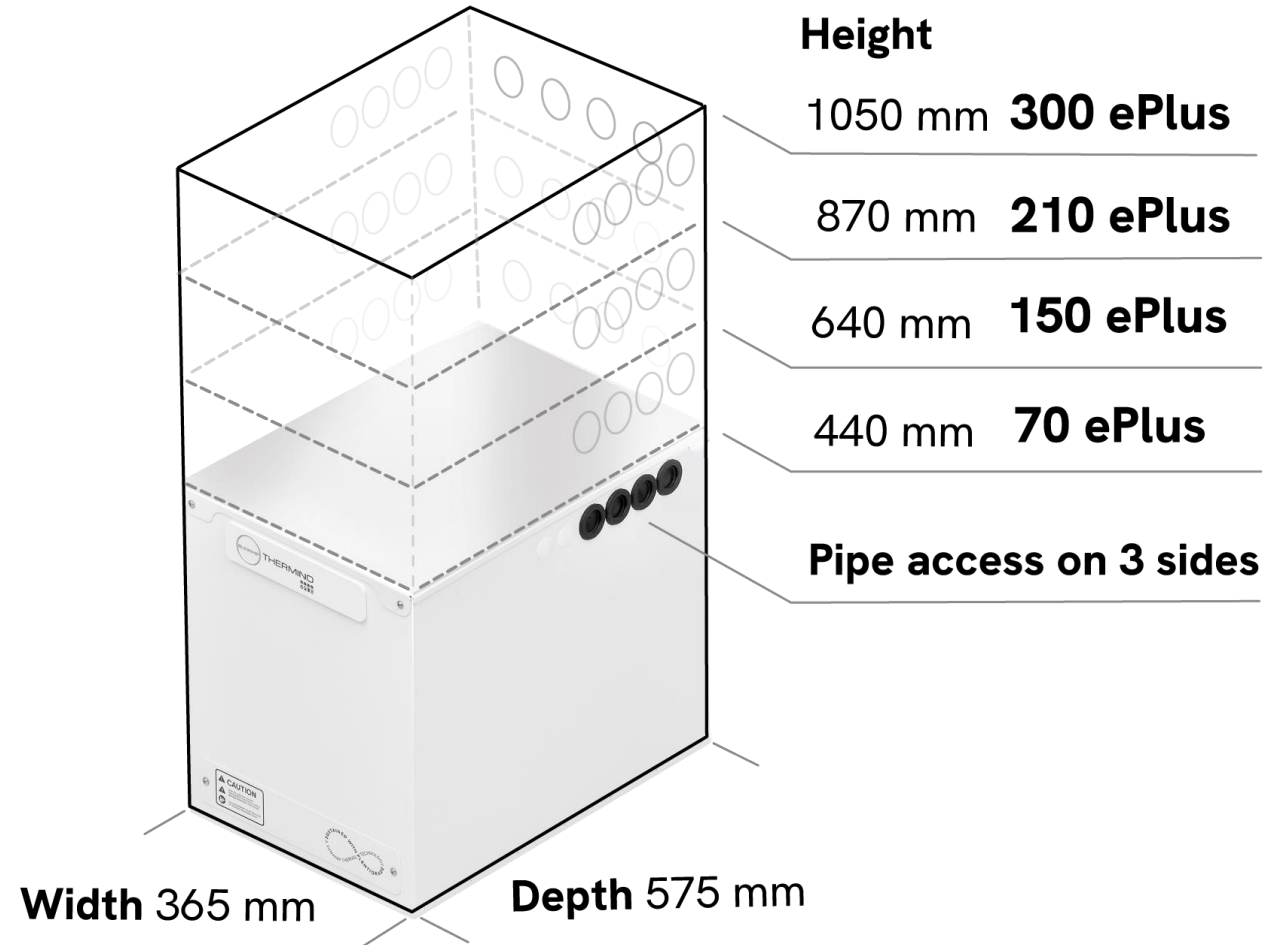


Thermino ePlus

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

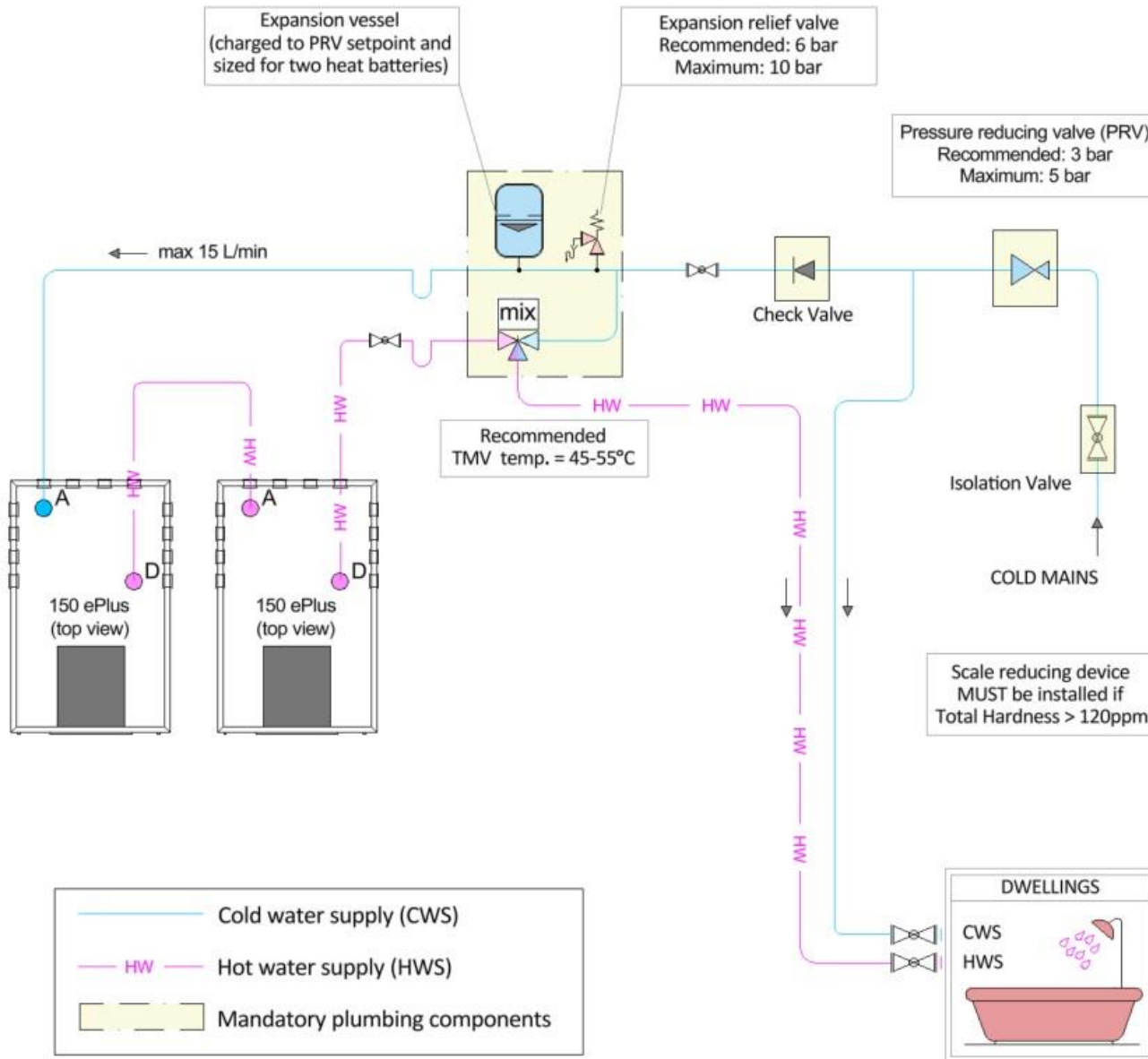
The following abbreviations are used in the manual:

- 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:

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)	$1.15 \cdot (2+2)$ = 4.6 kPa	$1.15 \cdot (18+18)$ = 41.4 kPa	$1.15 \cdot (23+23)$ = 49.5 kPa	$1.15 \cdot (40+40)$ = 92 kPa

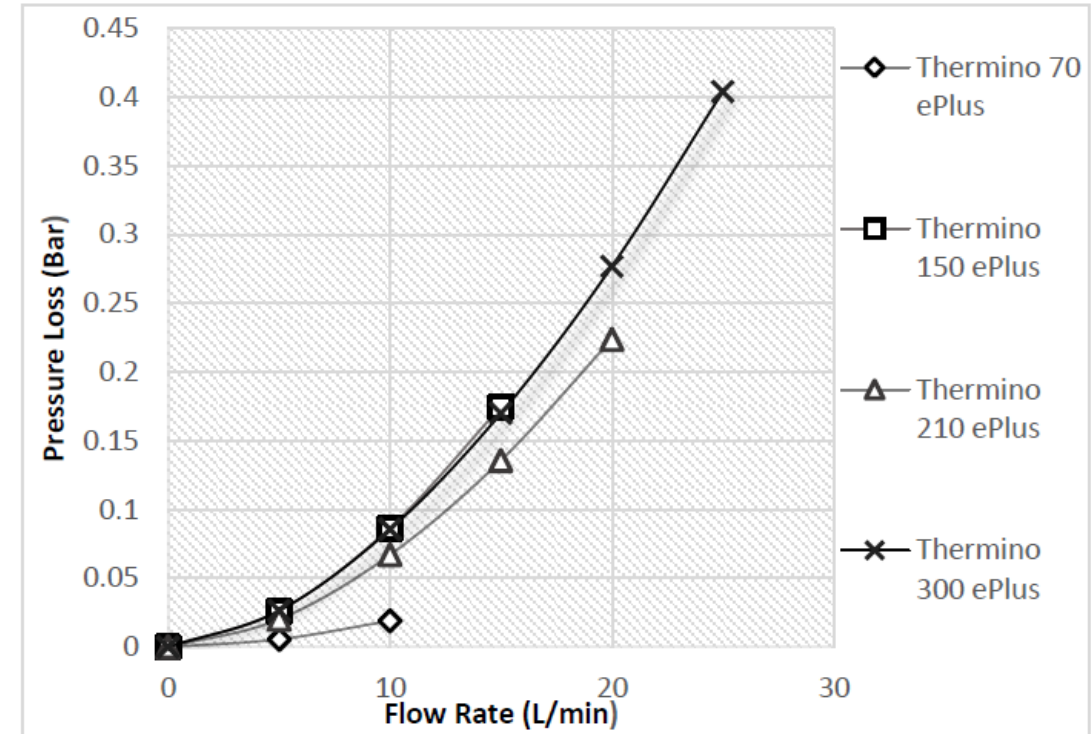
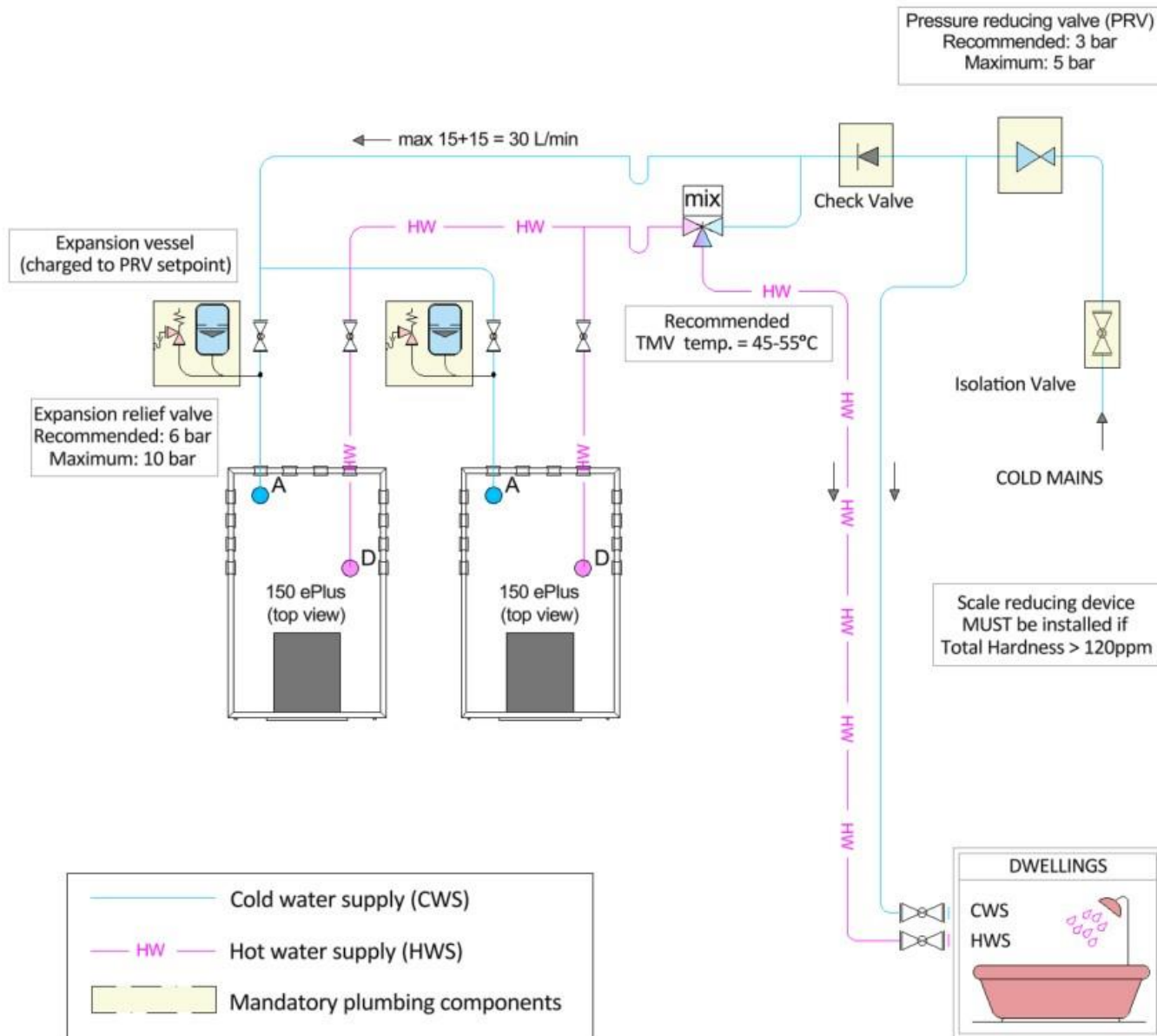


Figure 3 – Thermino ePlus Heat Batteries pressure loss

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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