

TERMO⁺

Heat pumps

MONOBLOC
air / water

The most efficient and complete heating solution for homes.



TermoPlus® Monobloc air/water heat pump

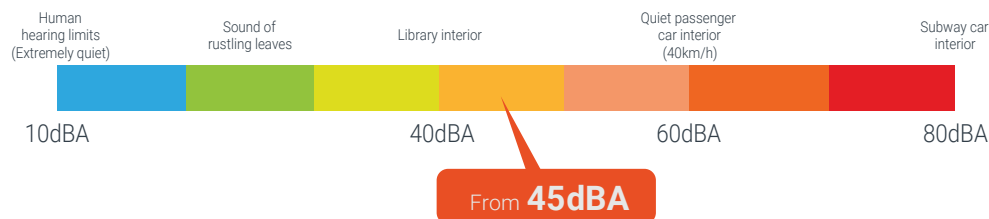
The TermoPlus® Monobloc system is an extremely efficient air/water heat pump system comprised of an outdoor air/water heat pump and an indoor Hydrobox or Hydrotank unit. The system offers a reliable total home heating solution with hot water supply. It is compatible with radiators, fan coils and/or underfloor heating. Enjoy year-round comfort with advanced control options in a single neat package.

KEY BENEFITS

- Ultra-low running cost** with a high efficiency A+++ system
- No more noise** - Extremely quiet starting at 45dBA
- Dependable during extreme cold** with full heating capacity
- A real zero carbon solution**
- Remote tech support**, monitoring and maintenance
- Easy to use remotely or from your couch** using the MELCloud app

The new ultra-quiet outdoor units take air/water heat pumps to the next level

Designed specifically for residential applications, our ultra-quiet air/water heat pumps are up to 3dBA quieter than previous models. Coupling their ultra-low noise levels with their sleek, minimal design, has made the system the perfect choice for high-density housing.



Reap the benefits of a Fully Hydronic system

Fully Hydronic systems circulate refrigerant only within the unit. As a result they offer distinct advantages:

- Use of standard heating pipes between exterior and interior.
- The system offers greater protection against refrigerant leaks and can be installed without a refrigerant-qualified engineer.
- Greater reliability: the most sensitive hydronic system components are housed safely inside the unit.
- More flexible placement options for the outdoor unit due to the lack of refrigerant pipes.

Reduced environmental impact with R32 refrigerant

R32 refrigerant has a global warming potential (GWP) equivalent to one third of the conventional R410A refrigerant. The use of the R32-compatible compressor and advanced control system allows for a 30% reduction in refrigerant volume and an approximate 75% reduction in CO₂ equivalent in some models.



Comparison of GWP		Comparison of Refrigerant Volume		Comparison of CO ₂ Equivalent	
R410A	2088	R410A	4.3kg	R410A	8.98t
R32	675	R32	3.3kg	R32	2.2t
	67% reduction*		30% reduction*		75% reduction*

Ecodan air/water hydronic outdoor units

PUZ-WM Ecodan

Our range of Ecodan ATW (air-to-water) hydronic hot water heat pumps are available in 5kW, 6kW, 8.5kW and 11.2kW capacities. Designed to suit a wide range of heating and cooling applications, these models offer a viable solution for the varying requirements that domestic and light commercial applications demand.

Key Features

- Operating range as low as -20 °C (WM50/60/85) and -25 °C (WM112) outside air temperature.
- Maintains 100 % heating capacity down to -3 °C outside air temperature.
- Ultra-quiet "AA" chassis.
- No handling of refrigerant gases, only water and electrical connections.



Zubadan air/water hydronic outdoor units

PUZ-HWM Zubadan

The new R32 Zubadan ATW (air/water) hydronic hot water heat pump is available in a 14kW capacity.

Key Features

- Operating range down to -28 °C outside air temperature.
- Maintains 100 % capacity down to -15 °C outside air temperature.
- No handling of refrigerant gases, only water and electrical connections.





EASY INTEGRATION

1. Outdoor unit: Ecodan or Zubadan
2. Indoor Hydrotank unit
3. Indoor Hydrobox unit + domestic hot water heater (if needed)
4. Floor / wall heating
5. Radiators
6. Domestic hot water
7. Standard plumbing connections instead of refrigerant tubing



Operational at -28 °C when using Zubadan external units.



The use of an additional heating element is not required when using the right unit size.

Indoor units: TermoPlus® Hydrobox or Hydrotank for R32 ATW hydronic units



Hydrobox



Internal wall unit for heating and cooling (without DHW)

- Built-in weather-compensated Mitsubishi Electric control.
- Efficient operation without additional internal heaters.
- Automatic switching between hot water and heating water (up to 60 °C).
- In addition to heating, cooling is possible with fan coils.
- Multi-functional controller with programmes such as automatic anti-legionella, floor drying, holiday mode and weekly timer.
- Flexible installation, ideal when space is limited.



Hydrotank



Heating and cooling with domestic hot water (DHW)

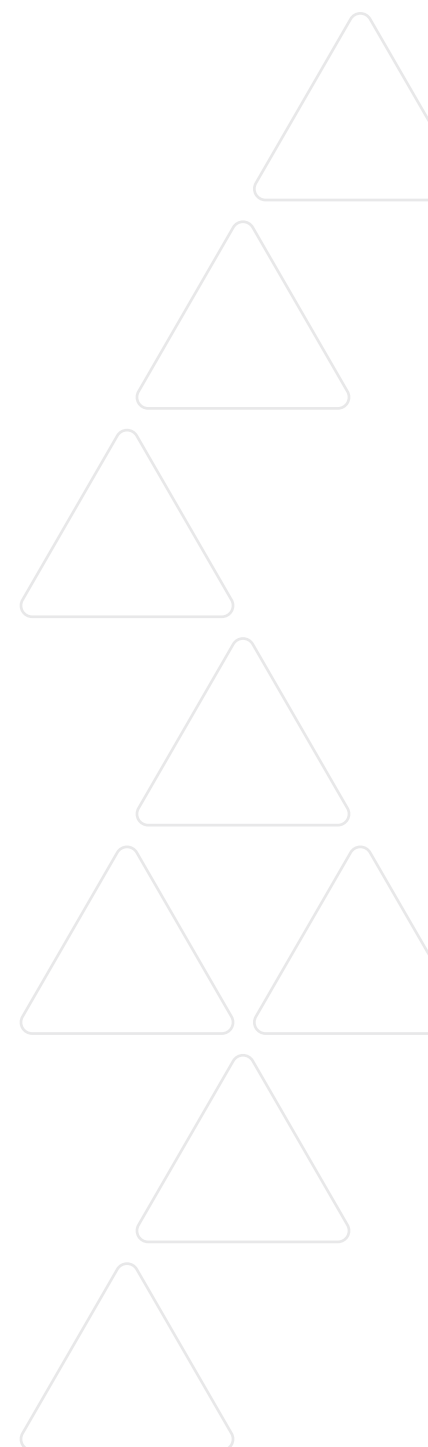
In addition to the advantages of the Hydrobox model, the Hydrotank model also offers:

- Domestic hot water heating.
- Convenient installation: all key components are in one unit.
- Easy and clean installation: the installation of the unit requires little space and integrated connection management means less clutter.
- Easy access maintenance.

INDOOR UNIT		Hydrobox	Hydrotank	
TYPE		without DHW	DHW	
OUTDOOR CAPACITY RANGE (Nominal)		5 - 14	5 - 14 [kW]	
HEATING OPERATING RANGE		Heating Flow Temperature 20 - 60	20 - 60 [°C]	
COOLING OPERATING RANGE		Cooling Flow Temperature 5 - 25	5 - 25 [°C]	
WATER DATA		Max Flow Rate	40,1 [L/min]	
		Primary Pump	25/1-7	
		Connection Size (Heating / DHW)	1" female screw	
		Primary Expansion Vessel	10 [L]	
WATER SAFETY DEVICES	Water Circuit	Pressure Relief Valve	2,5 (build-in) [Bar]	
		Flow Sensor Min Flow Rate	6,5 - 40,1 [L/min]	
DIMENSIONS		Width	510 [mm]	
		Depth	330 [mm]	
		Height	830 [mm]	
WEIGHT		45	130 [kg]	
ELECTRICAL DATA		Control Board (Optionally Powered by Outdoor Unit)	Electrical Supply	220-240V, 50Hz
			Breaker	C10/1
		Booster Heater (Optionally Powered if Required)	Electrical Supply	380-400V, 50Hz
			Capacity	6 [kW]
			Max Running Current	9 [A]
			Breaker	C10/3

Hydrobox includes: flow temperature controller (FTC6) with main controller and temperature sensors, water circulation pump, flow sensor and expansion vessel.

Hydrotank includes: flow temperature controller (FTC6) with main controller and temperature sensors, water circulation pump, flow sensor, expansion vessel and domestic hot water tank.



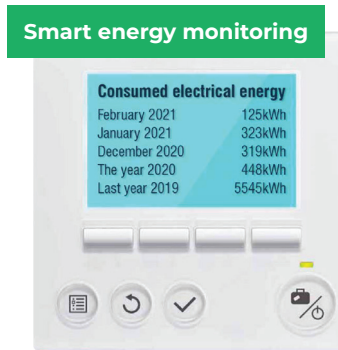
OUTDOOR UNIT		PUZ-WM50VHA	PUZ-WM60VAA	PUZ-WM85VAA	PUZ-WM85YAA	PUZ-WM112YAA	PUZ-HWM140YHA
ENERGY CLASS	W35	A+++	A+++	A+++	A+++	A+++	A+++
	W55	A++	A++	A++	A++	A++	A++
	DHW	A+	A+	A+	A+	A+	A+
HEATING ^{*1} (A7/W35)	Capacity [kW]	5.00	6.00	8.50	8.50	11.20	14
	Power Input [kW]	1.00	1.19	1.77	1.77	2.38	3.14
	COP	5.00	5.06	4.80	4.80	4.70	4.46
HEATING ^{*2} (A2/W35)	Capacity [kW]	5.00	6.00	8.50	8.50	11.20	14
	Power Input [kW]	1.35	1.60	2.42	2.42	3.26	4.44
	COP	3.70	3.75	3.51	3.51	3.44	3.15
WATER DATA	Outdoor Connection	1" parallel male screw	1" parallel male screw	1" parallel male screw	1" parallel male screw	1" parallel male screw	1" parallel male screw
	Heating Flow Rate Range [L/min]	6.5 to 14.3	8.6 to 17.2	10.8 to 24.4	10.8 to 24.4	14.4 to 32.1	17.9 to 40.1
	Heating Flow Temperature Range [°C]	20 – 60	20 – 60	20 – 60	20 – 60	20 – 60	20 - 60
	Cooling Flow Temperature Range [°C]	5 – 25	5 – 25	5 – 25	5 – 25	5 – 25	5 - 25
OPERATING OUTDOOR TEMPERATURE RANGE	Heating [°C DB]	-20 ~ +24 °C	-20 ~ +24 °C	-20 ~ +24 °C	-20 ~ +24 °C	-25 ~ +24 °C	-28~+21
	DHW [°C DB]	-20 ~ +35 °C	-20 ~ +35 °C	-20 ~ +35 °C	-20 ~ +35 °C	-25 ~ +35 °C	-28~+35
NOISE	SPL at 1M ^{*1} [dBA]	52	45	45	45	47	53
REFRIGERANT DATA	Type	R32	R32	R32	R32	R32	R32
	Charge [kg]	2.0	2.2	2.2	2.2	3.0	3.3
DIMENSIONS	Width [mm]	950	1050	1050	1050	1050	1020
	Depth [mm]	330+30	480	480	480	480	330+30
	Height [mm]	943	1020	1020	1020	1020	1350
WEIGHT	[kg]	71	98	98	98	119	143
ELECTRICAL DATA	Electrical Supply	1Ph, 230V, 50Hz	1Ph, 230V, 50Hz	1Ph, 230V, 50Hz	3Ph, 400V, 50Hz	3Ph, 400V, 50Hz	3Ph, 400V, 50Hz
	Maximum Current [A]	13	13	22	3x11,5	3x13	3x13
	Fuse Rating [A]	16	16	25	3x16	3x16	3x16

*1 Under normal heating conditions at outdoor temp: 7°CDB / 6°CWB, outlet water temp 35°C, inlet water temp 30°C as tested to BS EN14511.

*2 Under normal heating conditions at outdoor temp: 2°CDB / 1°CWB, outlet water temp 35°C, inlet water temp 30°C.

TermoPlus® Smart Energy Monitoring and system management

The TermoPlus heat pump system offers state-of-the-art energy monitoring and management. This means that families can turn their usage data into greater savings by optimizing their household power consumption for heating and hot water for greater efficiency. Energy monitoring also allows households to take advantage of off-peak tariffs where available, reducing power bills even further.



Smart energy monitoring

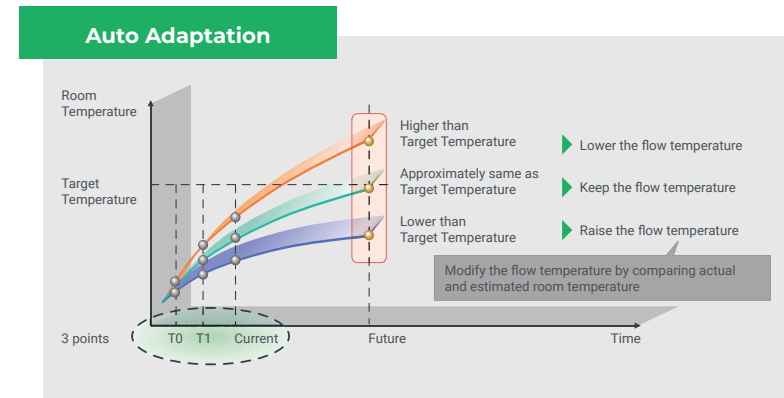
Monitor electricity consumption and heat output on the remote controller. Users can now easily check the following:

- Consumed electrical energy for space heating, cooling and domestic hot water (kWh).
- Delivered energy for space heating, cooling and domestic hot water (kWh).

Auto Adaptation

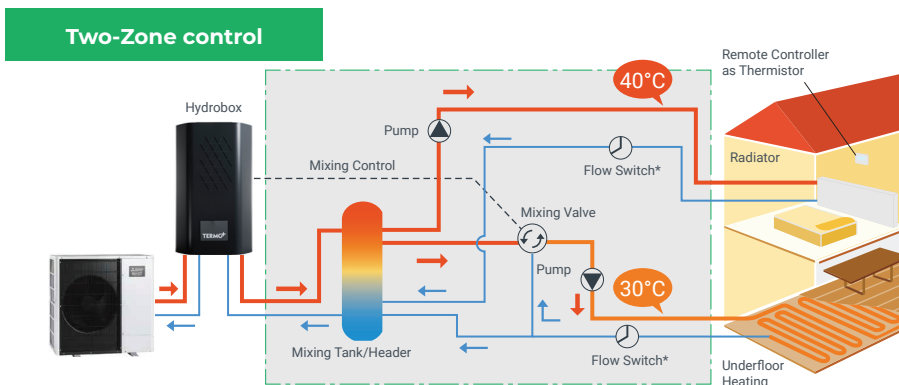
Our advanced Auto Adaptation Function measures the room temperature and outdoor temperature, calculating the required heating for the room. The flow temperature is automatically controlled according to the required heating, while the optimal room temperature is maintained at all times; ensuring appropriate heating capacity and preventing energy wastage.

By estimating future changes in room temperature, the system prevents unnecessary increases and decreases in the flow temperature. Auto Adaptation maximises both comfort and energy savings.



Simultaneously control two different temperature zones with Two-Zone control

The system can adjust and maintain two flow temperatures when different temperatures are required for different rooms. For example, it can maintain a flow temperature of 40 °C for the bedroom radiators and another flow temperature of 30 °C for the living room underfloor heating.



*Flow switch not included – field supplied.



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