



Independent **heating.** Comfortable **cooling.**

Minimalist design. Maximum efficiency.

With the introduction of their new FIRE+ICE single room heat pump with cooling function, ETHERMA presents an innovative monoblock air heat pump that does not require any external unit. It is perfect for rooms up to 35 m² in size such as living rooms or bedrooms, and is a surefire winner with a COP (Coefficient of Performance) value of 3.28 at 7 C°. And here's the best thing: FIRE+ICE can be installed quickly and easily on the inside of external walls.



Flexible control using the touchscreen display on the device or remote control



Insulated wall duct prevents cold bridges



This is how you heat your home today. A real revolution.

The compact FIRE+ICE is the optimal decentralised solution for individual residential units – either for older buildings or for easy, rapid apartment renovations. Whether you want to be free of oil, gas or a storage heater as a private homeowner or you are a housing cooperative and want to convert as many apartments as you want without much effort. In multi-family houses in urban areas, large central heat pumps are often not permitted or the amount of space is inadequate.

Efficient. Electric. Heating.

Clever combined with power from solar, water or wind power, electric heating systems from ETHERMA are already helping to reduce CO_2 emissions. With fast, almost loss-free heat at the touch of a button. No technical room. No maintenance. No fuel supply. No complicated piping installation. The innovative FIRE+ICE single room heat pump with air conditioning function is another step towards a sustainable future.

The ETHERMA OVERALL CONCEPT. For home renovations.

Comfort in every room. **With no oil or gas.**

When it comes to existing apartments, there are few innovative, easy-to-install heating systems to replace old systems. ETHERMA heating systems therefore provide the perfect solution for decentralised gas boilers or old night storage heaters. If you are already investing in a new heating system, ETHERMA is your best option.

In larger rooms, FIRE+ICE is ideal for heating. In smaller rooms that are only used on a temporary basis (kitchen, bathroom, hallway) and rooms with no external wall (a necessity in order to install FIRE+ICE), you can use infrared panels and electrical underfloor heating. The ETHERMA AQUA product range for central and decentralised hot water generation completes the overall concept. For heating or hot water: With ETHERMA, everything comes from a single source.

Fast, practical loss-free warmth

- > Entirely independent heating
- > Maximum supply security
- > No gas boiler in your apartment
- > No technical room, no fuel, no maintenance
- > Convenient individual room control
- > Cooling in summer (FIRE+ICE)
- Cheaper over the longer term in terms of the overall cost calculation



Electrical underfloor heating

- > Pleasant infrared radiant heat
- > Under tiles, laminates, parquet or stone
- > Low installation height, max. 4 mm, ideal for subsequent renovation
- Immediately noticeable warmth, no inertia as with water-based floor heating systems

One-time investment in ETHERMA systems



Infrared heating

- > Very high radiation efficiency
- Cut heating by up to 3 degrees, and hence up to 18% in energy and costs
- > Pleasant infrared warmth
- > Fast heating response
- > Modern design
- > For your wall or ceiling

Туре	Quan- tity	Price per unit excl. VAT	Total investment excl. VAT	Power rating in kW
Heating				
FIRE+ICE heat pump	2	€2,880.00	€5,760.00	5.78
LAVA [®] BATH infrared heating	1	€590.00	€590.00	0.35
LAVA [®] BASIC infrared heating	1	€470.00	€470.00	0.35
eFLOOR PRO netted heating mat set	1	€540.00	€540.00	0.8
Thermostat kitchen	1	€145.00	€145.00	
Total heating			€7,505.00	7.28
Warm water				
AQUA WHL continuous-flow water heater	1	€535.00	€535.00	15
AQUA WSP hot water storage	1	€290.00	€290.00	2
Total - hot water			€825.00	17
Total heating and hot water			€8,330.00	24.28
Total heating and hot water DE incl. 19% VAT			€9,912.70	
Total heating and hot water AT incl. 20% VAT			€9,996.00	

From old to new. From gas heating to the ETHERMA overall concept.

 Heating element 2 Decentralised gas boiler



Sample apartment, approx. 70 m²



1 FIRE+ICE heat pump

- 2 LAVA[®] BATH infrared heating
- 3 LAVA® BASIC infrared heating
- 4 eFLOOR PRO netted heating mat set
- 5 AQUA WHL continuous-flow water heater
- 6 AQUA WSP hot water storage

Total cost comparison in accordance with VDI 2067 (sample calculation)

	Gas combi thermal baths incl. radiator replacement (incl. 19% VAT.)	ETHERMA Overall concept for Austria (incl. 20% VAT.)	ETHERMA Overall concept for Germany (incl. 19% VAT.)
Investment costs	€10,470.00	€9,996.00	€9,912.70
Lifespan of the heat generator	15 years	15 years	15 years
Energy price per kWh ¹	€0.105	0.22	0.29
Ø Overall efficiency of the heat generator	0.85	2.7	2.7
Total energy required in kWh	9270	3660	3660
Annual investment costs ²	€1,008.70	€963.04	€955.01
Annual operating costs ³	€973.35	€805.204	€1,061.404
Annual maintenance costs	€259.53	€48.29	€47.90
Total costs/year over the useful life	€2,241.58	€1,816.53	€2,064.31

1 Energy prices: as of 20 May 2024 including VAT.

DE: Average prices Germany nationwide as of May 2024: Gas: 10.5 ct/kWh, electricity: 29 ct/kWh AT: Gas: MaxEnergy: 7.9 ct/kWh, electricity: 22 ct/kWh

Over the estimated useful life
Annual COP (Coefficient of Performance) for FIRE+ICE is assumed to be 3; infrared panels and FBH: 1,200 full-load hours/year

4 Maintenance costs for hot water appliances

Simple to operate. Ingenious **TO INSTALL.**



That's the way it works with the **FIRE+ICE** living room heat pump.

Circuit 1: Outside air

- Outside air is drawn into the system through an opening in the external wall.
- > The heat exchanger removes the heat from this outside air.
- > The cooled outside air is directed through the second opening into the open air.

Circuit 2: Interior air

- > The heat removed from the outside air is continuously fed into the room air.
- The external air and inside air circuits are completely separate from each other in terms of ventilation.
- > When outdoor temperatures are cooler, the integrated additional heating element is activated automatically as required.







- > Two core holes, 200 mm in diameter respectively for supply and exhaust air
- > One hole, 20 mm in diameter condensation line
- > Inserting the insulated wall duct and attaching the external covers

> The wall mounting rail is secured using 6 screws (included in the scope of delivery)



- > FIRE+ICE is connected using a mains cable or power socket
- > The unit is hung on the wall mounting rail - and you're done!

Installation in no time at all. No outdoor unit.

The FIRE+ICE living room heat pump can be easily installed on the inside of any vertical external wall with an even surface. This makes it perfect for retrofitting. Only two small core holes and one small hole are needed.

Most of the assembly is done from the inside – only the outer covers are attached from the outside. Since no refrigeration technician is required, the FIRE+ICE heat pump can be installed by an electrician or plumber, for example. The insulated wall duct protects against cold bridges.

Unattractive, bulky outdoor units, a familiar sight with conventional heat pumps or air conditioning units are now a thing of the past.



TECHNICAL DETAILS

>	Voltage:	230 V
>	Fuse rating (inert):	16 A
>	Max. connected load	
	without/with additional electric heater:	1.09/2.89 kW
>	Additional heating output:	0.9/1.8 kW
>	Max. heat output at 7°C outdoor temperatu	re
	without/with additional electric heater:	3.05/4.85 kW
>	Max. heat output at 2°C outdoor temperatu	re
	without/with additional electric heater:	2.51/4.31 kW
>	Max. heat output at -7°C outdoor temperat	ure
	without/with additional electric heater:	1.60/3.40 kW
>	Max. cooling output at 35/27°C:	3.10 kW
>	COP at 7°C	
	(Coefficient of Performance):	3.28
>	EER (Energy Efficiency Ratio):	3.25
>	Sound pressure level inside	
	(measured according to ISO 7779):	27.0-41.0 dB(A)
>	Sound pressure level at maximum	
	fan speed:	up to 63 dB(A)
>	Refrigerant:	R32 (0.5 kg)
>	Air hole diameter	
	External wall (2x):	200 mm
>	Condensation line diameter	
	External wall (1x):	20 mm
>	Weight:	41 kg
>	Plug connection cable:	1.7 m
>	IP rating:	IPX0
>	Energy efficiency class - heating:	А
>	Energy efficiency class - cooling:	A+

ETHERMA FIRE+ICE

The innovative single room heat pump with cooling function









Remote control

Exterior covers

ETHERMA FIRE+ICE single room heat pump with cooling function, 230 V

(The scope of delivery includes all necessary parts for installation including drilling template, 2 pieces of external covers, insulated wall duct (1 m) and mounting rail as well as remote control including battery.)

	, ,			
Туре	Art. no.	Width (mm)	Height (mm)	Depth (mm)
ET-HP-FIRE+ICE2-5-W	48001	1010	549	165

Accessories

Туре	Art. no.	Description
ET-HP-FIRE+ICE-AP-WCU	48087	External room thermostat for controlling up to 16 devices. Wired version, mounting on flush-mounted box 503 PU: 1 unit (Fig. 1)
ET-HP-FIRE+ICE-AP-ISOPIPE-160	48094	Insulated wall duct for core drilling 200 mm for wall thicknesses over 50 cm additionally required, material EPS, length 1 m, PU: 1 unit (Fig. 2)
ET-HP-FIRE+ICE-AP-CLS	48099	Cover for underside of unit, privacy screen for elevated installations, VPE: 1 pc. (no image)



ETHERMA TIP:

In addition to the FIRE+ICE single room heat pump with cooling function, the ETHERMA overall concept for apartments up to 150 m² in size also includes infrared panel for walls and ceilings as well as electrical underfloor heating for smaller rooms that are only used on a temporary basis or rooms with no external wall. In addition, ETHERMA also offers the matching solution for central and decentralised hot water generation with the ETHERMA AQUA product line. We'll be glad to help!

ETHERMA Elektrowärme G

Elektrowärme GmbH Landesstraße 16 5302 Henndorf Tel.: +43 (0) 6214 | 76 77 Web: www.etherma.com E-mail: office@etherma.com ETHERMA Deutschland GmbH Carl-Zeiss-Ring 15a 85737 Ismaning

Tel.: +49 (0) 25 62 | 81 97 00 Web: www.etherma.com E-mail: office.de@etherma.com

