CATALOGUE PRODUCTS

2026

HOT WATER R290 - R454C
HEATERS ONSEN | ONLY IN
TOTAL HEAT EXCHANGER

Termal

Termal Air Conditioning

ECO-FRIENDLY PRODUCTS FOR SMART AIR CONDITIONING

Termal is a leading company in the marketing of plant equipment for domestic use.

It offers a range of products in heat pumps and water heaters for heating and DHW production, as well as air conditioners suitable for historic centers, units for heating swimming pools and for air treatment.

EXPERIENCE THAT GUIDES THE FUTURE

Technological research, a love of challenge and the ability to interpret the future are our entrepreneurial heritage

These principles are the foundation of a history that has been developing for over 40 years, of a commitment that has evolved in the pursuit of excellence and continuous improvement.

TERMAL GROUP

Termal is a commercial group that was founded in the 1980s. A history that has developed over more than 40 years of dynamic activity, a commitment that has evolved in the pursuit of excellence and continuous improvement.

Termal is currently a group consisting of a network of companies and is a leading player in the Italian and European climate and comfort sector.

TERMAL QUALITY

- Direct logistics;
- Academy for continuous training;
- Extensive network of service centres;
- In-house technical office for product development;
- Pre- and post-sales service.

Termal Group

PRE-SALES AND AFTER-SALES SERVICE

Termal Assistance Portal, the reference point for assistance

The Termal Assistance Portal provides centralised and efficient technical assistance for products.

The platform can be accessed at **www.assistenzatermal.it**; customers and technical assistance centres can access it to submit their support requests through a clear interface, personalised access and linear operational flows.

Each request is automatically forwarded to the relevant department, ensuring effective management and optimised response times.

An environment where, through simple workflows, support requests can be submitted and the necessary documentation accessed.

Centralised access

A single portal for all support needs.

Simplified experience

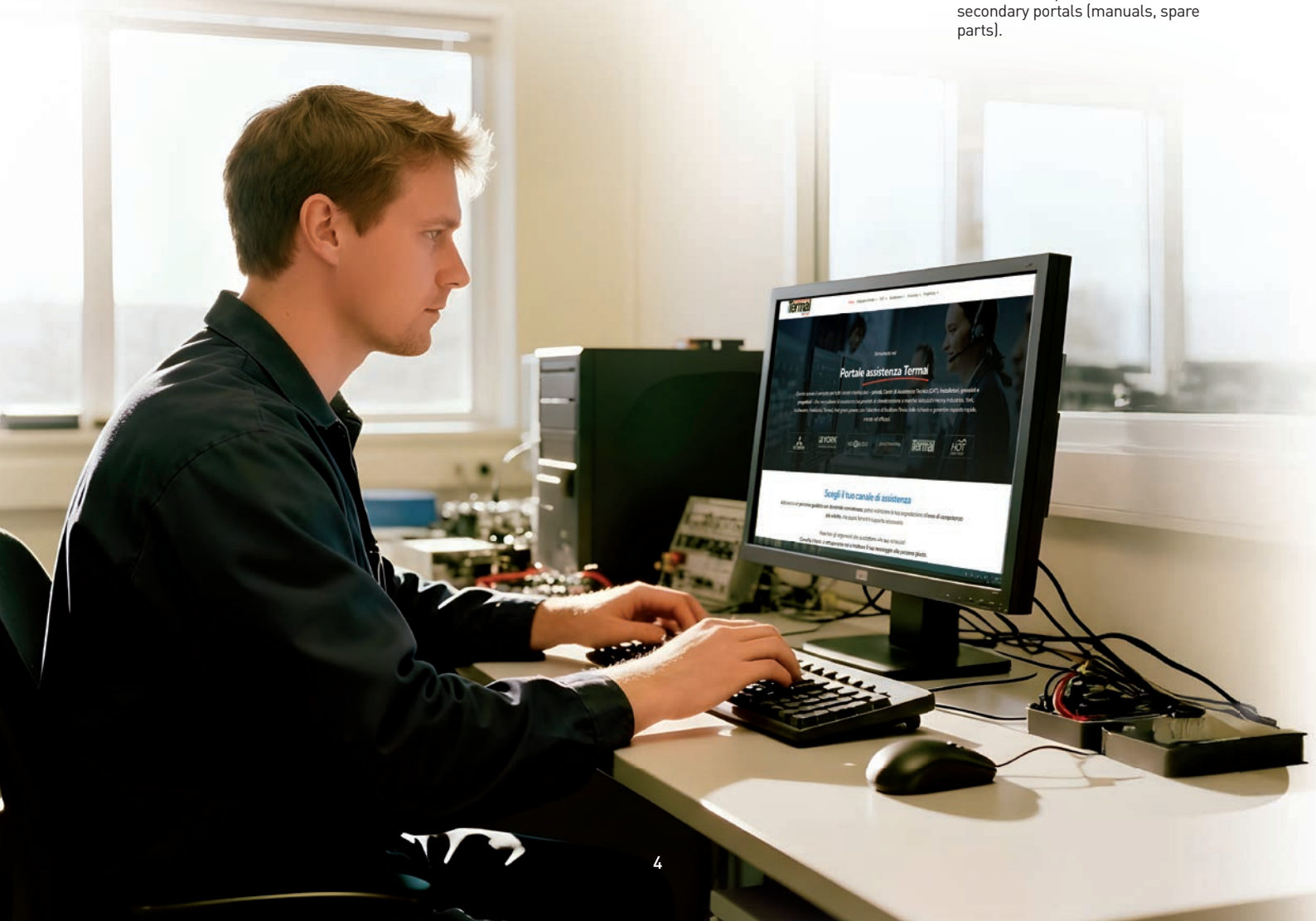
Intuitive interface for all types of users, with guided paths.

Efficiency and speed

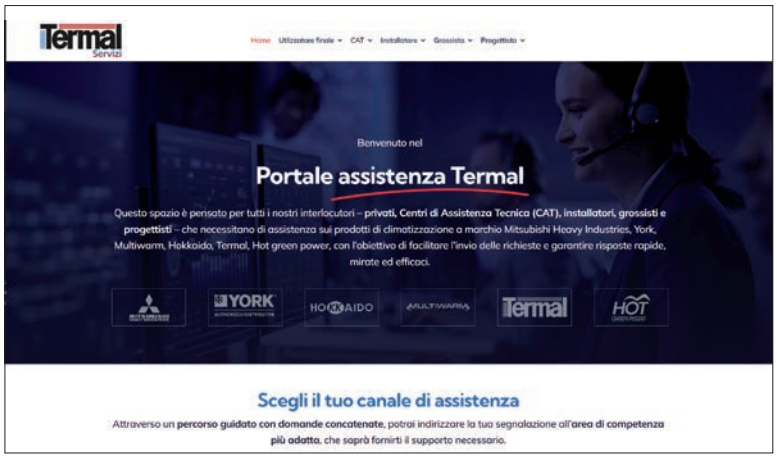
System that simplifies communication with the relevant departments and reduces response times.

Integrated management

Each flow generates a notification to the correct department and links to secondary portals (manuals, spare parts).



www.assistenzatermal.it



Advantages for installers, designers and wholesalers

The portal dedicated to **professional operators** offers a complete set of tools for every phase: from design to commissioning, right through to after-sales support.

Each profile – installer, designer or wholesaler – finds **technical resources, specific modules and support materials** that facilitate daily work, reduce response times and guarantee a high level of service to the end customer.

Start-up and after-sales service

Just a few clicks to send us your request for product commissioning or after-sales assistance on already installed products.

Spare parts management and after-sales service

Dedicated area for requesting original spare parts and support for products that have already been installed.

Documentation requests

Quickly obtain manuals, diagrams, technical specifications and official support materials

Design specifications

Tools for defining technical requirements, system diagrams and design configurations.

Advantages for CATs and self-service customers

The portal offers CATs and self-service customers a structured environment in which to operate efficiently and independently. The features are designed to meet the needs of those **who work with the product on a daily basis**, providing direct specialist technical support and access to the most up-to-date documentation.

To streamline the compilation of requests, these users can **log in**.

Specialised technical support

Access to dedicated channels to request in-depth assistance on complex issues or technical interventions.

Access to technical documentation

Manuals, certifications and technical specifications are always available and up to date.

Spare parts management

Reserved area for selecting and requesting original spare parts needed for field interventions.

TERMAL ACADEMY TRAINING

Training that becomes operational expertise. In Bologna, at the heart of the Termal Group

The Termal Academy is the training department of the Termal Group: a team of engineers and specialised technicians who transfer practical know-how on air conditioning, heating and domestic hot water production systems from the brands distributed by the Group on a daily basis.

We are located in Bologna, where theory meets real-life systems in operation and training becomes performance in the field.

An environment where, through simple flows, you can submit requests for assistance and access the necessary documentation.

Termal **Academy**

Who it is aimed at

Installers, designers, specialised technicians. Professionals who want to work to the highest standards, keep up to date with the latest developments and transform technical expertise into value for the customer and new business opportunities.

Our method

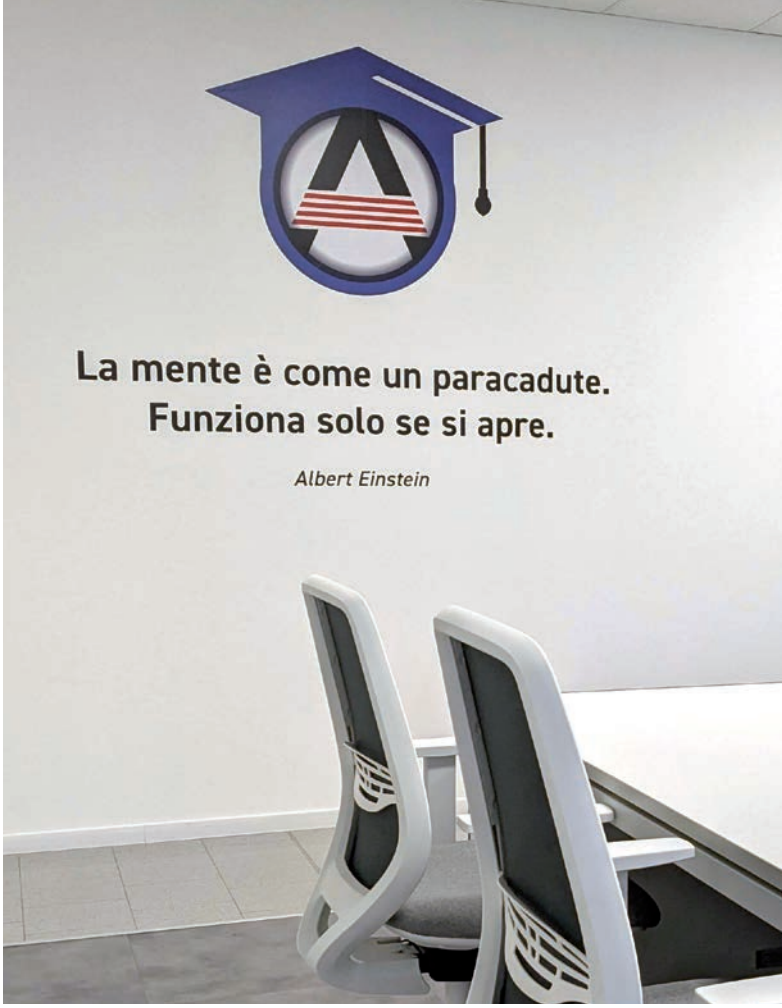
- **Theory + practice:** each course combines lectures, demonstrations and tests on working systems.
- **Operational approach:** focus on installation, assistance, maintenance and fault diagnosis.
- **Continuous updating:** programmes always aligned with new products, technological developments and regulatory changes.

The headquarters and laboratories

At our Bologna headquarters, you will find:

- **Theory classrooms** for structured in-depth study.
- **Demonstration and practical classrooms** with real systems from the various product families (residential, commercial, VRF and hydronic systems) and related control instruments.

This is where you really learn: by touching, measuring and configuring.



HVAC training content

- Refrigeration circuit and best installation practices.
- Fault diagnosis and service procedures.
- Design of **VRF systems or air-water heat pumps.**
- Use of **sizing software**.
- Regular updates on **industry regulations**.

The principles that guide us

Trust, technology, evolution, quality, continuous training. These are our five guiding principles: we believe in people and their development. Experienced professionals are at your side to tackle the challenges of everyday work and always stay one step ahead.

Strategies for the future

The TERMAL Academy **offers regular, highly specialised programmes** on innovative HVAC products and solutions. Not just technical skills: we also focus on marketing and sales techniques to improve customer relations and communication, so that we can truly meet their needs.

What you take home

- **Up-to-date and immediately** applicable operational skills.
- **Certificate of attendance** and complete technical handouts for each module.
- A network of specialists with whom you can continue to exchange ideas even after the course.

HEAT PUMP WATER HEATERS **HOT WATER**

Ducted Kitchen *series*

Indoor units	Range
 TWMMS 09080 J	✓ 80 LITRES 0.95 kW
 TWMMS 09100 J	✓ 100 LITRES 1.00 kW
 TWMMS 09150 J	✓ 150 LITRES 1.30 kW

Ducted *series*

Indoor units	Range
 TWMBS 2203 J-1	✓ 200 LITRES 1.50 kW
 TWMBS 2303 J-1	✓ 300 LITRES 1.50 kW
 TWMBS 2403 J-1	✓ 400 LITRES 1.50 kW

WiFi and **titanium anode** included as standard

Ducted *series* NEW

Indoor units	Range
 TWMBS 3500 K	✓ 460 LITRES 4.00 kW

WiFi and **titanium anode** included as standard

Line up

HEAT PUMP HEATERS **ONSEN** FOR SWIMMING POOLS

Indoor units	Range
 **TCPHNB 1201 Z** Single-phase	✓ 12.50 kW
 **TCPHNB 1501 Z** Single-phase	✓ 15.60 kW
 **TCPHSB 3101 Z** Three-phase	✓ 31.50 kW

Indoor units	Range
 **TCPVSB 4001 Z** Three-phase	✓ 40.00 kW
 **TCPVSB 4601 Z** Three-phase	✓ 46.00 kW

AIR CONDITIONER WITHOUT OUTDOOR UNIT

Only in

Indoor units	2.33 kW
 **TTWIS 311 Z**	✓

Line up

TOTAL HEAT EXCHANGER

Indoor units	Range
 ETIN 805	✓ 800 mc/h
 ETIN 1005	✓ 1000 mc/h
 ETIN 1505	✓ 1500 mc/h
 ETIN 2005	✓ 2000 mc/h

HEAT PUMP WATER HEATERS HOT WATER

DOMESTIC HOT WATER UP TO 70°C

Low-GWP refrigerants for domestic hot water production

The TERMAL HOT WATER range uses refrigerants selected to meet new requirements in terms of energy efficiency, environmental sustainability and operating reliability. The choice of refrigerant is a key aspect in the design of heat pumps for domestic hot water production, as it affects performance, the product's climate impact, and installation and maintenance procedures.

In this context, the use of low-GWP refrigerants helps reduce the potential contribution to global warming, supporting the HVAC industry's regulatory transition towards increasingly responsible solutions.

R290 NEW REFRIGERANT

R290, propane, is a natural refrigerant with an extremely low GWP and zero ODP, meaning it has no impact on the ozone layer. Its excellent thermodynamic properties support high levels of efficiency and make it particularly suitable for heat pumps dedicated to domestic hot water production.

R290 belongs to safety class A3: it is a low-toxicity refrigerant, but it is highly flammable. For this reason, it requires components, safety controls, installation procedures and maintenance operations that comply with the applicable regulations. When properly managed, it represents a high-performance solution with a particularly favourable environmental profile.

R454C NEW REFRIGERANT

R454C is a new-generation low-GWP refrigerant developed to reduce environmental impact compared with traditional refrigerants. With a GWP value below the 150 threshold, it is one of the most interesting solutions for applications aligned with the ecological transition and the gradual reduction of high-impact fluorinated gases.

R454C belongs to safety class A2L: it is a low-toxicity and mildly flammable refrigerant, with a lower flammability level than A3 refrigerants. It offers a well-balanced combination of efficiency, application safety and sustainability, making it suitable for systems designed according to the technical and regulatory requirements for mildly flammable refrigerants.

A complete range for any application

Efficiency - Savings - Well-being

The Termal Hot Water range of heat pump water heaters is characterised by a large number of solutions capable of satisfying any need in a range of applications, both on a small and large scale. Termal technology solutions include products:

- Ducted Kitchen
- Ducted

With the use of the compressor alone, the Ducted and Ducted Kitchen models at R290 can bring the water up to 65° C. All models can bring the water to a maximum of 70° C via the electrical resistance.

At such temperatures, it is possible to perform periodic thermal disinfection cycles of the stored hot water, which can prevent the proliferation of Legionella bacteria.

All solutions are **ideal for new buildings and renovation projects**.

Advantages

All DUCTED models are equipped with a **titanium anode** that permanently protects the tank from the corrosive effects of water.

As opposed to a **magnesium anode solution, the service life of the tank is extended and little maintenance is required, thus reducing the costs of periodic servicing**.
Like any metal structure in direct contact with an electrolyte (water), the heating elements are also subject to the phenomenon of corrosion. Electrochemical reactions cause decomposition and re-composition with other elements of the metals from which they are made, inevitably compromising their structure.

The Titanium Anode is an **environmentally friendly solution** which is "clean" and designed and engineered to operate using as little energy as possible.

The anode is electrically powered by means of a direct current that is circulated between the device and the tank to be protected.

At the heart of the system is the innovative electronics completely managed by a state-of-the-art microprocessor **capable of achieving performance hitherto unthinkable for this specific application**.

The regulation of the impressed current value is based on a highly efficient calculation algorithm, which allows the control of the correct current intensity in accordance with the instantaneous degree of protection and the reaction time of the tank.
The reading of the system's potential value through the same titanium electrode takes place in dynamic mode, allowing the current flow to be maintained once the equilibrium value is reached, without frequent interruptions or even partial variations in intensity.

The ability of Titanium Anode to self-learn and adjust to the actual conditions of the structure under protection, **means that even the delivery of the impressed current is dynamic and perfectly balanced to the needs of the system to be protected.**

Ducted Kitchen series

The "Ducted Kitchen" series is designed to be installed inside the tall cabinetry of the kitchen. The range consists of three tank sizes (80/100/150L) with external air expulsion and both internal and external intake.

Thanks to the wall-mounted installation, it is possible to further optimize the spaces inside the technical compartment.

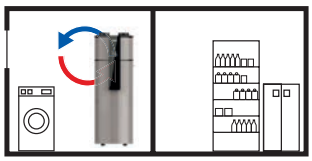
Ducted series

To be positioned indoors, it can be used in different installation configurations, with or without air intake or expulsion ducting. Thanks to the possibility of parallel or series installation (centralised systems), Termal Hot Water in the "Ducted" series is also suitable for large-volume hot water requirements.

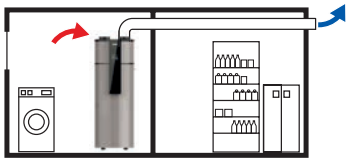
Versatile installation allows the full energy of the air to be harnessed

Air intake and/or expulsion is possible in the installation premises or with air intake and/or expulsion ducts from other premises. A condensate drainage network must be created.

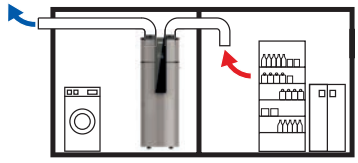
In particular, the "Ducted" series allows the heat pump system to be used in **5 installation modes**:

1. 

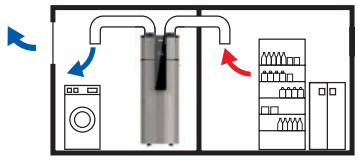
Recirculated air installation: air inlet and outlet take place in the installation premises. DHW is produced by exploiting the air in the room and at the same time removing heat and humidity from it, cooling it. The installation of a partition to prevent air recirculation in the immediate vicinity of the extraction vent is recommended.

2. 

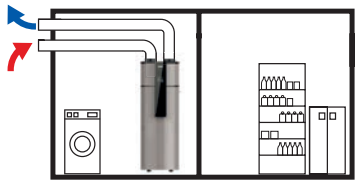
Installation with internal air intake: with air extraction outdoors. DHW is produced by exploiting the air in the installation premises, which is then expelled outside via ducting.

3. 

Installation with air intake from another room and expulsion to the outside via ducting. In situations where there are rooms with a high degree of heat build-up, this installation mode allows the system to work with a high level of energy efficiency, guaranteeing the exchange of air without the need to open the window.

4. 

Installation with air intake from another room and expulsion inwards (with or without ducting in rooms with openings to the outside). An advantageous situation for example in cellars where cold, dehumidified air is needed.

5. 

Installation with air intake and extraction to the external environment. This mode ensures that there is no variation in the temperature of the room where the Hot Water is installed. Operation depends on the minimum and maximum temperature of the external air intake (see product data sheets). This application is mainly used in locations with mild temperatures.

EXAMPLES OF RESIDENTIAL AND COMMERCIAL APPLICATIONS

Termal models are made of innovative materials to ensure a long service life. Furthermore, they are quiet and efficient.

The various power ratings meet all energy needs, and the availability of hot water will no longer be a problem.

DHW with 80/100/150 L Hot Water **Ducted Kitchen** units in **R290** for independent homes

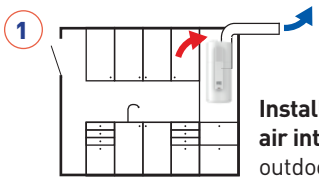
Description of the installation

The application type, illustrated in the figure, describes the installation in an apartment, which is newly built, being renovated or involves the replacement of existing installations.

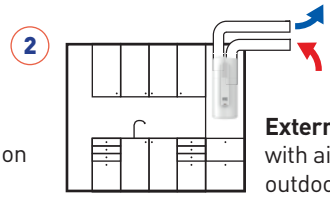
Domestic hot water is produced by a single 80, 100 or 150 litres Hot Water unit.

The heat pump is designed to be installed in the kitchen, just like a traditional boiler, and is conveniently placed inside the tall cabinetry of the kitchen, with air extraction to the outside.

The "Ducted kitchen" series allows use in **2 installation modes**:



Installation with internal air intake: with air extraction outdoors.



External air installation: with air intake and expulsion to the outdoors.

TWMMS 09080 J
TWMMS 09100 J
TWMMS 09150 J
80/100/150 litres

R290 NEW REFRIGERANT

1 apartment

1 bathrooms with showers and toilets

1 family of 1/2 persons

80/100/150 L depending on the household's DHW use

Termal

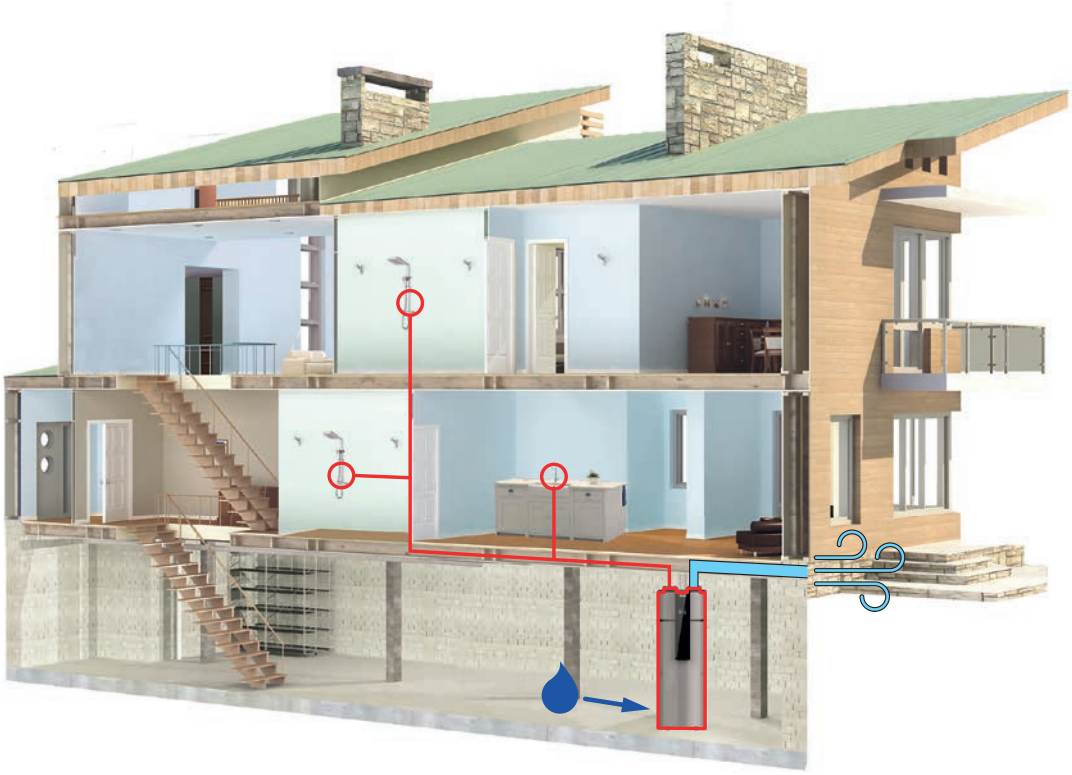
DHW with 200/300 L Hot Water **Ducted** units in **R290** for independent homes

Description of the installation

The application type, illustrated in the figure, describes the installation in an independent home, which is newly built, being renovated or involves the replacement of existing installations.

The production of domestic hot water is provided by one 200 or 300-litre monobloc Hot Water system.

The heat pump can be located in a technical or service room of the building, e.g. cellar or garage.



TWMBS 2203-2303 J-1
200/300 litres

1 apartment

2 bathrooms with showers and toilets

1 family of 3/4 persons

200/300 L tank size

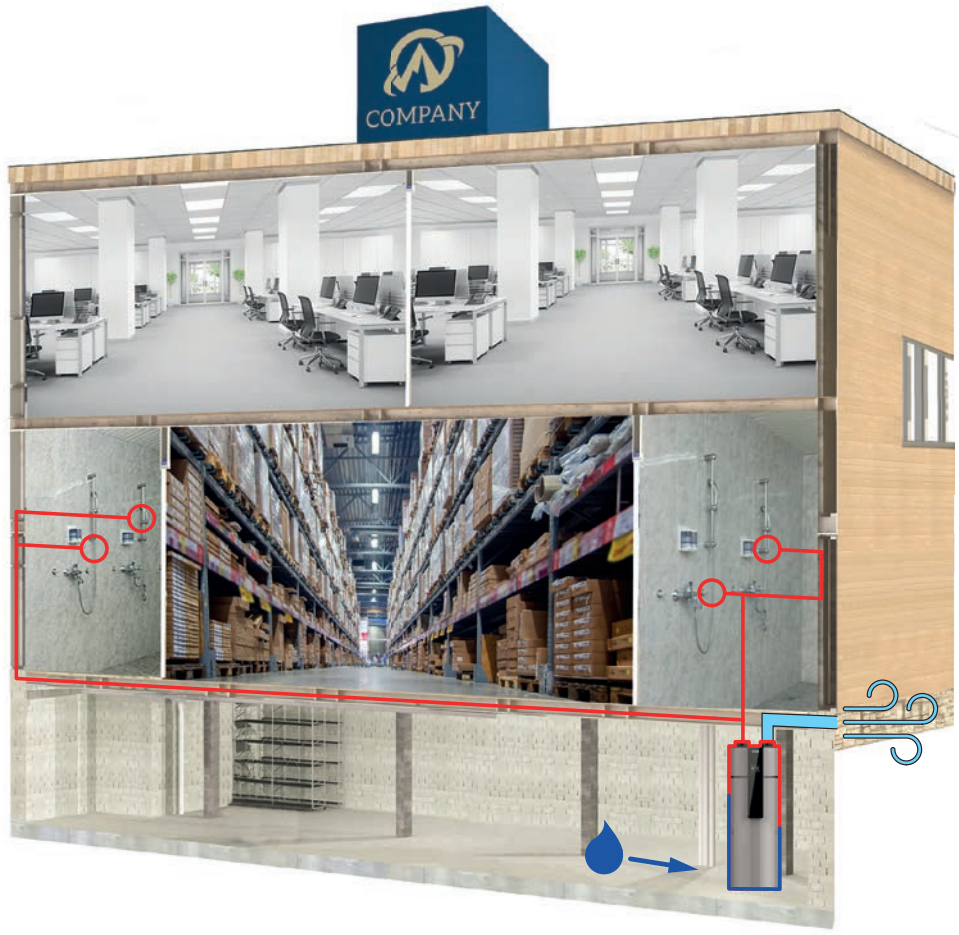
DHW with 300 L Hot Water **Ducted** units in **R290** for gyms or company changing rooms

Description of the installation

The application type, illustrated in the figure, describes the system in a company with a warehouse and offices.

The production of domestic hot water is provided by one 300-litre monobloc Hot Water system.

The heat pump can be located in a technical or service room, e.g. a central heating room, with ducting of the treated air.



TWMBS 2303 J-1
300 litres

R290 NEW REFRIGERANT

2 changing rooms (with 3 showers each)

10 users (5 per shift)

40 L requirements per person

400 L DHW requirements per day

42°C water supply temperature to utilities

Termal

Hot Water monobloc 80/100/150 litres at **R290** **Ducted Kitchen** series

INTEGRATED Wi-Fi

- Monobloc heat pump water heater, designed to be installed inside the tall cabinetry of the kitchen
- R290 refrigerant gas
- Vitrified galvanized steel
- Energy Efficiency Class **A+**
- Hot water up to 65° C with compressor only
- Anti-Legionella cycle
- Exceptional resistance to corrosion thanks to the **titanium anode included as standard**

TWMMS 09080 J
TWMMS 09100 J
TWMMS 09150 J

Energy class

TWMMS 09080 J — A+ (M)
TWMMS 09100 J — A+ (M)
TWMMS 09150 J — A+ (L)

R290 NEW REFRIGERANT
Titanium anode included
145L CAPACITY
ANTI-LEGIONELLA CYCLE

Model			TWMMS 09080 J	TWMMS 09100 J	TWMMS 09150 J
Tank volume		L	78	98	145
Rated thermal power[1]		W	950	980	1300
Rated power consumption[1]		W	250	258	351
COP (rated)[1]		W/W	3.80	3.80	3.70
Rated hot water production capacity[1]		L/h	20.5	21.0	28.0
COPDHW[2]		W/W	2.61	2.61	2.79
Test cycle profile[2]		-	M	M	L
Hot water volume at 40°C[2]		L	85	110	160
Energy efficiency (η wh)[3]		%	112	111	122
Energy Efficiency Class[3]		-	A+	A+	A+
IP protection rating		-	IP21	IP21	IP21
Hot water T. adjustment range		°C	38~70 (50 default)	38~70 (50 default)	38~70 (50 default)
Maximum hot water T. compressor only		°C	65	65	65
Electrical data	Power	Ph-V-Hz	1-220~240V-50Hz		
	Integrative heating element	W	1500		
	Maximum current (including heating element)	A	9.00	9.00	10.50
Refrigerant circuit	Refrigerant[4]	type (GWP)	R290 (0.02)		
	Quantity	kg	0.15	0.15	0.15
	Compressor	type	Rotary ON/OFF		
Product specifications	Dimensions (D x H)	mm	ø500 x 1196	ø500 x 1360	ø500 x 1707
	Net weight	kg	57	62	80
	Noise power level (without channels)	dB(A)	54	54	56
	Working range (compressor only)	°C	-7~+43		
Tank	Tank material	-	Vitrified galvanized steel		
	Heat exchanger	type	Microchannel aluminum		
	DHW hydraulic connections	inches	G1/2" (DN15)	G1/2" (DN15)	G1/2" (DN15)
	Titanium anode	-	Titanium electrode		
	Maximum operating pressure	Mpa	0.8	0.8	0.8
Air ducts	Air flow (without ducts)	m³/h	190	200	240
	Fan static pressure (max)	Pa	20	20	30
	Air duct - Diameter	mm	160	160	160
	Air duct - Length	m	5	5	5

1. Conditions: intake air 15°C DB (12°C WB), water inlet 15°C / outlet 45°C. 2. Test according to EN16147/2017; intake air 7°C, water inlet 10°C.
3. Directive 2009/125/EC - ERP EU No. 812/2013. 4. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 0.02. if 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 50 times less than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.

R290
NEW REFRIGERANT

Comfort at home

Designed to be installed in the kitchen, just like a traditional boiler, the "Ducted Kitchen" series is conveniently placed inside the tall cabinetry of the kitchen, with air extraction to the outside.

Safety

- The tank is protected from corrosion by the titanium anode included as standard.
- Anti-legionella system: the danger of legionella bacteria is averted thanks to periodic cycles that raise the temperature of the water inside the storage tank above 65°C.

Installation warnings

1. It is mandatory to install a safety and non-return valve on the cold-water inlet. Failure to do so could seriously damage the equipment. Use a valve with a 0.7 MPa setting. For the installation location, please refer to the piping connection diagram.
2. The discharge pipe of the safety valve must descend vertically and must not be placed in an environment where there is a risk of freezing.
3. The water must be able to drip freely from the pipe and its end must be left free.
4. The safety valve must be tested regularly to check its function and to remove any limescale that might block it.

Hot Water monobloc 200/300/400 litres at **R290 Ducted** series

- Floor-standing heat pump water heaters
- R290 refrigerant gas
- Titanium anode with alarm LED
- Additional 1.5 kW electric heating element
- Hot water up to 60°C with compressor alone; up to 70° C with electric heating element integration

INTEGRATED Wi-Fi

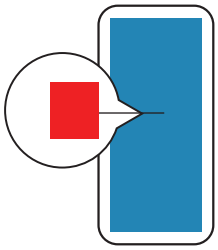
TWMBS 2203 J-1
TWMBS 2303 J-1
TWMBS 2403 J-1

Energy class

Model			TWMBS 2203 J-1	TWMBS 2303 J-1	TWMBS 2403 J-1
Tank volume		L	200	300	400
Rated thermal power[1]		W	1500	1500	1500
Rated power consumption[1]		W	388	388	388
COP (rated)[1]		W/W	3.87	3.87	3.87
Rated hot water production capacity[1]		L/h	32.0	32.0	32.0
COPDHW[2]		W/W	3.04	3.24	3.44
Test cycle profile[2]		-	L	XL	XXL
Hot water volume at 40°C[2]		L	291	377	479
Energy efficiency (η wh)[3]		%	130	132	141
Energy Efficiency Class[3]		-	A+	A+	A+
IP protection rating		-	IPX1	IPX1	IPX1
Hot water T. adjustment range		°C	35~65	35~65	35~65
Maximum hot water T. compressor only		°C	65	65	65
Electrical data	Power	Ph-V-Hz	1-220~240V-50Hz		
	Integrative heating element	W	1500	1500	1500
	Maximum current (including heating element)	A	9.50	9.50	9.50
Refrigerant circuit	Refrigerant[4]	type (GWP)	R290 (0.02)		
	Quantity	kg	0.15	0.15	0.15
	Compressor	type	Rotary ON/OFF		
Hydraulic data	Tank material	-	Stainless steel 304		
	DHW hydraulic connections	inches	G3/4" (DN20)		
	Hydraulic solar coil connections	inches	-	-	-
	Maximum operating pressure	bar	10	10	10
Air ducts	Air flow (without ducts)	m^3/h	290	290	290
	Fan static pressure (max)	Pa	60	60	60
	Inside diameter	mm	180	180	180
	Length Max	m	8	8	8
Product specifications	Operating range	°C	-5~+43	-5~+43	-5~+43
	Titanium anode		Titanium electrode with alarm LED		
	Sound power level	dB(A)	51	51	51
	Dimensions (D x H)	mm	ø560x1745	ø640x1840	ø700x1880
	Net weight	kg	80	85	95
Controls	Wired control on board the machine		Included		
	WiFi Module		Integrated		

1. Conditions: intake air 20°C DB (15°C WB), inlet water 15°C / outlet 55°C. 2. Test according to EN16147; air 7°C, inlet water 10°C.
3. Directive 2009/125/EC - ERP EU n. 812/2013 (SGS-CSTC certification for all models). 4. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 0.02. if 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 50 times less than 1 kg of CO_2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.

Product benefits



Durable titanium anode

Titanium anode as standard with the Hot Water system.

R290 NEW REFRIGERANT

Comfort at home

- Programming to take advantage of any advantageous time slots on the electricity tariff and have hot water available when needed.
- Two operating modes: maximum savings with the use of the compressor alone or maximum speed with the simultaneous use of the heat pump and integrated electric heating element, to produce large quantities of DHW in a short time.

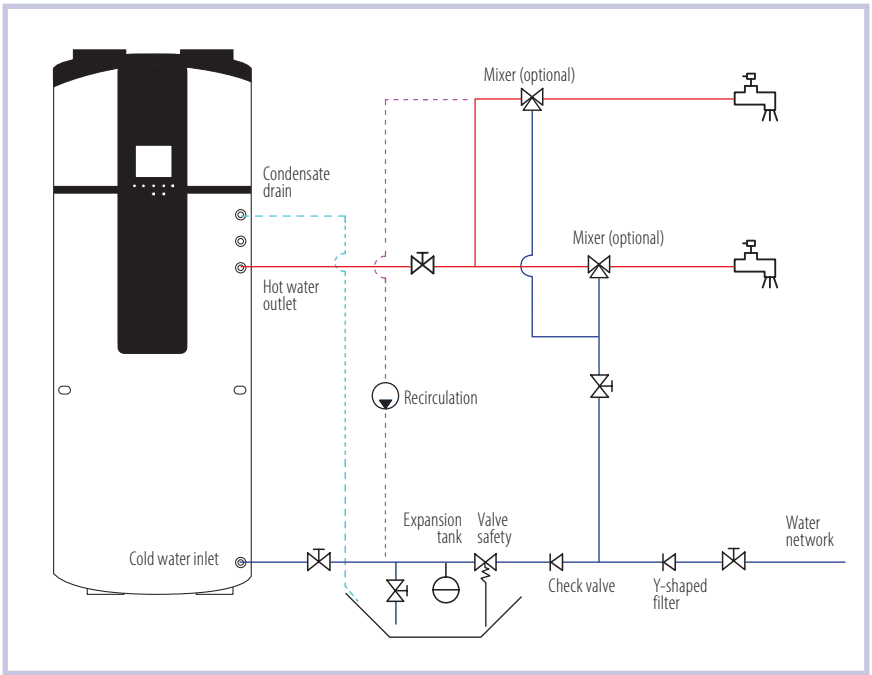
Safety

- Since the heat exchanger is outside the tank, no contamination between water and coolant is possible.
- Anti-legionella system: the danger of legionella bacteria is averted thanks to periodic cycles that raise the temperature of the water inside the storage tank above 65°C.
- The titanium anode permanently protects the tank from the corrosive action of the water, ensuring greater reliability and lower maintenance costs than a magnesium anode solution.

5 installation modes

1. Recirculated air installation: air inlet and outlet take place in the installation premises.
2. Installation with internal air intake and air extraction outdoors.
3. Installation with intake from another room and expulsion outdoors
4. Installation with air intake from another room and expulsion to an internal room (with or without ducting).
5. Installation with air intake and extraction to the external environment.

Hydraulic connections diagram



Hot Water monobloc 460 litres at **R454C** **Ducted** series

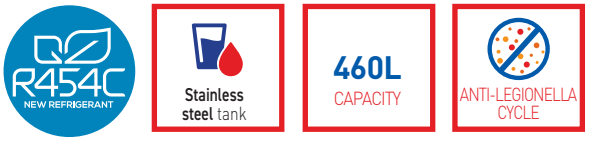
NEW

INTEGRATED Wi-Fi

- Floor-standing heat pump water heaters
- **R454C refrigerant gas (GWP=146, class A2L)**
- Titanium anode with alarm LED
- 4 kW compressor and 1.5 kW integrative electric resistance
- Hot water up to 65°C with compressor alone; up to 70° C with electric heating element integration

TWMBS 3500 K

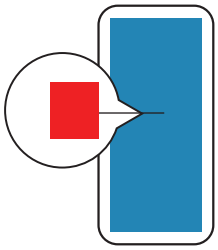
Energy class



Model			TWMBS 3500 K
Tank volume		L	460
Rated thermal power[1]		W	4000
Rated power consumption[1]		W	960
COP (rated)[1]		W/W	4.17
Rated hot water production capacity[1]		L/h	86.0
COPDHW[2]		W/W	2.79
Test cycle profile[2]		-	XXL
Hot water volume at 40°C[2]		L	522
Energy efficiency (η wh)[3]		%	111.7
Energy Efficiency Class[3]		-	A
IP protection rating		-	IPX 1
Hot water T. adjustment range		°C	35 - 70
Maximum hot water T. compressor only		°C	65
Electrical data	Power	Ph-V-Hz	1-220~240V-50Hz
	Integrative heating element	W	1500
	Maximum current (including heating element)	A	10.00
Refrigerant circuit	Refrigerant[4]	type (GWP)	R454C (146)
	Quantity	kg	0.65
	Compressor	type	Rotary Inverter
Hydraulic data	Tank material	-	Stainless steel 304
	DHW hydraulic connections	inches	G 3/4" (DN20)
	Maximum operating pressure	bar	10
Air ducts	Air flow (without ducts)	m^3/h	650
	Fan static pressure (max)	Pa	45
	Inside diameter	mm	180
	Length Max	m	8
Product specifications	Operating range	°C	-10~43
	Titanium anode		Titanium electrode with alarm LED
	Sound power level	dB(A)	51
	Dimensions (D x H)	mm	ø800 x 1880
	Net weight	kg	125
Controls	Wired control on board the machine		Included
	WiFi Module		Integrated

1. Conditions: intake air 20°C DB (15°C WB), water inlet 15°C / outlet 55°C. 2. Tested according to EN16147; air 7°C, water inlet 10°C.
3. Directive 2009/125/EC - ERP EU n. 812/2013 (SGS-CSTC certification for all models). 4. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of146 if 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 146 times less than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.

Product benefits



Durable titanium anode

Titanium anode as standard with the Hot Water system.

R454C NEW REFRIGERANT

Comfort at home

- Programming to take advantage of any advantageous time slots on the electricity tariff and have hot water available when needed.
- Two operating modes: maximum savings with the use of the compressor alone or maximum speed with the simultaneous use of the heat pump and integrated electric heating element, to produce large quantities of DHW in a short time.

Safety

- Since the heat exchanger is outside the tank, no contamination between water and coolant is possible.
- Anti-legionella system: the danger of legionella bacteria is averted thanks to periodic cycles that raise the temperature of the water inside the storage tank above 65°C.
- The titanium anode permanently protects the tank from the corrosive action of the water, ensuring greater reliability and lower maintenance costs than a magnesium anode solution.

5 installation modes

1. Recirculated air installation: air inlet and outlet take place in the installation premises.
2. Installation with internal air intake and air extraction outdoors.
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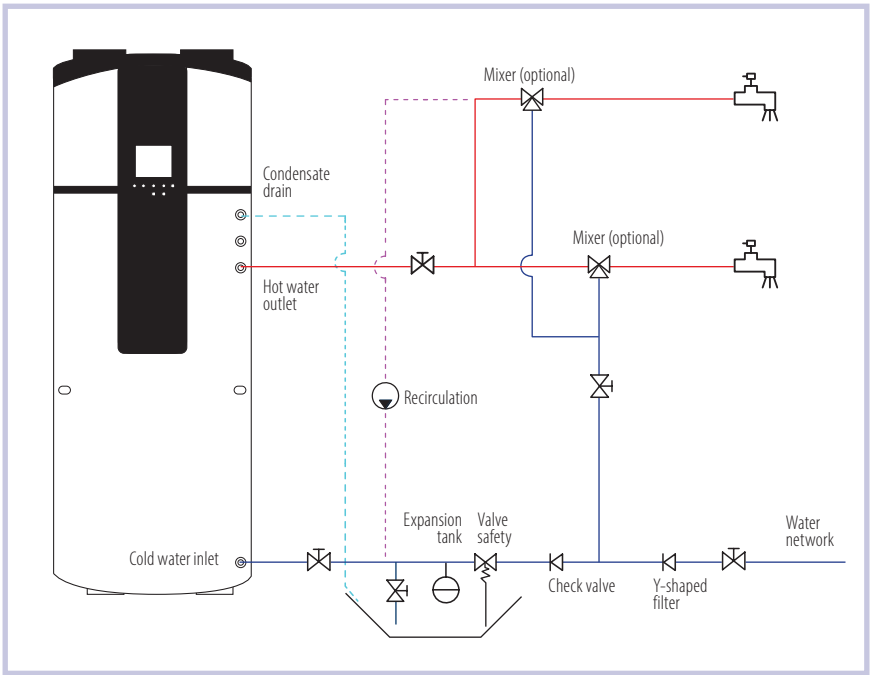
Hydraulic connections diagram



HEAT PUMP HEATERS **ONSEN** FOR SWIMMING POOLS

GAS R32
QUICK INSTALLATION

RUSTPROOF ABS CASING

2 single-phase & 1 three-phase models

2 three-phase models

The pleasure of swimming in a pool in all seasons

Termal heat pump heaters can be used in small, medium, and large indoor as well as outdoor pools.

They are an effective solution for heating swimming pool water, even in late autumn or during sudden drops in temperature, **thus extending the bathing season**.

Equipped with a titanium heat exchanger and high-efficiency compressor, Termal swimming pool heat pumps guarantee absolute operational reliability, high energy performance and low operating consumption.

Titanium heat exchanger: a guarantee of safety and reliability

All **Termal heat pump heaters** are equipped with a titanium exchanger capable of heating any type of water, irrespective of its origin and the treatment used (chlorine treatment, salt sterilisation, bromine, ozone, etc.) and all systems with extensive disinfection requirements.

The titanium alloy provides maximum protection, guaranteed over time, against corrosion caused by chlorine.

Durable materials: ABS pump body

All units are **encased in a** rust-free **thermoformed ABS outer shell**.

This casing makes it possible to install all products in the open air, without the risk of deterioration caused by atmospheric agents or the need for special maintenance.

Heat pump heaters for swimming pools **ONSEN** in **R32**

INTEGRATED Wi-Fi

- New design, ABS plastic casing, rustproof
- Refrigerant gas R32
- 2 single-phase models from 12.50 to 15.60 kW; 1 three-phase model from 31.66 kW
- Titanium heat exchanger
- Operating air temperature -10°C~+43°C

single-phase
TCPHNB 1201 Z
TCPHNB 1501 Z

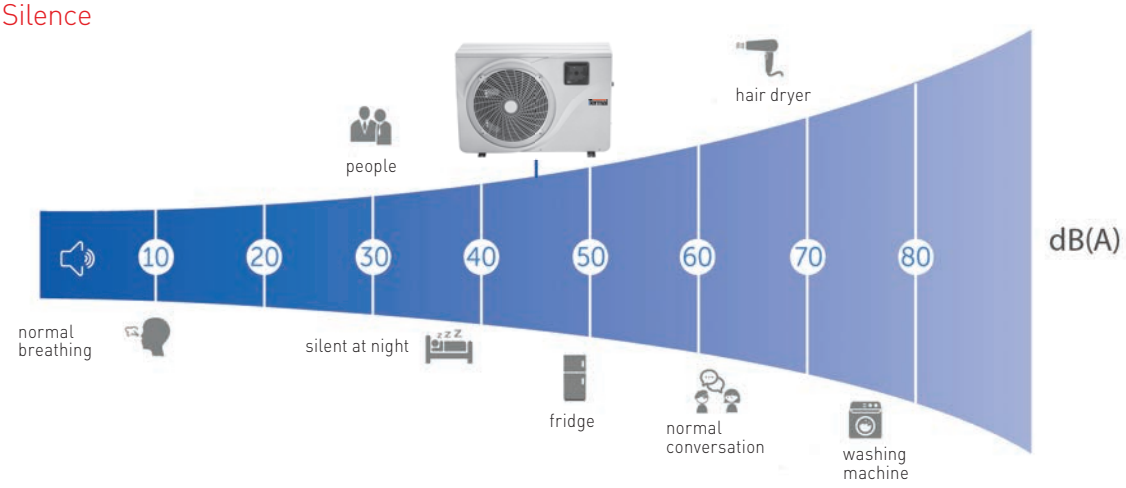
three-phase
TCPHSB 3101 Z

R32 | ABS CASING | SILENT | EASY TO INSTALL

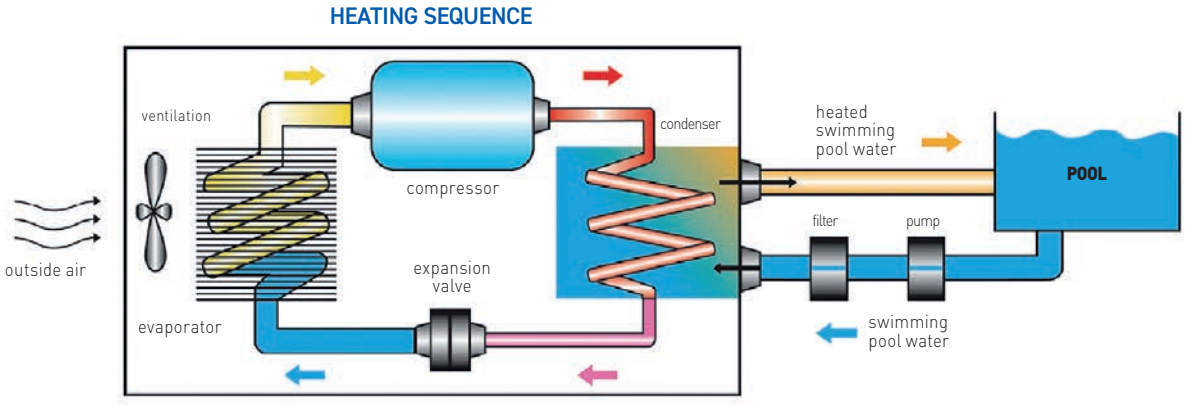
Model		TCPHNB 1201 Z	TCPHNB 1501 Z	TCPHSB 3101 Z
Estimated swimming pool volume	m³	35-50	50-70	90-120
Operating range	°C	-10~43	-10~43	-10~43
Conditions - Air 26°C DB/24.3°C WB - Water 26°C in / 28°C out				
Heating capacity	kW	12.50~2.89	15.60~3.61	31.66~6.97
Power consumption	kW	1.82~0.216	2.25~0.27	4.61~0.523
Current absorbed	A	7.99~0.97	9.88~1.21	8.24~0.93
COP	W/W	13.38~6.87	13.37~6.93	13.33~6.87
Conditions - Air 15°C DB/12°C WB - Water 26°C in / 28°C out				
Heating capacity	kW	9.37~2.17	12.48~2.88	23.63~5.35
Power consumption	kW	1.90~0.30	2.53~0.40	4.81~0.746
Current absorbed	A	8.34~1.34	11.11~1.79	8.60~1.33
COP	W/W	7.23~4.93	7.24~4.93	7.17~4.91
Conditions - Air 35°C DB - Water 27°C in / 25°C out				
Cooling capacity	kW	5.00~2.80	6.80~4.20	15.76~5.94
Power consumption	kW	1.43~0.598	1.94~0.887	4.64~1.25
Current absorbed	A	6.28~2.68	8.52~3.98	8.29~2.23
EER	W/W	4.68~3.50	4.74~3.51	4.74~3.40
Power supply	V/Ph/Hz	220-240/1/50		380-415V/3/50
Max current absorbed	A	16.40	17.70	11.60
Water capacity	m³/h	4	5.3	10.5
Pressure drops	kPa	6.91	10.4	15.71
Refrigerant[1]	type (GWP)	R32 (675)		
Quantity (tons CO2)	kg (t)	0.55 (0.37)	0.75 (0.51)	2 (1.35)
Dimensions LxDxH	mm	930x340x650	930x340x650	1220x440x850
Net weight	kg	43	45	108
Sound pressure at 1 m	dB(A)	40~48	41~50	<51
Compressor	type	Rotary		
Evaporator	type	Finned copper pipes		
Protection degree		IPX4	IPX4	IPX4

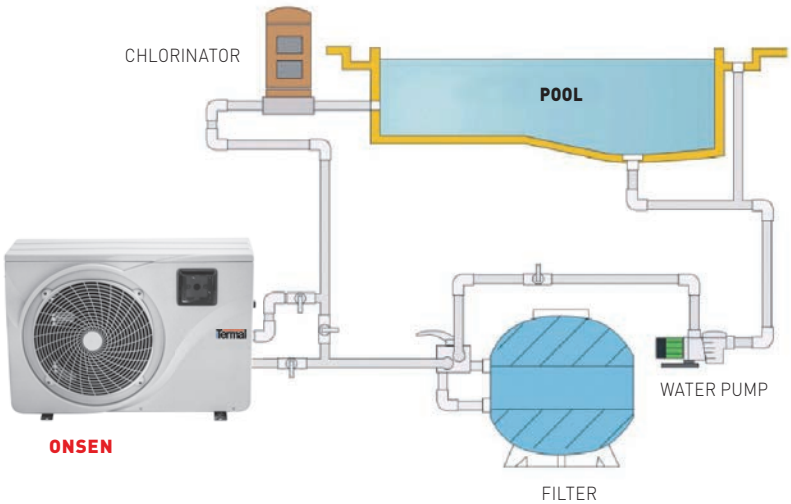
1. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 675. if 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 675 times less than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.

Silence



Applications





Heat pump heaters for swimming pools **ONSEN** in **R32**

INTEGRATED Wi-Fi

- New design, ABS plastic casing, rustproof
- Refrigerant gas R32
- 2 three-phase models from 40.30 to 45.65 kW;
- Titanium heat exchanger
- Operating air temperature -10°C~+43°C

three-phase
TCPVSB 4001 Z
TCPVSB 4601 Z

R32

ABS CASING

SILENT

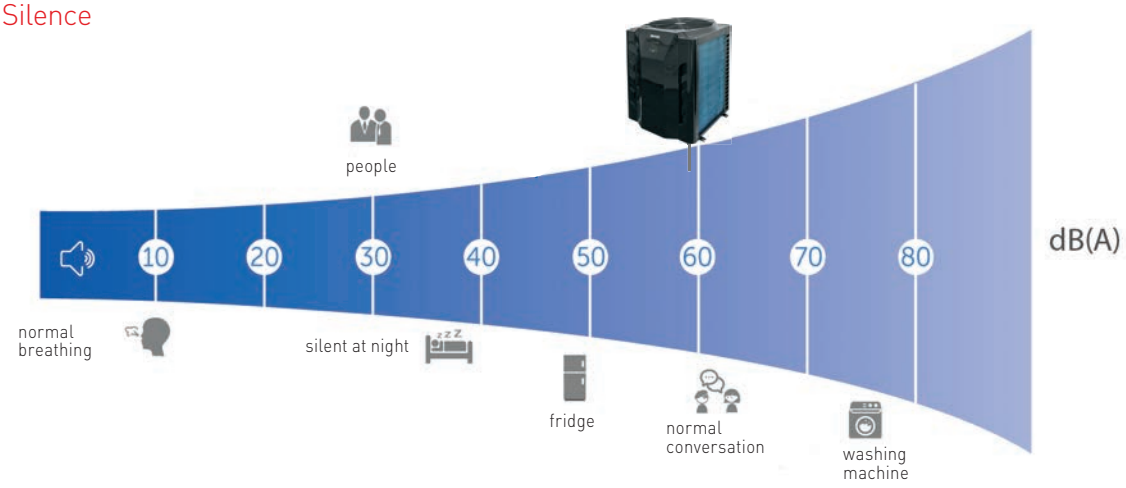
EASY TO INSTALL

*** Distributor note**
The data shown may be subject to change. For updated information, please consult the latest version of the catalogue available on the website www.mitsubishi-termal.it.

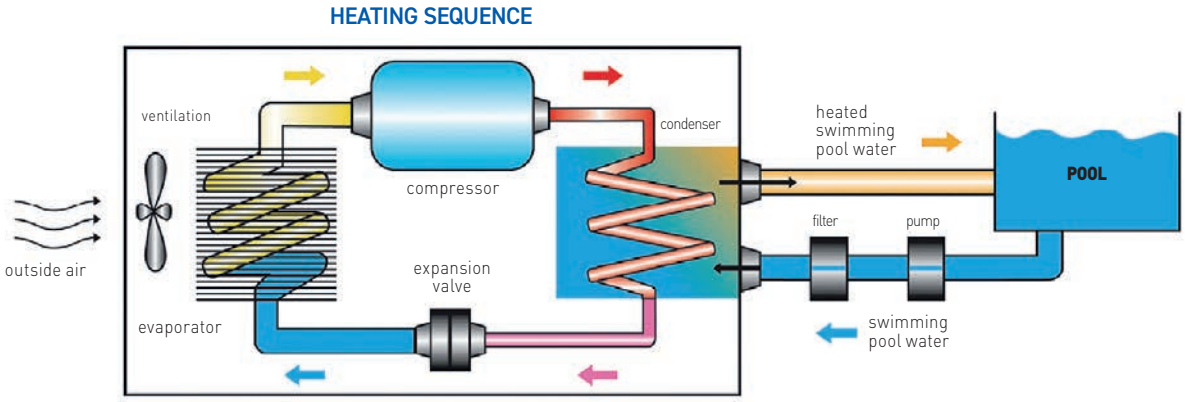
Model		TCPVSB 4001 Z*	TCPVSB 4601 Z*
Estimated swimming pool volume	m³	120~160	120~160
Operating range	°C	-10~43	-10~43
Conditions - Air 26°C DB/24.3°C WB - Water 26°C in / 28°C out			
Heating capacity	kW	40.30~8.79	45.65~8.79
Power consumption	kW	6.14~0.77	7.08~0.78
COP	W/W	11.47~6.56	11.27~6.44
Conditions - Air 15°C DB/12°C WB - Water 26°C in / 28°C out			
Heating capacity	kW	30.06~6.31	35.02~7.33
Power consumption	kW	6.44~0.939	7.40~1.10
COP	W/W	6.72~4.66	6.66~4.73
Conditions - Air 35°C DB - Water 27°C in / 25°C out			
Cooling capacity	kW	19.54~8.51	22.76~7.36
Power consumption	kW	5.76~1.76	6.82~1.56
EER	W/W	4.84~3.39	4.72~3.33
Power supply	V/Ph/Hz	380-415V/3/50	
Max current absorbed	A	14.66	16.22
Water capacity	m³/h	14.5	15.1
Pressure drops	kPa	37.77	35.31
Refrigerant[1]	type (GWP)	R32 (675)	
Quantity (tons CO2)	kg (t)	2.7 (1.82)	3.0 (2.03)
Dimensions LxDxH	mm	659x732x913	
Net weight	kg	95	105
Sound pressure at 1 m	dB(A)	58	58
Compressor	type	Rotary	
Evaporator	type	Finned copper pipes	
Protection degree		IPX4	IPX4

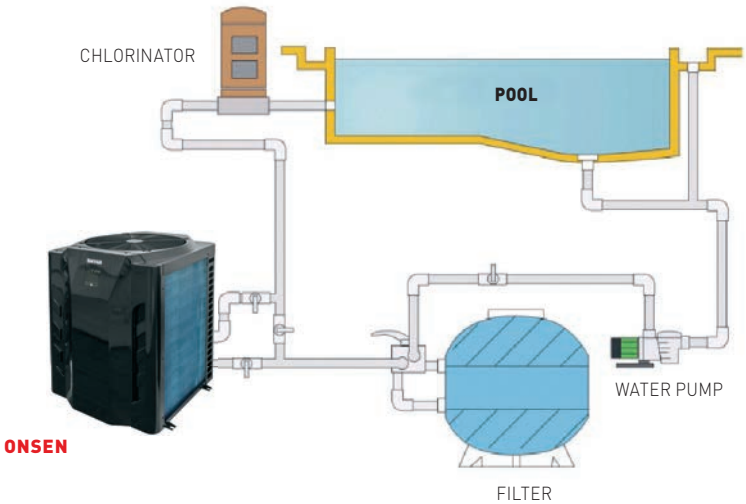
1. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 675. if 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 675 times less than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.

Silence



Applications





Only in

AIR CONDITIONER
WITHOUT OUTDOOR UNIT

R32 REFRIGERANT GAS
(GWP 675)

COOL IN THE SUMMER
WARM IN THE WINTER
DESIGN ALL YEAR LONG

"Only in", the heat pump without outdoor unit combines the evaporating and condensing part in a single unit, normally divided into traditional splits composed by two units

A+/A
TTWIS 311 Z

The advantages

Ideal for historical buildings

Since it has no outdoor unit, its installation does not compromise the aesthetics of the building's façade.
Its modern, essential design with a depth of only 17 cm adapts to all types of interiors, for air conditioning " without architectural barriers.".

Low consumption

DC Inverter technology makes "Only in" consumption very low. Once the desired temperature has been reached, the units run at minimum power, reducing air outlet speed in the environment, thus significantly reducing electrical consumption.

Less Maintenance

Practically no maintenance is required since the cooling circuit is "sealed" and therefore free of any refrigerant pipes.

Quiet

Thanks to the power used, the internal layout and skilful use of soundproofing materials, "Only in" offers exceptional levels of quiet: it is difficult to tell it apart from a normal wall split unit.

Easy to install

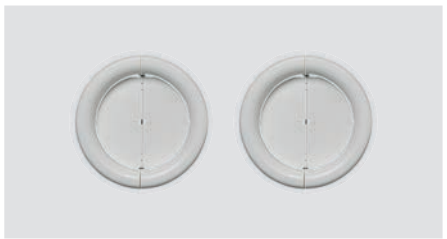
Without an outdoor unit, it can be easily installed on any perimeter wall, even without the presence of a qualified refrigeration installer. Simply drill two 16.2 cm diameter holes in the wall. No need to then lay any pipes which normally connect the indoor and outdoor units.

Remote and on-board control

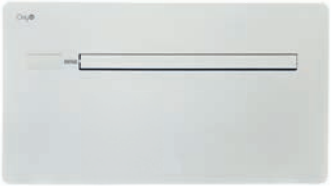
"Only in" is equipped with a practical, functional remote control. A convenient control panel is also present on-board the machine, from where all settings can be made including the "LOCK" function which locks the keyboard.
The "heating" function can also be deactivated from the control panel. "Only in" therefore can operate only in "cold" and can be installed without a condensate drain pipe.

Retractable outer grilles

The tilting outer grilles open only when the unit is running. This guarantees better indoor comfort as it reduces the entry of dust, noise and pollution and requires less maintenance and even less visibility outside.
The outer grilles can be painted with the same colour as the façade to almost completely hide its installation.



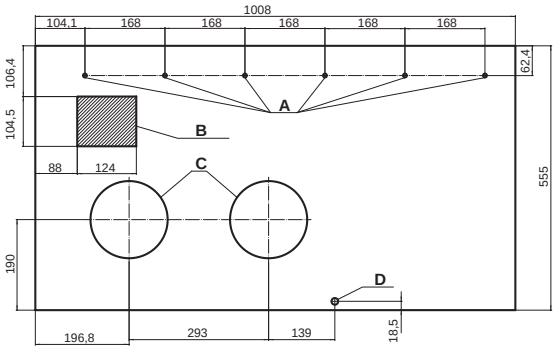
AIR CONDITIONER WITHOUT OUTDOOR UNIT

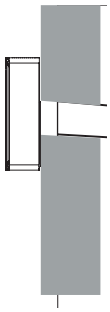


Technical installation information

A Holes for M8 plugs
B Area for electrical connection
C Holes for Ø160 mm air ducting
D Ø14 mm condensate drain

Assembly template, support bracket, pipes for holes and outer grilles are contained inside packaging.





New wall control T-DTW-ST-Modbus

- Cable included (8 m)
- Modulating speed
- Touch Screen Interface
- Built-in Modbus port

R32

Model			TTWIS 311 Z
Type			Monobloc double duct - DC-Inverter heat pump
Control			Panel + Remote control
Rated capacity (T=+35°C)	Cooling	kW	2.33
Rated capacity (Dual-Power function)		kW	3.10
Rated absorbed power		kW	0.72
Rated energy efficiency coefficient		EER1	3.25
Seasonal energy efficiency class		626/20112	A+
Dehumidifying capacity		L/h	0.9
Rated capacity (T=+7°C)	Heating	kW	2.31
Rated capacity (Dual-Power function)		kW	3.05
Rated absorbed power		kW	0.71
Rated energy efficiency coefficient		COP1	3.28
Seasonal energy efficiency class		626/20112	A
Electrical data			
Power		Ph-V-Hz	1Ph - 220/240V - 50Hz
MAX absorbed current		A	4.60
Refrigerant circuit			
Refrigerant3		Type (GWP)	R32 (675)
Quantity (tons CO2)		kg (t)	0.50 (0.338)
Product specifications			
Dimensions	LxDxH	mm	1030x555x170
Net weight		kg	41
Sound power level		dB(A)	58
Sound pressure level	Hi-Lo	dB(A)	41-27
Treated air volume (indoor/outdoor)	Hi	m3/h	400/480
	Mi	m3/h	320/390
	Lo	m3/h	270/340
Operating limit (indoor environment)	Cooling	°C (DB)	18~35
	Heating		5~27
Operating limit (outdoor environment)	Cooling	°C (DB)	-5~43
	Heating		-10~24
Installation			
Wall hole diameter		mm	162
Wall hole distance		mm	293
Optional parts			
Decorative foot kit			TWIS 2200 CINF
Smart Touch + ModBus wall control panel			T-DTW-ST-Modbus

1. Value measured according to harmonised standard EN14511. 2. Delegated Regulation UE N.626/2011 with regard to energy labelling indicating the energy consumption of air conditioners. 3. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 675. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 675 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.

TOTAL HEAT EXCHANGER

ENERGY RECOVERY DURING HEAT EXCHANGE INSIDE THE ROOMS

TOTAL HEAT EXCHANGER

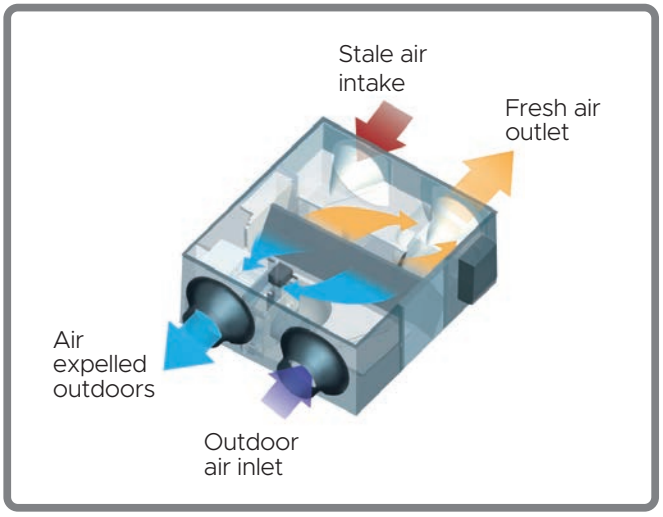
ETIN 805~2005

- 4 capacities: 800~2000 m3/h
- DC Inverter fan.
- Mandatory wire controller

Ventilation units with heat recovery are suited for use in bars, restaurants, offices, gyms, changing rooms where air needs to be exchanged during hours of operation.

The unit consists of two centrifugal fans: one introduces clean air filtered from outside an the other one expels the stale air from the inside. The two air flows go through a blade heat exchanger, in which part of the heat is recovered.

Depending on the season, the indoor air heats or cools the outdoor air, which is introduced without coming into contact with it.



Model			ETIN 805	ETIN 1005	ETIN 1505	ETIN 2005
Exchange efficiency[1]	Enthalpy	%	72.3	76.0	69.4	74.7
	Thermal	%	78.7	82.8	75.5	77.2
Electrical data						
Power supply		Ph-V-Hz	1~220~240~50			
Power absorption		W	320	380	680	950
Rated absorbed current		A	2.40	2.90	3.80	5.70
Product specifications						
External dimensions	DxLxH	mm	1311x1286x390	1311x1526x390	1740x1425x615	1811x1625x685
Net weight		Kg	80	90	181.5	208.5
Sound power level	Hi	dB(A)	55	54	69	70
Treated air volume		m3/h	800	1000	1500	2000
Fan static pressure	Hi	Pa	140	160	180	200
Ducting flange		mm	ø244	ø244	346x326	346x326
Condensate drain pipe			Not required		Necessary	
Operating range (max UR 80%)		°C	-7~43			
Degree of protection			IPX2			
Accessories						
Wired control (not included)			DTW EH5			

Reference legislation: EU Ecodesign Directive 1253/2014 for non-residential ventilation units (NRVU) and residential ventilation (RVU).
1. Values related to the high speed of the 3 levels settable by wired remote control.

Due to the continuous technological evolution of our products, we reserve the right to vary the technical specifications within this catalogue at any time and without prior notice. The hydraulic diagrams shown are only examples and do not replace the system design.

CATALOGUE PRODUCTS TERMAL 2026

HOT WATER R290 - R454C
HEATERS ONSEN | ONLY IN
TOTAL HEAT EXCHANGER

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06-2026