



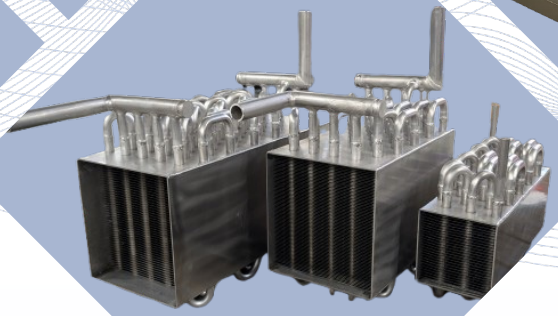

Specialist for heat recovery

Save energy costs, conserve resources

We are WätaS

Thermal solutions. A perfect fit. Powerful.

Since its foundation, **WätaS Wärmetauscher Sachsen GmbH** has stood for customised solutions in the field of **heat transfer and heat recovery**. As an owner-managed company based in Olbernhau, Saxony, we develop and manufacture high-quality components and systems that are precisely tailored to our customers‘ requirements.

Our focus is on the development of innovative **heat exchanger technologies** for a wide range of applications - from compact air-to-air plate heat exchangers, smooth tube and gas cooler solutions to multi-circuit evaporators and customised stainless steel products. Our systems are used wherever **efficiency, reliability and thermodynamic** precision are required - in industry, in building technology or for customised special solutions.

Production is **„Made in Germany“** according to the principles of **lean production** - efficient, flexible and with clear quality standards. Thanks to our in-house development, in-house testing and decades of experience, we support our customers from the initial idea through to series production - with expertise, commitment and technical excellence.

WätaS - your partner for pioneering heating solutions.



Our Statement

„For us, energy efficiency means optimizing heat generation and energy consumption in line with demand at the right place, at the right time at the right time in the necessary temperature level - only when it is actually needed.“

Our history

Innovation grows from experience

Every idea needs a beginning - and every innovation needs a clear vision. This is what makes us a leading manufacturer of heat exchangers today.

2003—2008: Foundation and first expansion steps

WätaS began in May 2003 as a start-up with 10 employees in Pobershau in the Ore Mountains. The early focus is on energy-efficient heat exchanger solutions and customer-specific production. In 2004, an investment grant enables the purchase of modern machinery - a key lever for scaling up from start-up to industrial production.



2009—2013: Relocation and capacity expansion in the Ore Mountains

In 2009, WätaS relocates production to Olbernhau, which has served as its headquarters ever since. In 2011, production there is expanded to 7,500 m². During these years, the company has sharpened its profile as a specialist in heat recovery and energy-efficient heating systems - with a growing team and machinery.

2015—2019: Entry into fuel cells & strategic acquisitions

Development of own fuel cell components begins in 2015. 2019 marks two milestones: Firstly, the take-over of SAF-Manufaktur in Leipzig and secondly, the founding/change of name of WätaS Fuel Cell Saxony GmbH in Leipzig. At the same time, a new 1,400 m² production hall is built at the headquarters.



2020—2023: Automation, Product range & own panel WT production

The 2020s are characterised by digitalisation and automation, as well as the expansion of the in-house product world: finned heat exchangers, heat pipes and low-temperature heating systems. In 2022/23, WätaS puts its own, fully automated production facility for air-to-air plate heat exchangers into operation.



2024—Today: Portfolio expansion & series start-ups

Series production of low-temperature radiators starts in 2024; WätaS publishes new technical documentation and data sheets. At the same time, the company strengthens its delivery capability by acquiring a machine park (Walter Nuding Wärmetauscher GmbH) and expands its site base in Olbernhau with a second location for further growth in logistical proximity to the main plant.

Rooted in Saxony
Connected through technology

At our three locations in Saxony, we combine deeply rooted regional strength with the ambition to set technological standards. Each location contributes to our joint success with its own expertise - characterised by a tradition of technical excellence and inspired by pioneering developments.

WätaS stands for technology that is rooted in the region and at the same time fulfils the highest international requirements.



Olbernhau - Werk I

Since 2009: Headquarters of WätaS Wärmetauscher Sachsen GmbH

Olbernhau - Werk II

Since 2024: Location of WätaS Wärmetauscher Sachsen GmbH





Leipzig

Since 2019: Headquarters of WätaS SAF GmbH and Fuel Cell Saxony GmbH

WÄTAS® SAF

FUEL CELL® SAXONY

Our strengths
What makes WätaS special

WätaS stands for **customised heat exchangers** that are consistently geared to the requirements of our customers. Our most important **unique selling points** at a glance:



» **Customised design:**
Each product is precisely matched to the thermal requirements and the structural conditions.

» **In-house development & production:**
From the idea to series production - everything from one from a single source, completely „Made in Germany“.

» **From one-offs to series production:**
Whether customised or large order - we manufacture flexible and scalable according to as required.

» **High vertical range of manufacture:**
Precise production, short short distances, maximum control even for small batches or special designs.

» **Broad product range:**
From the air-to-air plate heat exchanger to the finned heat exchangers through to special solutions for industry, building services engineering or regenerative applications in numerous material combinatons.

» **Technical expertise:**
Decades of experience, combined with modern design, production and manufacturing technologies and testing technologies.

Sustainability

Responsibility that makes an impact

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At WätaS, sustainability is not a trend, but a conviction. As a developer and manufacturer of energy-efficient heat exchanger systems, we make an active contribution to climate protection every day - through our products as well as our processes.

Our **heat exchanger solutions** enable effective recovery and utilisation of heat and cold, lower energy losses and reduce emissions in industrial and building services applications.



We also think sustainably about our production:

» Our own solar power covers a large part of our energy requirements.

» Hydrogen instead of fossil gases reduced in soldering processes CO_2 emissions and improves soldering quality.

» A parabolic reflector concentrates solar heat for thermal processes.

» In our plants we rely on **heat pumps** and **pellet stoves** for heating.

» All rooms and halls are equipped with **low-temperature radiators** and **low-temperature baseboard heaters** and heat with low flow temperatures (35°C) and high efficiency.

» Our electric vehicles are charged with solar power - in collaboration with a climate-friendly logistics partner.





In addition, **drinking water treatment**, r**ecycling-friendly product design** and **economical use of raw materials** ensure a consistently sustainable approach.

As a **long-standing member of the Saxony Environmental Alliance**, we are committed to voluntary, corporate environmental protection and are actively helping to shape a responsible future.

WätaS combines **innovation with responsibility** - for energy-efficient solutions and a future worth living.

Certified trust

Quality you can build on

At WätaS, quality is not just a focus - it is certified and measurable. Our products fulfil the highest technical standards and are regularly tested in accordance with international guidelines. This allows us to offer our customers safety, efficiency and reliability in every step of the collaboration.

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Our key certifications at a glance:

» **ISO 9001:2015**
Efficient quality management for all processes

» **EN ISO 3834-2**
Certified welding technology at the highest level

» **Pressure equipment test according to 2014/68/EU (Modul A2) and AD 2000**
Tested safety for sensitive areas of application

» **BV Mode II / RINA / Lloyds possible**
Shipbuilding approval - certified quality for maritime applications

» **Commercial energy passport 2019**
Documented energy efficiency in the company

» **Leakage classification for ventilation heat exchangers**
Tested tightness for maximum energy efficiency

» **Anerkannter Praxispartner der Berufsakademie Sachsen**
Commitment to training and innovation





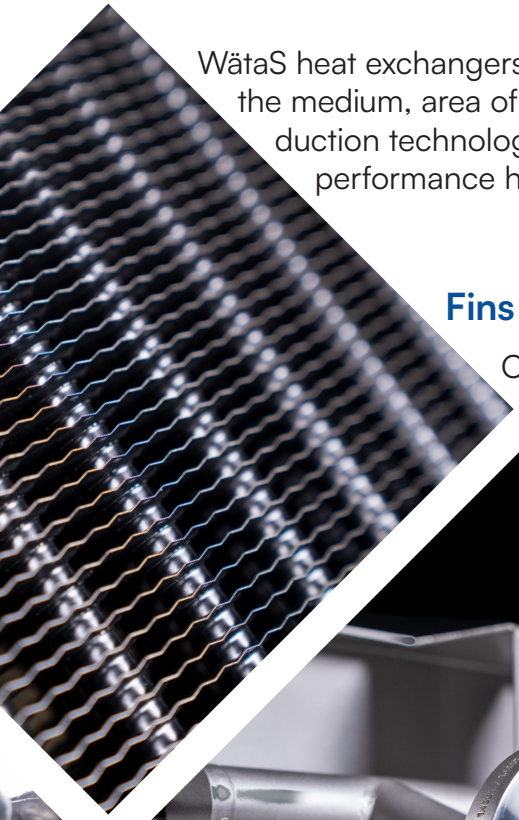








Variety of materials for the highest demands



WätaS heat exchangers stand for maximum flexibility in the choice of materials - tailored to the medium, area of application and thermal requirements. Thanks to our variable production technology, we offer customised material combinations for durable and high-performance heat exchanger systems.

Fins

Our high-performance fins are manufactured in corrugated form from **Aluminium - AlMg3 - coated aluminium - copper - steel - CuNi** or **stainless steel** - for maximum heat transfer and a stable connection.



Core tubes

Depending on the application, core tubes are made from **Copper - Steel - Aluminium - CuNi** or **Stainless steel** are used. They are firmly connected to the fins by mechanical expansion and ensure reliable heat transfer.

Manifolds & distributors

Collector pipes made of **Copper - Steel - Aluminium - CuNi** or **Stainless steel** are available with individual connection types such as soldered ends, threaded nuts or flanges. Venturi distributors made of **Brass** or **Stainless steel** - depending on the installation position - ensure precise refrigerant distribution in multi-circuit systems and guarantee reliable heat transfer.

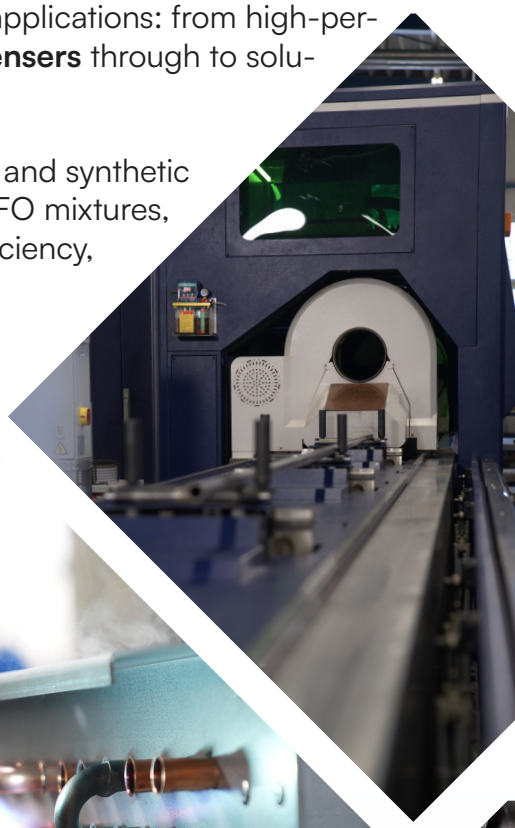
Frame construction

Our frames are made of either **Aluminium - Copper - galvanised steel - CuNi** or **stainless steel**. In addition to the standard U-frame, customised special frames are also possible, as are insulated housings and gas-tight versions.

Technical operating limits & options

Our heat exchangers are extremely flexible - they are designed for a wide variety of media such as **oils, water, steam, refrigerants** and **air and cover** a broad range of applications: from high-performance **coolers** to efficient **heaters, direct evaporators** and **condensers** through to solutions for demanding **superheated steam** processes.

We process all thermal oils used on the market as well as both natural and synthetic refrigerants. Whether ammonia, CO_2, propane or modern HFC and HFO mixtures, or other refrigerants - our designs are tailored to ensure maximum efficiency, safety and durability in a wide range of applications.



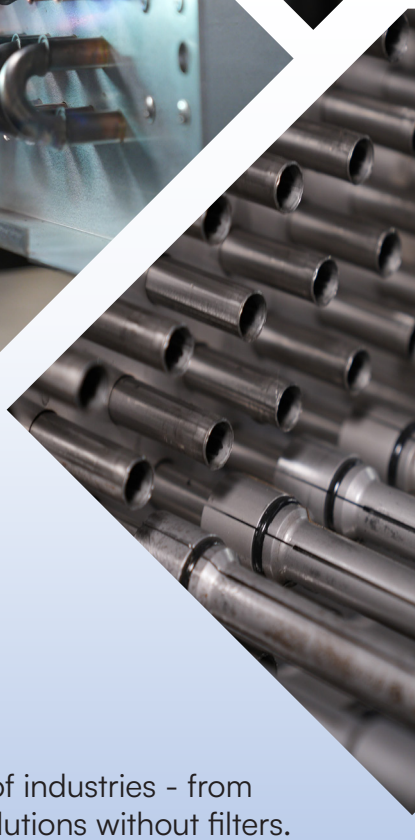
Permissible operating conditions:

» **Thermal oil operation: up to 350 °C, 16 bar**
(special solutions up to 400 °C)
» **Steam operation: up to 65 bar**
» **Refrigerants** (evaporators & condensers):
up to 65 bar
» **Special pressures: up to 90 bar**
(for stainless steel)



Surface finishing & protective coatings

WätaS offers a wide range of **coating options** to optimise performance, durability and hygiene:



Possible coatings:

» **Powder coating**
» **Tin plating**
» **Galvanisation**
» **Paintwork, dip coating**
» **Hydrophilic coating: improves the defrosting behaviour considerably**
» **Nano coating: lotus effect for less dirt adhesion, improved dehumidification and dew point shift of up to 3 K**

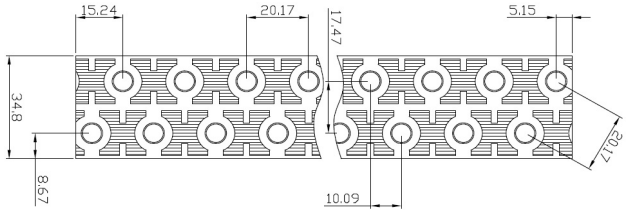
This diversity makes our heat exchangers the ideal solution for a wide range of industries - from heat pumps and refrigeration systems to machine cooling and customised solutions without filters.

Fin geometries

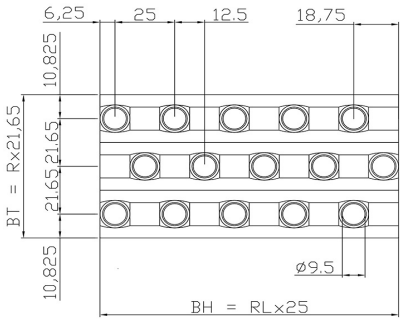
Efficiency begins in the detail

The performance of a heat exchanger is largely determined by the design of its fin structure. WätaS focuses on precision and variety here: with **eight different fin geometries**, matched to core **tube diameters from 6 mm to 15 mm**, we enable optimum adaptation to thermal requirements, flow conditions and installation situations.

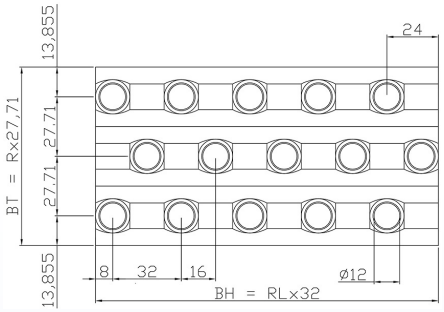
Geometry 20 x 17; tube diameter 6 mm



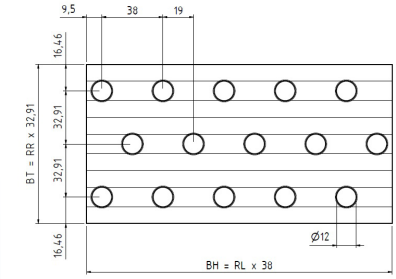
Geometry 25 x 22; tube diameter 9.5 mm



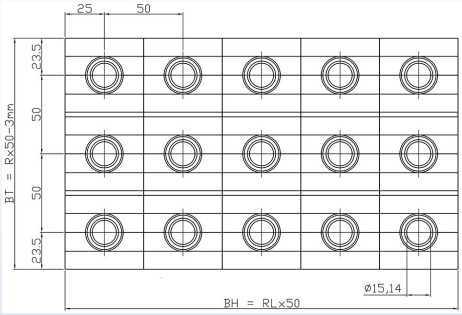
Geometry 32 x 28; tube diameter 12 mm



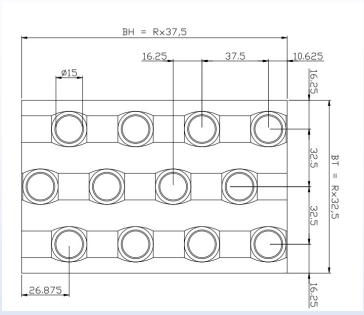
Geometry 38 x 33; tube diameter 12 mm



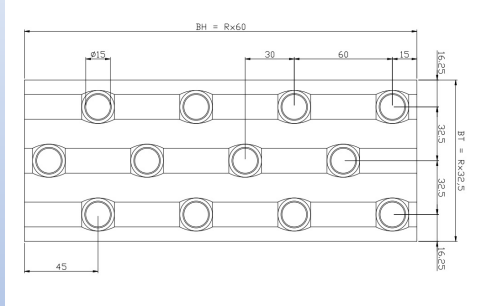
Geometry 50 x 50; tube diameter 15 mm



Geometry 37.5 x 32.5; tube diameter 15 mm



Geometry 60 x 32.5; tube diameter 15 mm



Diversity in use

Our heat exchanger solutions at a glance

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WätaS offers a wide range of heat exchanger types to meet the most diverse requirements.



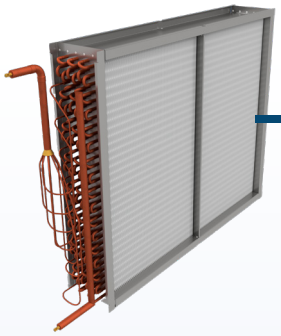
Air cooler

Use of glycol down to -50°C
Standard test pressure: 16 bar



Air heater

Version as vapour coil possible
Use of thermal oil > 180°C possible
Standard test pressure: 16 bar (option 120 bar)



Direct vaporiser

Direct evaporation of all approved and natural refrigerants



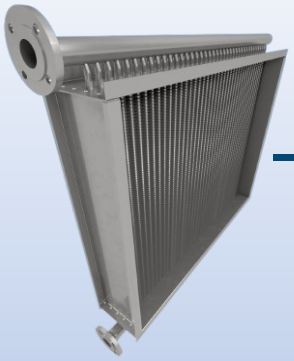
Capacitors

Condensation of various
Standard test pressures: 30 bar (option 120 bar)



Recooler

For thermal oils and coolants up to 400 °C



Superheated

In stainless steel or galvanised steel for sustainable and efficiency-enhancing technology

Special heat exchanger

Solutions beyond the standard in series production

In addition to classic heat exchanger designs, WätaS offers a wide range of **special solutions** that are specifically developed for demanding installation situations, special media or increased requirements in terms of efficiency, hygiene or geometry. These special designs expand the range of applications for our technology - customised and precisely tailored.



Gas cooler

» Application Material types Stainless steels 1.4301, 1.4404
» Extraction of temperature from exhaust gas flow and generation hot water or thermal oil
» Utilisation of high waste heat temperatures up to approx. 600°C possible
» Cleanable via inspection openings / design with bypass possible



Smooth tube heat exchanger

» Enable contaminated media to recover heat or to transport them to certain temperature levels
» Different pipe diameters allow a customised specific design
» Easily accessible -> quick and effective cleaning
» Thermodynamically interconnected in counterflow



Multi-circuit heat exchanger

» Customised design and construction possible
» Condenser & direct evaporator: circuits interlocked / separated
» Coolers & heaters: Zones can be produced
» Reverse circuit for cooling and heating (heat pump circuit)



Curved and round heat exchangers

» Optimum efficiency and therefore the highest possible customer benefit
» 1 to 4 rows of pipes available in copper or stainless steel
» Round duct installation, thereby increasing the surface area to smallest space



Heatpipe

» Maintenance-free heat recovery via phase change without direct media contact
» Features: media-separated, maintenance-free, ideal for large temperature differences
» Temperature up to 145 °C (optional 260 °C)
» Also in stainless steel

Heat recovery with a system

Air-to-air plate heat exchanger

WätaS air-to-air plate heat exchangers made of **Aluminium** or **Stainless steel** enable reliable and energy-efficient heat recovery in ventilation systems. Using the **cross-flow or counter-flow principle**, the energy from the exhaust air is utilised to effectively preheat the incoming fresh air - without any moving parts or external energy supply.

With **efficiencies of up to 92 %**, our systems make a decisive contribution to reducing energy requirements and optimising the indoor climate - ideal for trade, industry and building technology.

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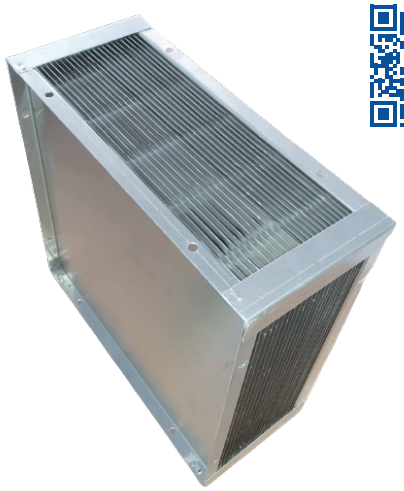

Fields of application

» Residential ventilation
» Ventilation and air conditioning technology
» Drying technology
» Paper industry, paint shops
» Laundry
» Combined heat and power plant
» Industrial ovens

Advantages

» **Highest quality**
» **Low costs**
» **Large quantities**
» **Best price / performance ratio**
» **Heat and cold recovery**
» **In stainless steel for higher temperatures available**



Oval tube heat exchanger

» **Large increase in area in the compared to the round tube**
» **For easy maintenance and cleaning suitable**

Features

» Temperatures: -40 to 600°C
» Pressure loss: 20 to 200 Pa
» Efficiency 60 to 92 %
» No moving parts
» No pumps required
» No separate fans required
» Integrated bypass possible
» Hygienic separation of extract air and supply air
» Application-specific materials can be selected
» Silent operation
» Maintenance-free

WätaS building services

Efficient systems for sustainable building energy

WätaS offers a sophisticated overall system for modern, sustainable building technology - perfectly harmonised and meeting the requirements of contemporary new builds and energy-efficient renovations. The combination of **heat pump, low-temperature radiator, domestic hot water heat pump (Aquaheater), geothermal coil** and **buffer cylinder** enables maximum energy efficiency with maximum living comfort.

Buffer storage tank - Lightweight, robust, powerful connection

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GRP cylinder with a volume of 740 litres for efficient heat storage.

» Up to 90 °C Temperature resistance
» Maximum pressure: 10 bar
» Low weight (100 kg), easy integration
» Perfect for hydraulic decoupling and system buffering
» Possible for hot and cold water (utilisation of the heat pump for cooling)
» Numerous integration options for heat exchangers and heating elements

Low-temperature radiators

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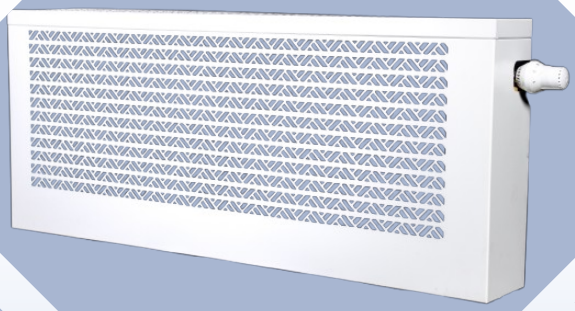

Optimised for heat pump operation from 30 °C.

» High performance thanks to integrated, low-noise fans
» Smart home compatible, low maintenance
» Available in five lengths: 600, 800, 1000, 1200, 1500 mm
» Alternative to underfloor heating - ideal for renovation and new builds
» Special dimensions possible

Earth spiral - geothermal energy in the smallest space



Stainless steel geothermal heat exchanger, space-saving and efficient - without deep drilling.

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» Up to 80 % cheaper than classic geothermal solutions
» For heating and cooling
» Regenerable and quick to install

Aquaheater - Domestic hot water heat pump

Compact appliance for water heating with ambient air as the energy source.

» Up to 75 % energy savings
» Nominal output: 1.5 kW + 1.5 kW additional heater
» Water temperature up to 65 °C
» Whisper quiet
» Smart LCD control

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Low-temperature baseboard heater

Low flow temperature and maximum energy efficiency through:

» For indoor installation in industrial halls and large rooms
» Length x height x depth in mm: 2340 x 370 x 150 (special dimensions on request)
» Housing colours (standard: RAL 5017 blue or RAL 7016 anthracite, special colours on request)
» Passive (without fan) or active (with fan) available
» Passive: 35 °C Flow: 140-655 W (depending on room temperature)
» Active: 35 °C Flow: 1330-1930 W (depending on room temperature)



Propane air-to-water heat pump

Efficient heating technology that utilises environmental heat - ideal for low flow temperatures and can be combined with buf- fer storage tanks and low-temperature radiators.

» Eligible, low-maintenance, low-emission
» In two power variants: 13 kW and 20 kW
» Perfect for modern building and renovation concepts
» Highest possible subsidy, thanks to the use of natural refrigerants

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Enquire now

Your personalised offer from WätaS

Whether heat exchangers, heat recovery, heating technology or complete solutions for modern energy applications - we provide you with customised and expert advice. Together we will find the right solution for your requirements.

Scan the QR code to get in touch with us directly. directly. Fast, uncomplicated and personal.

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