–weishaupt–

info

Information on Weishaupt products

Burners | Heating systems | Solar technology | Heat pumps | Building Management Systems

Reliability

From the Zugspitze to luxury cruise ships to China's Hall of the People – burners, heating and condensing systems, heat pumps, solar systems and building management systems from Weishaupt can be found everywhere.

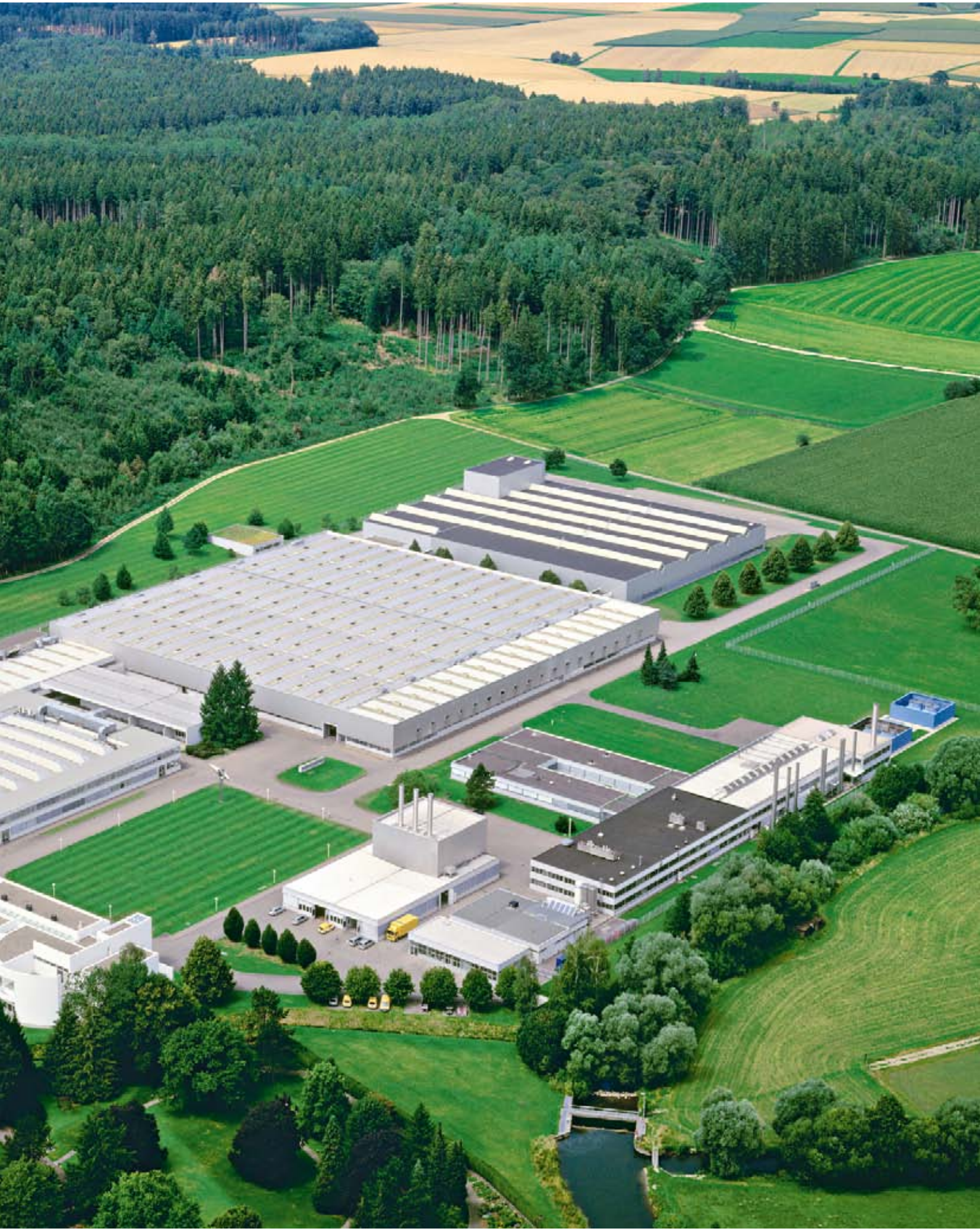
Reliability, precision work and service are the characteristics of the family owned technology company, founded by Max Weishaupt in Schwendi, Southern Germany in 1932, which is represented by branch offices and daughter companies in sixty countries.
The production facility for small, medium and large, industrial burners and for control panels is located in Schwendi. Pyropac AG, part of the Weishaupt group of companies, located in Sennwald, Switzerland produces heating and condensing systems.

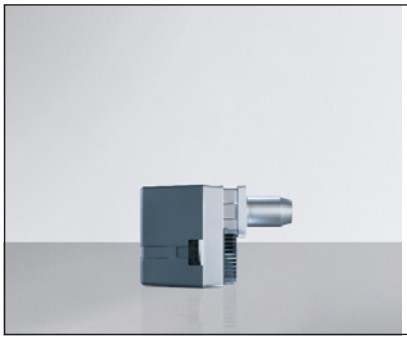
With the company "Neuberger Building Management" in Rothenburg ob der Tauber, the whole spectrum of modern building management can be covered. BauGrund Süd GmbH, another member of the Weishaupt group, is one of the leading drilling companies in Europe and provides geothermal and well drillings for heat pump systems. Continuous work on new developments and on optimising existing Weishaupt products has been carried out in the company's own Research and Development Institute at the head office since 1962. Weishaupt's motivation is driven by technical advances, which continue to set standards in the industry.

A willingness to invest provides the necessary head start in a tough, competitive environment. So in recent years, many millions of Euros have been invested in new products and in the expansion of the production facility. Meticulous product control and prompt professional service ensure Weishaupt's well known reliability.

The full Weishaupt Programme includes:
- Small, medium and industrial burners
- Condensing systems for oil and gas
- Energy storage
- Domestic water heaters
- Solar systems
- Heat pumps and associated geothermal and well systems
- Building Management Systems

Administration, burner production, control panel production and research at the head office in Schwendi.





Burners

For decades, burners with the Weishaupt trademark have been synonymous with reliability and economical use of liquid and gaseous fuels.

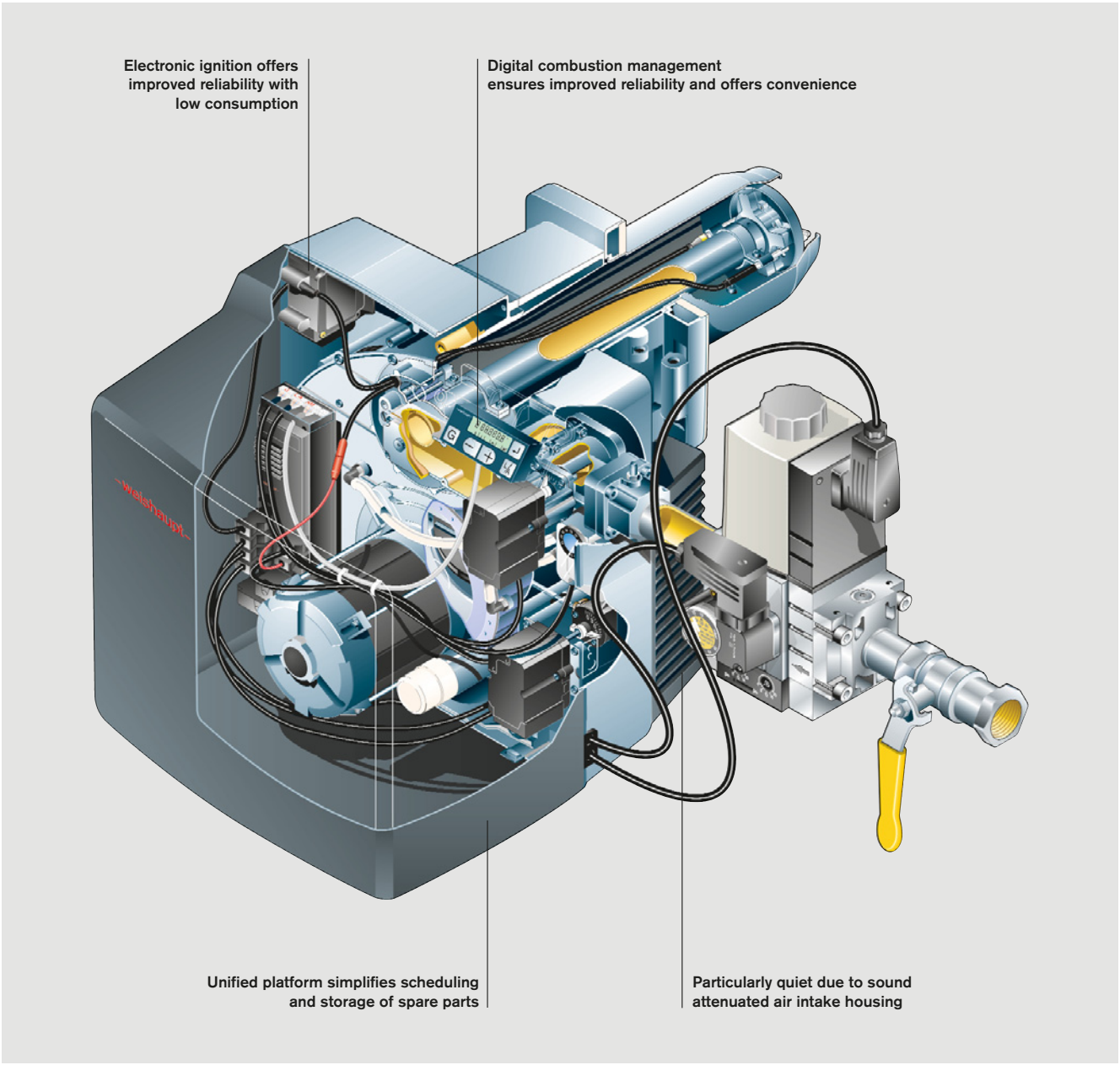
With a wide spectrum of ratings, starting with just a few kilowatts up to many megawatts, Weishaupt burners are used in a variety of different applications.

Weishaupt continually sets new standards with constant further developments in the company's own Research and Development Institute. Low pollutant combustion achieved using multiflam technology, and digital combustion management are just two of many examples of Weishaupt's strength in innovation and the associated quality of Weishaupt products.

All burners are manufactured at the head office in Schwendi. The ultra-modern production plant is a showpiece not only in terms of safety, precision and cleanliness – it also allows fast production of medium and large, industrial burners, which are almost always made to individual customer specification. This is partly due to the high level of in-house manufactured parts, which not only ensures that high quality standards are met, but also allows prompt production of special equipment.

The new monarch burner combines sophisticated high technology with functional design.

Burner series W:
proven a million times over.



All components of W burners are bought together in a compact unit.
The components for fuel/air regulation are clearly laid out and easily accessible.

The ratings spectrum of the W burner series starts at 12 kW and ranges up to 570 kW.

The success of Weishaupt's compact W series, is the result of uncompromising quality and customer focus. Millions of W burners are providing reliable and economical service in homes for central heating and domestic water heating as well as for process plants.

The burners, with an output of up to 570 kW, are not only very compact but are also equipped with the latest Weishaupt burner technology.
The standard use of digital combustion management maximises reliability and efficiency through microprocessor-based monitoring and control of all functions.

Due to the digitalisation of the burner, integration into a building management system, control via computer system and remote monitoring and diagnostic are possible via modem.

The diversity of applications, well thought out design and reliability of the burners have contributed to the exemplary success of the W series.

One example of improvements in technology for the W series is the purflam burner, which was developed in Weishaupt's research and development institute. With its special mixing head, the purflam burner combusts the oil virtually soot free and with very low emissions by first converting the fuel into a gaseous condition.

These and other advances in development form the basis for ever more economical and reliable heat generation.

W burners operate fully automatic. The digital combustion management ensures the burners precisely follow the predetermined sequence of operation and controls the fuel/air ratio.

monarch® burners:
clean design with maximum functionality

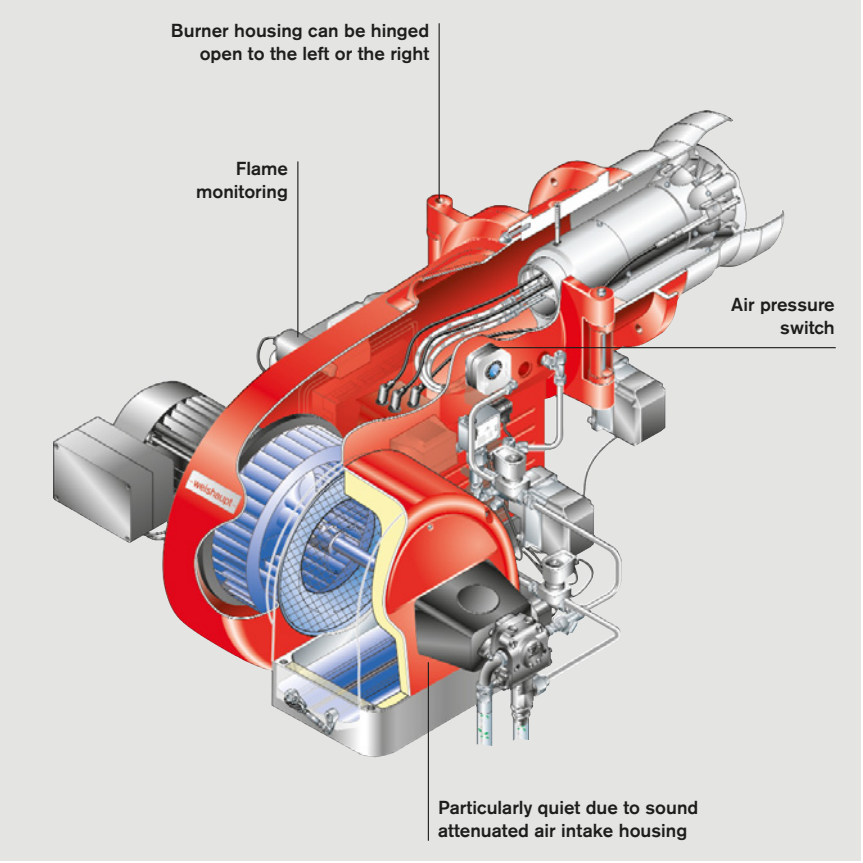
All ratings sizes of the new monarch burners combine high technology with functional design.

No marque has been with Weishaupt for longer or been more iconic: "Monarch" has always stood for low emissions, robust technology and reliable operation.

The current series of Weishaupt WM monarch burner embodies these virtues with modern technology and outstanding design. The oil, gas and dual fuel burners operate on heating, steam and high-efficiency boilers and air heaters and are not only reliable and economical, but also extremely quiet. A completely new air flow geometry was developed in Weishaupt's own aerodynamic test facility - unique in the industry - which allows a hitherto never achieved quiet and efficient operation.

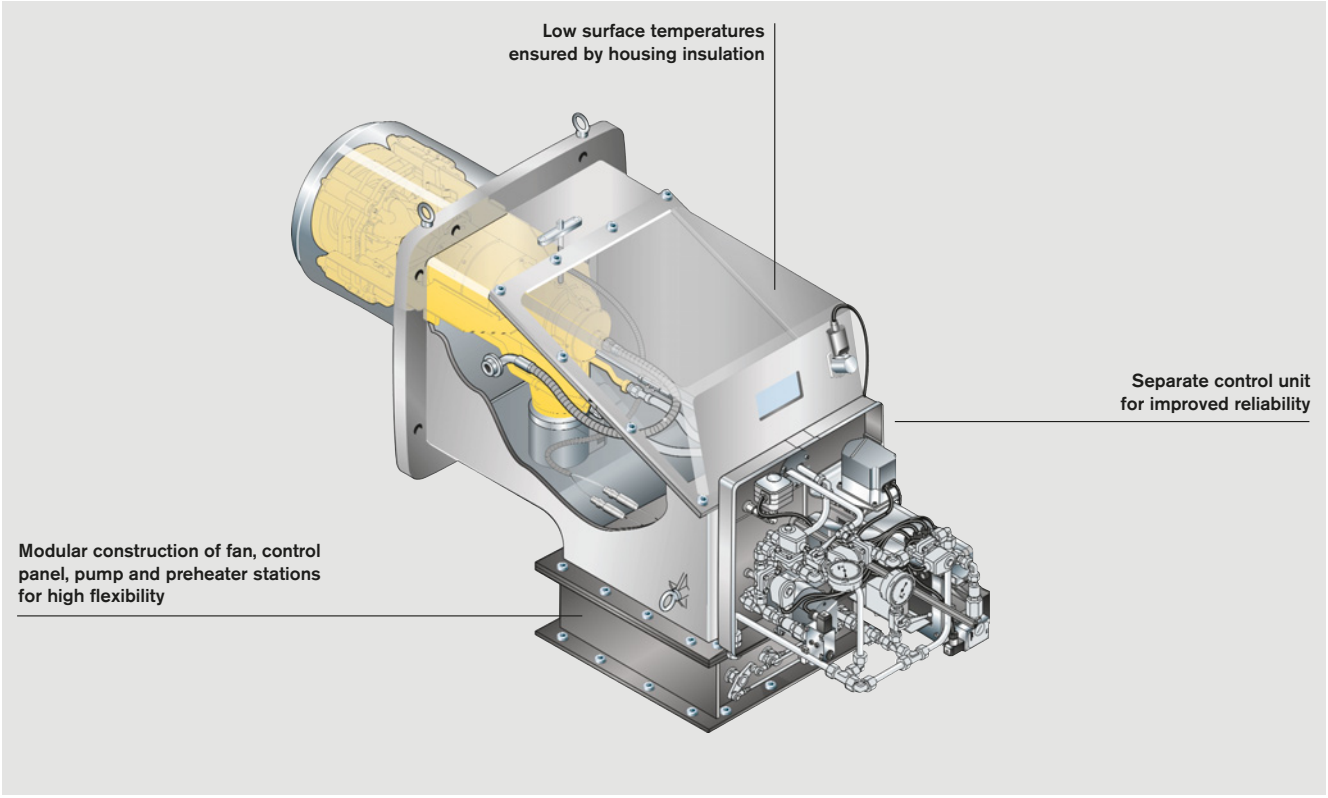
The standard integration of the digital Weishaupt combustion management into the new monarch burners ensures constant, low emission combustion. The digitalisation of the burner also enables the integration of control into BMS networks and Bus systems, making control fully automatic.

The burners can also be equipped with speed control and O_2 trim to further increase efficiency. Flexibility, which pays. Weishaupt's monarch WM burner range offers a complete programme for ratings up to 5,700 kW where efficiency, low emissions and reliable operation are a must – all this together with nationwide and worldwide Weishaupt service.



WK burners for industrial applications: power-packs in modular design.

The WK 80 is at the top of the ratings range for Weishaupt industrial burners.



WK burners can easily be adapted to various plant conditions - even under the harshest conditions.

The WK burner range contains the most powerful and largest Weishaupt burners. Their modular design and large ratings spectrum makes them particularly suitable for industrial applications. The separation of the various components such as fan, control panel, pump station, etc. provides maximum efficiency and flexibility for various applications. Due to the modular design, these burners can be used for combustion air temperatures up to 250° C.

This flexibility, coupled with technical advantages such as digital combustion management, speed control and O_2 trim, as well as multiflam technology make the WK burners a force to be reckoned with in the industrial burner market.

Another unique feature is the test bed used to type test Weishaupt's industrial burners. This test bed makes it possible to supply type tested burners of sizes beyond the 20 MW limit, thus making them "ready to use".

It does not matter which type of fuel is available. The Weishaupt WK burner can be operated with various oils and gases depending on the version selected.

Of course, the WK burner is fitted as standard with all Weishaupt virtues - economy, efficiency and reliability.

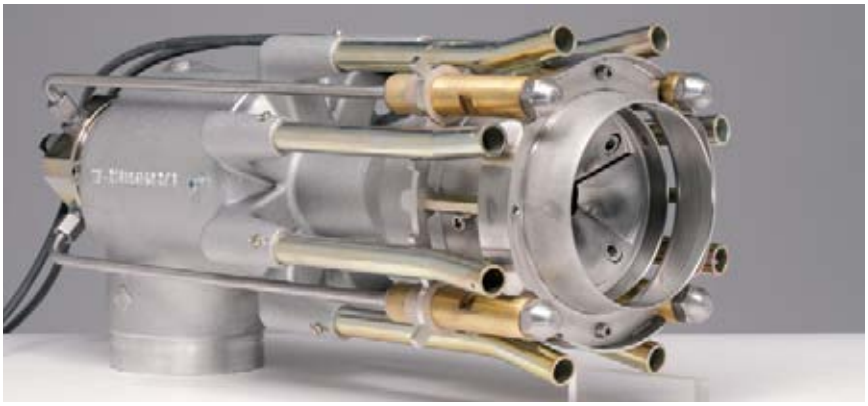
multiflam® principle: emission reduction as standard.

In 1999, Weishaupt made history with the introduction of multiflam technology into the market. Unprecedented low emission values stunned the industry. With the patented mixing head, Weishaupt was able to reduce the Nitrous Oxide emissions (NO_x) for medium and large burners to values normally only seen with compact burners. Weishaupt has set the standards with values below 120 mg/m³ for oil and 60 mg/m³ for gas, depending on the relevant combustion chamber geometry.

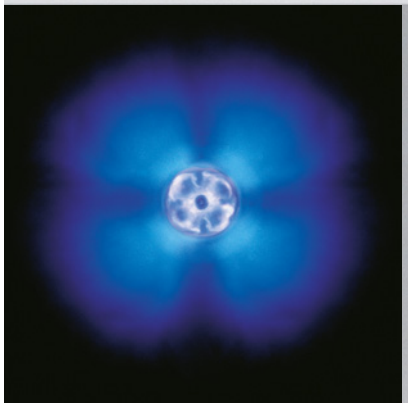
The multiflam burners therefore comply with the most stringent regulations worldwide and are leaders among industrial burners particularly in countries with strict environmental regulations such as Switzerland.

The core of multiflam technology is the special construction of the mixing head, in which the fuel is divided and its energy released to secondary and primary flames, making combustion more efficient then ever before. This is achieved by the recirculation of the combustion mixture directly in the mixing head.

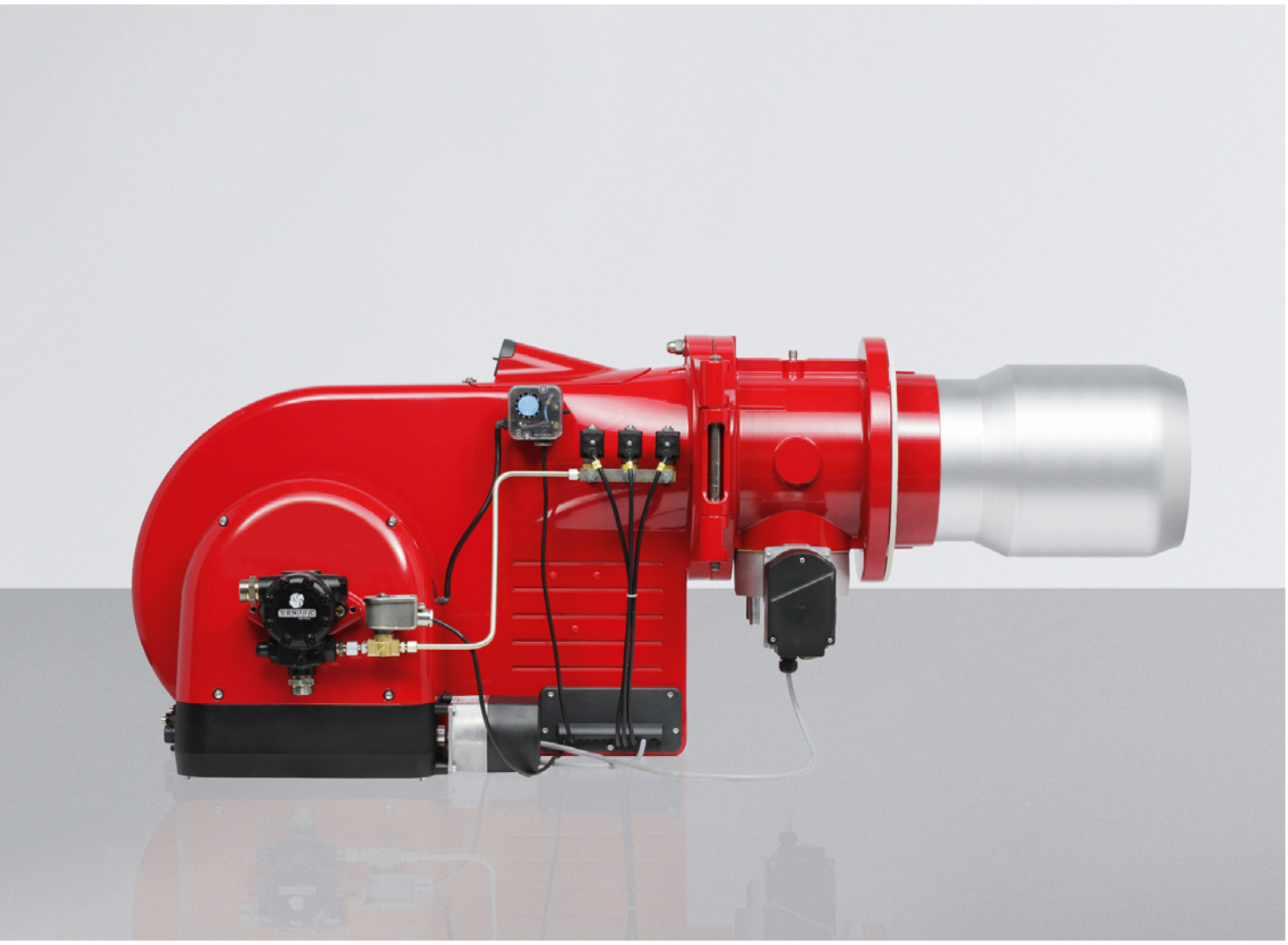
This technology is used with various burner ranges and ratings sizes. Starting with the Weishaupt monarch WM10 to the dual fuel burner WK 80, the largest of Weishaupt's industrial burners, multiflam technology ensures exemplary low emissions.



The multiflam mixing head can be recognised by its separate nozzles.



The special flame formation is generated by recirculation.



The new monarch WM burner range is also available in multiflam version.

Heating systems

Weishaupt heating systems are the answer to ever increasing demands for extremely economical domestic heating with very low emissions.

During the development of these systems, the external design played an important role. With the condensing units Thermo Condens – with a ratings range of 5 to 1,200 kW – Weishaupt was able to combine all the advantages of advanced technology with timeless design.

The use of traditional fuels, such as gas and oil, together with Weishaupt's condensing technology form a perfect combination if profitability and climate protection are at the forefront.

The high quality materials used to manufacture the Weishaupt units together with sophisticated system technology, such as digital control, are also of decisive importance.

Programmable fully automatic operation with optional remote control via a number of different media or by integration into a building management system are not unknown requirements for Weishaupt Thermo Condens units, but a promise already made to the demanding user.

The same applies to Weishaupt Service, which supports the trade with know-how and materials around the clock, seven days a week, throughout the year to ensure continuous and reliable operation.

The premix oil burner of the wall mounted oil condensing boiler WTC-OW generates the modulating heat via a homogeneous carpet of flame.

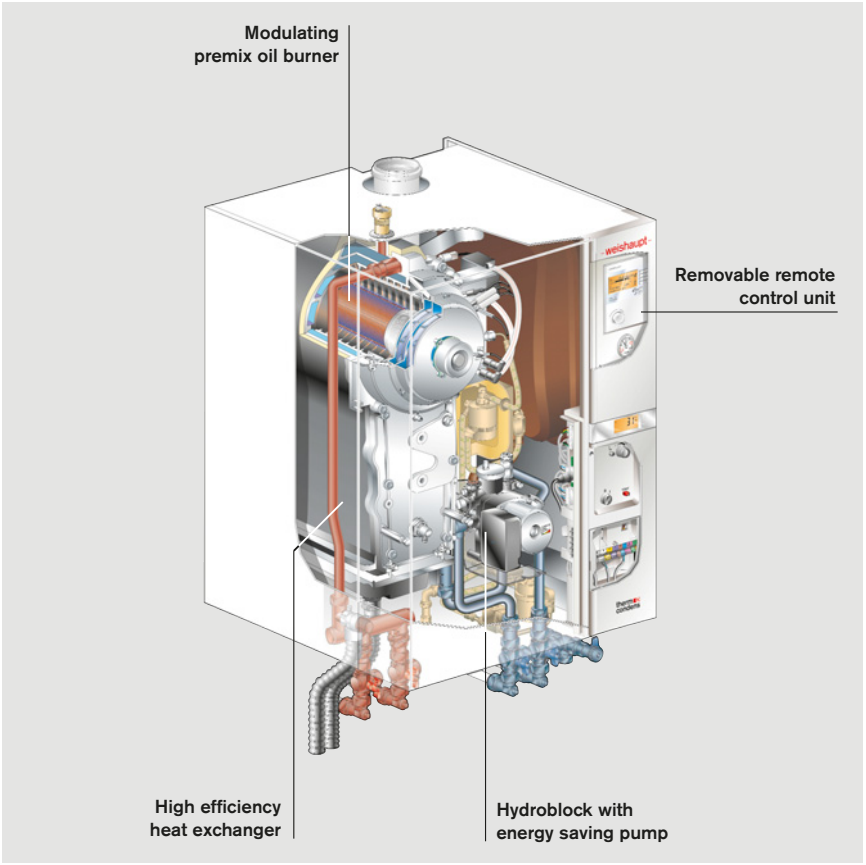
Oil condensing boiler WTC-OW: heating on demand.

The modulating oil condensing boiler represents environmentally friendly and economical heating technology.

Oil will continue to play a major role in heat generation in buildings. The economical and efficient use of this energy source is therefore important in many respects.

Environmentally friendly and economical heating with fuel oil on a new level has been achieved with the development of the Weishaupt Thermo Condens wall mounted oil boiler (WTC-OW) with ratings of 5.5 to 15 kW.

In addition to known condensing technology, which uses the latent heat in the flue gas, Weishaupt's condensing unit has the ability of modulating operation. Thus, not only a new heat exchanger made of aluminim / silicon was developed, which transfers the heat to the heating water, but the principle of complete combustion was totally revised.



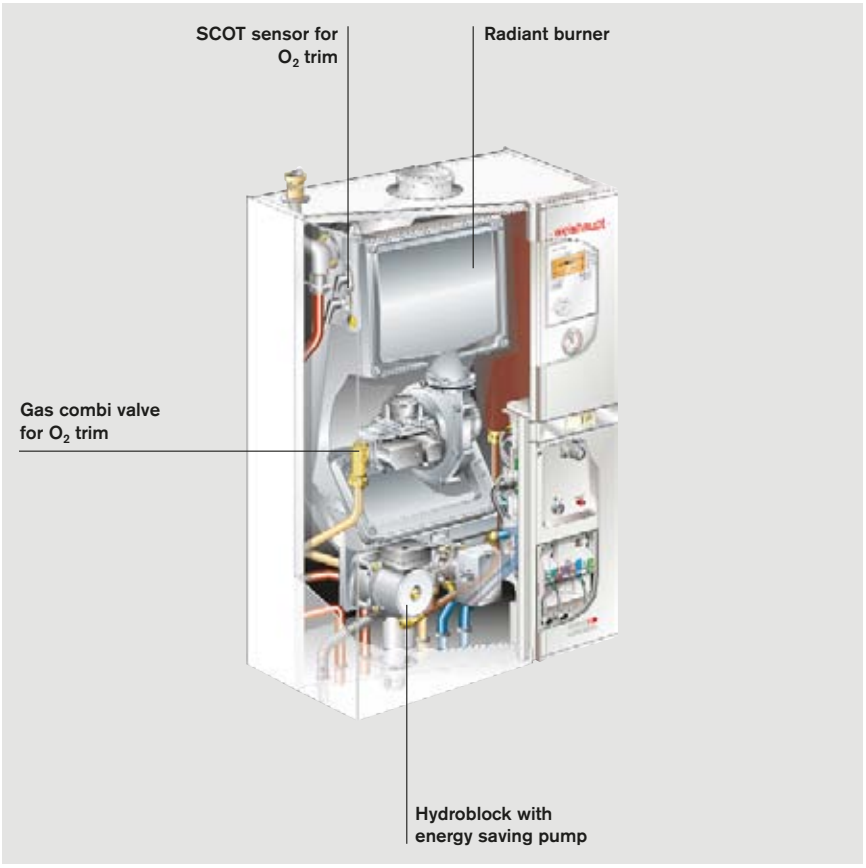
Modulating combustion makes it possible for the first time to exactly match the oil consumption to the heating system requirements. A special feature is the conversion of fuel oil into an almost gaseous condition, which allows precise metering of the fuel. Another advantage of this unique operation is the low noise level during combustion.

Never before has an oil heating system from Weishaupt been as efficient and convenient as today. The convenience is increased significantly by the digital control of the condensing unit. Control of the unit via the Internet, SMS status message to a mobile phone or even the integration into a building management system are no longer a rarity.

With the compact WTC-OW K unit Weishaupt offers a space-saving alternative. This unit incorporates a domestic water tank and thanks to its integral housing cover its design is very attractive.

At the heart of the wall mounted oil condensing boiler are the high efficiency heat exchanger and modulating premix oil burner.

Gas condensing boiler WTC-GW: convenient and reliable heat.



The separation of hydraulic and electrical components ensure reliable operation and simplified installation.

Gas is, not without reason, one of the most important fuels worldwide. The high energy content, the availability for generations to come, the fact that no storage is needed and the combustion is almost soot-free all emphasise the benefits.

The wall mounted condensing boiler Weishaupt Thermo Condens extends these benefits in many other ways. One of the most important is the standard use of O_2 trim (System SCOT), which ensures uniform combustion through constant monitoring even with fluctuating gas quality. The modern condensing boiler can respond to the characteristics of various types of fuel (natural gas, bio gas, sewage gas, etc.) autonomously.

This intelligent control combined with the high efficiency heat exchanger made of Aluminium/Silicone and the innovative radiant burner make the Weishaupt gas condensing boiler one of the most economical on the market.

The ratings range of 5 to 60 kW can be expanded by cascading several units. The wall mounted gas condensing boiler is also available in a compact version with tank. Here, all components are combined in one unit.

As a system provider Weishaupt offers a full range of accessories and components for virtually any situation, for example, hydraulic coupling, flue gas systems, etc.

Wall mounted gas condensing units are particularly compact and quiet.

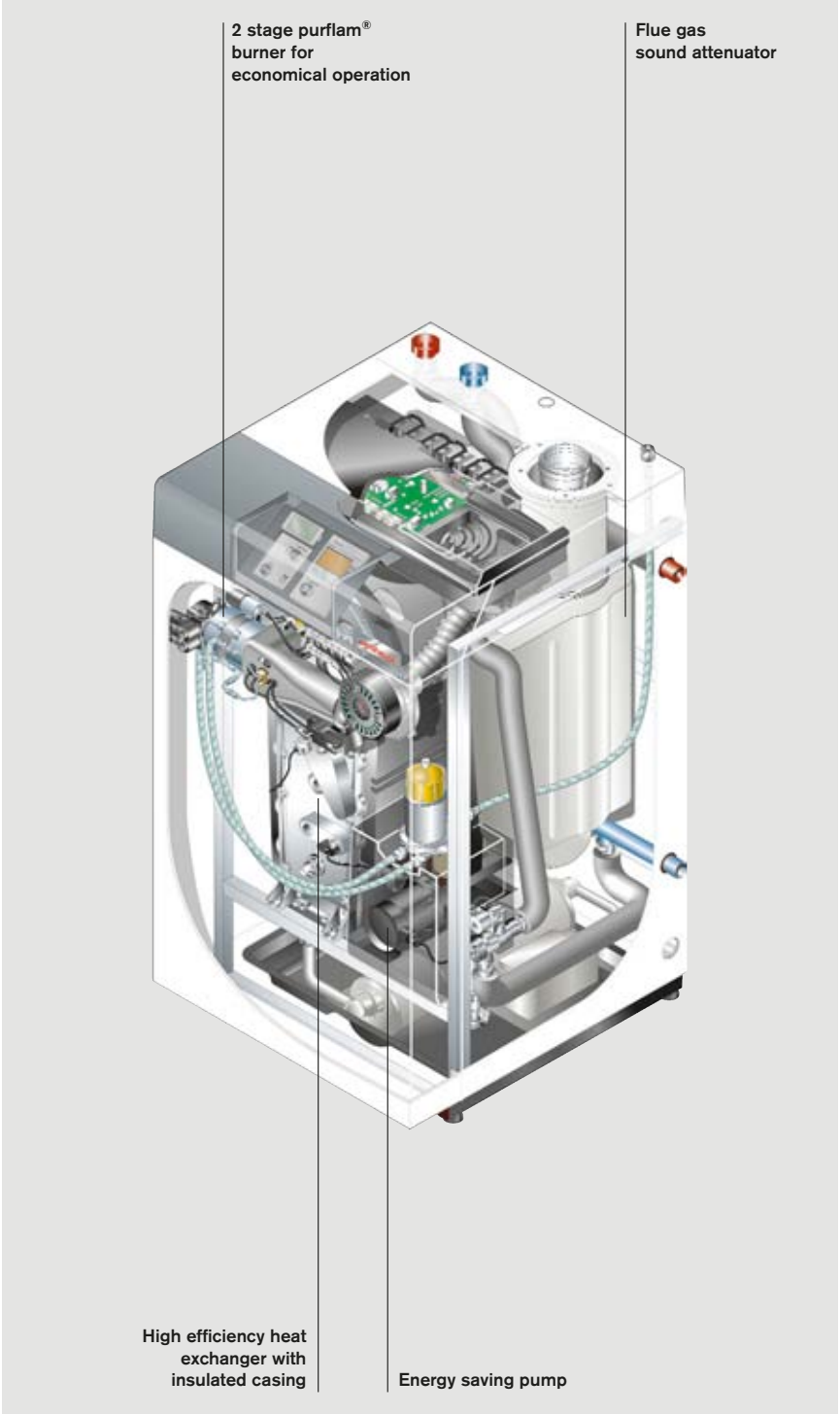

weishaupt

Oil condensing boiler WTC-OB: robust and economical.

The compact floor standing oil condensing boiler, WTC-OB, forms a seamless continuation of the wall mounted units. This new boiler generation makes it possible not only to adhere to emission regulations and rules but to exceed them. The exemplary efficiency of the WTC-OB is achieved with the new purflam burner in conjunction with the Weishaupt designed heat exchanger made from Aluminium/Silicone. High electrical efficiency is provided by a standby requirement of less than 4 W. Additionally, an optional energy saving high efficiency pump can be used.

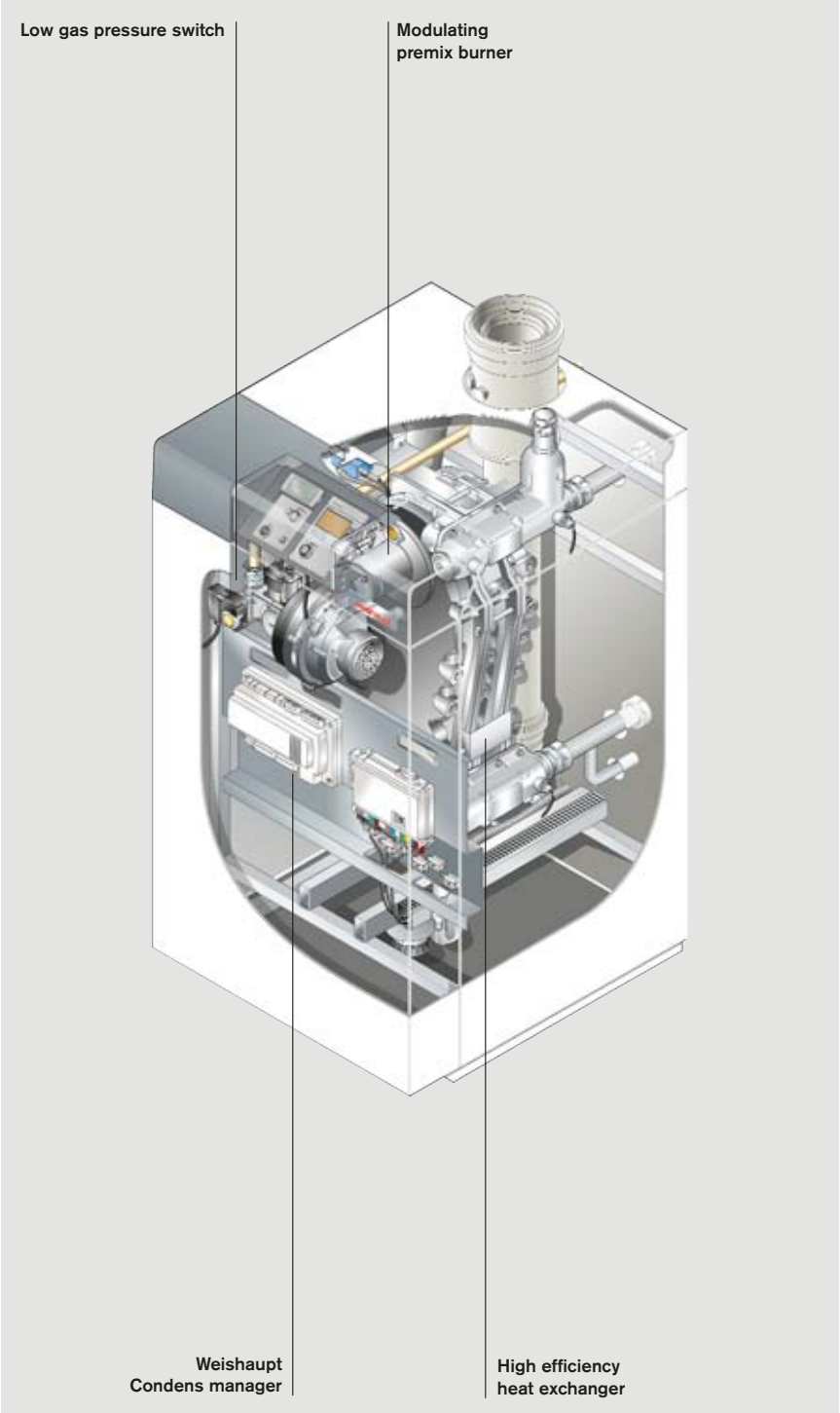
With the ability to use both low sulphur fuel oil as well as standard fuel oil or fuel oil with bio additives, the oil condensing boiler shows its high flexibility. This is supported by the modular control system, which is used with the WTC-OB. For example, the heating system can thus be monitored and controlled through various media via the communications module WCM-COM.

The integrated sound attenuation for flue gas and air intake, the standard supply of commissioning assistant software and the protected air shut off system which eliminates the possibility of fuel oil smells, are just some of the many characteristics of the Weishaupt oil condensing boiler, which make the system unique.



The purflam burner in conjunction with the high efficiency heat exchanger makes the floor standing oil condensing unit particularly economical.

Gas condensing boiler WTC-GB: high capacity in compact form.



With the gas condensing boiler WTC-GB, Weishaupt offers a compact and flexible system to cover even the highest demands. With a ratings range of 16 to 300 kW the condensing boilers cover a wide spectrum that can be expanded to up to 1,200 kW by cascade operation. The uncompromising focus on quality and reliability is enhanced by the choice of materials used for manufacturing. The core of the Weishaupt Thermo Condens gas condensing boiler, the heat exchanger, is made of proven Aluminim/Silicon, and the innovative radiant burner of a thermally stable metal alloy.

This, combined with intelligent control, make the condensing boilers with a modulation ratio of 6:1 and an efficiency of more than 109% H_i the absolute top in their class.

A contributory factor to this is the standard implementation of high safety requirements. Various sensors, including flue gas pressure, gas pressure, water level, supply and return temperatures as well as flue gas ducting, monitor safe operation without interruption.

Convenience features have also been incorporated in the boiler development in a number of ways. Simple installation, quieter and more flexible operation and quick and easy maintenance were objectives, which have been implemented successfully with the WTC-GB

High ratings requirements for up to 1,200 kW can be covered by cascade operation.


weishaupt

Domestic water heater and energy storage tanks: suitable for all heating systems.

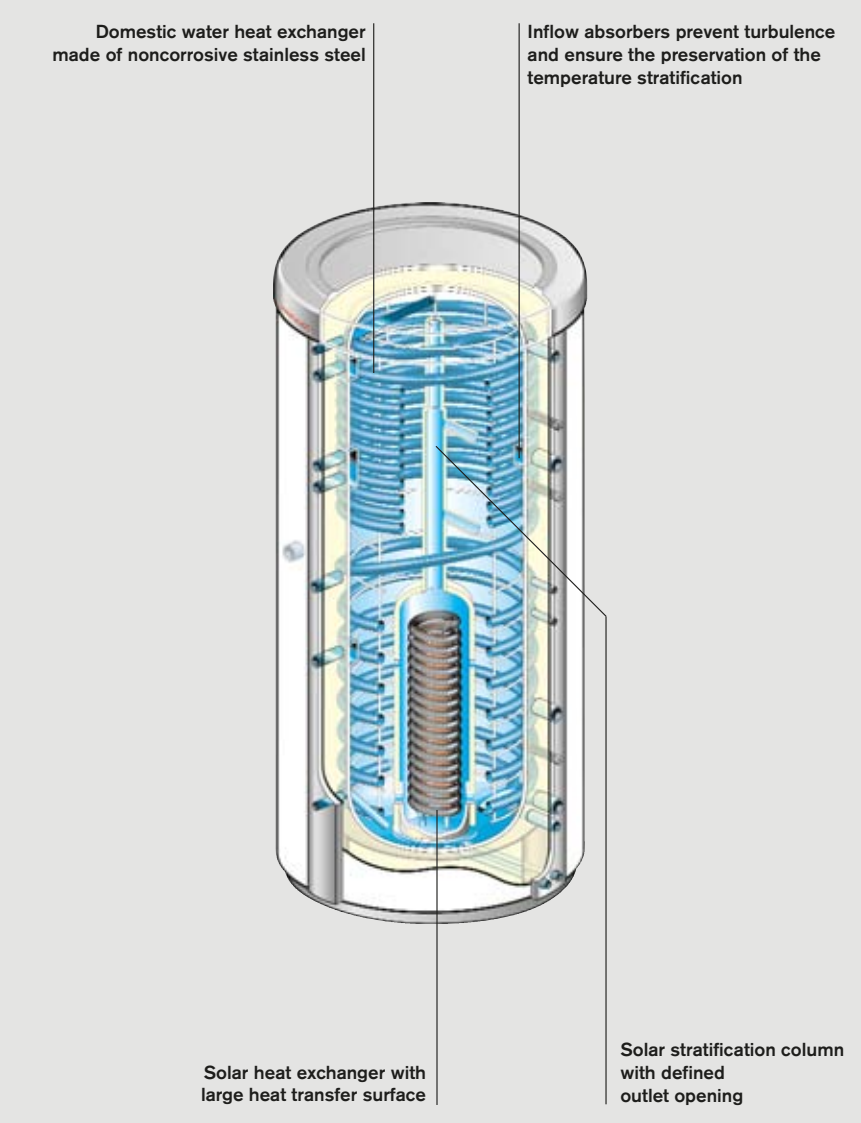
The requirements of an efficient and environmentally friendly heating system usually go hand in hand with the desire for reliable and convenient domestic water heating. Therefore, Weishaupt offers suitable systems for domestic water heating and energy storage for almost any application.

A high standard in terms of heat transfer and insulation is just as important as the hygienic property of the material and its manufacturing. Therefore, Weishaupt uses only selected materials, such as enamel or stainless steel, in the production of its domestic water heaters and energy storage tanks.

The integration of various heat sources, including renewable energies, can be realised with the Weishaupt AquaSol (WASol) tanks or Weishaupt energy storage tanks (WES).

With a volume of about 900 litres, the WES 910 is not only the largest energy storage tank, but thanks to multiple connection options also the most flexible. Not only is it possible to connect to solar power or conventional heating it is also possible to connect wood burning appliances.

If the water demand is greater, it is possible to use multiple energy storage tanks in cascade operation to meet the demand.



Weishaupt energy storage tank WES in combi version "C"

Domestic water heaters and energy storage tanks are available in a number of variations.

Solar systems

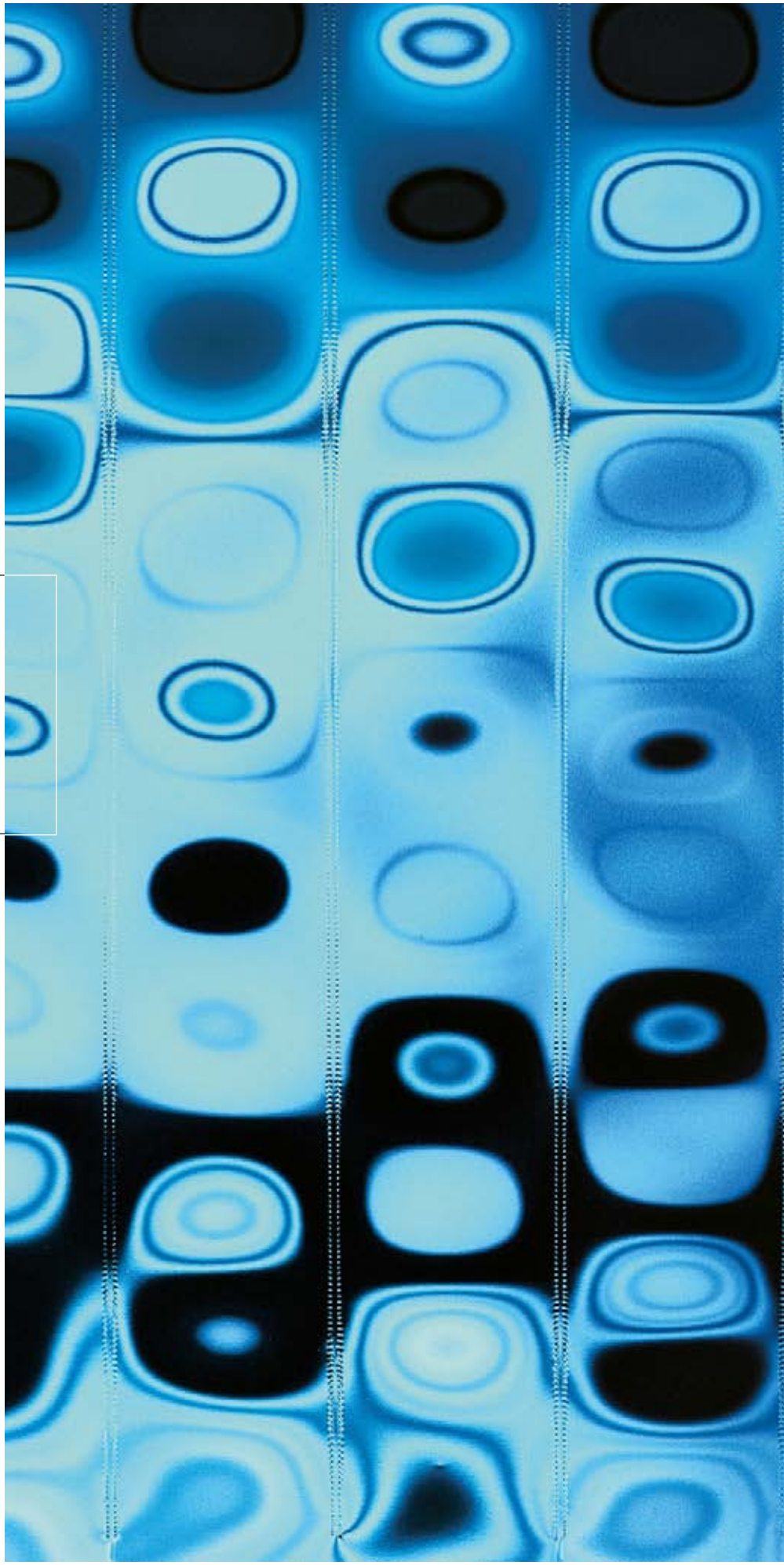
The sun is the largest known source of energy. The amount of energy the sun supplies to our planet is approximately 10,000 times higher than the global primary energy demand. Annually, this is approximately 3.9 x 1,024 joules. The energy delivered is clean, plentiful and free of charge.

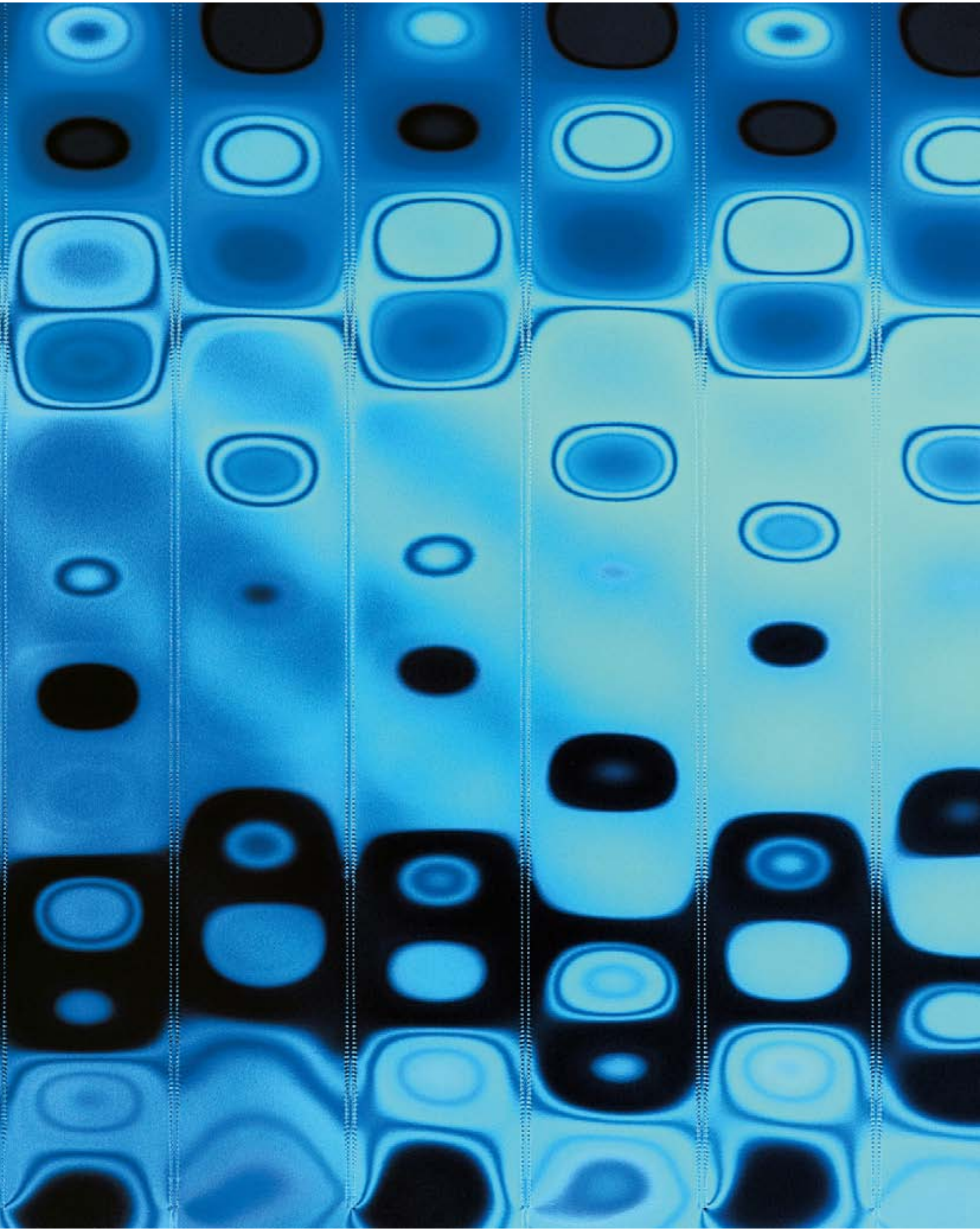
Weishaupt solar panels collect the energy and use it to heat domestic water and to support the existing heating system. This means fuel savings can be made, which protects both the environment and the wallet.

A complete package, from solar panels to control systems to dual stratification tanks are available from Weishaupt's solar program to cover almost any roofing requirements.

Only high quality materials are used during the production of Weishaupt solar panels to ensure they can withstand the most extreme weather conditions and continue to deliver the highest possible yield year after year.

The special Titanium-Nickel coating of the absorber surface and the laser-welded connection to the copper serpentine piping ensure high heat transfer from the solar panels.





Solar systems WTS: efficient use of the sun's energy.

On the flat roof, the collectors are elevated.

When installed on the roof, the panels are placed above the roofing tiles.

When installing in the roof, the panels replace the roofing tiles.

The flat panels, series Weishaupt Thermo Solar WTS, help to efficiently conserve resources and the climate. A positive side effect is the noticeable drop in heating costs.

With the different variations – on-roof, in-roof and flat roof – and a multitude of installation systems, Weishaupt solar panels are a safe purchase for almost any property. Weishaupt offers a suitable solution for every type of roofing, from slate to plain tiles.

This flexibility continues inside the property. A Weishaupt solar system can be combined with an existing heating system, a modern Weishaupt condensing boiler or with a Weishaupt heat pump.

The sophisticated digital solar controller which controls the supply of solar heat, ensures that high yield and reliability are provided. A well planned and executed Weishaupt solar system can produce an average yearly energy yield to heat approximately 60% of the domestic hot water required in a household.

Furthermore, the accolade "Solar Key Mark" guarantees a positive eco-balance and means the panels comply with local regulations. Thanks to the high-quality materials and careful processing, systems with long lasting reliability and high efficiency are available. Examples of this are the rigid aluminim frame, the Miro-Therm® coated absorber surface and the laser-welded copper serpentine piping.

The solar system WTS-F2 has been designed for larger panel areas.

Heat pumps

With the entry into the heat pump market, Weishaupt has extended its product programme by an additional renewable energy heating system.

Heat pumps offer an alternative to conventional heating systems. They use electrical energy to utilise the free ambient heat in the air, groundwater or soil.

Weishaupt offers heat pumps for an extensive range of possible energy sources with a number of different capacities. Weishaupt's heat pumps are used both in family homes and for industrial production and produce cost-effective and environmentally friendly heat for central heating and domestic hot water.

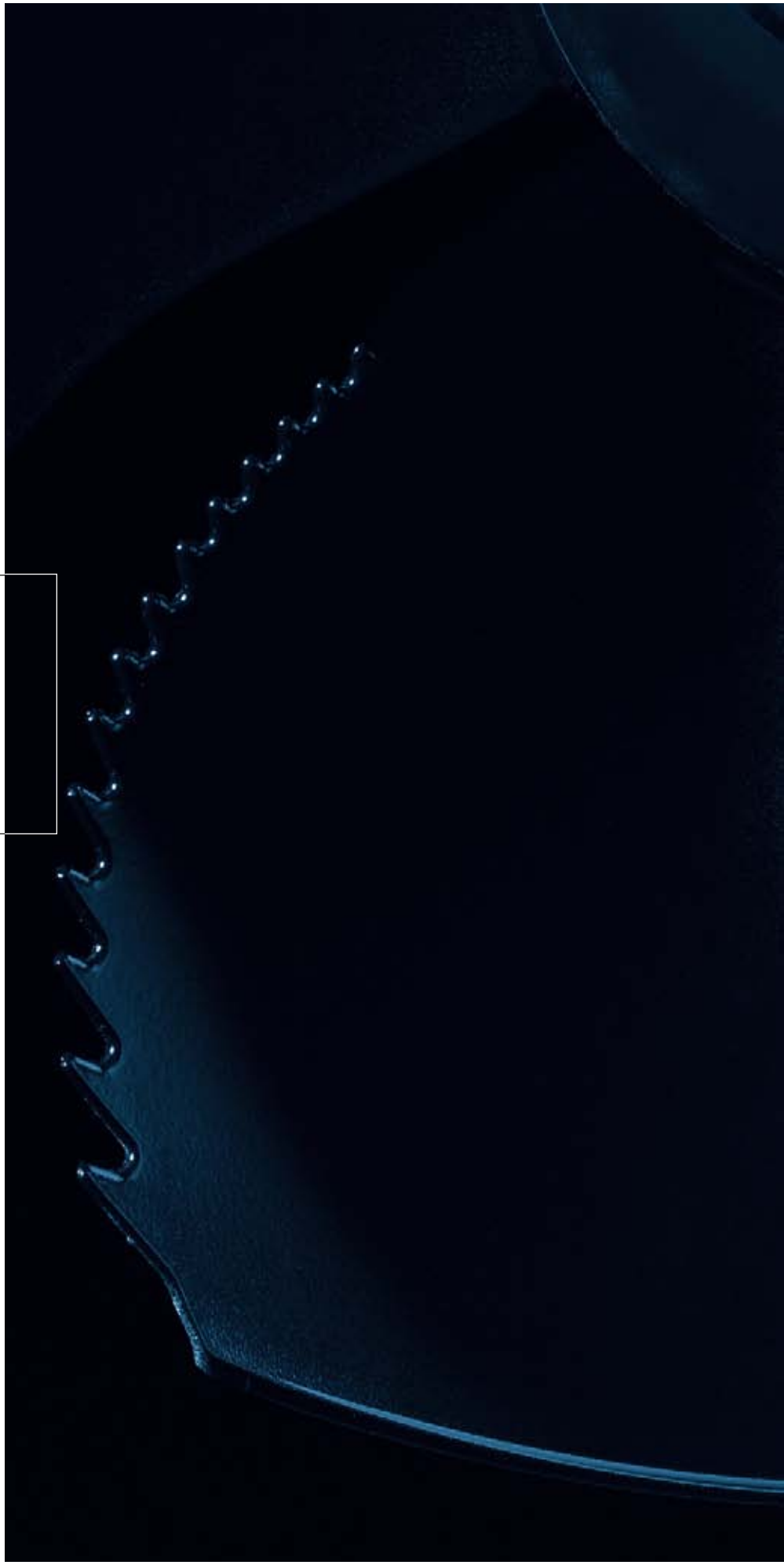
Weishaupt, with its high temperature and domestic water heat pumps, provides the right solutions for virtually every application even when renovating.

Depending on application, Weishaupt heat pumps can source over ¾ of the total energy generated from the environment and require only ¼ in the form of electricity. This outstanding eco-balance associated with Weishaupt quality and service guarantees reliability and efficiency.

The service responsibility is reflected in the heat pump training center, where service engineers and tradesmen are introduced to and trained on heat pump technology from Weishaupt, and also in Weishaupt's specially equipped service vehicles for heat pumps.

With the drilling company "BauGrund Süd", part of the Weishaupt group of companies, Weishaupt offers complete systems from geothermal drilling to commissioning all from one source.

The axial fan in the air / water heat pump is extremely quiet and highly efficient thanks to its flow optimised contour.



Weishaupt heat pumps: energy from the air, the soil or the water.

Weishaupt heat pumps, WWP use the energy from the air, water and soil to produce cost-effective and environmentally friendly heat for heating and domestic hot water.

Due to nearly constant groundwater temperatures (8-12 ° C), the water / water heat pumps are the most efficient heat exchangers of this type.

With almost identical efficiency, the brine / water heat pumps are next in line. They extract energy from the ground using geothermal probes. A collector field can be used as an alternative to the probe.

The most flexible solution to take advantage of the existing environmental heat, is the air / water heat pump. This can be installed inside the home (WWP LI) or outside of the home (WWP LA). Thanks to the air flow, this variation carries out its operation very quietly and does not disturbed the peace of a good neighbourhood.

The efficient high temperature versions of Weishaupt heat pumps are able to produce flow temperatures of up to 75 °C and are therefore suitable when renovating existing buildings, which do not have a surface heating circuit.

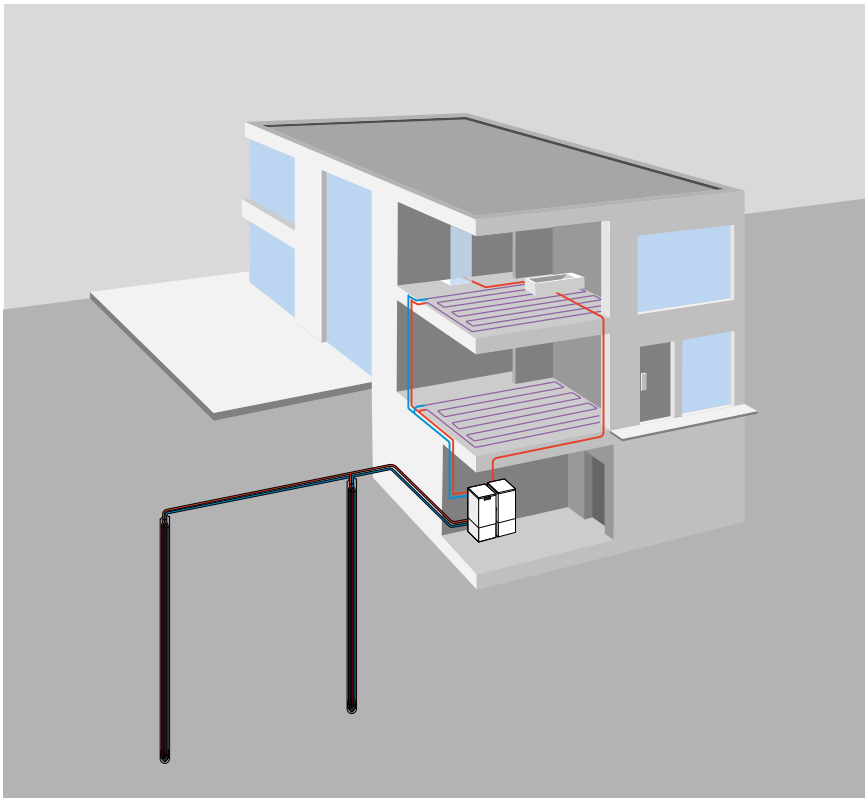
For all energy sources, there are Weishaupt heat pumps that can be used not only for heating but also for cooling.

Furthermore, the capacity of the heat pumps can be greatly expanded by using several heat pumps in cascade operation. This allows the utilisation of environmental energy on large projects.

Air-water heat pumps are available for indoor or outdoor installation.

Many heat pump systems from Weishaupt are also suitable for cooling buildings.

BauGrund Süd:
geothermal drilling from one source.



Brine / water heat pump system with geothermal probe.

Weishaupt supply not only a complete heat pump programme with accessories such as storage tanks and hydraulics, but also geothermal probe and well systems.

The drilling company "BauGrund Süd", part of the Weishaupt group of companies, is responsible for all the relevant tasks, from seeking approvals to the drilling and the installation of the geothermal probe or well system, to the connection of the brine or water pipework to the heat pump and the removal of the soil.

As one of the leading drilling companies in Europe BauGrund Süd provides the highest safety and quality for each drilling project, even beyond the actual drilling.

The company offers a 10 year warranty for the extraction capacity of the geothermal probes installed for up to 2,000 full load hours per year (to VDI 4640).

Various seals of approval, such as DVGW W120 emphasize the diligence and quality of the drilling company.

Good planning facilitates geothermal drilling.


20.5°C

Building Management

The terms security and networking are inextricably linked to building management - especially with systems from Neuberger, Rothenburg ob der Tauber, part of the Weishaupt group of companies.

Neuberger extends the high reliability and efficiency demands of Weishaupt to entire buildings. Be it residential dwellings, industrial production plant or public buildings – by cross-monitoring and controlling various systems such as lighting, ventilation, heating, shading, etc. a lot of energy and money can be saved.

Neuberger networks these systems and installations and creates an intelligent building management system, which can control everything from one central location. Here, not only the energy improvements play an economically and ecologically important role, but also the safety-related aspects, which not only ensure the reliable operation of the systems but also protect against unauthorized access and interference.

With building management systems from Neuberger all aspects can be combined, scheduled and executed from one source – including subsequent servicing.

Light

The right amount of light at the right time – building management fulfils the promise. The lighting is controlled depending on structural features and personal needs.

Heating

Energy saving is the primary focus of a heating control system. Heat generation and building management from one source from Weishaupt and Neuberger optimise all the benefits.

Cooling

It is more expensive to cool than to heat, because cooling requires more energy. Modern control systems and building management technology ensure that cooling systems work efficiently.

Building management systems from Neuberger make buildings energy efficient, more comfortable and safer.

Air conditioning

With air conditioning, the primary concern is to ensure the right amount of good quality air is delivered to the right place. Control technology can provide optimum air conditioning automatically.

Shade

Automatic blinds are used to prevent rooms overheating or to use the sun as a source of heat - they can also take account of individual heating requirements.

Fire protection

Smoke is very harmful to people. Neuberger equipment processes data from alarm and warning systems and controls all the fire protection systems.

Sterile rooms

The manufacture of pharmaceutical products is subject to very strict hygiene requirements. Neuberger building management systems record, monitor and save all relevant process data.

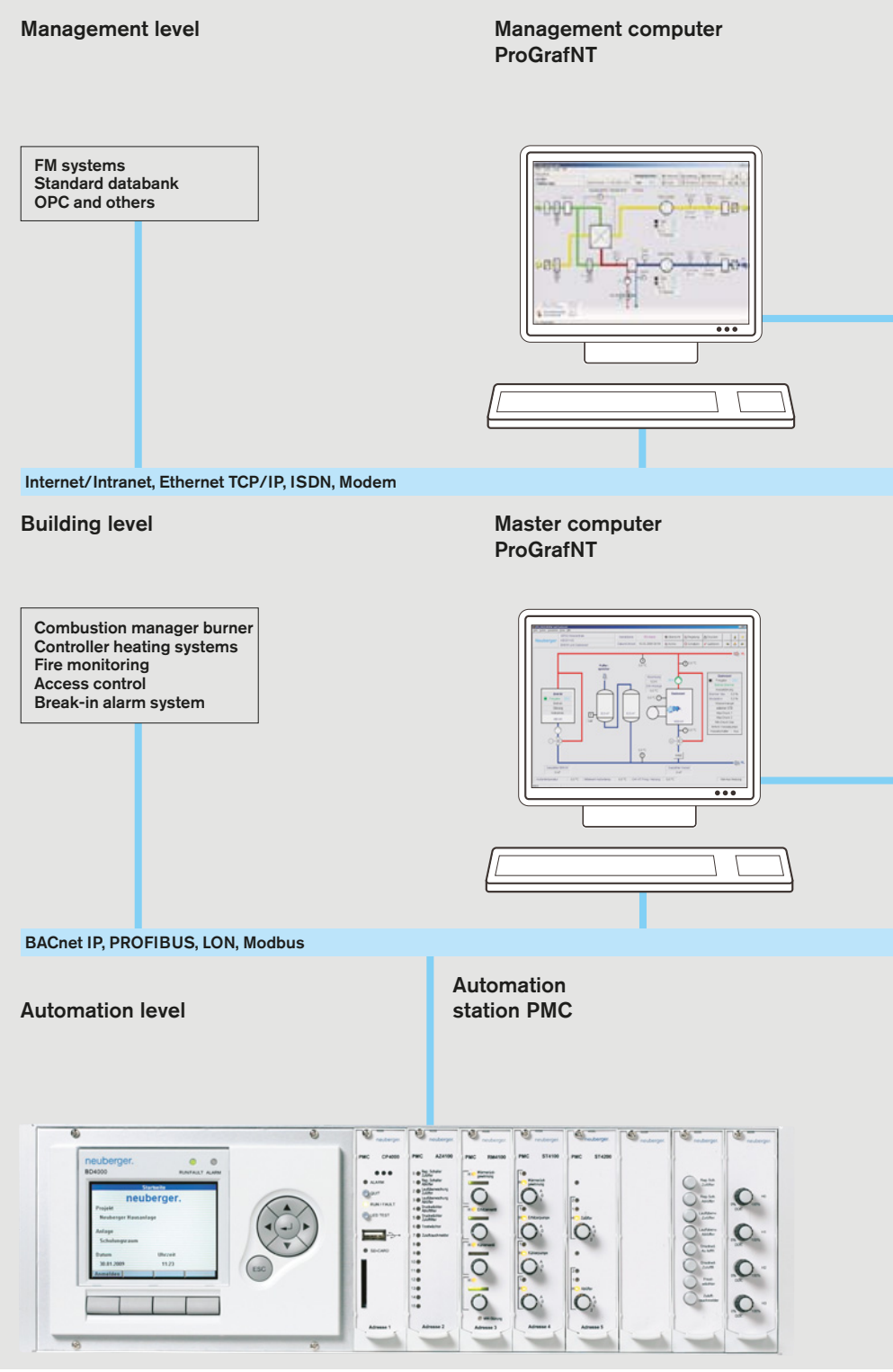
Neuberger building management systems make buildings intelligent.

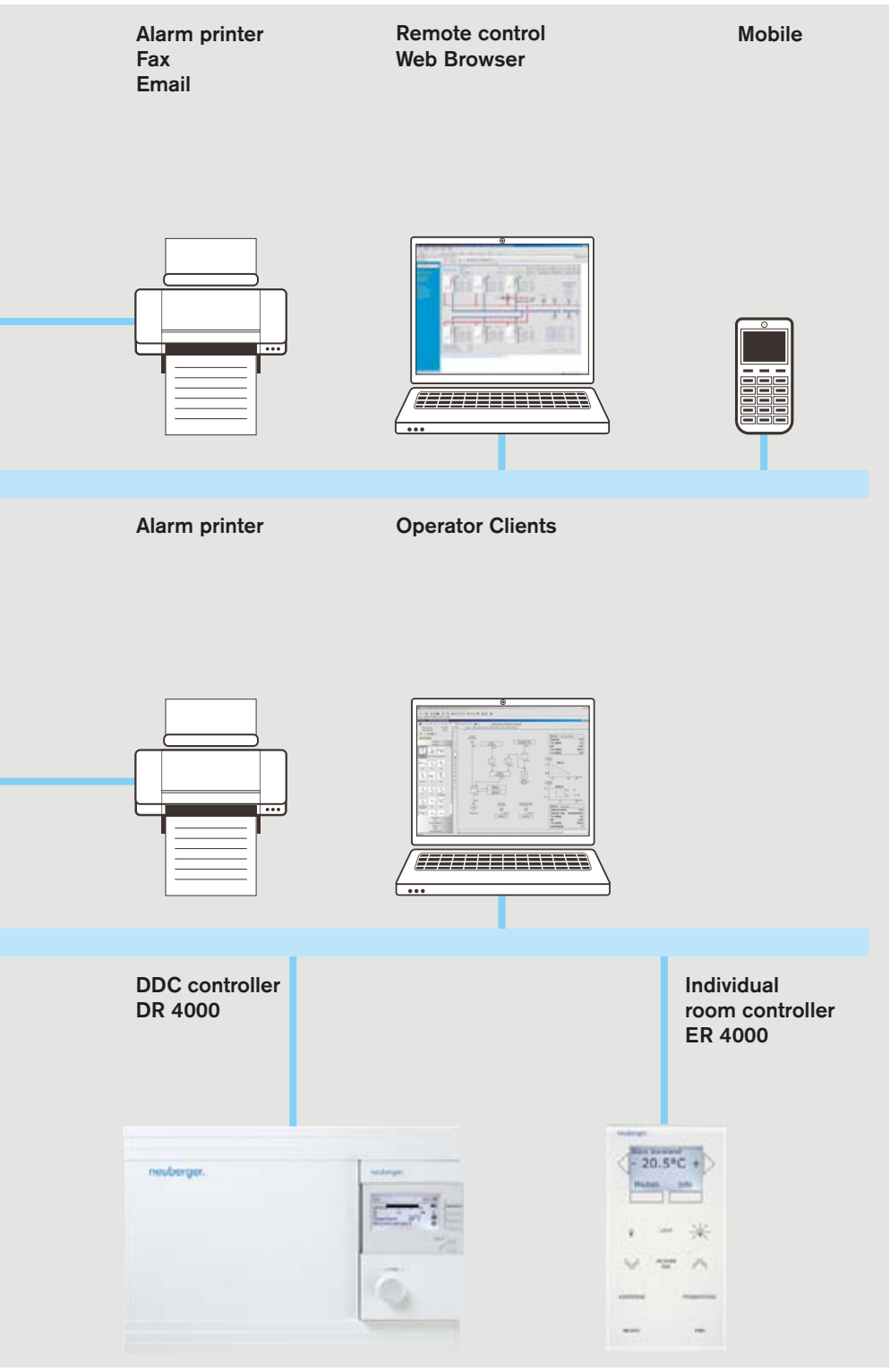
Neuberger can automate individual rooms or entire buildings. Even highly secure facilities such as lock systems in the pharmaceutical industry operate safely and reliably thanks to Neuberger technology.

Because flexibility is one of the most important issues in the implementation of modern building management systems, Neuberger developed a system with ProGrafNT that uses only open bus systems. Extensions of almost any kind are no longer an unsolvable problem. Various interfaces such as Modbus, eBUS, M-bus, KNX the open communication via BACnet IP, as well as data transfer to external databanks are just a few examples of the high degree of flexibility.

Neuberger is also a step ahead in clear arrangement and logging. All systems and data can be represented graphically and archived user-specific.

Extensions to the system with remote control and monitoring via modem or the integration of a Web server, as well as status notification by e-mail, fax, mobile phone or pager are possible.




Alarm printer
Fax
Email
Remote control
Web Browser
Mobile
Alarm printer
Operator Clients
DDC controller
DR 4000
Individual
room controller
ER 4000

Max Weishaupt GmbH
D-88475 Schwendi
Tel.: +49 73 53 8 30
Fax: + 49 73 53 8 33 58
www.weishaupt.de

Print No. 8300**15**02, December 2010