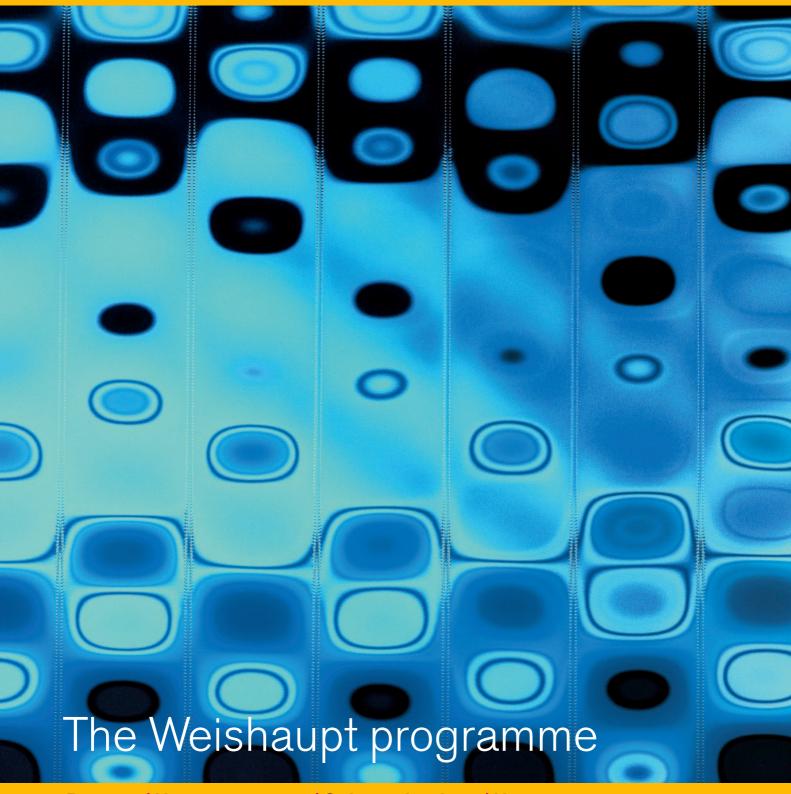
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Information on Weishaupt products





Quality creates trust

Weishaupt has been one of the leading combustion technology companies for more than 50 years. Worldwide, the Weishaupt Group is represented in 60 countries and has more than 3000 employees.

The Weishaupt range includes:

- Oil, gas and dual fuel burners up to 22,,000 kW
- Oil or gas fired condensing boiler up to 1,200 kW
- · Solar heating systems
- · Heat pumps
- Control technology for complex heating plant
- Building management system from Weishaupt's subsidiary, Neuberger

For more than 40 years, Weishaupt's own Research and Development Centre has been working continuously on new developments and the optimisation of existing products.

Our common motivation is the technological advances which time and again set a bench-mark for the industry.

However, only the most modern manufacturing facilities and painstaking quality control ensure Weishaupt's well known quality.



More than 600 burners leave the plant in Schwendi daily

Burners

Weishaupt burners cover a range of 12 to 22,000 kW.

They can be used wherever heat is needed – in heating residences or hospitals, schools or offices, in industry or trade, on board ships and for mobile plant. They are suitable for all commonly available gas and oil types and are notable for their reliability, longevity and great economy.

Nearly all burner types over the entire performance range are available in a Low NO_x version, with particularly low emission levels.





Proven millions of times over: The compact W series burners



WGL30 dual fuel burner



W burners, sizes 5 to 40



Display for digitally setting the WG10 to WG40 and WL30 to WL40 burners.

Well over four million Weishaupt W series burners have already been installed and are providing reliable, economical service the world over. They work fully automatically, providing heat for heating, hot water and process plant. In combination with modern system technologies they achieve the highest degree of combustion technology efficiency.

All the components in W series burners are brought together in a compact unit. The fuel/air regulation devices are clearly laid out and easily accessible. Digital combustion management controls the fuel/air ratio and ensures the burners precisely follow the predetermined sequence of operations.

The rating spectrum starts at 12 kW and goes up to 570 kW. The mode of operation, dependent on the burner model, can be single or two stage, sliding two stage or modulating.

All burner types conform to the appropriate EN standards and are independently type tested. All burners are also voluntarily DIN and DVGW registered and subject to an annual production check.





The clean flame: Weishaupt purflam® burner



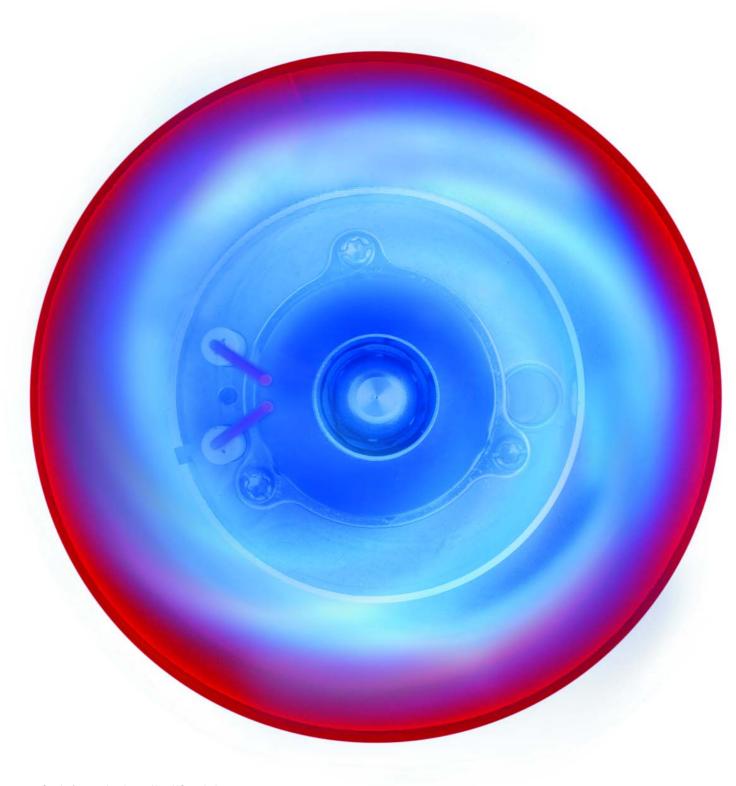
The new Weishaupt purflam® compact burner produces the purest oil flame there has ever been from such a small burner. Its new technology burns oil so cleanly that there is practically no smoke formed and the NO_x levels of 70-90 mg/kWh fall well below all statutory requirements. The burner is suitable for all the usual oil fired heating boilers. Weishaupt's over 50 years of experience in burner design and construction have led to a product that not only achieves something extraordinary but also something that will set the standard for advanced and reliable combustion technology for years to come.

Weishaupt purflam® technology utilises a special mixing assembly to turn the atomised oil mist into a gaseous state for combustion.

The homgeneous air/gas mixture thus formed burns smoke free with externely low emissions. A specially formed air outlet means no further equipment is required to ensure flame stability. Extreme combustion chambers do not present any problems as a rule.

Weishaupt quality purflam® burners are fully automatic and feature digital combustion management as standard. Powerful microprocessors continuously monitor and control the combustion process to ensure maximum efficiency. The integral eBUS interface enables the digital combustion manager to communicate with other systems.

The purflam® burner is available in six ratings from 16.5 kW to 40 kW.



Smoke free combustion and low NO_x emissions ensured by the special mixing assembly

Powerful and reliable: The large Weishaupt burners

The Weishaupt monarch® series has been used for 5 decades on all types and sizes of heating plant. Weishaupt's outstanding reputation was built on the back of these burners.

Reliability, technological longevity and the clear layout of all the components are the hallmarks of these tried and tested monarch® burners and the further developed industrial burners, which have an overall capacity range of 300 to 11,700 kW. Dual fuel burners fire oil or gas as required. Fuel changeover is effected automatically without the need for manual intervention at the burner. These burners are used particularly where economy or safety considerations make the ability to switch to an alternative fuel appear useful.

Weishaupt industrial burners are fitted with digital combustion managers as standard. This provides for optimal combustion figures, continually reproducible dosing of fuel and air and simple operation.





RGL70 dual fuel burners in a district heating centre



Durability with digital precision: The Weishaupt monarch® burners

The Weishaupt WM10, WM20 and WM30 monarch® series burners are a new design combining good looks with a high degree of functionality. Thanks to the digital combustion management incorporated as standard, installation, adjustment, operation and servicing are easier and more precise than ever. As high quality Weishaupt burners they embody the Weishaupt virtues of low emissions and robust technology in order to ensure the lastingly reliable operation Weishaupt customers have come to expect.

All components are clearly arranged and easily accessible. The burners can be hinged open to the right or left. If required the burners can be supplied prewired to facilitate installation. And a further plus point for well thought out Weishaupt quality: an innovative fan unit and aerodynamically arranged air components minimise the amount of noise produced. The result: the new monarch® burner is considerably quieter than its predecessor.

Available as oil, gas or dual fuel burners, the new monarch® range reliably and economically fires hot water boilers, steam boilers, air heaters and modern high capacity boilers. Digital technology, logical construction and the most up to date combustion technology results in an outstanding price-performance ratio. The WM burners have a capacity range of 300 to 5,000 kW.



The monarch* WM 30 combines the most up to date digital combustion technology with low emissions and quiet operation



Robust and adaptable: The high-performance WK industrial burners

Weishaupt WK series industrial burners are constructed according to the modular construction principle and can therefore be matched very precisely to site requirements. There are, for example, special versions for combustion air temperatures up to 250 °C.

Five compact components are brought together: burner, fan, pump, preheater and controls assembly. Different

combinations of the various components of these gas, oil or dual fuel burners allow for an operating range of 300 to 22,000 kW (17,000 kW for multiflam® burners).



Weishaupt industrial WK series burners have been developed for use on special industrial and process applications, including plant with preheated combustion air (up to 250° C).



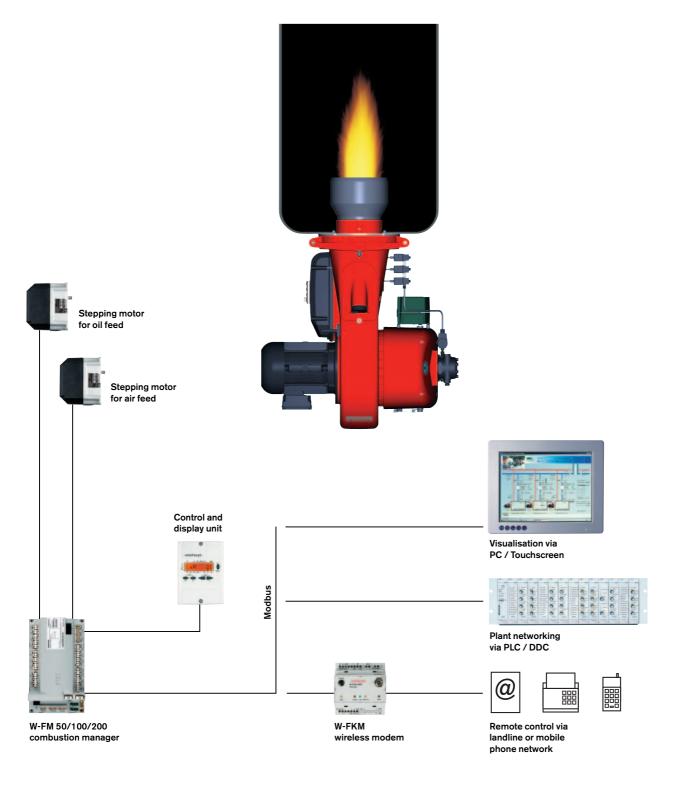
Intelligent and user friendly: Digital combustion management

Operation of combustion plant becomes simpler, easier and more economical with the help of digital combustion management.

The important functions - such as fuel and air supply or flame monitoring - are effected and controlled with digital precision. "Ideal values" can be preset and continually reproduced. The aim is the optimisation of operational functions with maximum economy and minimal emissions.

Thanks to digital technology, such plant-specific optimisation is now available at a reasonable price level. Outlay for installation and servicing is much reduced in comparison with conventional technologies. Digital combustion management also allows for remote operation, fault diagnosis and monitoring of the plant. This increases security and ease of use for the operator.





Greater fuel economy - lower emissions: The patented multiflam® technology

WKG 70/1-B 3LN

WKG 70/2-A 3LN

WKG 70/3-A 3LN

WKG 80/1-A 3LN



Weishaupt has begun a new chapter in the history of combustion technology with its multiflam® technology. The technology allows burners rated from 800 to 17,000 kW to achieve a level of emissions previously only ever seen with small burners.

The system uses the principle of fuel distribution, whereby the fuel flow is divided between multiple nozzles arranged concentrically around the combustion head and atomised. An axially adjustable diffuser plate ensures that the air annulus is correct at every point throughout the burner's capacity range.

The multiflam® principle has long been tested in the field on large gas, oil and dual fuel burners. In Switzerland, a country with the most stringent environmental regulations, Weishaupt multiflam® burners are among the leading combustion technologies.

Oil burner				
WM-L10/3-A / T-3LN	200	_	900 kW	
RL 30/2-A 3LN	298	-	2.144 kW	
RL 40/2-A 3LN	476	_	2.977 kW	
RL 50/1-B 3LN	535	-	3.750 kW	
Gas burner				
WM-G10/3-A / ZM-3LN	125	-	900 kW	
G 30/2-A 3LN	300	_	2.000 kW	
G 40/2-A 3LN	400	-	2.800 kW	
G 50/1-B 3LN	450	_	3.500 kW	
G 50/2-A 3LN	500	_	4.500 kW	
G 60/2-A 3LN	650	-	5.800 kW	
G 70/1-B 3LN	750	_	7.000 kW	
G 70/2-A 3LN	900	-	9.100 kW	

- 10.000 kW

- 12.000 kW

- 13.000 kW

- 17.000 kW

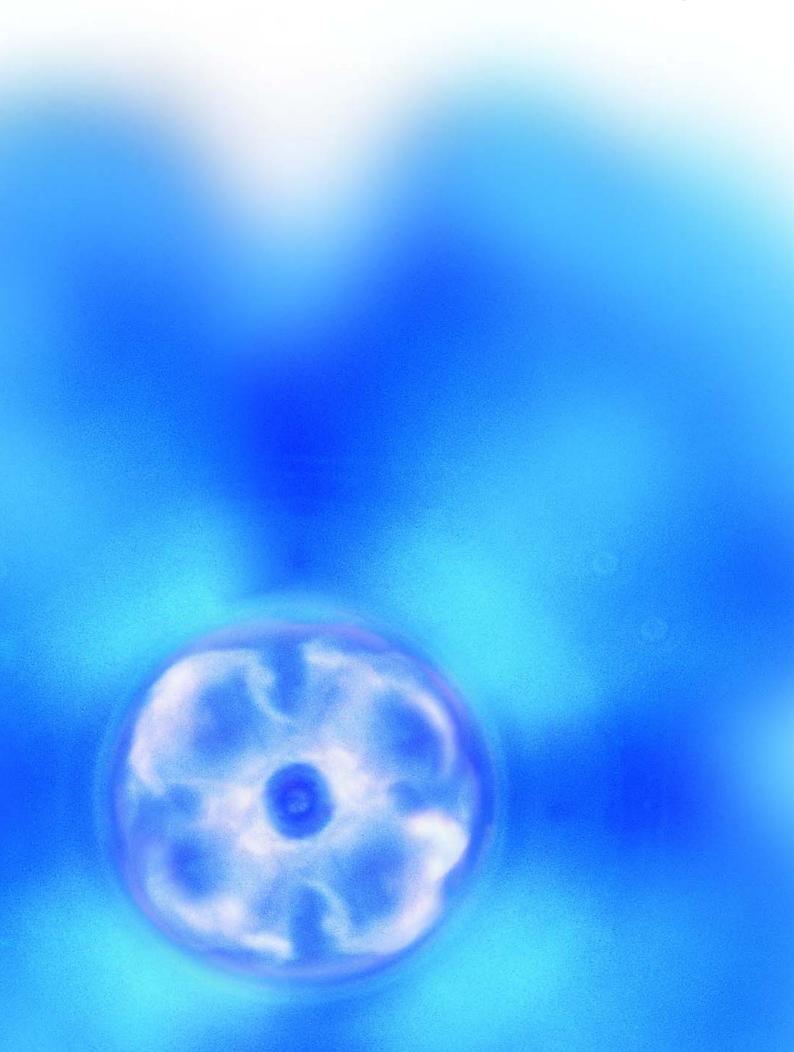
1.000

1.100

1.100

1.800

Dual fuel burner		Oil		(Gas	
WM-GL10/3-A / ZM-T-3LN	125	-	880 kW	200	-	880 kW
RGL 30/2-A 3LN	300	-	2.000 kW	357	-	2.000 kW
RGL 40/2-A 3LN	400	-	2.800 kW	476	-	2.800 kW
RGL 50/1-B 3LN	450	-	3.500 kW	536	-	3.500 kW
RGL 50/2-A 3LN	500	-	4.500 kW	595	-	4.500 kW
RGL 60/2-A 3LN	650	-	5.500 kW	1071	-	5.500 kW
RGL 70/1-B 3LN	750	-	7.000 kW	1191	-	7.000 kW
RGL 70/2-A 3LN	900	-	9.100 kW	1548	-	9.100 kW
WKGL 70/1-B 3LN	1.000	-	10.000 kW	1548	-	10.000 kW
WKGL 70/2-A 3LN	1.100	-	12.000 kW	1787	-	12.000 kW
WKGL 70/3-A 3LN	1.100	-	13.000 kW	1787	-	13.000 kW
WKGL 80/1-A 3LN	1.800	_	17.000 kW	2380		17.000 kW



Heating systems

Weishaupt heating systems are the answer to increasing demands for extremely economical domestic heating with very low emissions. The combination of high quality materials and modern digital control technology has led to the successful achievement of heating technology, which due to its solid, high quality design satisfies every need.



Floor standing oil fired condensing boiler: Thermo Unit WTU-SB and WTU-GB

The Weishaupt Thermo Unit oil fired condensing boiler is a steel or cast iron boiler designed for economical and environmentally friendly domestic heating.

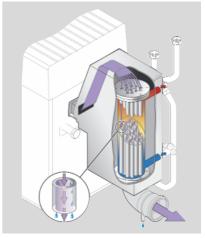
Condensation takes place in the separate condenser module, thereby protecting the boiler body from condensates. The condenser also serves to reduce the overall operational noise level of the system.

A well tried and tested burner and user friendly control technology that covers the entire spectrum of modern energy management are integrated into the design. With this heating system you will always do well.

Weishaupt's plastic flues have proven themselves best suited for use with the condensing boilers. They are lightweight, easy to assemble, extremely resistant to the effects of condensates and the weather, and make chimney cleaning both simple and inexpensive.



The WTU-SB (steel) and WTU-GB (cast iron) oil fired condensing boilers operate quietly and reliably.



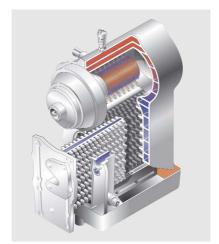
Since condensation takes place in a separate condenser module, the boiler body is perfectly protected from condensates.



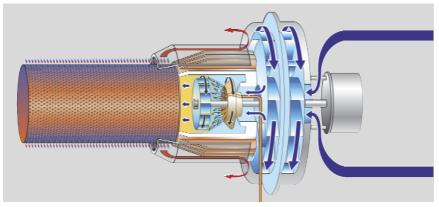
Modulating, wall hanging oil fired condensing boiler: Thermo Condens WTC-OW



WTC-OW oil fired condensing boiler



High capacity SiAl heat exchanger



Premix oil burner

Its quiet operation and high degree of energy efficiency make the WTC-OW oil fired condensing boiler extremely user friendly and economical.

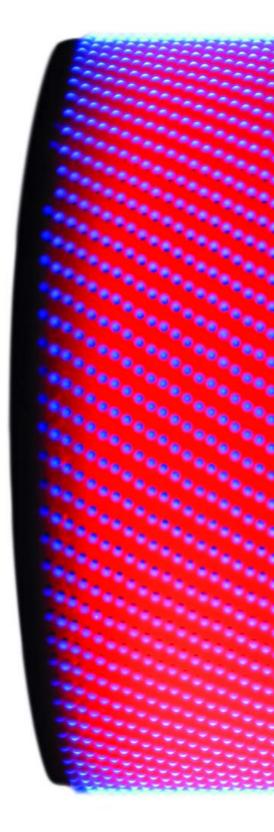
The special premix oil burner with rotating atomiser, frequency controlled precision dosing oil pump, and variable speed fan together ensure the boiler's exemplary efficiency and particularly quiet operation. The modulation range extends from 5 to 15 kW.

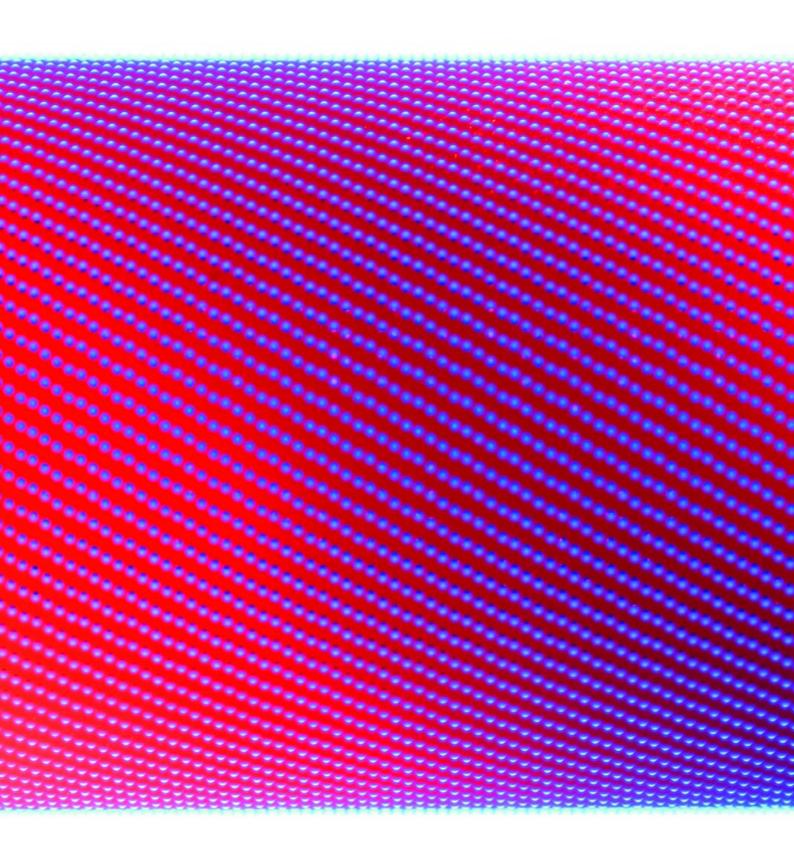
The outstanding efficiency of 104%* is achieved through the perfect matching of heat exchanger, burner and control system.

The ability to modulate brings considerable advantages in comparison with single or two stage oil fired condensing boilers:

- Operating times are optimised
- Average flue gas temperatures are considerably reduced
- Standby heat losses are minimised
- Operation is extraordinarily quiet comparable with a gas fired WTC condensing boiler
- * 104.7 % nett / 98.8 % gross

The premix oil burner ensures economical combustion and quiet operation





Modern condensing technology: Thermo Condens

The Weishaupt Thermo Condens system offers fuel saving, reliability and user friendliness. Most noteworthy is its optimum conversion of input energy by using the heat from the condensation. Thereby the heat usually lost in heating systems from the flue gases is retained. The resulting nett efficiency of up to 110%* leads to a considerable fuel saving and a large reduction of harmful emissions.

With their modulating operation the Weishaupt Thermo Condens systems are ideal for domestic heating. Weishaupt has established a benchmark by producing the world's first small condensing boiler with O2 trim (SCOT system) as standard. The dynamic monitoring of combustion quality by the newly developed SCOT system allows for optimal combustion all the time. Furthermore, the SCOT system ensures remarkably low emissions, a low rate of gas consumption and quiet operation. It also ensures supply in the event of varying gas qualities

For larger rating requirements, condensing boilers with ratings up to 60 kW are available. Thanks to its compact form and comprehensive system technology, it can be used anywhere. Cascades of up to four units allow for ratings up to 240 kW.

The condensing system is also available with an integral water cylinder. The new Thermo Condens Kompakt has the innovative 115 I Weishaupt Aqua Power hot water cylinder mounted below the heat exchanger. The advantage: The small amount of space required for the compact heating unit, its high hot water capacity being equivalent to that more typical of a 200 I cylinder. For classical domestic water heating the Thermo Condens Kompakt is also available with the economical 100 I Aqua Integra hot water cylinder with heat exchanger coil.

A floor standing condensing boiler with ratings between 120 and 170 kW is now available for the heating of larger buildings. A cylindrical premix radiant burner provides for very low emissions during the combustion of its homogeneous air/gas mixture. The perfect matching of the aluminium heat exchanger and regulator enables a modulation range of 6:1. The superbly equipped unit leaves nothing to be desired. For example, the unit incorporates a gas pressure switch that makes it possible to automatically restart after an interruption to the gas supply.

* 110 % nett / 99.1 % gross



Weishaupt's compact and elegant gas fired condensing boilers be used anywhere.



All the components are clearly arranged and easily accessible



The highly pratical 115 I Weishaupt Aqua Power hot water cylinder



Install anywhere: the elegant, timeless design of the Weishaupt Thermo Condens Kompakt never looks out of place

Large output gas fired condensing boiler: Thermo Condens WTC-GB

The floor standing gas fired WTC-GB condensing boiler with ratings between 120 and 170 kW (and cascades of up to 1,200 kW) is available for the heating of larger buildings.

At the heart of the WTC-GB is the aluminium heat exchanger. The Al-Si material is recognised for its durability and is an excellent heat conductor. Thanks to a special casting process the heat exchanger possesses highly efficient heat transferring contours, which enable an outstanding degree of efficiency when converting the energy input in to heat.

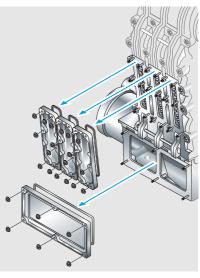
The perfect matching of the heat exchanger with the control system enables a modulation range of 6:1.

The innovative radiant burner is made of an extremely heat resistant alloy, ensuring optimal combustion of the homogeneous air/gas mixture. Its cylindrical form and its woven surface lead to particularly low emissions. Combustion is continually monitored by an ionisation electrode.

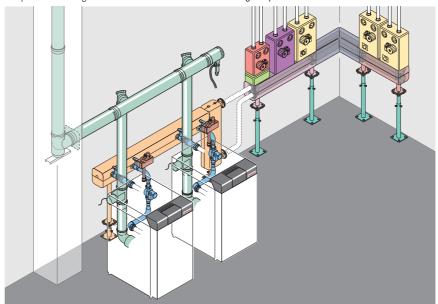
The superbly equipped unit leaves nothing to be desired. For example, the unit incorporates a gas pressure switch that makes it possible to automatically restart after an interruption to the gas supply.



The WTC-GB gas fired condensing boiler is compact and well organised



The heat exchanger is easily accessed via several large inspection hatches



Cascading up to four condensing boilers for a combined rating of up to 1,200 kW



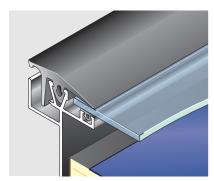
Free energy from the sun: Weishaupt WTS-F solar heating system

The specially developed Weishaupt solar collector exhibits an exemplary positive eco balance, for which it has been awarded the Solar Key Mark. It is especially noteworthy for its high degree of functionality and well-crafted appearance.

The Weishaupt solar collector is fitted with a high power absorber for the greatest heat yield. Laser double welding unites the dense copper pipe meander with the aluminium full surface absorber. This innovative technology achieves an optimal heat transfer. To increase the energy yield the absorber is equipped with a high selectivity Mirotherm coating.

There are collectors suitable for fitting in the roof, on the roof and, with a support stand, on flat roofs.

Laminate construction for outstanding heat



Patented water drainage section with UV-resistant

Weishaupt solar heating systems can be extended in modular fashion. They are best suited for additional heating and domestic hot water. The German Federal Trade Ministry's directive, regarding measures to encourage the use of renewable energy, are more than met.

integrated manifolds are available for large applications.







Hot water made easy: Weishaupt hot water cylinders

The consumption of potable and other household water is extremely high. In an average home, 130 litres of water are used each day, of which 50 litres are warm water. Therefore, demands made of water heating technology are very high.

Top goal: Water hygiene

Alongside extremely high efficiency, the ease with which the water can be drawn off, heat insulation and processing quality are core themes for our developmental engineers.

However, greatest care is also given to the cleanliness and hygiene of the water. All parts which come into contact with drinking water are sealed with high-grade enamel or made from stainless steel.

Classic domestic water heating

If solar energy is not used, domestic water is heated by an oil or gas fired boiler or condensing boiler. The wide range of Weishaupt water heaters, with sizes varying from 70 to 500 I fulfils all requirements, because the optimal solution is available for any application.

Solar heating of domestic water

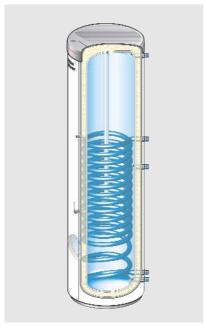
A special bivalent water heater is required in conjunction with a solar collector facility for heating domestic

The Weishaupt AquaSol is equipped with two heat exchangers; the lower is fed with solar energy while the upper heat exchanger is supplied through the heating system, unless it is provided with sufficient solar energy.

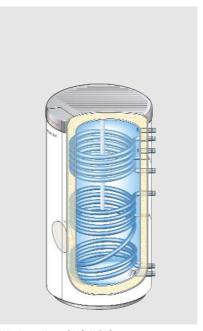
The Weishaupt AquaSol makes hot water easy and is available in capacities from 310 to 510 l.

Solar water heating plus heating support

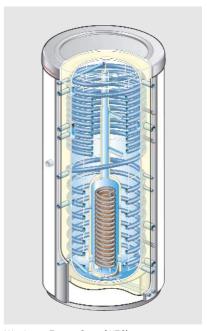
If, aside from heating water, central heating is also to be supported, then a large volume hot water cylinder is necessary. The innovative WES retains solar gains due to its excellent heat insulation, it provides ideal heat distribution and additionally offers a hygenic and large warm water capacity. The WES is available in 660 and 910 I sizes



Weishaupt Aqua Tower (WAT)



Weishaupt Aqua Sol (WASol)



Weishaupt Energy Store (WES)

Heat Pumps

Weishaupt heat pumps utilise the energy provided by nature for heating and domestic hot water.

You will find the right heat pump in Weishaupt's range to suit any and every requirement, whether you want to make use of energy from the air, ground or groundwater.



Utilising free energy from the environment: The Weishaupt heat pump range

Weishaupt heat pumps make simple and economical use of free environmental energy, whether from the air, ground or groundwater. Weishaupt offers complete solutions for every need, both for new builds and rennovation projects.

Another interesting possibility is the use of heat pumps for cooling during warmer times of the year. Weishaupt offers systems for passive or active cooling.

Heat from the air

Air/water heat pumps use freely available ambient air as an energy source and are thereby highly efficient, performing very well at temperatures down to -25 °C. There are indoor and outdoor versions available, both for new buildings and for renovation projects. The modern high capacity heat pumps can provide flow temperatures of up to 75 °C.

Heat from the earth

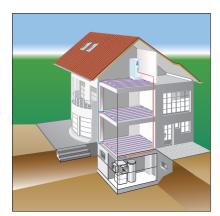
Brine/water heat pumps convert the solar energy stored in the ground into warming heat energy. The heat can be collected either by earth probes or an earth collector.

Heat from groundwater

If there is sufficient groundwater of suitable quality available, water/water heat pumps are the most efficient of all three systems.

One-stop support

Weishaupt heat pumps are certified in accordance with international quality standards. Each individual heat pump is function tested. Quality and reliability are of the highest level, as is typical for Weishaupt. A fact further demonstrated by the trend setting heat pump training centre, which provides theoretical and practical training on all available systems.



Air/water heat pump, indoor



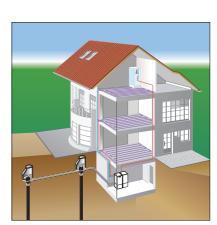
Brine/water heat pump, earth collector



Air/water heat pump, outdoor



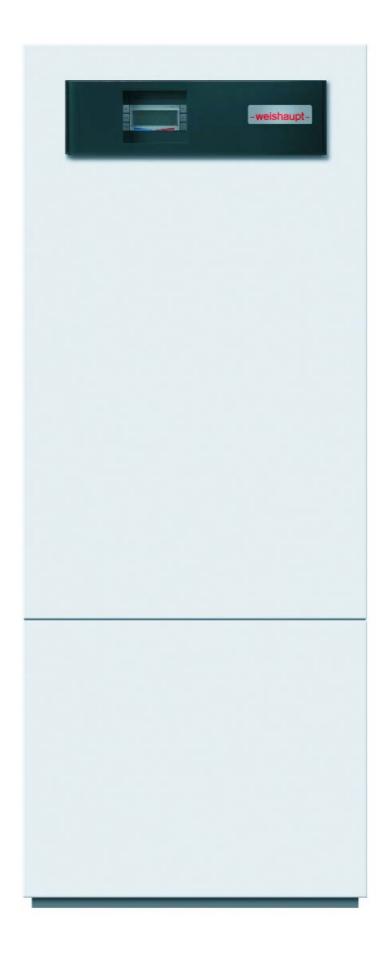
Water/water heat pump



Brine/water heat pump, earth probe



DHW heat pump



The Weishaupt heat pump range, with a capacity range of 5 to 130 kW, offers a solution for every application

Control Technology / Building Management

There is a suitable Weishaupt control panel for every Weishaupt burner. This principle is one of the guarantees of the safety and reliability of Weishaupt's combustion technology.

Weishaupt can now offer 'one-stop' an A to Z of the most complex optimisation technologies for building management. This integrated automation solution means that as well as the core products of burners and heating systems, Weishaupt offers a networking concept that can be easily integrated into new and existing plant.

Communication with other customer specified units via defined and open bus systems is supported. The process management software monitors, controls and optimises the heating and air conditioning. Such solutions use intelligent protocols and balancing to achieve a high degree of effectiveness and reliability.



Flexible, future oriented, economical: Weishaupt control technology

Weishaupt offers a control solution for all its burners - all the components are matched and checked in the factory. This principle is one of the guarantees for the reliability and safety of Weishaupt combustion technology. The provision from a single supplier also saves costs in project management, installation and service. 30 years experience with control panels is invaluable.

A systematically coordinated range of control panels is available. It is complemented by a variety of special versions. The main points in the Weishaupt controls programme are:

Burner controls

Burners and control panels from a single supplier, matched to each other at the factory.

- Manufactured in accordance with EN and international standards
- Digital combustion management with eBUS interface
- Safety-oriented PLC controls

Thermal process technology

Process technologies require, in addition to the necessary burner controls, extensive additional control and regulation functions. Typical applications include:

- Thermal fluid heaters
- · Salt heaters
- Dryers
- Painting facilities
- Smelting

Boiler facilities

The safety requirements of EN or TRD standards, as well as country specific requirements for boiler plant, have a decisive influence on control technology.

Weishaupt offers solutions for:

- · Warm water plant
- · Hot water plant
- Steam plant
- · Boiler sequencing controls
- · Optimisation of multiple boiler plant

Ships

This special environment places particularly high demands on the technology.

For the control of

- Auxiliary boilers
- · Inert gas preparation
- · Heaters

Weishaupt offers solutions in line with all common classifications, such as GL, LRS, ABS, DNV, RS, PRS, BV etc.



Plant with optimised Weishaupt multiple boiler control system



Future ready: Weishaupt building management

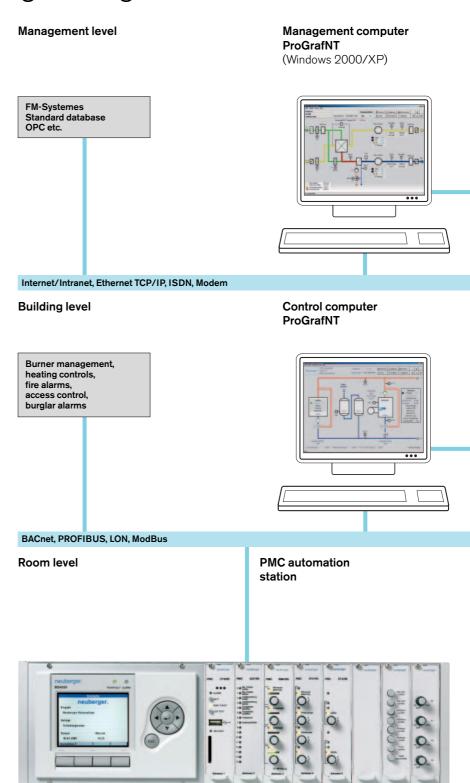
Weishaupt building management from Weishaupt's subsidiary, Neuberger:

Manufacturer-independent, goal oriented, cost conscious

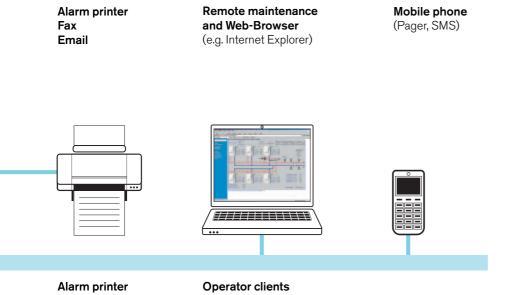
Do you need a building management system which permits the integration of all the components for heating, climate, ventilation and other monitoring systems and is nevertheless simple to use?

All economic, organisational and personal decision criteria enter our automation concepts – for solutions which are well thought out are oriented to the user, integrated and future safe.

Therefore you always have the option of adding to modules, integrating other products, or making expansions as you wish.







ProGrafNT supports you in central management tasks

- Interfaces to all common FM systems (such as Loy+Hutz, Speedikon)
- Problem-free data exchange through the use of standard databases and Windows operating system
- Communication via internet/ intranet, Ethernet TCP/IP, ISDN, modem, GSM wireless modem

ProGrafNT – the neutral control technology for your building

- Manufacturer-independent software
- Open communication through the use of standard bus protocols (BACnet, PROFIBUS, LON, ModBus)
- Facility visualisation
- Historic data (archive)
- Alarm via pager, mobile phone, person call systems, fax, email





ER 4000 individual room regulator



DR 1000 DDC unit



PMC – the flexible and reliable DDC substation

- Open bus communication (BACnet, PROFIBUS, LON, ModBus)
- Integrated hand operation level
- Clear text operating device
- Modular structure

Individual room regulator – individual comfort in all rooms

- Individual room regulator with integrated control unit and temperature sensor
- Open communication via standard LON bus
- LON system integration of all equipment (lighting, blinds, etc.)



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We're right where you need us

A strong service network gives peace of mind Weishaupt equipment is available from good heating companies, with whom Weishaupt works in partnership. To support the specialists, Weishaupt maintains a large sales and service network. Delivery, spares and service are thus contiually ensured.

Even in an emergency, Weishaupt is on call. The service department is available to Weishaupt customers around the clock, 365 days a year. A Weishaupt branch office or agency near you can answer all your questions on heating and Weishaupt burners.

