# **The Weishaupt Programme**





#### The Weishaupt company

# -weishaupt-

Weishaupt are one of the world's leading combustion technology companies. We produce gas, oil and dual fuel burners from 12 to 17,500 kW, measurement and control technology and compact central heating boilers and special condensing boilers for domestic heating.

Over 3,000 employees worldwide ensure that our products are produced in accordance with our high quality standards, are delivered on time and benefit from reliable after sales service. All our products are the result of painstaking work at our research and development centre, the "Weishaupt Research and Development Institute for Oil and Gas Firing". Our comprehensive series of tests and trials ensure that only technically advanced, long lived products with minimal emission levels are released on to the market.



The Weishaupt factory in Schwendi, Germany.

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Weishaupt burners cover a range of 12 to 17,500 kW. Generally, they can be used wherever there is a need for heat domestic heating as well as heating in schools and offices, in trade and industry, on ships and for mobile use.

They are suited for use with all commercially available types of gas and oil, and are noted for their reliability, longevity and excellent fuel economy. Furthermore, alongside the standard version, most oil and gas burners are available in LN (LowNO<sub>x</sub>) versions.

Weishaupt Research and Development Centre Test beds for medium and large sized burners



#### The W series - proven millions of times over



WG5 gas burner



Display for digitally setting the WG20, WG30 and WG40 burners

WL40 oil burner on heating plant

Well over three 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 technology plant at the push of a button. In conjunction 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 ensures the burners precisely follow the predetermined sequence of operations and controls the fuel / air ratio.

The rating spectrum starts at 12 kW and goes up to 570 kW. The mode of operation, dependent on the model, can be single or two stage, sliding two stage or modulating. All burner types conform to the appropriate DIN and EN standards and are type tested.



Weishaupt W series burners have long since become a classic. They have secured a safe place in the world of modern industrial design.



#### The legendary Monarch and Industrial burner series



RGL dual fuel burner with electronic compound regulation



RGL70 dual fuel burner in a heating centre

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 trademarks of these tried and tested burners. The operating range of the series is from 60 to 10,900 kW. In combination with modern control technology and electronics - for example  $O_2$  trim, speed control or electronic compound regulation - energy consumption and emissions can be reduced to a minimum.

The dual fuel burners fire oil or gas, according to choice. Fuel change over is carried out either manually or automatically via the burner controls. These burners are used particularly where or economy or safety considerations make the switching to an alternative fuel appear useful.





The Monarch series founded the good reputation of Weishaupt's products. The first burner left the production line in 1952.

# Weishaupt multiflam® technology



Dual fuel multiflam<sup>®</sup> burners are also available



Typical flame formation on a multiflam\* burner

Weishaupt has begun a new chapter in the history of combustion technology with its multiflam<sup>®</sup> technology. The technology allows burners rated over 1 MW 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<sup>®</sup> principle has already been tested in the field on large oil and dual fuel burners. In Switzerland, where there are very stringent environmental regulations, burners using multiflam<sup>®</sup> technology are already widespread.





### The WK industrial burner

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Weishaupt WK series burners are used mainly for industrial applications. They 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 operating temperatures up to 250°C.

Five compact components are brought together: burner, fan, pump, preheater and control panel. Different combinations of the various components of these gas, oil or dual fuel burners allow for an operating range from 300 to 17,500 kW.





WKGL50 dual fuel burner in operation

# **Digital combustion management**



The Control and Display Unit makes working with digital combustion management simple. It can be used up to 100 m away from the burner.

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 plantspecific 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.



Weishaupt heating systems are the answer to the increasing demand for extremely economical heating with very low emissions for domestic use. The combination of high quality materials and modern digital control technology, has led to the successful achievement of heating technologies, which due to their solid design represent the pinnacle of today's technical standards.



# The WTG and WTU heating systems

The Weishaupt Thermo Gas and Thermo Unit heating systems are designed for economical and environmentally friendly domestic heating.

Weishaupt Thermo Gas is a gas fired special heating boiler, which is available in 7 rating steps between 9 and 34 kW. Its modern pre-mixing burner technology is quiet, economical and safe. With such value for money, this system provides a really economical way to heat your home.

The Weishaupt Thermo Unit heating system can be supplied with either a gas or an oil fired burner. A seamless (WTU-G) or alternatively a steel (WTU-S) boiler body, a well tried and tested burner and user friendly control technology that covers the entire spectrum of modern energy management. With this heating system you will always do well.



Weishaupt Thermo Gas



a seamless boiler body



WTU-S compact heating unit with WAT water heater



The Weishaupt WTU thermo Unit combines energy savings and comfort in an exemplary fashion.



### WTC: Modern condensing technology

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, alongside a considerable fuel saving, a large reduction of harmful emissions.

With a step-free operating range of 33 to 100 % the WTC 15 and WTC 25 Weishaupt Thermo Condens systems are ideal for domestic heating. 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.

For larger rating requirements, the WTC 45 and WTC 60 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.



WTC-A special condensing boiler with WAV water heater (underneath)



Press + turn - remote control ensures simple, userfriendly operation



Plastic flues have best proven themselves in conjunction with condensing systems



It can be sited (almost) anywhere: Weishaupt Thermo Condens: an energy package for the entire house.



### The Weishaupt WTS-F solar heating system

Weishaupt solar heating systems are based on more than 20 years of pioneering and innovative work by the Schweizer company - the market leader in solar heating and building facades in Switzerland.

The specially developed Weishaupt solar collector exhibits an exemplary positive eco balance. 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. The absorber consists of a labyrinth of copper piping fully enclosed in an aluminium absorbing surface. An optimal transfer of heat is achieved with this combination. To increase the energy yield the absorber is equipped with a high selectivity  $NiO_x$ coating.

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

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 (525 kWh/m²/a are more than met.

Used in conjunction with system fittings, controllers, and bivalent water heaters from Weishaupt you have an optimally matched solar heating system that fulfils every wish.



Laminate construction for outstanding heat transfer.



Patented water drainage section with UV-resistant EPDM seal.





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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.

The Weishaupt Group's amalgamation with Neuberger Gebäudeautomation GmbH & Co. has led to a significant growth of capability in this area. Weishaupt can now offer 'one-stop' an A to Z of the most complex optimisation tecnologies 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.

#### Neuberger



# Burners and heating systems for all situations

W series Oil, gas and dual fuel burners



Monarch and Industrial series Monobloc oil, gas and dual fuel burners





Туре	Gas ①	Oil ①	Rating in kW	Throughput in kg/h	Mode of operation
WL2	-	EL	16.5 – 570	1.4 – 48	Single and two stage
WG	N, S, F	-	12 – 550	-	Single and two stage sliding two stage, modulating
WGL	N, S, F	EL	60 – 300	6 – 25	Two stage (on oil) Sliding two stage (on gas)

Туре	Gas ①	Oil ①	Rating in kW	Throughput in kg/h	Mode of operation
L, RL3	-	EL	70 – 10,900	6 – 915	single, two and three stage, sliding two stage, modulating
M, MS, RMS	-	M/MS	90 – 10,900	8 – 970	single, two and three stage, Sliding two stage, modulating
G	N, S, F	-	60 - 10,500	-	two stage, sliding two stage, modulating
GL, RGL③, RGMS	N, S, F	EL, M/MS	60 – 10,500	8.4 - 882	two stage, sliding two stage, modulating, two and three stage (GL oil side)

Туре	Gas ①	Oil ①	Rating in kW	Throughput in kg/h	Mode of operation
WKL	-	EL	450 - 17,500	38 - 1475	sliding two stage, modulating
WKMS	-	M/MS	550 – 17,500	38 – 1557	Sliding two stage, modulating
WKG	N, S, F	-	300 – 17,500	-	sliding two stage, modulating
WKGL3	N, S, F	EL	300 – 17,500	38 – 1475	sliding two stage, modulating
WKGMS	N, S, F	M/MS	300 – 17,500	50 – 1557	sliding two stage, modulating

① Abbreviations for fuel

EL = light oil, M/MS = medium and heavy oil, N = natural gas, F = LPG, S = town gas

2 Also available in LN (Low No<sub>x</sub>) execution

③ Various types (burner sizes) available in 3LN (multiflam\*) execution

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#### Weishaupt Thermo Unit



Туре	Gas	Oil	Rating in kW	Equipment
WTU-G with cast boiler body-	•	•	15 – 45 (5 capacity ranges)	<ul> <li>choice of oil or gas fired forced draught burner</li> <li>various types of control to meet any and all requirements</li> </ul>
WTU-S with steel boiler body	•	•	15 – 55 (7 capacity ranges)	<ul> <li>choice of oil or gas fired forced draught burner</li> <li>various types of control to meet any and all requirements</li> </ul>

Weishaupt Thermo Gas



Туре	Gas	Oil	Rating in kW	Equipment
WTG with atmospheric pre-mix burner	•	-	9 – 34 (7 capacity ranges)	<ul> <li>choice of natural gas or LPG (P)</li> <li>various types of control to meet any and all requirements</li> </ul>

#### Weishaupt Thermo Condens



Туре	Gas	Oil	Rating in kW ①	Equipment
WTC 15-A WTC 25-A with modulating pre-mix burner	•	-	4.3 – 14.7 7.5 – 25.2	<ul> <li>various types of control to meet any and all requirements</li> </ul>
WTC 45-B WTC 60-A with modulating pre-mix burner	•	-	13.9 – 46.8* 14.1 – 64.6*	<ul> <li>various types of control to meet any and all requirements</li> </ul>

\* Up to four units can be cascade

①  $T_V/T_R 50/30 \,^{\circ}C$ 

#### We're right where you need us

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#### 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 continually ensured. Even in an emergency, Weishaupt is on the job. 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 and heating systems.

