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info

Information on burner technology



The Weishaupt burner range


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Weishaupt burners: Decades of reliability

For decades, burners that proudly carry the Weishaupt name have been synonymous with the extremely safe, economical, and reliable combustion of gaseous and liquid fuels.

The broad spectrum of outputs offered by Weishaupt burners, beginning at just a few kilowatts and extending up into the multi-megawatt range, means that they see use in a wide range of applications.

Weishaupt continually establishes new benchmarks, facilitated by the ever-constant efforts of its own Research and Development Centre. Digital combustion management and the extemely low emissions of multiflam® burners are just two of many examples of Weishaupt's innovative power and the high product quality it engenders.

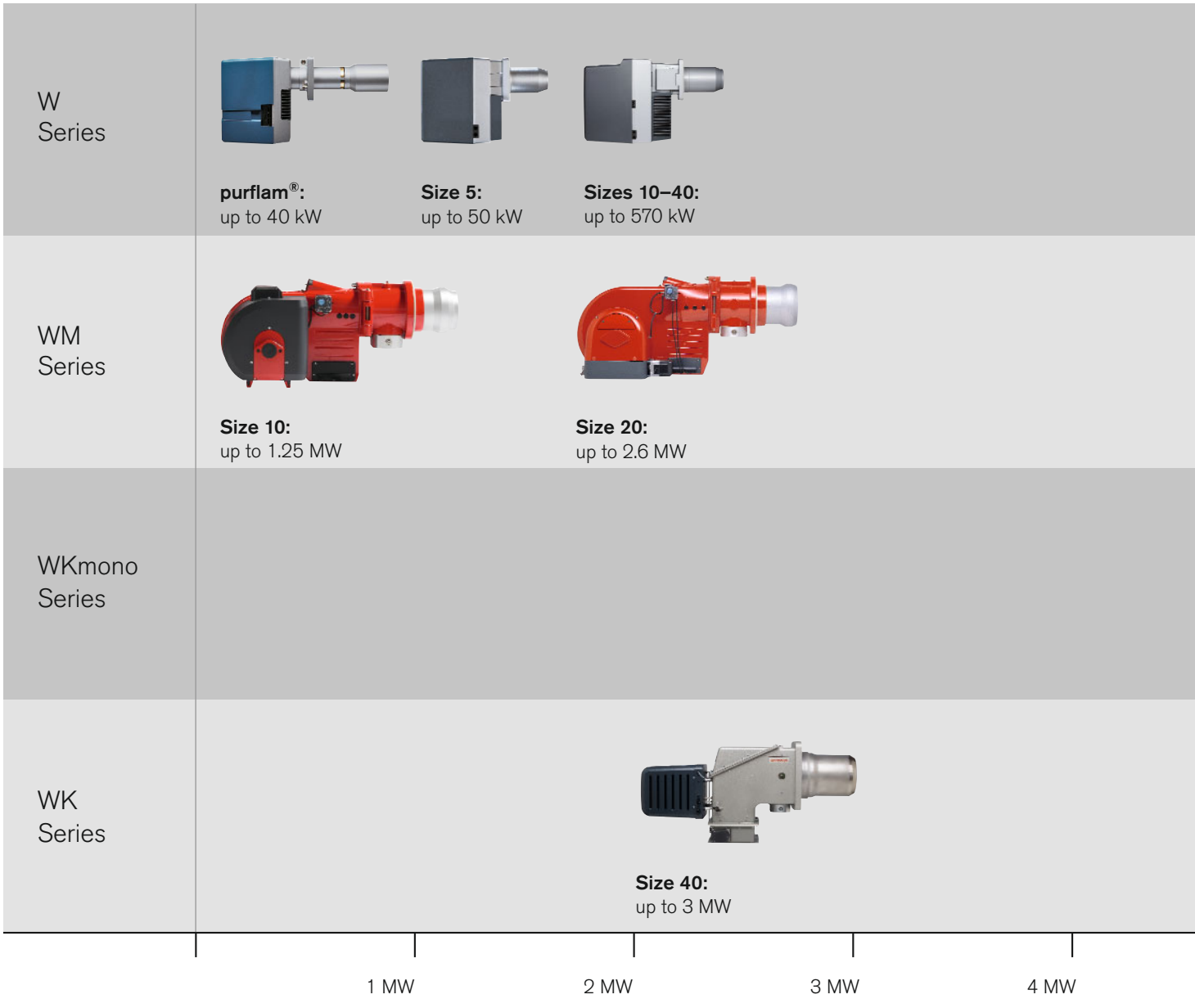
All Weishaupt burners are manufactured at the company's main plant in Schwendi in southwestern Germany. Not only does this extremely modern production facility serve as a beacon of safety, precision, and cleanliness, it also allows for a rapid response when assembling medium and large-sized burners, which are almost always individually configured. The high proportion of in-house production, among other things, allows Weishaupt to meet its own demands for high levels of quality and to ensure purpose-built items can be produced promptly.

Of course, Weishaupt's range also runs the gamut of modern control technology, including fully comprehensive solutions for complex building automation projects that are future-oriented, cost-effective, and flexible.

For more than 30 years now, Weishaupt has also been manufacturing complete heating systems. Encompassing not only tried-and-tested condensing boilers, the systems can also efficiently incorporate renewable energy sources. Solar energy for DHW heating and central heating support is represented in the Weishaupt range, as is geothermal energy, and ground-source, water-source, and air-source heat pumps.

Weishaupt monarch® burners combine highly sophisticated, cutting-edge technology with functional design

At a glance:
The Weishaupt burner range



The above overview shows the outputs of Weishaupt's burner series.

Each series has in turn several versions for different types of applications, such as vertical firing or marine executions, or burners for use on thermal process plant.

Individual special executions are always available. Yet at the same time, numerous innovations and improvements mean that the actual number of burner models has been reduced. The benefits this brings when designing and outfitting systems cannot be overestimated.



Size 30:
up to 6.2 MW



Size 50:
up to 11 MW



Size 80:
up to 17 MW



Size 50:
up to 6 MW



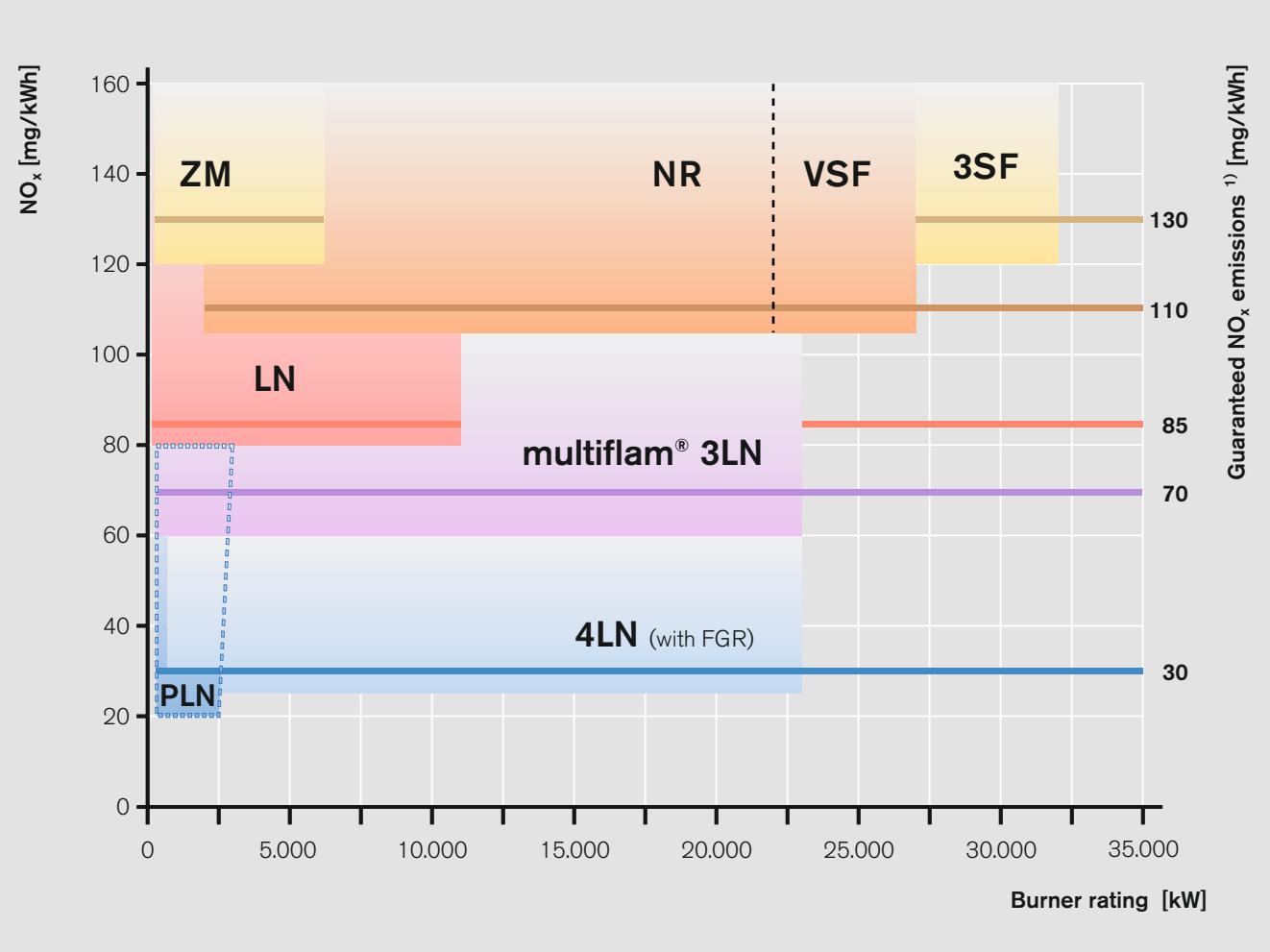
Size 70:
up to 13 MW



Size 80:
up to 32 MW

5 MW | 6 MW | 7 MW | 12 MW | 17 MW | 32 MW

NO_x emission values for different gas burner versions



For many decades, the Weishaupt name has been a byword for low emissions, robust equipment, and reliable operation.

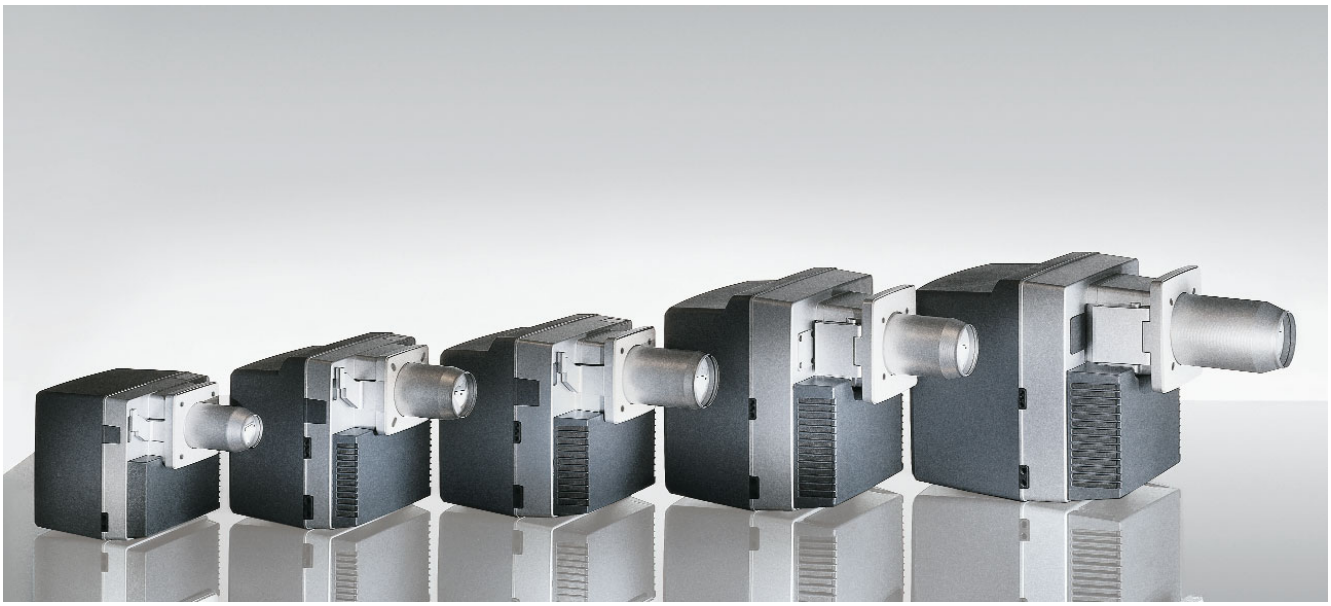
The graphic shows the output range of different gas mixing assemblies and the NO_x emissions they can achieve. The coloured lines mark the respective guaranteed NO_x emission values, subject to Weishaupt's constraints.

.A further reduction in NO_x emissions of up to 35 % can be achieved if external flue gas recirculation (FGR) is combined with the appropriate mixing assembly.

The low emissions achievable with 4LN-version burners, which include FGR as standard, is particularly noticiable. In the 700–23 000 kW range, NO_x emissions of just 30 mg/kWh can be guaranteed with these natural-gas-firing burners.

NO_x values with the combustion of natural gas dependent on system parameters [1].

[1] The values are for the stated burner versions on three-pass combustion chambers with medium temperatures ≤ 110 °C and combustion air < 40 °C. Weishaupt constraints based on the requirements of EN 676.



The W-series burners have outputs ranging from 12 kW up to 570 kW

The success of Weishaupt's W-series compact burners is the result of a relentless focus on quality and the customer.

The millions of W-series burners that have already been installed are a reliable, safe, and economical source of heat for domestic and commercial heating and hot-water systems the world over, as well as for countless industrial applications.

The burners, which are rated for outputs of up to 570 kW, are not only extremely compact, they are also equipped with the latest Weishaupt combustion technology. Digital combustion management is a standard feature across the range and offers the highest degree of operational reliability and efficiency, thanks to its microprocessor-based monitoring and control of all burner functions.

The integration of digital technology into the burners also opens up the possibility of communicating electronically with building management systems via Modbus or Profibus. These remote monitoring and diagnosis capabilities are a significant feature of modern systems.

The versatility of the W-series burners, along with their well-thought-out design and their reliability, has helped to make them an outstanding success.

The Weishaupt purflam® oil burner is one example of the process of continuous development that the W-series has undergone over the course of the past several decades. It has a special mixing assembly which produces a blue flame, similar to a gas burner, that results in soot-free oil combustion with minimal emissions.

This and other developmental advances have all been based on one goal: the achievement of ever-more economical and reliable heat generation.



W-series burners have fully automatic operation; their digital combustion manager follows the pre-programmed sequence of operations precisely and controls the fuel / air compound

WM-series monarch® burners: Distinctive design with ultimate functionality



All sizes of the latest generation of monarch® burners combine cutting-edge technology with functional form

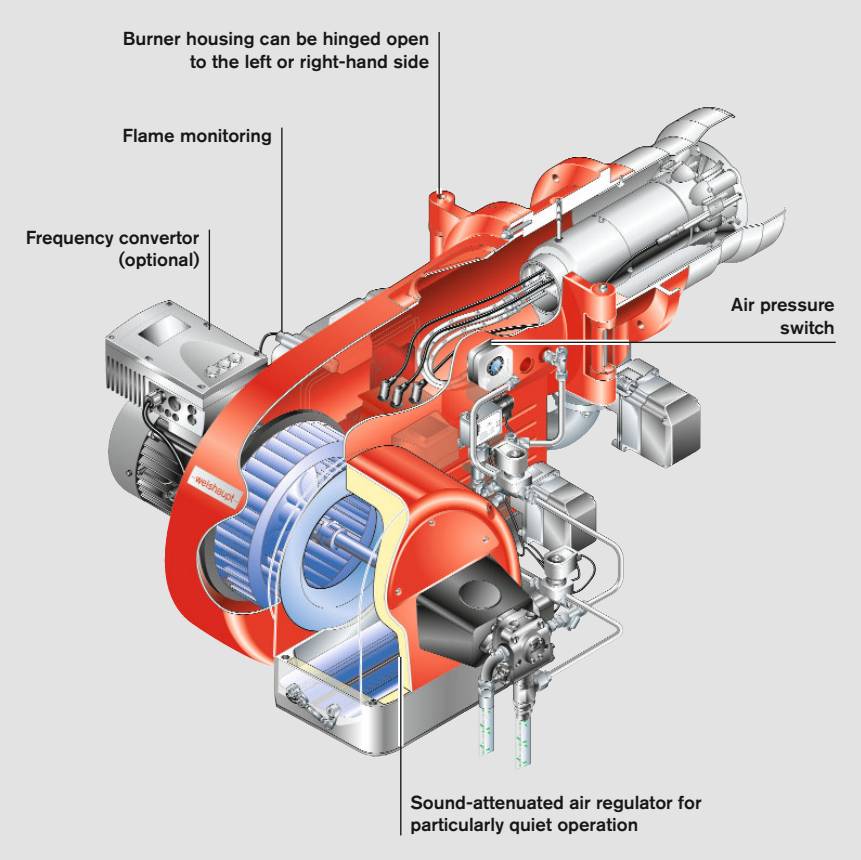
Monarch. No other brand name has served Weishaupt for longer or with more distinction. It has always stood for low emissions, robust technology, and reliable operation.

The current range of Weishaupt monarch® burners embodies these virtues within an outstanding design that utilises the latest technology. The gas, oil, and dual-fuel burners are used to fire hot-water, steam, and water-tube boilers, as well as air heaters, and they do so not only reliably but also extremely quietly. Weishaupt was able to use its own aerodynamics testing facility – something unique in the industry – to develop a completely new air inlet geometry that facilitates the extraordinarily quiet and efficient operation of the burners.

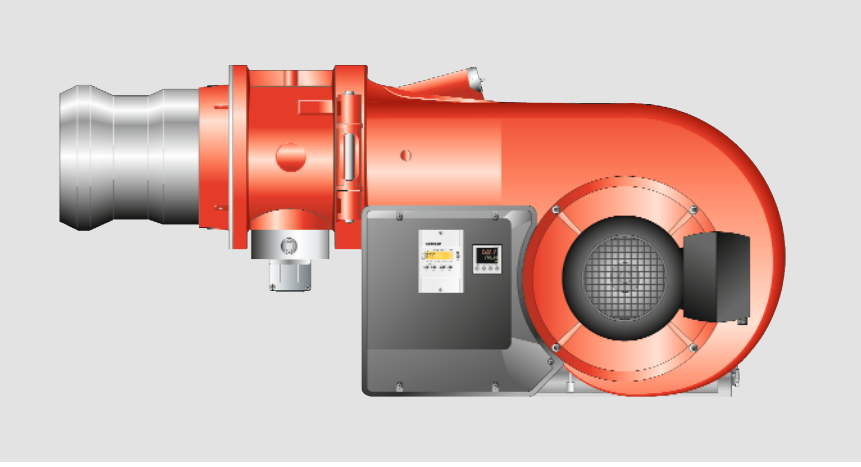
Weishaupt digital combustion managers are included as standard with the latest monarch® burners, guaranteeing both low emissions and the extremely precise and continually reproducible dosing of fuel and combustion air. Furthermore, digital control of the burners opens up numerous opportunities for automation and control through integration with building management systems and bus networks.

The burners can also be equipped with variable speed drive and O_2 trim to help increase efficiency even further – flexibility that pays for itself. Weishaupt's WM-series monarch® burners offer a seamless range of outputs up to 11 MW.

This latest generation of these burners is particularly notable for efficiency, low emissions, and reliable operation. These benefits are coupled, as always, with Weishaupt's closely knit, global service network.

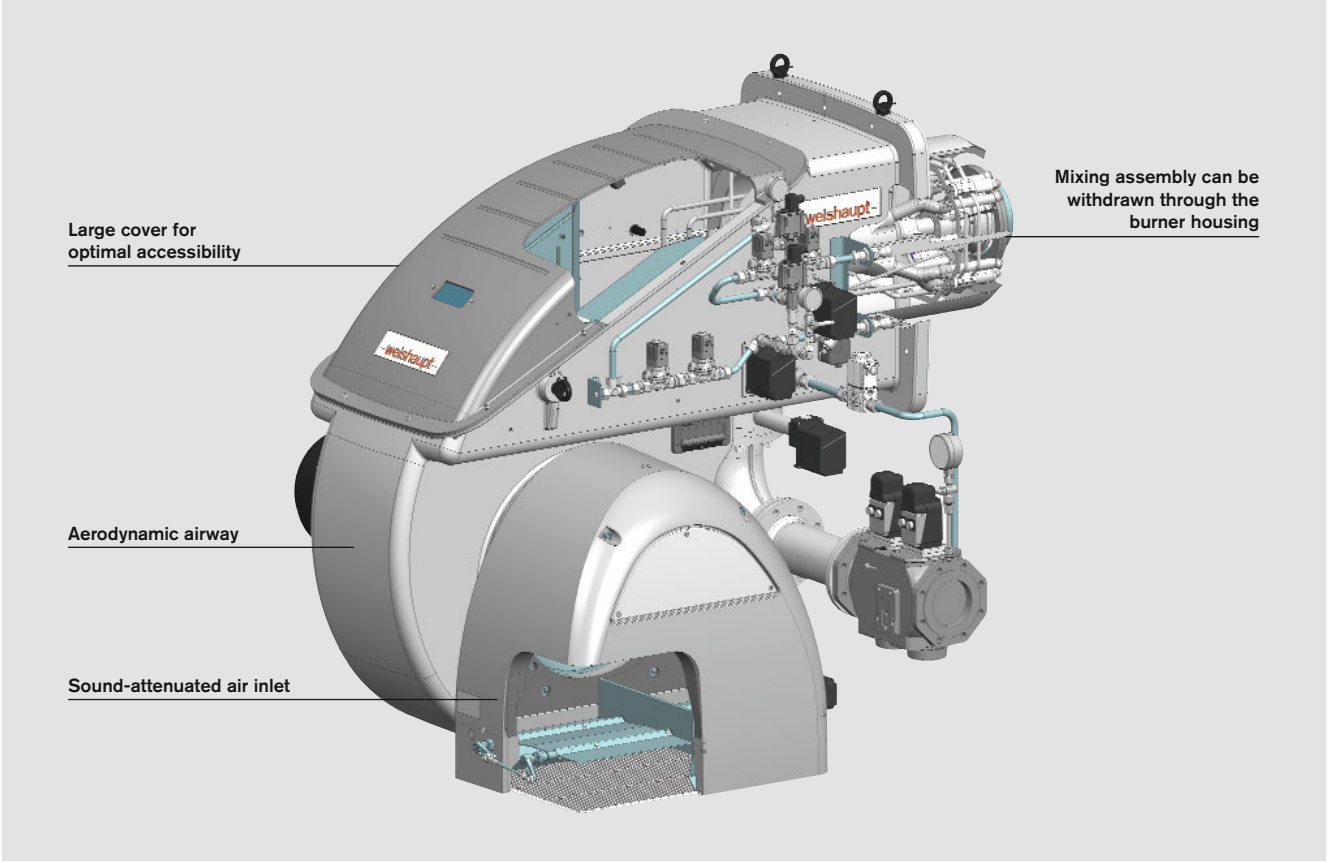


WM-GL30 monarch® dual-fuel burner, version ZM-R
(sliding-two-stage / modulating load control on both fuels)



WM 30 monarch® burner with integral W-FM 54 combustion manager and KS20 load controller

Weishaupt WKmono 80:
The next-generation monobloc burner



The WKmono 80, the next generation of monobloc burner, packs a high rating into a compact design

The WKmono 80 is a combination of monobloc and duobloc burner. It retains the compact and service-friendly design and uses the existing modular construction system.

The burner, whose controls can be inbuilt or mounted in a separate control panel, uses pump stations and other system components from the WK burner range. This utmost degree of efficiency and flexibility means the burner is suitable for the widest range of applications.

The combustion managers are, in a nutshell, "digital reliability". Their adaptability and versatility leave nothing to be desired. VSD, O_2 trim and communication with superordinate control systems are commonplace features for equipment of this size.

Since no one fuel is the same as the next, different mixing assemblies have been specially developed for use with particular fuels. Reliable combustion with a wide range of gases and oils is thereby guaranteed.

This next generation of monobloc burner shares in Weishaupt's guiding principles of cost-effectiveness, efficiency, and reliability.

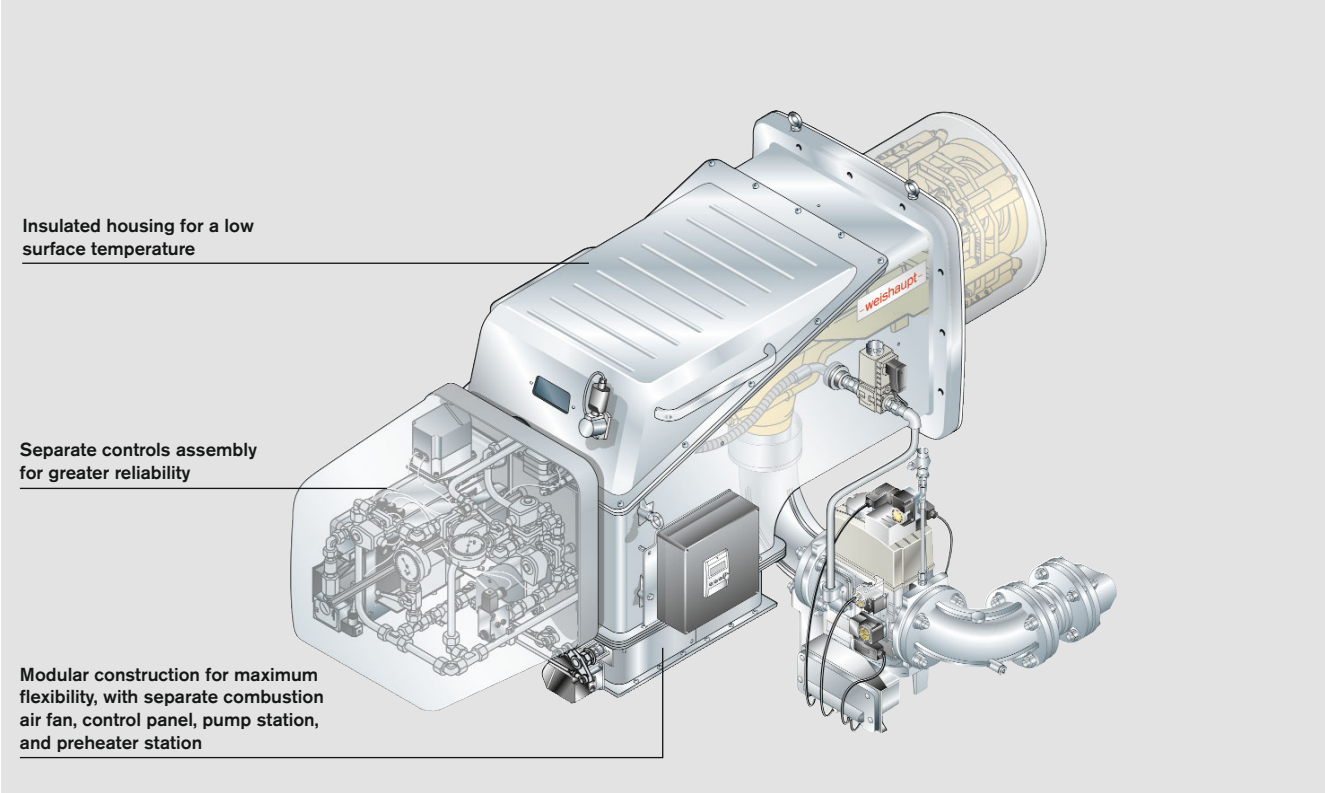


The WKmono 80 provides a top-rate performance all the way up to 17 MW

WK-series industrial burners: Modular powerhouses



In classical duobloc form, the WK 80 can achieve an output of 32 MW



WK-series burners can be adapted to suit a wide range of even the most arduous of applications

The WK range contains Weishaupt's largest and most powerful burners. The modular design of the burners, coupled with their enormous 32 MW capacity range, makes them ideally suited to industrial applications.

The combustion air fan, pump station, and preheater station are all selected independently of the burner. This concept offers a high degree of flexibility for matching to the most diverse applications.

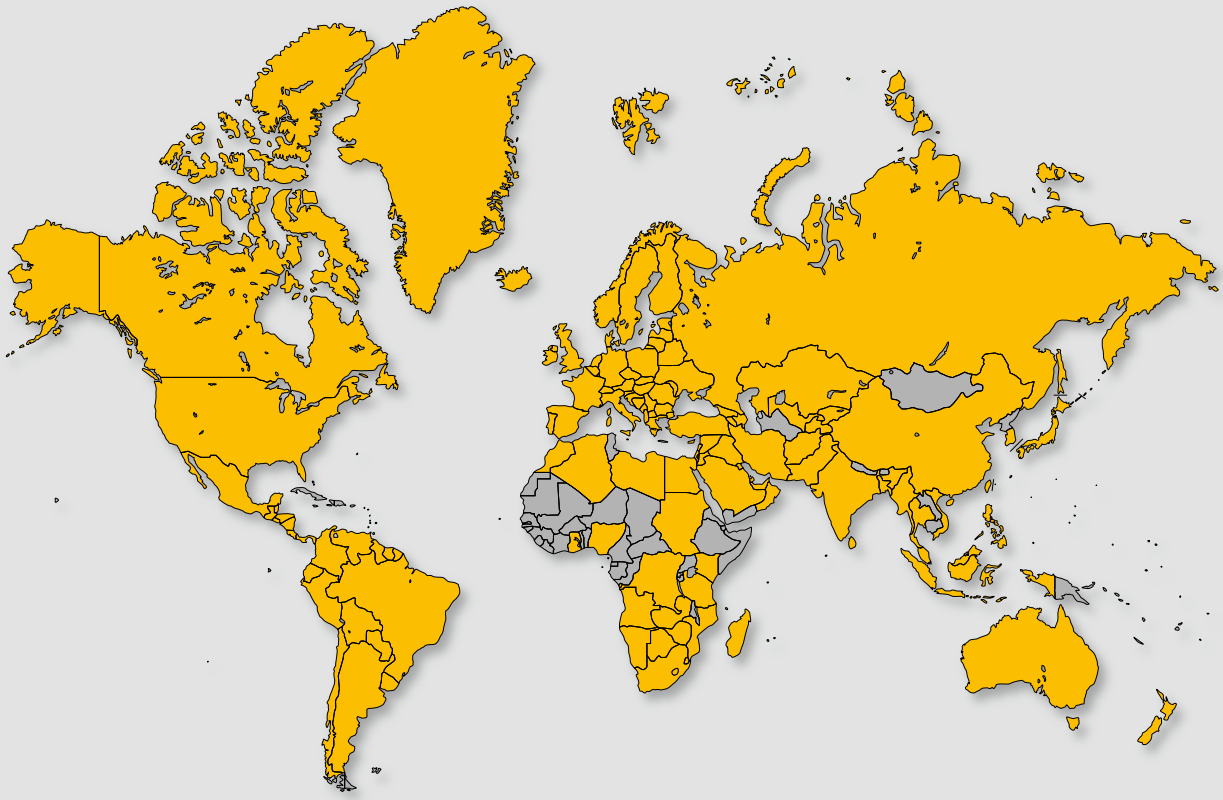
The burner housing is fitted with insulation which significantly reduces its surface temperature during operation with pre-heated combustion air. The insulation also provides effective noise reduction.

The flexibility of the WK-series burners, coupled with their other technological advantages such as digital combustion management, VSD, O_2 trim, and multiflam® technology, places them firmly in the vanguard of industrial burners.

The test flame tube which Weishaupt uses to develop its industrial burners is one of a kind. The facility allows for the extensive testing of burners beyond the 20 MW boundary, and for their advance adaptation to specific applications.

It does not matter which fuel is to be fired. Weishaupt WK-series burners are able to fire a wide variety of gases and oils reliably, provided an appropriate version of the burner is used.

Weishaupt worldwide:
We're there where you need us



Algeria
Angola
Argentina
Australia
Austria
Bahrain
Belgium
Belize
Bolivia
Bosnia-Herzegovina
Botswana
Brazil
Bulgaria
Canada
Chile
China
Colombia
Congo
Costa Rica
Croatia
Cyprus
Czechia
Denmark
Ecuador
Egypt
El Salvador
Estonia
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