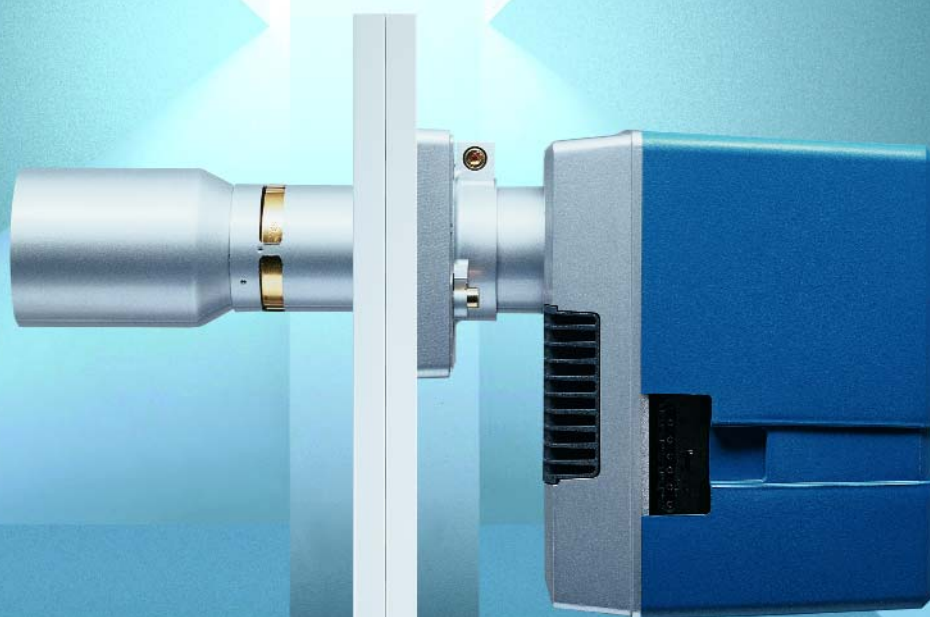


– weishaupt –

# product

Information on Weishaupt purflam® burners



The future is clear

**Weishaupt purflam® burners up to 35 kW**

# Weishaupt purflam<sup>®</sup> burners: Technology for the environment



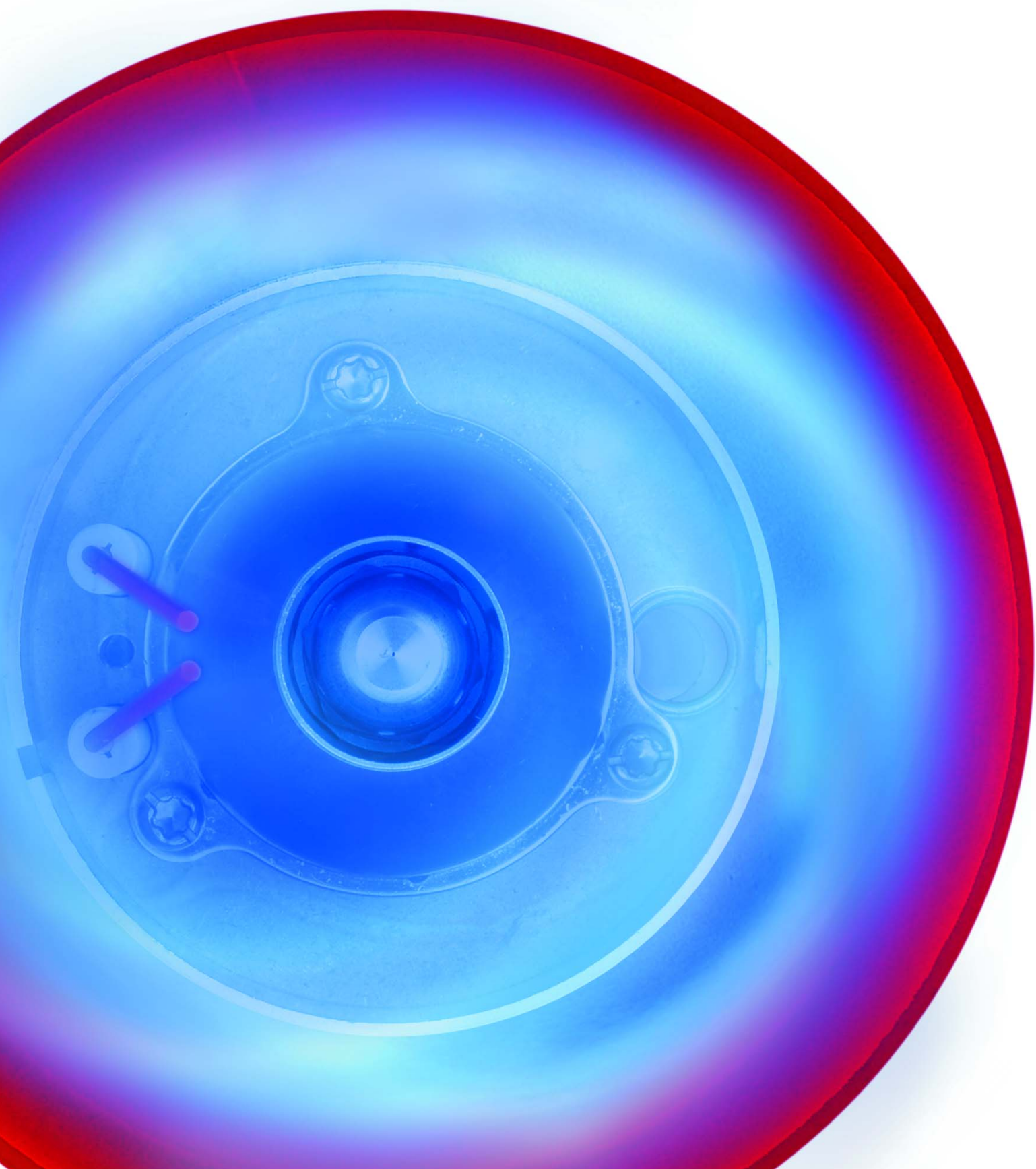
*More than 90 people work on the future of burners and heating systems at the Weishaupt Research and Development Centre*

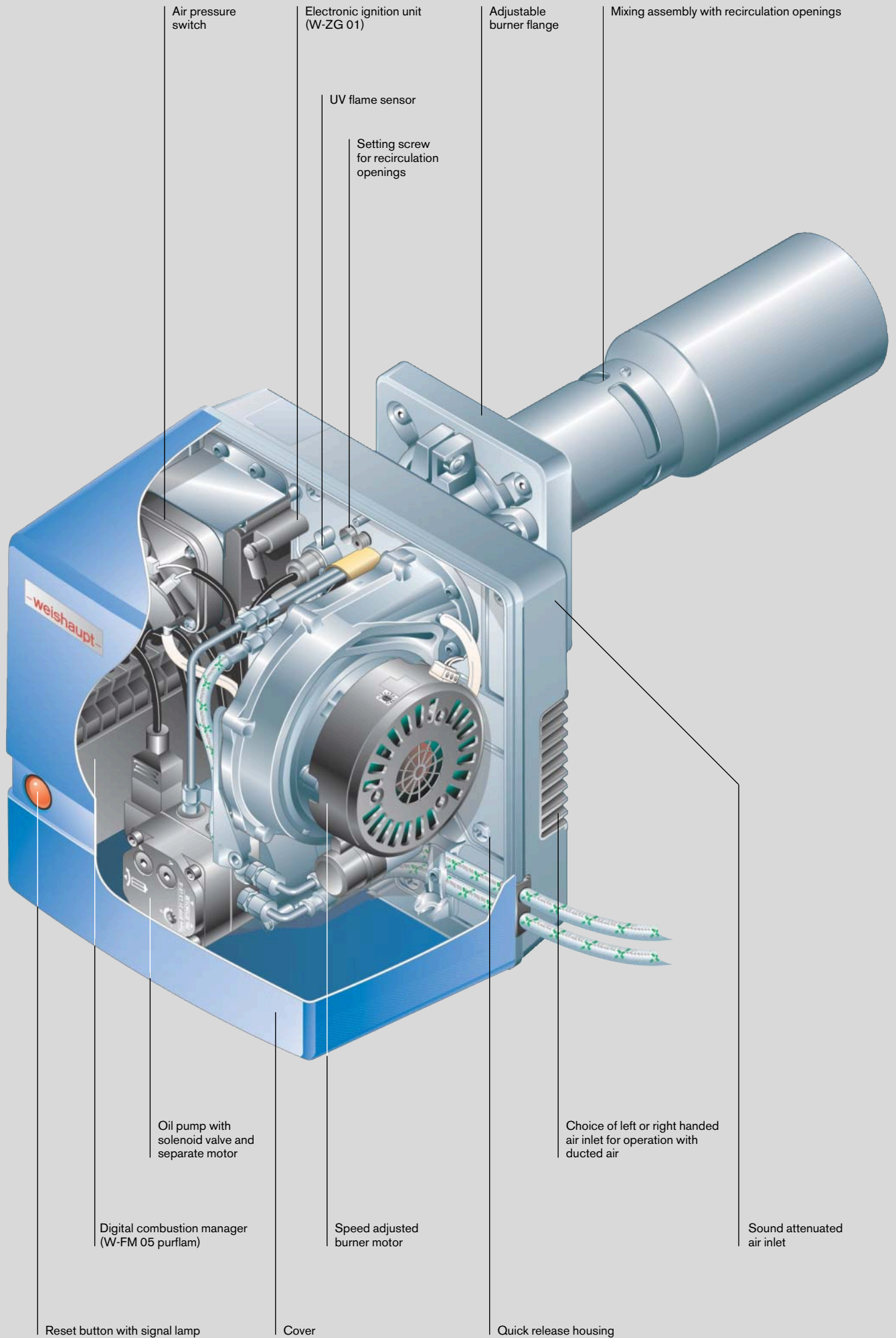
The future is our most important challenge. Technical progress is our motivation. Innovative products are the result.

Therefore, as long as 50 years ago our own Research and Development Centre was already developing economical burners with extremely low emissions – at a time when very few people were talking about environmental protection.

Weishaupt has once again begun a new chapter in the history of combustion technology with its purflam<sup>®</sup> burners. Based on the millionfold tried and tested W series burners, a new generation of burners has now been developed, which serves to underline our competence in the field of Low NO<sub>x</sub> burner technology.

*The special combustion head ensures smoke free combustion*





Air pressure switch

Electronic ignition unit (W-ZG 01)

Adjustable burner flange

Mixing assembly with recirculation openings

UV flame sensor

Setting screw for recirculation openings

weishaupt

Reset button with signal lamp

Oil pump with solenoid valve and separate motor

Digital combustion manager (W-FM 05 purflam)

Speed adjusted burner motor

Choice of left or right handed air inlet for operation with ducted air

Sound attenuated air inlet

Cover

Quick release housing

# Weishaupt purflam<sup>®</sup> burners: High efficiency, low emissions

**Weishaupt purflam burners are notable for their particularly low NO<sub>x</sub> and CO emissions. Furthermore, the burners operate economically and quietly. The burners have a capacity range of 16.5 to 35 kW.**

## **Optimal combustion principle**

The better oil and air are mixed together, the more complete the subsequent combustion will be. The Weishaupt purflam burner's special mixing assembly effects a gasification of the atomised oil mist, thanks to the radiant heat from the incandescent combustion head and the internal recirculation of the hot combustion gases. The resultant mixture combusts smoke free and with reduced NO<sub>x</sub> emissions. Soot build up on the heat exchanger surfaces is prevented, so the boiler retains its full heating capacity and maintenance costs are reduced. The specially formed air outlets ensure the flame maintains a self stabilising rotation so that no flame stabilisation devices are required, minimising disruptive influences on flame quality.

## **Futuristic fan technology**

The oil pump is driven separately from the combustion air fan. The fan operates via a direct current motor, the speed of which is set in relation to the burner output. The fan speed, and thus the air quantity, is set by means of a potentiometer rather than by adjustment of an air damper. The specially formed fan wheel achieves an optimal degree of efficiency, thus minimising electrical consumption.

Note: burners which achieve very low emission levels (NO<sub>x</sub> and CO) use special combustion systems which need higher fan pressures than standard burners. Under certain circumstances, dependent on the boiler type, this can lead to higher noise levels on the flue gas side than were being emitted by the burner previously fitted. In these situations we recommend the fitting of a flue gas sound absorber.

## **Universally employable**

Weishaupt purflam burners are suitable for use with all the usual steel or sectional boilers within the advised capacity ranges. Even extremely short combustion chambers do not, as a rule, present any problems.

## **Easy to commission**

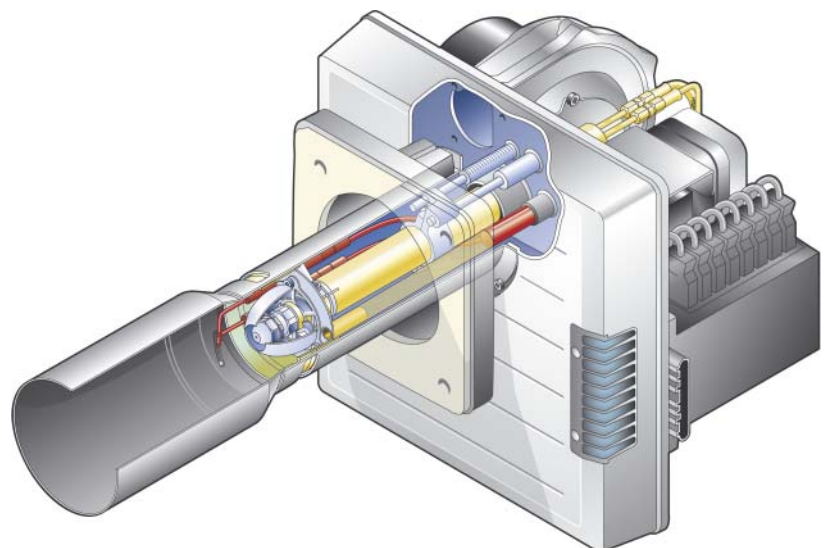
Weishaupt purflam burners are preset and ready for immediate operation. Only adjustments to meet site conditions are required. All of the commissioning work, such as the setting of the recirculation openings, can be carried out with the burner in its installed position. Preparations such as setting the diffuser disc or air damper are not applicable. The burner can be easily matched to the available combustion chamber length using the adjustable flange, which is included as standard.

## **Digital combustion management**

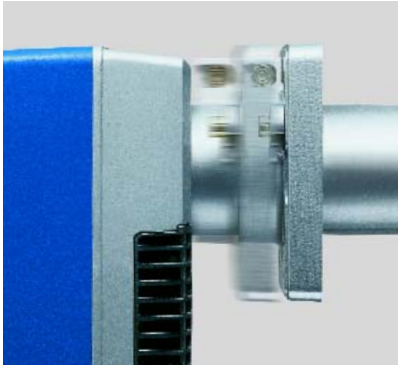
All Weishaupt purflam burners are fitted with digital combustion managers as standard, whose microprocessors control and monitor all burner functions. Consequently, Weishaupt purflam burners are easy to use, precise and safe. Digital combustion managers also offers the possibility of communicating with other systems via an integrated eBUS port. This enables the heating engineer to monitor the operation of the burner and remotely diagnose any faults.

## **Weishaupt nozzle shut off system**

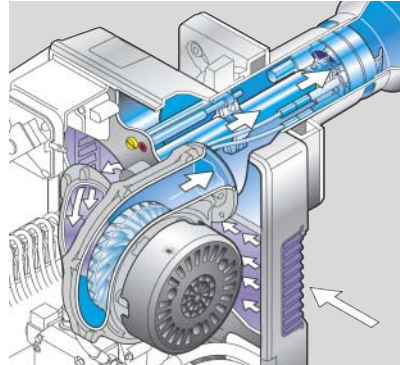
All purflam burners are equipped with the Weishaupt nozzle shut off system. This shuts off the oil completely whilst the nozzle assembly is brought up to temperature and prevents oil nozzle drips after burner shutdown.



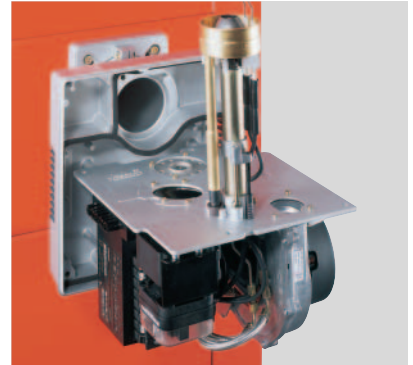
# Weishaupt purflam<sup>®</sup> burners: Trustworthy technology



The adjustable burner flange is used to match to available combustion chamber length



A potentiometer is used to regulate the air quantity by setting the fan speed



Servicing position for optimal access to the mixing assembly

**The Weishaupt purflam burner has arisen from the further development of the millionfold tried and tested W series burners. All components are clearly arranged and easily accessible. The technology makes a good impression because it is typical Weishaupt.**

#### Environmentally friendly

- Smoke free combustion
- NO<sub>x</sub> emission levels considerably lower than 120 mg/kWh
- Low emissions at start up and shut down
- Low electrical consumption

#### Universal

- Adjustable flange fitted as standard so the burner can be easily adjusted for the length of combustion chamber available
- Suitable for use with all the usual steel or sectional boilers within the advised capacity ranges.
- Compact construction
- Can be rotated through 180°
- Ducted air supply can be connected to the left or right hand side if required; connection pre-existing

#### Simple commissioning

- Oil and air nozzles are fitted at the factory, burner preset cold Preparations such as diffuser and air damper setting are not required
- A potentiometer is used to set the fan speed and thus the air quantity and mixing pressure
- A setting screw can be used to adjust the recirculation openings on the burner after it has been mounted

#### Simple maintenance

- Separate servicing position
- Good accessibility to all components
- Quick release housing

#### Optimised operation

- Extremely quiet fan
- Motor with anti-vibration mountings
- Specially formed fan blades for high efficiency and reduced electrical consumption
- Sound attenuated burner housing
- Soft start function at approx. 95% of nominal load

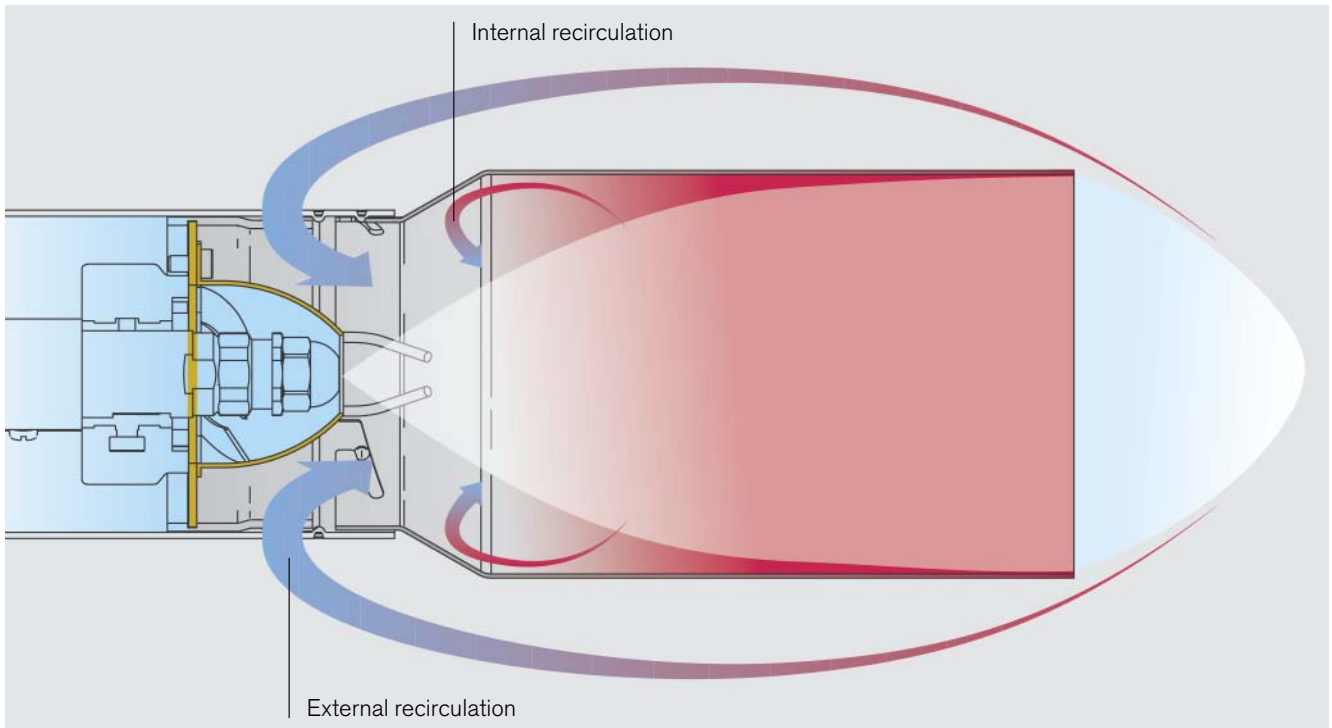
#### Digital combustion management

- Plugged electrical connections
- Signal lamp for fault diagnosis simplifies servicing
- Safe operation
- Bus interface (eBUS)

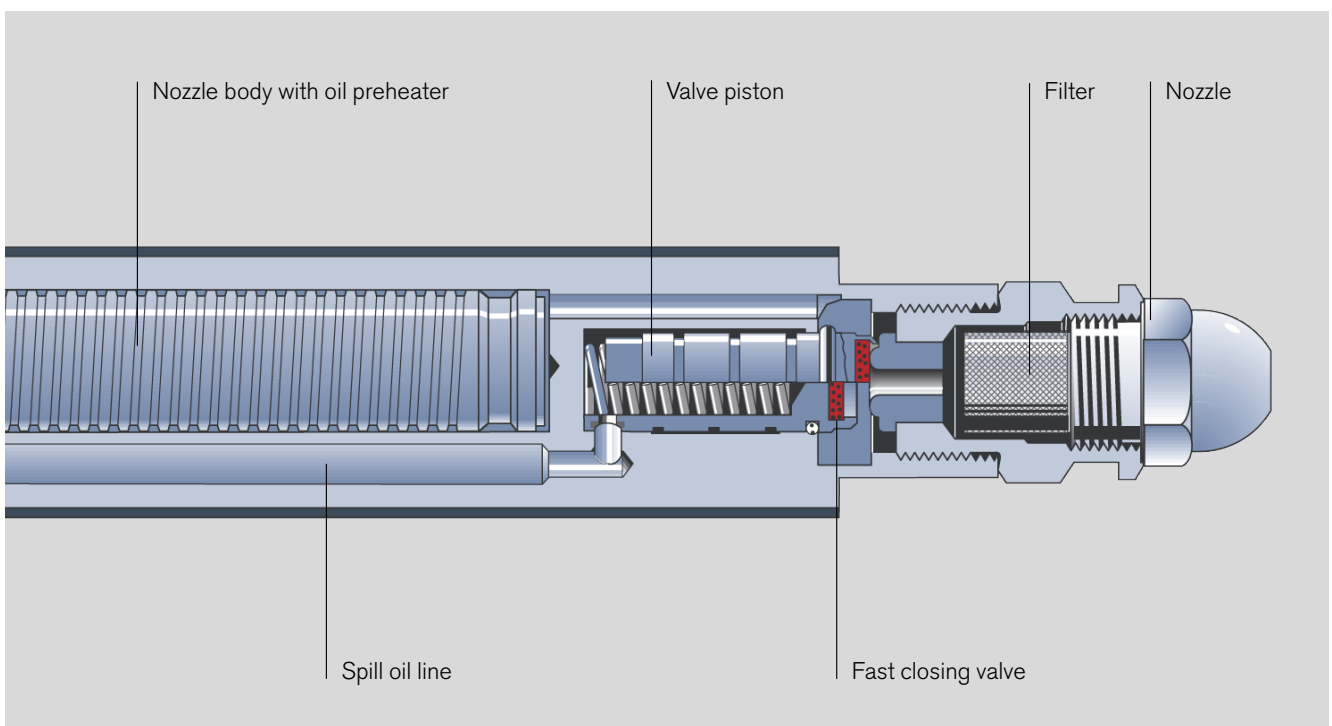
#### Proven quality

All burners are tested by an independent body and conform to the following standards and EU directives:

- EN 267
- EN 50 081/82
- EN 60 335
- Machinery Directive 98/37/EC
- Electromagnetic Compatibility Directive 89/336/EEC
- Low Voltage Directive 73/23/EEC
- Boiler Efficiency Directive 92/42/EEC



*The special construction of the mixing assembly effects the gasification of the oil mist and the necessary recirculation of the combustion gases – combustion of the oil is smoke free with considerably reduced NO<sub>x</sub> emissions*



*The Weishaupt nozzle shut off system prevents drips during burner start up and shut down and also reduces emissions*

## Technical Data

