

– weishaupt –

product

Information on compact burners



Digital oil burners

Weishaupt oil burners, WL10 to WL40 (30–570 kW)

A burning passion for quality

Technological progress is our motivation. It has been driving us for more than 60 years to keep setting new standards for the combustion equipment industry.

Our own Research and Development Centre is constantly working both on the development of new products and on the optimisation of existing ones.

We consider it not only our goal but our responsibility to go above and beyond current legislative requirements to develop combustion systems which emit ever fewer pollutants, save ever more energy, and combine ecology and economy in a practical manner.

Therefore, not only do we invest in research and technology, but we also only ever work with the best materials, using the latest tools, and we carry out meticulous quality control checks.

Millions of times over, heating specialists and customers have proven Weishaupt burners to be reliable, durable, environmentally friendly, and technologically advanced; a fact also borne out by our numerous prizes for design and innovation.

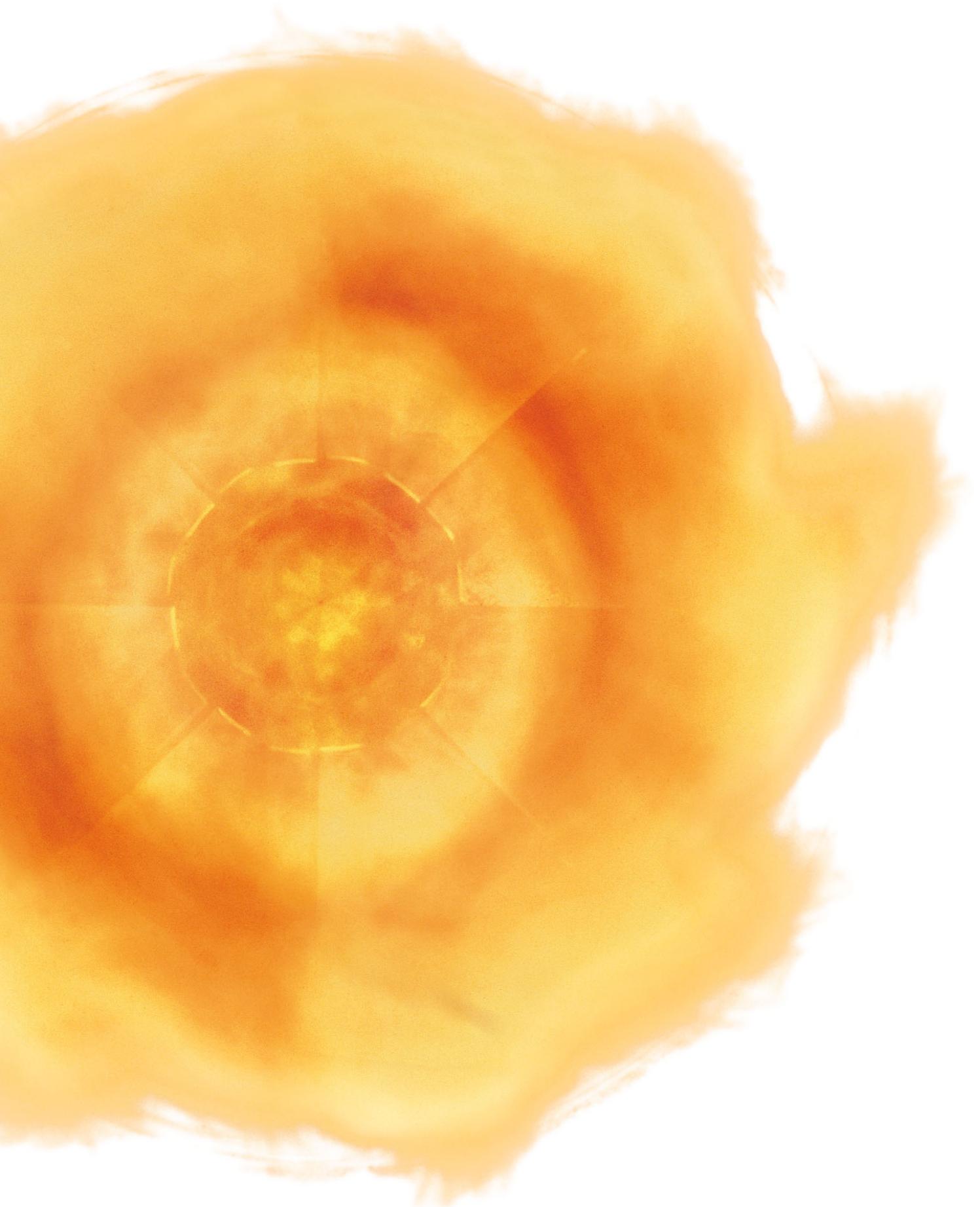
Every day, more than 600 burners are manufactured at our ultra-modern facilities in Schwendi, Germany. Each and every single burner undergoes a mechanical and electrical function test. It is this combination of technology and effective quality control that helps to safeguard Weishaupt's renowned reputation for quality.

A new burner is always an investment in the future. Costs always need to be well-balanced against use but, ultimately, long-term overall success depends on quality, technology and safety. Deciding on a Weishaupt burner is always a safe investment in the future.



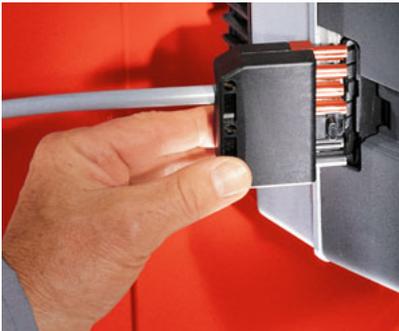
The very latest research and production methods and rigorous quality control ensure the quality for which Weishaupt is renowned

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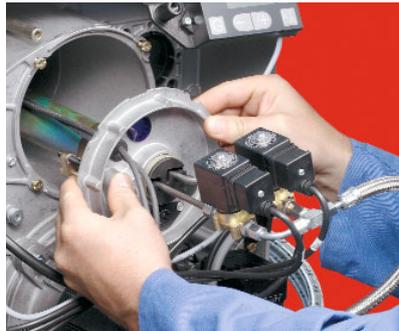




A hallmark of practical combustion technology



Coded plugs for safe electrical connection



All components are easily accessible



Simple commissioning and diagnosis

A safe investment in the future

Reliable and economical: The million-fold success of Weishaupt's compact burners is the result of an unrelenting orientation towards quality and customer satisfaction. The equipment has been continually developed and improved over decades.

The latest production methods and very stringent quality checks of all products ensure Weishaupt's reputation for quality. In choosing Weishaupt you are making a safe investment in the future.

Large capacity range

The large capacity range of 30 to 550 kW makes the burners suitable for a wide range of heat generators.

Electronic ignition

The W-ZG 01 ignition unit used on all Weishaupt W-series burners is very energy efficient and extremely reliable.

Digital combustion management for reliability and ease of use

Weishaupt is a pioneer in this field. Digital combustion management offers greater ease of use, simple servicing, even greater reliability in operation, and, last but not least, an extremely attractive price to capacity ratio. Furthermore, this intelligent technology enables the burner to be integrated with complex building management systems.

Outstanding service

Weishaupt has an extensive worldwide sales and service network. Customer service is available around the clock. Weishaupt's optimal in-house training ensures service technicians are of the highest calibre.

Service case

The Weishaupt service case for burner sizes up to WL20 facilitates the sensible storage of spare parts and optimal service readiness. All the parts needed for repairs and service work are clearly arranged in this handy and robust plastic case.

Proven quality

The burners are tested by an independent body and fulfil the applicable requirements of the following European Union directives and applied standards:

- EMC** EMC Directive 2014/30/EU
Applied standards:
 - EN 61000-6-1 : 2007
 - EN 61000-6-3 : 2007
- LVD** Low Voltage Directive 2014/35/EU
Applied standards:
 - EN 60335-1 : 2010
 - EN 60335-2-102 : 2010
- MD** Machinery Directive 2006/42/EC
Applied standards:
 - EN 267 Annex J,
- PED¹⁾** Pressure Equipment Directive 2014/68/EU
Applied standards:
 - EN 267 Annex K,
 - Conformity assessment procedure: Module B

The burners are labelled with

- CE Mark
- DIN CERTCO

¹⁾ WL30 and WL40 with the appropriate choice of equipment.

Digital combustion management: reliable and easy to use



All Weishaupt W-series burners are fitted as standard with digital combustion managers, whose microprocessors control and monitor all burner functions. As a result, Weishaupt burners are easy to use, precise, and reliable.

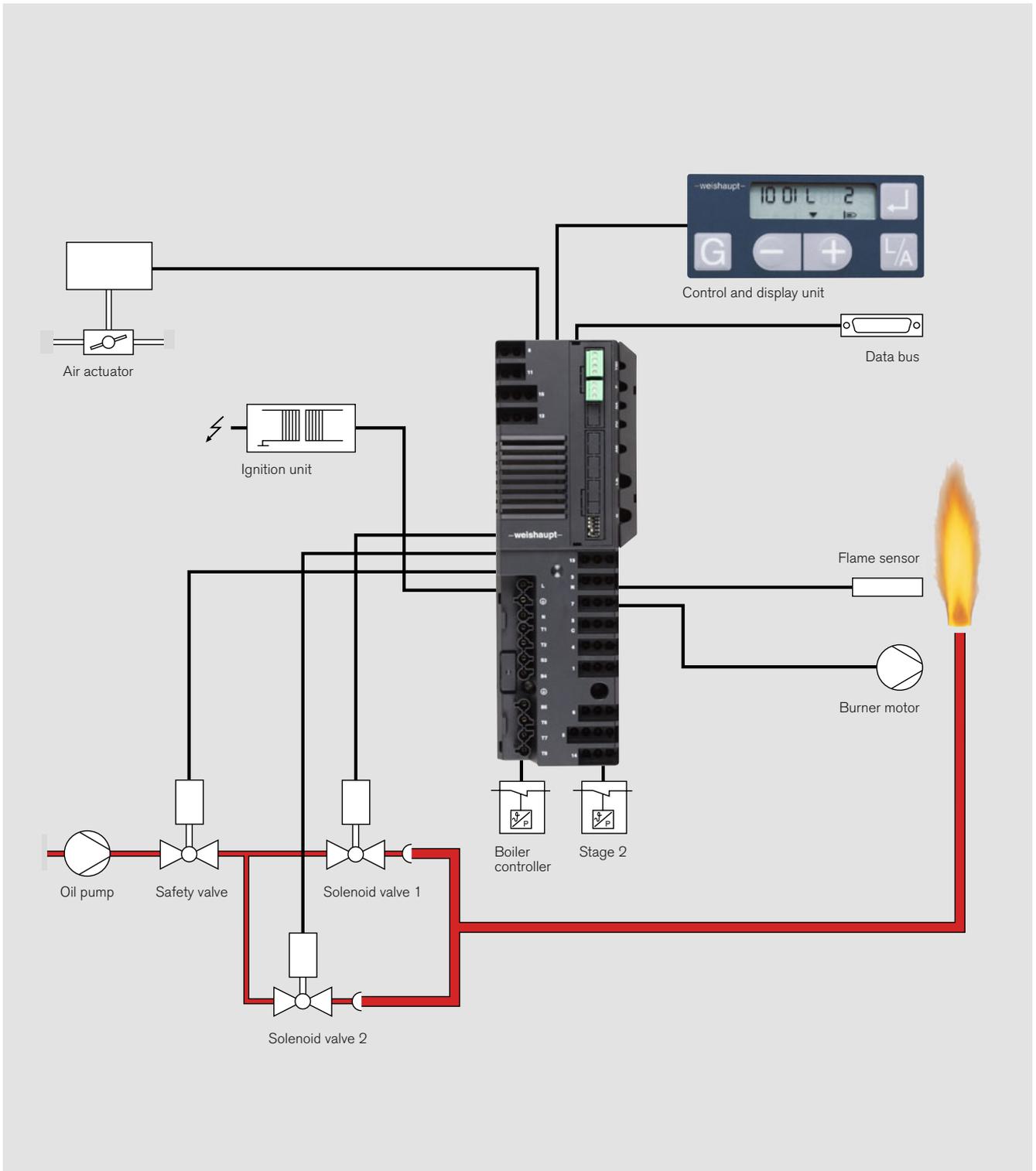
The digital combustion managers also offer the possibility of communicating with other systems via an integrated bus connection. This allows a technician to monitor the operation of the burner and remotely diagnose any errors.

The key points:

- The utilisation of identical units for gas and oil-fired burners helps simplify commissioning and reduces the number of spares required.
- Non-interchangeable plugs ensure the correct electrical connection of all components
- Electrical remote reset is possible
- Safety is ensured by the reciprocal monitoring of two microprocessors
- Vari-coloured LED lamp to indicate burner operational stage and fault conditions (WL10 and WL20)
- LCD screen with interrogation, service, and parameterisation functions. The burner can be set directly via the operating keys (WL30 and WL40)
- Suitable for the continuous operation of LTHW plant – no controlled restart every 24 hours
- Suitable for air heaters and Group II and III steam boilers, as well as for Group IV steam boilers (with optional W-FM 25 PO)
- The integrated bus interface offers the following functions:
 - Connection to a PC for display of the operational sequence and the setting of functional parameters
 - Remote monitoring and diagnosis via a self-dialling modem
 - Connection to the latest building management systems
 - Prepurge time can be set via a PC

Digital combustion management Features	W-FM 05	W-FM 10	W-FM 25	W-FM 25 PO
Intermittent firing	●	●	●	●
Continuous firing >24 h				●
Flame sensor for intermittent firing	QRB	QRB	QRB	QRB
Flame sensor for continuous firing				QRB
Actuators with stepping motors		●	●	●
Single-fuel operation	●	●	●	●
Removable control unit (max. length of connecting line)			3 m	3 m
Fuel consumption meter			● ¹⁾	● ¹⁾
Bus interface	eBUS	eBUS	Modbus/Profibus	Modbus/Profibus
Available on burner models	WL10 WL20 single-stage	WL10 WL20 two-stage	WL30 WL40 two-stage	WL30 WL40 two-stage

¹⁾ In conjunction with a VZ04 oil meter with pulsed output



Schematic representation with W-FM 25

Trustworthy technology

Remove the burner's cover and you are immediately struck by how clearly its components are arranged, and how the electrical connections are obvious and non-interchangeable. The equipment makes a very good impression, just as Weishaupt always does.

Compact construction

The WL burners' compact construction means they can be easily installed by one person, reducing installation costs to a minimum.

Weishaupt nozzle shutoff system

All Low-NO_x burners are equipped with Weishaupt's nozzle shutoff system. This ensures a tight oil shutoff at the nozzle assembly, preventing any drips after the burner has been switched off.

Low-NO_x version

There are Low-NO_x versions available for all WL burner sizes. A specially designed mixing head generates an intensive internal flue gas recirculation that results in exemplary emission levels.

Sound-attenuated air inlet

The burners have a transverse fan with a sound-attenuated air inlet and, as a consequence, are particularly quiet in operation.

Electronically controlled air damper

The electronically controlled air damper fully closes at burner shutdown to hinder the cooling down of the combustion chamber.

Sevicing position

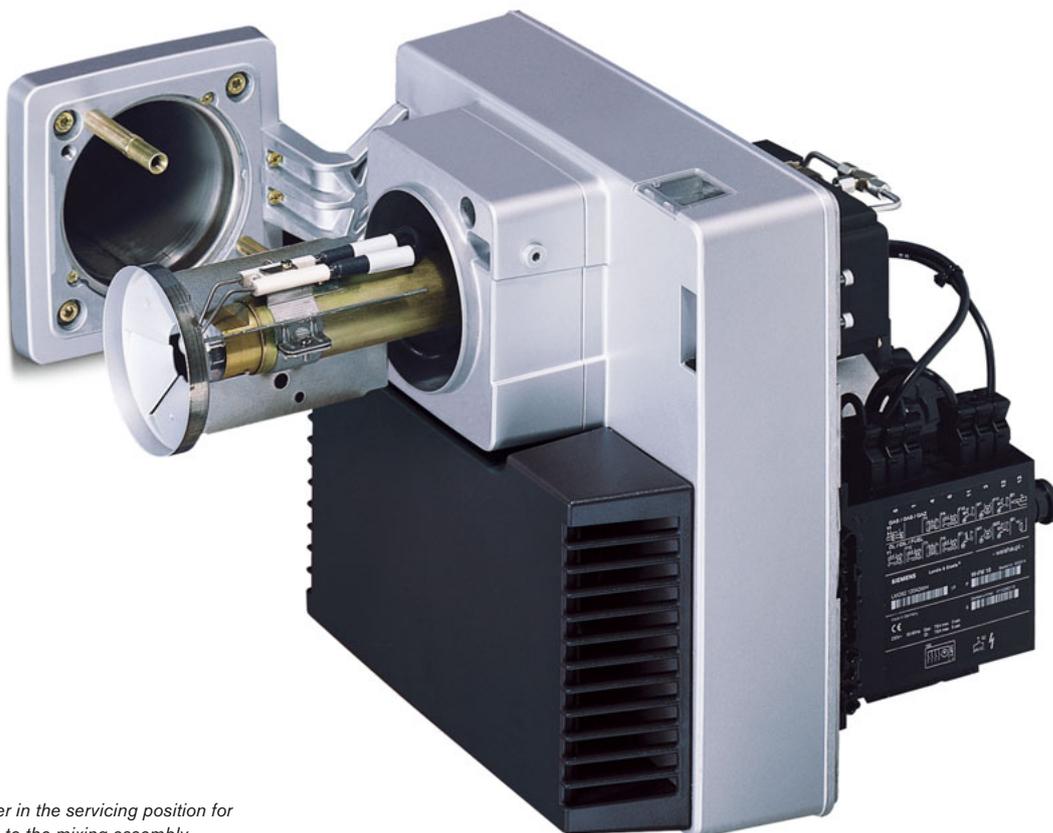
A special bracket allows the burner to be put into a servicing position, providing easy access to the burner and its mixing assembly.

Common platform

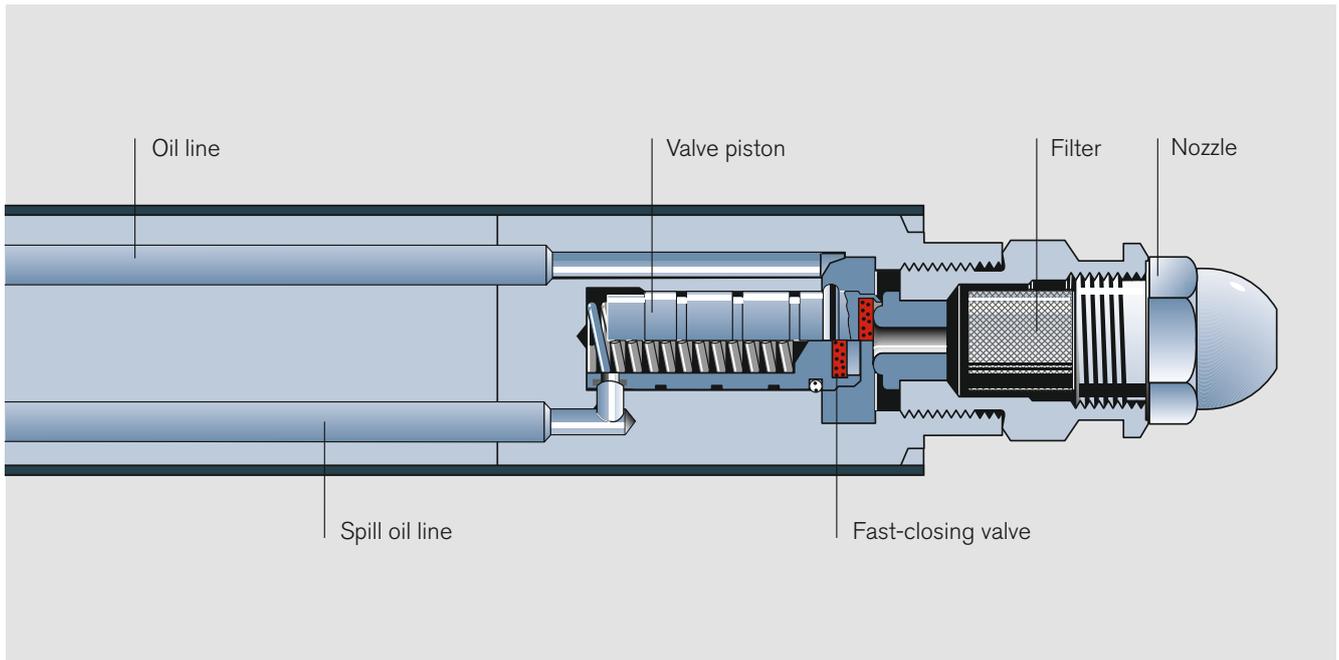
The common platform principle used with W-series burners greatly simplifies the provision and storage of spare parts.

Diagnosis via laptop

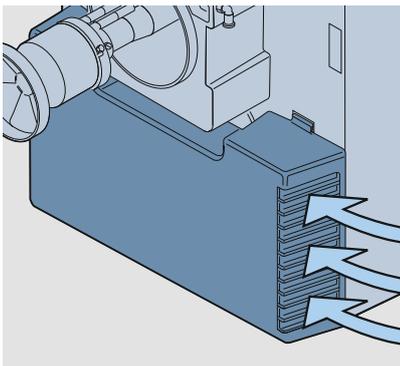
A laptop computer can be connected to the combustion manager, offering easy combustion optimisation and fault analysis. A package comprising interrogation software and connection cables is available for this.



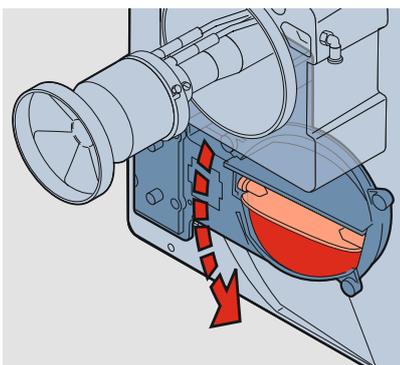
WL20 burner in the servicing position for easy access to the mixing assembly



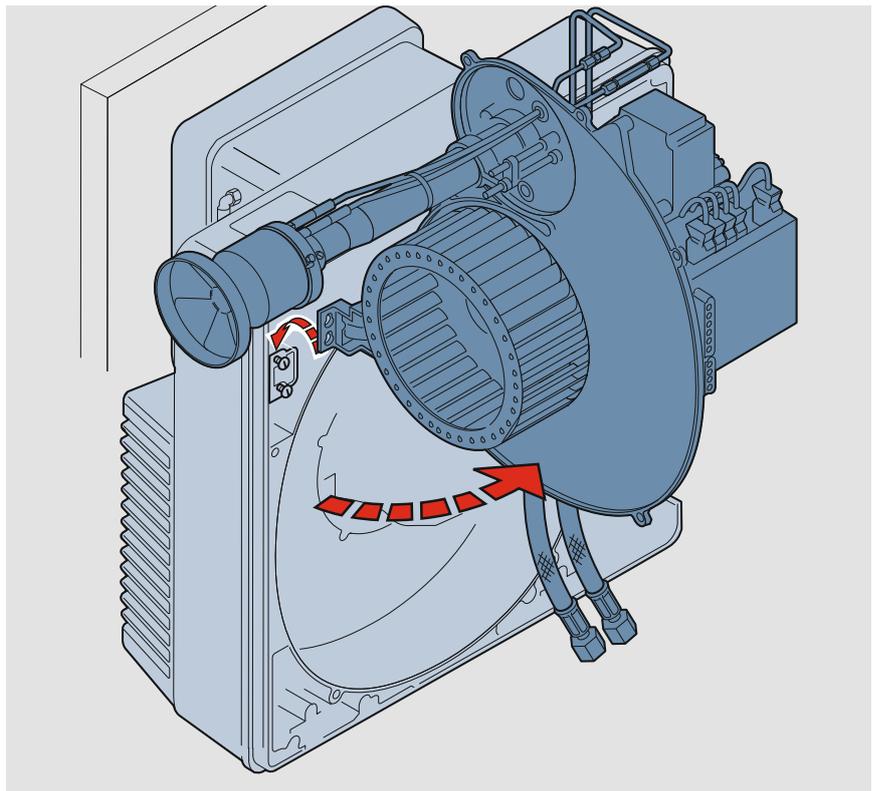
Weishaupt nozzle shutoff system



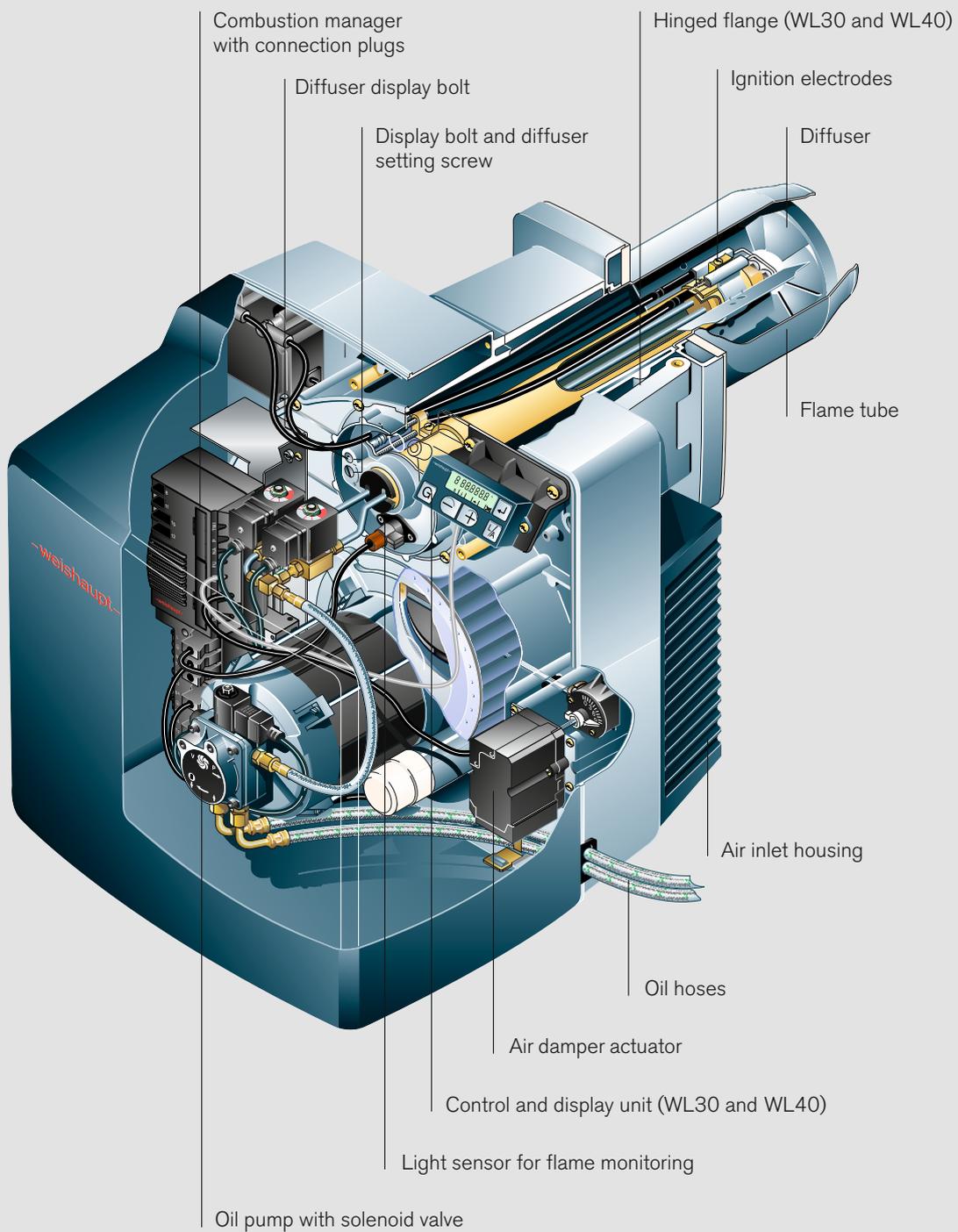
Sound-absorbing air inlet housing



Electronically controlled air damper



Housing with components in the servicing position: easy access to the fan wheel



Example: WL30/WL40

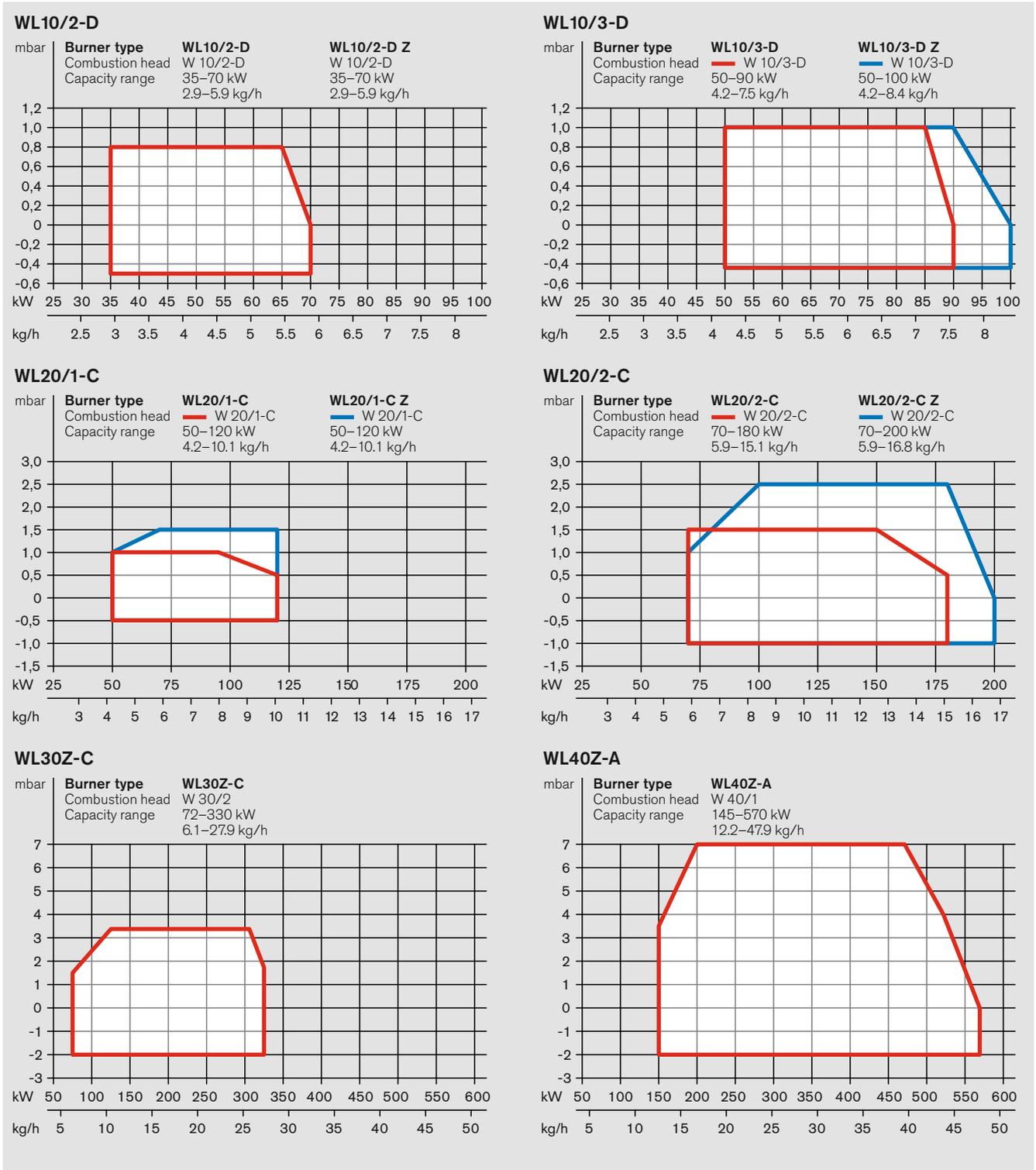
Model overview

Burner type	Version	Mode of operation	Rating	Power input	Mass	Order No.
Standard						
WL10/2-D		Single-stage	35–70 kW	0.13 kW	14.0 kg	241 111 22
WL10/2-D		Single-stage with actuator	35–70 kW	0.13 kW	14.0 kg	241 111 20
WL10/2-D	Z	Two-stage with actuator	35–70 kW	0.13 kW	14.0 kg	241 111 23
WL10/3-D		Single-stage	50–90 kW	0.13 kW	14.0 kg	241 110 31
WL10/3-D		Single-stage with actuator	50–90 kW	0.13 kW	14.0 kg	241 110 30
WL10/3-D	Z	Two-stage with actuator	50–100 kW	0.13 kW	14.0 kg	241 110 32
WL20/1-C		Single-stage	50–120 kW	0,25 kW	20.0 kg	241 210 21
WL20/1-C		Single-stage with actuator	50–120 kW	0.25 kW	20.0 kg	241 210 11
WL20/1-C	Z	Two-stage with actuator	50–120 kW	0.25 kW	20.5 kg	241 213 21
WL20/2-C		Single-stage	70–180 kW	0.25 kW	20.0 kg	241 210 22
WL20/2-C		Single-stage with actuator	70–180 kW	0.25 kW	20.0 kg	241 210 12
WL20/2-C	Z	Two-stage with actuator	70–200 kW	0.25 kW	20.5 kg	241 213 22
WL30	Z-C	Two-stage	72–330 kW	0.42 kW	28.0 kg	241 313 21
WL40	Z-A	Two-stage	145–570 kW	0.62 kW	37.0 kg	241 403 21
Low-NO_x						
WL10/1-D	1LN	Single-stage	30–55 kW	0.13 kW	14.0 kg	241 110 15
WL10/2-D	1LN	Single-stage	50–75 kW	0.13 kW	14.0 kg	241 110 25
WL20/1-C	Z 1LN	Two-stage	55–130 kW	0.25 kW	20.5 kg	241 213 25
WL30	Z-C 4LN	Two-stage	72–215 kW	0.42 kW	28.0 kg	241 313 26
WL40	Z-A 1LN	Two-stage	120–355 kW	0.62 kW	37.0 kg	241 403 25

Please refer to price list for special equipment

Burner selection

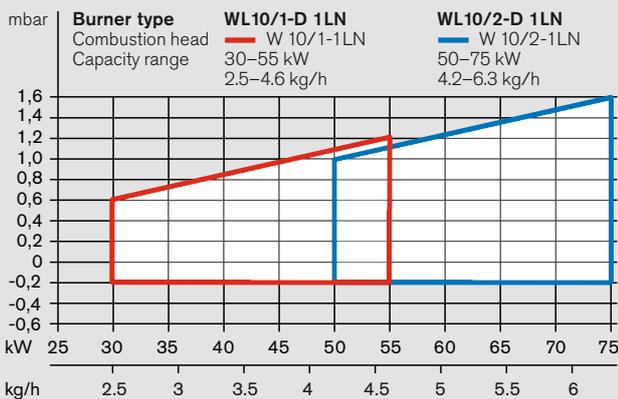
WL10 to WL40, standard version



Burner selection

WL10 to WL40, Low-NO_x version

WL10/...-D 1LN

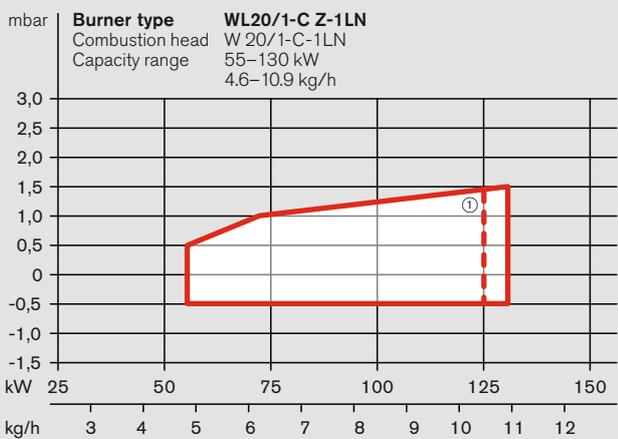


Capacity graphs for oil burners certified in accordance with EN 267.

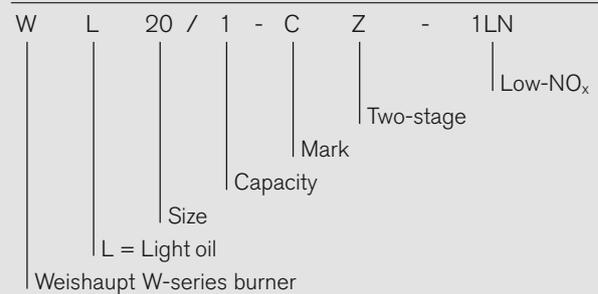
Stated ratings are based on an air temperature of 20 °C and an installation of 500 m above sea level.

Stated oil throughputs are based on a nett calorific value (LHV) of 11.9 kWh/kg for light oil.

WL20/1-C Z-1LN

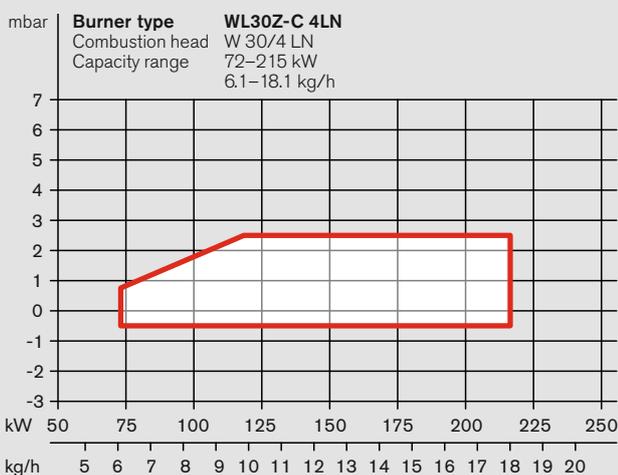


Model designation

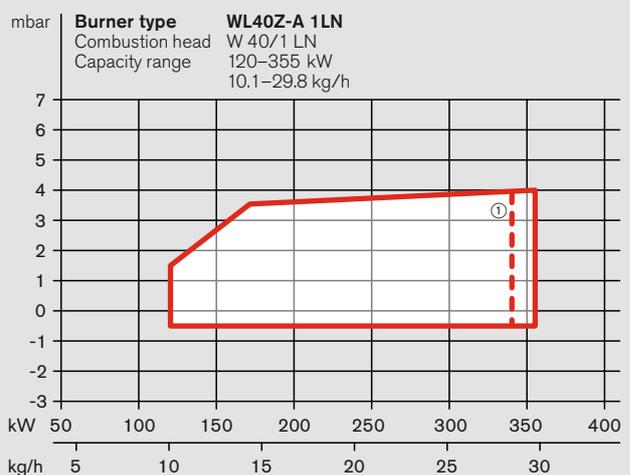


① Limitation for Switzerland:
For use on three-pass heat generators only.

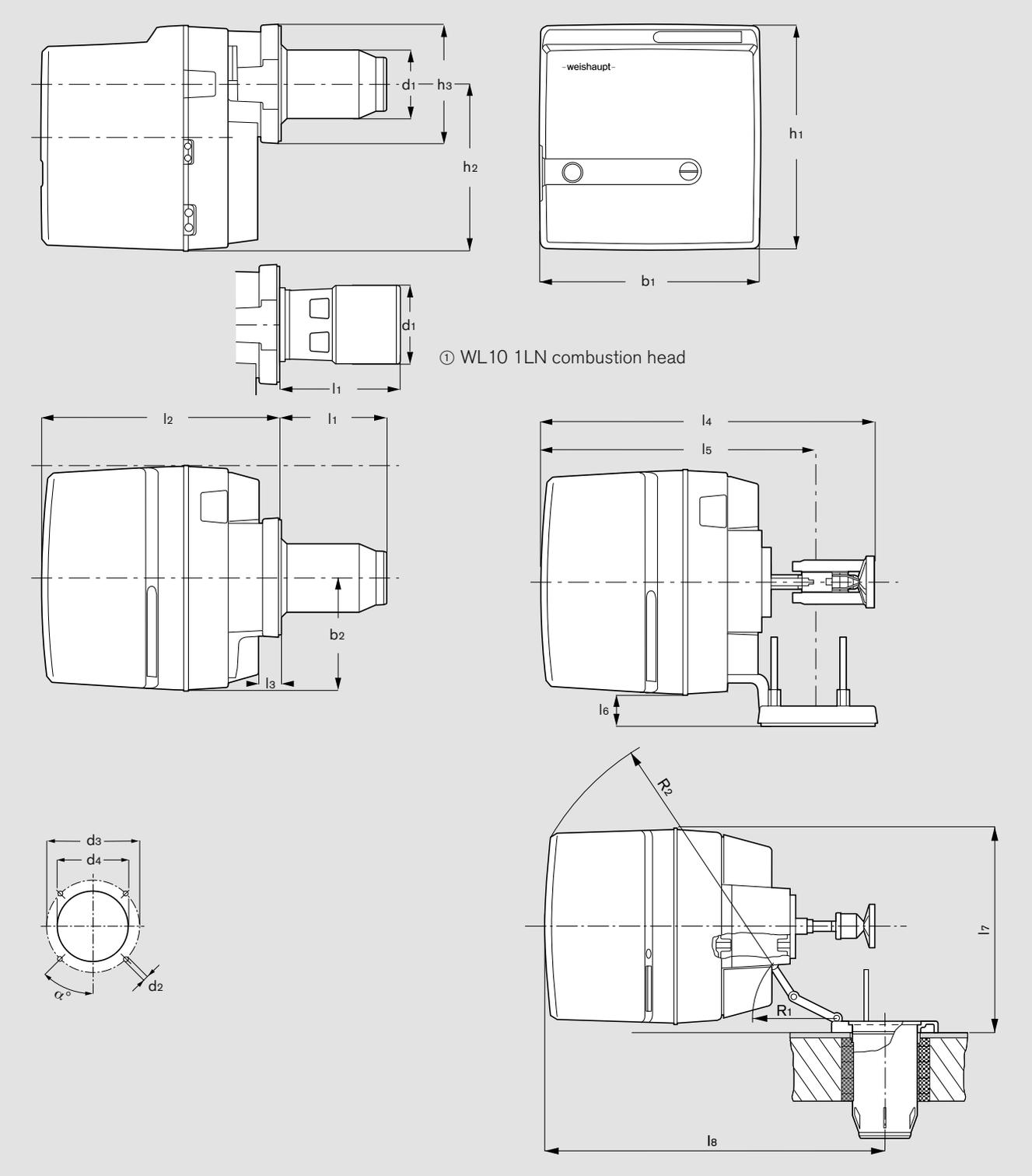
WL30Z-C 4LN



WL40Z-A 1LN



Dimensions



Burner dimensions

Burner type	Dimensions in mm																							
	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	l ₇	l ₈	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	d ₁	d ₂	d ₃	d ₄	d ₅	d ₆	R ₁	R ₂	α°
Standard																								
WL10/2-D	137	344	32	476	398	51	-	-	330	165	-	353	270	165	-	99	M8	150-170	110	-	-	-	-	-
WL10/3-D	140	344	32	476	398	51	-	-	330	165	-	353	270	165	-	108	M8	150-170	110	-	-	-	-	-
WL20/1-C	140	393	32	525	434	73	-	-	358	179	-	376	285	182	183	108	M8	170	130	123	150	-	-	-
WL20/2-C	174	393	32	558	434	73	-	-	358	179	-	376	285	182	183	120	M8	170	130	123	150	-	-	-
WL30Z-C	172	480	62	640	600	62	460	600	420	226	100	460	342	-	-	127	M8	170-186	130	-	-	158	490	45
WL40Z-A	242	577	72	801,5	615	72	480	615	450	245	108	480	360	-	-	151	M10	186-200	160	-	-	185	570	45
Low-NO_x																								
WL10/1-D 1LN	①	344	31.5	476	398	51	-	-	330	165	-	353	270	165	-	100	M8	150-170	110	-	-	-	-	-
WL10/2-D 1LN	②	344	31.5	476	398	51	-	-	330	165	-	353	270	165	-	108	M8	150-170	110	-	-	-	-	-
	① 232-252		② 232-257																					
WL20/1-C 1LN	141	393	32	532	434	73	-	-	358	179	-	376	285	182	183	108	M8	170	130	123	150	-	-	-
WL30Z-C 4LN	170	480	62	639	600	62	460	600	420	226	100	460	342	-	-	127	M8	170-186	130	-	-	158	490	45
WL40Z-A 1LN	238	577	72	795	615	72	480	615	450	245	108	480	360	-	-	151	M10	186-200	160	-	-	185	570	45

