



High-Performance Packaged Boiler

Australia's largest certified
package boiler company.



**The Environmental
Group Limited**
Engineering a Sustainable Future

The Environmental Group Limited

www.environmental.com.au

Working across the Circular Economy

Our Purpose

Engineering a sustainable future.

Our Mission

To enable our clients to contribute to a cleaner environment by safely delivering pivotal solutions while generating value for our shareholders, staff, and partner industries.

Our Team

Our local experts are dedicated to reducing waste and boosting energy performance. Trusted worldwide to provide the highest standards of service and support.

Tomlinson Energy Services

Part of The Environmental Group

Tomlinson Energy Services is Australia's leading provider of packaged boiler solutions, delivering the highest combustion efficiency to keep operating costs low and performance high.

We specialise in custom design, installation, commissioning, and national servicing and repairs, complemented by our 24/7 emergency support.

With offices and a dedicated service team across Australia, Tomlinson Energy Services ensures boilers operate at peak performance for maximum efficiency and reliability.



SOUND ABSORBERS FOR WEISHAUPT BURNERS



Offering Industry Leading Burners

Weishaupt produces gas and oil-fired boilers, heat pumps, and burners. These top-quality products are characterised by their meticulous development, high-quality workmanship, outstanding operational reliability, and maximum Efficiency. Their unrivalled excellence extends equally to design and function.

The outstanding effectiveness of Weishaupt sound absorbers



W-SH 20 in a district heating centre, with bespoke shroud cutouts for the fuel and power supplies.

Weishaupt gas, oil, and dual-fuel burners operate quietly, thanks to the aerodynamic design of their air-ducting parts. Likewise, their mixing assemblies have been developed to ensure that the mixing process is quiet, and their motors and fan wheels are dynamically balanced. All this helps to ensure both low noise levels during operation and the longevity of the equipment.

Sound attenuation measures

The burner, heat generator, and flue gas side equipment in every heating installation form an acoustic system. Resonance phenomena can propagate sound, with the resultant noise being more or less disturbing, depending on its intensity and frequency.

Noise reduction measures – such as the use of sound-absorbing shrouds – can be implemented to ensure that noise limits for the boiler room and adjacent areas are not exceeded.

There is a choice of sound-absorbing shrouds to absorb and dampen the noise created by the burner. To reduce the noise created by any flue gas side equipment, we would recommend the installation of a flue gas sound absorber.

Effectiveness

Weishaupt sound-absorbing shrouds work to dampen and absorb sound. By covering or insulating the source of the noise, the sound energy within them is reflected internally and thus reduced. It is important that the insulation be as complete as possible, without acoustical bridges. All sound absorbing shrouds therefore feature an integral air intake section. This, and the whole shroud, are lined with non-woven glass fleece insulation and mineral wool; the resultant high degree of absorption converts the sound energy into heat.

Assessment of the sound level

The amount of noise generated by a burner is given as a sound pressure level measured in decibels [dB(A)].

During the analysis the sound pressure levels are determined area by area using octave filtering. This gives lineally mediated levels referenced to the relative octave centre frequency, which are then displayed in the form of a graph.

The test result is an A-weighted sound pressure level, obtained by summing across the whole frequency range, taking into account weighting curve A.

The evaluation of sound emissions with the test unit conforms to EC 1672.

Construction

The sound-absorbing shrouds, which can be wheeled into and out of position and adjusted for height as required, are noteworthy for their self-supporting “flat-pack” design. They comprise several easy-to-handle component parts – the base, sides, air inlet, and lid – that can be easily assembled by means of quick-release catches to form a single sound-proof unit.

The shroud has openings either to the side or below for gas, oil and electrical supply lines. An oil drip tray is available if required.

Design stage considerations

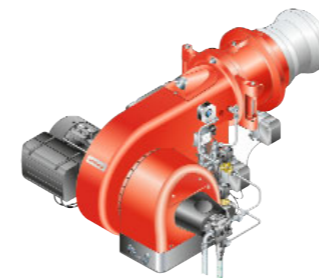
When designing a plantroom with sound-absorbing shrouds, it should be ensured that electrical cables and oil supply lines will be installed such that they do not form an obstruction that would hinder the wheeling into position of the shroud. Care must be taken, for the same reason, with regard to any protrusion of boiler plinths and to the position of any stanchions, gulleys, or walls. Gas valve train components should not be in a position that would necessitate overly large openings in the shroud, reducing its effectiveness.

There must be sufficient space available behind the shroud to allow for it to be freely wheeled back, so that servicing work can be carried out on the burner.

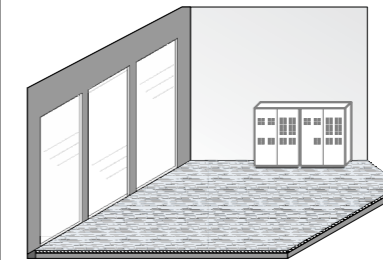
We will be happy to advise you should you have special requirements to be accommodated. For example, a supporting frame might be required for the legs of the sound-absorbing shroud. A supporting frame is always required for floor clearances (to the underside of the shroud) in excess of 800 mm. The relevant ordering information can be found on pages 8 and 9.

The use of sound-absorbing shrouds results in a small suction side pressure loss. Depending on the type of shroud and the burner rating, this is in the region of 1.5 mbar.

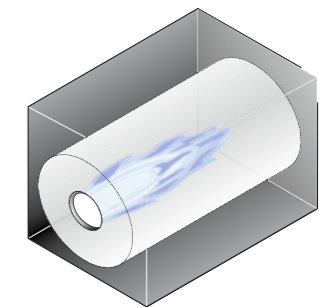
Burner sound pressure level



Spatial sound reflections



Combustion chamber noise

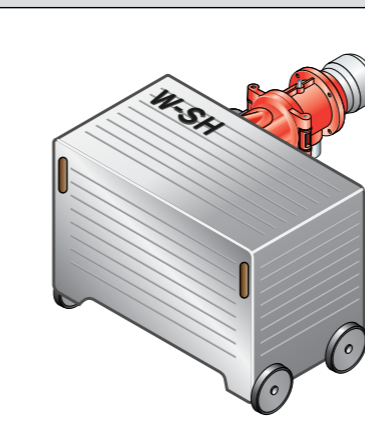
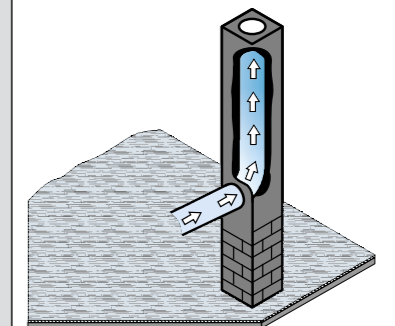


Other influences

- Solenoid valves
- Air ducts
- Safety valves
- Feed water pumps
- Pump stations
- Circulation pumps
- Gas valve trains
- Structure-borne sound



Noise within the flue



Sound-absorbing shrouds

Weishaupt's optional W-SH sound-absorbing shrouds can make a considerable reduction in burner noise emissions.

There are two different versions of sound absorbing shroud available (see box, right).

W-SH 15 W-SH 20



Sound pressure level reduction

Examples of some of the factors that contribute to noise levels

What is the difference between sound power level and sound pressure level?

Sound power level, L_{WA} , and sound pressure level, L_{pA} , are two different quantities that are both measured in decibels (dB(A)).

Sound emission

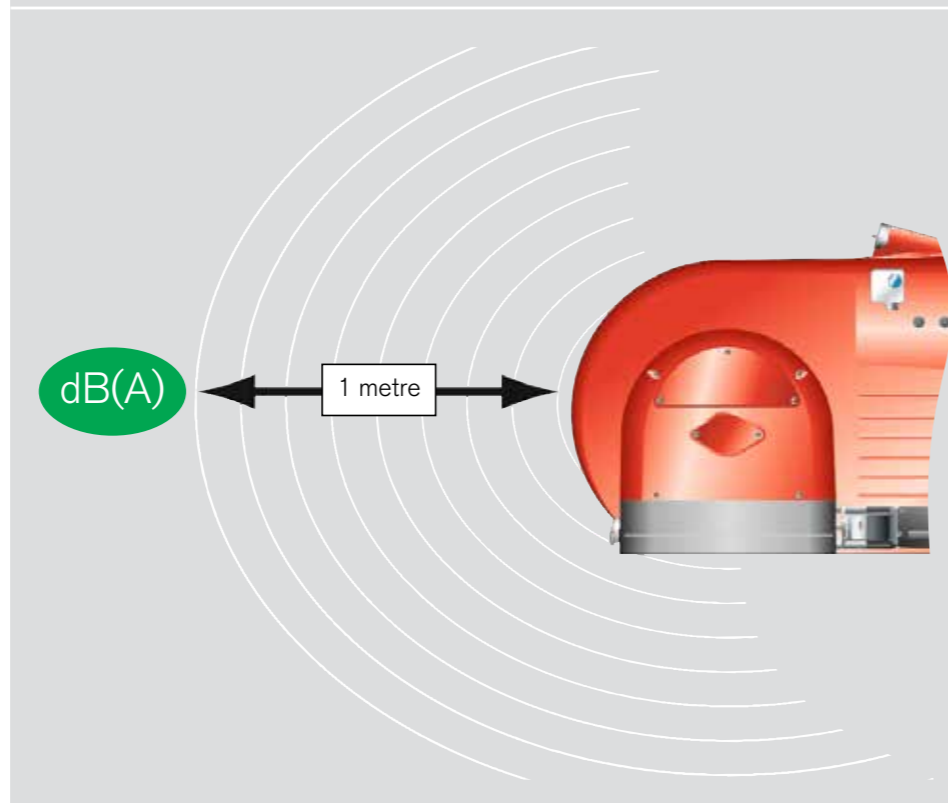
The sound energy that continually radiates from an acoustic source is referred to as a sound emission. The term sound power refers to the rate at which sound energy is transmitted per unit time.

Sound power level

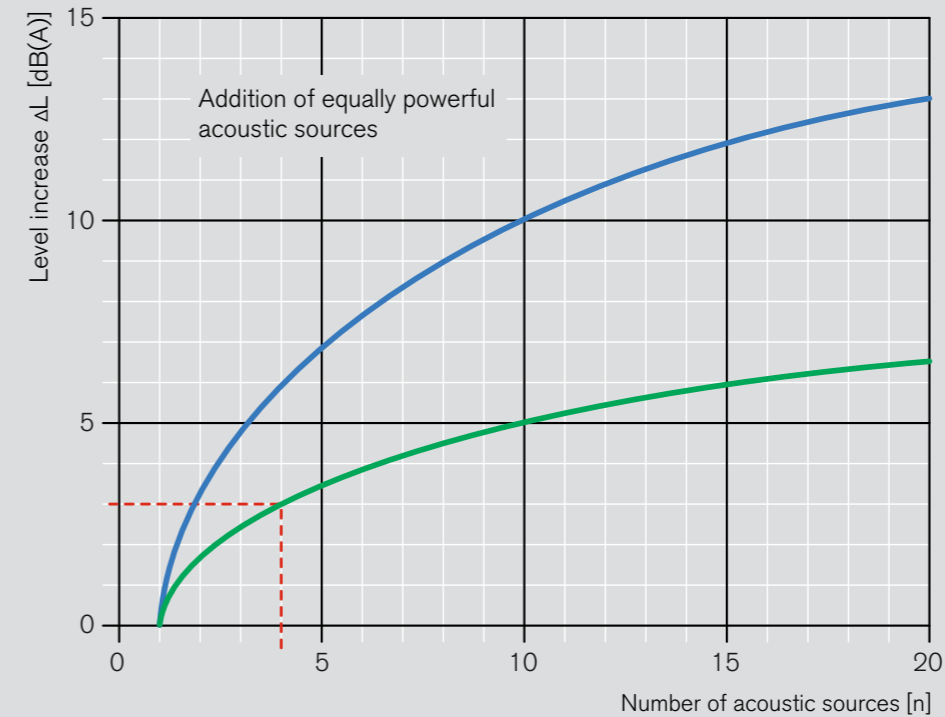
Sound power, measured in accordance with EN ISO 9614-2, is a theoretical quantity that cannot be measured directly. It is derived from a measurement of intensity on an envelope (designated volume around the burner). The result can be expressed in two different units: as the sound power, which is measured in watts, or as a sound power level (L_{WA}), which is measured in decibels. Sound power is **independent** of spatial and distance considerations. The sound power of an acoustic source causes sound pressure variations in the air, whereas the sound pressure of an acoustic source is the resultant, distance-**dependent** effect.

Sound pressure level

The reference point for airborne sound was defined at the beginning of the 20th century to be $p_0 = 20 \mu\text{Pa}$. This sound pressure was considered to be the threshold level of human hearing at a frequency of 1 kHz. It is measured at a distance of 1 metre from the acoustic source (burner). Project specifications and local regulations mostly stipulate sound pressure levels.



Adding sound levels from multiple acoustic sources

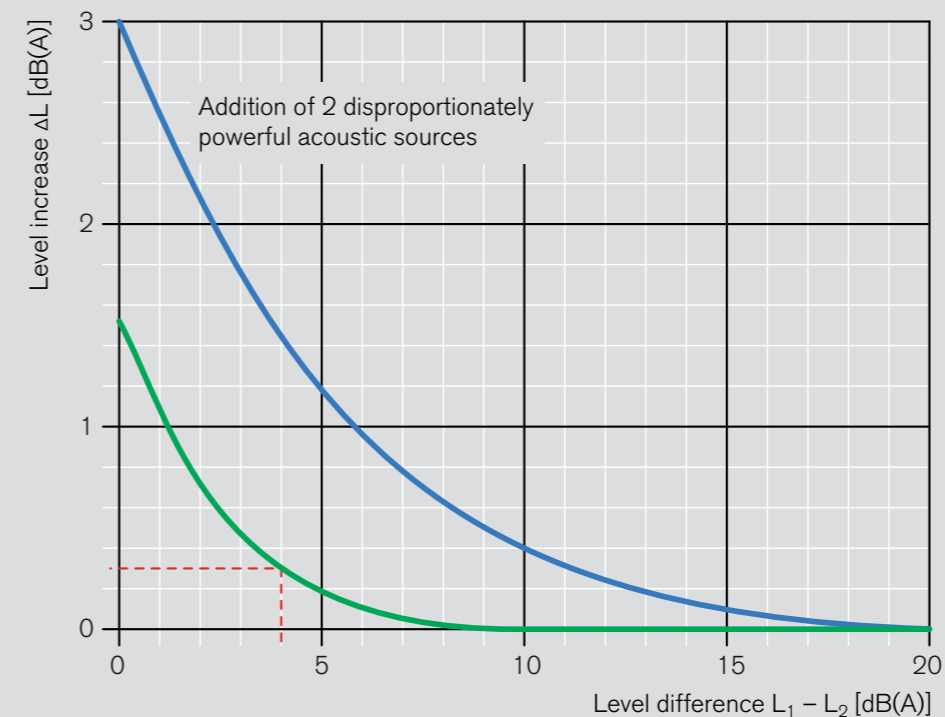


Addition of equally powerful, reference-free acoustic signals.

Example:
Multi-boiler plant with 4 burners

4 acoustic sources, each at: 78 dB(A)
Increase to level: 3 dB(A)
Total sound pressure level: 81 dB(A)

- Machines installed in very close proximity
- Spatially separated machines (standard for boiler plant)



Addition of two disproportionately powerful, reference-free acoustic signals.

Example:
Multi-boiler plant with 2 burners

Acoustic source 1: 79 dB(A)
Acoustic source 2: 75 dB(A)
Level difference: 4 dB(A)
Level increase: 0.3 dB(A)
Total level: 79.3 dB(A)

- Machines installed in very close proximity
- Spatially separated machines (standard for boiler plant)

The total level is calculated by adding the level increase to the highest acoustic source level.

Sound absorbing shrouds

Technical description

Reducing the overall sound level

The degree of attenuation that can be achieved depends very much on the customisation of the shroud to suit the plant and an advance, site-specific check has invariably proved invaluable. Where required, a site measurement survey can be undertaken in order to record the necessary details.

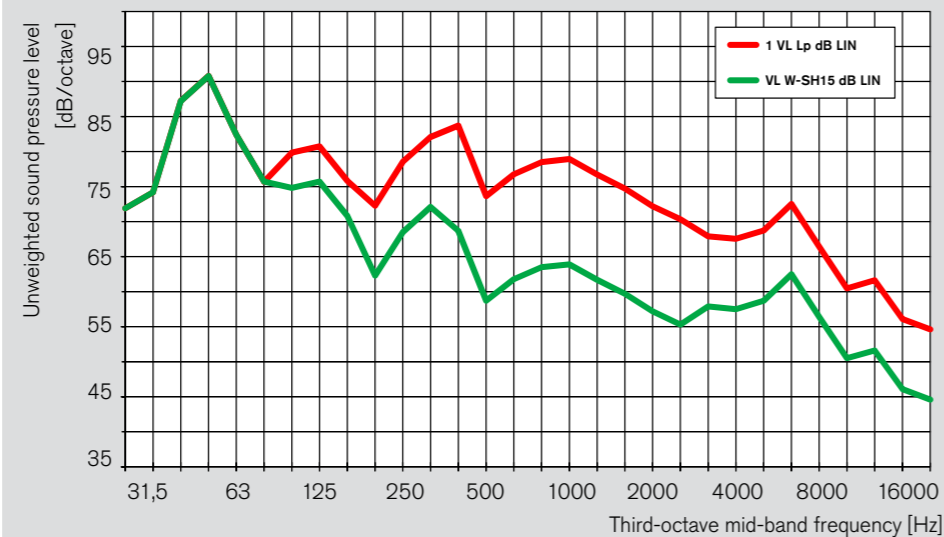
The reduction of burner noise addresses only one factor in the overall noise level of a boiler room, albeit not an insignificant one. Other factors include:

- How and where the heat exchanger is installed
- Radiation of low-frequency flame noise from the front of the boiler
- The ducting of flue gases within the heat exchanger and between the heat exchanger and the chimney
- Adjacent boiler plant
- Pumps, ancillary equipment
- Design of the building etc.

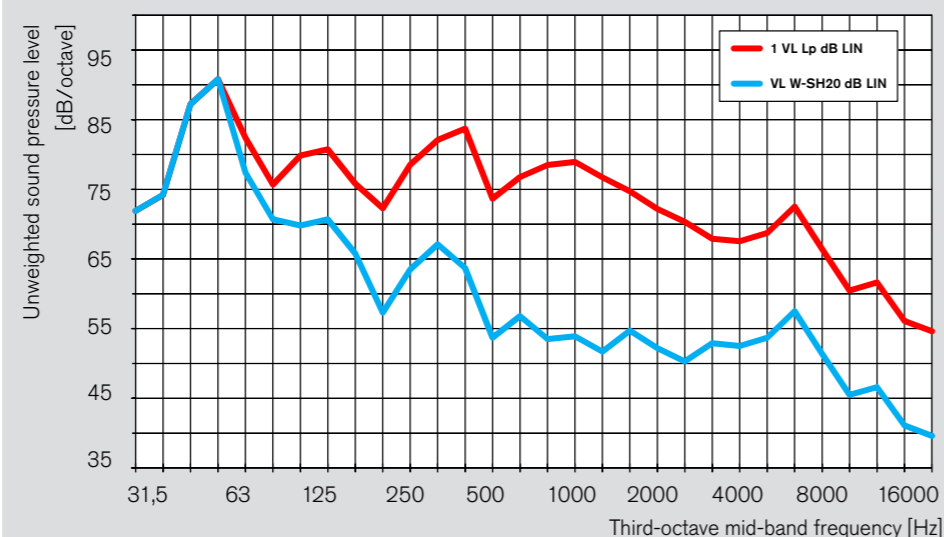
The reduction of the overall noise level of a system can therefore end up being less than the reduction in burner noise achieved through the use of burner sound absorbers. The influence of the above factors under reflective conditions can often not be fully separated from burner noise. Taking this into account, the extent to which any reduction in the overall noise level of a system can be inferred from a statement on the reduction of burner noise is limited.

In particular, it should be noted that the ambient noise level in the vicinity of the burner (extraneous noise emissions) can affect the measurement of the burner noise level.

Sound level measurement – Example 1



Sound level measurement – Example 2



Rear view of W-SH15 sound absorbers for W-series (l) and larger (r) burners.



Front view of a W-SH15 sound absorber



Rear view of a W-SH20 sound absorber for larger burners.

Function

Use of these shrouds dampens and absorbs noise emanating from the burner.

Composition

The exterior cladding is constructed from painted stainless steel. Inside, the shroud is lined with sound-absorbing, heat-resistant, non-combustible mineral wool (DIN 4102 class A2 fire protection) and glass fleece. The interior of the “flat-pack”-type shrouds for monarch-series burners and larger is additionally lined with galvanised, perforated plate.

Construction

For W-series burners, the shroud is a single-piece construction with removable lid. For monarch-series burners and above, the shroud is composed of several easy-to-handle component parts – the base, sides, air inlet, and lid – that can be easily assembled by means of quick-release catches to form a single soundproof unit.

The shroud is mounted on castors and is rolled into and out of position. Two of the castors can be fixed with wheel locks when required. Shroud height is bespoke but the legs can be shortened if it proves necessary.

Air ingress is via an integral air inlet section. The shroud has cutouts either in the sides, base, or lid for gas, oil and electrical supply lines.

Shroud dimensions

See pages 8 and 9 for dimensions and burner-relevant details. Minor site-specific deviations are permissible.

Paint finish

The shroud components are finished in the following standard colours

- Lid: matt black RAL 9005
- Sides: anthracite RAL 7016
- Base and legs: matt black RAL 9005

Other RAL colours are available upon request.

W-SH 10 and W-SH 15 shrouds

Dimensions and scope of delivery

W-SH 20 shrouds

Dimensions and scope of delivery

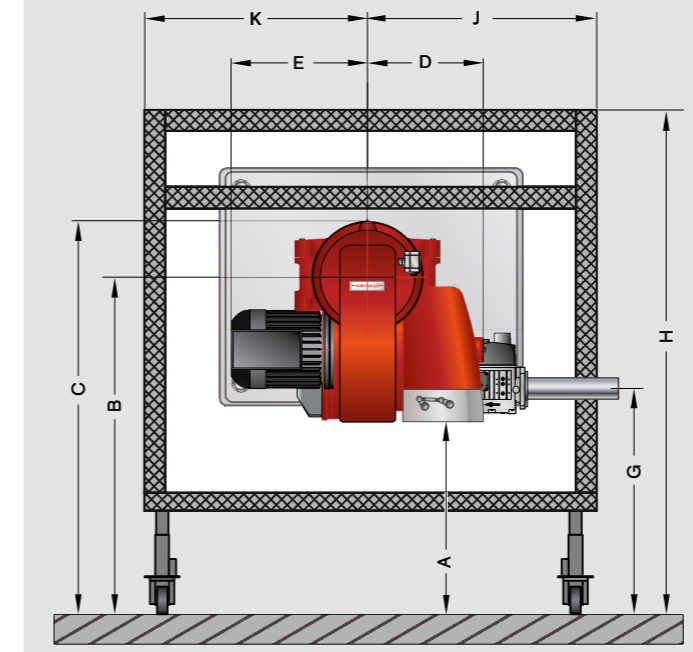
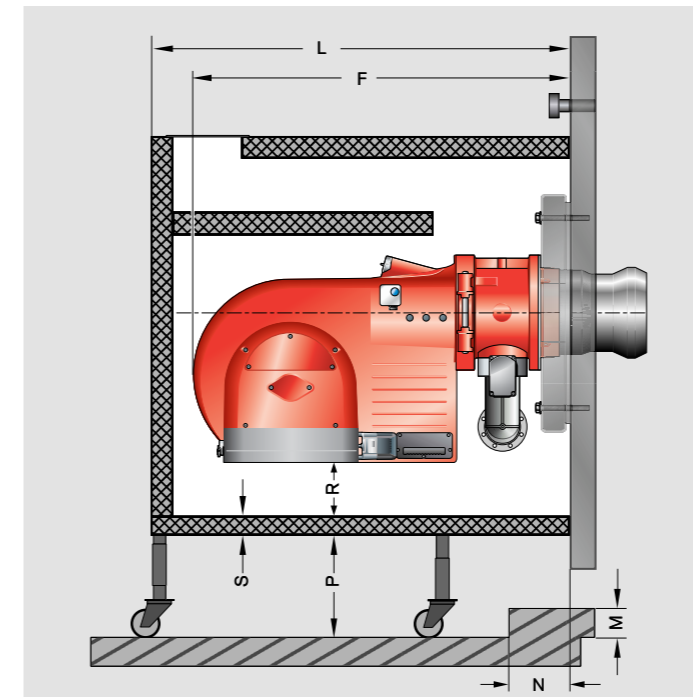
W-SH 10 sound absorbing shrouds (5–10 dB(A) attenuation)					
Burner type	W x H x D mm	Order No.	Notes:	Installation dimensions	
WL5 (not purflam)	450 x 450 x 450	698 301	The W-SH 10 shroud is constructed from painted sheet steel and is of a hanging, single-piece design.	A form will be provided to record the specific measurements which must be taken on site when ordering a sound absorbing shroud. An on-site survey can be undertaken by Weishaupt instead, if preferred (additional cost on application).	
WL10	480 x 480 x 500	698 302			
WL20	530 x 530 x 550	698 303			
WG5	450 x 450 x 450	698 310	The shroud is hung from the burner housing. Air ingress is via an integrated attenuating section.		
WG10	480 x 480 x 500	698 311			
WG20	530 x 530 x 550	698 312			
W-SH 15 sound absorbing shrouds (10–15 dB(A) attenuation)					
Burner type	W x H x D mm	Order No.	Burner type	W x H x D mm	Order No.
WL30	560 x 600 x 560	698 002	WM-GL10	970 x 780 x 1020	698 048
WL40	560 x 680 x 775	698 003	WM-GL20	1110 x 950 x 1180	698 050
WM-L10	910 x 780 x 880	698 042	WM-GL30	1350 x 1150 x 1400	698 053
WM-L20	1000 x 950 x 1070	698 044	WM-GL50	1780 x 1730 x 1800	698 056
WM-L30	1200 x 1150 x 1200	698 051	WKmono-GL80	2100 x 2250 x 2550	698 059
WM-L50	1640 x 1730 x 1800	698 054	GL3, RGL3	970 x 780 x 1020	698 031
WKmono-L80	2100 x 2250 x 2550	698 057	GL5, RGL5	1000 x 830 x 1090	698 032
L1	750 x 730 x 760	698 004	GL7, RGL7	1080 x 950 x 1180	698 033
L3, RL3	900 x 780 x 865	698 005	GL8, RGL8	1120 x 950 x 1180	698 034
L5, RL5	930 x 830 x 950	698 006	GL9, RGL9		
L7, RL7	970 x 950 x 1010	698 007	RGL10	1210 x 1060 x 1380	698 035
L8, RL8	1010 x 950 x 950	698 008	RGL11	1240 x 1060 x 1420	698 036
L9, RL9, RL10	1090 x 1060 x 1180	698 009	GL30, RGL30	1160 x 978 x 1350	698 037
RL11	1120 x 1100 x 1180	698 010	GL40, RGL40	1210 x 1010 x 1410	698 038
L30, RL30	1050 x 975 x 1170	698 011	RGL50	1400 x 1160 x 1520	698 039
L40, RL40	1110 x 1010 x 1140	698 012	RGL60	1560 x 1340 x 1760	698 040
RL50	1110 x 1010 x 1140	698 013	RGL70	1750 x 1510 x 1950	698 041
RL60	1350 x 1310 x 1660	698 014	WKL, G, GL70 ⊙	1600 x 1800 x 2000	698 344
RL70	1540 x 1510 x 1660	698 015	WKL, G, GL80 ⊙	1800 x 2000 x 2400	698 345
WG10–20	500 x 550 x 460	698 016	Oil drip tray for W-SH 15		
WG / WGL30	560 x 600 x 650	698 017	W30–40	500 x 50 x 400	698 201
WG / WGL40	560 x 680 x 730	698 018	WM10	600 x 50 x 400	698 208
WM-G10	910 x 780 x 1020	698 043	WM20	700 x 50 x 500	698 209
WM-G20	1000 x 950 x 1180	698 045	WM30	600 x 50 x 900	698 210
WM-G30	1150 x 1150 x 1400	698 052	WM50	1150 x 50 x 900	698 211
WM-G50	1640 x 1730 x 1800	698 055	WKmono-G80	2100 x 2250 x 2550	698 058
WKmono-G80	2100 x 2250 x 2550	698 058	G1, GL1	880 x 730 x 900	698 019
G3	910 x 780 x 1020	698 020	G3	910 x 780 x 1020	698 020
G5	930 x 830 x 1090	698 021	G5	930 x 830 x 1090	698 021
G7	960 x 950 x 1180	698 022	G7	960 x 950 x 1180	698 022
G8	1000 x 950 x 1180	698 023	G8	1000 x 950 x 1180	698 023
G9, G10	1100 x 1060 x 1380	698 024	G9, G10	1100 x 1060 x 1380	698 024
G11	1130 x 1060 x 1420	698 025	G11	1130 x 1060 x 1420	698 025
G30	1110 x 975 x 1350	698 026	G30	1110 x 975 x 1350	698 026
G40	1150 x 1010 x 1410	698 027	G40	1150 x 1010 x 1410	698 027
G50	1230 x 1160 x 1520	698 028	G50	1230 x 1160 x 1520	698 028
G60	1300 x 1340 x 1760	698 029	G60	1300 x 1340 x 1760	698 029
G70	1500 x 1510 x 1950	698 030	G70	1500 x 1510 x 1950	698 030

W-SH 20 sound absorbing shrouds (20–25 dB(A) attenuation)					
Burner type	W x H x D mm	Order No.	Burner type	W x H x D mm	Order No.
WL30	630 x 630 x 680	698 102	GL3, RGL3	970 x 780 x 1030	698 131
WL40	590 x 720 x 880	698 103	GL5, RGL5	1000 x 830 x 1200	698 132
WM-L10	910 x 780 x 990	698 142	GL7, RGL7	1120 x 950 x 1330	698 133
WM-L20	1040 x 950 x 1170	698 146	GL8, RGL8	1160 x 950 x 1330	698 134
WM-L30	1250 x 1150 x 1300	698 151	GL9, RGL9		
WM-L50	1680 x 1750 x 1820	698 154	RGL10	1250 x 1060 x 1530	698 135
WKmono-L80	2100 x 2250 x 2550	698 157	RGL11	1280 x 1060 x 1570	698 136
L1	750 x 730 x 870	698 104	GL30, RGL30	1160 x 975 x 1490	698 137
L3, RL3	900 x 780 x 975	698 105	GL40, RGL40	1210 x 1010 x 1550	698 138
L5, RL5	930 x 830 x 1060	698 106	RGL50	1440 x 1150 x 1670	698 139
L7, RL7	1010 x 950 x 1160	698 107	RGL60	1640 x 1360 x 1820	698 140
L8, RL8	1050 x 950 x 1160	698 108	RGL70	1830 x 1530 x 2010	698 141
L9, RL9, RL10	1130 x 1060 x 1330	698 109	Oil drip tray for W-SH 20		
RL11	1160 x 1100 x 1330	698 110	W30–40	500 x 50 x 400	698 201
L30, RL30	1050 x 975 x 1300	698 111	WM10	600 x 50 x 400	698 208
L40, RL40	1180 x 1010 x 1270	698 112	WM20	700 x 50 x 500	698 209
RL50	1270 x 1160 x 1390	698 113	WM30	600 x 50 x 900	698 210
RL60	1430 x 1330 x 1530	698 114	WM50	1150 x 50 x 900	698 211
RL70	1670 x 1530 x 1720	698 115	WKmono80	1900 x 50 x 900	698 212
WG30,			Monarch		
WGL30	590 x 640 x 780	698 117	1–5	600 x 50 x 400	698 202
WG40	590 x 720 x 880	698 118	7–8	700 x 50 x 500	698 203
WM-G10	910 x 780 x 1130	698 143	9–1	900 x 50 x 600	698 204
WM-G20	1040 x 950 x 1330	698 147	Industrial		
WM-G30	1200 x 1150 x 1500	698 152	30–40	800 x 50 x 600	698 205
WM-G50	1680 x 1750 x 1820	698 155	50–60	1000 x 50 x 700	698 206
WKmono-G80	2100 x 2250 x 2550	698 158	70	1350 x 50 x 750	698 207
G1, GL1	880 x 730 x 1010	698 119	G30	1110 x 975 x 1490	698 126
G3	910 x 780 x 1030	698 120	G40	1150 x 1010 x 1550	698 127
G5	930 x 830 x 1200	698 121	G50	1270 x 1150 x 1670	698 128
G7	1000 x 950 x 1330	698 122	G60	1340 x 1350 x 1820	698 129
G8	1040 x 950 x 1330	698 123	G70	1580 x 1530 x 2010	698 130
G9, G10	1140 x 1060 x 1530	698 124	WM-GL10	970 x 780 x 1130	698 148
G11	1170 x 1060 x 1570	698 125	WM-GL20	1150 x 950 x 1330	698 150
G30	1110 x 975 x 1490	698 126	WM-GL30	1400 x 1150 x 1500	698 153
G40	1150 x 1010 x 1550	698 127	WM-GL50	1820 x 1750 x 1820	698 156
G50	1270 x 1150 x 1670	698 128	WKmono-GL80	2100 x 2250 x 2550	698 159
G60	1340 x 1350 x 1820	698 129			
G70	1580 x 1530 x 2010	698 130			
Stand-off spacer for burners with integral frequency convertor size 4			Type		Order No.
			Size 50 (except for G50/1)		
			Sizes 60 and 70		
			WM-GL30/1-A ZM-R-3LN		
			WM 30/2 (except for WM-G, 380–415 V)		
			WM 30/3		
			WM 50	217 315 07 332	
			Supporting frame for shroud legs		
			Type		Order No.
			W-SH 15	698 250	
			(Required for some heat generators and for all floor clearances greater than 800 mm)		
			Notes:		
			The stated dimensions are an approximate guide only. Every shroud is manufactured to site-specific dimensions.		
			The W-SH 15 shroud is constructed from painted sheet steel and has a removable lid.		
			The shroud stands on legs with castors. The legs can be adjusted to control the height of the shroud. Air ingress is via an integrated attenuating section.		
			⊙ The shroud has a cutout for air ductwork in lieu of an integrated attenuating section		
			Installation dimensions		
			A form will be provided to record the specific measurements which must be taken on site when ordering a sound absorbing shroud. An on-site survey can be undertaken by Weishaupt instead, if preferred (additional cost on application). The shroud's legs will be manufactured to the correct length for the installation. Minor adjustments to accommodate uneven flooring are possible.		
			*) Please enquire regarding gas burners with FGR		
			Stand-off spacer for burners with integral frequency convertor size 4		
			Type		Order No.
			Size 50 (except for G50/1)		
			Sizes 60 and 70		
			WM-GL30/1-A ZM-R-3LN		
			WM 30/2 (except for WM-G, 380–415 V)		
			WM 30/3		
			WM 50	217 315 07 332	
			Supporting frame for shroud legs		
			Type		Order No.
			W-SH 20	698 250	
			(Required for some heat generators and for all floor clearances greater than 800 mm)		
			Notes:		
			The stated dimensions are an approximate guide only. Every shroud is manufactured to site-specific dimensions.		
			The W-SH 20 shroud is constructed from painted sheet steel and is of a "flat pack" design.		
			The shroud stands on legs with castors. The legs can be adjusted to control the height of the shroud. Air ingress is via an integrated attenuating section.		
			Installation dimensions		
			A form will be provided to record the specific measurements which must be taken on site when ordering a sound absorbing shroud. An on-site survey can be undertaken by Weishaupt instead, if preferred (additional cost on application). The shroud's legs will be manufactured to the correct length for the installation. Minor adjustments to accommodate uneven flooring are possible.		
			Please enquire regarding sound absorbing shrouds for duobloc WK-series burners.		
			*) Please enquire regarding gas burners with FGR.		

Dimensional checklist and notes

Dimensions for checklist

<p>Customer Project No. _____</p> <p>Weishaupt Organisation _____ Name _____ Tel. _____ Email _____</p>	<p>Contact person for queries Company _____ Person _____ Tel. _____ Email _____ Street _____ Town _____ Country _____</p>
<p>Heat generator and burner Heat generator model _____ Heat generator rating _____ kW Flat-fronted heat generator <input type="checkbox"/> Yes <input type="checkbox"/> No <small>(If no, a dimensional drawing of the front of the heat generator must be provided)</small> Burner type _____ Frequency convertor <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Burner-mounted without fan <input type="checkbox"/> Burner-mounted with fan (size 4) <input type="checkbox"/> Outside of the sound absorbing shroud</p>	<p>Electrical connections <input type="checkbox"/> Right-hand side <input type="checkbox"/> Left-hand side <input type="checkbox"/> From below <input type="checkbox"/> Flexible <input type="checkbox"/> Ducted</p> <p>Attenuation <input type="checkbox"/> 10-15 dB(A)* <input type="checkbox"/> 20-25 dB(A)* <small>* Please refer to page 6, "Reducing the overall sound level".</small></p>
<p>Gas valve train Gas 1 _____ Gas 2 _____ Double gas valve assembly type _____ Double gas valve assembly DN _____ Gas fed from right-hand side <input type="checkbox"/> <input type="checkbox"/> Gas fed from left-hand side <input type="checkbox"/> <input type="checkbox"/> Gas fed from below <input type="checkbox"/> <input type="checkbox"/> Ignition pilot line <input type="checkbox"/> <input type="checkbox"/> VPS-type valve proving <input type="checkbox"/> <input type="checkbox"/> Gas valve train junction box <input type="checkbox"/> <input type="checkbox"/> Other fittings, gas 1 _____ Other fittings, gas 2 _____</p>	<p>Colour <input type="checkbox"/> Standard (Anthracite, RAL 7016) <input type="checkbox"/> Bespoke colour, RAL No. _____</p> <p>Spatial data <input type="checkbox"/> Wheelable version <input type="checkbox"/> Shroud air inlet above the burner <input type="checkbox"/> Shroud air inlet behind the burner <input type="checkbox"/> Other position (please enquire)</p> <p>Access to the plant room <input type="checkbox"/> Level <input type="checkbox"/> Via steps Dimension of narrowest access point _____ mm</p> <p>Delivery of the sound absorber <input type="checkbox"/> Flat-packed <input type="checkbox"/> Seaworthy packaging</p> <p><small>Note: Additional costs may be incurred in accomodating any site-specific dimensions that reveal details which were unknown to Weishaupt at the quotation stage.</small></p>
<p>Oil supply <input type="checkbox"/> Right-hand side <input type="checkbox"/> Left-hand side <input type="checkbox"/> From below <input type="checkbox"/> Burner with electromagnetic clutch <input type="checkbox"/> Burner with burner-mounted pump station <input type="checkbox"/> Burner with separate pump station</p>	



Minimum burner firing height
Dimensions P, R, and S should be noted for standard, wheelable shrouds. Dimension A should be checked. It may be possible to accomodate a reduced firing height through the use of a special-execution shroud (additional costs might be incurred). Solutions may include:
- A non-wheelable shroud
- A lowered section in the base plate
- Etc.

Minimum clearances and attenuation levels

Burner type	Minimum clearance		Attenuation	
	P mm	R mm	W-SH15 S mm	W-SH20 S mm
W 5	80	50	25 ¹⁾	-
W 10-40	80	50	25	40
WM 10	80	120	40	60
WM 20-30	120	150	40	60
WM 50	150	200	60	80
WKmono80	190	200	60	80
3-5	80	120	40	60
7-11	120	150	40	60
30-40	120	150	60	80
50-70	150	200	60	80

¹⁾ WSH10

Burner dimensions

- A FFL to underside of burner _____ mm
- B Burner firing height _____ mm
- C FFL to topside of burner _____ mm
- D Burner width, right-hand side _____ mm
- E Burner width, left-hand side _____ mm
- F Burner length _____ mm
- G FFL to CL of gas valve train 1 _____ mm
- G FFL to CL of gas valve train 2 _____ mm

Shroud dimensions

- H Max. overall height _____ mm
- J Max. shroud width, right-hand side _____ mm
- K Max. shroud width, left-hand side _____ mm
- L Max. length of shroud _____ mm

Plinth dimensions

- M Height of plinth _____ mm
- N Projection of plinth under burner _____ mm

Supporting frame Yes No

Leg lengths (dimension P) greater than 800 mm require a supporting frame.
Control calculation: P = A - R - S (see table for values)

Contact Us



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**The Environmental
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Engineering a Sustainable Future