

ApenGroup



Industrial Heating Solutions 2019

ApenGroup[®]
aermaxline

NEW SUSPENDED WARM AIR HEATERS: Kondensa, Plus, Rapid

Why Choose Apen Group

Apen Group, a leader in the field of industrial heating with hot air, designs, manufactures and distributes Warm air heaters since 1973.

The know-how and skills gained, led to the development of a wide range of heating products where everyone can find the ideal solution to their needs.

Our range of suspended warm air heaters is composed by three series of products:

- KONDENSA, suspended condensing and modulating warm air heater, with efficiency up to 108%
- PLUS, modulating warm air heater with very low polluting emissions
- RAPID, suspended warm air heater TWO STAGES, simple and easy to use.

The three ranges, providing different performances and efficiency, are characterized by:

- high quality materials, such as AISI 441 stainless steel, pre-painted panels and, where present, advanced electronic;
- premix combustion system with very low polluting emissions;
- innovative and efficient production systems;
- reliability and safety guaranteed by a 100% factory test





NEW SUSPENDED WARM AIR HEATERS: Kondensa, Plus, Rapid

High Quality Materials

Furnace and air/flue exchanger are manufactured entirely with AISI 441 high quality stainless steel (with low carbon content) which assures maximum reliability and long life cycle.

Clean Combustion

The burner that fully premix air and gas, features the new suspended heaters with:

- No carbon monoxide emissions - CO=0.
- Very low nitrogen oxides emissions, approximately 30 ppm
- Low emission of CO₂, due to high combustion efficiency and to reduction of fuel consumption arising from heat output modulation.

Innovation and Technology

The microprocessor-based electronic card, of KONDENSA and PLUS heaters, regulates continuous modulation of heat output and controls both the burner's fan for air/gas mixing and the gas valve.

Guaranteed Safety

An advanced technique of air/gas mixing guarantees total safety. The gas valve delivers gas according to the air/gas ratio set in factory. If combustion air fails, the gas valve closes. If combustion air decreases, the valve automatically reduces gas flow while maintaining optimal combustion parameters.

Safety and Control Devices

Safety and control devices are composed by

1. Safety thermostat with manual reset and positive safety.
2. Electronic ignition device for the burner and ionisation flame control device.
3. Ignition and flame detection electrodes.

Modularity System

The subdivision of the total thermal input into more heaters installed, allows to rationalize the system: "zone" management of the supply of thermal power and integration of thermal power limited to the installation of new devices.

Direct Thermal Exchange

No Hydraulic System,

No Intermediate Fluid:

The thermal energy produced by the heater is transferred to the air of the local by means of a direct heat exchange with the products of combustion, which flow within a "sealed" circuit respect to the heated ambience.

The absence of intermediate fluid prevents the realization of the hydraulic system and the inherent problems in the freezing water.

In a few minutes the ambience begins to heat due to the lack of thermal inertia.

No Need for a Heat Plant

Warm air heaters can be installed in the spaces to be heated, therefore do not require a separate room nor an enclosure that would reduce useful space.

Summer Ventilation

It is possible to set heaters in summer ventilation mode, by activating the ventilation, so to improve the comfort of the ambience (in which they are installed).

Versatility of Installation

The heaters of the serie PLUS and RAPID can also be installed hanged to the ceiling through eyebolts or with downwards air blow.





KONDENSA

Suspended condensing and modulating warm air heater with efficiency up to 108%



PLUS

Suspended modulating warm air heater with very low polluting emissions



RAPID

Suspended warm air heater TWO STAGES, simple and easy to use.

KONDENSA / Serie LK Condensing and Modulating Warm Air Heater

Technical Features

- Outputs range from 5 kW to 97 kW;
- Sealed combustion circuit;
- INOX AISI 441 stainless steel combustion chamber, INOX AISI 441 stainless steel exchanger tubes and fume collection box made of low carbon content;
- Efficiency up to 108% referred to the lower heating value (Hi);
- Premixed gas modulating burner, low NOx emissions in class 5, in compliance with EN 1020 2009 standards;
- Electronic card with continuous modulation of power, controlled by a microprocessor, which allows energy savings of up to 50%;
- Very high reduction of air stratification;
- An advanced technique of air/gas mixing guarantees total heater safety;
- Safety thermostat and condensate control sensor;
- 230V/1ph/50Hz supply voltage;
- In compliance with all applicable EC regulations (0476CQ0451);
- A version of suspended heater KONDENSA serie LK with centrifugal fan and mixing box is available upon request.



Model		LK020*		LK034		LK045		LK065		LK080		LK105	
Type of Appliance		B23 - B23P - C13 - C33 - C43 - C53 - C63											
EC Approval	PIN.	0476CQ0451											
NOx Class	Val	5											
Heater Performance													
		min	max	min	max	min	max	min	max	min	max	min	max
Burner heat output (Hi)	kW	4.75	19.00*	7.60	34.85	8.50	42.00	12.40	65.00	16.40	82.00	21.00	100.00
Useful Heat Output [P _{min} , P _{rated}]**	kW	4.97	18.18	8.13	33.56	8.97	40.45	13.40	62.93	17.77	80.03	22.77	97.15
Hi Efficiency (N.C.V.) [η _{pl} , η _{nom}]**	%	104.63	95.68*	106.97	96.30	105.50	96.30	108.06	96.82	108.35	97.60	108.40	97.15
Hs efficiency (G.C.V.) [η _{pl} , η _{nom}]**	%	94.26	86.20	96.37	86.76	95.07	86.76	97.36	87.22	97.62	87.93	97.68	87.52
Flue losses with burner on (Hi)	%	0.4	4.3	0.6	3.7	0.5	3.7	0.2	3.2	0.3	2.4	0.2	2.8
Flue losses with burner off (Hi)	%	<0,1		<0,1		<0,1		<0,1		<0,1		<0,1	
Envelope loss factor [F _{env}]**(1)	%	0%		0%		0%		0%		0%		0%	
Seasonal space heating energy efficiency [Reg.EU/2281/2016] [η _{s,h}]**	%	90,4		92,1		90,7		93,2		93,1		93,1	
Emission efficiency [Reg.EU/2281/2016] [η _{s,low}]**	%	97,5		97,3		97,0		97,4		97,0		97,0	
Max. condensation (2)	l/h	0.4		0.9		1.1		2.1		3.3		2.7	
Exhaust Gases - Pollution Emissions													
Carbon monoxide - CO - (0% of O ₂) (3)	ppm	< 5		< 5		< 5		< 5		< 5		< 5	
Emissions of nitrogen oxides - NOx** (0% of O ₂) (Hi) (4)		38 mg/kWh - 22 ppm		42 mg/kWh - 24 ppm		33 mg/kWh - 19 ppm		39 mg/kWh - 22 ppm		41 mg/kWh - 23 ppm		39 mg/kWh - 22 ppm	
Emissions of nitrogen oxides - NOx** (0% of O ₂) (Hs) (9)		34 mg/kWh - 20 ppm		38 mg/kWh - 22 ppm		30 mg/kWh - 17 ppm		35 mg/kWh - 20 ppm		37 mg/kWh - 21 ppm		35 mg/kWh - 20 ppm	
Available Pressure at the flue	Pa	80		90		100		120		120		120	
Electrical Data													
Supply voltage	V	230 Vac - 50 Hz single-phase											
Rated power	kW	0.147	0.180	0.270	0.310	0.280	0.310	0.420	0.510	0.500	0.613	0.650	0.750
Power input in stand-by [e _{sb}]**	kW	0.005											
Auxiliary electricity consumption [e _{lmin} - e _{lmax}]**(10)	kW	0,011	0,045	0,011	0,074	0,024	0,082	0,015	0,097	0,040	0,123	0,020	0,130
Protection Rating	IP	IP 20											
Operating Temperatures	°C	from -15°C to +40°C - for lower temperatures, a burner housing heating kit is required											
Storage Temperatures	°C	-25°C to +60°C											
Connections													
Ø gas connection (5)	GAS	UNI/ISO 228/1-G 3/4"		UNI/ISO 228/1-G 3/4"		UNI/ISO 228/1-G 3/4"		UNI/ISO 228/1-G 3/4"		UNI/ISO 228/1-G 3/4" (6)		UNI/ISO 228/1-G 3/4" (6)	
Ø of Intake/exhaust pipes	mm	80/80		80/80		80/80		80/80		100/100 (7)		100/100 (7)	
Air Flow Rate													
Air flow rate (15° C)	m³/h	2700		4300		4500		7800		9000		11100	
Air temperature increase	°C	5.28	19.30	5.42	22.37	5.73	25.74	4.92	23.13	5.66	25.49	5.89	25.09
Number and diameter of fans		1 x Ø350		1 x Ø 450		1 x Ø450		2 x Ø400		2 x Ø450		3 x Ø400	
Fans speed	rpm	1370		1370		1370		1370		1370		1370	
Sound pressure (Lp) (8)	dB(A)	44		49		49		51		52		54	
Weight													
Net Weight	kg	58		72		79		98		129		145	
Weight with packaging	kg	73		90		97		122		155		173	

NOTES:

* For GB: LK020GB-00EO in accordance with the ECA requirements.

Burner heat output max 15kW and Efficiency Hi (Net C.V.) 96,7%.

** Symbol of conformity with Reg.EU/2281/2016.

(1) The losses from the enclosure must be regarded as zero as the heater is installed in a heated environment.

(2) Max. condensation produced acquired from testing at 30%Qn.

(3) Value referred to cat. H (G20)

(4) Weighted value to EN1020:2009 ref. to cat. H (G20), referred to gross calorific value (Hi, G.C.V.).

(5) The gas line must be dimensioned according to the length of the

routing and not to the heater input diameter.

For countries requiring an ISO connection different from the one shown, an adaptor will be supplied.

(6) For the LK080 and LK105 models, the minimum gas supply duct diameter must be UNI/ISO 228/1- G 1".

(7) Ø100/100 obtained by using adaptors supplied as standard.

(8) Measured at a distance of 6 m from the machine.

(9) Weighted value to EN1020:2009 ref. to cat. H (G20), referred to net calorific value (Hs, G.C.V.).

(10) Excluding the electric current absorbed by the cooling fan/s



PLUS / Serie LP Modulating Warm Air Heater

Technical Features

- Outputs range from 12 kW to 92 kW;
- Sealed combustion circuit;
- INOX AISI 441 stainless steel combustion chamber, INOX AISI 441 stainless steel exchanger tubes and fume collection box made of low carbon content;
- Efficiency up to 94% referred to the lower heating value (Hi);
- Premixed gas modulating burner, low NOx emissions in class 5, in compliance with EN 1020 2009 standards;
- Electronic card with continuous modulation of power, controlled by a microprocessor, which allows energy savings of up to 30%;
- Very high reduction of air stratification;
- An advanced technique of air/gas mixing guarantees total heater safety;
- Safety thermostat;
- 230V/1ph/50Hz supply voltage;
- In compliance with all applicable EC regulations (0476CQ0451);
- A version of suspended heater PLUS serie LP with centrifugal fan and mixing box is available upon request.



Model*		LP015		LP024		LP034		LP042		LP052		LP072		LP102	
Type of equipment		B23 - B23P - C13 - C33 - C43 - C53 - C63													
CE approval	PIN.	0476CQ0451													
NOx class [EN1020:2009]	Val	5													
Heater Performance															
		min	max	min	max	min	max	min	max	min	max	min	max	min	max
Burner heat output (Hi)	kW	13.0	16.5	21.8	27.0	27.5	34.8	33.3	44.0	42.4	52.2	60	73.5	81.8	100.0
Useful Heat Output [P _{min} , P _{rated}]**	kW	12.1	15.0	20.4	24.6	25.8	31.9	31.2	40.2	39.9	48.1	56.2	67.5	76.8	92.3
Hi Efficiency (N.C.V.) [η _{pl} , η _{nom}]**	%	93.2	90.7	93.7	91.2	93.7	91.8	93.8	91.3	94.2	92.1	93.7	91.8	93.9	92.3
Hs efficiency (G.C.V.) [η _{pl} , η _{nom}]**	%	83.8	81.6	84.3	81.2	84.3	82.6	84.4	82.2	84.8	82.9	84.3	82.6	84.5	83.1
Flue losses with burner on (Hi)	%	6.8	9.3	6.3	8.8	6.3	8.2	6.2	8.7	5.8	7.9	6.3	8.2	6.1	7.7
Flue losses with burner off (Hi)	%	<0,1		<0,1		<0,1		<0,1		<0,1		<0,1		<0,1	
Envelope loss factor [F _{env}]** (1)	%	0%		0%		0%		0%		0%		0%		0%	
Seasonal space heating energy efficiency [Reg.EU/2281/2016] [η _{s,h}]**	%	74.0		73.2		72.7		74.0		72.5		73.8		72.8	
Emission efficiency [Reg.EU/2281/2016] [η _{slow}]**	%	93.8		92.2		91.3		92.4		90.7		92.6		91.1	
Flue gas emissions															
Carbon monoxide - CO - (0% of O ₂) (2)	ppm	<5		<5		<5		<5		<5		<5		<5	
Emissions of nitrogen oxides - NOx** (0% of O ₂) (Hi) (3)		44 mg/kWh - 25 ppm		30 mg/kWh - 17 ppm		30 mg/kWh - 17 ppm		44 mg/kWh - 25 ppm		47 mg/kWh - 27 ppm		43 mg/kWh - 26 ppm		58 mg/kWh - 33 ppm	
Emissions of nitrogen oxides - NOx** (0% of O ₂) (Hs) (8)		40 mg/kWh - 22 ppm		27 mg/kWh - 15 ppm		27 mg/kWh - 15 ppm		40 mg/kWh - 22 ppm		42 mg/kWh - 24 ppm		39 mg/kWh - 23 ppm		52 mg/kWh - 30 ppm	
Available Pressure at the flue	Pa	80		100		120		120		130		140		140	
Electrical Characteristics															
Supply voltage	V	230 Vac - 50 Hz single-phase													
Rated power	kW	0.117	0.143	0.172	0.197	0.152	0.184	0.267	0.320	0.280	0.330	0.470	0.493	0.550	0.582
Power input in stand-by [el _{sb}]**	kW	0.005													
Auxiliary electricity consumption [el _{min} - el _{max}]** (9)	kW	0.037	0.063	0.033	0.058	0.045	0.074	0.037	0.071	0.056	0.101	0.061	0.112	0.080	0.121
Protection Rating	IP	IP 20													
Operating Temperatures	°C	from -15°C to +40°C - for lower temperatures, a burner housing heating kit is required													
Storage Temperatures	°C	-25°C to +60°C													
Connections															
Ø Gas Connection (4)	GAS	UNI/ISO 228/1-G 3/4"		UNI/ISO 228/1-G 3/4"		UNI/ISO 228/1-G 3/4"		UNI/ISO 228/1-G 3/4"		UNI/ISO 228/1-G 3/4"		UNI/ISO 228/1-G 3/4"		UNI/ISO 228/1-G 3/4" (5)	
Intake/exhaust pipes Ø	mm	80/80		80/80		80/80		80/80		80/80		80/80		100/100 (6)	
Air flow rate															
Air flow rate (15° C)	m³/h	2000		2700		3100		4300		4500		7800		9000	
Air temperature increase	°C	17.4	21.5	21.7	26.1	23.9	29.5	20.8	26.8	25.4	30.6	20.7	24.8	24.5	29.4
Number and diameter of fans (no. of poles)		1 X Ø350 (6P)		1 X Ø350 (4P)		1 X Ø450 (6P)		1 X Ø450 (4P)		1 X Ø450 (4P)		2 X Ø400 (4P)		2 X Ø450 (4P)	
Fans speed	rpm	920		1370		970		1370		1370		1370		1370	
Sound pressure (Lp) (7)	dB(A)	34		44		40		49		49		51		52	
Weight															
Net Weight	kg	58		58		68		70		78		102		123	
Weight with packaging	kq	73		73		85		88		96		126		149	

NOTES:

- * For GB: LP models do not satisfy the requirements of the standard ECA.
- ** Symbol of conformity with Reg.EU/2281/2016.
- (1) The losses from the enclosure must be regarded as zero as the heater is installed in a heated environment.
- (2) Value referred to cat. H (G20)
- (3) Weighted value to EN1020:2009 ref. to cat. H (G20), referred to gross calorific value (Hi, G.C.V.).
- (4) The gas line must be dimensioned according to the length of the routing and not to the heater input diameter.

For countries requiring an ISO connection different from the one shown, an adaptor will be supplied.

- (5) For LP102 models, the minimum gas supply duct diameter must be at least UNI/ISO 228/1- G 1".
- (6) Ø100/100 obtained by using adaptors supplied as standard.
- (7) Measured at a distance of 6 m from the machine.
- (8) Weighted value to EN1020:2009 ref. to cat. H (G20), referred to net calorific value (Hs, G.C.V.).
- (9) Excluding the electric current absorbed by the cooling fan/s.



RAPID / Serie LR Two-Stages Warm Air Heater

Technical Features

- Outputs range from 15 kW to 92 kW;
- Sealed combustion circuit;
- INOX AISI 441 stainless steel combustion chamber, INOX AISI 441 stainless steel exchanger tubes and fume collection box made of low carbon content;
- Efficiency up to 94% referred to the lower heating value (Hi);
- Premixed gas modulating burner, low NOx emissions in class 5, in compliance with EN 1020 2009 standards;
- Safety thermostat;
- An advanced technique of air/gas mixing guarantees total heater safety;
- 230V/1ph/50Hz supply voltage;
- In compliance with all applicable EC regulations (0476CQ0451);
- Available with Axial or Centrifugal Fan.



RAPID Two-Stages / Technical Data

Model		LR015		LR024		LR034		LR042		LR052		LR072		LR102	
Type of equipment		B23P - B53P - C13 - C43 - C53 - C63													
CE approval	PIN.	0476CQ0451													
NOx class [EN1020:2009]	Val	5												4	
Heater Performance															
		min	max	min	max	min	max	min	max	min	max	min	max	min	max
Burner heat output (Hi)	kW	13.0	16.5	21.8	27.0	27.5	34.8	35.5	44.0	42.4	52.2	60	73.5	81.8	100.0
Useful Heat Output [P _{min} , P _{rated}]**	kW	12.1	15.0	20.4	24.6	25.8	31.9	33.1	40.2	39.9	48.1	56.2	67.5	76.8	92.3
Hi Efficiency (N.C.V.) [η _{pl} , η _{nom}]**	%	93.2	90.7	93.7	91.2	93.7	91.8	93.2	91.3	94.2	92.1	93.7	91.8	93.9	92.3
Hs efficiency (G.C.V.) [η _{pl} , η _{nom}]**	%	83.8	81.6	84.3	81.2	84.3	82.6	83.9	82.2	84.8	82.9	84.3	82.6	84.5	83.1
Flue losses with burner on (Hi)	%	6.8	9.3	6.3	8.8	6.3	8.2	6.8	8.7	5.8	7.9	6.3	8.2	6.1	7.7
Flue losses with burner off (Hi)	%	<0,1		<0,1		<0,1		<0,1		<0,1		<0,1		<0,1	
Enclosure loss factor [F _{env}]** (1)	%	0%		0%		0%		0%		0%		0%		0%	
Room heating seasonal energy efficiency [Reg.EU/2281/2016] [η _{s,h}]**	%	73.6		72.9		72.3		72.6		72.2		73.4		72.5	
Emission efficiency [Reg.EU/2281/2016] [η _{slow}]**	%	93.8		92.2		91.3		92.0		90.7		92.6		91.2	
Flue gas emissions															
Carbon monoxide - CO - (0% of O ₂) (2)	ppm	<5		<5		<5		<5		<5		<5		<5	
Emissions of nitrogen oxides - NOx** (0% of O ₂) (Hi) (3)		44 mg/kWh - 25 ppm		30 mg/kWh - 17 ppm		30 mg/kWh - 17 ppm		44 mg/kWh - 25 ppm		47 mg/kWh - 27 ppm		43 mg/kWh - 26 ppm		58 mg/kWh - 33 ppm	
Emissions of nitrogen oxides - NOx** (0% of O ₂) (Hs) (8)		40 mg/kWh - 22 ppm		27 mg/kWh - 15 ppm		27 mg/kWh - 15 ppm		40 mg/kWh - 22 ppm		42 mg/kWh - 24 ppm		39 mg/kWh - 23 ppm		52 mg/kWh - 30 ppm	
Available Pressure at the flue	Pa	80		100		120		120		130		140		140	
Electrical Characteristics															
Supply voltage	V	230 Vac - 50 Hz single-phase													
Rated power	kW	0.117	0.143	0.172	0.197	0.152	0.184	0.267	0.320	0.280	0.330	0.470	0.493	0.550	0.582
Power input in stand-by [e _{sb}]**	kW	0.005													
Auxiliary devices power consumption [e _{lmin} - e _{lmax}]** (9)	kW	0.037	0.063	0.033	0.058	0.045	0.074	0.045	0.071	0.056	0.101	0.061	0.112	0.080	0.121
Protection Rating	IP	IP 20													
Operating Temperatures	°C	from -15°C to +40°C - for lower temperatures, a burner housing heating kit is required													
Storage Temperatures	°C	-25°C to +60°C													
Connections															
Ø gas connection (4)	GAS	UNI/ISO 228/1-G 3/4"	UNI/ISO 228/1-G 3/4"	UNI/ISO 228/1-G 3/4"	UNI/ISO 228/1-G 3/4"	UNI/ISO 228/1-G 3/4"	UNI/ISO 228/1-G 3/4"	UNI/ISO 228/1-G 3/4"	UNI/ISO 228/1-G 3/4"	UNI/ISO 228/1-G 3/4"	UNI/ISO 228/1-G 3/4"	UNI/ISO 228/1-G 3/4"	UNI/ISO 228/1-G 3/4"	UNI/ISO 228/1-G 3/4" (5)	
Intake/exhaust pipes Ø	mm	80/80		80/80		80/80		80/80		80/80		80/80		100/100 (6)	
Air flow rate															
Air flow rate (15° C)	m³/h	2000		2700		3100		4300		4500		7800		9000	
Air temperature increase	°C	17.4	21.5	21.7	26.1	23.9	29.5	22.1	26.8	25.4	30.6	20.7	24.8	24.5	29.4
Number and diameter of fans (no. of poles)		1 X Ø350 (6P)		1 X Ø350 (4P)		1 X Ø450 (6P)		1 X Ø450 (4P)		1 X Ø450 (4P)		2 X Ø400 (4P)		2 X Ø450 (4P)	
Fans speed	rpm	920		1370		970		1370		1370		1370		1370	
Sound pressure (Lp) (7)	dB(A)	34		44		40		49		49		51		52	
Weight															
Net Weight	kg	57		57		67		70		78		102		123	
Weight with packaging	kg	72		72		85		87		96		125		149	

NOTES:

- * The LRC042 and LRC072 models do not meet the ErP 2018 requirements (Reg.EU/2281/2016).
- ** Symbol of conformity with Reg.EU/2281/2016.
- (1) The losses from the enclosure must be regarded as zero as the heater is installed in a heated environment.
- (2) Value referred to cat. H (G20).
- (3) Weighted value to EN1020:2009 ref. to cat. H (G20), referred to Lower Calorific Value (Hi, N.C.V.).
- (4) The gas line must be dimensioned according to the length of the routing and not to the heater input diameter.

- For countries requiring an ISO connection different from the one shown, an adaptor will be supplied.
- (5) For LR102 models, the minimum gas supply duct diameter must be at least UNI/ISO 228/1-G 1".
- (6) Ø100/100 obtained by using adaptors supplied as standard.
- (7) Measured at a distance of 6 m from the machine.
- (8) Weighted value to EN1020:2009 ref. to cat. H (G20), referred to Higher Calorific Value (Hs, G.C.V.).
- (9) Excluding the electric current absorbed by the cooling fan/s.

RAPID / Serie LR with AXIAL Fan

Technical Features

- Input power from 15 kW to 92 kW;
- Sealed combustion circuit;
- AISI 441 stainless steel combustion chamber;
AISI 441 stainless steel exchanger tubes and flue hood,
made of low carbon-content steel;
- Efficiency up to 94% according to the lower calorific value (Hi);
- Premix modulation burner, class 5, low NOx emissions in
compliance with EN 1020 2009 standards;
- Safety thermostat;
- An advanced technique of air/gas mixing guarantees total heater
safety;
- 230V/1ph/50Hz supply voltage;
- Compliant with all EC applicable regulations
(0476CQ0451 approval);
- Axial fan.



Standard Accessories

- Kit for conversion to LPG.
- Kit High/Low working mode.

Optional Accessories

- Control with functions of room thermostat and output lines for
remote locking and unlocking;
- Fixed or revolving brackets;
- Aluminium flue outlet kit;
- Aluminium combustion air intake kit;



Note

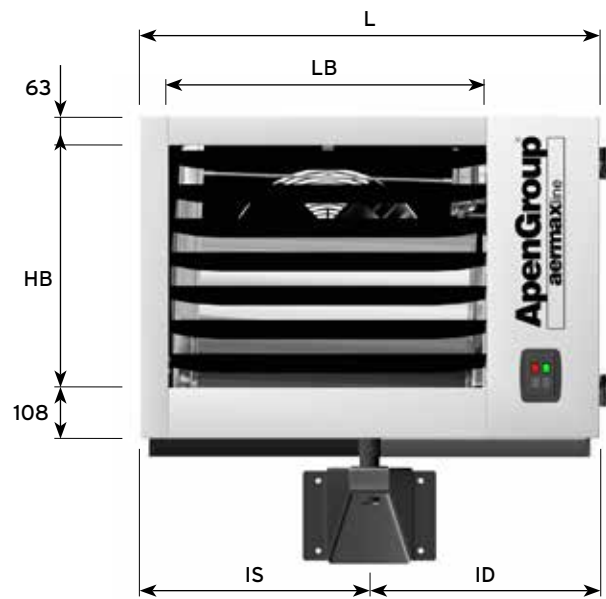
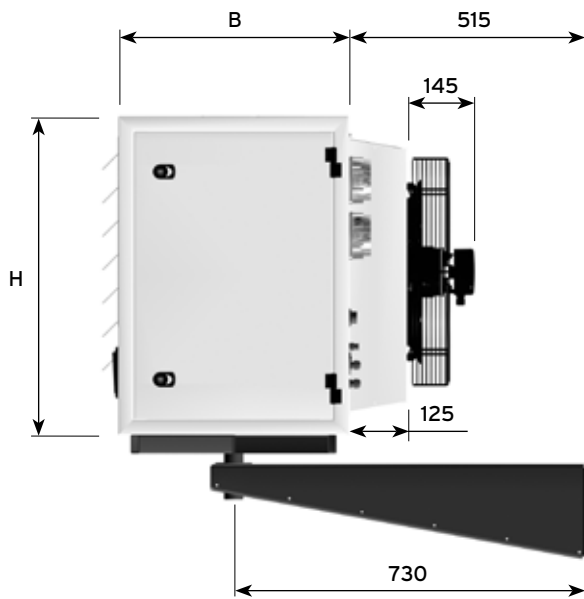
Heaters come ready and factory tested for methane gas. Use the specific kit to convert them to LPG (propane) gas, if necessary.

ON/OFF Heater Rapid Serie LR with Axial Fan

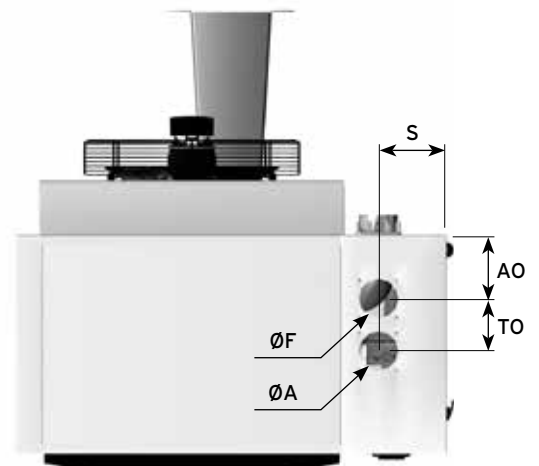
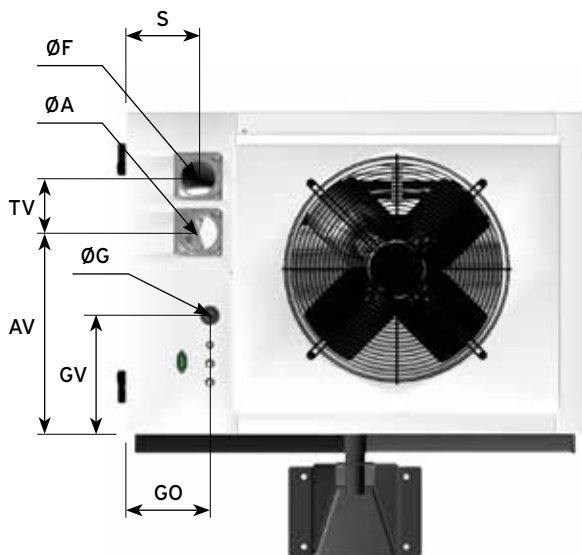
Model	Useful Heat Output		Max. Efficiency	Useful Heat Input max	Net Weight	Air Flow (15°)
	max (kW)	min (kW)*				
LR015	15,0	12,1	90,7	16,5	57	2.000
LR024	24,6	20,4	91,2	27,0	57	2.700
LR034	31,9	25,8	91,8	34,8	67	3.100
LR042	40,2	33,1	91,3	44,0	70	4.300
LR052	48,1	39,9	92,1	52,2	78	4.500
LR072	67,5	56,2	91,8	73,5	102	7.800
LR102	92,3	76,8	92,3	100,0	123	9.000

*With the kit for TWO-STAGE operation.

RAPID LR with AXIAL Fan/ Dimensions



Model	Overall Dimensions			Louvers		Brackets		Gas Supply		
	B	H	L	HB	LB	IS	ID	ØG	GO	GV
LR015, LR024	500	690	795	520	490	395	400	3/4"	180	255
LR034, LR042			985		680	490	495			
LR052		765	1.310	595	1.010	655	660			
LR072			1.515		1.180	770	745		210	275
LR102		845	1.515	675	1.180	770	745			



Model	Horizontal Outlets (STD)				
	A	F	AV	TV	S
LR015, LR024	80	80	430	120	155
LR034, LR042			505		
LR052			560		
LR072	100*	100*	140	185	
LR102					

*Obtained with adapters supplied as standard.

Model	Vertical Outlets (OPT.)				
	A	F	AV	TV	S
LR015, LR024	80	80	145	120	155
LR034, LR042					
LR052					
LR072	100*	100*	140	185	
LR102					

*Obtained with adapters supplied as standard.

RAPID / Serie LR with CENTRIFUGAL Fan

Technical Features

- Input power from 32 kW to 67 kW;
- Sealed combustion circuit;
- AISI 441 stainless steel combustion chamber;
AISI 441 stainless steel exchanger tubes and flue hood,
made of low carbon-content steel;
- Efficiency up to 94% according to the lower calorific value (Hi);
- Premix modulation burner, class 5, low NOx emissions in
compliance with EN 1020 2009 standards;
- Safety thermostat;
- An advanced technique of air/gas mixing guarantees total heater
safety;
- 230V/1ph/50Hz supply voltage;
- Compliant with all EC applicable regulations
(0476CQ0451 approval);
- Centrifugal fan.



Standard Accessories

- Kit for conversion to LPG.
- Kit High/Low working mode.

Optional Accessories

- Control with functions of room thermostat and output lines for
remote locking and unlocking;
- Fixed or revolving brackets;
- Aluminium flue outlet kit;
- Aluminium combustion air intake kit;

Note

- Heaters come ready and factory tested for methane gas. Use the
specific kit to convert them to LPG (propane) gas, if necessary.
- The LRC042 and LRC072 models do not meet the ErP 2018
requirements (Reg.EU/2281/2016).
- The LRC042 and LRC072 models are suitable for the Extra-EU
market.

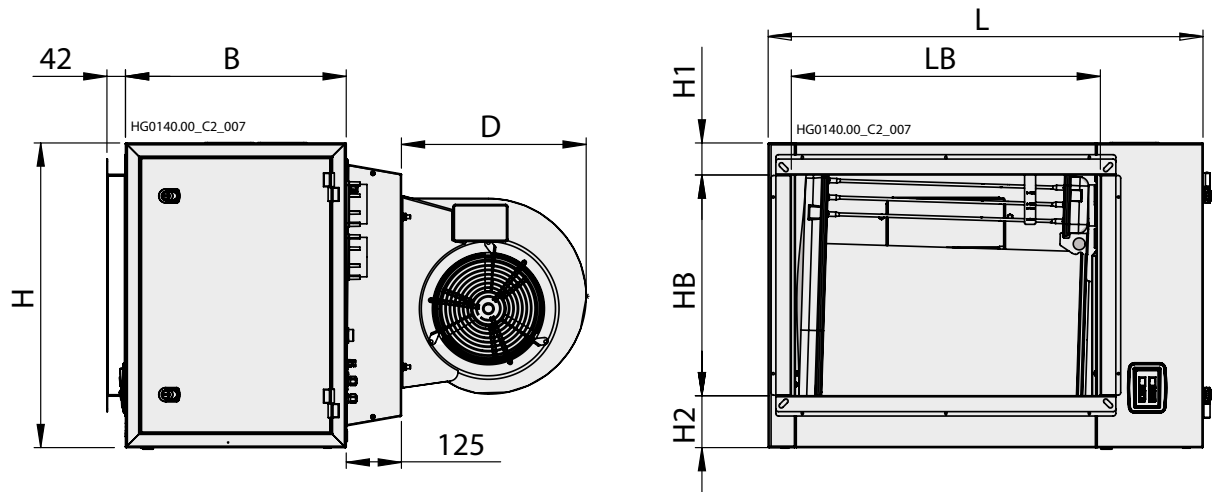
ON/OFF Heater Rapid Serie LR with CENTRIFUGAL Fan

Model	Useful Heat Output		Max. Efficiency	Useful Heat Input max	Net Weight	Air Flow	Available Pressure	Power Absorbed*
	max (kW)	min (kW)*	%	kW	kg	m ³ /h	Pa	W
LRC034	31,9	25,8	91,8	34,8	81	3.050	140	1.090
LRC042**	40,2	33,1	91,3	44,0	81	3.050	140	1.120
LRC052	48,1	39,9	92,1	52,2	99	4.650	140	1.260
LRC072**	67,5	56,2	91,8	73,5	124	5.650	140	2.080

* With the kit for TWO-STAGE operation.

** The LRC042 and LRC072 models do not meet the ErP 2018 requirements (Reg.EU/2281/2016).
The LRC042 and LRC072 models are suitable for the Extra-EU market.

RAPID LR with CENTRIFUGAL Fan/ Dimensions



Model	Overall Dimensions					Louvers			Gas Supply		
	B	H	L	D	HB	LB	H1	H2	ØG	GO	GV
LRC034, LROC42	500	690	985	420	500	700	73,5	117,5	3/4"	180	255
LRC052		765		480	600		61	105			
LRC072			1.310	420		1.000					



RAPID / Accessories for Indoor Installation

AXIAL Fan



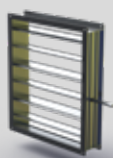
CENTRIFUGAL Fan



ACCESSORIES



BACK PROTECTION / MIXING BOX



REGULATION DAMPER
(INLET AIR)



FILTER
(INLET AIR)



ACCESSORIES

	AXIAL for INDOOR INSTALLATION	CENTRIFUGAL for INDOOR INSTALLATION
	LRxxx	LRCxxx
Back Protection Mixing Box	X	X
Regulation Damper (inlet air)	X	X
Filter (inlet air)		X

RAPID / Accessories for Indoor Installation



Back Protection Mixing Box

Code	Description	Target
G27730	Back protection kit	LR034 / LR042 LRC034 / LRC042
G27740	Back protection kit	LR052 LRC052
G27760	Back protection kit	LR072 LRC072



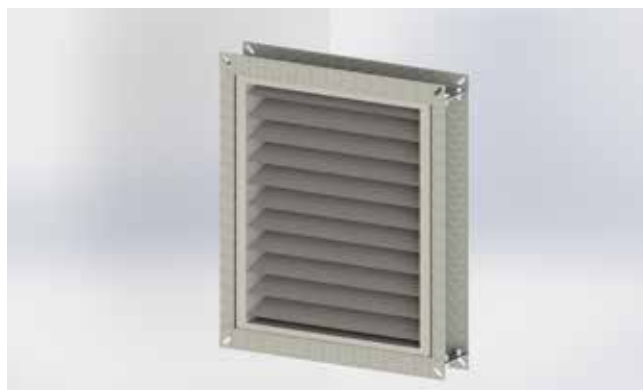
Supports Kit

INDOOR Heater Models with:				
	Axial Fan	Axial Fan + MIXING	Centrifughal Fan	Centrifughal Fan + MIXING
G27900 Support kit	●			
G13700.01 Support kit		●	●	●



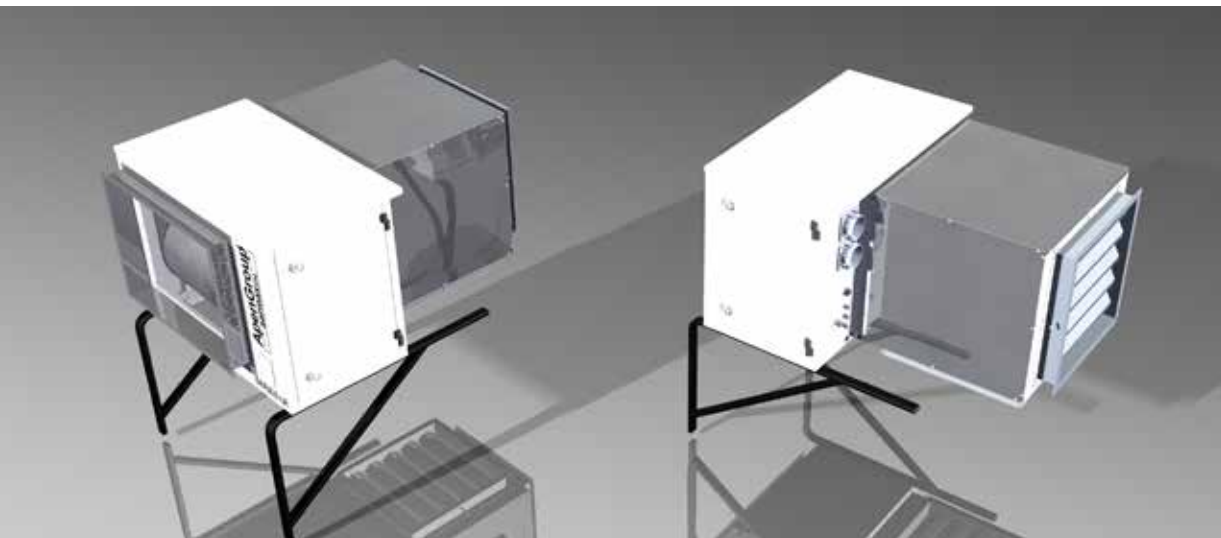
Regulation Damper

Code	Description	Target
G05833	Regulation damper 125 510 x 510	LR034 / LR042 LRC034 / LRC042
G04321	Regulation damper 125 510 x 610	LR052 LRC052
G07689	Regulation damper 125 860 x 610	LR072 LRC072



Filters

Code	Description	Target
G27430	Filter	LRC034 / LRC042
G27440	Filter	LRC052
G27460	Filter	LRC072



RAPID LR *-00X0

Warm Air Heater for Outdoor Installation (Cold Temperatures)

Suspended Warm Air Heater ON/OFF operation, suitable to be installed outside with very cold temperatures. Available with axial or centrifugal fan. Low polluting emissions.

Differences of the suspended warm air heater for outdoor installation compared to “standard” heaters:

- the presence of the filler panel installed above the heater;
- positioning of the power outlet and the buttons / controls spies inside the compartment protected from rain and humidity;
- presence of a ventilated resistance inside the compartment, managed by a frost thermostat (TA) at the machine.

Technical Features

- Special isolation for outdoor installation -40 ° C temperature;
- Input power from 34 kW to 72 kW;
- AISI 441 stainless steel combustion chamber; AISI 441 stainless steel exchanger tubes and flue hood, for very long life resistance;
- Efficiency up to 94% according to the lower calorific value (Hi);
- Premix modulation burner, class 5, low NOx emissions in compliance with EN 1020 2009 standards;
- An advanced technique of air/gas mixing guarantees total heater safety;
- Safety thermostat (JUMO high-quality German brand);
- 230V/1ph/50Hz supply voltage;
- High/Low working mode;
- Compliant with all EC applicable regulations (0476CQ0451 approval);
- Axial fan with 1 speed;
- Optional centrifugal fan with 1 speed;
- Optional safety fire dampers;
- Optional regulation dampers;
- Optional filter.

Standard Accessories

- Kit for conversion to LPG.

Optional Accessories

- Air fan protection box with mixing box chamber;
- Control with functions of room thermostat and output lines for remote locking and unlocking;
- Fixed or revolving brackets;
- Aluminium flue outlet kit;
- Aluminium combustion air intake kit.



NOTE:

- The LRC042 and LRC072 models do not meet the ErP 2018 requirements (Reg.EU/2281/2016).
- The LRC042 and LRC072 models are suitable for the Extra-EU market.

RAPID LR *-00X0

Warm Air Heater with AXIAL FAN

for Outdoor Installation (Cold Temperatures)



Model	LR034-00X0	LR042-00X0	LR052-00X0	LR072-00X0
Type of appliance	B23P - B53P - C13 - C43 - C53 - C63			
EC Approval	PIN.	0476CQ0451		
NOx class	Val	5		

Heater Performance

Nominal heat input	kW	34,8	44,0	52,2	73,5
Nominal heat output	kW	31,9	40,2	48,1	67,5
Efficiency Hi (P.C.I.)	%	91,8	91,3	92,1	91,8
Efficiency Hs (P.C.S.)	%	82,6	82,2	82,9	82,6
Chimney loss - burner ON (hi)	%	8,2	8,7	7,9	8,2
Chimney loss - burner OFF (hi)	%	<0,1	<0,1	<0,1	<0,1
Casing heat loss		0%	0%	0%	0%

Exhaust Gases - Pollution Emissions

Carbon monoxide - CO - (0% di O ₂)	ppm	<5	<5	<5	<5
Nitrogen oxide - NOx - (0% di O ₂)		30 mg/kWh- 17 ppm	44 mg/kWh- 25 ppm	47 mg/kWh- 27 ppm	43 mg/kWh- 26 ppm
Available pressure at flue	Pa	120	120	130	140

Electrical Data

Power supply	V	230 Vac - 50 Hz monophase			
Power absorbed	kW	0.184	0.320*	0.330*	0.493*
Power absorbed in stand by	kW	0.005			
IP protection	IP	IPX5D			
Working temperature	°C	from -40°C to +40°C - for lower temperatures, a burner housing heating kit is required			

Connections

Ø Gas connection	GAS	UNI/ISO 228/1 - G3/4"	UNI/ISO 228/1 - G3/4"	UNI/ISO 228/1 - G3/4"	UNI/ISO 228/1 - G3/4"
Ø of air inlet/exhaust pipes	mm	80/80	80/80	80/80	80/80

Air Flow

Air flow	m ³ /h	3.100	4.300	4.500	7.800
Δ T Air	°C	29,5	26,8	30,6	24,8
Fans number /Ø		1 X Ø450 (6P)	1 X Ø450 (4P)	1 X Ø450 (4P)	2 X Ø400 (4P)
Fans speed	rpm	970	1.370	1.370	1.370

* When thermal electrical resistance is active due to low external temperature, electrical consumption is increased of 100 W.



RAPID LR *-00X0

Warm Air Heater with CENTRIFUGAL FAN for Outdoor Installation (Cold Temperatures)

Model		LRC034-00X0	LRC042-00X0 **	LRC052-00X0	LRC072-00X0 **
Type of appliance		B23P - B53P - C13 - C43 - C53 - C63			
EC Approval	PIN.	0476CQ0451			
NOx class	Val	5			
Heater Performance					
Nominal heat input	kW	34,8	44,0	52,2	73,5
Nominal heat output	kW	31,9	40,2	48,1	67,5
Efficiency Hi (P.C.I)	%	91,8	91,3	92,1	91,8
Exhaust Gases - Pollution Emissions					
Available pressure at flue	Pa	140	140	140	140
Electrical Data					
Power absorbed *	kW	1,09*	1,12*	1,26*	2,08*
IP protection	IP	IPX5D			
Working temperature	°C	from -40°C to +40°C - for lower temperatures, a burner housing heating kit is required			
Air Flow					
Air flow	m³/h	3.050	3.050	4.650	5.650

* When thermal electrical resistance is active due to low external temperature, electrical consumption is increased of 100 W.

** The LRC042 and LRC072 models do not meet the ErP 2018 requirements (Reg.EU/2281/2016).
The LRC042 and LRC072 models are suitable for the Extra-EU market.

RAPID LR*-00X0/ Accessories for Outdoor Installation

AXIAL Fan



CENTRIFUGAL Fan



ACCESSORIES



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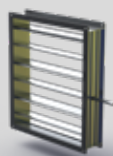


BACK PROTECTION / MIXING BOX

CHIMNEY



+



+



REGULATION DAMPER
(INLET AIR)

FILTER
(INLET AIR)



ACCESSORIES

	AXIAL for OUTDOOR INSTALLATION	CENTRIFUGAL for OUTDOOR INSTALLATION
	LRxxxx-00X0	LRCxxxx-00X0
Back Protection Mixing Box	X	X
Chimney	X	X
Regulation Damper (inlet air)	X	X
Filter (inlet air)		X

RAPID LR*-00X0/ Accessories for Outdoor Installation

Back Protection Mixing Box

Code	Description	Target
G27730	Back protection kit	LR034-00X0 / LR042-00X0 LRC034-00X0 / LROC42-00X0
G27740	Back protection kit	LR052-00X0 LRC052-00X0
G27760	Back protection kit	LR072-00X0 LRC072-00X0



Chimney

Code	Description
G27790	Chimney for LR034-00X0 / LR042-00X0 / LR052-00X0 / LR072-00X0 Chimney for LRC034-00X0 / LRC042-00X0 / LRC052-00X0 / LRC072-00X0



Supports Kit

Code	Description
G27900	Supports for LR034-00X0 / LR042-00X0 / LR052-00X0 / LR072-00X0 Supports for LRC034-00X0 / LRC042-00X0 / LRC052-00X0 / LRC072-00X0



Regulation Damper (Inlet Air)

Code	Description	Target
G05833	Regulation damper 125 510 x 510	LR034-00X0 / LR042-00X0 LRC034-00X0 / LROC42-00X0
G04321	Regulation damper 125 510 x 610	LR052-00X0 LRC052-00X0
G07689	Regulation damper 125 860 x 610	LR072-00X0 LRC072-00X0



Filters (Inlet Air)

Code	Description	Target
G27430	Filter	LRC034 / LRC042
G27440	Filter	LRC052
G27460	Filter	LRC072



SMARTWEB and SMARTEASY controls



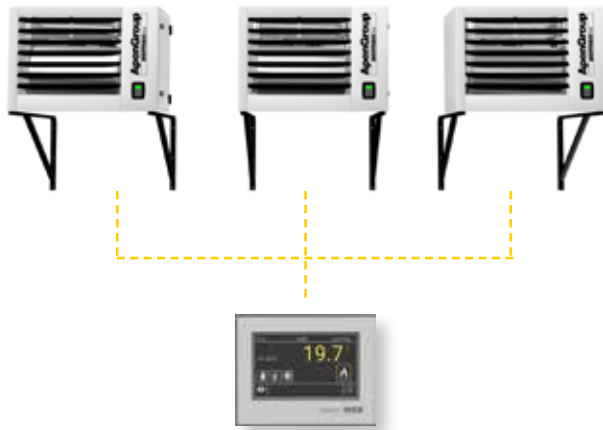
SMARTWEB / SMARTEASY

- Simple connection to the machine using two polarized conductors;
- It manages all the functions, regulations and resetting;
- Possibility to install 3 additional temperature probes;
- It has a 4,3" touch screen with resolution 480x272 pixel;
- It supports the following languages: italian, english, spanish, french, german, dutch, czech, polish and rumenian;
- Additionally, SMARTWEB version allows to connect to the internet line to manages remotely the installation;
- It can be installed from the beginning or added later as an optional accessory.

KONDENSA and PLUS Heaters' controls

SmartWeb / SmartEasy Controls

New Apen Group's remote control SMARTWEB and SMARTEASY series perform the function of standalone chronothermostat and can be used in a system that monitors a zone in which can be installed from one up to a maximum of 32 machines simultaneously.

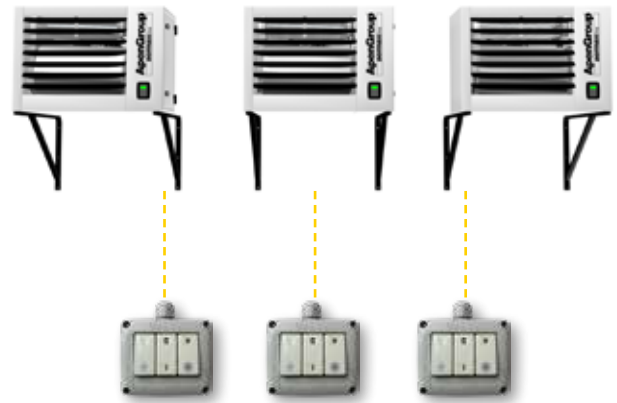


Basic Remote Control

It allows the following settings:

- On/Off button
- Summer/Winter switch and Reset button.

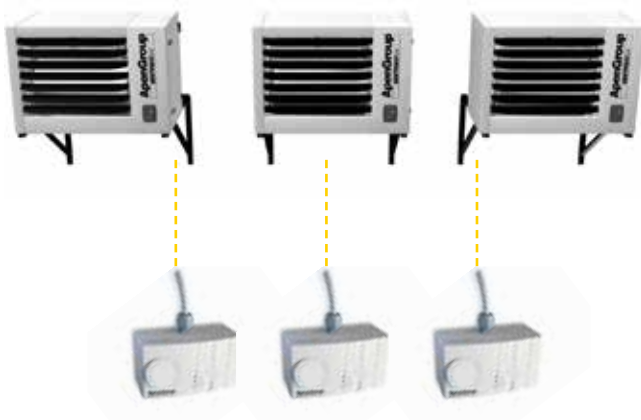
It can be used with a thermostat to regulate room temperature, switch to summer or winter working mode, turn off the heater without powering the unit off, display burner lock and reset the burner after a lock.



RAPID Heater's controls

Remote Control with Thermostat

Control of turning ON/OFF with the room temperature regulation, with Summer/Winter switch and Reset button.

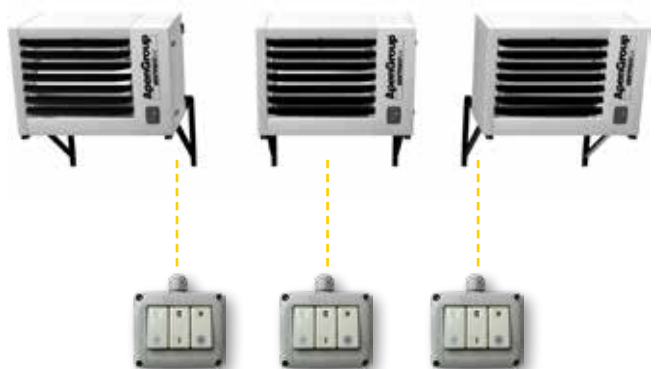


Basic Remote Control

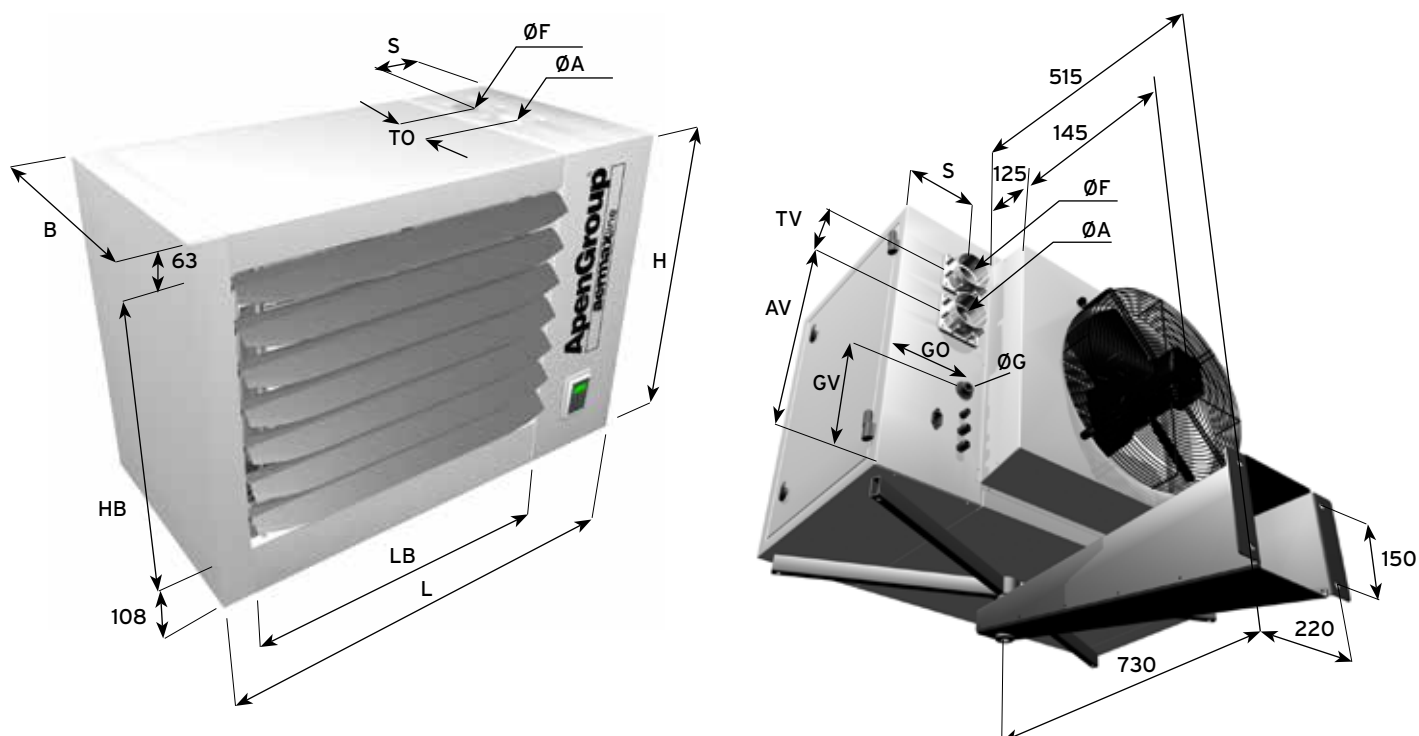
It allows the following settings:

- On/Off button
- Summer/Winter switch and Reset button.

It can be used with a thermostat to regulate room temperature, switch to summer or winter working mode, turn off the heater without powering the unit off, display burner lock and reset the burner after a lock.



Dimensions



Kondensa

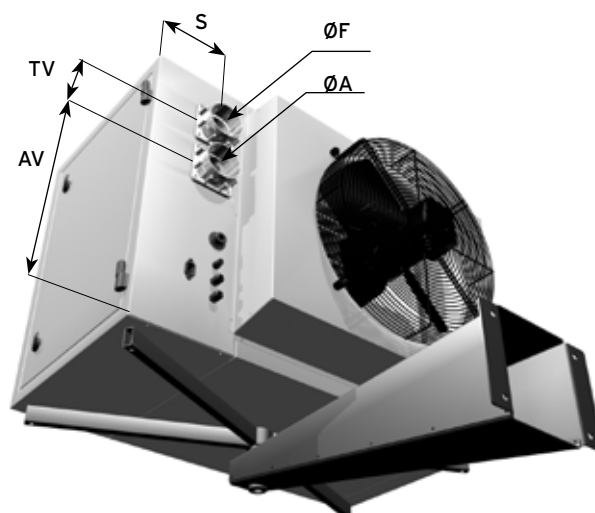
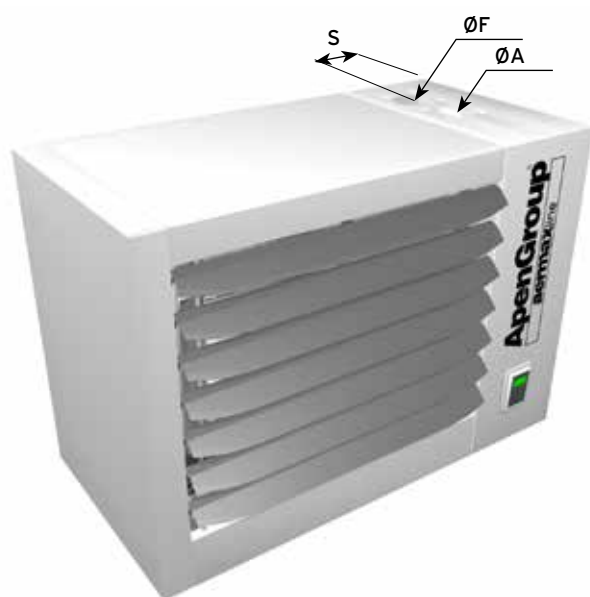
Model	Overall Dimensions			Louvres		Brackets		GAS Supply		
	B	H	L	HB	LB	IS	ID	ØG	GO	GV
LK020	500	690	795	520	490	395	400	3/4"	180	255
LK034			985		680	490	495			
LK045		765	1310	595	1010	655	660			
LK065			1515		1180	770	745			
LK105		845	1740	675	1410	895	845		210	275

Plus

Model	Overall Dimensions			Louvres		Brackets		GAS Supply		
	B	H	L	HB	LB	IS	ID	ØG	GO	GV
LP015	500	690	795	520	490	395	400	3/4"	180	255
LP024			985		680	490	495			
LP034		765	1310	595	1010	655	660			
LP042			1515		1180	770	745			
LP052		845	1740	675	1410	895	845		210	275

Rapid

Model	Overall Dimensions			Louvres		Brackets		GAS Supply		
	B	H	L	HB	LB	IS	ID	ØG	GO	GV
LR015	500	690	795	520	490	395	400	3/4"	180	255
LR024			985		680	490	495			
LR034		765	1310	595	1010	655	660			
LR042			1515		1180	770	745			
LR052		845	1740	675	1410	895	845		210	275



Kondensa

Model	Standard Horizontal Outlets				
	ØA	ØF	AV	TV	S
LK020	80	80	430	120	155
LK034					
LK045			505		
LK065					
LK080	100*	100*	560	140	185
LK105					

Model	Optional Vertical Outlets				
	ØA	ØF	AO	TO	S
LK020	80	80	145	120	155
LK034					
LK045					
LK065					
LK080	100*	100*		140	185
LK105					

Plus

Model	Standard Horizontal Outlets				
	ØA	ØF	AV	TV	S
LP015	80	80	430	120	155
LP024					
LP034					
LP042					
LP052			505		
LP072					
LP102	100*	100*	560	140	185

Model	Optional Vertical Outlets				
	ØA	ØF	AO	TO	S
LP015	80	80	145	120	155
LP024					
LP034					
LP042					
LP052					
LP072					
LP102	100*	100*		140	185

Rapid

Model	Standard Horizontal Outlets				
	ØA	ØF	AV	TV	S
LR015	80	80	430	120	155
LR024					
LR034					
LR042					
LR052			505		
LR072					
LR102	100*	100*	560	140	185

Model	Optional Vertical Outlets				
	ØA	ØF	AO	TO	S
LR015	80	80	145	120	155
LR024					
LR034					
LR042					
LR052					
LR072					
LR102	100*	100*		140	185

* Obtained with adapters supplied as standard

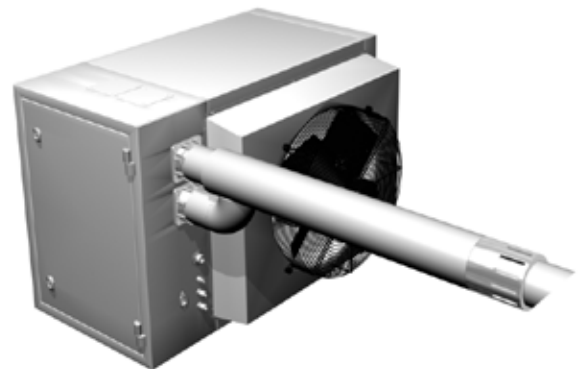


Exhaust Fumes Terminals



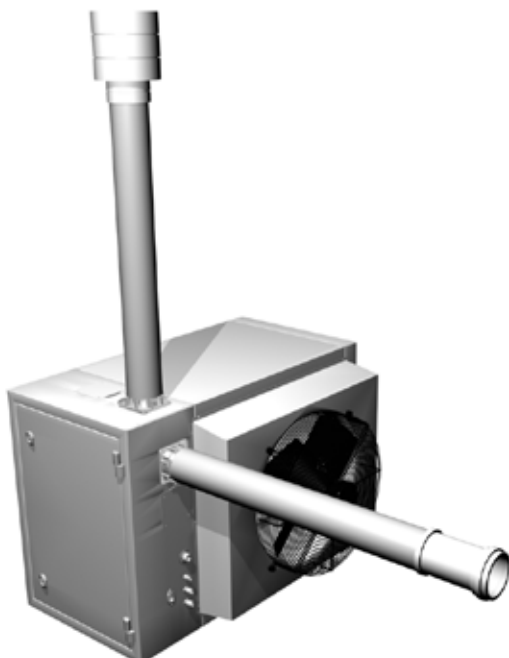
Tipo B23 - Vertical

Open combustion circuit, combustion air intake from indoor, external flue exhaust on the roof.



Tipo C13 - Horizontal Coaxial

Combustion circuit is sealed from the room. Piping is connected to outdoor using one concentric terminal through the wall.



Tipo C53

Sealed combustion circuit. Both pipes are connected to outdoor through different walls.



Tipo C33 - Coaxial Connection to Roof

Sealed combustion circuit. Piping is connected to outdoor using one concentric terminal on the roof.

