

ApenGroup



Suspended Warm Heaters

LK Kondensa

LP Plus

LR Rapid

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

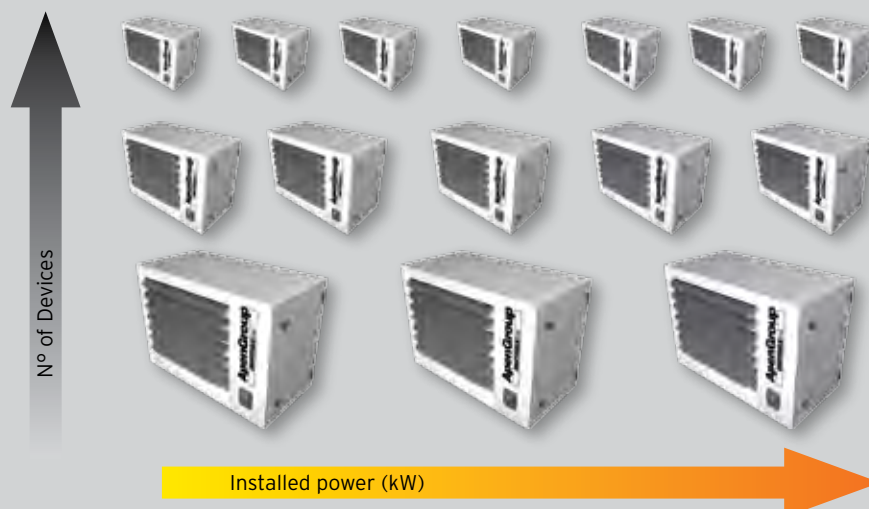
Warm air heaters can be installed in the spaces to be heated, therefore do not require a separate room nor an enclosure that would reduce useful space.

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.



KONDENSA / Technical Data

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
Nominal heat input	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
Nominal heat output	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
Efficiency Hi (P.C.I)	%	104,63	95,68	106,97	96,30	105,50	96,30	108,06	96,82	108,35	97,60	108,40	97,15
Efficiency Hs (P.C.S)	%	94,26	86,20	96,37	86,76	95,07	86,76	97,36	87,22	97,62	87,93	97,68	87,52
Chimney loss - 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
Chimney loss - burner OFF (hi)	%	<0,1		<0,1		<0,1		<0,1		<0,1		<0,1	
Casing heat loss ⁽¹⁾	%	0%		0%		0%		0%		0%		0%	
Max. Condensation produced ⁽²⁾	l/h	0,4		0,9		1,1		2,1		3,3		2,7	

Exhaust Gases - Pollution emissions

Carbon monoxide - CO - (0% di O ₂) ⁽³⁾	ppm	< 5		< 5		< 5		< 5		< 5		< 5	
Nitrogen oxide - NOx - (0% di O ₂) ⁽⁴⁾		38 mg/kWh - 22 ppm		42 mg/kWh - 24 ppm		33 mg/kWh - 19 ppm		39 mg/kWh - 22 ppm		32 mg/kWh - 18 ppm		41 mg/kWh - 23 ppm	
Available pressure at flue	Pa	80		90		100		120		120		120	

Electrical Data

Power supply	V	230 Vac - 50 Hz monophase											
Power absorbed	W	147	180	270	310	280	310	425	510	500	613	650	750
Power absorbed in stand by	W	<5											
IP protection	IP	IP20											
Working temperature	°C	from -15°C to +40°C - for lower temperatures, a burner housing heating kit is required.											

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 air inlet/exhaust pipes	mm	80/80	80/80	80/80	80/80	100/100 ⁽⁷⁾	100/100 ⁽⁷⁾

Air flow

Air flow	m ³ /h	2.700		4.300		4.500		7.800		9.000		11.100	
Δ T Air	°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
Fans number /Ø		1 x Ø350		1 x Ø 450		1 x Ø450		2 x Ø400		2 x Ø450		3 x Ø400	
Fans speed	rpm	1.370		1.370		1.370		1.370		1.370		1.370	
Max. applicable pressure	Pa	1.200		1.200		1.200		1.200		1.200		1.200	
Sound pressure (Lp) ⁽⁸⁾	dB(A)	44		49		49		51		52		54	
Noise level (Lw)		71,3		75,7		75,7		78,3		78,8		81,3	

Weight

Net weight	kg	58		72		79		98		129		145	
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NOTE:

- (1) Heat loss is null since the unit heaters are installed inside the heated space building.
- (2) Max. Condensation produced acquired from testing 30%Qn.
- (3) Value referenced to cat. H (G20).
- (4) Weighted value to EN1020 ref. to cat. H (G20), referred to Hi (L.C.V.).
- (5) The gas line must be measured on the basis of the length of the path and not on the basis of the diameter of the appliance.
For countries where it is required a different ISO connection, from the one already specified, an adapter will be provided.
- (6) For models LK080 and LK105 the gas supply pipe must have a diameter at least UNI / ISO 228/1- G 1".
- (7) Ø100/100 obtained with adapters supplied as standard.
- (8) Measured at a distance of 6 m from the machine.



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 appliance	B23- B23P- C13 - C33 - C43 - C53 - C63						
EC Approval	PIN. 0476CQ0451						
NOx class	Val 5 4						

Heater Performance

		min	max	min	max	min	max	min	max	min	max	min	max	min	max
Nominal heat input	kW	13,0	16,5	21,8	27,0	27,5	34,8	33,3	44,0	39,4	52,2	60	73,5	81,8	100,0
Nominal heat output	kW	12,1	15,0	20,4	24,6	25,8	31,9	31,2	40,2	37,0	47,9	56,2	67,5	76,8	92,3
Efficiency Hi (P.C.I)	%	93,2	90,7	93,7	91,2	93,7	91,8	93,8	91,3	94,0	91,8	93,7	91,8	93,9	92,3
Efficiency Hs (P.C.S)	%	83,8	81,6	84,3	81,2	84,3	82,6	84,4	82,2	84,6	82,6	84,3	82,6	84,5	83,1
Chimney loss - burner ON (hi)	%	6,8	9,3	6,3	8,8	6,3	8,2	6,2	8,7	6,0	8,2	6,3	8,2	6,1	7,7
Chimney loss - burner OFF (hi)	%	<0,1		<0,1		<0,1		<0,1		<0,1		<0,1		<0,1	
Casing heat loss ⁽¹⁾		0%		0%		0%		0%		0%		0%		0%	

Exhaust Gases - Pollution emissions

Carbon monoxide - CO - (0% di O ₂) ⁽²⁾	ppm	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nitrogen oxide - NOx - (0% di O ₂) ⁽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 - 24 ppm	58 mg/kWh - 33 ppm							
Available pressure at flue	Pa	80	100	120	120	130	140	140							

Electrical Data

Power supply	V	230 Vac - 50 Hz monophase													
Power absorbed	W	117	143	172	197	175	205	267	320	280	330	470	493	550	582
Power absorbed in stand by	W	<5													
IP protection	IP	IP20													
Working temperature	°C	from -15°C to +40°C - for lower temperatures, a burner housing heating kit is required													

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"	UNI/ISO 228/1- G 3/4"
Ø of air inlet/exhaust pipes	mm	80/80	80/80	80/80	80/80	80/80	80/80	80/80	80/80	80/80	80/80	80/80	80/80	80/80	100/100 ⁽⁶⁾

Air flow

Air flow	m ³ /h	2.000	2.700	2.700	4.300	4.500	7.800	9.000							
Δ T Air	°C	17,37	21,45	21,69	26,14	27,36	33,92	20,82	26,78	23,59	30,53	20,66	24,80	24,47	29,40
Fans number /Ø		1 X Ø350 (6P)	1 X Ø350 (4P)	1 X Ø350 (4P)	1 X Ø450 (4P)	1 X Ø450 (4P)	2 X Ø400 (4P)	2 X Ø450 (4P)							
Fans speed	rpm	920	1.370	1.370	1.370	1.370	1.370	1.370							
Max. applicable pressure	Pa	1.200	1.200	1.200	1.200	1.200	1.200	1.200							
Sound pressure (Lp) ⁽⁷⁾	dB(A)	34	44	44	49	49	51	52							
Noise level (Lw)		61,4	71,3	71,3	75,7	75,7	78,3	78,8							

Weight

Net weight	kg	58	58	68	70	78	102	123
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NOTE:

- (1) Heat loss is null since the unit heaters are installed inside the heated space building.
- (2) Value referenced to cat. H (G20).
- (3) Weighted value to EN1020 ref. to cat. H (G20), referred to Hi (L.C.V.).
- (4) The gas line must be measured on the basis of the length of the path and not on the basis of the diameter of the appliance.
For countries where it is required a different ISO connection, from the one already specified, an adapter will be provided.
- (5) For model LP102 the gas supply pipe must have a diameter at least UNI / ISO 228 / 1- G 1 " .
- (6) Ø100/100 obtained with adapters supplied as standard.
- (7) Measured at a distance of 6 m from the machine.



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 appliance	B23P - B53P - C13 - C43 - C53 - C63						
EC Approval	PIN. 0476CQ0451						
NOx class	Val 5 4						

Heater Performance

		min	max	min	max	min	max	min	max	min	max	min	max	min	max
Nominal heat input	kW	13,0	16,5	21,8	27,0	27,5	34,8	35,5	44,0	42,4	52,2	60,0	73,5	81,8	100,0
Nominal heat output	kW	12,1	15,0	20,4	24,6	25,8	31,9	33,1	40,2	39,6	47,9	56,2	67,5	76,8	92,3
Efficiency Hi (P.C.I)	%	93,2	90,7	93,7	91,2	93,7	91,8	93,2	91,3	93,4	91,8	93,7	91,8	93,9	92,3
Efficiency Hs (P.C.S)	%	83,8	81,6	84,3	81,2	84,3	82,6	83,9	82,2	84,1	82,6	84,3	82,6	84,5	83,1
Chimney loss - burner ON (hi)	%	6,8	9,3	6,3	8,8	6,3	8,2	6,8	8,7	6,6	8,2	6,3	8,2	6,1	7,7
Chimney loss - burner OFF (hi)	%	<0,1		<0,1		<0,1		<0,1		<0,1		<0,1		<0,1	
Casing heat loss ⁽¹⁾		0%		0%		0%		0%		0%		0%		0%	

Exhaust Gases - Pollution emissions

Carbon monoxide - CO - (0% di O ₂) ⁽²⁾	ppm	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nitrogen oxide - NOx - (0% di O ₂) ⁽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 - 24 ppm	58 mg/kWh - 33 ppm							
Available pressure at flue	Pa	80	100	120	120	130	140	140							

Electrical Data

Power supply	V	230 Vac - 50 Hz monophase													
Power absorbed	W	117	143	172	197	175	205	267	320	280	330	470	493	550	582
Power absorbed in stand by	W	<5													
IP protection	IP	IP20													
Working temperature	°C	from -15°C to +40°C - for lower temperatures, a burner housing heating kit is required													

Connections

Ø Gas connection ⁽⁴⁾	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"	UNI/ISO 228/1 - G3/4"	UNI/ISO 228/1 - G3/4"	UNI/ISO 228/1 - G3/4"	UNI/ISO 228/1 - G3/4"	UNI/ISO 228/1 - G3/4"	UNI/ISO 228/1 - G3/4"	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	80/80	80/80	80/80	80/80	80/80	80/80	80/80	80/80	80/80	100/100 ⁽⁶⁾

Air flow

Air flow (15°)	m ³ /h	2.000	2.700	2.700	4.300	4.500	7.800	9.000							
Δ T Air	°C	17,37	21,45	21,69	26,14	27,36	33,92	20,82	26,78	23,59	30,53	20,66	24,80	24,47	29,40
Fans number /Ø		1 X Ø350 (6P)	1 X Ø350 (4P)	1 X Ø350 (4P)	1 X Ø450 (4P)	1 X Ø450 (4P)	2 X Ø400 (4P)	2 X Ø450 (4P)							
Fans speed	rpm	920	1.370	1.370	1.370	1.370	1.370	1.370							
Max. applicable pressure	Pa	1.200	1.200	1.200	1.200	1.200	1.200	1.200							
Sound pressure (Lp) ⁽⁷⁾	dB(A)	34	44	44	49	49	51	52							
Noise level (Lw)		61,4	71,3	71,3	75,7	75,7	78,3	78,8							

Weight

Net weight	kg	57	57	67	70	78	102	123							
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NOTE:

- (1) Heat loss is null since the unit heaters are installed inside the heated space building.
- (2) Value referenced to cat. H (G20).
- (3) Weighted value to EN1020 ref. to cat. H (G20), referred to Hi (L.C.V.).
- (4) The gas line must be measured on the basis of the length of the path and not on the basis of the diameter of the appliance.
For countries where it is required a different ISO connection, from the one already specified, an adapter will be provided.
- (5) For model LR102 the gas supply pipe must have a diameter at least UNI / ISO 228 / 1- G 1 ".
- (6) Ø100/100 obtained with adapters supplied as standard.
- (7) Measured at a distance of 6 m from the machine.

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.

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;
- Kit High/Low working mode.

NOTE

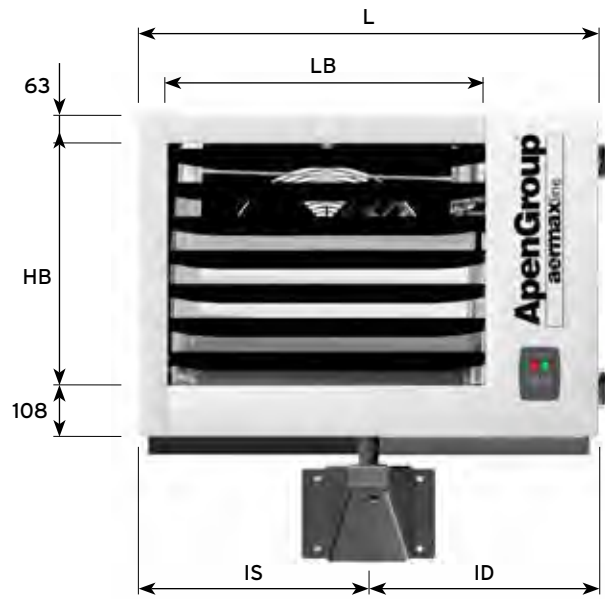
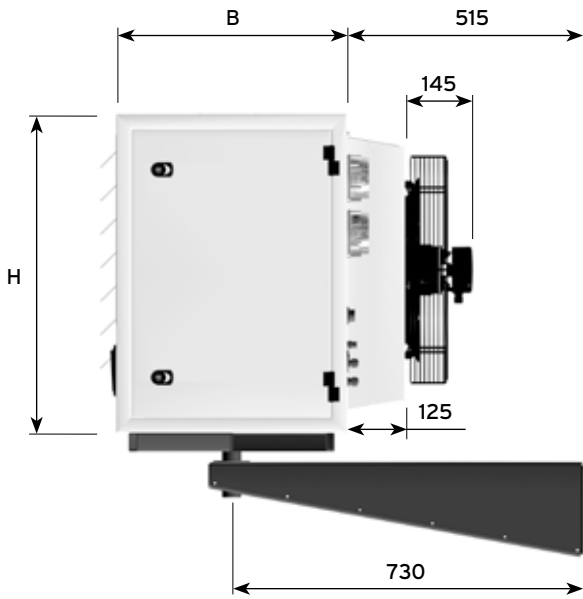
Heaters come ready and factory tested for methane gas. Use the specific kit to convert them to LPG (propane) gas, if necessary.

ON/OFF HEATER RAPID SERIE LR WITH AXIAL FAN

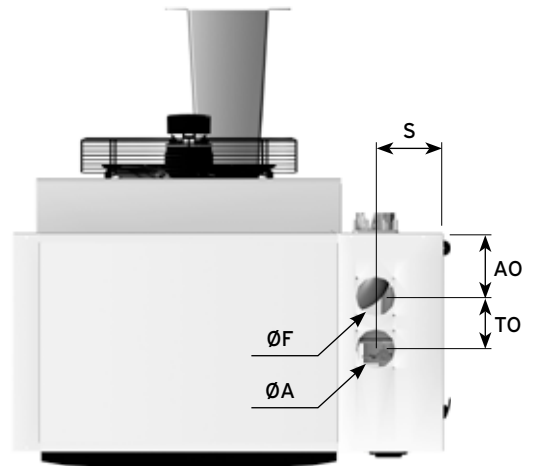
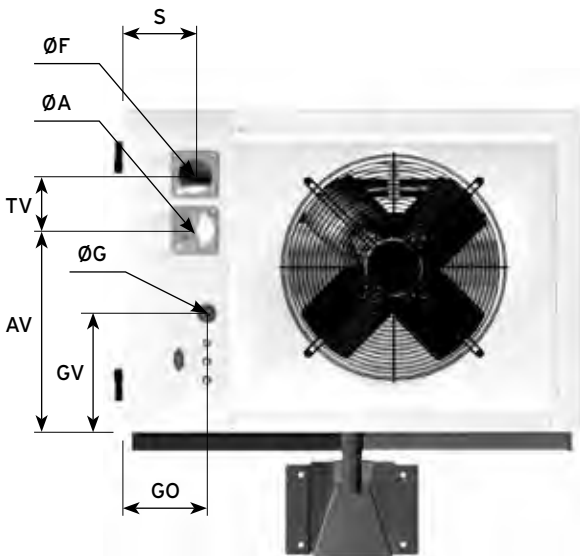
Model	Useful Heat Output		Max. Efficiency	Useful Heat Input max	Net Weight	Air Flow (15°)
	max (kW)	min (kW)*				
LR015	15,0	12,1	90,7	16,5	57	2.000
LR024	24,6	20,4	91,2	27,0	57	2.700
LR034	31,9	25,8	91,8	34,8	67	2.700
LR042	40,2	33,1	91,3	44,0	70	4.300
LR052	47,9	39,6	91,8	52,2	78	4.500
LR072	67,5	56,2	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							
LR052		765	1.310	595	1.010	655	660			
LR072			1.515	675	1.180	770	745			
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	140	185
LR072			100*		
LR102			100*	560	140

*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			140	185	
LR102					100*

*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.

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;
- Kit High/Low working mode.

NOTE

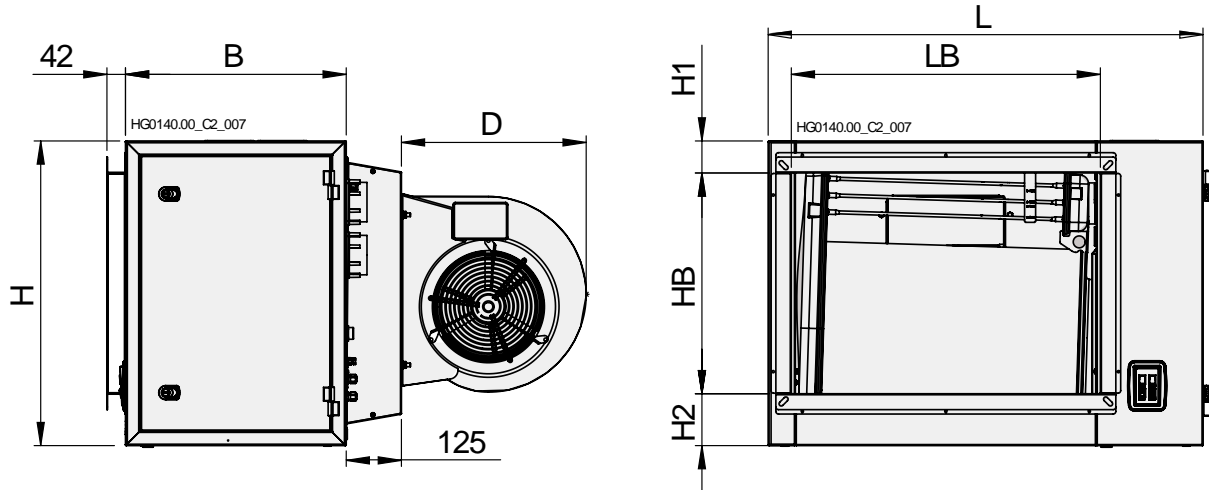
Heaters come ready and factory tested for methane gas. Use the specific kit to convert them to LPG (propane) gas, if necessary.

ON/OFF HEATER RAPID SERIE LR WITH CENTRIFUGAL FAN

Model	Useful Heat Output		Max. Efficiency	Useful Heat Input max	Net Weight	Air Flow	Available Pressure	Power Absorbed*
	max (kW)	min (kW)*						
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	47,9	39,6	91,8	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.

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



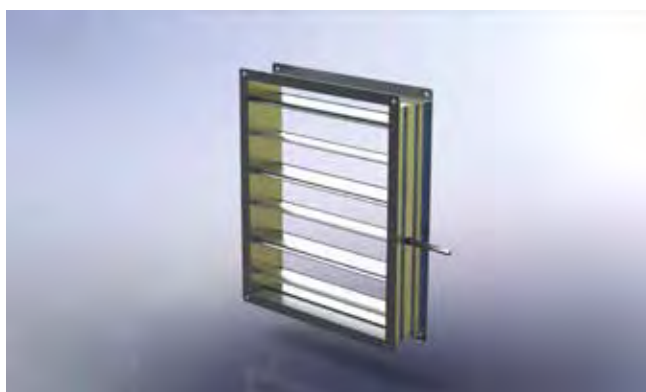
BACK PROTECTION MIXING BOX

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

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



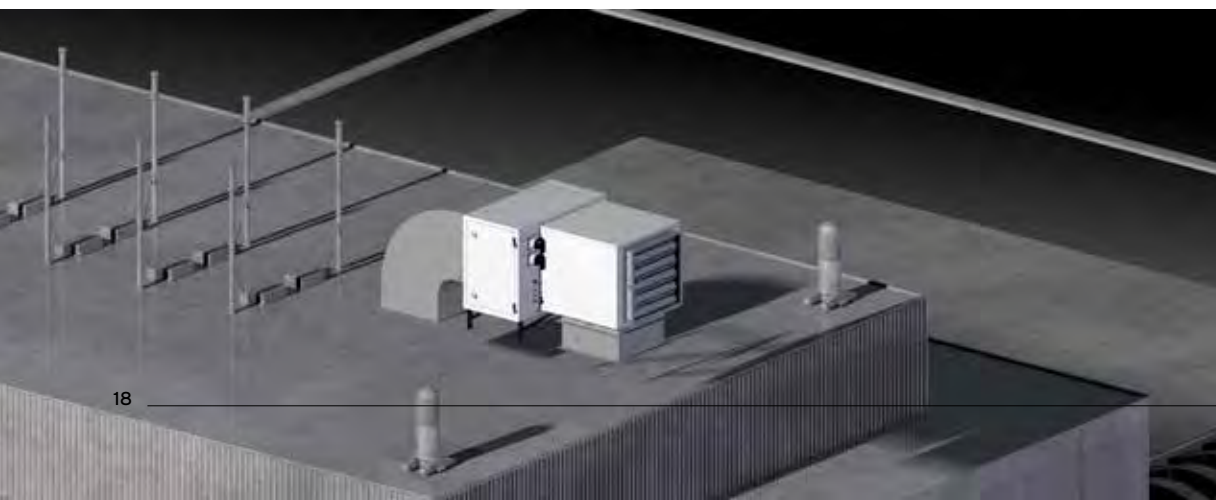
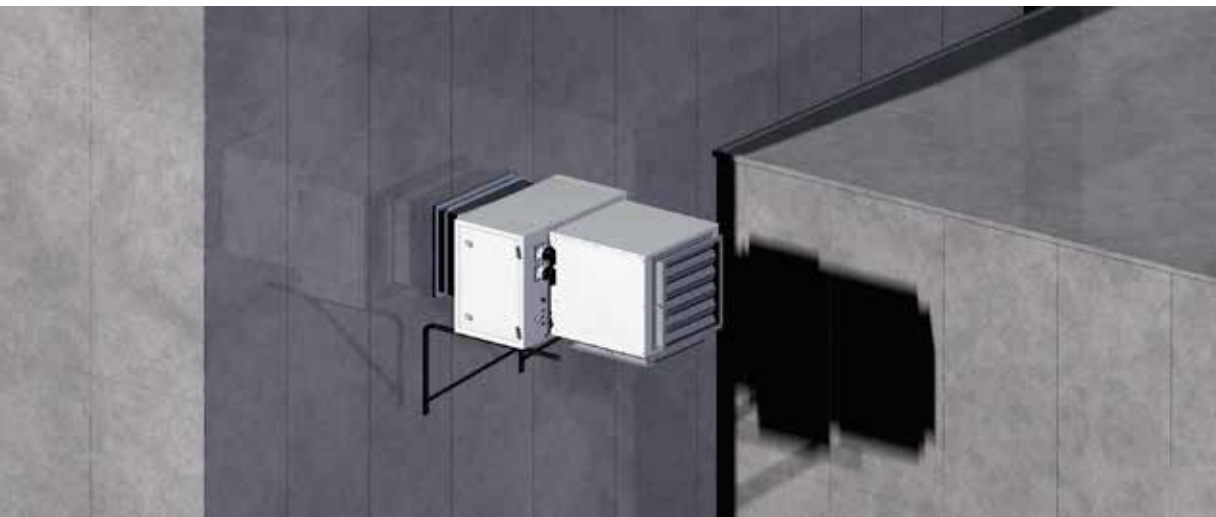
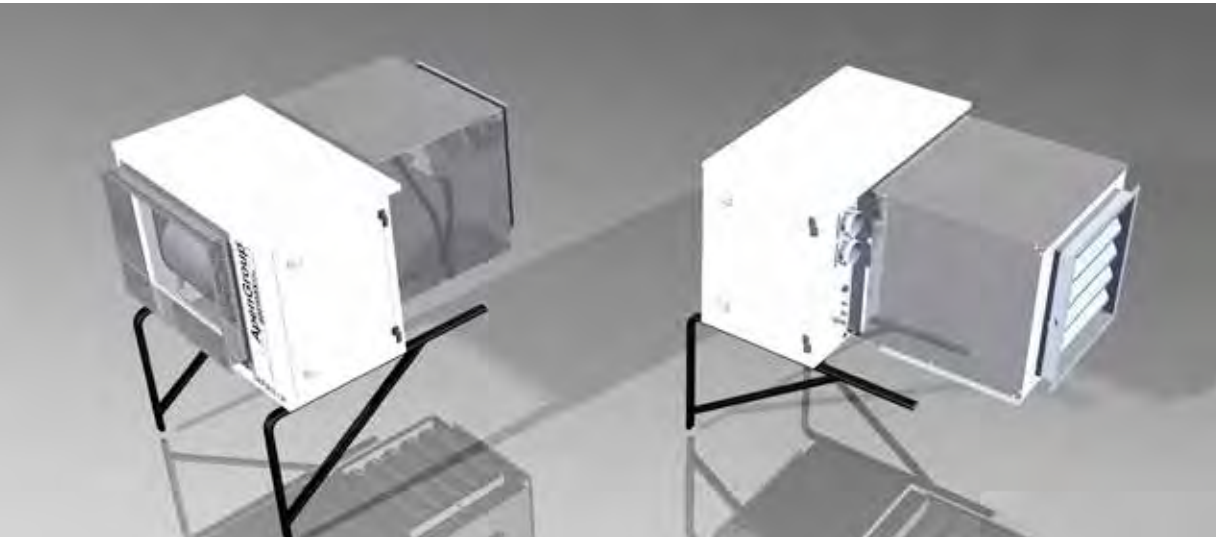
REGULATION DAMPER

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.



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	47,9	67,5
Efficiency Hi (P.C.I)	%	91,8	91,3	91,8	91,8
Efficiency Hs (P.C.S)	%	82,6	82,2	82,6	82,6
Chimney loss - burner ON (hi)	%	8,2	8,7	8,2	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- 24 ppm
Available pressure at flue	Pa	120	120	130	140
Electrical Data					
Power supply	V	230 Vac - 50 Hz monophase			
Power absorbed	W	205	320*	330*	493*
Power absorbed in stand by	W	<5			
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	2.700	4.300	4.500	7.800
Δ T Air	°C	33,92	26,78	30,53	24,80
Fans number /Ø		1 X Ø350 (4P)	1 X Ø450 (4P)	1 X Ø450 (4P)	2 X Ø400 (4P)
Fans speed	rpm	1.370	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	47,9	67,5
Efficiency Hi (P.C.I)	%	91,8	91,3	91,8	91,8
Exhaust Gases - Pollution emissions					
Available pressure at flue	Pa	140	140	140	140
Electrical Data					
Power absorbed *	W	1.090*	1.120*	1.260*	2.080*
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	m ³ /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.

RAPID LR*-00X0/ Accessories for outdoor installation

AXIAL Fan



CENTRIFUGAL Fan



ACCESSORIES



+



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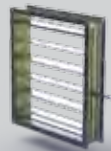


BACK PROTECTION / MIXING BOX

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



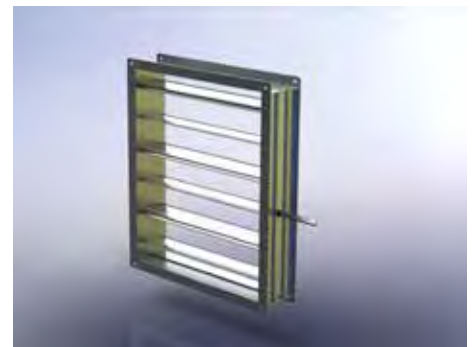
SUPPORTS KIT

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 / 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 controls

Remote Control with Thermostat

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

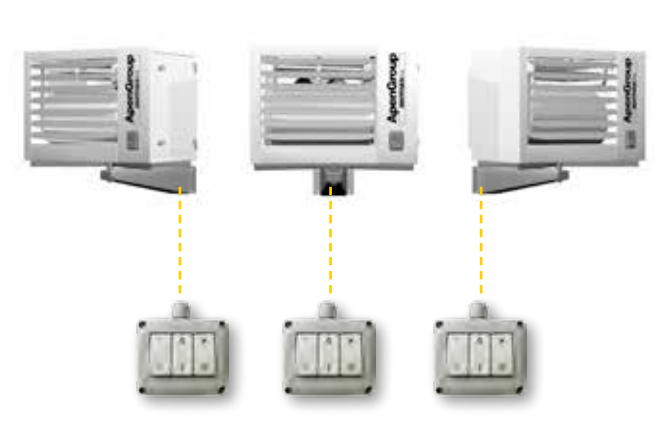


Basic Remote Control

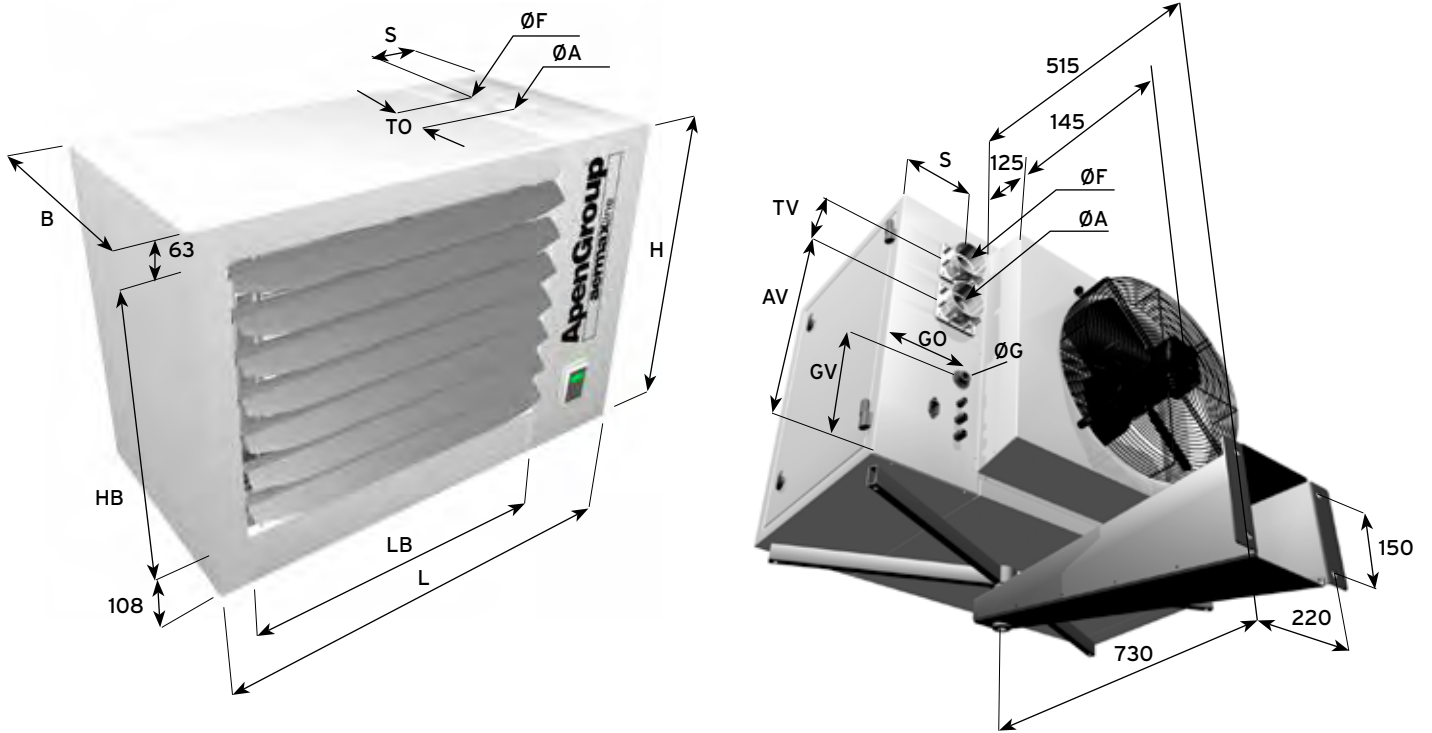
It allows the following settings:

- 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

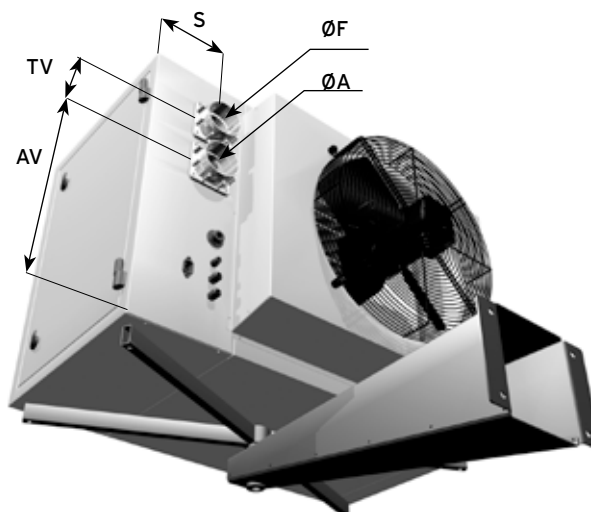
Model	Overall Dimensions			Louvres		Brackets		GAS Supply		
	B	H	L	HB	LB	IS	ID	ØG	GO	GV
LK020	500	690	795	520	490	395	400	3/4"	180	255
LK034			985		680	490	495			
LK045		765	1.310	1.010	655	660				
LK065		1.515	1.180	770	745	210	275			
LK080		845	1.740	1.410	895				845	
LK105										

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		1.310	1.010	655			
LP042		1.515	1.180	770	745	210	275			
LP052		845	1.740	1.410	895				845	
LP072										
LP102										

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		1.310	1.010	655			
LR042		1.515	1.180	770	745	210	275			
LR052		845	1.740	1.410	895				845	
LR072										
LR102										



Kondensa

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

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

Plus

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

Rapid

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

* Obtained with adapters supplied as standard.

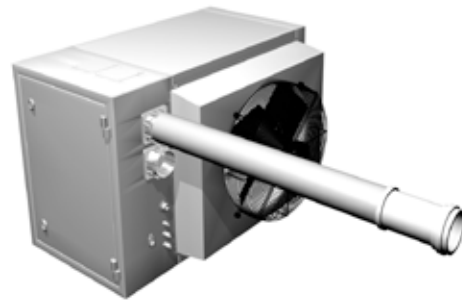


Exhaust Fumes Terminals



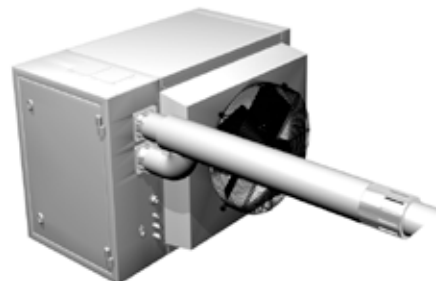
Tipo B23 - Vertical

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



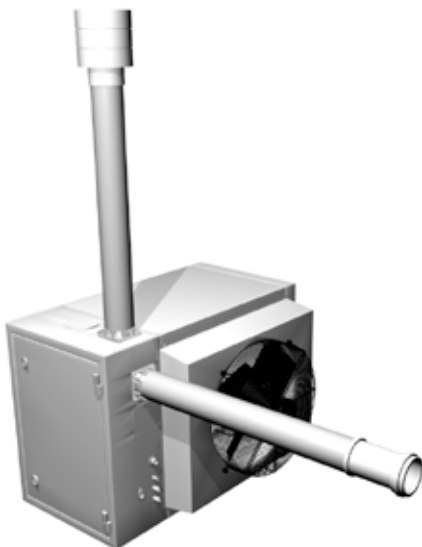
Tipo B23 - Horizontal

Open combustion circuit, combustion air intake from indoor, external flue exhaust through the wall.



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

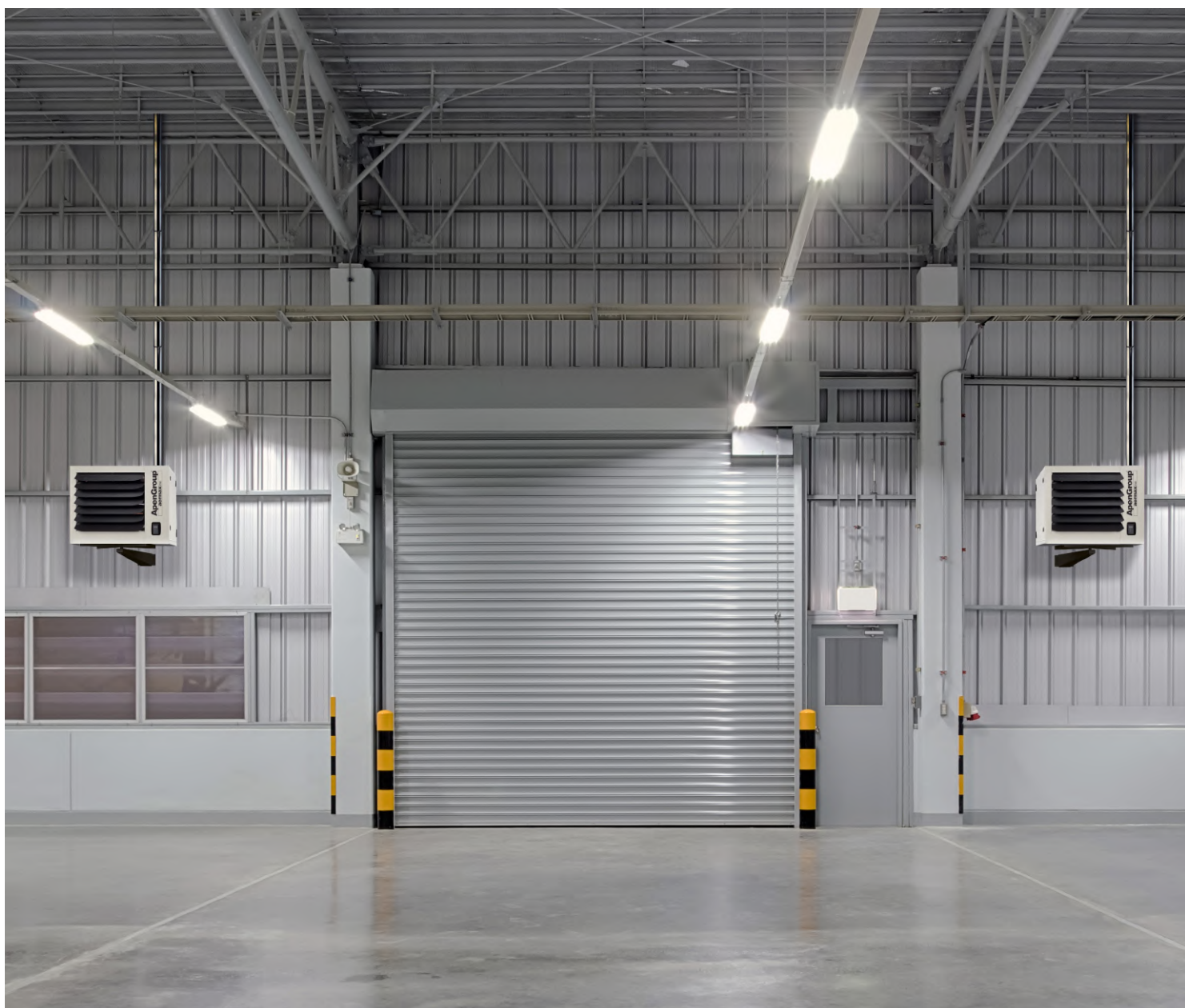
Sealed combustion circuit. Piping is connected to outdoor using one concentric terminal on the roof.

ApenGroup[®]
aermaxline

APEN GROUP S.p.A.
20060 Pessano con Bornago (MI) - Italy
Via Isonzo, 1 (ex Via Provinciale, 85)
Phone +39-02-95.96.93.1 Fax +39-02-95.74.27.58
www.apengroup.com
apen@apengroup.com

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Specifications in this catalogue are subject to change without notice.

ApenGroup



LK KONDENSA

LRP RAPID PRO 



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NEW SUSPENDED WARM AIR HEATERS

Why Choose Kondensa or Rapid Pro?

From 1-1-2021, Apen Group will introduce the new versions to satisfy the ERP 2021 requirements.

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

- KONDENSA, suspended condensing and modulating warm air heater, with efficiency up to 108%;
- RAPID PRO, modulating warm air heater,

The two ranges, provide different performances and efficiency, are characterized by:

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



High Quality Materials

Combustion chamber and heat exchanger are manufactured entirely from AISI 441 high quality stainless steel (with low carbon content) which assures maximum reliability and long life cycle.

Clean Combustion

The burner fully premixes gas and combustion air, providing each heater with the following benefits:

- 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 RAPID-PRO heaters, regulates continuous modulation of heat output and controls both the burner fan and the gas valve.

Guaranteed Safety

An advanced technique of pre-mix burners guarantees total safety. The gas valve delivers gas according to the air/gas ratio set at 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 include:

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

Modulating Burner

The flexibility and turndown of modulating burners allows each heater (whether a single unit or multiple unit system) ensure that the correct amount of heat is being delivered by the appliance(s) demanded by the control system.

Direct Thermal Exchange

No Water Supply,

The thermal energy produced by the burner is transferred to the air by means of a heat exchanger that contains the products of combustion. This ensures maximum transference of heat into the supply air stream without any contact with the products of combustion.

This method provides instant heating benefits for the space being served.

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

Because there is no requirement for water the inherent problems associated with such systems are avoided.

Plant Room Not Required

LK and LRP models are installed within the space they are heating, therefore plant room space is not required.

Summer Ventilation

It is possible to set heaters in summer ventilation mode, by activating the enabling the supply air fan to run, this will help improve the comfort levels within the space they are installed.

Versatility of Installation

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



KONDENSA 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 heat exchanger tubes and flue collection box made of low carbon content;
- Efficiency up to 108% (ncv);
- Premixed gas modulating burner, low NO_x emissions (class 5) in compliance with EN 1020 2009 standards;
- Electronic control board with continuous modulation of heat output, 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.



KONDENSA / Technical Data

Model		LK020	LK034	LK045	LK065	LK080	LK105						
Type of appliance		B23 - B23P - C13 - C33 - C43 - C53 - C63											
EC Approval	PIN.	0476CQ0451											
NOx Class [EN1020:2009]	Val	5											
Type of fuel		Gaseous											
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_{p}, 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_{p}, 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	
Max. condensation ⁽¹⁾	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) ⁽²⁾	ppm	< 5		< 5		< 5		< 5		< 5		< 5	
Emissions of nitrogen oxides - NOx* (0% of O ₂) (Hi) ⁽³⁾		29 mg/kWh - 16 ppm		51 mg/kWh - 29 ppm		36 mg/kWh - 20 ppm		45 mg/kWh - 25 ppm		31 mg/kWh - 18 ppm		40 mg/kWh - 23 ppm	
Emissions of nitrogen oxides - NOx* (0% of O ₂) (Hs) ⁽⁶⁾		26 mg/kWh - 15 ppm		46 mg/kWh - 26 ppm		32 mg/kWh - 18 ppm		41 mg/kWh - 23 ppm		28 mg/kWh - 16 ppm		36 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
Protection rating	IP	IP 20											
Operating temperatures	°C	from -15°C to +40°C - for lower temperatures, a burner housing heating kit is required ⁽⁹⁾											
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" ⁽⁵⁾	UNI/ISO 228/1- G 3/4" ⁽⁵⁾						
Ø Intake/exhaust pipes	mm	80/80	80/80	80/80	80/80	100/100 ⁽⁶⁾	100/100 ⁽⁶⁾						
Air Flow Rate													
Air flow rate (15° C)	m ³ /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) ⁽⁷⁾	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:

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

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

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

(3) Weighted value to EN17082 ref. to cat. H (G20), referred to net 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 the LK080 and LK105 models, the minimum gas supply pipe diameter must be almost 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 appliance.

(8) Weighted value to EN17082 ref. to cat. H (G20), referred to gross calorific value (Hs, G.C.V).

(9) In case of installation of the burner housing heating kit, add 105 W (230V) to the nominal electric power value.

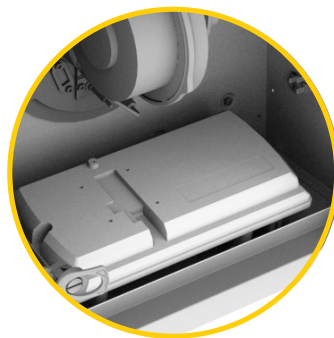


Technical Features

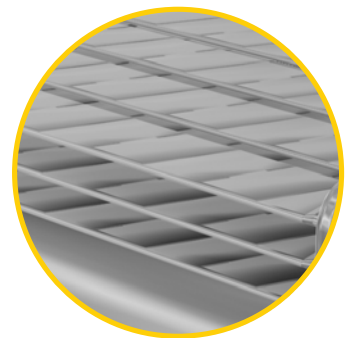
- Outputs range from 9 kW to 92 kW;
- Sealed combustion circuit;
- INOX AISI 441 stainless steel combustion chamber, INOX AISI 441 stainless steel heat exchanger tubes and flue collection box made of low carbon content;
- Efficiency up to 97% (ncv);
- Premixed gas modulating burner, low NOx emissions (class 5) in compliance with EN 1020 2009 standards;
- Electronic control board with continuous modulation of heat output, controlled by a microprocessor, which allows energy savings of up to 40%;
- 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.



Premix Burner



Electronic Card



Stainless Steel Tube Bundle

Model	LRP018	LRP028	LRP035	LRP045	LRP055	LRP075	LRP102								
Type of appliance	B23 - B23P - C13 - C33 - C43 - C53 - C63														
EC Approval	PIN. 0476CQ0451														
NOx Class [EN1020:2009]	Val 5														
Type of fuel	Gaseous														
Heater Performance															
		min	max	min	max	min	max	min	max	min	max	min	max	min	max
Burner heat output (Hi)	kW	10,1	16,5	16	27	20,2	34,8	26	44	29,8	52,2	44,4	73,5	51,8	100,0
Useful heat output [P_{min} , P_{rated}]*	kW	9,7	15,1	15,4	24,6	19,6	32,4	25,0	40,6	28,8	48,1	42,5	67,5	49,9	92,3
Hi Efficiency (N.C.V.) [η_{pP} , η_{nomP}]*	%	95,8	91,8	96,3	91,2	96,8	93,1	96,3	92,3	96,8	92,1	95,8	91,8	96,4	92,3
Hs Efficiency (G.C.V.) [η_{pP} , η_{nomP}]*	%	86,2	82,6	86,7	82,1	87,1	83,8	86,7	83,1	87,1	82,9	86,2	82,6	86,8	83,1
Flue losses with burner on (Hi)	%	4,2	8,2	3,7	8,8	3,2	6,9	3,7	7,7	3,2	7,9	4,2	8,2	3,6	7,7
Flue losses with burner off (Hi)	%	<0,1		<0,1		<0,1		<0,1		<0,1		<0,1		<0,1	
Exhaust Gases - Pollution Emissions															
Carbon monoxide - CO - (0% of O ₂) ⁽¹⁾	ppm	<5		<5		<5		<5		<5		<5		<5	
Emissions of nitrogen oxides - NOx* (0% of O ₂) (Hi) ⁽²⁾		51 mg/kWh - 29 ppm		55 mg/kWh - 31 ppm		42 mg/kWh - 24 ppm		55 mg/kWh - 31 ppm		46 mg/kWh - 26 ppm		60 mg/kWh - 34 ppm		67 mg/kWh - 38 ppm	
Emissions of nitrogen oxides - NOx* (0% of O ₂) (Hs) ⁽⁷⁾		46 mg/kWh - 26 ppm		49 mg/kWh - 28 ppm		38 mg/kWh - 21 ppm		49 mg/kWh - 28 ppm		42 mg/kWh - 23 ppm		54 mg/kWh - 31 ppm		60 mg/kWh - 34 ppm	
Available pressure at the flue	Pa	80		100		120		120		130		140		140	
Electrical Data															
Supply voltage	V	230 Vac - 50 Hz single-phase													
Rated power	kW	0,1	0,143	0,15	0,197	0,13	0,184	0,25	0,32	0,268	0,33	0,454	0,493	0,49	0,582
Protection rating	IP	IP 20													
Operating temperatures	°C	from -15°C to +40°C - for lower temperatures, a burner housing heating kit is required ⁽⁸⁾													
Storage temperatures	°C	from -25°C to +60°C													
Connections															
Ø Gas connection ⁽³⁾	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"	UNI/ISO 228/1-G 3/4"
Ø Intake/exhaust pipes	mm	80/80		80/80		80/80		80/80		80/80		80/80		100/100 ⁽⁵⁾	
Air Flow Rate															
Air flow rate (15°C)	m ³ /h	2000		2700		3100		4300		4500		7800		7900	
Air temperature increase	°C	13,9	21,7	16,4	26,1	18,1	30,0	16,7	27,1	18,4	30,6	15,6	24,8	18,1	33,5
Number and diameter of fans		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 Ø400 (4P)	
Fans speed	rpm	920		1370		970		1370		1370		1370		1370	
Sound pressure (Lp) ⁽⁶⁾	dB(A)	34		44		40		49		49		51		51	
Weight															
Net weight	kg	58		58		68		70		78		102		123	
Weight with packaging	kg	73		73		85		88		96		126		149	

NOTES:

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

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

(2) Weighted value to EN17082 ref. to cat. H (G20), referred to net calorific value (Hi, N.C.V.).

(3) 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.

(4) For the LRP102 model, the minimum gas supply pipe diameter must be at least UNI/ISO 228/1- G 1".

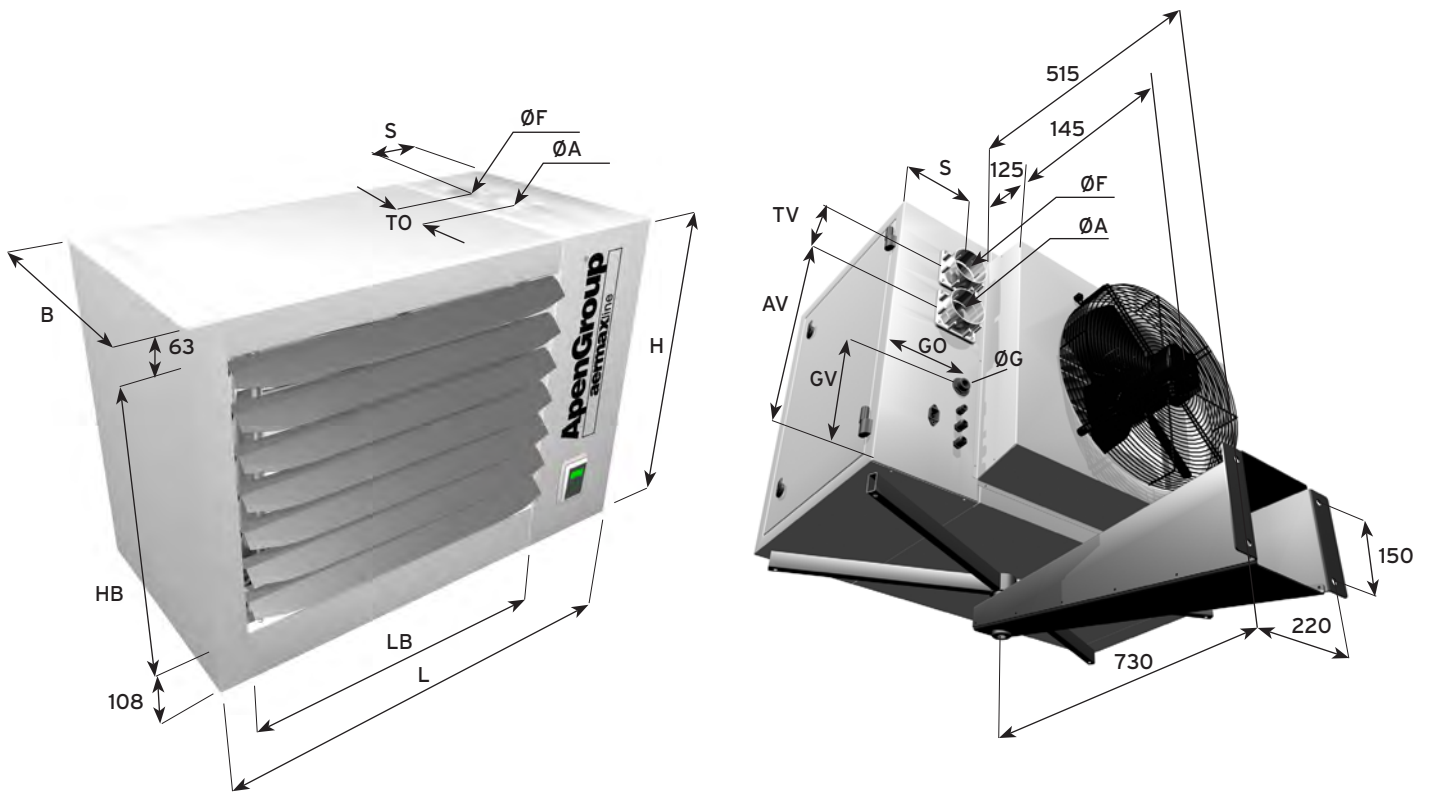
(5) Ø100/100 obtained by using adaptors supplied as standard.

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

(7) Weighted value to EN17082 ref. to cat. H (G20), referred to gross calorific value (Hs, G.C.V.).

(8) In case of installation of the burner housing heating kit, add 105 W (230V) to the nominal electric power value.

Dimensions

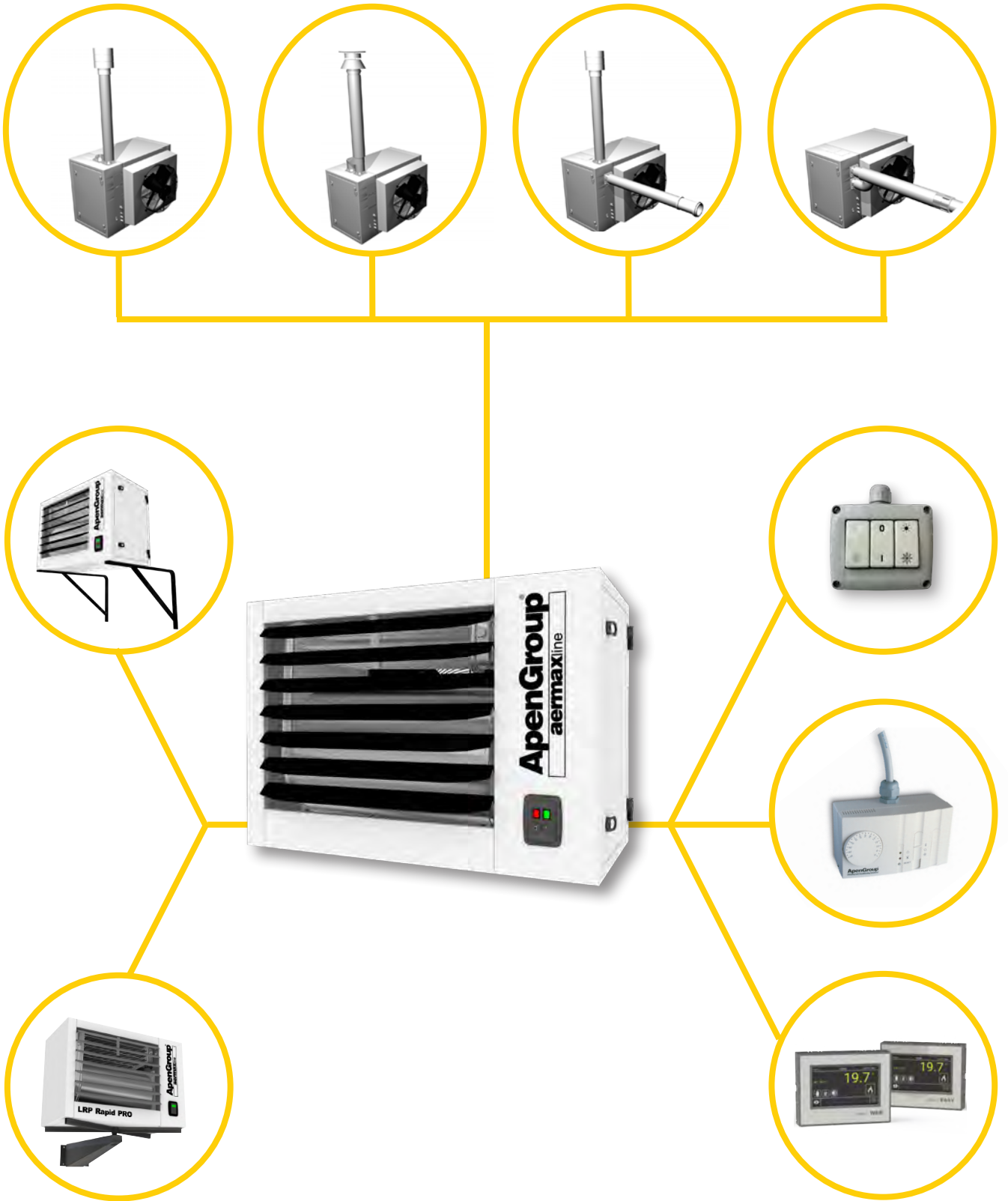


Kondensa

Model	Overall Dimensions			Louvres		Brackets		GAS Supply			Packaging				
	B	H	L	HB	LB	IS	ID	ØG	GO	GV	Bi	Li	Hi	Hbi	
LK020	500	690	795	520	490	395	400	3/4"	180	255	815	870	850	118	
LK034			985		680	490	495					1065			
LK045		765	1310	595	1010	605	710					1395	920		
LK065			1515		1180	720	795					1595	1040		
LK080		845	1740	675	1410	805	935					210	275		1820
LK105															

Rapid PRO

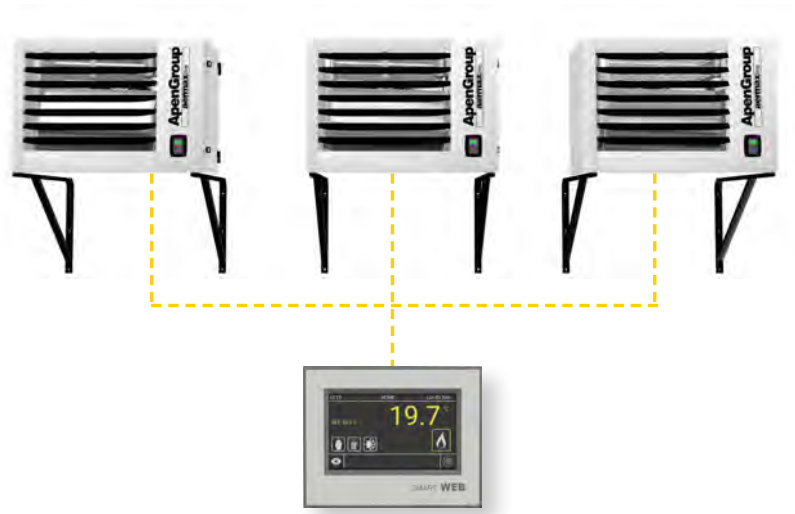
Model	Overall Dimensions			Louvres		Brackets		GAS Supply			Packaging				
	B	H	L	HB	LB	IS	ID	ØG	GO	GV	Bi	Li	Hi	Hbi	
LRP018 LRP028	500	690	795	520	490	395	400	3/4"	180	255	815	870	850	118	
LRP035 LRP045			985		680	490	495					1065			
LRP055		765	1310	595	1010	605	710					1395	920		
LRP075			1515		1180	720	795					1595	1040		
LRP102		845	1740	675	1410	805	935					210	275		1820



Heater's Controls

SmartWeb / SmartEasy Controls

Apen Group's new remote control SMARTWEB and SMARTEASY series perform the functions of standalone timeclock and thermostat and can be used in a system that controls up to 32 heaters installed in a single zone.

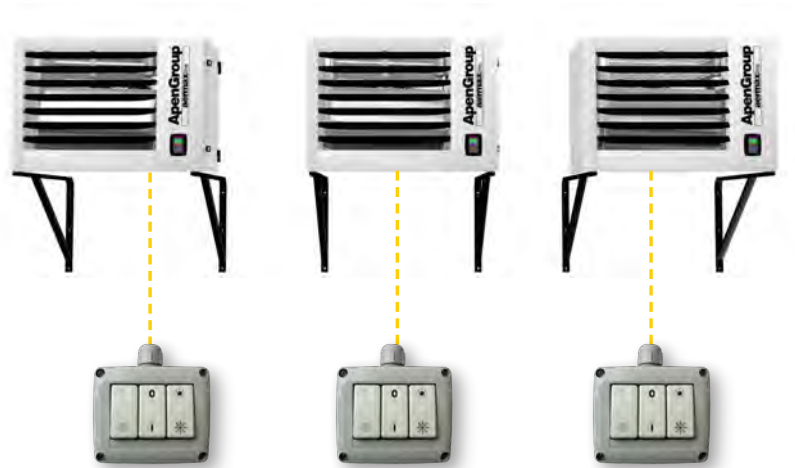


Basic Remote Control

It allows the following settings:

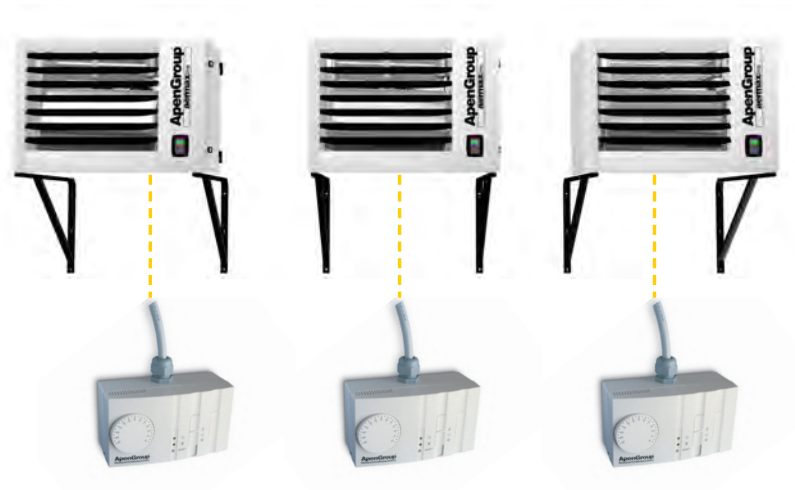
- On/Off button
- Summer/Winter switch and Reset button.

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.



Remote Control with Thermostat

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

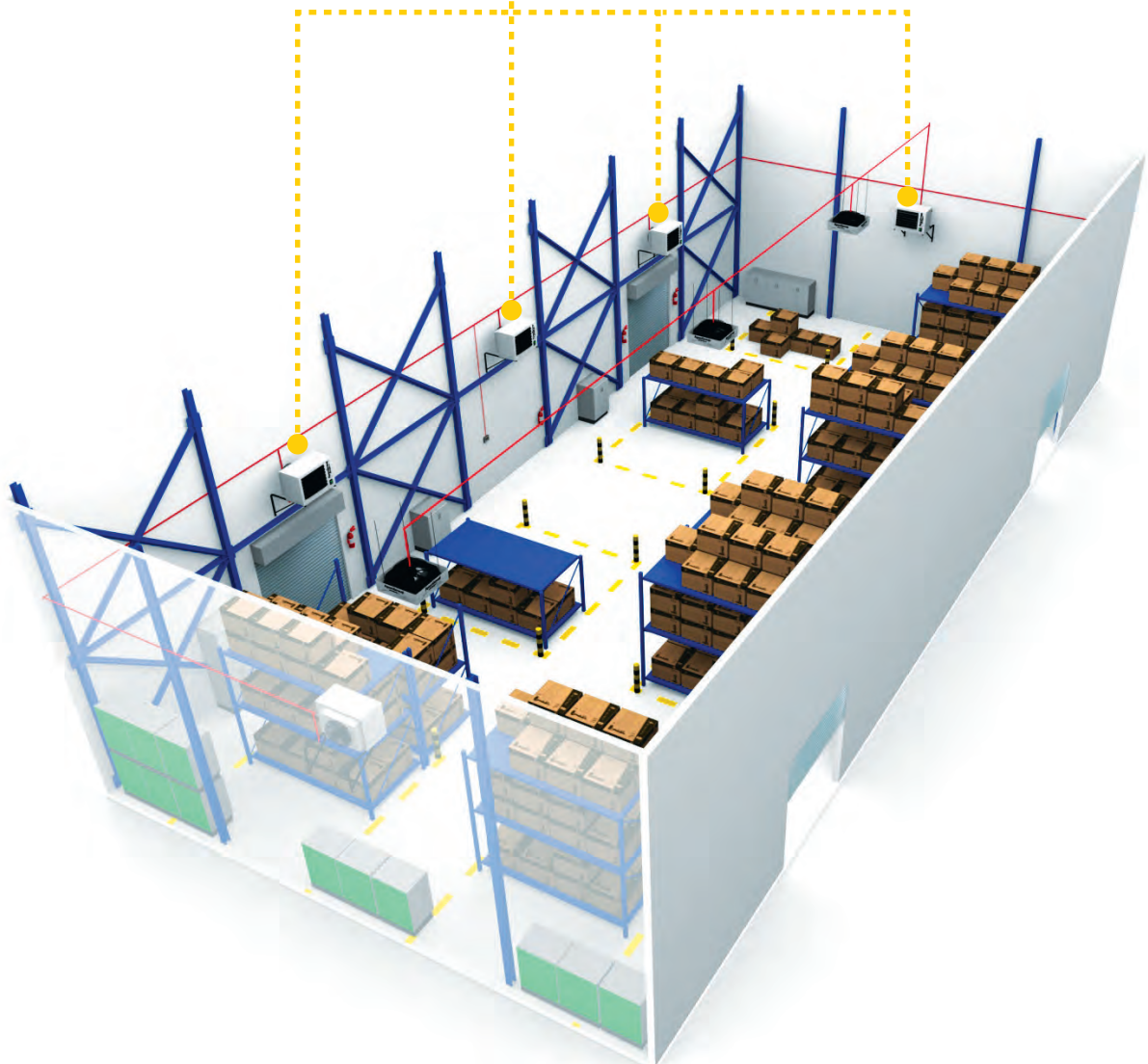
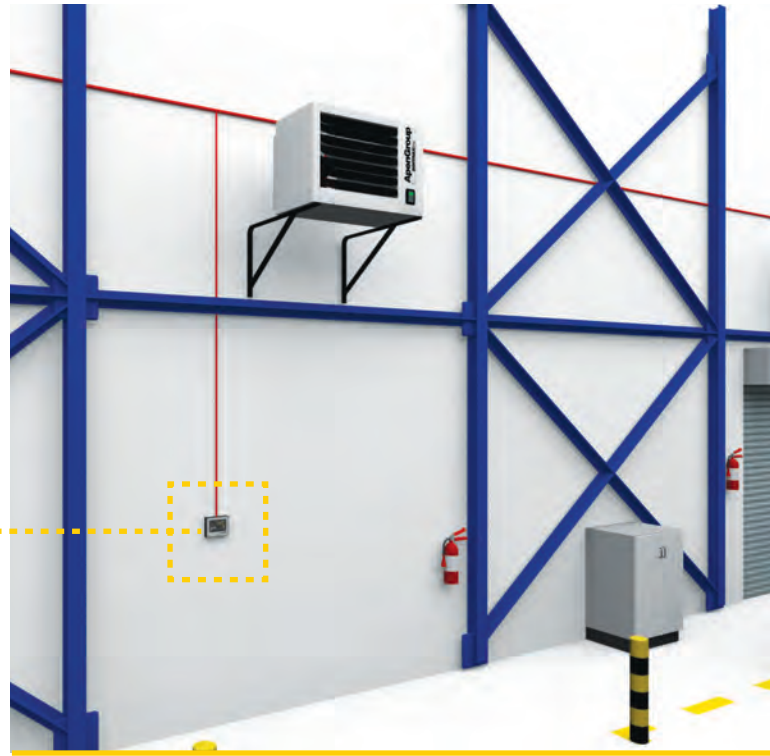


SMARTWEB and SMARTEASY controls



Features

- Simple connection to the heater using four polarized wires (2 wires for modbus control and 2 for electrical supply, 12 V);
- It manages all the functions, regulations and resetting;
- Possibility to install 3 additional temperature probes;
- Has a 4.3" touch screen with resolution 480x272 pixel;
- Supports the following languages: italian, english, spanish, french, german, dutch, czech, polish and rumenian;
- Additionally, SMARTWEB version allows connection to the internet via ethernet to remotely control the installation;
- It can be installed from the beginning or added later as an optional accessory.



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APEN GROUP S.p.A.
Via Isonzo, 1 - Pessano con Bornago
20060 (Milano) - Italy
Tel +39 02 95 96 931 Fax +39 02 95 74 27 58
www.apengroup.com apen@apengroup.com
Cod. X01790GB ed.A-2010
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