

# Cartivel

## APEN LK

Suspended Gas Fired Unit Heaters



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Sales Brochure

# LK Series

## Suspended Condensing Unit Heaters

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### Heater Design

- Heater range has been designed to be compact and light weight, with excellent aesthetic qualities.
- Combustion chamber and heat exchanger manufactured in AISI441 stainless steel. Advanced manufacturing techniques and robot welding ensure accuracy and high quality for long service life.

### Technical

- Fully complies with the requirements of ErP2021. UKCA and CE approvals.
- Range of seven heat outputs from 18.1kW to 97.5kW.
- Modulating premix burner.
- Efficiencies of up to 108.6% on low fire.
- Heater comes complete with LPG conversion kit as standard.
- LED display panel on front of heater shows heater operating mode. Also shows error code in the event of malfunction.

### Installation

- Heaters can be suspended from threaded rod or mounted on wall brackets.
- Very long flue and combustion air runs are possible with the LK range. Up to 30m horizontal can be achieved with both flue and combustion air.
- Easy commissioning using LED display panel on the front of the heater.
- Rear mounted flue and combustion air connection as standard. Can be converted to top connection on site.
- Simple single phase electrical connection via plug in rear of heater.

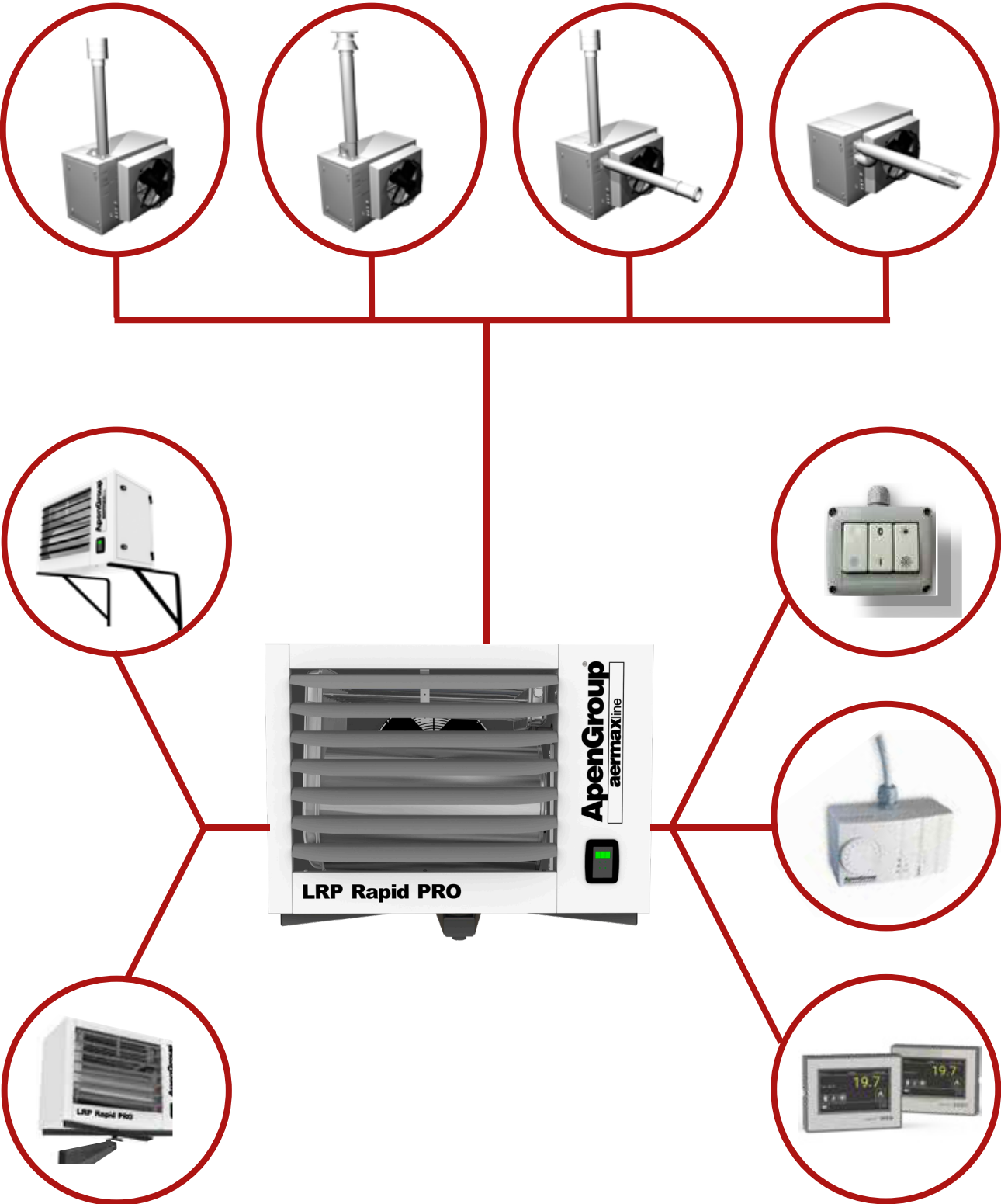
### Controls

- Standard control option is the Smart Easy unit. Four core control cable connection to heater.
- Upgrade to the Smart Web option and get remote access to the heater via the internet.
- BMS connection option standard feature.
- Other control options available.

### Applications

- In addition to general industrial application, the quiet operation and compact design of the LK range make it suitable for a wide range of commercial and leisure projects too.

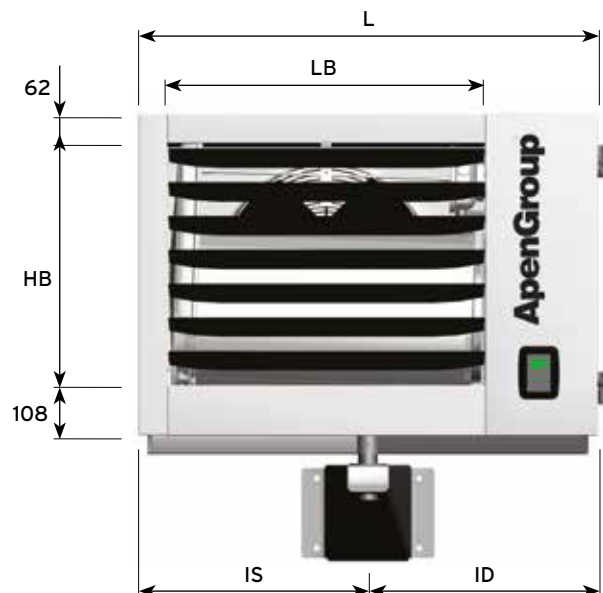
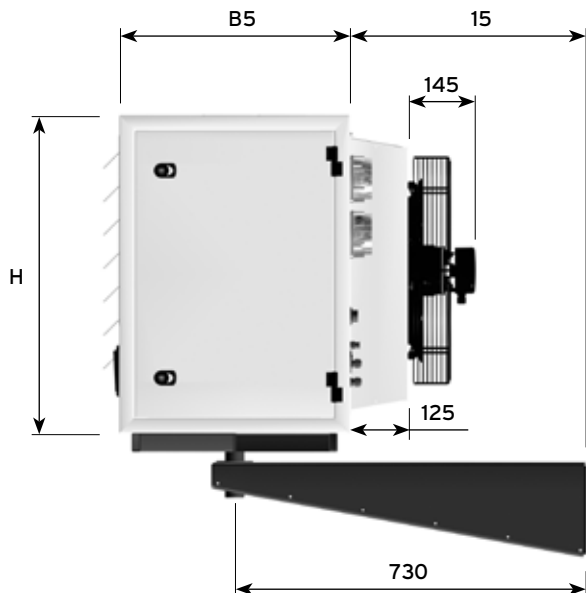
# Accessories



# Technical Data

Model		LK020	LK034	LK045	LK065	LK080	LK105						
Type of equipment		B23 - B23P - C13 - C33 - C43 - C53 - C63											
NOx Class	Val	5											
<b>Heater Performance</b>													
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Furnace Heat Input (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	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.)	%	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.)	%	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	l/h	0.4		0.9		1.1		2.1		3.3		2.7	
<b>Flue Gas Emissions</b>													
Carbon monoxide - CO - (0% of O <sub>2</sub> )	ppm	<5		<5		<5		<5		<5		<5	
Emissions of nitrogen oxides NOx - (0% od O <sub>2</sub> ) (Hi)		29mg/kWh - 16 ppm		51mg/kWh - 29 ppm		36mg/kWh - 20 ppm		45mg/kWh - 25 ppm		31mg/kWh - 18 ppm		40mg/kWh - 23 ppm	
Emissions of nitrogen oxides NOx - (0% od O <sub>2</sub> ) (Hs)		26mg/kWh - 15ppm		46mg/kWh - 26ppm		32mg/kWh - 18ppm		41mg/kWh - 23ppm		28mg/kWh - 16ppm		36mg/kWh - 20ppm	
Pressure available at the flue	Pa	80		100		120		120		130		140	
<b>Electrical Connections</b>													
Supply voltage	V	230 Vac - 50Hz single-phase											
Absorbed electrical 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	IP20											
Operating temperatures	°C	-15°C to +40°C - lower temperatures require buner compartment heating kit											
<b>Connections</b>													
Gas connection Ø	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"	
Intake/exhaust pipes Ø	mm	80/80		80/80		80/80		80/80		100/100		100/100	
<b>Air Flow Rate</b>													
Air flow rate (15°C)	m <sup>3</sup> /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 Ø450		1 x Ø450		2 x Ø400		2 x Ø450		3 x Ø400	
Fan speed	rpm	1370		1370		1370		1370		1370		1370	
Sound pressure (Lp)	dB(A)	44		49		49		51		52		54	
<b>Weight</b>													
Net weight	kg	58		72		79		98		129		145	

## LRP Dimensions

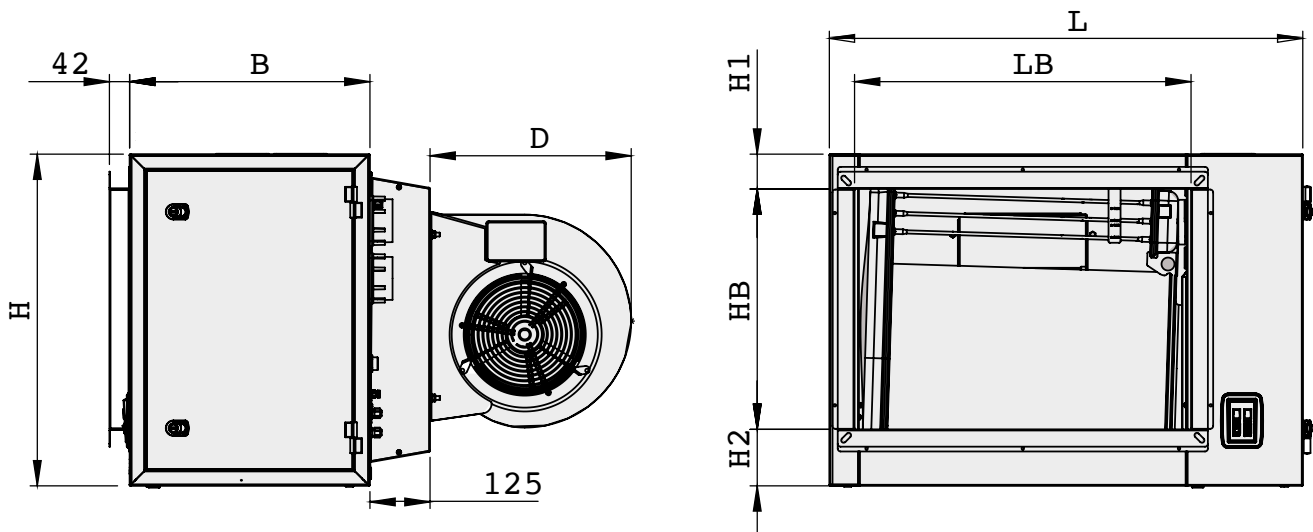


Model	Overall Dimensions			Louvre		Shelf		Supply GAS		
	B	H	L	HB	LB	IS	ID	ØG	GO	GV
LK020	500	690	795	520	490	395	400	3/4"	180	255
LK034	500	690	985	520	680	490	495	3/4"	180	255
LK045	500	765	985	595	680	490	495	3/4"	180	255
LK065	500	765	1310	595	1010	605	710	3/4"	180	255
LK080	500	845	1515	675	1180	720	795	3/4"	180	275
LK105	500	845	1740	675	1410	805	935	3/4"	180	275

# LK-00C0 Centrifugal Fan Technical Data

Model		LK034-00C0		LK045-00C0		LK065-00C0	
Type of equipment		B23-B23P-C13-C33-C43-C53-C63					
NOx Class	Val	5					
<b>Heater Performance</b>							
		Min	Max	Min	Max	Min	Max
Nominal heat input (Hi)	kW	7.60	34.85	8.50	42.00	12.40	65.00
Useful heat output	kW	8.13	33.56	9.00	40.40	13.40	62.93
Hi efficiency (N.C.V)	%	106.97	96.30	105.88	98.19	108.06	96.82
Hi efficiency (G.C.V)	%	96.37	86.76	95.39	86.66	97.36	87.22
Flue losses with burner on (Hi)	%	0.6	3.7	0.5	2.7	0.2	3.2
Flue losses with burner off (Hi)	%	<0.1		<0.1		<0.1	
Max. condensation	l/h	0.9		1.1		2.1	
<b>Flue Gas Emissions</b>							
Carbon monoxide - CO - (0% of O <sub>2</sub> )	ppm	<5		<5		<5	
Emissions of nitrogen oxides NOx - (0% of O <sub>2</sub> )(Hi)		51mg/kWh - 29ppm		36mg/kWh - 20ppm		45mg/kWh - 25ppm	
Pressure available at the flue	Pa	90		100		120	
<b>Electrical Characteristics</b>							
Supply voltage	V	230 Vac - 50Hz single-phase					
Absorbed electrical power	kW	0.270	0.310	0.280	0.310	0.420	0.510
Protection rating	IP	IP20					
Operating temperatures	°C	-15°C to +40°C - lower temperatures require a burner compartment heating kit					
<b>Connections</b>							
Gas connection Ø	GAS	UNI/ISO 228/1-G 3/4"		UNI/ISO 228/1-G 3/4"		UNI/ISO 228/1-G 3/4"	
Intake/exhaust pipes Ø	mm	80/80		80/80		80/80	
<b>Air Flow Rate</b>							
Air flow rate (15°C)	m <sup>3</sup> /h	3050		4650		5650	
Available pressure	Pa	140		140		140	
Rated power	kW	1120		1120		1120	

## LK-00C0 Centrifugal Fan Dimensions



Model	Overall Dimensions				Duct Outlet				GAS Supply		
	B	H	L	D	HB	LB	H1	H2	ØG	GO	GV
LK034-00C0	500	690	985	425	500	700	74	118	3/4"	180	255
LK045-00C0	500	765	985	480	600	700	61	105	3/4"	180	255
LK065-00C0	500	765	1310	420	600	1000	61	105	3/4"	180	255

# Products In The Cartivel Range

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**Gas Fired Unit Heaters - Cabinet Heaters**  
**Destratification Fans - Electric Unit Heaters**  
**Oil Fired Unit Heaters - Industrial Air Curtains**  
**Commercial Air Curtains - LPHW Unit Heaters**  
**Gas Fired Radiant Tubes Electric Radiant - Air Rotation**  
**Heat Exchanger Modules - HVLS Fans - Direct Fired Heaters**  
**Gas Fired Air Handling Units**



## Get In Touch

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