

HADAR

APEN LRN/LRP

Suspended Gas Fired Unit Heaters



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Sales Brochure

LRN/LRP Series

Suspended Unit Heaters



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 15.1kW to 91.1kW.
- Modulating premix burner.
- Efficiencies of up to 96.8% 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.
- All units can be installed as horizontal or vertical airflow.
- Very long flue and combustion air runs are possible with the LRP 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.

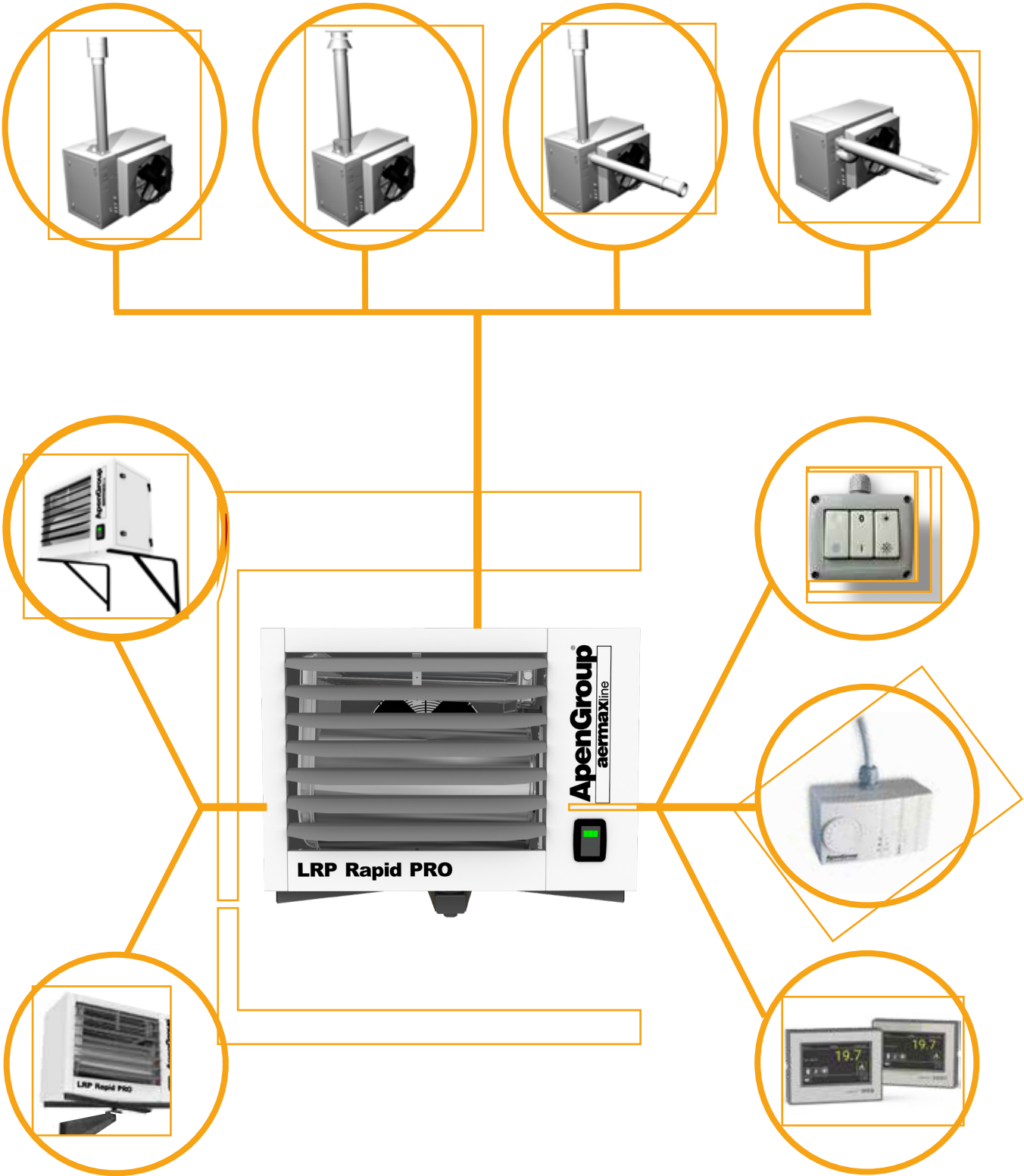
Controls

- 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 LRP range make it suitable for a wide range of commercial and leisure projects too.

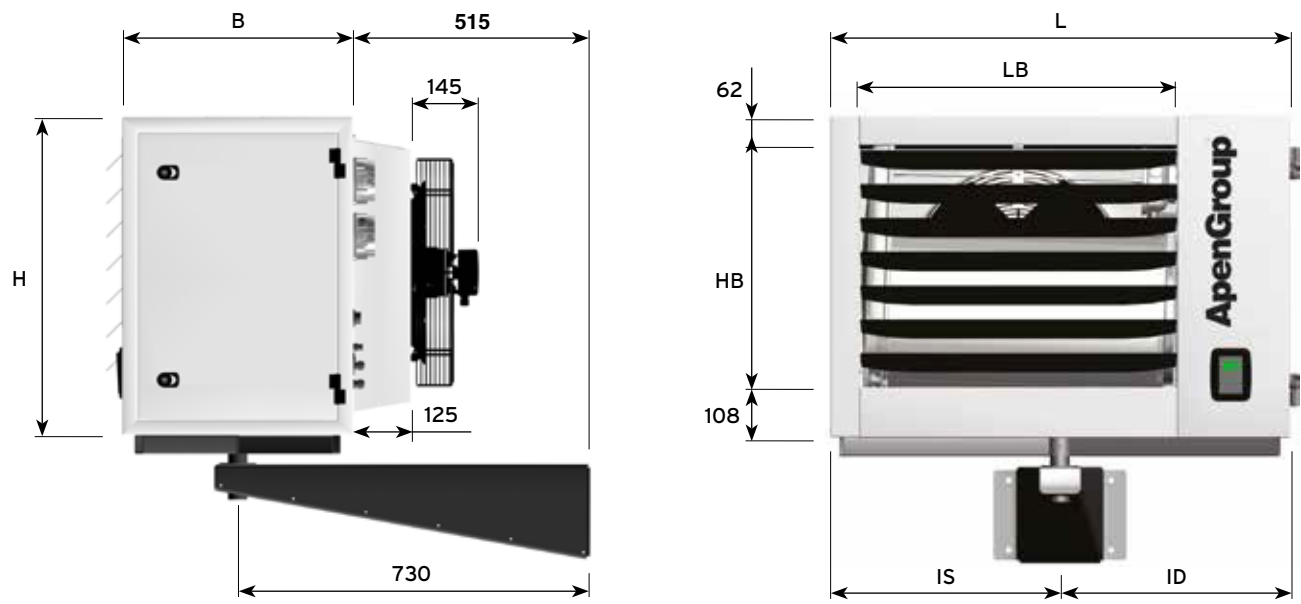
Accessories



Technical Data

Model		LRN018		LRN028		LRN035		LRN045		LRP055		LRP075		LRP102	
Type of equipment		B23 - B23P - C13 - C33 - C43 - C53 - C63													
NOx Class	Val	5													
Heater Performance															
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Nominal heat output (Hi)	kW	10.0	17.4	15.6	27.0	19.6	34.8	26.2	44.8	29.8	52.2	44.4	73.5	51.8	100.0
Useful heat output	kW	9.6	15.9	15.0	24.6	18.9	31.7	25.2	40.9	28.8	48.1	42.5	67.5	49.9	91.1
Hi efficiency (N.C.V.)	%	96.1	91.2	96.0	91.2	96.2	91.2	96.2	91.3	96.8	92.1	95.8	91.8	96.4	91.1
Hs efficiency (G.C.V.)	%	86.6	82.1	86.4	82.1	86.4	82.1	86.4	82.2	87.1	82.9	86.2	82.6	86.8	82.0
Flue losses with burner on (Hi)	%	3.9	8.8	4.0	8.8	3.8	8.8	3.8	8.7	3.2	7.9	4.2	8.2	3.6	8.9
Flue losses with burner off (Hi)	%	<0.1		<0.1		<0.1		<0.1		<0.1		<0.1		<0.1	
Flue Gas Emissions															
Carbon monoxide - CO - (0% of O ₂)	ppm	<5		<5		<5		<5		<5		<5		<5	
Emissions of nitrogen oxides NOx - (0% od O ₂) (Hi)		71mg/kWh - 40 ppm		57mg/kWh - 32 ppm		54mg/kWh - 31 ppm		64mg/kWh - 36 ppm		46mg/kWh - 26 ppm		60mg/kWh - 34 ppm		67mg/kWh - 38 ppm	
Pressure available at the flue	Pa	60		80		100		120		130		140		140	
Electrical Connections															
Supply voltage	V	230 Vac - 50Hz single-phase													
Absorbed electrical power	kW	0.1	0.12	0.16	0.2	0.12	0.17	0.26	0.31	0.268	0.33	0.454	0.493	0.49	0.582
Protection rating	IP	IP20													
Operating temperatures	°C	-15°C to +40°C - lower temperatures require buner compartment heating kit													
Connections															
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"		UNI/ISO 228/1-G 3/4"	
Intake/exhaust pipes Ø	mm	80/80		80/80		80/80		80/80		80/80		80/80		100/100	
Air Flow Rate															
Air flow rate (15°C)	m³/h	2000		2700		3200		4600		4500		7800		9000	
Air temperature increase	°C	13.8	22.7	15.9	26.1	16.9	28.4	15.7	25.5	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 Ø450 (4P)	
Fan speed	rpm	900		1400		900		1400		1370		1370		1370	
Sound pressure (Lp)	dB(A)	32		43		39		49		49		51		52	
Weight															
Net weight	kg	43		45		56		58		78		102		123	

Dimensions

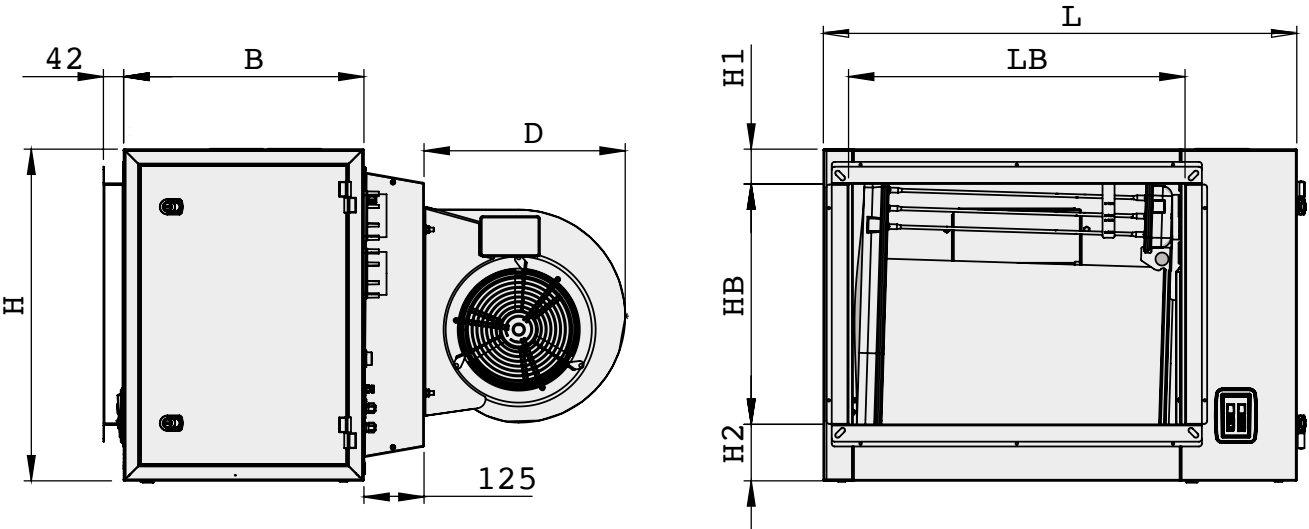


Model	Overall Dimensions			Louvre		Shelf		Supply GAS		
	B	H	L	HB	LB	IS	ID	ØG	GO	GV
LRN018	435	645	725	550	460	325	325	3/4"	180	255
LRN028	435	645	725	550	460	325	325	3/4"	180	255
LRN035	435	645	965	550	700	445	445	3/4"	180	255
LRN045	435	645	965	550	700	445	445	3/4"	180	255
LRP055	500	765	985	595	680	490	495	3/4"	180	255
LRP075	500	765	1310	595	1010	605	710	3/4"	180	255
LRP102	500	845	1515	675	1180	720	795	3/4"	210	255

LRN/LRP-00C0 Centrifugal Fan Technical Data

Model		LRN035-00C0		LRN055-00C0		LRN075-00C0	
Type of equipment		B23-B23P-C13-C33-C43-C53-C63					
NOx Class	Val	5					
Heater Performance							
		Min	Max	Min	Max	Min	Max
Nominal heat input (Hi)	kW	19.6	34.8	29.8	52.2	44.4	73.5
Useful heat output	kW	18.9	31.7	28.8	48.1	42.5	67.5
Hi efficiency (N.C.V)	%	96.2	91.7	96.8	92.1	95.8	91.8
Hi efficiency (G.C.V)	%	86.2	82.3	87.1	82.9	86.2	82.6
Flue losses with burner on (Hi)	%	3.8	8.3	3.2	7.9	4.2	8.2
Flue losses with burner off (Hi)	%	<0.1		<0.1		<0.1	
Flue Gas Emissions							
Carbon monoxide - CO - (0% of O ₂)	ppm	<5		<5		<5	
Emissions of nitrogen oxides NOx - (0% of O ₂)(Hi)		54mg/kWh - 31ppm		46mg/kWh - 26ppm		60mg/kWh - 34ppm	
Pressure available at the flue	Pa	100		130		140	
Electrical Characteristics							
Supply voltage	V	230 Vac - 50Hz single-phase					
Absorbed electrical power	kW	0.12	0.17	0.268	0.33	0.454	0.493
Protection rating	IP	IP20					
Operating temperatures	°C	-15°C to +40°C - lower temperatures require a burner compartment heating kit					
Connections							
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	
Air Flow Rate							
Air flow rate (15°C)	m³/h	4400		3050		4650	
Available pressure	Pa	140		140		140	
Rated power	kW	0.9		1.26		2.08	

LRP-00C0 Centrifugal Fan Dimensions



Model	Overall Dimensions				Duct Outlet				GAS Supply		
	B	H	L	D	HB	LB	H1	H2	ØG	GO	GV
LRP035-00C0	435	645	965	430	550	700	37	58	3/4"	180	255
LRP055-00C0	500	765	985	490	600	700	61	105	3/4"	180	255
LRP075-00C0	500	765	1310	420	600	1000	61	105	3/4"	180	255

Products In The Hadar Range

**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**



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