

KONDENSA and RAPID PRO Wall-mounted warm air heaters

ApenGroup®

RESEARCH, ECOLOGY AND ENERGY SAVING

OVERVIEW

APEN GROUP S.p.A. is a leading manufacturer of heating systems, and offers a wide range of products: condensing boilers, condensing heat exchangers, suspended warm air heaters, and floor standing condensing warm air heaters.

Apem Group has always been an innovation leader thanks to constant product and process development, and continuous research of advanced solutions in technology.

OUR VISION

We consider 'caring for the environment' (environment, persons, relationships, cooperation) our way towards the excellence.

OUR MISSION

Designing, manufacturing and marketing of HVAC products that stand out for their quality and for their compliance with environmental standards. Our R&D staff is deeply committed to the setup of products that assure low polluting emissions, high efficiency and minimum consumption, thereby assuring optimum heating and conditioning, from small residential spaces to large industrial buildings.

A LEADING COMPANY

Our modern facility is built on an area of 30,000 sqm, 11,000 of which encompass headquarters, manufacturing and research facilities. Easy and timely intercompany communication is provided through an IBM AS400 server with a fully integrated Server Windows NT PC network.

The website www.apengroup.com and e-mail apen@apengroup.com, allow to communicate easily with all entities outside the company (eg. Customers, suppliers, associations).

CUSTOMER SERVICE

To be truly customer-oriented, a service must satisfy custom's requests from the clients.

APEN GROUP can meet any project need by developing custom products. Its flexibility in the manufacturing process and the availability of state-of-the-art machinery for metal sheet processing guarantee cost effective products.

Cost effectiveness is another basic characteristic of APEN GROUP products, besides a high potential for technology, commercial and industrial development.

TECHNOLOGY EXCELLENCE

A qualified team of engineers and researchers, these committees for the development of standards UNICIG, researches and develops products using CAD computer systems, translating into production the best that you obtained from the research, studying cutting-edge technical and manufacturing solutions.

ENVIRONMENT

Environment protection is essential for present and next generations' quality of life.

Apem Group's challenge is investing in research and development activities which grant the design and the production of environment friendly products.

Such a concern is well resumed in the current slogan "Apem Group caring for environment" and it involves all the company organization: from research of suppliers and partners who share this same goal, to staff personnel, natural source optimization and definition of any prevention control and correction so to respect the fixed quality goals and environment deference.

MANUFACTURING EXCELLENCE

Each product is tested, checked, and commissioned to guarantee that combustion parameters, efficiency levels, and component reliability fully comply with quality standards required for user comfort and satisfaction.

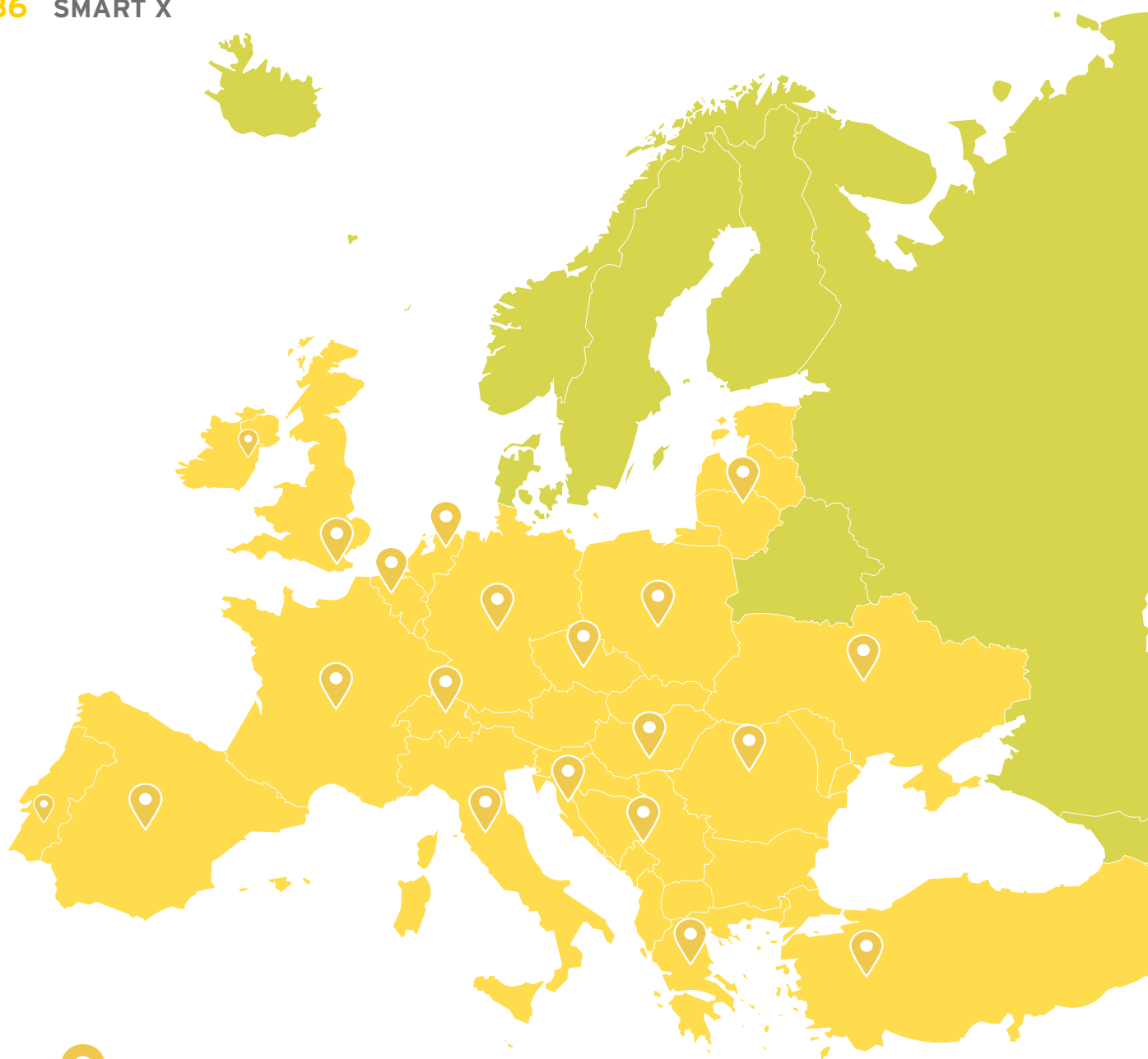
The manufacturing of our products takes advantage of ultimate, state-of-the-art planning and organization methods, which include: Digital control equipment. Welding robots. Forming robots. Computer assisted test lines. Advanced automation assures top-quality products as well as manufacturing flexibility and timely deliveries. Innovation, reliability, and originality are built-in features of each of our products.

SALES EFFICIENCY

Apem Group operates nationally and internationally: it is present in Italy thanks to an efficient and well distributed organization: professional agents, consultants, engineers and designers are ready to match the demands of customers always and everywhere.

Abroad, distributors, dealers, joint ventures with foreign partners, share with the company the principles of distribution of highly qualified equipment in relation to the needs of different countries.

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ApenGroup has an international presence. Contact us at export@apengroup.it to get our distributor's name in your country, or to become our partner.

HISTORY

1967

THE ORIGINS: THERMOVÜR

The company - founded under the name Thermovür - began its great adventure with the production and sale of oil and gas burners. The founding partners are two brothers-in-law having the same name - Angelo Rigamonti - with the assistance and great professionalism of their father/father-in-law Emilio Rigamonti.

1973

AERMAX

Thermovür is supported by the company AERMAX for the marketing of floor-standing warm air heaters and burners, particularly for the foreign market.

1980'S

EXPERIENCE AND KNOW-HOW

The heating sector is evolving rapidly, the building boom and the need to keep everyone warm leads to the need for new and different products: floor-standing boilers, wall-hung boilers, gas burners, gas-fired wall-mounted warm air heaters, gas radiators.

1991

APENGROUP IS BORN

The two companies create a single company, which will benefit from the wealth of knowledge of the two brands and the know-how now internalised by the company: APEN GROUP SPA is born, a group of companies for new energies. Apen Group today.

2000'S

NEW PROJECTS, NEW PRODUCTS

In 2008, confirmation of the company's technical capabilities in the field of air conditioning was confirmed by the introduction on the market of the Kondensa product (condensing warm air heater), air handling units and RoofTop monobloc machines with built-in condensing heat exchanger.

2017

50 YEARS OF LOVE FOR THE CLIMATE!

We are proud to have celebrated our first 50 years in business. In the book "La storia siamo Noi" (We are history), we have recounted the main events that have marked the most important milestones which have made us grow in terms of competence and technological know-how in the heating sector. A continuous evolution, because progress is a never ending process.



2024

RESEARCH, INNOVATION AND ECOLOGY

We are always evolving.

The market, the experiences, the difficulties have made us stronger and more committed to facing new challenges, new technologies, new countries.

We want to defend the values we believe in to be able to improve environmental comfort, attention to people and the use of energy. We also want our company to contribute to a better future!

CERTIFIED QUALITY

APEN GROUP S.p.A. ranges among the first Italian companies to be certified by an industry- wide acknowledging system at European level. We have been audited and certified to be in compliance with the quality standards defined in UNI EN ISO 9001:2015 protocol.

Certification has been obtained for the design, manufacturing, marketing and service of hybrid systems, of warm air heaters, condensation heaters and exchangers, condensing boilers, water fan units, air destratifiers, air handling central units, and burners. The commitment to quality took by the company dates back to the beginning of our history, and it is confirmed by the following milestones:

In 1988 APEN GROUP was certified by DVGW Deutscher Verein Des Gas Und Wasserfaches E.V. and it was approved as a trading partner for suspended heaters in Germany. Then approvals for the sale of these heaters in other markets followed, such as France, Switzerland, the Netherlands, and Belgium.

In 1995 all the gas-fired appliances we manufacture were certified according to EC Directives.

In 1991 we were the first Italian company in the HVAC industry to be registered in accordance with UNI EN ISO 9003 requirements. In 1993 the auditing was extended to include compliance with UNI EN ISO 9002 standards.

In 2003, we were acknowledged to be compliant with UNI EN ISO 9001:2000, and the registration was confirmed in 2006.

In 2013 the Board of Directors has adopted the organizational model 231.

In 2017 we obtained the certification in compliance with the UNI EN ISO 9001:2015.

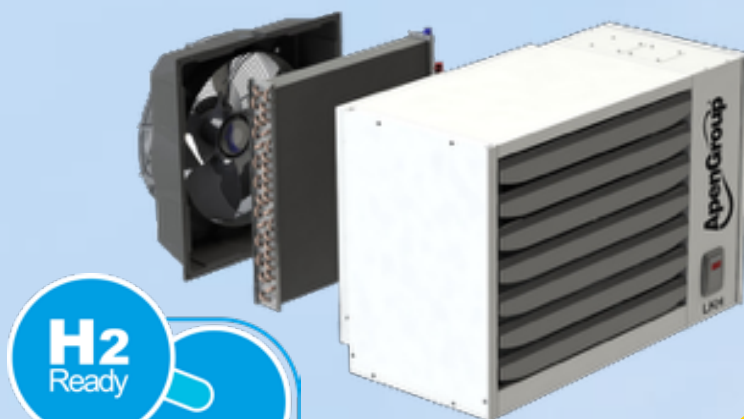
INTERNATIONAL CERTIFICATES

Apén Group's products have been tested and certified by Gastec-Kiwa CERMET, the famous Dutch Notified Body, with test labs accredited by the EC.



KONDENSA HYBRID LKH

HYBRID WARM AIR HEATER



HEAT PUMP



OPTIONAL
SMART X CONTROLS

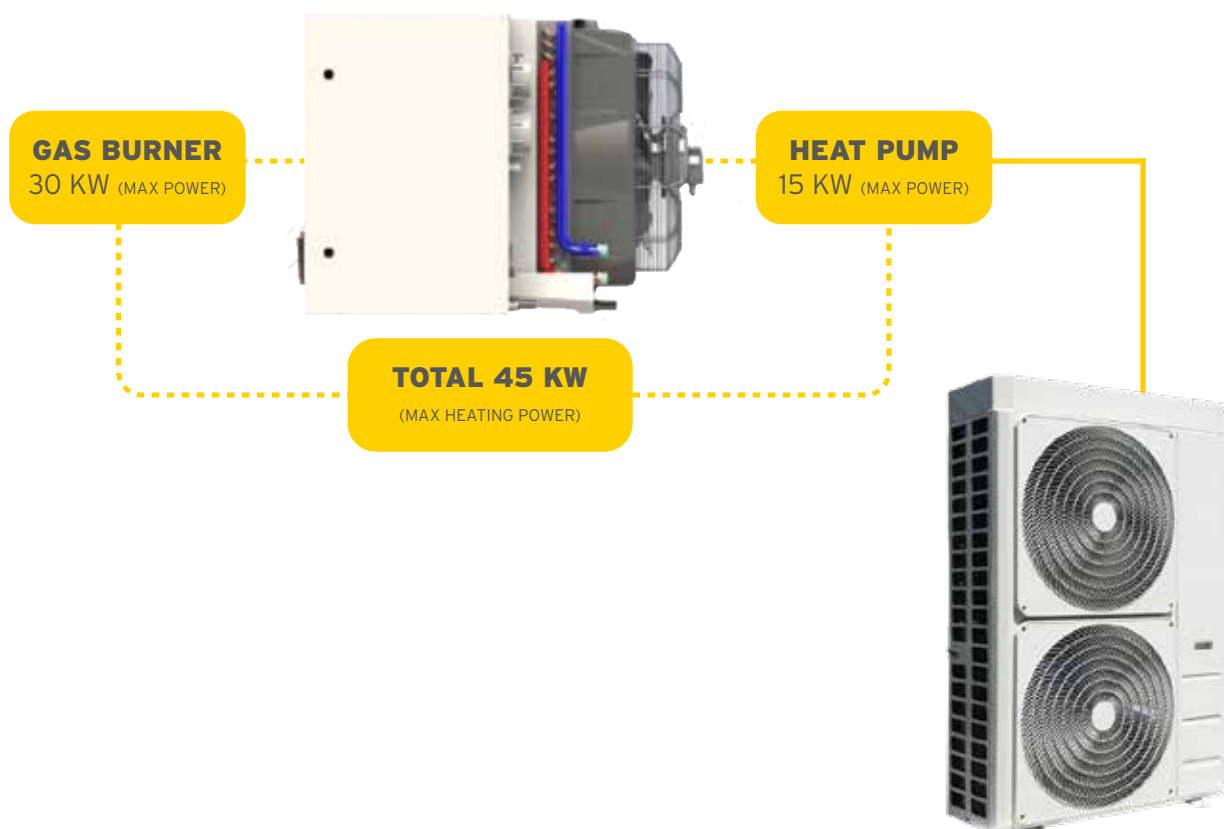


ErP
2021



KONDENSA HYBRID LKH

Hybrid warm air heaters



HEAT PUMP + CONDENSING WARM AIR HEATER

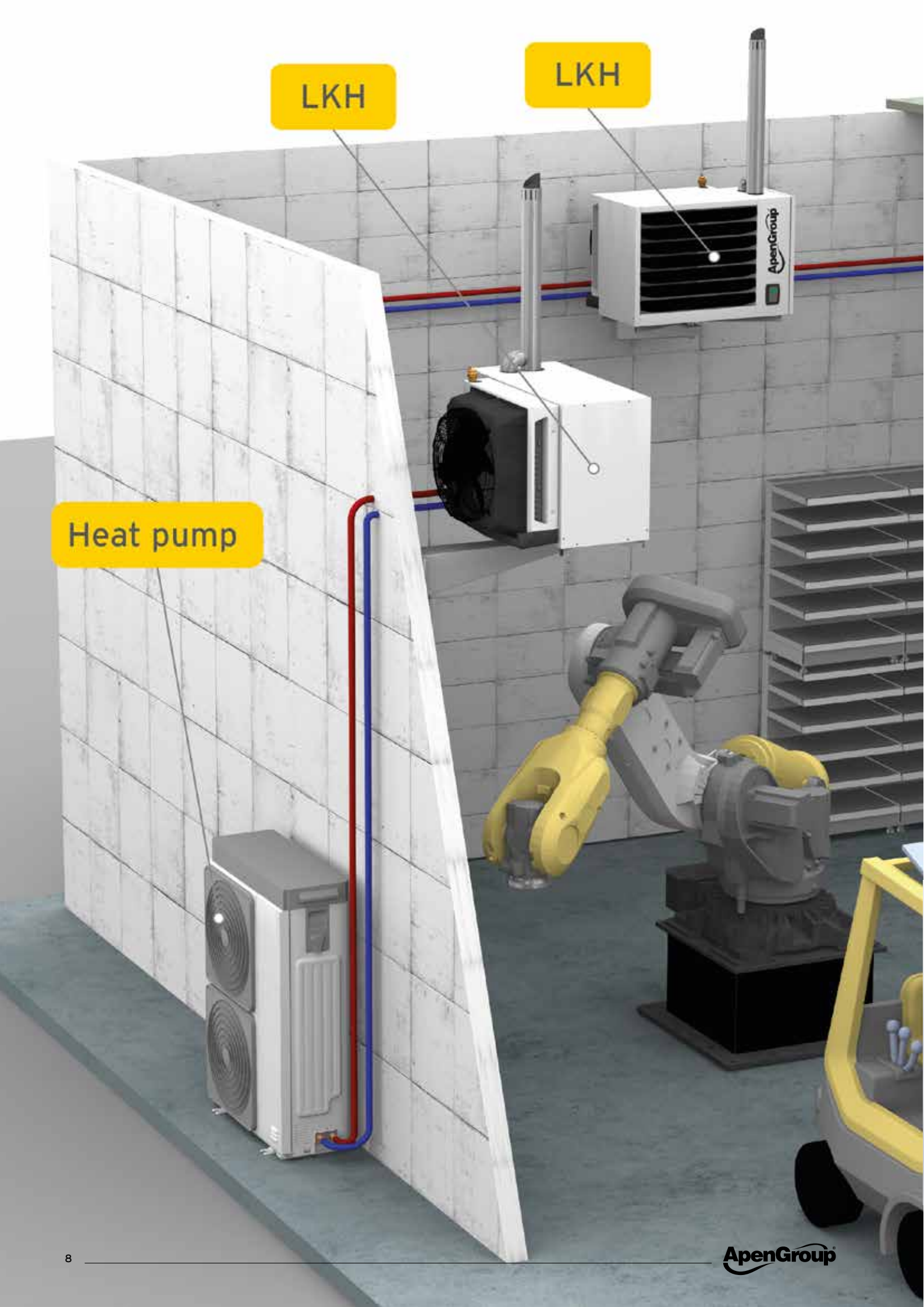
	Output Power (kW)	Water ΔT (°C)	Air ΔT (°C)	Water Flow (m³/h)	Water ΔP (kPa)	Air Flow (m³/h)
Heating	15+30 (45)	45/40	15	2,3	20	4500 @10V
Cooling	12	07/12	11	2,3	20	1500 @4V

CONDENSING WARM AIR HEATER

	Output Power (kW)	η	η Seasonal h [Reg.U.E/2281/2016]	NOx (% O ₂) [hi]	NOx (% O ₂) [hs]
Nominal heat input (MAX)	29	96%	93,10%	47 mg/kWh	42 mg/kWh
Nominal heat input (MIN)	7,5	108%		26ppm	24ppm

HEAT PUMP

	Output Power (kW)	Water ΔT (°C)	Air ΔT (°C)	Water Flow (m³/h)	Water ΔP (kPa)
Heating	15	45/40	15	2,3	25
Cooling	12	07/12	11	2,3	25

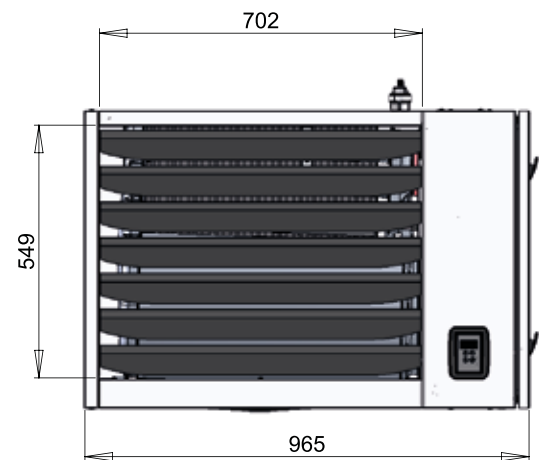
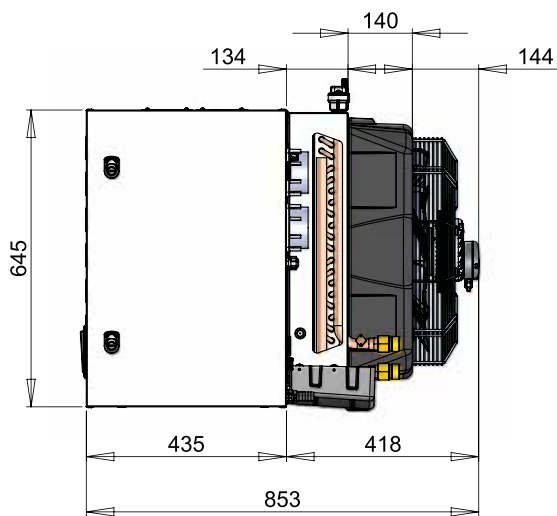


Heat pump

LKH

LKH

KONDENSA HYBRID LKH / DIMENSIONS



Model	Overall dimensions			Louvre		Rotating shelf			Fixed shelf
	H	L	DA	HB	LB	IS	ID	E	E
LKH044	645	965	143	550	700	445	445	530	410



KONDENSA LKN RAPID PRO LRN

WALL-MOUNTED WARM AIR HEATERS



OPTIONAL
SMART X CONTROLS



OPTIONAL
ON/OFF CONTROL



ErP
2021



KONDENSA LKN AND RAPID PRO LRN

Wal-mounted warm air heaters

ECOLOGY AND ENERGY SAVING

Kondensa LKN and Rapid Pro LRN

warm air heaters are characterised:

- by the high quality of the materials used, such as AISI 441 stainless steel, pre-painted panels and state-of-the-art electronics.
- by premixing combustion systems, with very low polluting emissions.
- by innovative and efficient production systems.
- by reliability and safety guaranteed by 100% factory testing.

FIELDS OF APPLICATION

- Logistics
- Depots and Warehouses
- Facilities
- Sheds
- Shopping Malls

MAIN INNOVATION

Kondensa LKN (condensing warm air heater) and **Rapid Pro LRN** (modulating warm air heater) will feature the following main innovation:

- Direct ignition of the burner;
- Single electrode with ignition and flame detection functions;
- New venturi tube designed by Apen Group.

They will be certified for operation with Natural gas / Hydrogen up to 20% according to the UNIT TS 11854 technical specification.

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.

SAFETY AND CONTROL DEVICES

Safety and control devices include:

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

SYSTEM MODULARITY

The subdivision of the total heat output over several installed fan heaters makes it possible to achieve greater rationalisation of the system: "zone" management of the heat output delivery. The integration of heat output is limited to the installation of new appliances.

SUMMER VENTILATION

It is possible to set the machine to operate in ventilation mode, improving the comfort of the room in which the heater is installed.

INNOVATION AND TECHNOLOGY

The microprocessor-based electronic card, of **LKN** and **LRN** 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.

DIRECT THERMAL EXCHANGE: NO WATER SUPPLY

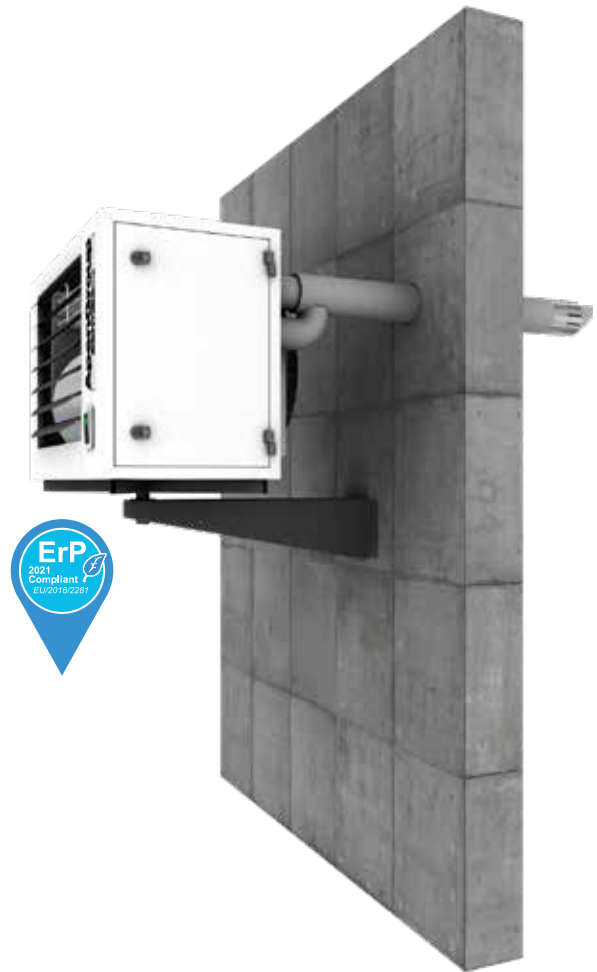
The thermal energy produced by the burner is transferred to the air by means of a heat exchanger that contains the products of combustion. This ensures maximum transference of heat into the supply air stream without any contact with the products of combustion. This method provides instant heating benefits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



KONDESA LK/LKN CONDENSING WARM AIR HEATERS

TECHNICAL FEATURES

- Output range:
LK models from 5 kW to 97 kW
LKN models from 5 kW to 35 kW.
- Sealed combustion circuit.
- Combustion chamber in AISI 441 stainless steel, heat exchanger tubes and flue gas collection box in AISI 441 stainless steel with low carbon content.
- Efficiency up to 108% in relation to the lower heating value (Hi).
- Modulating premixed gas burner with low NOx emission in class 5 in accordance with EN 1020 2009.
- Safety thermostat and condensate detection electrode.
- Electronic board with continuous power modulation controlled by microprocessor, which allows energy savings up to 50%.
- Very high reduction of air stratification.
- Use of a sophisticated air/gas mixing technique that makes the heater absolutely safe.
- 230V single-phase 50Hz power supply.
- Multifunctional LCD display for diagnostics control.
- CE approval in compliance with all applicable regulations.



RAPID PRO LRP/LRN MODULATING WARM AIR HEATERS

TECHNICAL FEATURES

- Output range:
LRP models from 9 kW to 92 kW
LRN models from 9 kW to 40 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.
- Safety thermostat.
- 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.
- 230V/1ph/50Hz supply voltage.
- In compliance with all applicable EC regulations (0476CQ0451).



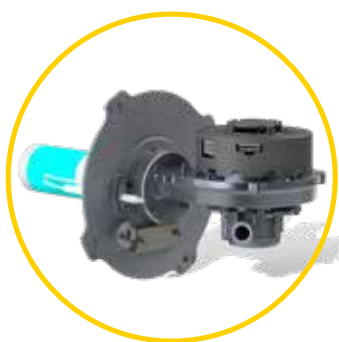
KONDENSA LKN AND RAPID PRO LRN MAIN INNOVATION

Kondensa LKN (condensing warm air heater) and **Rapid Pro LRN** (modulating warm air heater) will feature the following main innovation:

- Direct ignition of the burner;
- Single electrode with ignition and flame detection functions;
- New venturi tube designed by Apen Group.

They will be certified for operation with Natural gas / Hydrogen up to 20% according to the UNIT TS 11854 technical specification.

BURNER



1. Direct ignition burner (without using the pilot burner) with a **single electrode** for ignition and flame detection.
2. New venturi tube in aluminium made by Apen Group.

GAS VALVE



New position of the gas valve.

NTC



New position of the NTC probe on the back of the heater

SIZE COMPARISON OF THE NEW HEATER LKN020 AND PREVIOUS LK020



LKN WITH AXIAL FAN / TECHNICAL DATA

Model*	LKN020 (indoor installation)		LKN035 (indoor installation) LKN035-00X0 (outdoor installation)		
Type of equipment	B23P - C13 - C33 - C53 - C63				
NOx class	Val	5			
Heater Performance					
		min	max	min	max
Furnace heat input (Hi)	kW	5,4	17,7	7,5	34,9
Useful heat output [P _{min} , P _{rated}]*	kW	5,8	16,9	8,1	33,7
Hi Efficiency (N.C.V.) [η _{pl} , η _{nom}]*	%	107,0	95,7	108,0	96,5
Hs Efficiency (G.C.V.) [η _{pl} , η _{nom}]*	%	96,4	86,1	97,2	86,9
Flue losses with burner ON (Hi)	%	1,1	4,3	0,5	3,5
Flue losses with burner OFF (Hi)	%	<0,1		<0,1	
Max. condensation ⁽¹⁾	l/h	0,7		0,9	
Flue Gas Emissions					
Carbon monoxide - CO - (0% di O ₂) ⁽²⁾	ppm	< 5		< 5	
Emissions of nitrogen oxides NOx* (0% di O ₂) (Hi) ⁽³⁾		44 mg/kWh - 25 ppm		47 mg/kWh - 26 ppm	
Emissions of nitrogen oxides NOx* (0% di O ₂) (Hs) ⁽⁴⁾		40 mg/kWh - 22 ppm		42 mg/kWh - 24 ppm	
Pressure available at the flue	Pa	80		100	
Electrical Characteristics					
Supply voltage	V	230 Vac - 50 Hz single phase			
Rated power	kW	0,15	0,16	0,26 ⁽⁵⁾	0,31 ⁽⁵⁾
Protection rating	IP	IP 20 (IPX5D only for -00X0 and -00Z0 models)			
Operating temperatures	°C	from -15°C to +40°C for lower temperatures, a burner housing heating kit is required ⁽⁵⁾			
Connections					
Ø Gas connection ⁽⁶⁾	GAS	UNI/ISO 228/1 - G 3/4"		UNI/ISO 228/1 - G 3/4"	
Intake/exhaust pipes Ø	mm	80/80		80/80	
Air flow rate					
Air flow rate (15 °C) ⁽⁷⁾	m³/h	2700		4600	
Air temperature increase	°C	6,1	18,0	5,0	21,0
Number and diameter of fans		1 x Ø350 (4P)		1 x Ø 450 (4P)	
Fan speed	rpm	1400		1400	
Sound pressure (Lp) ⁽⁸⁾	dB(A)	43		49	
Weight					
Net weight	kg	45		58	

NOTES:

* Symbol in compliance with Reg.EU/2281/2016.

(1) Max. condensation produced acquired from testing at Qmin.

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

(5) If the burner housing heater kit is installed, add 105 W (230V) to the rated power value on the nameplate.

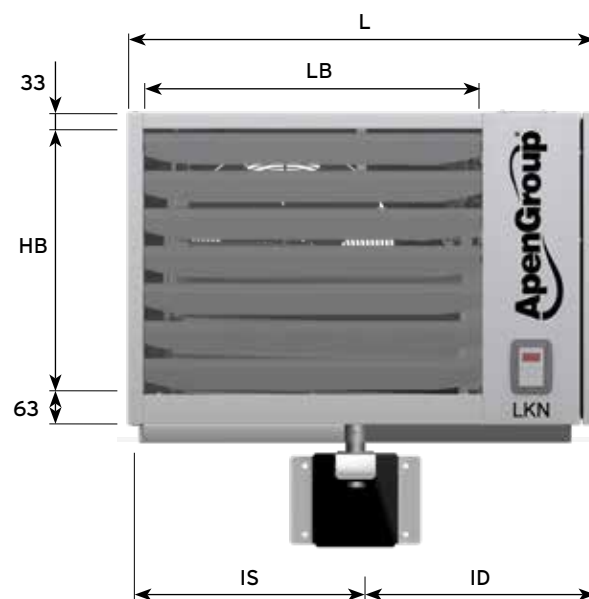
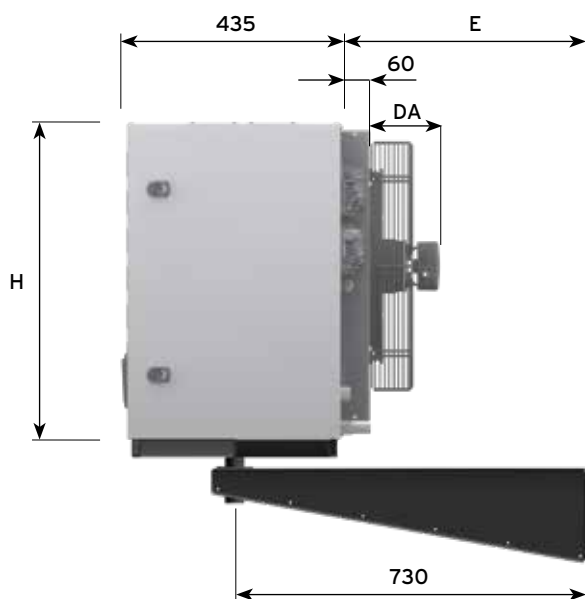
(6) The gas line must be dimensioned according to the length of the routing and not to the heater input diameter.

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

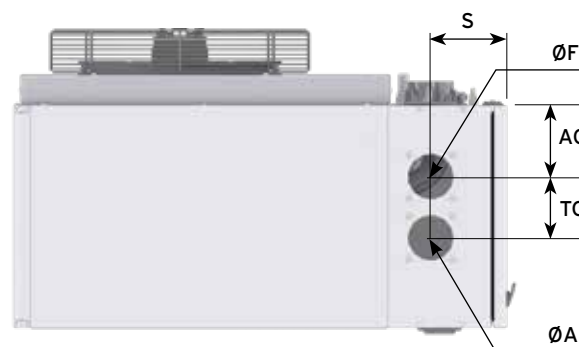
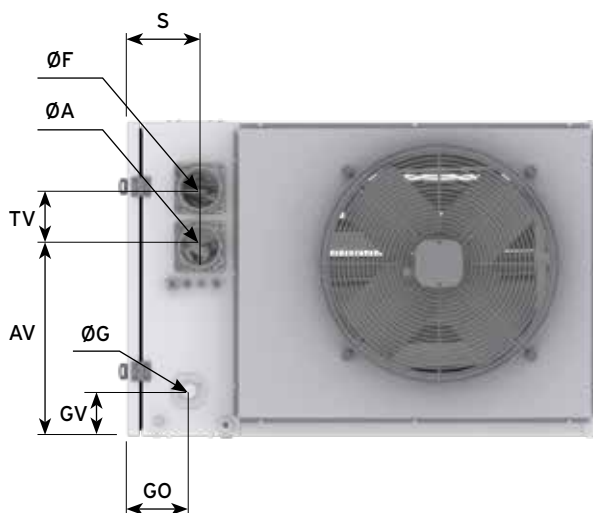
(7) Calculated according to ISO 5801- 2007

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

LKN WITH AXIAL FAN / DIMENSIONS



Model	Overall dimensions			Louvre		Rotating shelf		Fixed shelf
	H	L	DA	HB	LB	IS	ID	E
LKN020 (indoor installation)	645	725	95	550	460	325	325	410
LKN035 (indoor installation)	645	965	143	550	700	445	445	410
LKN035-00X0 (outdoor installation)	645	965	143	550	700	-	-	-



Model	Horizontal exhausts (STD)					Supply gas			
	A	F	AV	TV	S	ØG	GO	GV	
LKN020	80	80	390	120	145	3/4"	125	93	
LKN035	80	80	390	120	145	3/4"	125	93	

Model	Vertical exhausts (OPT.)				
	A	F	AO	TO	S
LKN020	80	80	140	120	145
LKN035	80	80	140	120	145

LRN WITH AXIAL FAN / TECHNICAL DATA

Model*		LRN018		LRN028		LRN035		LRN045	
Type of equipment		B23P - C13 - C33 - C53 - C63							
NOx class	Val	5							
Heater Performance									
		min	max	min	max	min	max	min	max
Furnace heat input (Hi)	kW	10.0	17.4	15.6	27.0	19.6	34.8	26.2	44.8
Useful heat output [P _{min} , P _{rated}]*	kW	9.6	15.9	15.0	24.6	18.9	31.7	25.2	40.9
Hi Efficiency (N.C.V.) [η _{pl} , η _{nom}]*	%	96.1	91.2	96.0	91.2	96.2	91.2	96.2	91.3
Hs efficiency (G.C.V.) [η _{pl} , η _{nom}]*	%	86.6	82.1	86.4	82.1	86.4	82.1	86.4	82.2
Flue losses with burner on (Hi)	%	3.9	8.8	4.0	8.8	3.8	8.8	3.8	8.7
Flue losses with burner off (Hi)	%	<0,1		<0,1		<0,1		<0,1	
Flue gas emissions									
Carbon monoxide - CO - (0% of O ₂) ⁽¹⁾	ppm	<5		<5		<5		<5	
Emissions of nitrogen oxides - NOx* (0% of O ₂) (Hi) ⁽²⁾		71 mg/kWh - 40 ppm		57 mg/kWh - 32 ppm		54 mg/kWh - 31 ppm		64 mg/kWh - 36 ppm	
Emissions of nitrogen oxides - NOx* (0% of O ₂) (Hs) ⁽³⁾		64 mg/kWh - 36 ppm		51 mg/kWh - 29 ppm		49 mg/kWh - 28 ppm		58 mg/kWh - 33 ppm	
Pressure available at the flue	Pa	60		80		100		120	
Electrical Characteristics									
Supply voltage	V	230 Vac - 50 Hz single-phase							
Rated power	kW	0.10	0.12	0.16	0.20	0.12	0.17	0.26	0.31
Protection Rating	IP	IP 20							
Operating Temperatures	°C	from -15°C to +40°C - for lower temperatures, a burner housing heating kit is required ⁽⁴⁾							
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"	
Intake/exhaust pipes Ø	mm	80/80		80/80		80/80		80/80	
Air flow rate									
Air flow rate (15°C) ⁽⁶⁾	m³/h	2000		2700		3200		4600	
Air temperature increase	°C	13.8	22.7	15.9	26.1	16.9	28.4	15.7	25.5
Number and diameter of fans (no. of poles)		1 X Ø350 (6P)		1 X Ø350 (4P)		1 X Ø450 (6P)		1 X Ø450 (4P)	
Fans speed	rpm	900		1400		900		1400	
Sound pressure (Lp) ⁽⁷⁾	dB(A)	32		43		39		49	
Weight									
Net Weight	kg	43		45		56		58	

NOTES:

* Symbol in compliance 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) Weighted value to EN17082 ref. to cat. H (G20), referred to gross calorific value (Hs, G.C.V).

(4) If the burner housing heater kit is installed, add 105 W (230V) to the rated power value on the nameplate.

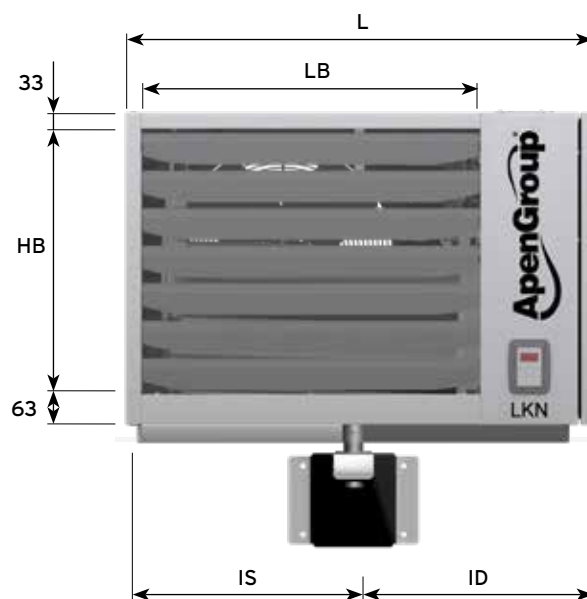
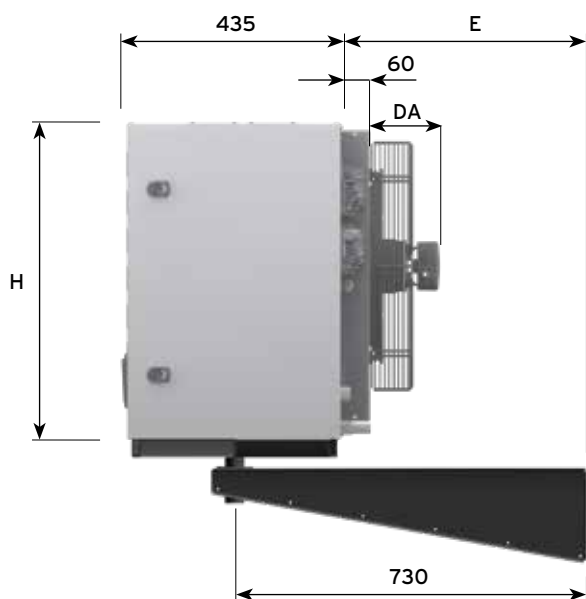
(5) The gas line must be dimensioned according to the length of the routing and not to the heater input diameter.

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

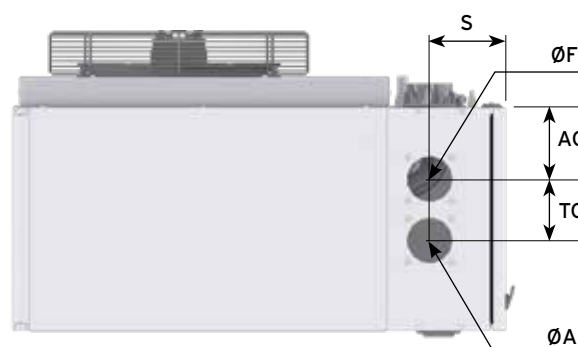
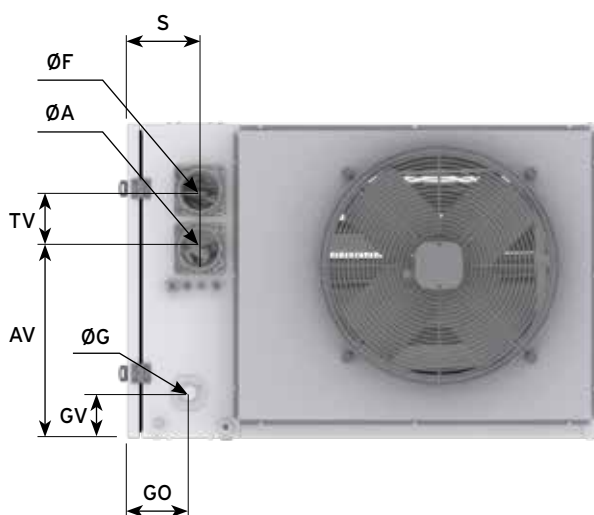
(6) Calculated according to ISO 5801- 2007

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

LRN WITH AXIAL FAN / DIMENSIONS



Model	Overall Dimensions			Louvre		Rotating shelf		Fixed shelf	
	H	L	DA	HB	LB	IS	ID	E	E
LRN018	645	725	95	550	460	325	325	530	410
LRN028	645	725	95	550	460	325	325	530	410
LRN035	645	965	143	550	700	445	445	530	410
LRN045	645	965	143	550	700	445	445	530	410



Model	Horizontal exhausts (STD)				Supply gas			
	A	F	AV	TV	S	ØG	GO	GV
LRN018	80	80	390	120	145	3/4"	125	93
LRN028	80	80	390	120	145	3/4"	125	93
LRN035	80	80	390	120	145	3/4"	125	93
LRN045	80	80	390	120	145	3/4"	125	93

Model	Vertical exhausts (OPT.)				
	A	F	AO	TO	S
LRN018	80	80	140	120	145
LRN028	80	80	140	120	145
LRN035	80	80	140	120	145
LRN045	80	80	140	120	145

LKN WITH CENTRIFUGAL FAN / TECHNICAL DATA

Model*		LKN035-00CO (indoor installation) LKN035-00ZO (outdoor installation)	
Type of equipment		B23P - C13 - C33 - C53 - C63	
NOx class	Val	5	
Heater Performance			
		min	max
Furnace heat input (Hi)	kW	7,5	34,9
Useful heat output [P_{min} , P_{rated}]*	kW	8,1	33,7
Hi Efficiency (N.C.V.) [η_{pl} , η_{nom}]*	%	108,0	96,5
Hs Efficiency (G.C.V.) [η_{pl} , η_{nom}]*	%	97,2	86,9
Flue losses with burner ON (Hi)	%	0,5	3,5
Flue losses with burner OFF (Hi)	%	<0,1	
Flue Gas Emissions			
Carbon monoxide - CO - (0% di O ₂) ⁽¹⁾	ppm	< 5	
Emissions of nitrogen oxides NOx* (0% di O ₂) (Hi) ⁽²⁾		47 mg/kWh - 26 ppm	
Emissions of nitrogen oxides NOx* (0% di O ₂) (Hs) ⁽³⁾		42 mg/kWh - 24 ppm	
Pressure available at the flue	Pa	100	
Electrical Characteristics			
Supply voltage	V	230 Vac - 50 Hz single phase	
Rated power	kW	0,26 ⁽⁴⁾	0,31 ⁽⁴⁾
Protection rating	IP	IP 20 (IPX5D only for LKN-00ZO models)	
Operating temperatures	°C	from -15°C to +40°C for lower temperatures, a burner housing heating kit is required ⁽⁴⁾	
Connections			
Ø Gas connection ⁽⁵⁾	GAS	UNI/ISO 228/1 - G 3/4"	
Intake/exhaust pipes Ø	mm	80/80	
Air flow rate			
Air flow rate (15 °C) ⁽⁶⁾	m³/h	3600	
Available pressure	Pa	90	
Rated power	kW	0,9	

NOTES:

* Symbol in compliance 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) Weighted value to EN17082 ref. to cat. H (G20), referred to gross calorific value (Hs, G.C.V.).

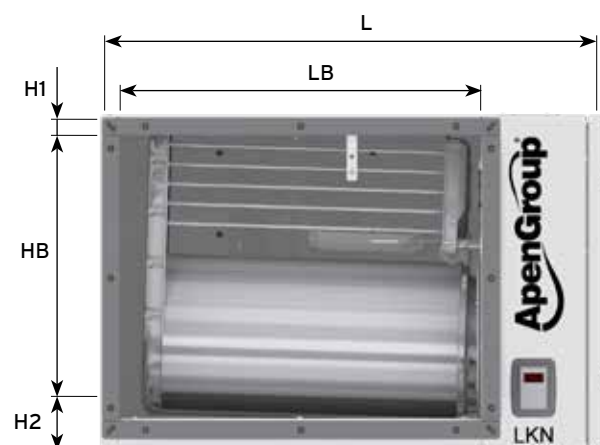
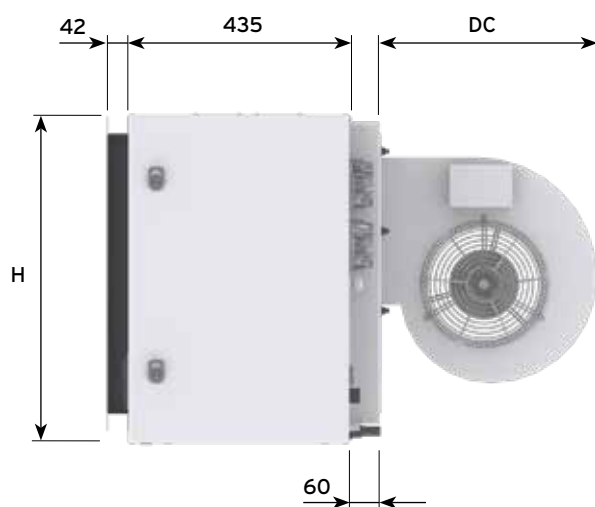
(4) If the burner housing heater kit is installed, add 105 W (230V) to the rated power value on the nameplate.

(5) The gas line must be dimensioned according to the length of the routing and not to the heater input diameter.

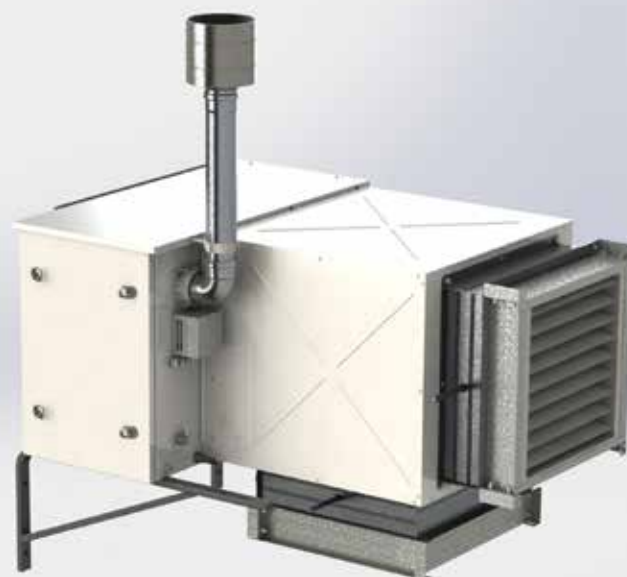
For countries requiring an ISO connection different from the one shown, an adaptor will be supplied.

(6) Calculated according to ISO 5801- 2007

LKN WITH CENTRIFUGAL FAN / DIMENSIONS



Model	Overall dimensions			Louvre			
	H	L	DC	HB	LB	H1	H2
LKN035-00C0 (indoor installation)	645	965	430	550	700	37	58
LKN035-00Z0 (outdoor installation)	645	965	430	550	700	37	58



LRN WITH CENTRIFUGAL FAN / TECHNICAL DATA

Model*		LRN035-OOCO (indoor installation)	
Type of equipment		B23P - C13 - C33 - C53 - C63	
NOx class	Val	5	
Heater Performance			
		min	max
Furnace heat input (Hi)	kW	19.6	34.8
Useful heat output [P _{min} , P _{rated}]*	kW	18.9	31.7
Hi Efficiency (N.C.V.) [η _{pl} , η _{nom}]*	%	96.2	91.7
Hs efficiency (G.C.V.) [η _{pl} , η _{nom}]*	%	86.2	82.3
Flue losses with burner on (Hi)	%	3.8	8.3
Flue losses with burner off (Hi)	%	<0,1	
Flue gas emissions			
Carbon monoxide - CO - (0% of O ₂) ⁽¹⁾	ppm	<5	
Emissions of nitrogen oxides - NOx* (0% of O ₂) (Hi) ⁽²⁾		54 mg/kWh - 31 ppm	
Emissions of nitrogen oxides - NOx* (0% of O ₂) (Hs) ⁽³⁾		49 mg/kWh - 28 ppm	
Pressure available at the flue	Pa	100	
Electrical Characteristics			
Supply voltage	V	230 Vac - 50 Hz single-phase	
Rated power	kW	0.12	0.17
Protection Rating	IP	IP 20	
Operating Temperatures	°C	from -15°C to +40°C - for lower temperatures, a burner housing heating kit is required ⁽⁴⁾	
Connections			
Ø gas connection ⁽⁵⁾	GAS	UNI/ISO 228/1-G 3/4"	
Intake/exhaust pipes Ø	mm	80/80	
Air flow rate			
Air flow rate (15°C) ⁽⁶⁾	m³/h	4400	
Available pressure	Pa	140	
Rated power	kW	0,9	

NOTES:

* Symbol in compliance 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) Weighted value to EN17082 ref. to cat. H (G20), referred to gross calorific value (Hs, G.C.V).

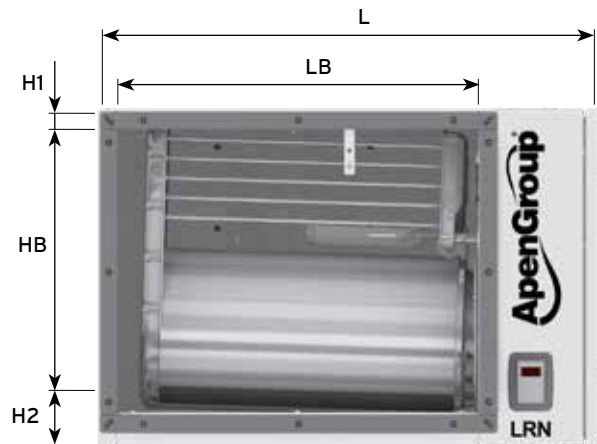
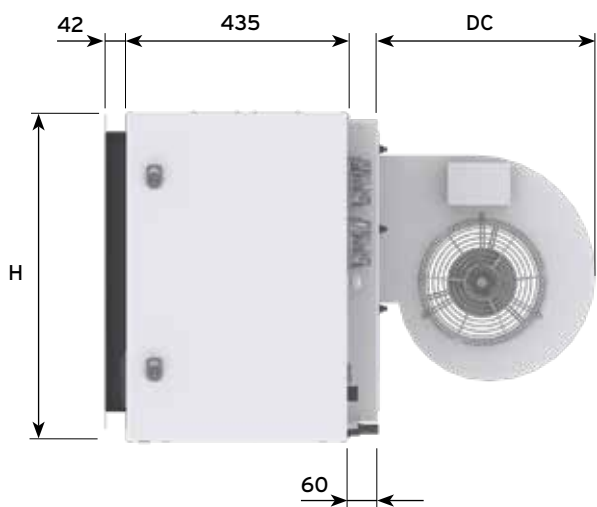
(4) If the burner housing heater kit is installed, add 105 W (230V) to the rated power value on the nameplate.

(5) The gas line must be dimensioned according to the length of the routing and not to the heater input diameter.

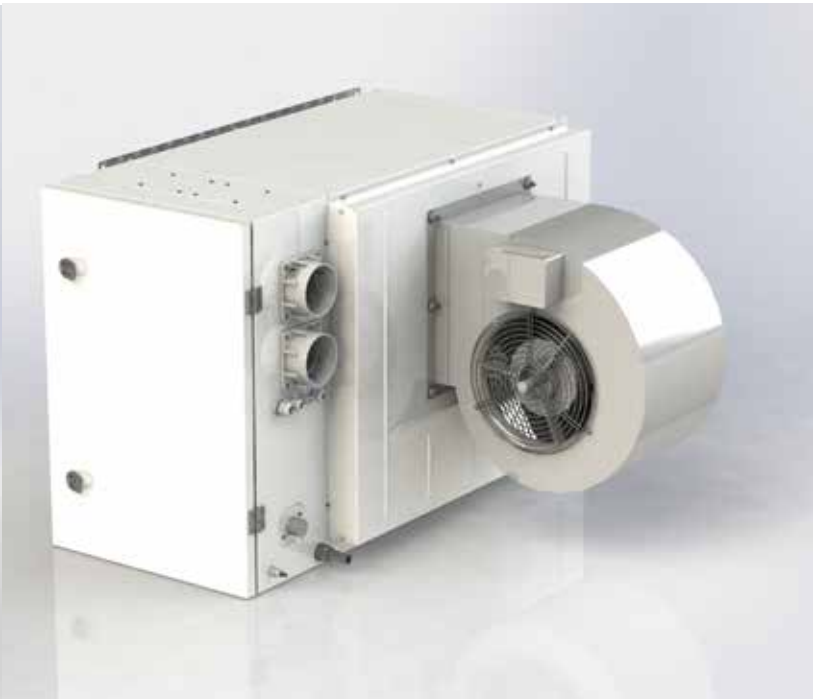
For countries requiring an ISO connection different from the one shown, an adaptor will be supplied.

(6) Calculated according to ISO 5801- 2007

LRN WITH CENTRIFUGAL FAN / DIMENSIONS



Model	Overall Dimensions			Louvre			
	H	L	DC	HB	LB	H1	H2
LRN035-00C0 (indoor installation)	645	965	430	550	700	37	58



KONDENSA LK RAPID PRO LRP

WALL-MOUNTED WARM AIR HEATERS



OPTIONAL
SMART X CONTROLS



OPTIONAL
ON/OFF CONTROL



ErP
2021



KONDENSA LK AND RAPID PRO LRP

Wall-mounted warm air heaters

ECOLOGY AND ENERGY SAVING

Kondensa LK and **Rapid Pro LRP** warm air heaters are characterised:

- by the high quality of the materials used, such as AISI 441 stainless steel, pre-painted panels and state-of-the-art electronics.
- by premixing combustion systems, with very low polluting emissions.
- by innovative and efficient production systems.
- by reliability and safety guaranteed by 100% factory testing.

FIELDS OF APPLICATION

- Logistics.
- Depots and Warehouses.
- Facilities.
- Sheds.
- Shopping malls.

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.

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.

SYSTEM MODULARITY

The subdivision of the total heat output over several installed fan heaters makes it possible to achieve greater rationalisation of the system: "zone" management of the heat output delivery. The integration of heat output is limited to the installation of new appliances.

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

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.

SUMMER VENTILATION

It is possible to set the machine to operate in ventilation mode, improving the comfort of the room in which the heater is installed.

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.

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.

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.

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.

LK WITH AXIAL FAN / TECHNICAL DATA

Model		LK020 -OX00		LK034 -OX00		LK045 -OX00		LK065 -OX00		LK080 -OX00		LK105 -OX00	
		MODELS AVAILABLE UNTIL STOCKS LAST											
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
Nominal 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 [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	
Max. quantity of condensation ⁽¹⁾	l/h	0,4		0,9		1,1		2,1		3,3		2,7	
Flue Gas 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) ⁽⁸⁾		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	
Pressure available at the flue	Pa	80		90		100		120		120		120	
Electrical Characteristics													
Supply voltage	V	230 Vac - 50 Hz 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 a burner compartment heating kit ⁽⁹⁾											
Connections													
Gas connection Ø ⁽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⁾	
Intake/exhaust pipes Ø	mm	80/80		80/80		80/80		80/80		100/100 ⁽⁶⁾		100/100 ⁽⁶⁾	
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) ⁽⁷⁾	dB(A)	44		49		49		51		52		54	
Weight													
Net Weight	kg	58		72		79		98		129		145	

NOTES:

* Symbol in accordance 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 Hi (N.C.V.).

(4) The gas line must be measured according to the length of the routing and not to the appliance 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 duct diameter must be UNI/ISO 228/1- G 1".

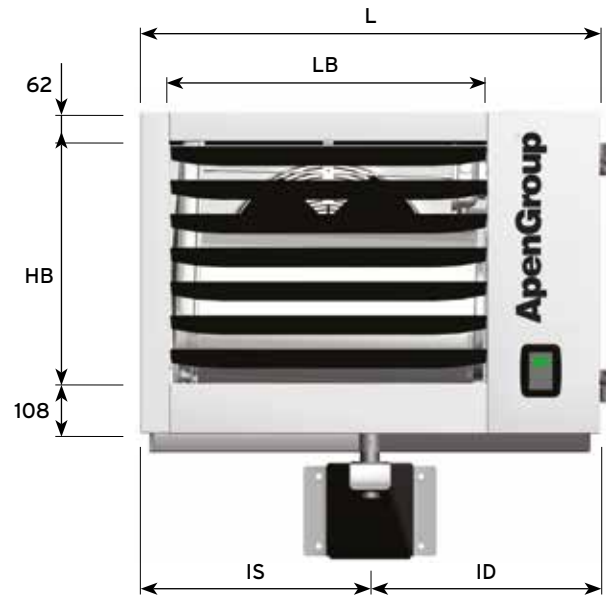
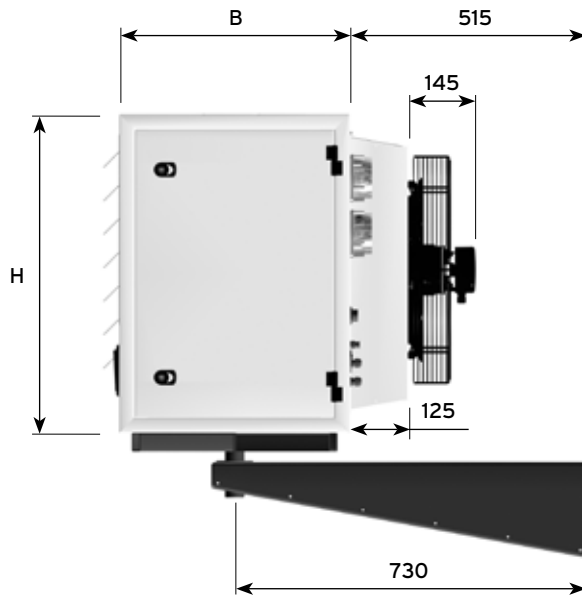
(6) Ø100/100 obtained by using adaptors supplied as standard.

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

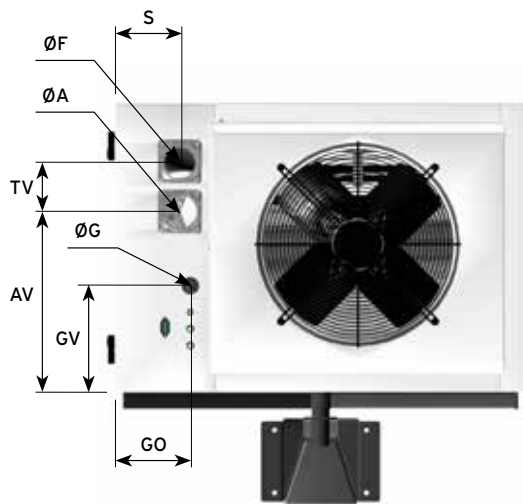
(8) Weighted value to EN17082 ref. to cat. H (G20), referred to gross calorific value (Hs, G.C.V.).

(9) If the burner housing heater kit is installed, add 105 W (230V) to the rated power value on the nameplate.

LK WITH AXIAL FAN / DIMENSIONS

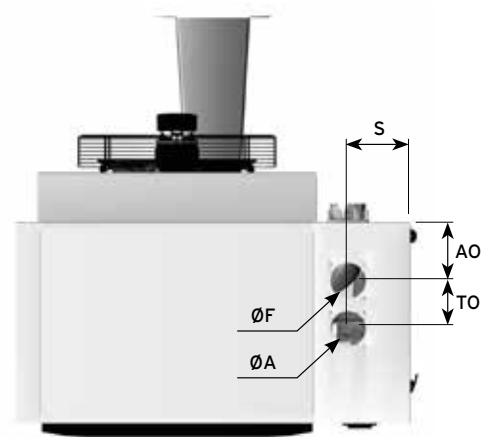


Model	Overall dimensions			Louvre		Shelf		GAS supply		
	B	H	L	HB	LB	IS	ID	ØG	GO	GV
LK020-0X00	500	690	795	520	490	395	400	3/4"	180	255
LK034-0X00	500	690	985	520	680	490	495	3/4"	180	255
LK045-0X00	500	765	985	595	680	490	495	3/4"	180	255
LK065-0X00	500	765	1310	595	1010	605	710	3/4"	180	255
LK080-0X00	500	845	1515	675	1180	720	795	3/4"	210	275
LK105-0X00	500	845	1740	675	1410	805	935	3/4"	210	275



Model	Horizontal exhausts (STD)				
	A	F	AV	TV	S
LK020-0X00	80	80	430	120	155
LK034-0X00	80	80	430	120	155
LK045-0X00	80	80	505	120	155
LK065-0X00	80	80	505	120	155
LK080-0X00	100*	100*	560	140	185
LK105-0X00	100*	100*	560	140	185

*Obtained by using the adaptors supplied as standard



Model	Vertical exhausts (OPT.)				
	A	F	AV	TV	S
LK020-0X00	80	80	145	120	155
LK034-0X00	80	80	145	120	155
LK045-0X00	80	80	145	120	155
LK065-0X00	80	80	145	120	155
LK080-0X00	100*	100*	145	140	185
LK105-0X00	100*	100*	145	140	185

*Obtained by using the adaptors supplied as standard

LRP WITH AXIAL FAN / TECHNICAL DATA

Model*		LRP018 -OX00	LRP028 -OX00	LRP035- -OX00	LRP045 -OX00	LRP055 -OX00	LRP075 -OX00	LRP102 -OX00							
		MODELS AVAILABLE UNTIL STOCKS LAST													
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 input (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	91,1
Hi Efficiency (N.C.V.) [η _{pl} ' η _{nom}]*	%	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	91,1
Hs efficiency (G.C.V.) [η _{pl} ' η _{nom}]*	%	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	82,0
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	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) ⁽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	
Pressure available at the flue	Pa	80		100		120		120		130		140		140	
Electrical Characteristics															
Supply voltage	V	230 Vac - 50 Hz single-phase													
Absorbed electrical 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	-15°C to +40°C - lower temperatures require a burner compartment heating kit ⁽⁸⁾													
Connections															
Gas connection Ø ⁽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" ⁽⁴⁾	
Intake/exhaust pipes Ø	mm	80/80		80/80		80/80		80/80		80/80		80/80		100/100 ⁽⁵⁾	
Air Flow Rate															
Air flow rate (15°C)	m³/h	2000		2700		3100		4300		4500		7800		9000	
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 Ø450 (4P)	
Fans speed	rpm	920		1370		970		1370		1370		1370		1370	
Sound pressure (Lp) ⁽⁶⁾	dB(A)	34		44		40		49		49		51		52	
Weight															
Net weight	kg	58		58		68		70		78		102		123	

NOTES:

* Symbol in accordance with Reg. EU/2281/2016.

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

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

(3) The gas line must be measured according to the length of the routing and not to the appliance diameter.

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

(4) For LRP102 models, the minimum gas supply duct diameter must be UNI/ISO 228/1- G 1".

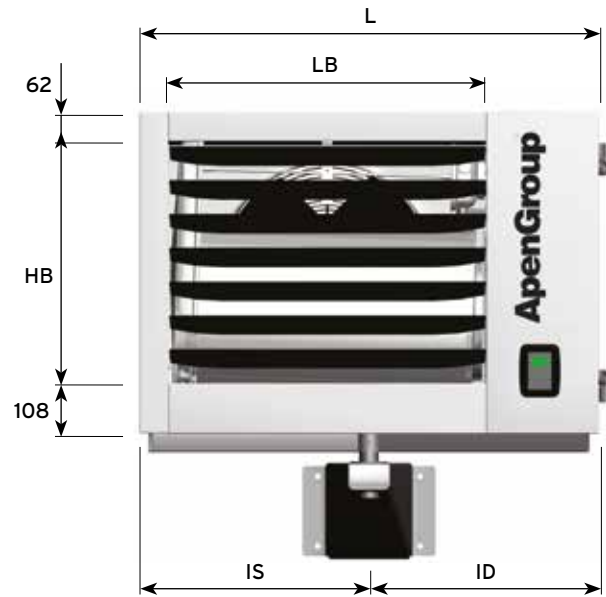
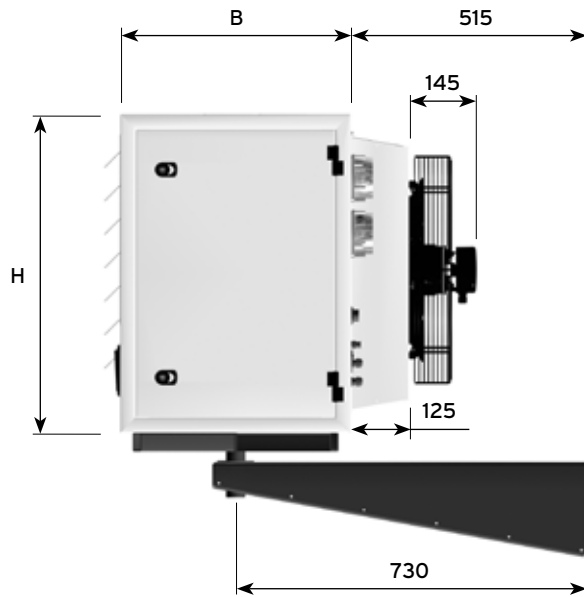
(5) Ø100/100 obtained by using adaptors supplied as standard.

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

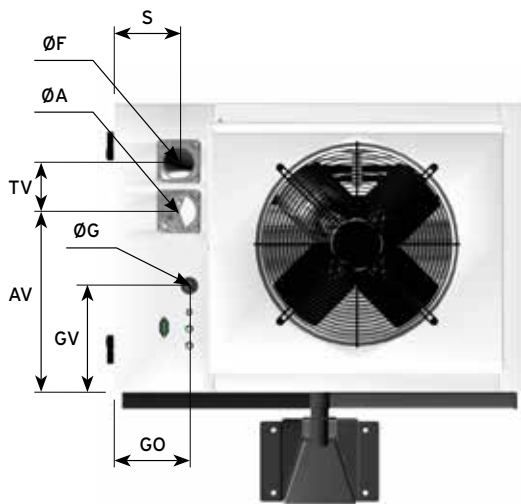
(7) Weighted value to EN17082 ref. to cat. H (G20), referred to gross calorific value (Hs, G.C.V.).

(8) If the burner housing heater kit is installed, add 105 W (230V) to the rated power value on the nameplate.

LRP WITH AXIAL FAN / DIMENSIONS

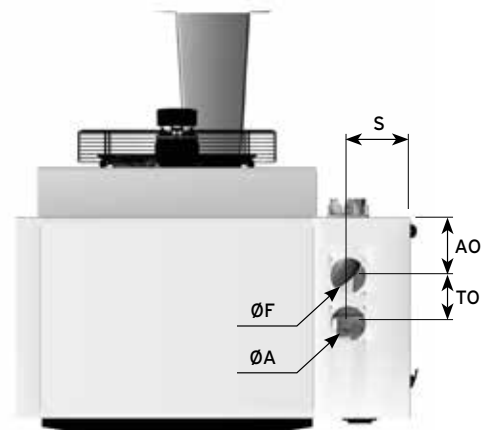


Model	Overall dimensions			Louver		Shelf		Supply GAS		
	B	H	L	HB	LB	IS	ID	ØG	GO	GV
LRP018-0X00	500	690	795	520	490	395	400	3/4"	180	255
LRP028-0X00	500	690	795	520	490	395	400	3/4"	180	255
LRP035-0X00	500	690	985	520	680	490	495	3/4"	180	255
LRP045-0X00	500	690	985	520	680	490	495	3/4"	180	255
LRP055-0X00	500	765	985	595	680	490	495	3/4"	180	255
LRP075-0X00	500	765	1310	595	1010	605	710	3/4"	180	255
LRP102-0X00	500	845	1515	675	1180	720	795	3/4"	210	275



Model	Horizontal exhausts (STD)				
	A	F	AV	TV	S
LRP018-0X00	80	80	430	120	155
LRP028-0X00	80	80	430	120	155
LRP035-0X00	80	80	430	120	155
LRP045-0X00	80	80	430	120	155
LRP055-0X00	80	80	505	120	155
LRP075-0X00	80	80	505	120	155
LRP102-0X00	100*	100*	560	140	185

*Obtained by using the adaptors supplied as standard



Model	Vertical exhausts (OPT.)				
	A	F	AV	TV	S
LRP018-0X00	80	80	145	120	155
LRP028-0X00	80	80	145	120	155
LRP035-0X00	80	80	145	120	155
LRP045-0X00	80	80	145	120	155
LRP055-0X00	80	80	145	120	155
LRP075-0X00	80	80	145	120	155
LRP102-0X00	100*	100*	145	140	185

*Obtained by using the adaptors supplied as standard

LKC-OX00 WITH CENTRIFUGAL FAN / TECHNICAL DATA

Model		LKC034 -OX00 MODELS AVAILABLE UNTIL STOCKS LAST		LKC045 -OX00		LKC065 -OX00	
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	7,60	34,85	8,50	42,00	12,40	65,00
Useful heat output [P _{min} , P _{rated}]*	kW	8,13	33,56	8,97	40,45	13,40	62,93
Hi Efficiency (N.C.V.) [η _{pl} , η _{nom}]*	%	106,97	96,30	105,50	96,30	108,06	96,82
Hs efficiency (G.C.V.) [η _{pl} , η _{nom}]*	%	96,37	86,76	95,07	86,76	97,36	87,22
Flue losses with burner on (Hi)	%	0,6	3,7	0,5	3,7	0,2	3,2
Flue losses with burner off (Hi)	%	<0,1		<0,1		<0,1	
Max. quantity of condensation ⁽¹⁾		0,9		1,1		2,1	
Flue Gas Emissions							
Carbon monoxide - CO - (0% of O ₂) ⁽²⁾	ppm	< 5		< 5		< 5	
Emissions of nitrogen oxides NOx*- (0% of O ₂) (HI) ⁽³⁾		51 mg/kWh - 29 ppm		36 mg/kWh - 20 ppm		45 mg/kWh - 25 ppm	
Emissions of nitrogen oxides - NOx*(0% of O ₂) (Hs) ⁽⁵⁾		46 mg/kWh - 26 ppm		32 mg/kWh - 18 ppm		41 mg/kWh - 23 ppm	
Pressure available at the flue	Pa	90		100		120	
Electrical Characteristics							
Supply voltage	V	230 Vac - 50 Hz 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 ⁽⁶⁾					
Connections							
Gas connection Ø ⁽⁴⁾	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	3050		4650		5650	
Available pressure	Pa	140		140		140	
Rated power	kW	1120		1260		2080	

NOTES:

* Symbol in compliance 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.).

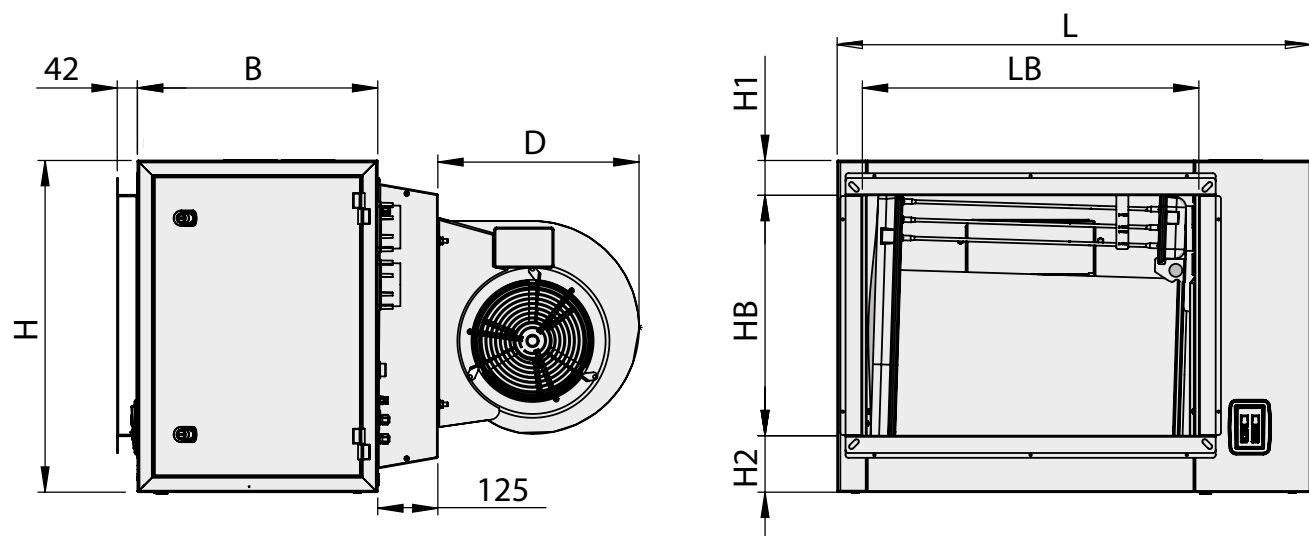
(4) The gas line must be dimensioned according to the length of the routing and not to the heater input diameter.

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

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

(6) If the burner housing heater kit is installed, add 105 W (230V) to the rated power value on the nameplate.

LKC WITH CENTRIFUGAL FAN / DIMENSIONS



KONDENSA SERIE LKC WITH CENTRIFUGAL FAN

Model	Overall Dimensions					Louvers			Gas Supply		
	B	H	L	D	HB	LB	H1	H2	ØG	GO	GV
LKC034-0X00	500	690	985	425	500	700	74	118	3/4"	180	255
LKC045-0X00	500	765	985	490	600	700	61	105	3/4"	180	255
LKC065-0X00	500	765	1.310	420	600	1.000	61	105	3/4"	180	255

LRP-OXCO WITH CENTRIFUGAL FAN / TECHNICAL DATA

Model	LRP035 -OXCO			LRP055 -OXCO		LRP075 -OXCO	
	MODELS AVAILABLE UNTIL STOCKS LAST						
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	20,2	34,8	29,8	52,2	44,4	73,5
Useful heat output [P _{min} , P _{rated}]*	kW	19,6	32,4	28,8	48,1	42,5	67,5
Hi Efficiency (N.C.V.) [η _{pl} , η _{nom}]*	%	96,8	93,1	96,8	92,1	95,8	91,8
Hs efficiency (G.C.V.) [η _{pl} , η _{nom}]*	%	87,1	83,8	87,1	82,9	86,2	82,6
Flue losses with burner on (Hi)	%	3,2	6,9	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) ⁽¹⁾	ppm	<5		<5		<5	
Emissions of nitrogen oxides NOx* - (0% of O ₂) (Hi) ⁽²⁾		42 mg/kWh - 24 ppm		46 mg/kWh - 26 ppm		60 mg/kWh - 34 ppm	
Emissions of nitrogen oxides - NOx*(0% of O ₂) (Hs) ⁽⁴⁾		38 mg/kWh - 21 ppm		42 mg/kWh - 23 ppm		54 mg/kWh - 31 ppm	
Pressure available at the flue	Pa	120		130		140	
Electrical Characteristics							
Supply voltage	V	230 Vac - 50 Hz single-phase					
Absorbed electrical power	kW	0,13	0,184	0,268	0,33	0,454	0,493
Protection Rating	IP	IP 20					
Operating Temperatures	°C	-15°C to +40°C - lower temperatures require a burner compartment heating kit ⁽⁵⁾					
Connections							
Gas connection Ø ⁽³⁾	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	3050		4650		7850	
Available pressure	Pa	140		140		140	
Rated power	kW	1120		1260		2080	

NOTES:

* Symbol in compliance 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).

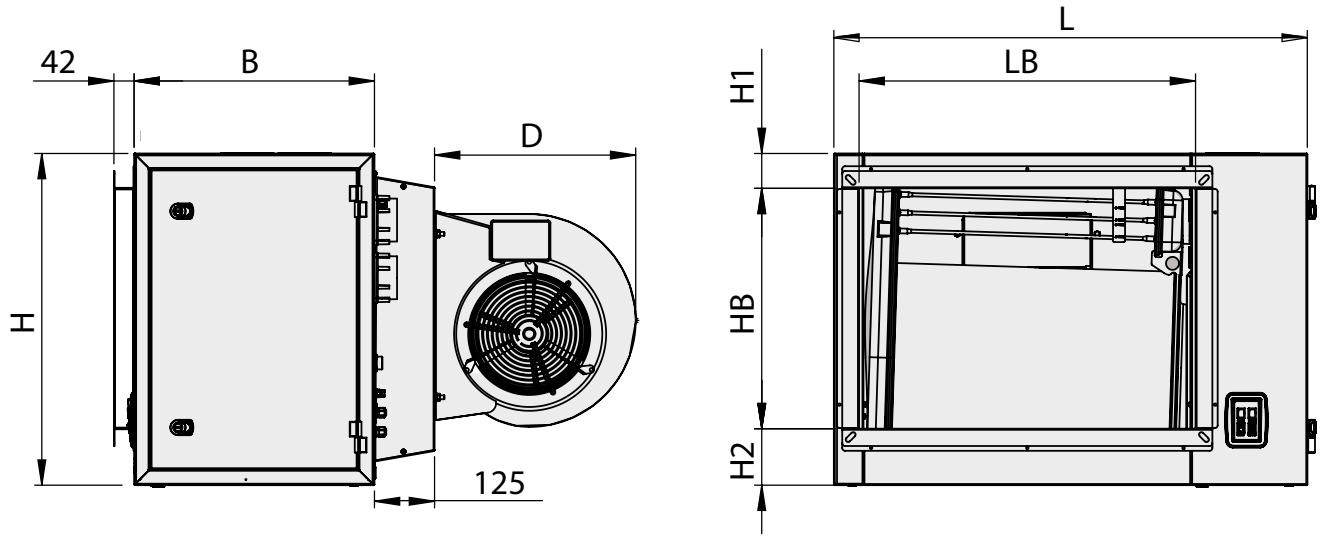
(3) The gas line must be dimensioned according to the length of the routing and not to the heater input diameter.

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

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

(5) If the burner housing heater kit is installed, add 105 W (230V) to the rated power value on the nameplate.

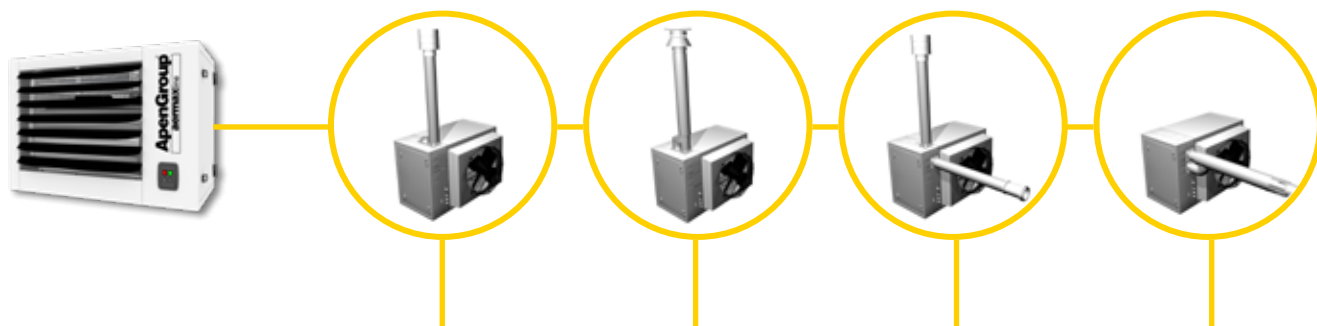
LRP-OXCO WITH CENTRIFUGAL FAN / DIMENSIONS



RAPID PRO SERIE LRP-OOCO WITH CENTRIFUGAL FAN

Model	Overall Dimensions					Louvers			GAS Supply		
	B	H	L	D	HB	LB	H1	H2	ØG	GO	GV
LRP035-OXCO	500	690	985	425	500	700	74	118	3/4"	180	255
LRP055-OXCO	500	765	985	490	600	700	61	105	3/4"	180	255
LRP075-OXCO	500	765	1310	420	600	1000	61	105	3/4"	180	255

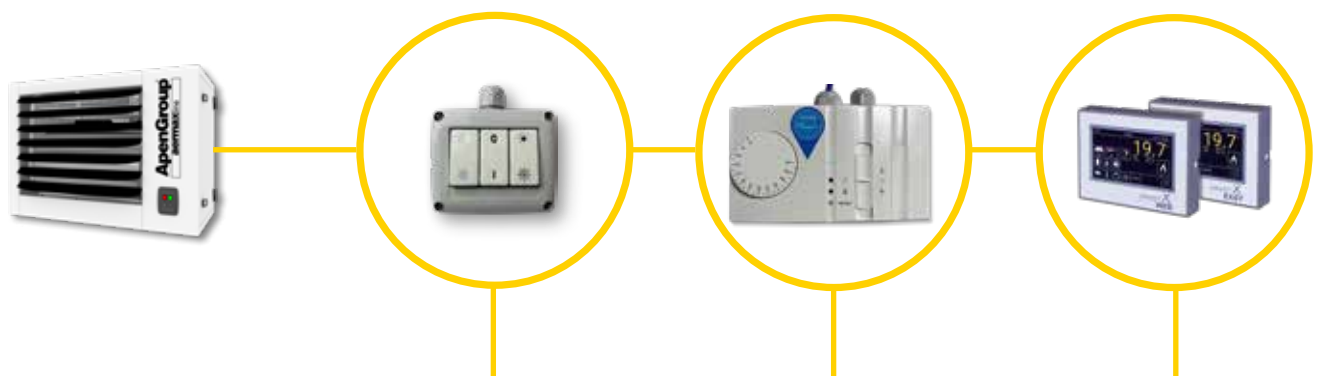
ACCESSORIES



EXHAUST FUMES TERMINALS



SUPPORTING BRACKETS



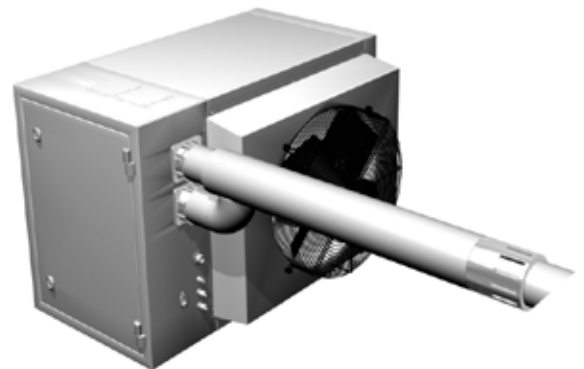
CONTROL ACCESSORIES

EXHAUST FUMES TERMINALS



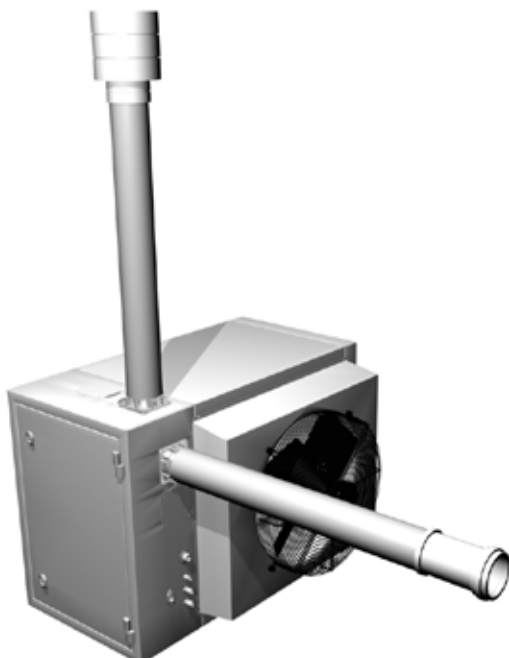
TIPO B23 - VERTICAL

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.

HEATER'S CONTROLS

SMART X WEB AND SMART X EASY CONTROLS

Apen Group's new remote control SMART X WEB and SMART X EASY series perform the functions of standalone timeclock and thermostat and can be used in a system that controls up to 15 heaters installed in a single zone.



BASIC REMOTE CONTROL

It allows the following settings:

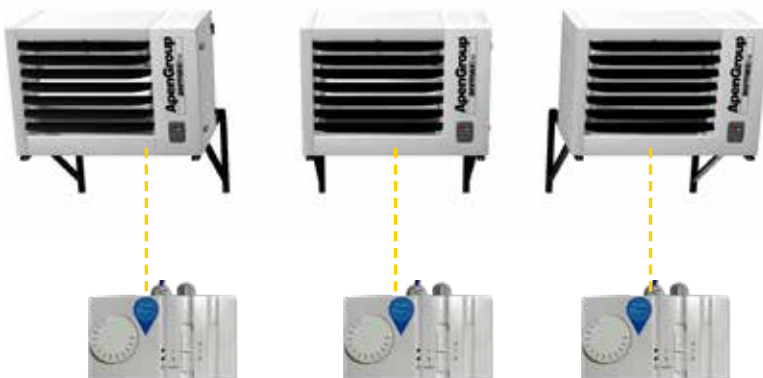
- On/Off button.
- Summer/Winter switch and Reset button.

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.

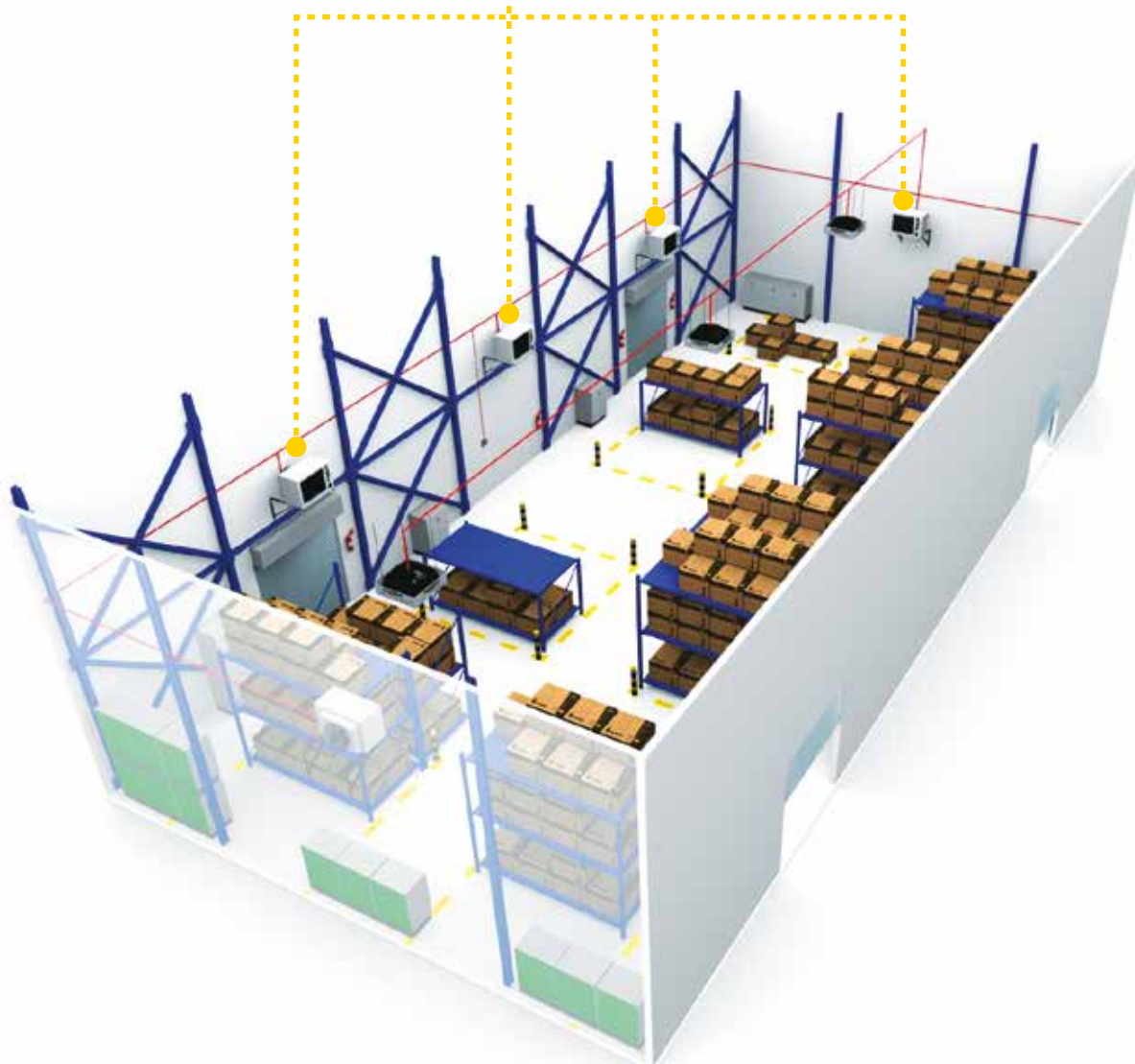
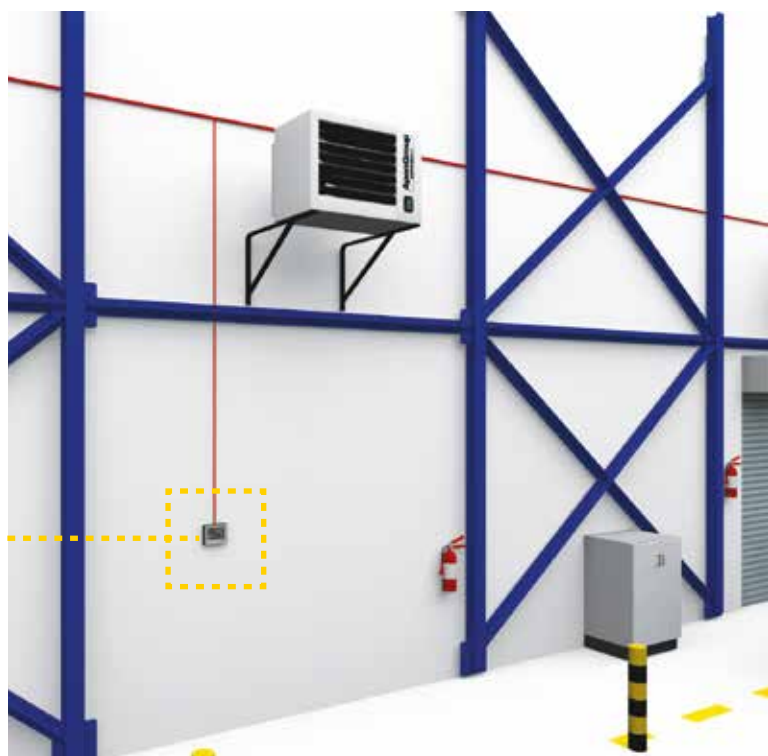


SMART X WEB AND SMART X EASY CONTROLS



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, SMART X WEB 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.



SMART X SYSTEM

REMOTE CHRONOTHERMOSTATS



ADVANCED
ELECTRONICS



WATER FAN
HEATERS



AIR
DESTRATIFIERS



GUARANTEED
EFFICIENCY



GAS CONDENSING
BOILERS



WALL-MOUNTED
HEATERS



SMART X SYSTEM

Remote chronothermostats

SMART X EASY AND SMART X WEB CONTROLS

Being touch-screen chronothermostats, the Apen Group SMART X EASY and SMART X WEB control all Apen Group products, guaranteeing operation with maximum efficiency and minimum energy consumption.

These user-friendly controls allow a wide choice of adjustments and a clear reading of the operating parameters as well as the resolution of any technical interventions.

PRODUCT CONTROL

- AKN gas condensing boilers.
- AQUAPUMP HYBRID system, hybrid heat pump with gas boiler.
- AX-EC electronic water fan heaters.
- QUEEN-EC Air destratifiers.
- KONDESA wall-mounted condensing warm air heaters.
- RAPID PRO wall-mounted warm air heaters.
- AH and AH-SPORT modular heating units.
- PK and PK-SPORT floor standing warm air heaters.

SIMPLE INSTALLATION

Connection via 2 power cables and 2 modbus cables is very simple. Installation can be built-in or flush with the wall.

MULTITASKING CONTROL

It acts as a stand-alone chronothermostat and can be used by one to a maximum of 15 machines simultaneously.

CONTROL VERSATILITY

It is possible to install up to 3 remote probes in addition to the one on board the control.

TOUCH SCREEN TECHNOLOGY

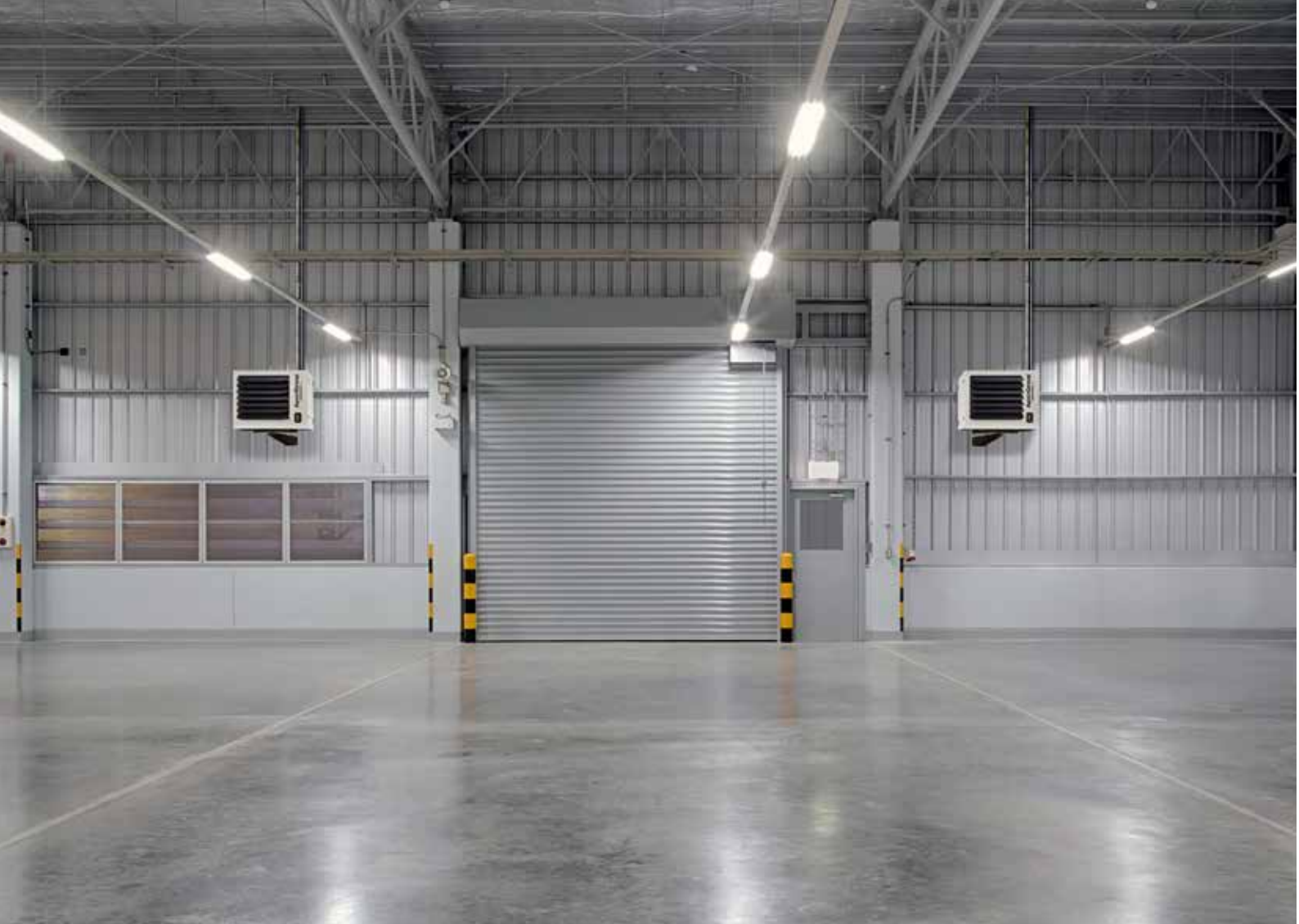
The controls are easy to use thanks to a 4.3" colour TFT display and a very intuitive management menu. The user program is multilingual (9 languages).

SMART X WEB

With the SMART X WEB version (through the connection to an intranet network) it is possible to carry out the complete management of the plant remotely via browser on a computer or via http address.

FAN MODE

Ventilation mode management for combination of AX-EC water fan heaters with AKN boilers.





APEN GROUP S.p.A.
Via Isonzo, 1 - Pessano con Bornago
20042 (Milan) - Italy
Tel +39 02 95 96 931 Fax +39 02 95 74 27 58
www.apengroup.com apen@apengroup.com
Code X01790.01GB ed.2402
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