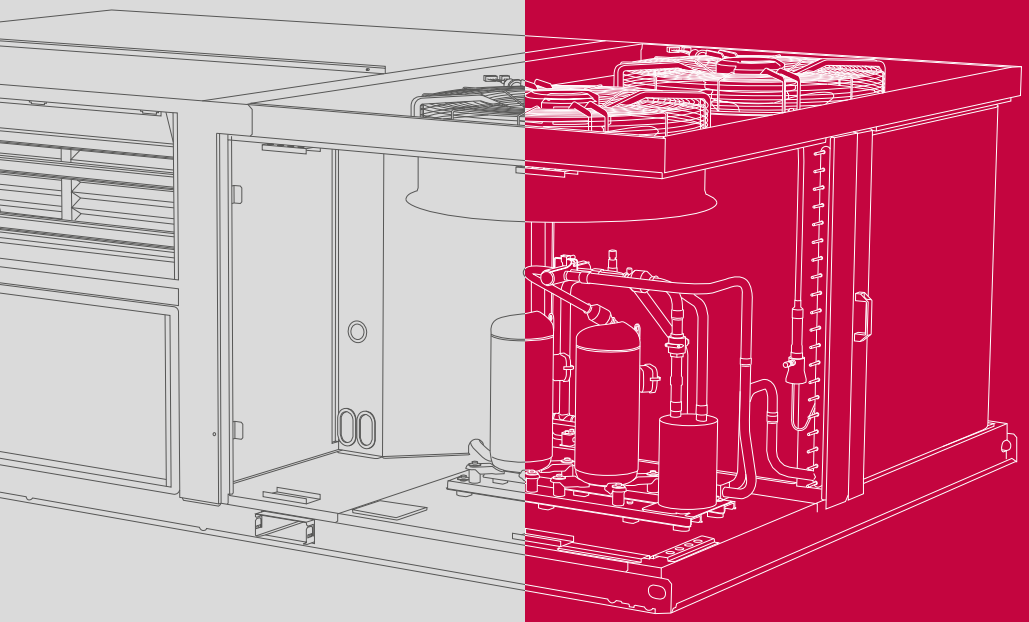
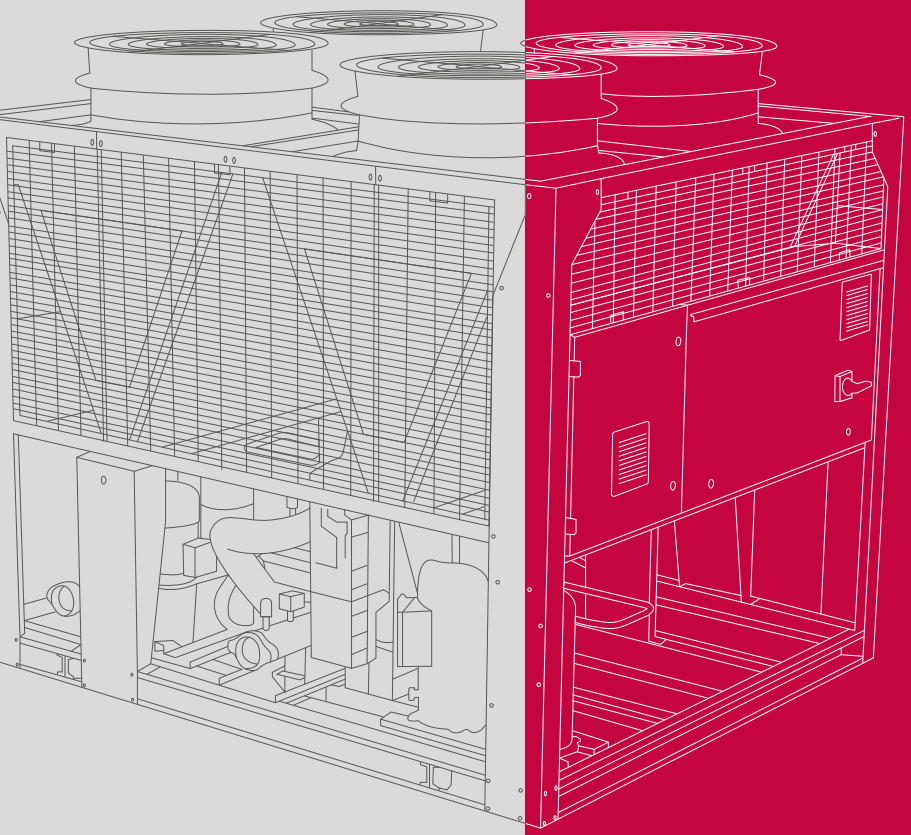


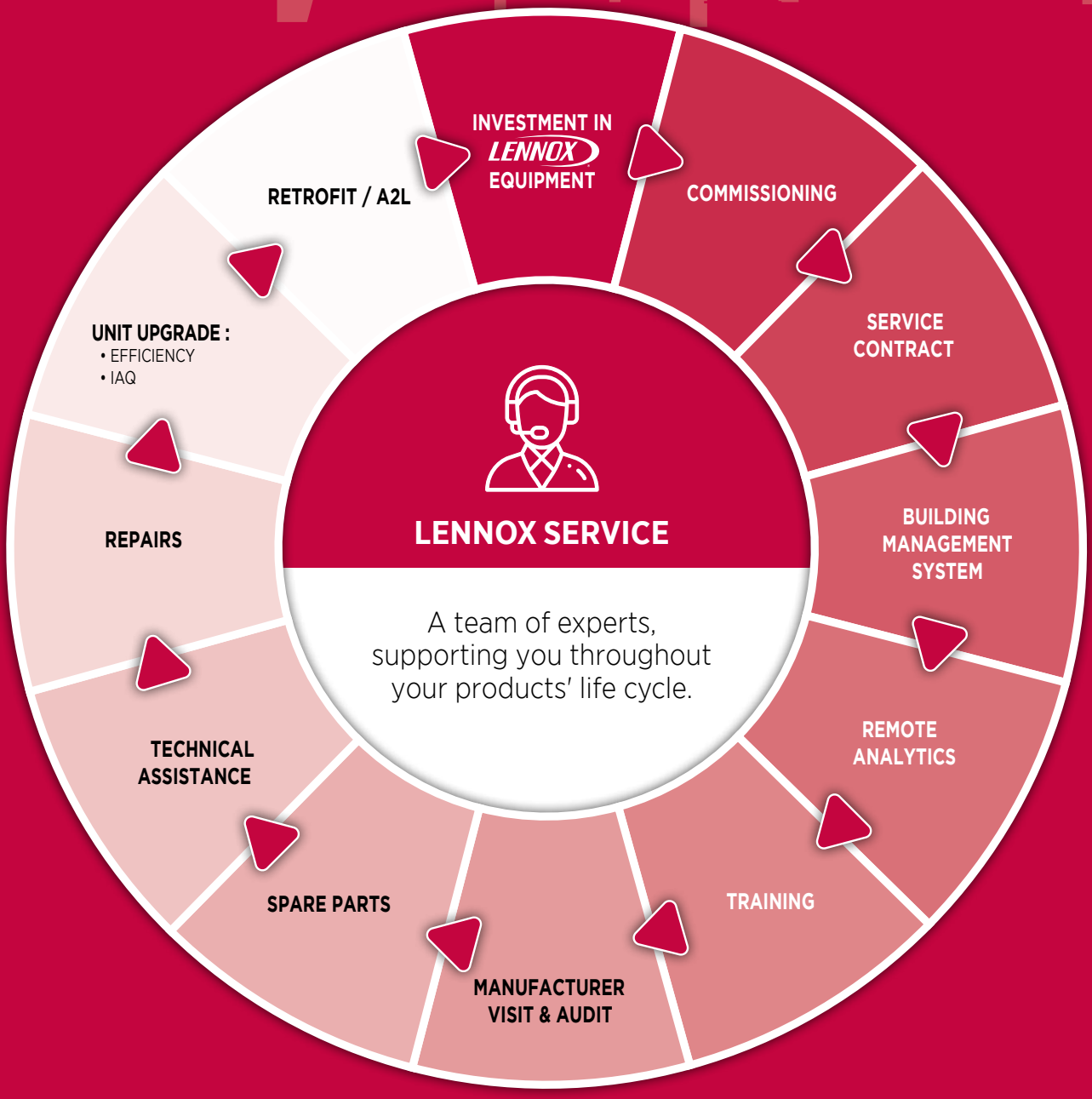


HVAC CATALOGUE

AIR CONDITIONING & HEATING
AIR TREATMENT & VENTILATION
CONTROL & SUPERVISION

LENNOX

at your service!



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A WORLD OF APPLICATIONS	4
REGULATIONS AND CERTIFICATIONS	6

AIR CONDITIONING & HEATING		Refrigerants	Cooling/Heating capacity & Airflow rate		Page
Rooftops	**eNeRGy**	R410A	❄ **53** - **170** kW / 🔥 **50** - **175** kW **13500** - **27000** m³/h	EUROVENT CERTIFIED PERFORMANCE	19
	eNeRGy+ Inverter	R410A	❄ **97** - **160** kW / 🔥 **102** - **164** kW **15500** - **27000** m³/h	EUROVENT CERTIFIED PERFORMANCE	19
	e-eNeRGy	R32	❄ **109** - **163** kW / 🔥 **112** - **168** kW **18900** - **27000** m³/h	EUROVENT CERTIFIED PERFORMANCE	19
	e-Baltic	R32	❄ **31** - **207** kW / 🔥 **30** - **207** kW **5700** - **35000** m³/h	EUROVENT CERTIFIED PERFORMANCE	27
	Baltic	R410A	❄ **22** - **122** kW / 🔥 **21** - **115** kW **4200** - **23500** m³/h	EUROVENT CERTIFIED PERFORMANCE	33
	Baltic	R410A	❄ **47** - **90** kW / 🔥 **60** - **117** kW **7100** - **14500** m³/h	---	33
	Flexair	R410A	❄ **85** - **217** kW / 🔥 **79** - **222** kW **15000** - **39000** m³/h	EUROVENT CERTIFIED PERFORMANCE	39
	Flexair	R410A	❄ **85** - **170** kW / 🔥 **112** - **127** kW **15000** - **30000** m³/h	---	39
Chillers & Heat Pumps	**eComfort** Inverter	R32	❄ **170** - **400** kW	EUROVENT CERTIFIED PERFORMANCE	53
	eComfort	R410A	❄ **20** - **180** kW / 🔥 **20** - **190** kW	EUROVENT CERTIFIED PERFORMANCE	61
	Neosys	R410A	❄ **200** - **1000** kW / 🔥 **200** - **500** kW	EUROVENT CERTIFIED PERFORMANCE	69
	Ecolean	R410A	❄ **40** - **200** kW / 🔥 **50** - **200** kW	EUROVENT CERTIFIED PERFORMANCE	77
	Aqua⁴	R410A	❄ **50** - **300** kW / 🔥 **50** - **350** kW	---	83
	Genesis Inverter	R513A R1234 ze R134a	❄ **220** - **1600** kW / 🔥 **230** - **1440** kW	EUROVENT CERTIFIED PERFORMANCE	91
	Genesis Inverter	R513A R1234 ze R134a	❄ **400** - **1650** kW / 🔥 **400** - **1950** kW	EUROVENT CERTIFIED PERFORMANCE	91
	Hydrolean	R410A	❄ **25** - **160** kW / 🔥 **30** - **170** kW	EUROVENT CERTIFIED PERFORMANCE	107
	MWC/MRC	R410A	❄ **180** - **380** kW / 🔥 **200** - **450** kW	EUROVENT CERTIFIED PERFORMANCE	115
Roomtops	**Flatair** Inverter	R410A	❄ **22** - **33** kW / 🔥 **20** - **29** kW **3700** - **5600** m³/h	---	125
	Compactair Inverter	R410A	❄ **22** - **82** kW / 🔥 **20** - **80** kW **5400** - **18700** m³/h	---	131
	Aqualean	R410A	❄ **2** - **40** kW / 🔥 **2,6** - **50** kW **285** - **7500** m³/h	---	137
Condensing Units	**ASC/ASH**	R410A	❄ **19,7** - **228** kW / 🔥 **19,8** - **218** kW	---	145
VRF	**e-Lite**	HFC	**8** - **270** kW / **3** - **96** HP	EUROVENT CERTIFIED PERFORMANCE	153

AIR TREATMENT & VENTILATION			Refrigerants	Cooling/Heating capacity & Airflow rate		Page
Fan Coil Units	**Allegra II**		WATER	❄ **0.5** - **8.9** kW / 🔥 **0.7** - **11.6** kW **60** - **1670** m³/h		167
	Armonia II		WATER	❄ **1.5** - **10.8** kW / 🔥 **1.9** - **13.5** kW **225** - **1536** m³/h		171
	Comfair HD		WATER	❄ **1.5** - **3.9** kW / 🔥 **1.8** - **4.9** kW **234** - **620** m³/h		177
	Inalto		WATER	❄ **3** - **28** kW / 🔥 **3,7** - **37,7** kW **516** - **5668** m³/h		181
	Comfair HH/HV		WATER	❄ **2,8** - **50,6** kW / 🔥 **4,9** - **60** kW **840** - **8000** m³/h		185
	Axil/Equitherm		WATER	❄ **4** - **20** kW / 🔥 **12** - **105** kW **1600** - **9100** m³/h	---	189
Fresh Air Units	**MiniAir** Inverter		R410A	**320** - **4700** m³/h	---	195
	MaxiAir Inverter		R410A	**1500** - **15000** m³/h	---	195
	e-MovAir Inverter		R410A	❄ **17** - **146** kW / 🔥 **20** - **140** kW **3500** - **30000** m³/h	---	199
Air Handling Units	**CleanAir LX**		---	❄ **2** - **550** kW / 🔥 **10** - **1300** kW **1000** - **100000** m³/h		207
	OneAir		---	**1100** - **100000** m³/h		211
Air-Cooled Condensers & Dry-coolers	**Neostar**	---	HFC	**18** - **1280** kW	---	215
	FC/FI Neostar	---	WATER	**20** - **1200** kW	---	215
	V-King	---	WATER	**50** - **2200** kW	---	215

CONTROL & SUPERVISION		Refrigerants	Cooling/Heating capacity & Airflow rate		Page
Control & Supervision	**LennoxCloud**	---	---	---	---	219
	Adalink II	---	---	---	---	223
	LennoxOneWeb	---	---	---	---	223
	LennoxHydroControl	---	---	---	---	223

WHO ARE WE?

LENNOX EMEA (**E**urope, **M**iddle-**E**ast, **A**frica), a division of Lennox International Incorporated (LII), is a leading provider of refrigeration, heating, air conditioning and air handling solutions. We are committed to assisting our clients in their projects in order to provide optimal and sustainable solutions.

At LENNOX EMEA, we ensure that every employee develops within the group and contributes to our customers' projects success. Our reputation grows every day by providing maximum comfort and efficiency through our air conditioning and refrigeration solutions.

Our reputation as a leading market player is based on simple principles that guide our actions: the ability to listen to our customers, knowledge of their business and understanding of their needs.

The commitment and expertise of all **LENNOX EMEA** employees are key to the trust our customers place in us every day and to ensuring the continuity of our relationships.

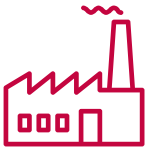
More than ever, **LENNOX EMEA** is committed to rising to tomorrow's challenges alongside you.

Ricardo FREITAS
VP, Managing Director LENNOX EMEA

LENNOX
EUROPE MIDDLE-EAST AFRICA

OUR KEY FIGURES

900 employees
in Europe



3 European production sites:
Genas, Longvic and Burgos

Quality certification:
ISO 9001 - 14001 - OHSAS 18001

1 European
training centre

1 European HVAC&R
development centre

9 subsidiaries and
sales offices

Commercial presence over
46 countries

A world of applications

CAFÉS RESTAURANTS

In a dining setting, guest comfort is critical to an enjoyable experience. But hard-working staff need to be taken care of as well. Lennox solutions provide reliable, efficient cooling and heating configurations that help create the perfect environment for food preparation and dining.

CONVENIENCE STORES

In smaller format stores, customer comfort and efficiency are key priorities. Lennox compact and aesthetic solutions provide the ideal temperature while optimising the energy footprint.

CULTURAL AND SPORT CENTRES

Performance and sports venues can be a challenging space to maintain temperature and humidity. Lennox solutions are designed to be easily modified for variable heating and cooling needs to accommodate any size crowd effectively and efficiently.

DATA CENTRES

In data centres, heat management is crucial. Lennox units provide reliably efficient cooling solutions that help data centre operators reduce the energy costs while maximising uptime.

FOOD RETAIL

In large, open spaces, priorities for HVAC performance include both comfort and efficiency. With Lennox one doesn't have to come at the cost of the other, with products and technology that deliver ideal heating and cooling solutions tailor-made for spacious retail settings.

HOSPITALS

For patients and guests, a healthcare environment can be an unfamiliar and uncomfortable place. Lennox products feature customizable applications with medical-grade air quality components to help enhance patient comfort and maintain a sanitary setting for everyone.

HOTELS

The environment in a hospitality setting is closely associated with customer satisfaction. Lennox can optimise guest comfort with a range of heating and cooling solutions while providing property owners with the most efficient options to maximize their HVAC investment in every location.

INDUSTRY

In large, open industrial spaces, keeping the set temperature constant across the entire building is of utmost importance. Lennox solutions offer industrial spaces accurate temperature, regardless of the activity or time.

NON-FOOD RETAIL

In large, open spaces, priorities for HVAC performance include both comfort and efficiency. With Lennox one doesn't have to come at the cost of the other, with products and technology that deliver ideal heating and cooling solutions tailor-made for spacious retail settings.

OFFICE BUILDINGS

A facility with an optimal HVAC system can have a direct impact on employee performance. Offering system-wide temperature control, as well as individual office control, Lennox can help enhance employee focus in a comfortable working environment.

SHOPPING MALLS

A pleasant store environment means longer visit times and potentially increased sales. Lennox customized products and controls offer retail spaces the most effective heating and cooling options, regardless of their size or configuration.

STORAGE & LOGISTICS

A key success metric in distribution applications is keeping employees productive when fulfilling orders. Lennox products and technology have been engineered to maintain comfort without compromising efficiency to deliver a win/win for staff and facility owners.

The LII group has a 125-year history inventing new technologies, developing new products and continuously enhancing product quality and improvements that address the world's heating, cooling and air quality challenges.

Following the group's lead, we at Lennox EMEA, are ready and committed to tackling climate change by designing, manufacturing and marketing efficient and environmentally-friendlier HVAC-R solutions. Developing products with progressively less carbon impact – through greater energy efficiency and use of refrigerants with lower global warming potential (GWP) is at the heart of our product strategy.

For the last few years, we have been dedicated to aligning the design of our climate control and refrigeration solutions with the European EcoDesign and F-Gas regulations.

Our Lennox HVAC units have recently been upgraded to meet or exceed the new EcoDesign 2021 thresholds, while we are continuing our refrigerant transition towards R32 and lower GWP refrigerants.

OVERVIEW OF OUR SUSTAINABLE JOURNEY

ECODESIGN
Directive 2009/125/EC

The **KYOTO** Agreement (1997), the **COP 21** (Paris 2015) and the **COP 22** (Marrakech 2016) set targets for limiting global warming to 1.5 °C. The **Ecodesign Directive 2009/125/EC** defines a framework for all energy-consuming equipment. Voted on in 2007, and implemented since 2008, it aims to reduce the power consumption of electronic devices through better design (ecodesign).

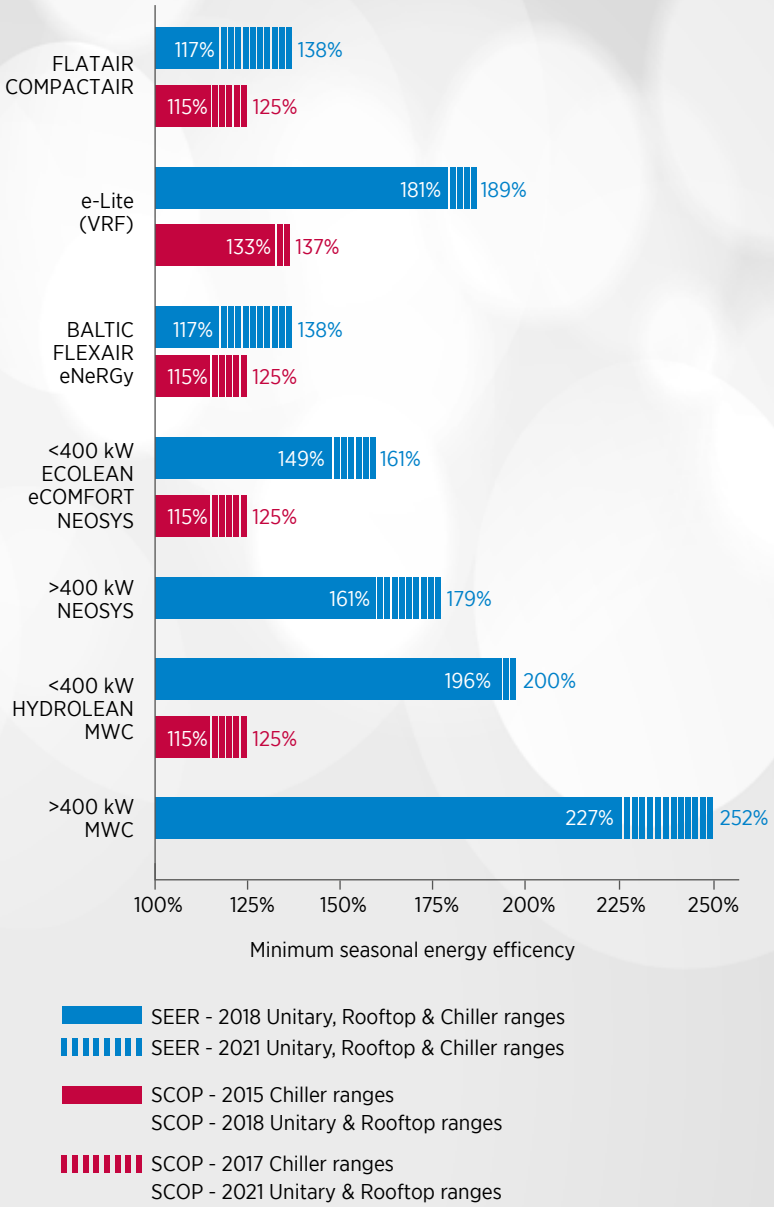
The implementation of the Ecodesign Directive is split into several areas of related products, called **"lots"**, focusing on the product areas with the most substantial energy consumption and the highest potential for energy savings.

The Ecodesign Directive is mandatory for all products marketed and used in the European Union (CE marking).

MINIMUM EFFICIENCY PERFORMANCE STANDARD (MEPS)

Requirements for minimum efficiency performance are set in Europe as a consequence of the implementation of the Ecodesign Directive. The regulation has been introduced step-by-step and the requirements gradually intensified over time.

With the introduction of the second and last tier of ENER LOT 21, or directive (EU) 2016/2281 for air heating and cooling products, high temperature process chillers and fan coil units, most of our units have had their minimum energy performance levels increased, and have thus been optimised to meet or exceed the new thresholds.



The Aqualean, Baltic water cooled, Flexair water cooled ranges are impacted, but no minimum performance to be reached. The eNeRGy without condenser range is impacted by the EU 2014/1253 (ventilation units). The ASC / ASH condensing units are not impacted.

WHAT IS F-GAS?

The chlorofluorocarbon (CF) and hydrofluorocarbon (HCFC) refrigerants used in cooling systems today are considered to be powerful greenhouse gases. To prevent climate changes and global warming, the European Commission has adopted a roadmap to reduce global emissions by 2050.

EU Regulation No. 517/2014, known as **F-Gas**:

Lays down rules regarding the containment, use, recovery and destruction of fluorinated greenhouse gases and the related measures.
Lays down the conditions for marketing certain products and equipment containing HFCs.
Imposes conditions on certain specific uses of fluorinated greenhouse gases.
Sets quantitative limits (quotas) for marketing HFCs.

This Regulation is for all companies that install, maintain and sell equipment containing refrigerants, as well as those that handle and distribute them.

DESIGN & MAINTENANCE OF EQUIPMENT

All equipment must be designed to prevent accidental discharge of greenhouse gases. Technical measures are taken upstream in order to minimise these leaks (refer to Regulation (EU) No. 517/2014 specifying the procedures for leakage checks).

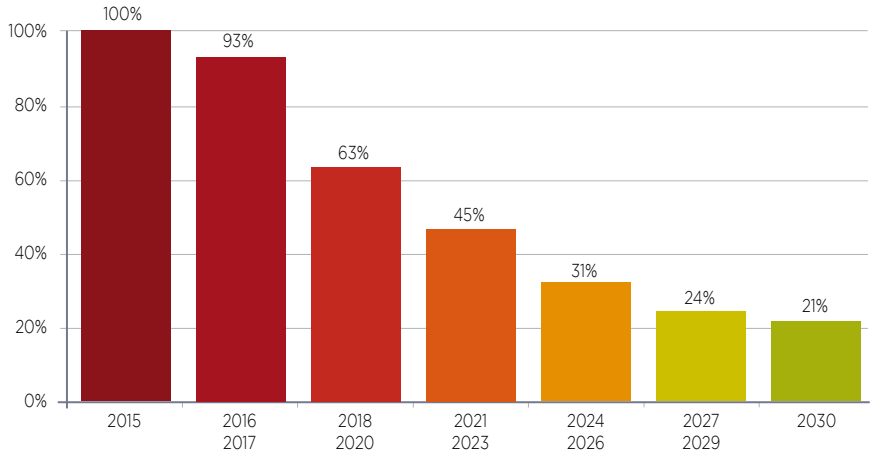
The F-Gas regulation on fluorinated gases imposes:

Frequent inspections.
Qualification of companies & their agents.

QUOTAS: "PHASE DOWN"

The European Commission is responsible for assigning the HFC quotas available on the market to companies. This measure aims to reduce the total amount of HFCs available on the market, so that the remaining share of HFCs (21% in 2030) is only used for the maintenance of existing equipment and/or for certain specific applications for which there is no alternative.

Marketing timetable (expressed in t CO2e)



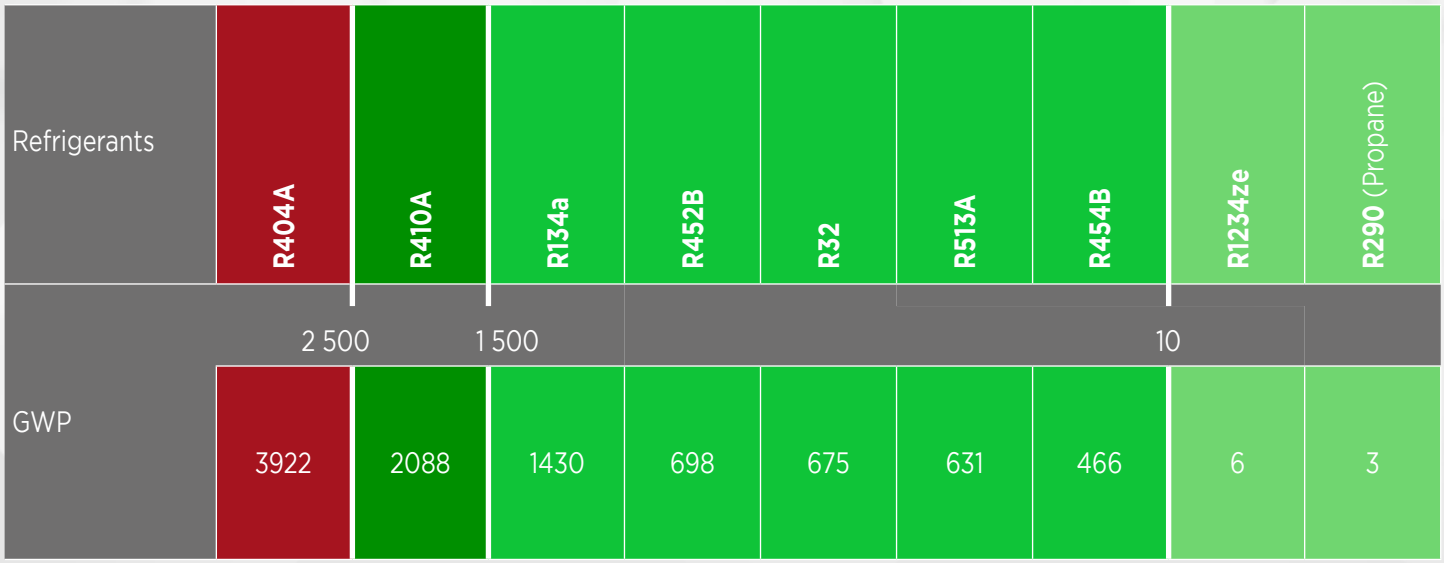
WHAT IS GWP?

All HFC refrigerants placed on the market are classified according to a Global Warming Potential (GWP). The GWP is an index that characterises the action of a chemical compound on the greenhouse effect within a given time. The reference refrigerant is CO2, of which the GWP is 1. The lower the index, the more environmentally-friendly the refrigerant.

New equipment is subject to restrictions based on the GWP of the refrigerants. So, refrigerants with a GWP greater than 2500 have been banned in new installations since January 2020.

The availability of HFCs will be limited by falling production quotas.

Refrigerants overview according to their GWP



R32, THE OBVIOUS ALTERNATIVE TO R410A

In the quest of alternative solutions to this HFC quota reduction, R32 is an obvious choice to replace R410A. It already makes up 50% of its composition, and it has a number of other key advantages:

- Low cost
- Pure substance
- Many providers due to no patent
- Already available on residential market
- GWP = 675

R513A & R1234ze, OPTIMUM REPLACEMENTS FOR R134a

R513A and R1234ze are excellent alternatives to R134a. These high-density refrigerants are ideal for large capacity chillers, with screw compressors. Both refrigerants are easy to retrofit to R134a systems – and because they are much less damaging to the environment, they benefit from lower taxes and leak test demands.

ISO

A guarantee of quality

The ISO family of standards has been developed to address various aspects of quality management. ISO certification enables us to guarantee the circulation of safe and quality products on the market. The various ISO standards also contribute to the fact that companies such as ours optimise their production methods, while guaranteeing our employees' safety.

Our company is ISO-certified and thus meets quality assurance criteria:

ISO 9001 - lays down the criteria applicable to a quality management system.
ISO 14001 - lays down the criteria applicable to an environmental management system.
OHSAS 18001 - establishes the method for setting up an occupational health and safety management system.

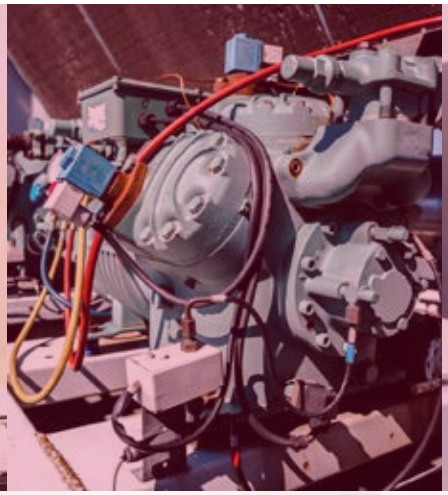
CE

The **CE marking** was created within the framework of European technical harmonisation legislation. It represents a manufacturer's commitment that its product complies with the regulatory requirements for free movement throughout the European Union. This marking is mandatory for all products covered by one or more European regulatory texts that explicitly provide for it. As a manufacturer, and in order to allow the circulation of our products, we rigorously ensure the conformity of our products with regard to the essential requirements defined by European legislation.

Our declaration of conformity specifies the applicable guidelines for the entire catalogue by product range.

At Lennox, we know that purchasing equipment is just the beginning of your HVAC investment. That's why we are committed to offer you unique support over the entire life of your equipment.

From commissioning to modernisation of your HVAC system, our service team is here to provide you with the right expertise in order to ensure its optimal running and extended lifespan.



LENNOX CARE

Benefit from OEM expertise for peace of mind.

Commissioning: our technicians perform all startup procedures and ensure your system is running efficiently and reliably from the start.

Maintenance: HVAC units often operate under harsh conditions that can affect their lifetime and performance, leading to extra energy consumption and operational costs. Partnering with our experts is the guarantee maintenance checks and audits are performed at the right time.

Repairs: count on our factory-trained technicians to efficiently solve problems and reduce downtime.

SPARE PARTS

Order them quickly and easily.

For your own repairs, our dedicated team supports you throughout the process of spare parts procurement – from the selection to the delivery.

MODERNISATION

Take your HVAC equipment to the next level.

Rely on our team to make sure your existing equipment keeps running efficiently. Our upgrade solutions – from latest fan technology, Indoor Air Quality (IAQ), controls & connectivity, to lower GWP refrigerants – will help you to keep a high performing building.

LENNOX EMEA UNIVERSITY

Training is one of the most important investments you can make in your business, and your future. The best technicians, sales and business people are life-long learners. The technician who's up to speed on the latest industry technology earns a customer's loyalty. A salesperson who sells an extra unit per week can bring in a significant extra in annual profit. Business owners and office staff who take the time to enhance their own knowledge and skills will create a thriving, growing workplace.

Lennox EMEA University offers training programmes, designed to help you hone your skills, expand your knowledge in an ever changing technological and regulatory environment and excel in your field. With our face-to-face, virtual classroom or webinar offerings, you can choose what best works for you.

All our trainings are delivered by our experienced instructors who have extensive knowledge in the HVAC-R industry and Lennox equipment.

ON-SITE COURSES

- Learn how to install and service Lennox units.
- Learn how to handle A2L refrigerants.
- Sessions offered at various locations.

VIRTUAL COURSES

- Training, with no travel. We're bringing the classroom to you.
- Keep up with the latest industry trends and regulations.

PACKAGED AIR HANDLING UNITS

eNeRGy 19

ROOFTOP UNITS

e-Baltic 27

Baltic 33

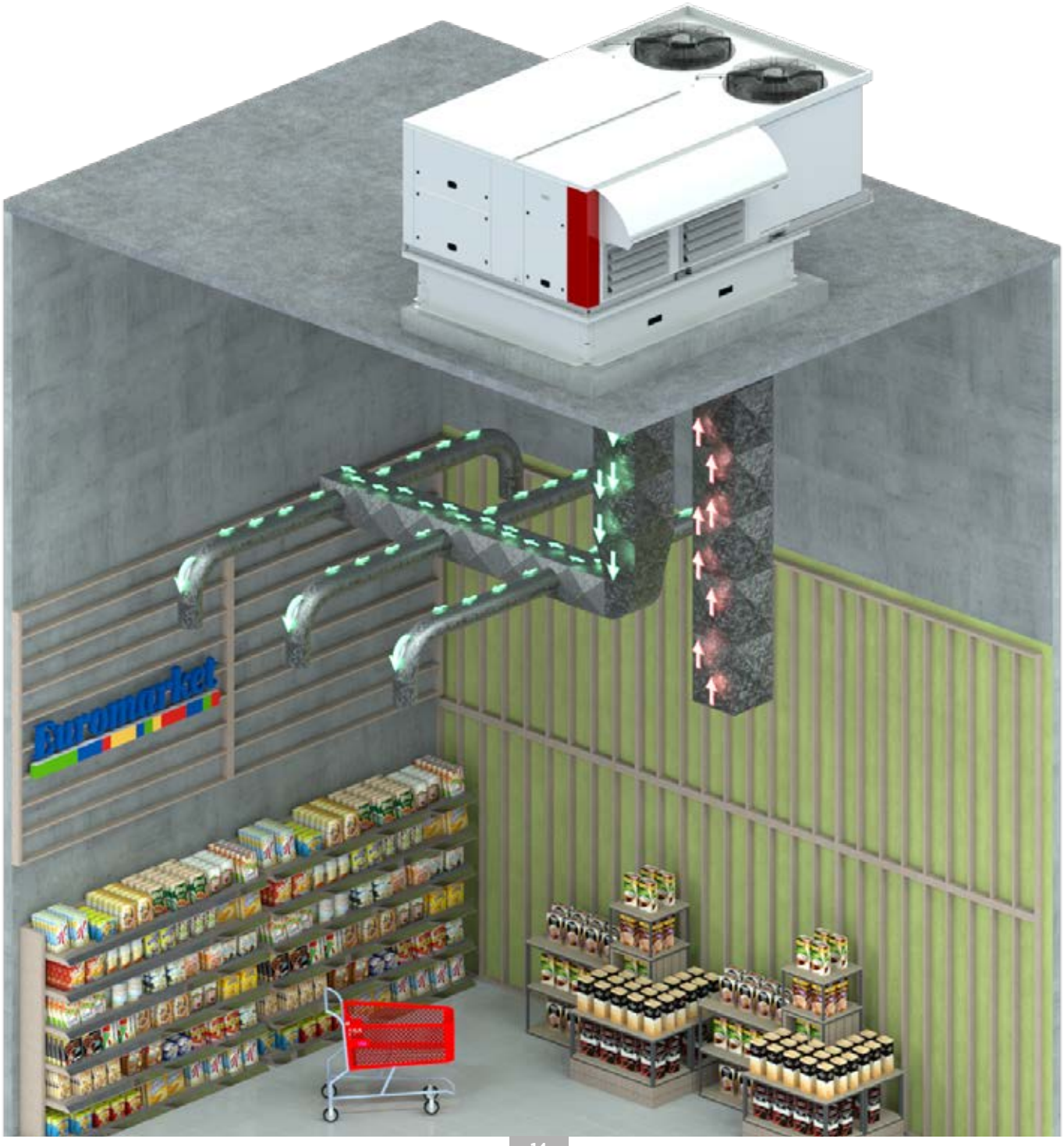
Flexair 39

WHAT IS A **ROOFTOP ?**

A rooftop, as the name suggests, is an HVAC unit located on the roof of a building. A rooftop can be installed on many different types of buildings, such as warehouses, shopping malls, industrial workshops, supermarkets, restaurants. The aim of a rooftop is to provide heated and cooled air to a defined area. The air is distributed through ductwork that define its route.

A rooftop is a compact air handler that is installed externally, and, therefore, designed and constructed to face all the elements. Unlike other HVAC units, a rooftop is self-contained and thus not connected to any other decentralized component. Rooftops represent an easy and simple way of providing air-conditioning: an all-in-one unit with plug and play installation.

Our range of rooftops offers flexibility in terms of design and sizing to be able to answer multiple applications, whether you are looking to equip an existing installation or a new one.



PACKAGED AIR HANDLING UNITS — AIR COOLED

	**eNeRGy**	R410A	53 - 170 kW 50 - 175 kW 13500 - 27000 m³/h		EUROVENT CERTIFIED PERFORMANCE
	**eNeRGy+** Inverter	R410A	97 - 160 kW 102 - 164 kW 15500 - 27000 m³/h		EUROVENT CERTIFIED PERFORMANCE
	**e-eNeRGy**	R32	120 - 178 kW 114 - 171 kW 18900 - 27000 m³/h		-

ROOFTOP UNITS — AIR COOLED / WATER COOLED

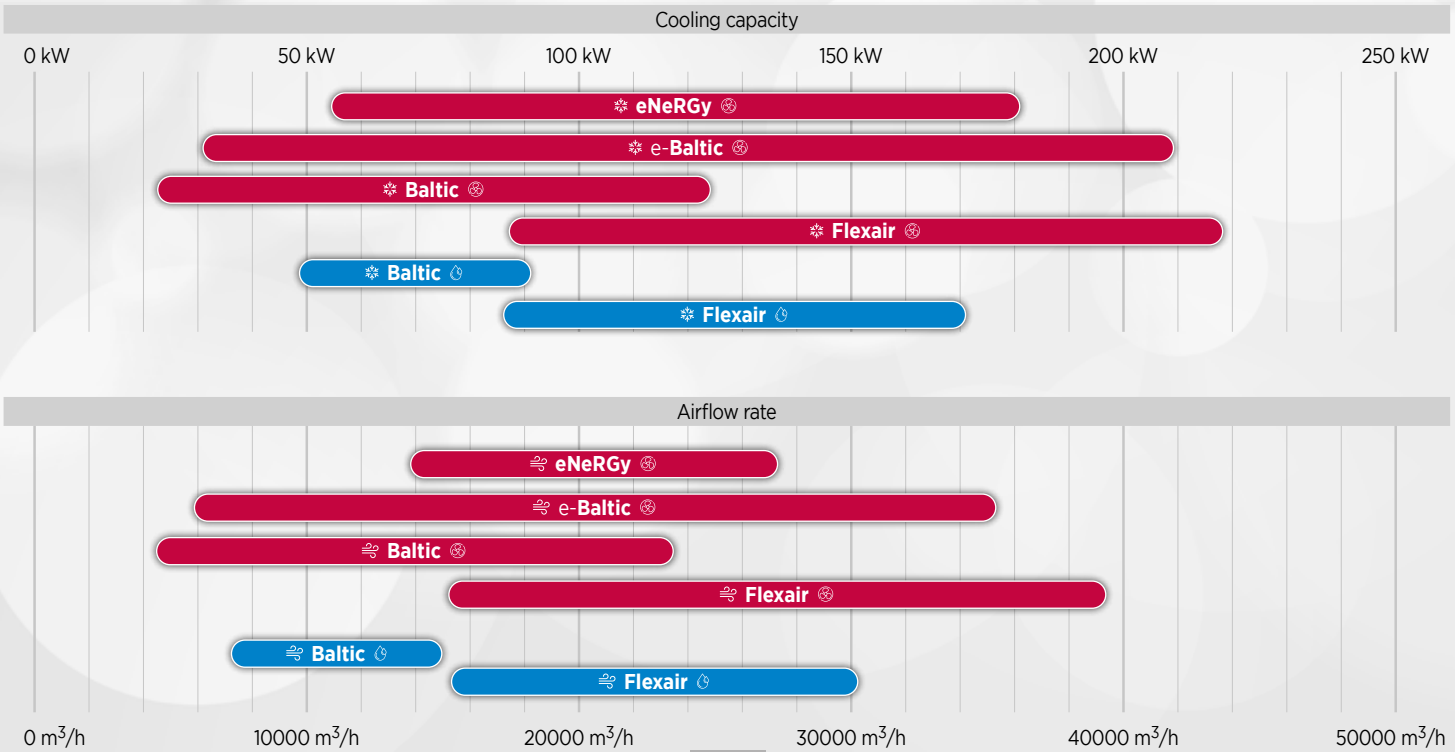
	**e-Baltic**	R32	31 - 207 kW 30 - 207 kW 5700 - 35000 m³/h		EUROVENT CERTIFIED PERFORMANCE
	**Baltic**	R410A	22 - 122 kW 21 - 115 kW 4200 - 23500 m³/h		EUROVENT CERTIFIED PERFORMANCE
	**Flexair**	R410A	85 - 217 kW 79 - 222 kW 15000 - 39000 m³/h		EUROVENT CERTIFIED PERFORMANCE
	**Baltic**	R410A	47 - 90 kW 60 - 117 kW 7100 - 14500 m³/h		-
	**Flexair**	R410A	85 - 170 kW 112 - 127 kW 15000 - 30000 m³/h		-

Air/Air
Water/Air

Cooling capacity
Heating capacity
Airflow rate

Cafés Restaurants
Non food retail
Food retail

Shopping malls
Storage & Logistics
Industry



■ Standard equipment ● Option

Additional configurations/options are available on request, please contact your sales representative.

		eNeRGy	eNeRGy+	e-eNeRGy	e-Baltic eBBH	e-Baltic eBFH	BALTIC BAC/BAH	FLEXAIR FAC/FAH
CASING	Pre-coated galvanised steel (white)	-	-	-	■	-	■	-
	Pre-coated aluminium (white)	■	■	■	-	■	-	■
INSULATION	M0 fire-proof classification	■	■	■	■	■	■	■
	25 mm double-skin	-	-	-	■	■	■	■
	50 mm double-skin	■	■	■	●	●	●	●
CONDENSATE DRAIN PAN	Removable drain pan	■	■	■	■	■	■	■
	Aluminium drain pan	■	■	■	■	■	■	■
AIR FLOW CONFIGURATION	Downflow supply	●	●	●	●	●	●	●
	Horizontal supply	●	●	●	●	●	●	●
	Upflow supply	●	●	●	-	●	-	●
	Downflow return	●	●	●	●	●	●	●
	Horizontal return	●	●	●	●	●	●	●
	Upflow return	●	●	●	●	●	●	●
AIR FILTER	G3	■	■	■	■	■	■	■
	G4	●	●	●	●	●	●	●
	Refillable G4	●	●	●	●	●	●	●
	M5 (ePM10 50%)	●	●	●	●	●	●	●
	F7 (ePM1 50%)	●	●	●	●	●	●	●
	F9 (ePM1 85%)	●	●	●	●	●	●	●
AUXILIARY HEATING	Modulating gas burner	●	●	●	●	●	●	●
	Natural gas burner	●	●	●	●	●	●	●
	Propane gas burner	●	●	●	●	●	●	●
	Electric heater (2-step or modulating 0-100%)	●	●	●	●	●	●	●
	Electric pre-heater (modulating 0-100%)	●	●	●	●	●	●	●
	Hot water coil	●	●	●	●	●	●	●
ANTI-CORROSION PROTECTION	LenGuard anti-corrosion protection on evaporator coil	●	●	●	●	●	●	●
	LenGuard anti-corrosion protection on condenser coil	●	●	●	●	●	●	●
ENERGY RECOVERY	Cross flow plate heat exchanger	-	-	-	●	-	●	-
	Rotary wheel heat exchanger	●	●	●	●	●	●	●
	Thermodynamic heat recovery	●	●	●	●	-	●	-
	eRecovery on food refrigeration systems	●	●	●	●	●	●	●
SUPPLY FAN	Direct drive & variable speed centrifugal EC plug fan (low & high pressure)	■	■	■	■	■	■	■
CONDENSER	**Air cooled** : Variable speed & low noise axial EC fan	■	■	■	■	■	■	■
	Water cooled : Plate exchanger	-	-	-	-	-	■	■
ECONOMISER	Motorised free-cooling/heating	■	■	■	■	■	■	■
EXHAUST	Gravity exhaust damper	●	●	●	●	●	●	●
	Power exhaust axial fan & gravity damper	●	●	●	●	●	●	●
	Centrifugal EC exhaust plug fan (direct drive and variable speed) & gravity damper	●	●	●	●	●	●	●
ROOF CURB	Non adjustable non assembled roof curb	-	-	-	●	●	●	●
	Adjustable roof curb	●	●	●	●	●	●	●
	Multidirectional airflow roof curb	-	-	-	●	●	●	●
PACKING	Container packing	●	●	●	●	●	●	●

■ Standard equipment ● Option

Additional configurations/options are available on request, please contact your sales representative.

		eNeRGy	eNeRGy+	e-eNeRGy	e-Baltic eBBH	e-Baltic eBFH	BALTIC BAC/BAH	FLEXAIR FAC/FAH
REFRIGERANT	R32	-	-	■	■	■	-	-
	R410A	■	■	-	-	-	■	■
	Refrigerant leak detection	●	●	●	■	■	●	●
COMPRESSOR	Inverter	-	■	-	-	-	-	-
	Multiscroll	■	■	■	■	■	■	■
	Tandem	■	■	■	■	■	■	■
	Silent start	●	●	●	●	●	●	●
	Compressor noise jacket	●	●	●	●	●	●	●
EXPANSION VALVE	Electronic (bi-flow for heat pump)	■	■	■	■	■	■	■
CONTROL	eClimatic (programmable controler)	■	■	■	■	■	■	■
	Regulation on supply or ambiant temperature	■	■	■	■	■	■	■
	7 time zones per day with 4 different operating modes	■	■	■	■	■	■	■
	Dirty filter alarm	■	■	■	■	■	■	■
	Dynamic defrost	■	■	■	■	■	■	■
	Alternate defrost	■	■	■	■	■	■	■
	Morning anticipation	■	■	■	■	■	■	■
	Dynamic setpoint	■	■	■	■	■	■	■
	Variable airflow management of supply fan	■	■	■	■	■	■	■
	eFlow airflow rate on display	■	■	■	■	■	■	■
	Variable airflow management of condenser fan	■	■	■	■	■	■	■
	Economiser power stage & free-cooling/heating	■	■	■	■	■	■	■
	Energy recovery module power stage (if energy recovery option)	■	■	■	■	■	■	■
	Compressors capacity steps (up to 4)	■	■	■	■	■	■	■
	Auxiliary heating capacity steps	■	■	■	■	■	■	■
	Intelligent fresh air management (Patent 03 50616)	■	■	■	■	■	■	■
COMMUNICATION	Master/Slave operation up to 24 units	●	●	●	●	●	●	●
	Distance Management System : LennoxCloud connectivity	●	●	●	●	●	●	●
	Distance Management System : LennoxOneWeb, ...	●	●	●	●	●	●	●
	External dry & analogic contacts board	●	●	●	●	●	●	●
	ModBus RS485 interface	●	●	●	●	●	●	●
	LonWorks® FTT10 interface	●	●	●	●	●	●	●
	BACnet RS485 interface	●	●	●	●	●	●	●
	ModBus & BACnet TCP/IP interface	●	●	●	●	●	●	●
DISPLAY INTERFACE	**DC** (comfort display)	●	●	●	●	●	●	●
	DM (multi-units display)	●	●	●	●	●	●	●
	DS (service display)	●	●	●	●	●	●	●
CONTROL AND SAFETY DEVICES	Main disconnect switch	●	●	●	●	●	●	●
	Smoke detector	●	●	●	●	●	●	●
	Fire thermostat	●	●	●	●	●	●	●
	Soft starter/Air sock control	●	●	●	●	●	●	●
	CO_2 control	●	●	●	●	●	●	●
	Humidity control	●	●	●	●	●	●	●
	Multi-ambient temperature	●	●	●	●	●	●	●
	Variable airflow management/constant pressure	●	●	●	●	●	●	●
	Energy meter	●	●	●	●	●	●	●

NOTES

eNeRGy

High efficiency packaged air treatment units

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

R410A

AIR COOLED
- **53** - **170** kW
- **50** - **175** kW
- **13500** - **27000** m³/h

AIR COOLED Inverter
- **97** - **160** kW
- **102** - **164** kW
- **15500** - **27000** m³/h

R32

AIR COOLED
- **109** - **163** kW
- **112** - **168** kW
- **18900** - **27000** m³/h

LENNOX participates in the ECP programme for RT.
Check ongoing validity of certificate : www.eurovent-certification.com

Optimised design and integration of highly efficient components enabling **energy savings.**

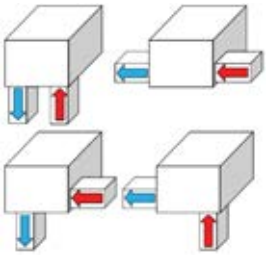
Modular concept that allows various combinations of thermodynamic circuits and air treatment sections, ensuring high adaptability with different building requirements.

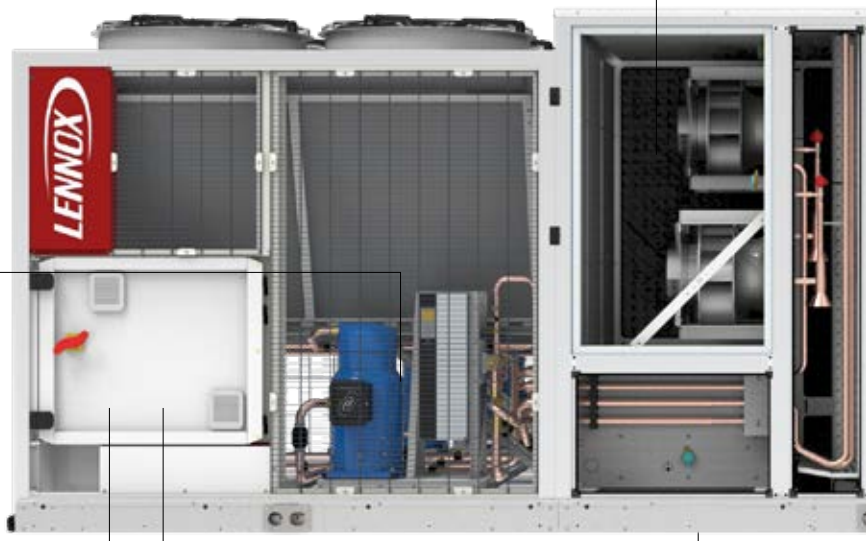
Tunnel flow design allows larger sections with more filtration options to improve **indoor air quality**.

Low noise level thanks to availability of several sound attenuation options.

AIRFLOW

Several available airflow configurations: top, bottom or horizontal, to fit each building's need.
Adjustable roof curb to fit the building's architecture.
Extraction and/or recovery section(s) integrated in the indoor section of the unit offering compactness and easy installation.





THERMODYNAMIC SYSTEM

Tandem or inverter scroll compressors allowing capacity modulation.
Variable refrigerant control with electronic expansion valve.
Fan with variable speed EC motor and swept blades, enabling control of the high and low floating pressure for optimum operation.
Large surface exchangers for highly efficient heat transfer.
Easy access to compressors enabling faster maintenance operations.

CONTROL

eClimatic electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet LonWorks®).
Several display solutions for different access levels.

eCLIMATIC

DS
Service display

DM
Multi-Rooftop display

DC
Comfort display

REMOTE MONITORING

Connectivity through **LennoxCloud** (LENNOX WEB PORTAL for Multi sites / Multi units).
BMS through:
- **LennoxOneWeb**.
- **ADALINK II*** (LENNOX WEB SERVER One site / Several units).
- **LennoxTouch**.*

* Check the availability of this feature in your country.

Photos and illustrations are not contractual.

CASING & DESIGN

Modular concept with various combinations of thermodynamic circuits and air treatment sections.
Structure built with 50mm aluminum profile for high rigidity and reduced weight.
Double skin panels with 50 mm of Rockwool insulation, built with pre-painted aluminum panels for high corrosion resistance.
Inclined removable drain pan in aluminum for easy disinfecting.
Easy Lock on the panels permits right or left hand opening or complete dismounting, allowing easy disinfecting and maintenance.

AIR TREATMENT

EC motor fans ensuring a precise temperature for better comfort and energy savings.
Analogue filter detection informs when the filters must be changed.
IAQ kits for improved indoor air quality within the building:
- G4 (standard)
- G4+F7 (ePM1 85%)
- G4+F7+F9 (ePM1 95%)
- UV-C lamps.
- Ionization.

AUXILIARY HEATING DEVICES

Different options depending on the energy source available on site:
- Hot water coil.
- Condensing gas burner.
- Electric heater.
- Electric preheater.

HEAT RECOVERY

Thermodynamic heat recovery, ideal for mild climates.
Heat recovery wheel, with both fresh and return air sections protected by G4 filters.
eRecovery, to recover free heat produced by food refrigeration systems.

$E_{(A)}$ 014$_{(B)}$ $A_{(C)}$ $H_{(D)}$ 85$_{(E)}$ $F_{(F)}$

(A) **E** = eNeRGy
(B) Airflow (x 1000 m^3/h)
(C) **A** = Air cooled condensation
(D) **H** = Heat pump - **N** = No condensing unit
(E) Cooling capacity in kW
(F) **F** = Standard scroll compressor

Air cooled version

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Heat pump units

eNeRGy		014AH			016AH		019AH				
		055	065	075	085	105	066	076	086	106	124
Nominal thermal performances - Cooling mode											
Cooling capacity (1)	kW	52,3	65,2	72,7	84,0	102,0	67,7	76,7	86,9	107,8	111,8
Total Power Input	kW	14,80	19,47	22,89	25,43	32,34	21,37	24,07	26,94	33,96	38,07
EER net (1)		3,53	3,35	3,18	3,30	3,15	3,17	3,19	3,23	3,18	2,94
Nominal thermal performances - Heating mode											
Heating capacity (2)	kW	48,2	63,0	68,4	80,9	97,7	66,8	76,6	87,0	106,8	107,2
Total Power Input	kW	11,09	16,65	17,98	21,70	28,60	16,93	18,96	22,68	31,00	30,34
COP net (2)		4,35	3,78	3,81	3,73	3,41	3,94	4,04	3,84	3,45	3,54
Seasonal efficiencies - Cooling mode											
Seasonal Energy Efficiency Ratio - **SEER** (3)		4,63	4,62	4,93	4,48	4,26	4,42	4,28	4,30	4,31	4,21
Seasonal energy efficiency - **ηs,c** (4)	%	182	182	194	176	167	174	168	169	169	165
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B	B	B	B	B
Seasonal efficiencies - Heating mode											
Seasonal Coefficient of Performance - **SCOP** (5)		3,66	3,52	3,52	3,41	3,25	3,64	3,39	3,32	3,28	3,32
Seasonal energy efficiency - **ηs,h** (6)	%	143	138	138	133	127	143	132	130	128	130
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B	B	B	B	B
Auxiliary heating											
Gas heating capacity - Standard / High	kW	82 / 100									
Electric heater capacity - Standard / High		36 / 108									
Electric pre-heater capacity - Standard / High		36 / 108									
Hot water coil capacity Air inlet 20°C/Water		69,6 / 122,2	69,6 / 122,2	69,6 / 122,2	74,5 / 132	74,5 / 132	81,9 / 146,9	81,9 / 146,9	81,9 / 146,9	81,9 / 146,9	81,9 / 146,9
Ventilation data											
Minimum airflow rate	m^3/h	9500	9500	9500	10500	10500	13000	13000	13000	13000	13000
Nominal airflow rate		13500	13500	13500	15500	15500	18900	18900	18900	18900	18900
Maximum airflow rate		16000	24000	24000	24000	24000	20000	24000	24000	24000	24000
Acoustic data - Standard unit											
Outdoor sound power	dB(A)	76,4	77,8	76,5	79,1	80,9	81,9	81,4	82,0	83,0	82,7
Indoor blower outlet sound power		78,9	78,9	78,9	82,5	82,5	90,0	90,0	90,0	90,0	87,6
Electrical data											
Maximum power	kW	29,3	37,3	37,7	42,4	44,5	37,3	37,7	42,4	44,5	48,9
Maximum current	A	135,8	124,4	148,8	171,4	183,7	124,4	148,8	171,4	183,7	187,9
Starting current	A	49,1	61,4	77,0	88,9	76,8	61,4	77,0	88,9	76,8	82,4
Short circuit current	kA	10	10	10	10	10	10	10	10	10	10
Refrigeration circuit											
Number of circuits		2	2	2	2	2	2	2	2	2	2
Number of compressors		3	4	4	4	4	4	4	4	4	4
Refrigerant load	kg	18	18	33,8	33,8	34,2	20	33	33	32,8	33,7

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

E(A) 014(B) A(C) H(D) 85(E) F(F)

(A) **E** = eNeRGy
(B) Airflow (x 1000 m^3/h)
(C) **A** = Air cooled condensation
(D) **H** = Heat pump - **N** = No condensing unit
(E) Cooling capacity in kW
(F) **F** = Standard scroll compressor

Air cooled version

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Heat pump units

eNeRGy		022AH				024AH					027AH	
		077	087	107	140	078	088	108	126	141	160	180
Nominal thermal performances - Cooling mode												
Cooling capacity (1)	kW	75,3	86,1	106,9	132,0	79,0	89,8	111,9	122,4	137,5	154,7	165,7
Total Power Input	kW	24,36	27,06	34,05	42,35	24,59	27,33	34,51	36,93	43,59	51,34	58,97
EER net (1)		3,09	3,18	3,14	3,12	3,21	3,29	3,24	3,31	3,15	3,01	2,81
Nominal thermal performances - Heating mode												
Heating capacity (2)	kW	75,8	87,7	107,6	129,1	76,9	89,3	109,9	121,0	135,9	148,3	178,5
Total Power Input	kW	18,88	22,61	30,49	37,89	18,39	22,05	29,28	30,72	39,22	41,55	56,13
COP net (2)		4,01	3,88	3,53	3,41	4,18	4,05	3,75	3,94	3,46	3,57	3,18
Seasonal efficiencies - Cooling mode												
Seasonal Energy Efficiency Ratio - **SEER** (3)		4,22	4,28	4,28	3,95	4,38	4,43	4,41	4,43	4,35	4,02	4,00
Seasonal energy efficiency - **ηs,c** (4)	%	166	168	168	155	172	174	173	174	171	158	157
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B	B	B	B	B	B
Seasonal efficiencies - Heating mode												
Seasonal Coefficient of Performance - **SCOP** (5)		3,40	3,38	3,35	3,34	3,51	3,50	3,51	3,49	3,29	3,30	3,28
Seasonal energy efficiency - **ηs,h** (6)	%	133	132	131	130	137	137	137	137	129	129	128
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B	B	B	B	B	B
Auxiliary heating												
Gas heating capacity - Standard / High	kW	100 / 200										
Electric heater capacity - Standard / High		54 / 144										
Electric pre-heater capacity - Standard / High		54 / 144										
Hot water coil capacity Air inlet 20°C/Water		111,4 / 176,5	111,4 / 176,5	111,4 / 176,5	111,4 / 176,5	117,9 / 188	117,9 / 188	117,9 / 188	117,9 / 188	117,9 / 188	123,9 / 198,6	123,9 / 198,6
Ventilation data												
Minimum airflow rate	m^3/h	15000	15000	15000	15000	17000	17000	17000	17000	17000	18500	18500
Nominal airflow rate		21600	21600	21600	21600	24300	24300	24300	24300	24300	27000	27000
Maximum airflow rate		24000	24000	24000	24000	28000	28000	32000	32000	32000	32000	32000
Acoustic data - Standard unit												
Outdoor sound power	dB(A)	83,8	84,2	84,8	85,1	79,7	80,6	81,9	81,3	82,2	83,6	84,9
Indoor blower outlet sound power		90,5	90,6	90,6	90,9	85,3	85,5	85,5	85,9	85,9	88,8	88,8
Electrical data												
Maximum power	kW	37,7	42,4	44,5	64,8	41,5	46,2	48,3	52,2	68,6	81,4	89,7
Maximum current	A	148,8	171,4	183,7	239,3	154,9	177,5	189,8	193,6	245,4	264,6	317,0
Starting current	A	77,0	88,9	76,8	106,6	83,1	95,0	82,9	88,1	112,7	131,9	149,3
Short circuit current	kA	10	10	10	10	10	10	10	10	10	10	10
Refrigeration circuit												
Number of circuits		2	2	2	2	2	2	2	2	2	2	2
Number of compressors		2	2	4	4	2	2	4	4	4	4	4
Refrigerant load	kg	31,9	32,1	32,7	43,6	27,7	27,9	28,2	42,6	43,4	44,2	44,2

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

E(A) 014(B) A(C) H(D) 85(E) F(F)

(A) **E** = eNeRGy
(B) Airflow (x 1000 m^3/h)
(C) **A** = Air cooled condensation
(D) **H** = Heat pump - **N** = No condensing unit
(E) Cooling capacity in kW
(F) **F** = Standard scroll compressor

Air cooled version

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Heat pump units

eNeRGy+		016AH	019AH	027AH
		105	124	160
Nominal thermal performances - Cooling mode				
Cooling capacity (1)	kW	102,7	121,6	172,7
Total Power Input	kW	31,84	40,49	57,98
EER net (1)		3,23	3,00	2,98
Nominal thermal performances - Heating mode				
Heating capacity (2)	kW	96,7	118,0	166,5
Total Power Input	kW	29,26	37,86	53,68
COP net (2)		3,30	3,12	3,10
Seasonal efficiencies - Cooling mode				
Seasonal Energy Efficiency Ratio - **SEER** (3)		4,93	4,71	4,72
Seasonal energy efficiency - **ηs,c** (4)	%	194	186	186
Eurovent energy efficiency class - Part load operation		B	B	B
Seasonal efficiencies - Heating mode				
Seasonal Coefficient of Performance - **SCOP** (5)		3,61	3,54	3,49
Seasonal energy efficiency - **ηs,h** (6)	%	141	139	137
Eurovent energy efficiency class - Part load operation		B	B	B
Auxiliary heating				
Gas heating capacity - Standard / High	kW	82 / 100		100 / 200
Electric heater capacity - Standard / High	kW	36 / 108		54 / 144
Electric pre-heater capacity - Standard / High	kW	36 / 108		54 / 144
Hot water coil capacity Air inlet 20°C/Water	kW	74,5 / 132	81,9 / 146,9	123,9 / 198,6
Ventilation data				
Minimum airflow rate	m^3/h	10500	13000	18500
Nominal airflow rate	m^3/h	15500	18900	27000
Maximum airflow rate	m^3/h	24000	24000	32000
Acoustic data - Standard unit				
Outdoor sound power	dB(A)	85,3	86,8	89,9
Indoor blower outlet sound power	dB(A)	81,0	86,1	87,3
Electrical data				
Maximum power	kW	29,3	37,3	37,7
Maximum current	A	135,8	124,4	148,8
Starting current	A	49,1	61,4	77,0
Short circuit current	kA	10	10	10
Refrigeration circuit				
Number of circuits		2	2	2
Number of compressors		3	3	3
Refrigerant load	kg	34,2	33,7	44,2

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

EE(A) 014(B) A(C) H(D) 85(E) F(F)

(A) **EE** = e-eNeRGy
(B) Airflow (x 1000 m^3/h)
(C) **A** = Air cooled condensation
(D) **H** = Heat pump - **N** = No condensing unit
(E) Cooling capacity in kW
(F) **F** = Standard scroll compressor

R32 benefits:

 # low GWP: 675.
 # low cost.
 # pure substance.
 # many providers due to no patent.

Air cooled version

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

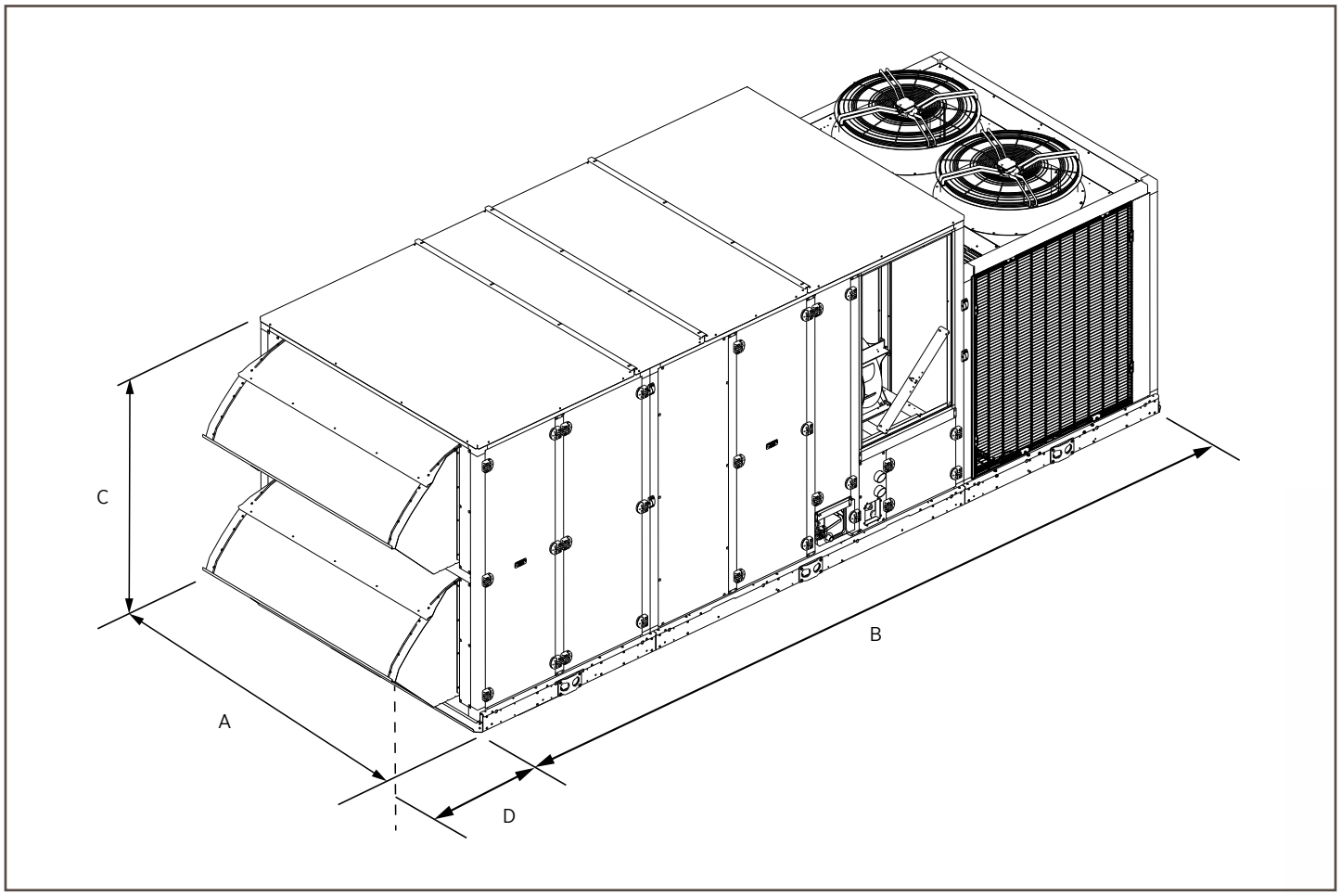
Heat pump units

e-eNeRGy		019AH	024AH	027AH
		110	140	170
Nominal thermal performances - Cooling mode				
Cooling capacity (1)	kW	108,6	138,7	163,4
Total Power Input	kW	38,16	48,12	55,38
EER net (1)		-	-	-
Nominal thermal performances - Heating mode				
Heating capacity (2)	kW	111,8	142,4	167,9
Total Power Input	kW	33,10	41,44	50,48
COP net (2)		-	-	-
Seasonal efficiencies - Cooling mode				
Seasonal Energy Efficiency Ratio - **SEER** (3)		4.35	4.47	4.4
Seasonal energy efficiency - **ηs,c** (4)	%	171	175.8	173
Eurovent energy efficiency class - Part load operation		B	B	B
Seasonal efficiencies - Heating mode				
Seasonal Coefficient of Performance - **SCOP** (5)		3.31	3.44	3.22
Seasonal energy efficiency - **ηs,h** (6)	%	129.4	134.6	125.8
Eurovent energy efficiency class - Part load operation		B	B	B
Auxiliary heating				
Gas heating capacity - Standard / High	kW	82 / 100	100 / 200	100 / 200
Electric heater capacity - Standard / High	kW	36 / 108	54 / 144	54 / 144
Electric pre-heater capacity - Standard / High	kW	36 / 108	54 / 144	54 / 144
Hot water coil capacity Air inlet 20°C/Water	kW	74,5 / 132	123,9 / 198,6	123,9 / 198,6
Ventilation data				
Minimum airflow rate	m^3/h	13000	17000	18500
Nominal airflow rate	m^3/h	18900	24300	27000
Maximum airflow rate	m^3/h	24000	32000	32000
Acoustic data - Standard unit				
Outdoor sound power	dB(A)	82	84,2	84,9
Indoor blower outlet sound power	dB(A)	87,6	88,5	88,8
Electrical data				
Maximum power	kW	56	73,5	83,6
Maximum current	A	213,4	238,8	279,1
Starting current	A	93,9	117,6	134,7
Short circuit current	kA	10	10	10
Refrigeration circuit				
Number of circuits		2	2	2
Number of compressors		4	4	4
Refrigerant load	kg	27,6	35,6	36

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

Air cooled version

eNeRGy		014AH	016AH	019AH	022AH	024AH	027AH
A	mm	2270	2270	2270	2270	2270	2270
B		4601	4601	4601	5202	5202	5202
C		2024	2024	2024	2275	2275	2275
D		450	450	450	612	612	612



e-Baltic

Air cooled rooftop units

R32

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

AIR COOLED

31 - **207** kW

30 - **207** kW

5700 - **35000** m³/h

LENNOX participates in the ECP programme for RT.
Check ongoing validity of certificate :
www.eurovent-certification.com

Installation and replacement made easy thanks to the unit's **compact nature with the same footprint** and **weight** as previous Baltic and Flexair ranges.
Optimised design and integration of highly efficient components enabling **energy savings**.
Flexibility in capacity and airflow rates, ventilation options, energy sources and design (configurations and roof curbs) in order to best fit your application's needs.
Low noise level thanks to availability of several sound attenuation options.
Reduced frequency of leak testing and lower taxes thanks to a lower CO_2e (carbon dioxyde equivalent).

**R32 is an obvious choice to replace R410A.
It already makes up 50% of its composition,
and it has a number of other key advantages:**

 # low GWP: 675
 # low cost
 # pure substance
 # many providers due to no patent

THERMODYNAMIC SYSTEM

R32 refrigerant (GWP = 675) enabling a decrease of the carbon dioxide equivalent for potential tax savings.
Tandem scroll compressors allowing capacity modulation.
Variable refrigerant control with electronic expansion valve.
Heat transfer efficiency thanks to new coil design.
Easy access to compressors enabling faster maintenance operations.
Fan with variable speed EC motor and swept blades, enabling control of the high and low floating pressure for optimum operation.
Integrated safety devices for peace of mind.

REMOTE MONITORING

Connectivity through **LennoxCloud** (LENNOX WEB PORTAL for Multi sites / Multi units).
BMS through:
- **LennoxOneWeb**.
- **ADALINK II*** (LENNOX WEB SERVER One site / Several units).
- **LennoxTouch**.*

* Check the availability of this feature in your country.

CONTROL

eClimatic electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet LonWorks®).
Several display solutions for different access levels.

eCLIMATIC

DS
Service display

DM
Multi-Rooftop display

DC
Comfort display

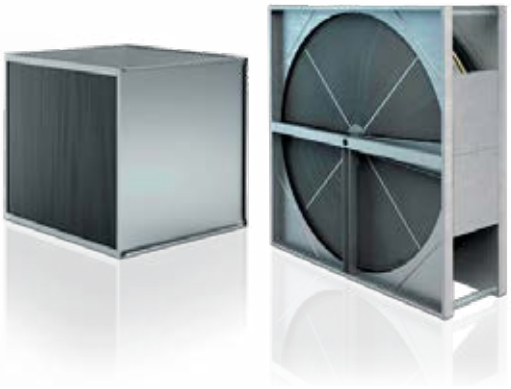
Photos and illustrations are not contractual.

CASING & DESIGN

New design enabling a -30% refrigerant charge.
Pre-coated steel or aluminum panels painted in RAL 9003 color, specially designed for corrosion resistance and to ensure long operation lifetime.
Compact design for perfect integration in its environment.
Same footprint as previous models for plug & play replacement.
Inclined removable drain pan in aluminum for easy disinfecting.
Double skin panels are available as an option.

HEAT RECOVERY

Thermodynamic heat recovery, ideal for mild climates.
Plate heat exchanger, to improve the system's efficiency in colder climates by preheating the fresh air stream.
Heat recovery wheel, with both fresh and return air sections protected by G4 filters.
eRecovery, to recover free heat produced by food refrigeration systems.

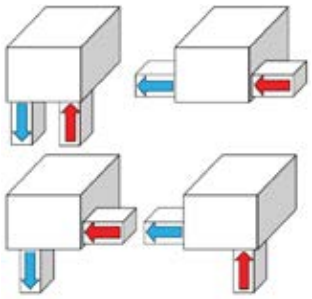


AIR TREATMENT

EC motor fans ensuring a precise temperature for better comfort and energy savings.
IAQ kits for improved indoor air quality within the building:
- Media filters (F7/ePM1 50%, M5/ePM10 50%).
- UV-C lamps.
- Ionization.

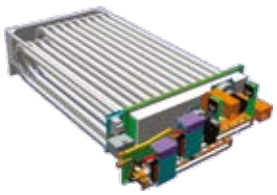
AIRFLOW

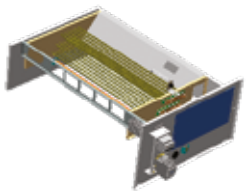
Several available airflow configurations: top, bottom or horizontal, to fit each building's need.
Adaptable roof curb to fit the buidling's architecture:
- Adjustable roof curb.
- Multidirectional roof curb.
- Vertical exhaust roof curb.
- Non adjustable, non assembled (only available outside the EU).



AUXILIARY HEATING DEVICES

Different options depending on the energy source available on site:
- Hot water coil.
- Condensing gas burner.
- Electric heater.
- Electric preheater.





eB(A) B(B) H(C) 100(D) D(E) P(F) 1(G) M(H)

(A) **eB** = e-Baltic
(B) **B** = Steel - **F** = Aluminium
(C) **H** = Heat pump unit
(D) Cooling capacity in kW (x 100 m^3/h)
(E) **S** = 1 circuit - **D** = 2 circuits
(F) **P** = R32 - **H** = HFO - **N** = No refrigerant
(G) Revision number
(H) 400V/3/50Hz

Air cooled version

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Heat pump units

e-Baltic		035	045	055	065	075	085	095
Nominal thermal performances - Cooling mode								
Cooling capacity (1)	kW	31,3	43,0	45,9	57,6	66,7	81,0	98,4
Total Power Input	kW	9,50	13,86	14,89	19,86	22,48	28,44	30,37
EER net (1)		3,30	3,10	3,08	2,90	2,97	2,85	3,24
Nominal thermal performances - Heating mode								
Heating capacity (2)	kW	29,7	37,2	43,0	56,5	64,3	83,0	92,7
Total Power Input	kW	7,94	10,54	12,61	16,57	18,71	25,80	24,14
COP net (2)		3,74	3,53	3,41	3,41	3,44	3,22	3,84
Seasonal efficiencies - Cooling mode								
Seasonal Energy Efficiency Ratio - **SEER** (3)		4,41	4,41	3,99	3,93	3,98	3,71	4,51
Seasonal energy efficiency - **ηs,c** (4)	%	173	173	157	154	156	145	177
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B	B
Seasonal efficiencies - Heating mode								
Seasonal Coefficient of Performance - **SCOP** (5)		3,46	3,24	3,43	3,23	3,52	3,23	3,35
Seasonal energy efficiency - **ηs,h** (6)	%	135	127	134	126	138	126	131
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B	B
Auxiliary heating								
Gas heating capacity	kW	33,9	33,9	57,2	57,2	74,1	74,1	101,5
Electric heater capacity - Standard / High	kW	18 / 36	18 / 36	27 / 54	27 / 54	27 / 54	27 / 54	27 / 54
Electric pre-heater capacity - Standard / High	kW	18 / 36	18 / 36	24 / 48	24 / 48	36 / 72	36 / 72	36 / 72
Hot water coil capacity Air inlet 10°C/Water 90-70°C	kW	Capacity depends on air and water conditions.						
Ventilation data								
Minimum airflow rate	m^3/h	5600	6000	6400	8800	10800	10800	15000
Nominal airflow rate	m^3/h	7000	7500	8000	11000	13500	16000	20500
Maximum airflow rate	m^3/h	10500	10500	11200	16000	22000	22000	23000
Acoustic data - Standard unit								
Outdoor sound power	dB(A)	75,2	77,2	74,1	76,4	79,0	81,7	81,4
Indoor blower outlet sound power	dB(A)	80,2	81,5	75,5	80,8	82,2	86,2	85,2
Electrical data								
Maximum power	kW	14,5	21,3	22,6	26,6	33,3	37,9	47,8
Maximum current	A	24,5	34,2	98,4	102,6	118,3	130,4	162,7
Starting current	A	82,2	112,1	39,3	44,9	56,0	63,4	75,8
Short circuit current	kA	10	10	10	10	10	10	10
Refrigeration circuit								
Number of circuits		1	1	2	2	2	2	2
Number of compressors		2	2	4	4	4	4	4
Refrigerant load	kg	6.75	6.75	6.2 / 6.2	6.2 / 6.2	5.7 / 5.7	5.7 / 5.7	7.7 / 7.7

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

eB(A) B(B) H(C) 100(D) D(E) P(F) 1(G) M(H)

(A) **eB** = e-Baltic
(B) **B** = Steel - **F** = Aluminium
(C) **H** = Heat pump unit
(D) Cooling capacity in kW (x 100 m^3/h)
(E) **S** = 1 circuit - **D** = 2 circuits
(F) **P** = R32 - **H** = HFO - **N** = No refrigerant
(G) Revision number
(H) 400V/3/50Hz

Air cooled version

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

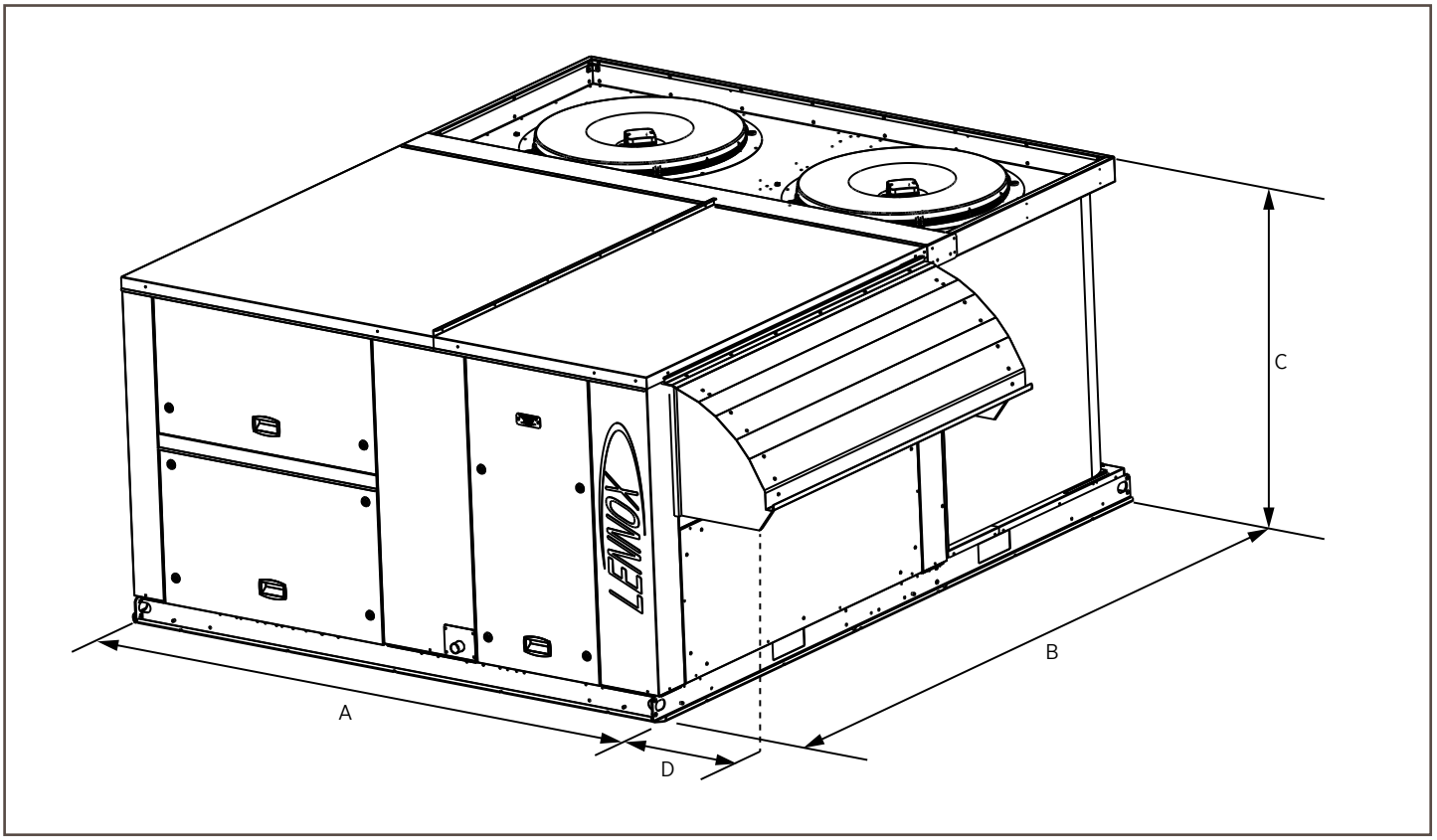
Heat pump units

e-Baltic		100	115	120	130	150	180	210
Nominal thermal performances - Cooling mode								
Cooling capacity (1)	kW	97,5	117,1	117,7	134,7	150,2	180,0	206,7
Total Power Input	kW	31,05	38,52	38,59	45,36	51,09	57,51	71,27
EER net (1)		3,14	3,04	3,05	2,97	2,94	3,13	2,90
Nominal thermal performances - Heating mode								
Heating capacity (2)	kW	93,5	114,0	115,0	129,3	145,9	172,9	207,0
Total Power Input	kW	24,60	31,84	32,86	34,95	41,10	45,86	59,65
COP net (2)		3,80	3,58	3,50	3,70	3,55	3,77	3,47
Seasonal efficiencies - Cooling mode								
Seasonal Energy Efficiency Ratio - **SEER** (3)		4,50	4,26	4,20	4,29	4,23	4,31	3,81
Seasonal energy efficiency - **ηs,c** (4)	%	177	167	165	169	166	169	149
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B	B
Seasonal efficiencies - Heating mode								
Seasonal Coefficient of Performance - **SCOP** (5)		3,39	3,33	3,30	3,38	3,38	3,39	3,35
Seasonal energy efficiency - **ηs,h** (6)	%	133	130	129	132	132	133	131
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B	B
Auxiliary heating								
Gas heating capacity	kW	95,4	101,5	95,4	139,2	139,2	172,9	172,9
Electric heater capacity - Standard / High		30 / 72	27 / 54	30 / 72	45 / 108	45 / 108	72 / 162	72 / 162
Electric pre-heater capacity - Standard / High		-	36 / 72	-	-	-	-	-
Hot water coil capacity Air inlet 10°C/Water 90-70°C		Capacity depends on air and water conditions.						
Ventilation data								
Minimum airflow rate	m^3/h	15000	17000	15700	19000	21000	24000	28000
Nominal airflow rate		20500	23000	23000	26000	28000	33000	35000
Maximum airflow rate		23000	23000	23000	35000	35000	43000	43000
Acoustic data - Standard unit								
Outdoor sound power	dB(A)	81,4	83,2	83,7	84,5	86,4	85,7	87,5
Indoor blower outlet sound power		85,2	87,7	87,7	89,4	91,0	88,6	89,8
Electrical data								
Maximum power	kW	47,9	55,8	56,3	62,6	68,8	82,0	98,6
Maximum current	A	162,9	212,6	213,5	202,8	230,2	273,8	328,7
Starting current	A	76,0	93,6	94,5	98,4	108,6	129,4	155,4
Short circuit current	kA	10	10	10	10	10	10	10
Refrigeration circuit								
Number of circuits		2	2	2	2	2	2	2
Number of compressors		4	4	4	4	4	4	4
Refrigerant load	kg	7.3 / 7.3	7.8 / 7.8	7.4 / 7.4	11.25 / 10.5	11.25 / 10.5	12.8 / 12.8	13.5 / 13.5

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

Air cooled version

e-Baltic		035	045	055	065	075	085	095	100	115	120	130	150	180	210
A	mm	2250	2250	2250	2250	2250	2250	2305	2245	2305	2245	2245	2245	2260	2260
B		2298	2298	2811	2811	3691	3691	3691	3315	3691	3315	4360	4360	5166	5166
C		1263	1263	1263	1263	1263	1263	1619	1750	1619	1750	1885	1885	2235	2235
D		435	435	435	435	435	435	435	360	435	360	456	456	620	620
Weight of standard units															
Basic unit	kg	680	680	900	960	1150	1150	1350	1400	1150	1250	1600	1650	2100	2300



BALTIC

Air and water cooled rooftop units

R410A

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

AIR COOLED

22 - **122** kW
21 - **115** kW
4200 - **23500** m³/h

WATER COOLED

47 - **90** kW
60 - **117** kW
7100 - **14500** m³/h

LENNOX participates in the ECP programme for RT.
Check ongoing validity of certificate : www.eurovent-certification.com

Installation and replacement made easy thanks to the unit's **compact nature with the same footprint** and **weight** as previous models.
Optimised design and integration of highly efficient components enabling **energy savings**.
Flexibility in capacity and airflow rates, ventilation options, energy sources and design (configurations and roof curbs) in order to best fit your application's needs.
Low noise level thanks to availability of several sound options.

THERMODYNAMIC SYSTEM

Tandem scroll compressors allowing capacity modulation.
Variable refrigerant control with electronic expansion valve.
Easy access to compressors enabling faster maintenance operations.
Variable speed EC axial fans with swept blades for improved efficiency.

REMOTE MONITORING

Connectivity through **LennoxCloud** (LENNOX WEB PORTAL for Multi sites / Multi units).
BMS through:
- **LennoxOneWeb**.
- **ADALINK II*** (LENNOX WEB SERVER One site / Several units).
- **LennoxTouch**.*

* Check the availability of this feature in your country.

CONTROL

eClimatic electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet LonWorks®).
Several display solutions for different access levels.

eCLIMATIC

DS
Service display

DM
Multi-Rooftop display

DC
Comfort display

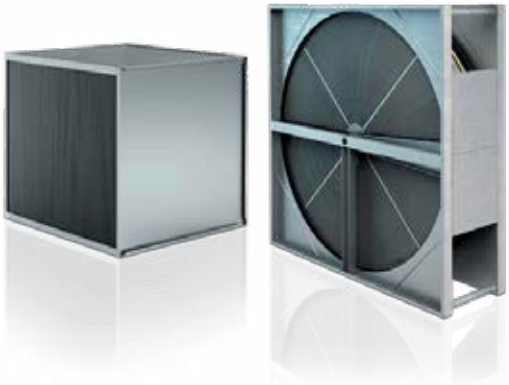
Photos and illustrations are not contractual.

CASING & DESIGN

Pre-coated steel or aluminum panels painted in RAL 9003 color, specially designed for corrosion resistance and to ensure long operation lifetime.
Compact design for perfect integration in its environment.
Same footprint as previous models for plug & play replacement.
Inclined removable drain pan in aluminum for easy disinfecting.
Double skin panels are available as an option.

HEAT RECOVERY

Thermodynamic heat recovery, ideal for mild climates.
Plate heat exchanger, to improve the system's efficiency in colder climates by preheating the fresh air stream.
Heat recovery wheel, with both fresh and return air sections protected by G4 filters.
eRecovery, to recover free heat produced by food refrigeration systems.

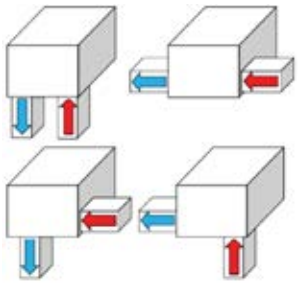


AIR TREATMENT

EC motor fans ensuring a precise temperature for better comfort and energy savings.
IAQ kits for improved indoor air quality within the building:
- Media filters (F7/ePM1 50%, M5/ePM10 50%).
- UV-C lamps.
- Ionization.

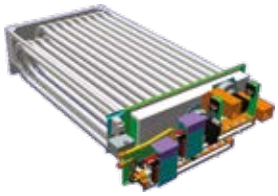
AIRFLOW

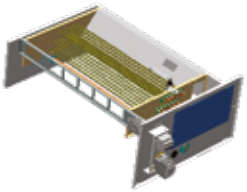
Several available airflow configurations: top, bottom or horizontal, to fit each building's need.
Adaptable roof curb to fit the buidling's architecture:
- Adjustable roof curb.
- Multidirectional roof curb.
- Vertical exhaust roof curb.
- Non adjustable, non assembled (only available outside the EU).



AUXILIARY HEATING DEVICES

Different options depending on the energy source available on site:
- Hot water coil.
- Condensing gas burner.
- Electric heater.
- Electric preheater.





BA(A) C(B) 065(C) D(D) N(E) M(F) 5(G) M(H)

(A) **BA** = BALTIC
(B) **C** = Cooling - **H** = Heat pump
(C) Cooling capacity in kW or airflow (x 1.000 m^3/h)
(D) **S** = 1 circuit - **D** = 2 circuits - **T** = 3 circuits - **F** = 4 circuits
(E) **H** = High heat - **S** = Standard heat - **N** = No heat
(F) **M** = R410A - **H** = HFO - **Z** = No refrigerant
(G) Revision number
(H) 400V/III/50Hz

Air cooled version

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Heat pump units

BALTIC		025	030	040	042	045	055	057	065	075	085	095	115	125
Nominal thermal performances - Cooling mode														
Cooling capacity (1)	kW	22,3	27,7	36,6	40,3	44,3	49,9	55,2	62,6	73,5	82,0	100,5	114,9	122,2
Total Power Input	kW	6,41	8,59	11,74	13,87	12,84	14,90	16,70	20,24	22,81	26,64	31,24	37,28	41,06
EER net (1)		3,48	3,22	3,12	2,90	3,45	3,35	3,30	3,09	3,22	3,08	3,22	3,08	2,98
Nominal thermal performances - Heating mode														
Heating capacity (2)	kW	20,9	25,7	34,6	38,3	40,4	45,0	53,7	60,8	70,7	78,3	95,6	107,5	114,8
Total Power Input	kW	5,59	7,10	9,97	11,34	11,57	13,07	14,87	17,97	21,45	24,41	26,98	31,73	35,37
COP net (2)		3,74	3,62	3,47	3,38	3,49	3,44	3,61	3,38	3,30	3,21	3,54	3,39	3,24
Seasonal efficiencies - Cooling mode														
Seasonal Energy Efficiency Ratio - **SEER** (3)		4.44	4.26	4	3.85	4.93	4.71	4.66	4.5	4.36	4.21	4.33	4.26	4.18
Seasonal energy efficiency - **ηs,c** (4)	%	175	167	157	151	194	186	184	177	172	166	170	168	164
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B	B	B	B	B	B	B	B
Seasonal efficiencies - Heating mode														
Seasonal Coefficient of Performance - **SCOP** (5)		3.49	3.4	3.27	3.21	3.33	3.29	3.32	3.3	3.21	3.22	3.4	3.33	3.2
Seasonal energy efficiency - **ηs,h** (6)	%	137	133	128	126	130	129	130	129	126	126	133	130	126
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B	B	B	B	B	B	B	B
Auxiliary heating														
Gas heating capacity	kW	33,9				57,2				74,1		101,5		
Electric heater capacity - Standard / High	kW	18/36				27/54				27/54		27/54		
Electric pre-heater capacity - Standard / High	kW	18/36				24/48				36/72		36/72		
Hot water coil capacity Air inlet 10°C/Water 90-70°C	kW	50	59	63	66	84	93	103	109	178	186	186	186	186
Ventilation data														
Minimum airflow rate	m^3/h	3600	4600	5100	5500	5700	6700	7900	8900	10500	10500	15000	17000	18000
Nominal airflow rate	m^3/h	4200	5700	6300	6900	7100	8300	9900	11100	13500	14500	19500	22000	23500
Maximum airflow rate	m^3/h	5600	6800	10000	10000	9700	11200	16000	16000	22000	22000	23000	23000	24500
Acoustic data - Standard unit														
Outdoor sound power	dB(A)	80,2	80,7	81,4	81,9	83,3	83,5	84,1	84,5	81,9	83,2	82,6	84,6	87,3
Indoor blower outlet sound power	dB(A)	71	77,3	79,4	81,4	72,1	74,5	77,6	80	83,1	84,5	84,1	86,7	88,2
Electrical data														
Maximum power	kW	13	15,3	18,3	20,3	25,8	28,1	30,2	33,3	40,6	44,6	49,8	55,8	60,5
Maximum current	A	56,7	66,3	93,2	121,4	77,3	87	89	116	129,2	161,9	192,4	212,9	220,9
Starting current	A	21,2	23,4	30,3	34,7	41,8	44	46,1	53	66,3	75,2	81,6	94,1	102
Short circuit current	kA	10				10				10		10		
Refrigeration circuit														
Number of circuits		1	1	1	1	2	2	2	2	2	2	2	2	2
Number of compressors		2	2	2	2	4	4	4	4	4	4	4	4	4
Refrigerant load	kg	6.1	6.1	8.1	8.1	6.5 +6.5	6.5 +6.5	8 +8	8 +8	10.5 +10.5	10.5 +10.5	10 +10	10.4 +10.4	10.8 +10.8

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

BA(A) C(B) 065(C) D(D) N(E) M(F) 5(G) M(H)

(A) **BA** = BALTIC
(B) **C** = Cooling - **H** = Heat pump
(C) Cooling capacity in kW or airflow (x 1.000 m^3/h)
(D) **S** = 1 circuit - **D** = 2 circuits - **T** = 3 circuits - **F** = 4 circuits
(E) **H** = High heat - **S** = Standard heat - **N** = No heat
(F) **M** = R410A - **H** = HFO - **Z** = No refrigerant
(G) Revision number
(H) 400V/III/50Hz

Water cooled version

Heat pump units

BALTIC		045	055	057	065	075	085
Nominal thermal performances - Cooling mode							
Cooling capacity (1)	kW	47,6	53,2	61,3	71,3	84,7	90,7
Total Power Input	kW	10,7	12,6	13,7	16,9	19,9	23,0
EER net (1)		4,5	4,2	4,5	4,2	4,2	3,9
Nominal thermal performances - Heating mode							
Heating capacity (2)	kW	60,2	68,2	79,2	91,3	106,5	117,1
Total Power Input	kW	13,1	14,6	16,8	20,7	22,8	26,7
COP net (2)		4,6	4,7	4,7	4,4	4,7	4,4
Seasonal efficiencies - Cooling mode							
Seasonal Energy Efficiency Ratio - **SEER** (3)		5.08	5.88	6.43	5.93	5.39	5.26
Seasonal energy efficiency - **ηs,c** (4)	%	195	227.4	249.4	229.3	207.7	202.3
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B
Seasonal efficiencies - Heating mode							
Seasonal Coefficient of Performance - **SCOP** (5)		2.94	3.44	4.79	4.55	4.41	4.25
Seasonal energy efficiency - **ηs,h** (6)	%	109.5	129.4	183.6	174.1	168.3	161.8
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B
Auxiliary heating							
Gas heating capacity	kW	57,2				74,1	
Electric heater capacity - Standard / High		27/54				27/54	
Electric pre-heater capacity - Standard / High		24/48				36/72	
Hot water coil capacity Air inlet 10°C/Water 90-70°C		84	93	103	109	178	186
Ventilation data							
Minimum airflow rate	m^3/h	5700	6700	7900	8900	10500	10500
Nominal airflow rate		7100	8300	9900	11100	13500	14500
Maximum airflow rate		9700	11200	16000	16000	22000	22000
Acoustic data - Standard unit							
Outdoor sound power	dB(A)	74,4	75,5	77,2	78,8	81,6	82,9
Indoor blower outlet sound power		75,2	78	81,4	83,6	87	88,5
Electrical data							
Maximum power	kW	22,1	25,2	28,4	31,5	39,6	43,7
Maximum current	A	124	126,9	86	113	127,7	160,4
Starting current	A	37,3	40,2	43,1	50	64,8	73,7
Short circuit current	kA	10				10	
Refrigeration circuit							
Number of circuits		2	2	2	2	2	2
Number of compressors		2	3	4	4	4	4
Refrigerant load	kg	6.8 +6.8	6.8 +6.8	7.8 +7.8	7.8 +7.8	9.1 +9.1	9.1 +9.1

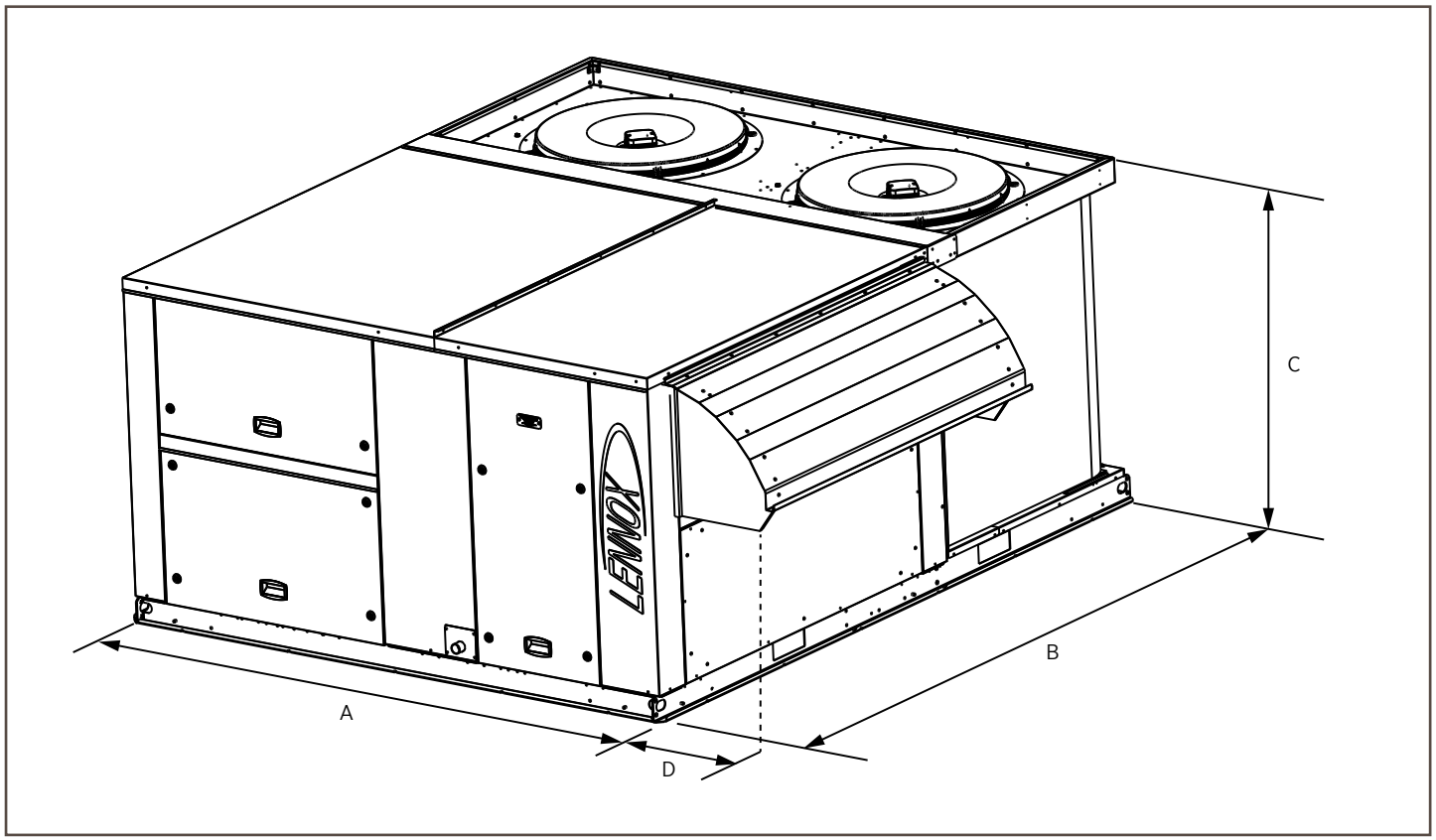
(1) **Cooling mode :** According to EN14511 nominal conditions
(2) **Heating mode :** According to EN14511 nominal conditions
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281

Air cooled version

BALTIC BAC/BAH		025	030	040	042	045	055	057	065	075	085	095	115	125
A	mm	2298				2811				3691		3691		
B		2250				2250				2250		2305		
C		1263				1263				1263		1619		
D		435												
Weight of standard units														
Basic unit	kg	600	620	660	660	860	860	920	920	1150	1150	1350	1350	1350

Water cooled version

BALTIC BAC/BAH		045	055	057	065	075	085
A	mm	2798				3298	
B		2250					
C		1263					
D		435					
Weight of standard units							
Basic unit	kg	800	820	860	880	1000	1050



Flexair

Air cooled and water cooled rooftop units

R410A

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

AIR COOLED

- **85** - **217** kW
- **79** - **222** kW
- **15000** - **39000** m³/h

WATER COOLED

- **85** - **170** kW
- **112** - **127** kW
- **15000** - **30000** m³/h

LENNOX participates in the ECP programme for RT.
Check ongoing validity of certificate : www.eurovent-certification.com

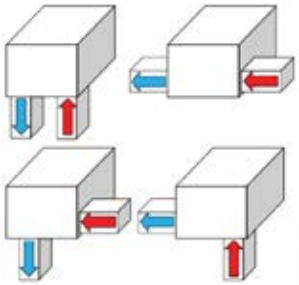
Installation and replacement made easy thanks to the unit's **compact nature with the same footprint** and **weight** as previous models.
Optimised design and integration of highly efficient components enabling **energy savings**.
Flexibility in capacity and airflow rates, ventilation options, energy sources and design (configurations and roof curbs) in order to best fit your application's needs.
Low noise level thanks to availability of several sound attenuation options.

CASING & DESIGN

Pre-coated aluminum panels painted in RAL 9003 colour, specially designed for corrosion resistance and to ensure long operation lifetime.
Condensing section mounted in a rigid base frame to ensure good support for compressors and giving rigidity to the complete structure.
Same footprint as previous models for plug & play replacement.
Double skin panels are available as an option.
Inclined removable drain pan in aluminum for easy disinfecting.

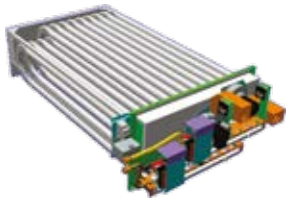
AIRFLOW

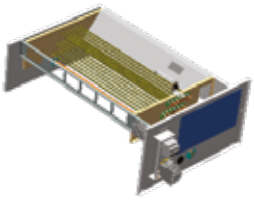
Several available airflow configurations: top, bottom or horizontal, to fit each building's need.
Adaptable roof curb to fit the buidling's architecture:
- Adjustable roof curb.
- Multidirectional roof curb.
- Vertical exhaust roof curb.
- Non adjustable, non assembled (only available outside the EU).



AUXILIARY HEATING DEVICES

Different options depending on the energy source available on site:
- Hot water coil.
- Condensing gas burner.
- Electric heater.





Photos and illustrations are not contractual.

REMOTE MONITORING

Connectivity through **LennoxCloud** (LENNOX WEB PORTAL for Multi sites / Multi units).
BMS through:
- **LennoxOneWeb**.
- **ADALINK II*** (LENNOX WEB SERVER One site / Several units).
- **LennoxTouch**.*

* Check the availability of this feature in your country.

CONTROL

eClimatic electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet LonWorks®).
Several display solutions for different access levels.

eCLIMATIC

DS
Service display

DM
Multi-Rooftop display

DC
Comfort display

THERMODYNAMIC SYSTEM

Tandem scroll compressors allowing capacity modulation.
Variable refrigerant control with electronic expansion valve.
Easy access to compressors enabling faster maintenance operations.
Variable speed EC axial fans with swept blades for improved efficiency.

AIR TREATMENT

EC motor fans ensuring a precise temperature for better comfort and energy savings.
Analogue filter detection to inform when the filters must be changed.
IAQ kits for improved indoor air quality within the building:
- G4 (standard)
- G4+F7 (ePM1 85%)
- G4+F7+F9 (ePM1 95%)
- UV-C lamps.
- Ionization.

HEAT RECOVERY

Heat recovery wheel, with both fresh and return air sections protected by G4 filters.
eRecovery, to recover free heat produced by food refrigeration systems.

R410A

FA(A) C(B) 100(C) D(D) N(E) M(F) 2(G) M(H)

(A) **FA** = Flexair
(B) **C** = Cooling only unit - **H** = Heat pump unit
(C) Cooling capacity in kW
(D) **S** = 1 circuit - **D** = 2 circuits - **T** = 3 circuits - **F** = 4 circuits
(E) **H** = High heat - **S** = Standard heat - **N** = No heat
(F) **M** = R410A - **H** = HFO - **N** = No refrigerant
(G) Revision number
(H) **M** = 400V/3/50Hz - **T** = 230V/1/50Hz

Air cooled version

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Cooling only units

Flexair		090	100	120	150	170	200	230
Nominal thermal performances - Cooling mode								
Cooling capacity (1)	kW	84,7	105,3	117,0	131,4	153,9	178,3	216,1
Total Power Input	kW	23,36	32,13	37,52	48,04	57,29	59,50	76,02
EER net (1)		3,62	3,28	3,12	2,73	2,69	3,00	2,84
Nominal thermal performances - Heating mode								
Heating capacity (2)	kW	-	-	-	-	-	-	-
Total Power Input	kW	-	-	-	-	-	-	-
COP net (2)		-	-	-	-	-	-	-
Seasonal efficiencies - Cooling mode								
Seasonal Energy Efficiency Ratio - **SEER** (3)		4,11	3,95	3,64	4,17	4,02	4,02	4,01
Seasonal energy efficiency - **ηs,c** (4)	%	161	155	143	164	158	158	158
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B	B
Seasonal efficiencies - Heating mode								
Seasonal Coefficient of Performance - **SCOP** (5)		-	-	-	-	-	-	-
Seasonal energy efficiency - **ηs,h** (6)	%	-	-	-	-	-	-	-
Eurovent energy efficiency class - Part load operation		-	-	-	-	-	-	-
Auxiliary heating								
Gas heating capacity - Standard / High	kW	60 / 120	60 / 120	60 / 120	120 / 180	120 / 180	180 / 240	180 / 240
Electric heater capacity - Standard / High	kW	30 / 72	30 / 72	30 / 72	45 / 108	45 / 108	72 / 162	72 / 162
Electric pre-heater capacity - Standard / High	kW	-	-	-	-	-	-	-
Hot water coil capacity Air inlet 20°C/Water	kW	114 / 177	126 / 201	133 / 212	145 / 254	156 / 275	177 / 295	186 / 313
Ventilation data								
Minimum airflow rate	m³/h	12000	14800	15000	18000	21000	24000	28000
Nominal airflow rate	m³/h	15000	18500	22000	26500	28000	33000	35000
Maximum airflow rate	m³/h	23000	23000	23000	35000	35000	43000	43000
Acoustic data - Standard unit								
Outdoor sound power	dB(A)	83,0	88,4	91,7	86,4	87,6	86,2	89,8
Indoor blower outlet sound power	dB(A)	85,9	91,0	95,3	91,4	91,7	88,5	89,8
Electrical data								
Maximum power	kW	44,7	52,3	56,7	64,6	78,8	88,7	102,8
Maximum current	A	159,3	170,9	194,0	204,6	249,0	296,0	313,6
Starting current	A	75,5	86,9	98,9	106,2	133,0	152,0	169,6
Short circuit current	kA	10						
Refrigeration circuit								
Number of circuits		2						
Number of compressors		2			4			
Refrigerant load	kg	8,2 / 8,2	8,5 / 9,5	9,5 / 9,5	14,5 / 14,8	13,75/13,25	18,5 / 18,5	19,8 / 19,8

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

FA(A) C(B) 100(C) D(D) N(E) M(F) 2(G) M(H)

(A) **FA** = Flexair
(B) **C** = Cooling only unit - **H** = Heat pump unit
(C) Cooling capacity in kW
(D) **S** = 1 circuit - **D** = 2 circuits - **T** = 3 circuits - **F** = 4 circuits
(E) **H** = High heat - **S** = Standard heat - **N** = No heat
(F) **M** = R410A - **H** = HFO - **N** = No refrigerant
(G) Revision number
(H) **M** = 400V/3/50Hz - **T** = 230V/1/50Hz

Air cooled version

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Heat pump units

Flexair		090	100	120	150	170	200	230
Nominal thermal performances - Cooling mode								
Cooling capacity (1)	kW	85,4	103,9	115,3	129,6	152,8	175,2	203,6
Total Power Input	kW	26,05	33,74	39,18	47,61	57,35	59,39	72,20
EER net (1)		3,28	3,08	2,94	2,72	2,66	2,95	2,82
Nominal thermal performances - Heating mode								
Heating capacity (2)	kW	81,1	100,5	112,9	129,7	150,4	180,0	211,8
Total Power Input	kW	21,94	29,24	34,19	37,38	46,51	51,94	65,90
COP net (2)		3,70	3,44	3,30	3,47	3,23	3,47	3,21
Seasonal efficiencies - Cooling mode								
Seasonal Energy Efficiency Ratio - **SEER** (3)		4,48	4,43	4,20	4,20	4,06	4,20	3,86
Seasonal energy efficiency - **ηs,c** (4)	%	176	174	165	165	160	165	151
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B	B
Seasonal efficiencies - Heating mode								
Seasonal Coefficient of Performance - **SCOP** (5)		3,36	3,30	3,21	3,42	3,20	3,26	3,21
Seasonal energy efficiency - **ηs,h** (6)	%	132	129	125	134	125	128	125
Eurovent energy efficiency class - Part load operation		B	B	B	B	B	B	B
Auxiliary heating								
Gas heating capacity - Standard / High	kW	60 / 120	60 / 120	60 / 120	120 / 180	120 / 180	180 / 240	180 / 240
Electric heater capacity - Standard / High	kW	30 / 72	30 / 72	30 / 72	45 / 108	45 / 108	72 / 162	72 / 162
Electric pre-heater capacity - Standard / High	kW	-	-	-	-	-	-	-
Hot water coil capacity Air inlet 20°C/Water	kW	114 / 177	126 / 201	133 / 212	145 / 254	156 / 275	177 / 295	186 / 313
Ventilation data								
Minimum airflow rate	m^3/h	12000	14800	15000	18000	21000	24000	28000
Nominal airflow rate	m^3/h	15000	18500	22000	26500	28000	33000	35000
Maximum airflow rate	m^3/h	23000	23000	23000	35000	35000	43000	43000
Acoustic data - Standard unit								
Outdoor sound power	dB(A)	82,7	86,8	90,3	86,4	87,6	86,2	89,8
Indoor blower outlet sound power	dB(A)	85,9	91,0	95,3	91,4	91,7	88,5	89,8
Electrical data								
Maximum power	kW	44,7	52,3	56,7	64,6	78,8	88,7	102,8
Maximum current	A	162,2	174,0	197,2	204,6	249,0	296,0	313,6
Starting current	A	75,5	86,9	98,9	106,2	133,0	152,0	169,6
Short circuit current	kA	10						
Refrigeration circuit								
Number of circuits		2						
Number of compressors		4						
Refrigerant load	kg	8,2 / 8,2	8,5 / 9	9 / 9	14,5 / 14,5	13,75/13,25	18 / 18	19,3 / 19,3

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

FA(A) C(B) 100(C) D(D) N(E) M(F) 2(G) M(H)

(A) **FA** = Flexair
(B) **C** = Cooling only unit - **H** = Heat pump unit
(C) Cooling capacity in kW
(D) **S** = 1 circuit - **D** = 2 circuits - **T** = 3 circuits - **F** = 4 circuits
(E) **H** = High heat - **S** = Standard heat - **N** = No heat
(F) **M** = R410A - **H** = HFO - **N** = No refrigerant
(G) Revision number
(H) **M** = 400V/3/50Hz - **T** = 230V/1/50Hz

Water cooled version

Heat pump units

Flexair		085	100	120	150	170
Nominal thermal performances - Cooling mode						
Cooling capacity (1)	kW	90,2	114,4	125,9	159,8	175,2
Total Power Input	kW	19,36	24,66	28,88	31,83	39,11
EER net (1)		4,66	4,64	4,36	5,02	4,48
Nominal thermal performances - Heating mode						
Heating capacity (2)	kW	111,9	131,5	153,2	191,6	226,9
Total Power Input	kW	23,61	29,35	34,74	38,55	51,45
COP net (2)		4,74	4,48	4,41	4,97	4,41
Seasonal efficiencies - Cooling mode						
Seasonal Energy Efficiency Ratio - **SEER** (3)		5,16	5,11	4,65	5,73	5,44
Seasonal energy efficiency - **ηs,c** (4)	%	201	199	181	224	212
Eurovent energy efficiency class - Part load operation		-	-	-	-	-
Seasonal efficiencies - Heating mode						
Seasonal Coefficient of Performance - **SCOP** (5)		3,53	3,69	3,12	4,21	4,27
Seasonal energy efficiency - **ηs,h** (6)	%	136	143	120	163	166
Eurovent energy efficiency class - Part load operation		-	-	-	-	-
Auxiliary heating						
Gas heating capacity - Standard / High	kW	60 / 120	60 / 120	60 / 120	120 / 180	120 / 180
Electric heater capacity - Standard / High		30 / 72	30 / 72	30 / 72	45 / 108	45 / 108
Electric pre-heater capacity - Standard / High		-	-	-	-	-
Hot water coil capacity Air inlet 20°C/Water		114 / 177	126 / 201	133 / 212	145 / 254	156 / 275
Ventilation data						
Minimum airflow rate	m^3/h	12000	14000	15000	18000	21000
Nominal airflow rate		15000	18500	20500	26000	30000
Maximum airflow rate		23000	23000	23000	35000	35000
Acoustic data - Standard unit						
Outdoor sound power	dB(A)	82,2	84,7	87,4	86,2	87,5
Indoor blower outlet sound power		87,8	89,4	93,3	92,7	95,5
Electrical data						
Maximum power	kW	39,5	45,1	56,6	62,7	79,8
Maximum current	A	211,0	262,0	279,4	252,8	278,5
Starting current	A	67,0	73,5	90,9	108,8	134,5
Short circuit current	kA	10				
Refrigeration circuit						
Number of circuits		2				
Number of compressors		2			3	4
Refrigerant load	kg	10,6 / 10,6	12,3 / 12,3	12,4 / 12,4	15,9 / 15,9	16 / 16

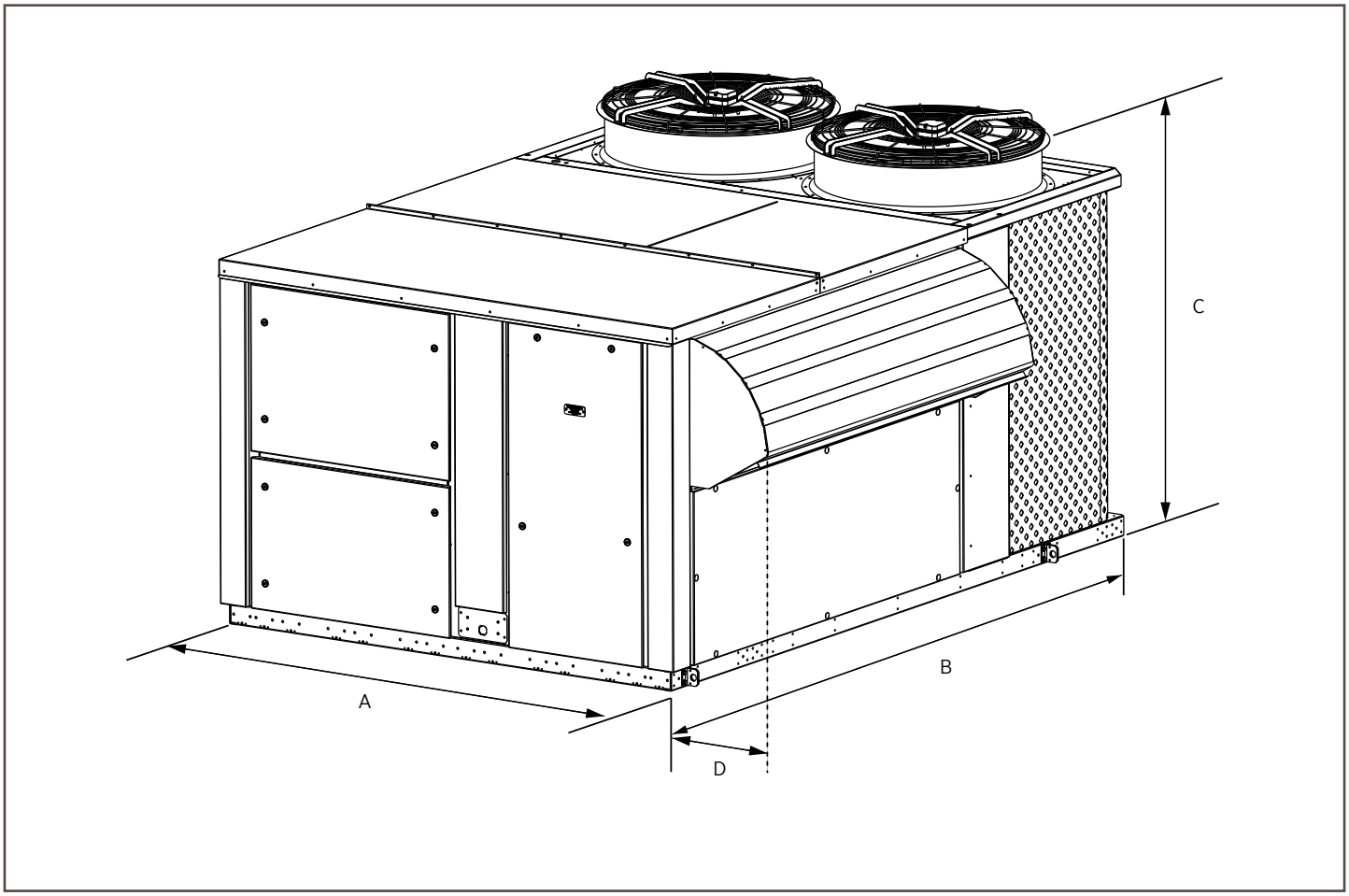
(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

Air cooled version

Flexair		090	100	120	150	170	200	230
A	mm	2245	2245	2245	2245	2245	2260	2260
B		3315	3315	3315	4360	4360	5166	5166
C		1750	1750	1750	1885	1885	2235	2235
D		360	360	360	456	456	620	620
Weight of standard units								
Basic unit	kg	966	1055	1054	1454	1550	2027	2143

Water cooled version

Flexair		085	100	120	150	170
A	mm	2290	2290	2290	2290	2290
B		3348	3348	3348	4385	4385
C		1510	1510	1510	1830	1830
D		415	415	415	415	415
Weight of standard units						
Basic unit	kg	790	874	955	1237	1300



NOTES

CHILLERS & HEAT PUMPS

eComfort Inverter 53

eComfort 61

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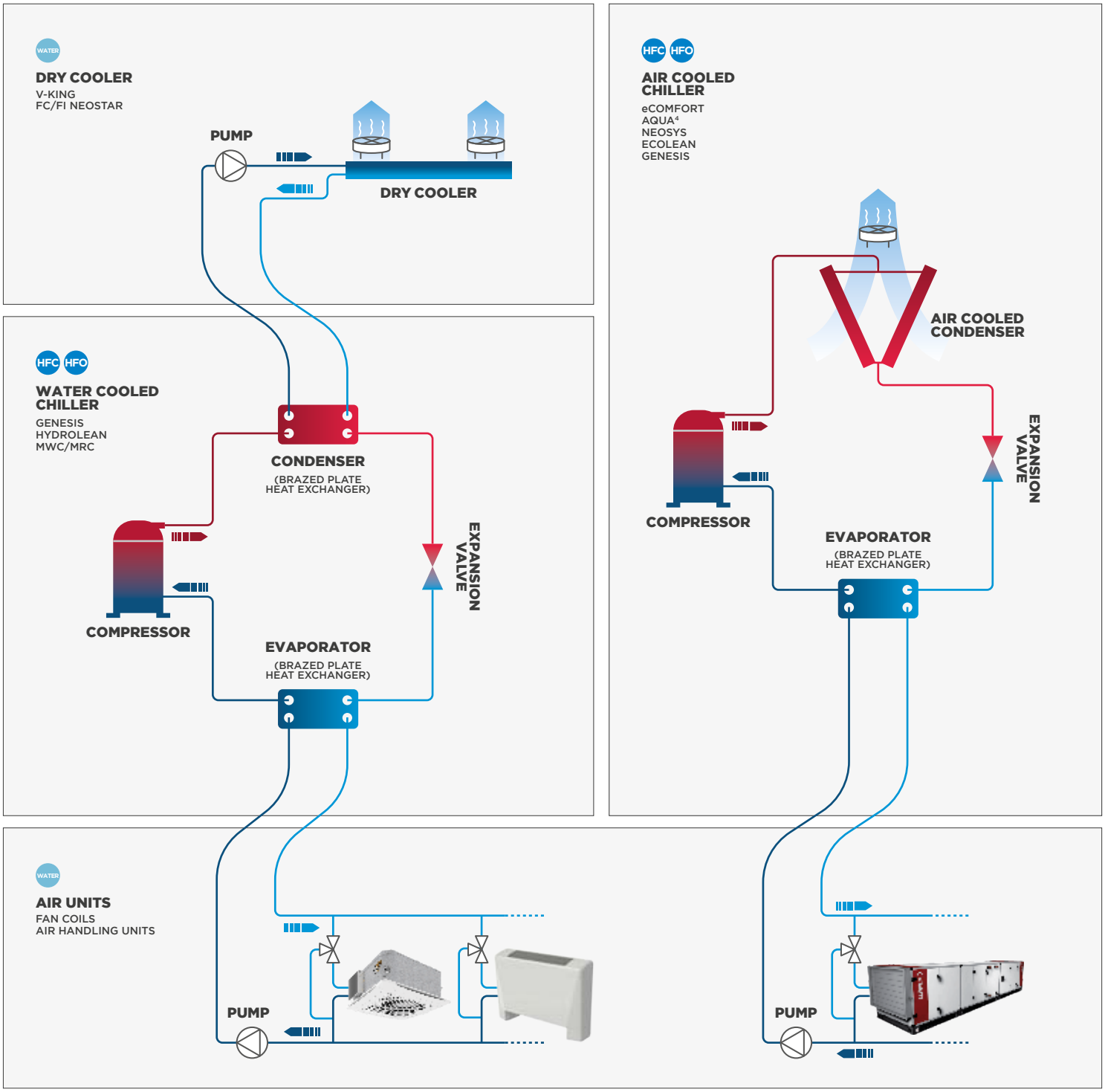
Genesis Inverter 91

Hydrolean 107

MWC/MRC 115

WHAT IS A **CHILLER** & **HEAT PUMP ?**

A chiller/heat pump is an HVAC unit designed to cool or heat water for comfort or process applications. It can be installed on many different types of buildings, such as shopping malls, commercial centres, office buildings, hotels, hospitals, data centres, industrial workshops and industrial process.
They provide cooling or heating capacity to other air units, such as fan coils and air handling units, and, dependent on the model, the heat rejection may be performed by a condenser or a dry cooler, making it a flexible solution for different building designs.
Our wide range of chillers and heat pumps offers multiple choices of refrigerant and product design to better support your project, whether you are looking for an indoor or outdoor installation, with built-in or remote condensers or dry coolers.



CHILLERS & HEAT PUMPS — AIR COOLED

	**eComfort** Inverter	Air/Air, Water/Air	R32	Cooling capacity: 170 - 400 kW	Non food retail, Shopping malls, Office buildings, Hotels, Industry, Hospitals, Data centres; EUROVENT CERTIFIED PERFORMANCE
	**eComfort**	Air/Air, Water/Air	R410A	Cooling capacity: 20 - 180 kW Heating capacity: 20 - 190 kW	Non food retail, Shopping malls, Office buildings, Hotels, Industry, Hospitals, Data centres; EUROVENT CERTIFIED PERFORMANCE
	**Neosys**	Air/Air, Water/Air	R410A	Cooling capacity: 200 - 1000 kW Heating capacity: 200 - 500 kW	Non food retail, Shopping malls, Office buildings, Hotels, Industry, Hospitals, Data centres; EUROVENT CERTIFIED PERFORMANCE
	**Ecolean**	Air/Air, Water/Air	R410A	Cooling capacity: 40 - 200 kW Heating capacity: 50 - 200 kW	Non food retail, Shopping malls, Office buildings, Hotels, Industry, Hospitals, Data centres; EUROVENT CERTIFIED PERFORMANCE
	**Aqua^4**	Air/Air, Water/Air	R410A	Cooling capacity: 50 - 300 kW Heating capacity: 50 - 350 kW	Non food retail, Hospitals; -
	**Genesis** Inverter	Air/Air	R513A	Cooling capacity: 400 - 1100 kW Heating capacity: 400 - 1200 kW	Non food retail, Shopping malls, Office buildings, Hotels, Industry, Hospitals, Data centres; EUROVENT CERTIFIED PERFORMANCE
		Air/Air	R1234 ze	Cooling capacity: 400 - 1350 kW	Non food retail, Shopping malls, Office buildings, Hotels, Industry, Hospitals, Data centres; EUROVENT CERTIFIED PERFORMANCE
		Air/Air	R134a	Cooling capacity: 220 - 1600 kW Heating capacity: 230 - 1440 kW	Non food retail, Shopping malls, Office buildings, Hotels, Industry, Hospitals, Data centres; EUROVENT CERTIFIED PERFORMANCE

CHILLERS & HEAT PUMPS — WATER COOLED

	**Genesis** Inverter	Water/Air	R513A	Cooling capacity: 400 - 1300 kW Heating capacity: 400 - 1500 kW	Non food retail, Shopping malls, Office buildings, Hotels, Industry, Hospitals, Data centres; EUROVENT CERTIFIED PERFORMANCE
		Water/Air	R1234 ze	Cooling capacity: 400 - 1650 kW Heating capacity: 400 - 1950 kW	Non food retail, Shopping malls, Office buildings, Hotels, Industry, Hospitals, Data centres; EUROVENT CERTIFIED PERFORMANCE
		Water/Air	R134a	Cooling capacity: 270 - 2470 kW	Non food retail, Shopping malls, Office buildings, Hotels, Industry, Hospitals, Data centres; EUROVENT CERTIFIED PERFORMANCE
	**Hydrolean**	Water/Air	R410A	Cooling capacity: 25 - 160 kW Heating capacity: 30 - 170 kW	Non food retail, Shopping malls, Office buildings, Hotels, Industry, Hospitals, Data centres; EUROVENT CERTIFIED PERFORMANCE
	**MWC/MRC**	Water/Air	R410A	Cooling capacity: 180 - 380 kW Heating capacity: 200 - 450 kW	Non food retail, Shopping malls, Office buildings, Hotels, Industry, Hospitals, Data centres; EUROVENT CERTIFIED PERFORMANCE

Air/Air
Water/Air

Cooling capacity
Heating capacity

Non food retail
Shopping malls
Office buildings
Hotels

Industry
Hospitals
Data centres

■ Standard equipment ● Option

Additional configurations/options are available on request, please contact your sales representative.

		eComfort R410A	eComfort R32	Ecolean EAC / EAR	Aqua[4] AAH	Neosys NAC / NAH	Genesis JAC
REFRIGERANT CIRCUIT	R32	-	■	-	-	-	-
	R410A	■	-	■	■	■	-
	R1234ze	-	-	-	-	-	■
	R513A	-	-	-	-	-	●
	R134A	-	-	-	-	-	●
	Winter cooling operation	●	●	●	■	●	●
	Low leaving water temperature down to -10°C	●	●	●	-	●	●
COMPRESSOR	Multiscroll	■	■	■	■	■	-
	Screw	-	-	-	-	-	■
	Inverter	-	●	-	-	-	●
	Low noise	●	●	●	■	■	●
	Super low noise	●	●	●	●	■	-
EXPANSION VALVE	Thermostatic	-	-	■	■	■	-
	Electronic	■	■	-	-	●	■
FAN	Axial fan	■	■	■	■	■	■
	Variable air flow control of condensation : HP floating	●	●	●	■	■	●
	EC fan	●	●	-	●	-	●
	Fan static pressure	●	●	●	-	-	●
AIR COIL	Standard copper tube/aluminium fin (1)	■	-	■	■	■	■
	Micro channel heat exchanger (2)	■	■	-	-	■	■
	Heavy anti-corrosion coil treatment	●	●	●	■	●	●
	Coils protection guards	●	●	●	●	●	●
HEAT EXCHANGER	Brazed plate heat exchanger	■	■	■	■	■	-
	Shell and Tube	-	-	-	-	-	■
ELECTRICAL	Main disconnect switch	■	■	■	■	■	■
	Phase reversal protection	●	●	●	■	●	■
	Antifreeze protection	●	●	●	●	●	●
	Softstarter	●	●	●	●	●	●
	Water tank modulating auxiliary electrical heater (heat pump)	●	-	●	-	-	●
	Power factor correction	●	●	-	●	●	-
	Energy meter	●	●	-	-	●	-
HYDRAULIC MODULE	Paddle flow switch	■	■	■	■	●	●
	Electronic flow switch	●	-	●	-	■	-
	Water filter	●	●	■	●	●	-
	Flange connection	●	●	-	-	●	■
	Water tank	●	●	●	●	-	●
	Low-pressure single pump	●	●	-	●	●	●
	Low-pressure twin pump	●	●	-	●	●	●
	High-pressure single pump	●	●	●	●	●	●
	High-pressure twin pump	●	●	●	●	●	●
	eDrive high-pressure single pump (variable primary flow)	●	●	●	-	●	-
	eDrive high-pressure twin pump (variable primary flow)	●	●	●	-	●	-
	By-pass valve for Delta P control (eDrive)	●	●	-	-	-	-

(1) Reversible heat pump units.
(2) Cooling only units.

■ Standard equipment ● Option

Additional configurations/options are available on request, please contact your sales representative.

		eComfort R410A	eComfort R32	Ecolean EAC / EAR	Aqua[4] AAH	Neosys NAC / NAH	Genesis JAC
CONTROL AND COMMUNICATION	Modbus RS485 communication interface	●	●	●	●	●	●
	Lonworks® FTT10 communication interface	●	●	●	●	●	●
	BACnet MSTP communication interface	●	●	●	-	●	●
	Modbus/BACnet/Ethernet TCP/IP communication interface	●	●	●	●	●	●
	Basic display	-	-	■	-	-	■
	Advanced display	■	■	●	■	■	-
	Service display	●	●	●	●	●	-
	Remote comfort display	●	●	●	●	●	●
	Extension board for aditional input /output	●	●	●	-	●	●
	Distance Management System : LennoxCloud connectivity	-	●	-	-	-	-
	Distance Management System : LennoxOneWeb, ...	-	●	-	-	-	-
ENERGY SAVING	Partial heat recovery	●	●	-	-	●	●
	Total heat recovery	-	-	-	■	●	●
	Free-cooling	-	-	-	-	●	●
MISCELLANEOUS	Rubber anti-vibration mounts	●	●	●	●	●	●
	Spring anti-vibration mounts	-	-	-	●	-	●
PACKING	Truck packaging for long distance	●	●	●	-	●	●
	Container packing	●	●	●	-	●	●

■ Standard equipment ● Option

Additional configurations/options are available on request, please contact your sales representative.

		Genesis JAW	Hydrolean SWC / SWH / SWR	MWC MWC / MWR
REFRIGERANT CIRCUIT	R32	-	-	-
	R410A	-	■	■
	R1234ze	■	-	-
	R513A	●	-	-
	R134A	●	-	-
	Brine operation down to -10°c	-	●	■
	HP/LP pressure gauges	■	●	-
COMPRESSOR	Multiscroll	-	■	■
	Screw	■	-	-
	Inverter	●	-	-
	Low noise	●	●	●
EXPANSION VALVE	Thermostatic	-	■	■
	Electronic	■	-	●
ELECTRICAL	Main disconnect switch	■	■	■
	Control & power equipment single evaporator pump	●	●	●
	Control & power equipment dual evaporator pump	●	-	●
	Control & power equipment single condenser pump	●	●	●
	Control & power equipment dual condenser pump	●	-	●
	Control & power equipment of outside fans (1 to 4)	-	●	-
HYDRAULIC OPTIONS	Paddle flow switch	●	■	-
	Electronic flow switch	-	-	■
	Evaporator water filter	-	●	●
	Condenser water filter	-	●	●
	Evaporator flange connections	■	-	●
	Condenser flange connections	■	-	●
	Pressure regulated water valve	●	●	-
CONTROL AND COMMUNICATION	Modbus RS485 communication interface	●	●	●
	Lonworks® FTT10 communication interface	●	-	●
	BACnet MSTP communication interface	●	-	●
	Hot water set-point control (heat pump mode)	-	-	●
	Remote comfort display	●	●	●
	Service display	-	-	●
	Extension board for aditional input /output	●	-	●
MISCELLANEOUS	Rubber anti-vibration mounts	●	●	●
	Spring anti-vibration mounts	●	-	-

eComfort

Air cooled chillers

R32

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

AIR COOLED Inverter

170 - 400 kW

LENNOX participates in the ECP programme for LCP-HP.
Check ongoing validity of certificate : www.eurovent-certification.com

Fast and easy installation and commissioning thanks to the integration of a complete hydraulic module with buffer tank and immersed heating rods.

Total system modulation granted by EC motor fans and inverter technology on compressors and pumps.

Excellent seasonal energy efficiencies (SEER) that exceed the European EcoDesign 2021 requirements.

Precise water temperature control in cooling mode thanks to highly efficient components.

CONTROL

eClimatic electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet LonWorks®).
DC Advanced display, equipped with a graphic screen providing access to the main user parameters, with two optional displays:
- Remote Display
- Service Display

eCLIMATIC

DC Advanced

eDRIVE

Variable speed drive pump option, which modulates the water flow through the plate heat exchanger and reduces energy costs:

Saves energy consumption especially at part-load conditions and during off period, reaching up to 75% reduction of the pump consumption.
Savings on the initial system cost, due to fewer pumps and piping connections than primary-secondary systems.
Flexibility and accuracy of the pump operation control: smooth start and stop, gradual change of speed, accuracy and stability of control.
Reduction of the repeated stress on the pump and piping resulting in longer equipment lifetime.
Elimination of the start-up current thanks to variable frequency drive that controls a gradual pump motor supply.

eDrive™

REMOTE MONITORING

Connectivity through **LennoxHydrocontrol**, a user-friendly interface for local supervision of the entire hydraulic system.
Connectivity through **LennoxCloud** (LENNOX WEB PORTAL for Multi sites / units).
BMS through:
- **LennoxOneWeb**.
- **ADALINK II*** (LENNOX WEB SERVER One site / Several units).
- **LennoxTouch**.*

* Check the availability of this feature in your country.

ACOUSTIC COMFORT

Three different noise level configurations available:
Quiet operation (standard), achieved with compact design, silent compressors and pumps, and with high-performance propeller fans, all installed in a closed box.
Low noise level option: High performance acoustic compressor jacket can halve the noise produced by the unit.
Active Acoustic Attenuation System with variable fan speed allows progressive adaptation of the unit to the building load while respecting the noise level constraints and the operating limits (as an option).

CASING & DESIGN

Casing made of white painted galvanised steel.
Compact design, granted by the V-shaped coils.
All thermodynamic and hydraulic components installed below the coils.

THERMODYNAMIC SYSTEM

Multi-scroll compressors, mounted in tandem or trio, to provide the best seasonal efficiencies.
Aluminium microchannel condenser coil on cooling only units.
Large surface exchangers built with copper tubing and aluminium fins on heat-pump units.
High performance propeller fans with profiled blades to improve efficiency and reduce noise level (EC version available as an option).
Thermally insulated and frost-protected water heat exchangers made from stainless steel plates with copper brazing.
One or two independent circuits, each equipped with electronic expansion valves.
Desuperheater (as an option): additional plate heat exchanger on each circuit to recover the rejected heat and provide free hot water for sanitary or industrial purposes.

Photos and illustrations are not contractual.

G(A) A(B) C(C) 170(D) D(E) P(F) 1(G) M(H)

(A) **G** = eComfort
(B) **A** = Air cooled unit
(C) **C** = Cooling only unit
(D) **170** = Approximate power in kW
(E) **D** = Dual circuit
(F) **P** = Refrigerant R32
(G) **1** = Revision number
(H) **M** = 400V/3/50Hz

Air cooled version - Standard version

Cooling only units

eCOMFORT - GAC				170D	200D	230D	270D	300D	330D	370D	400D
Nominal thermal performances - Cooling mode											
Cooling capacity (1)			kW	178,0	200,2	213,5	264,6	298,4	332,2	367,8	402,2
Total absorbed power (1)			kW	53,4	64,3	70,5	85,0	101,5	106,6	123,4	140,1
EER (1)				3,33	3,11	3,03	3,11	2,94	3,12	2,98	2,87
Eurovent energy class (1) - Full load operation				A	A	B	A	B	A	B	C
Comfort Application	**Standard Fans**	Seasonal Energy Efficiency Ratio (2) **SEER**		4,98	4,89	4,86	4,92	4,92	4,85	4,95	4,97
		Seasonal energy efficiency (3) **ηs,c**	%	196,3	192,7	191,3	193,6	194	190,9	194,8	196
Process Application		Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		5,59	5,44	5,48	5,35	5,49	5,38	5,53	5,64
Nominal thermal performances - Heating mode											
Heating capacity (1)			kW	-	-	-	-	-	-	-	-
Total absorbed power (1)			kW	-	-	-	-	-	-	-	-
COP (1)				-	-	-	-	-	-	-	-
Eurovent energy class (1) - Full load operation				-	-	-	-	-	-	-	-
Comfort Application	**Standard Fans**	Seasonal Coeficient of Performance (6) **SCOP**		-	-	-	-	-	-	-	-
		Seasonal energy efficiency (7) **ηs,h**	%	-	-	-	-	-	-	-	-
		Seasonal efficiency class (8)		-	-	-	-	-	-	-	-
Acoustic data											
Global sound power level - Standard unit			dB(A)	87,5	88,0	89,2	89,4	91,2	90,4	91,9	92,9
Electrical data											
Maximum power			kW	72,5	85,7	92,2	117,7	135,4	149,7	167,4	185,1
Maximum current			A	265,6	314,8	272,6	366,7	383,3	418,6	445,0	461,6
Starting current			A	121,2	141,6	151,0	193,5	219,8	245,4	271,7	298,2
Short circuit current			kA	50	50	50	50	50	50	50	50
Refrigeration circuit											
Number of circuits				2	2	2	2	2	2	2	2
Number of compressors				2 / 2	2 / 2	3 / 3	2 / 3	2 / 3	3 / 3	3 / 3	3 / 3
Total refrigerant load - R32			kg	18,5	18,9	20,3	27,4	28,1	36,0	34,8	40,1
Evaporator											
Nominal water flow rate			m^3/h	30,70	34,54	36,82	45,64	51,47	57,30	63,45	69,37
Nominal pressure drop			kPa	29	31	30	38	44	50	56	65
Hydraulic connection											
Type				Victaulic							
Diameter				4"	4"	4"	4"	4"	5"	5"	5"

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825. | **(6)** SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters.

G(A) A(B) C(C) 170(D) D(E) P(F) 1(G) M(H)

(A) **G** = eComfort
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(C) **C** = Cooling only unit
(D) **170** = Approximate power in kW
(E) **D** = Dual circuit
(F) **P** = Refrigerant R32
(G) **1** = Revision number
(H) **M** = 400V/3/50Hz

Air cooled version - Premium version with EC fans (SEAS) — Cooling only units

eCOMFORT - GAC				170D	200D	230D	270D	300D	330D	370D	400D
Nominal thermal performances - Cooling mode											
Cooling capacity (1)			kW	178,4	200,8	270,3	264,6	304,7	339,4	376,0	411,0
Total absorbed power (1)			kW	52,9	63,7	70,5	85,0	101,8	106,3	123,2	140,2
EER (1)				3,40	3,20	3,10	3,20	3,00	3,20	3,10	2,90
Eurovent energy class (1) - Full load operation				A	A	A	A	B	A	B	B
Comfort Application	EC Fans	Seasonal Energy Efficiency Ratio (2) **SEER**		5,2	5,1	5,1	5,1	5,1	5,2	5,1	5,1
		Seasonal energy efficiency (3) **ηs,c**	%	203,5	199,6	199,8	200	200,9	204,8	203	202,6
Process Application		Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		5,8	5,6	5,6	5,6	5,7	5,5	5,6	5,7
Nominal thermal performances - Heating mode											
Heating capacity (1)			kW	-	-	-	-	-	-	-	-
Total absorbed power (1)			kW	-	-	-	-	-	-	-	-
COP (1)				-	-	-	-	-	-	-	-
Eurovent energy class (1) - Full load operation				-	-	-	-	-	-	-	-
Comfort Application	EC Fans	Seasonal Coeficient of Performance (6) **SCOP**		-	-	-	-	-	-	-	-
		Seasonal energy efficiency (7) **ηs,h**	%	-	-	-	-	-	-	-	-
	Seasonal efficiency class (8)			-	-	-	-	-	-	-	-
Acoustic data											
Global sound power level - Standard unit			dB(A)	88,0	88,4	89,5	89,9	91,6	90,9	92,3	93,2
Electrical data											
Maximum power			kW	72,0	85,3	91,7	117,3	135,0	149,3	167,0	184,7
Maximum current			A	264,5	313,7	271,5	365,6	382,2	417,5	443,9	460,5
Starting current			A	117,8	138,2	147,6	189,0	215,4	239,8	266,2	292,6
Short circuit current			kA	50	50	50	50	50	50	50	50
Refrigeration circuit											
Number of circuits				2	2	2	2	2	2	2	2
Number of compressors				2 / 2	2 / 2	3 / 3	2 / 3	2 / 3	3 / 3	3 / 3	3 / 3
Total refrigerant load - R32			kg	18,5	18,9	20,3	27,4	28,1	36,0	34,8	40,1
Evaporator											
Nominal water flow rate			m^3/h	30,7	34,5	37,5	46,5	52,4	58,4	64,7	70,7
Nominal pressure drop			kPa	29	31	30	38	44	50	56	65
Hydraulic connection											
Type				Victaulic							
Diameter				4"	4"	4"	4"	4"	5"	5"	5"

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825. |
(6) SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters.

G(A) A(B) C(C) 170(D) D(E) P(F) 1(G) M(H)

(A) **G** = eComfort
(B) **A** = Air cooled unit
(C) **C** = Cooling only unit
(D) **170** = Approximate power in kW
(E) **D** = Dual circuit
(F) **P** = Refrigerant R32
(G) **1** = Revision number
(H) **M** = 400V/3/50Hz

Air cooled version - Modulating version with high pressure EC fans (HIFP) and inverter compressor (VSCP)

Cooling only units

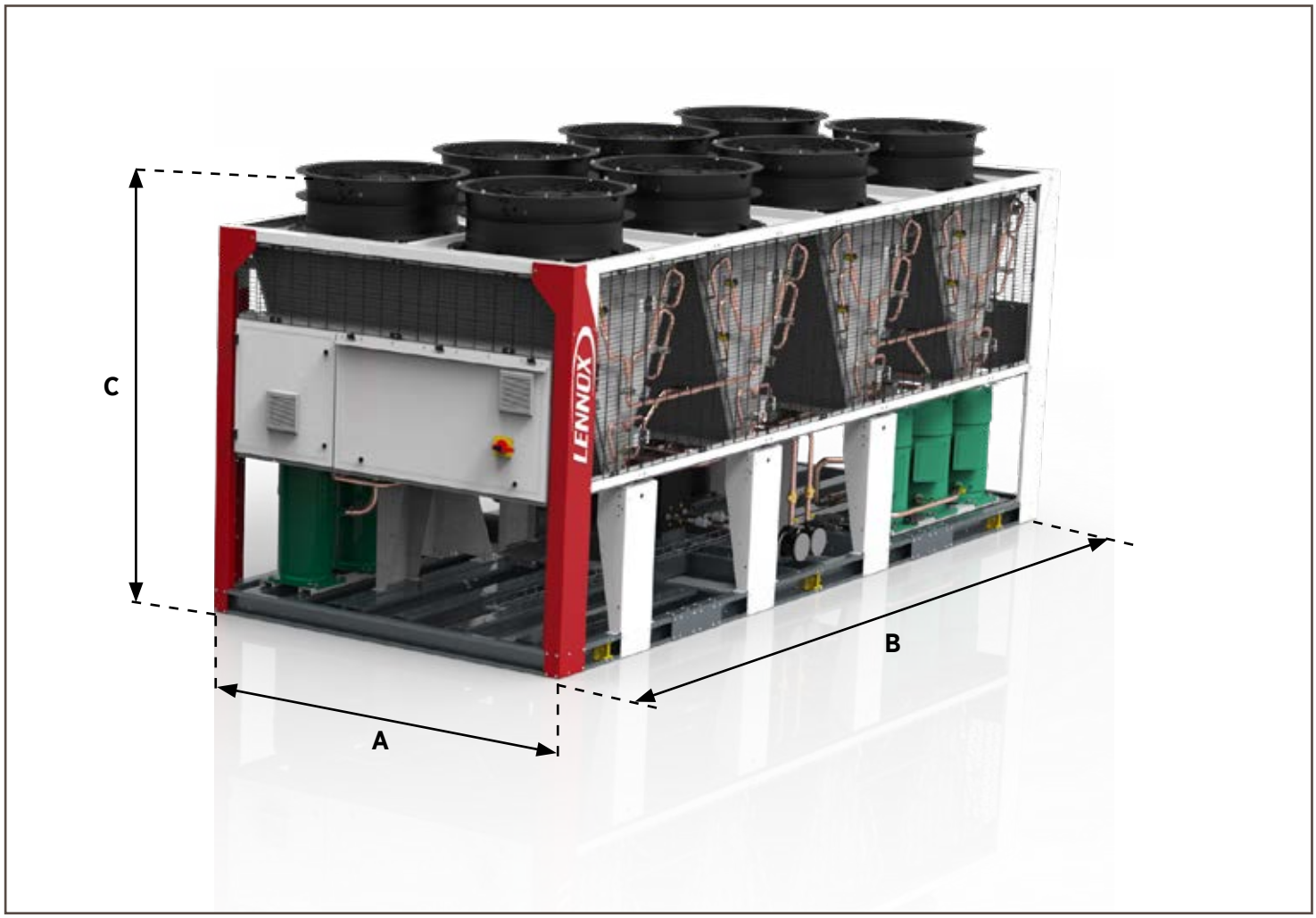
eCOMFORT - GAC				170D	200D	230D	270D	300D	330D	370D	400D
Nominal thermal performances - Cooling mode											
Cooling capacity (1)			kW	192,9	213,1	232,1	280,5	320,2	350,4	389,4	426,7
Total absorbed power (1)			kW	58,3	67,3	75,0	88,7	104,7	108,7	125,0	140,8
EER (1)				3,30	3,20	3,10	3,20	3,10	3,20	3,10	3,00
Eurovent energy class (1) - Full load operation				A	A	A	A	B	A	A	B
Comfort Application	EC Fans	Seasonal Energy Efficiency Ratio (2) **SEER**		5,0	4,9	4,8	4,8	4,9	4,9	5,0	5,0
		Seasonal energy efficiency (3) **ηs,c**	%	195,2	193,1	190,1	190,5	194,3	192,5	195,4	197,5
Process Application		Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		5,7	5,5	5,5	5,5	5,6	5,6	5,5	5,7
Nominal thermal performances - Heating mode											
Heating capacity (1)			kW	-	-	-	-	-	-	-	-
Total absorbed power (1)			kW	-	-	-	-	-	-	-	-
COP (1)				-	-	-	-	-	-	-	-
Eurovent energy class (1) - Full load operation				-	-	-	-	-	-	-	-
Comfort Application	EC Fans	Seasonal Coeficient of Performance (6) **SCOP**		-	-	-	-	-	-	-	-
		Seasonal energy efficiency (7) **ηs,h**	%	-	-	-	-	-	-	-	-
	Seasonal efficiency class (8)			-	-	-	-	-	-	-	-
Acoustic data											
Global sound power level - Standard unit			dB(A)	92,0	92,1	92,8	93,6	94,4	94,9	95,9	95,9
Electrical data											
Maximum power			kW	76,1	89,3	95,8	123,4	141,1	157,4	175,1	192,8
Maximum current			A	264,5	313,7	271,5	365,6	382,2	417,5	443,9	460,5
Starting current			A	124,0	144,4	153,8	198,3	224,7	252,2	278,6	305,0
Short circuit current			kA	50	50	50	50	50	50	50	50
Refrigeration circuit											
Number of circuits				2	2	2	2	2	2	2	2
Number of compressors				2 / 2	2 / 2	3 / 3	2 / 3	2 / 3	3 / 3	3 / 3	3 / 3
Total refrigerant load - R32			kg	18,5	18,9	20,3	27,4	28,1	36,0	34,8	40,1
Evaporator											
Nominal water flow rate			m^3/h	33,2	36,7	39,9	48,2	55,1	60,3	67,0	73,4
Nominal pressure drop			kPa	29	31	30	38	44	50	56	65
Hydraulic connection											
Type				Victaulic							
Diameter				4"	4"	4"	4"	4"	5"	5"	5"

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825. |
(6) SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters.

Air cooled version

Cooling only units

eCOMFORT - GAC		170D	200D	230D	270D	300D	330D	370D	400D
A	mm	2250			2250		2250		
B		2704			3976		5248		
C		2402			2402		2402		
Weight of standard units									
Basic unit	kg	1484	1493	1672	2408	2151	2443	2655	2901



NOTES

eComfort

Air cooled chillers / Heat pumps

R410A

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

AIR COOLED

20 - **180** kW

20 - **190** kW

LENNOX participates in the ECP programme for LCP-HP.
Check ongoing validity of certificate :
www.eurovent-certification.com

Fast and easy installation and commissioning thanks to the integration of a complete hydraulic module with buffer tank and immersed heating rods.

Compact and discreet design **for perfect architectural integration**.

Excellent SEPR seasonal energy efficiencies, which exceed the European EcoDesign 2021 requirements regarding high-temperature process cooling.

Precise water temperature control in cooling and heating modes thanks to highly efficient components.

CONTROL

eClimatic electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet LonWorks®).
DC Advanced display, equipped with a graphic screen providing access to the main user parameters, with two optional displays:
- Remote Display
- Service Display

eCLIMATIC

DC Advanced

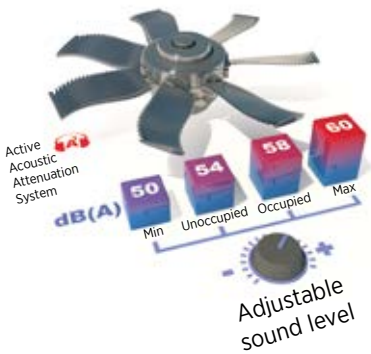
CASING & DESIGN

Casing made of white painted galvanised steel.
Compact design, perfect for architectural integration.
All thermodynamic and hydraulic components installed inside the box.
Unit designed with reduced height for discreet installation on a roof or on the ground (up to 1.7m), without the need for a peripheral screen.

ACOUSTIC COMFORT

Three different noise level configurations available:

Quiet operation (standard), achieved with compact design, silent compressors and pumps, and with high-performance propeller fans, all installed in a closed box.
Low noise level option: High performance acoustic compressor jacket can halve the noise produced by the unit.
Active Acoustic Attenuation System with variable fan speed allows progressive adaptation of the unit to the building load while respecting the noise level constraints and the operating limits (as an option).

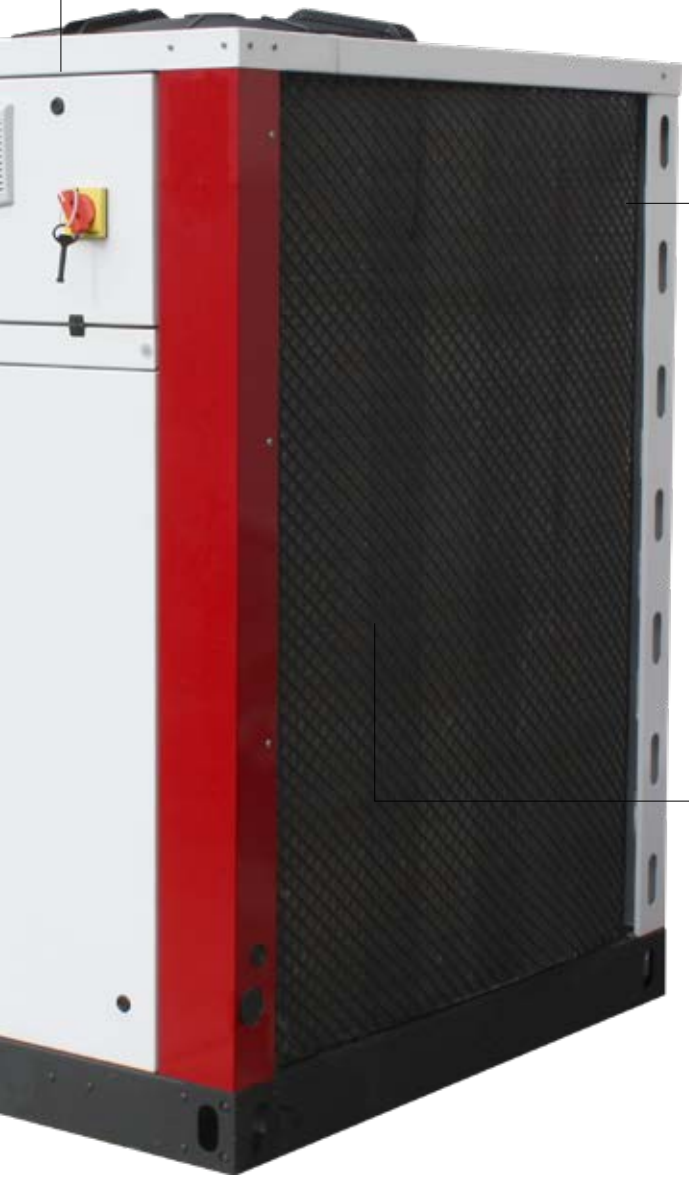


Photos and illustrations are not contractual.

REMOTE MONITORING

Connectivity through **LennoxHydrocontrol**, a user-friendly interface for local supervision of the entire hydraulic system.
Connectivity through **LennoxCloud** (LENNOX WEB PORTAL for Multi sites / units).
BMS through:
- **LennoxOneWeb**.
- **ADALINK II*** (LENNOX WEB SERVER One site / Several units).
- **LennoxTouch**.*

* Check the availability of this feature in your country.



THERMODYNAMIC SYSTEM

Multi-scroll compressors, mounted in tandem or trio, to provide the best seasonal efficiencies.
Aluminium microchannel condenser coil on cooling only units.
Large surface exchangers built with copper tubing and aluminium fins on heat-pump units.
High performance propeller fans with profiled blades to improve efficiency and reduce noise level (EC version available as an option).
Thermally insulated and frost-protected water heat exchangers made from stainless steel plates with copper brazing.
One or two independent circuits, each equipped with electronic expansion valves.
Desuperheater (as an option): additional plate heat exchanger on each circuit to recover the rejected heat and provide free hot water for sanitary or industrial purposes.

eDRIVE

Variable speed drive pump option, which modulates the water flow through the plate heat exchanger and reduces energy costs:
Saves energy consumption especially at part-load conditions and during off period, reaching up to 75% reduction of the pump consumption.
Savings on the initial system cost, due to fewer pumps and piping connections than primary-secondary systems.
Flexibility and accuracy of the pump operation control: smooth start and stop, gradual change of speed, accuracy and stability of control.
Reduction of the repeated stress on the pump and piping resulting in longer equipment lifetime.
Elimination of the start-up current thanks to variable frequency drive that controls a gradual pump motor supply.

G(A) A(B) C(C) 020(D) S(E) M(F) 2(G) M(H)

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(D) **020** = Approximate power in kW
(E) **S** = Single circuit - **D** = Double circuit
(F) **M** = Refrigerant R410A
(G) **2** = Revision number
(H) **M** = 400V/3/50Hz

Air cooled version

Cooling only units

eCOMFORT - GAC				020S	025S	030S	035S	040S	045S	055S	060S	070S	080S
Nominal thermal performances - Cooling mode													
Cooling capacity (1)			kW	20,1	24,6	31,7	36,9	40,1	45,5	54,8	61,2	69,5	82,7
Total absorbed power (1)			kW	6,0	7,8	10,8	12,0	13,1	15,6	17,3	19,5	22,3	25,9
EER (1)				3,36	3,14	2,93	3,07	3,06	2,91	3,17	3,14	3,12	3,19
Eurovent energy class (1) - Full load operation				A	A	B	B	B	B	A	A	A	A
Comfort Application	Standard Fans	Seasonal Energy Efficiency Ratio (2) **SEER**		4,67	4,66	4,32	4,44	4,49	4,34	4,67	4,44	4,57	4,61
		Seasonal energy efficiency (3) **ηs,c**	%	184	183	170	174	177	171	184	175	180	181
Process Application		Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		6,64	6,79	5,91	6,22	6,43	5,65	6,30	5,69	5,63	5,70
		Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		4,64	4,55	4,33	4,67	4,38	4,06	4,75	4,35	4,31	4,30
Comfort Application	EC Fans	Seasonal Energy Efficiency Ratio (2) **SEER**		4,93	5,02	4,61	4,81	4,76	4,65	4,89	4,64	4,71	4,85
		Seasonal energy efficiency (3) **ηs,c**	%	194	198	182	190	187	183	193	183	185	191
Process Application		Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		6,64	6,92	6,00	6,45	6,65	5,86	6,43	5,70	5,70	5,87
		Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		3,33	3,53	3,54	3,64	3,44	3,46	3,73	3,63	3,65	3,58
Nominal thermal performances - Heating mode													
Heating capacity (1)			kW	-	-	-	-	-	-	-	-	-	-
Total absorbed power (1)			kW	-	-	-	-	-	-	-	-	-	-
COP (1)				-	-	-	-	-	-	-	-	-	-
Eurovent energy class (1) - Full load operation				-	-	-	-	-	-	-	-	-	-
Comfort Application	Standard Fans	Seasonal Coeficient of Performance (6) **SCOP**		-	-	-	-	-	-	-	-	-	-
		Seasonal energy efficiency (7) **ηs,h**	%	-	-	-	-	-	-	-	-	-	-
	EC Fans	Seasonal Coeficient of Performance (6) **SCOP**		-	-	-	-	-	-	-	-	-	-
		Seasonal energy efficiency (7) **ηs,h**	%	-	-	-	-	-	-	-	-	-	-
Seasonal efficiency class (8)				-	-	-	-	-	-	-	-	-	-
Acoustic data													
Global sound power level - Standard unit			dB(A)	72,4	74,0	74,0	76,4	76,4	75,7	77,8	75,4	79,5	81,0
Electrical data													
Maximum power			kW	9,9	12,2	15,3	17,6	18,2	21,0	25,1	28,0	30,9	35,8
Maximum current			A	52,1	61,7	88,7	118,0	117,6	147,9	140,6	162,6	167,4	210,5
Starting current			A	16,6	18,8	25,8	31,2	30,5	37,1	42,2	47,0	51,8	68,1
Short circuit current			kA	10	10	10	10	10	10	10	10	10	10
Refrigeration circuit													
Number of circuits				1	1	1	1	1	1	1	1	1	1
Number of compressors				2	2	2	2	2	2	2	2	2	2
Total refrigerant load - R410a			kg	3,3	3,3	4,4	4,6	4,8	4,8	7,0	8,0	8,5	9,5
Evaporator													
Nominal water flow rate			m^3/h	3,47	4,24	5,47	6,36	6,92	7,85	9,45	10,56	11,99	14,26
Nominal pressure drop			kPa	17	25	27	36	30	39	33	40	18	24
Hydraulic connection													
Type				Threaded male						Victaulic or Welded			
Diameter				1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"

G(A) A(B) C(C) 020(D) S(E) M(F) 2(G) M(H)

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Air cooled version

Cooling only units

eCOMFORT - GAC				090S	110S	125S	110D	125D	140D	160D	185D
Nominal thermal performances - Cooling mode											
Cooling capacity (1)			kW	91,3	106,7	122,3	105,6	123,2	138,8	162,0	185,0
Total absorbed power (1)			kW	30,1	32,8	39,7	36,4	40,6	44,7	52,3	60,0
EER (1)				3,04	3,25	3,08	2,90	3,04	3,10	3,10	3,08
Eurovent energy class (1) - Full load operation				B	A	B	B	B	A	A	B
Comfort Application	Standard Fans	Seasonal Energy Efficiency Ratio (2) **SEER**		4,79	4,67	4,61	4,67	4,38	4,54	4,58	4,61
		Seasonal energy efficiency (3) **ηs,c**	%	189	184	181	184	172	179	180	182
Process Application		Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		5,88	5,64	5,50	6,08	5,43	5,44	5,49	5,43
		Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		4,34	4,17	4,10	4,52	4,08	4,12	4,17	4,08
Comfort Application	EC Fans	Seasonal Energy Efficiency Ratio (2) **SEER**		5,03	4,98	4,85	4,90	4,51	4,56	4,71	4,84
		Seasonal energy efficiency (3) **ηs,c**	%	198	196	191	193	178	179	186	190
Process Application		Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		6,09	5,55	5,47	6,26	5,42	5,53	5,70	5,50
		Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		3,56	3,33	3,38	3,78	3,39	3,49	3,54	3,39
Nominal thermal performances - Heating mode											
Heating capacity (1)			kW	-	-	-	-	-	-	-	-
Total absorbed power (1)			kW	-	-	-	-	-	-	-	-
COP (1)				-	-	-	-	-	-	-	-
Eurovent energy class (1) - Full load operation				-	-	-	-	-	-	-	-
Comfort Application	Standard Fans	Seasonal Coeficient of Performance (6) **SCOP**		-	-	-	-	-	-	-	-
		Seasonal energy efficiency (7) **ηs,h**	%	-	-	-	-	-	-	-	-
	EC Fans	Seasonal Coeficient of Performance (6) **SCOP**		-	-	-	-	-	-	-	-
		Seasonal energy efficiency (7) **ηs,h**	%	-	-	-	-	-	-	-	-
Seasonal efficiency class (8)				-	-	-	-	-	-	-	-
Acoustic data											
Global sound power level - Standard unit			dB(A)	81,0	83,6	84,2	81,0	83,6	84,2	84,0	85,1
Electrical data											
Maximum power			kW	41,1	48,4	54,9	49,5	57,4	63,2	71,5	84,1
Maximum current			A	166,2	197,5	245,8	182,2	212,3	222,0	278,5	292,2
Starting current			A	69,8	82,0	103,4	83,8	96,8	106,5	136,1	149,9
Short circuit current			kA	10	10	10	10	10	10	10	10
Refrigeration circuit											
Number of circuits				1	1	1	2	2	2	2	2
Number of compressors				3	3	3	2 / 2	2 / 2	2 / 2	2 / 2	3 / 2
Total refrigerant load - R410a			kg	12,5	12,5	12,5	13,0	13,6	16,0	16,6	19,5
Evaporator											
Nominal water flow rate			m^3/h	15,75	18,40	21,10	18,21	21,25	23,94	27,94	31,91
Nominal pressure drop			kPa	29	25	32	42	56	46	61	58
Hydraulic connection											
Type				Victaulic or Welded							
Diameter				2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3"	3"	3"

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825 | **(6)** SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters.

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Air cooled version

Heat pump units

eCOMFORT - GAH				020S	025S	030S	035S	040S	045S	055S	060S	070S	080S
Nominal thermal performances - Cooling mode													
Cooling capacity (1)			kW	20,0	24,4	31,0	36,4	39,4	44,7	54,0	60,1	68,4	81,4
Total absorbed power (1)			kW	6,0	8,0	11,2	12,4	13,5	16,2	17,9	20,1	23,1	26,7
EER (1)				3,31	3,05	2,77	2,94	2,92	2,76	3,02	2,99	2,96	3,05
Eurovent energy class (1) - Full load operation				A	B	C	B	B	C	B	B	B	B
Comfort Application	Standard Fans	Seasonal Energy Efficiency Ratio (2) **SEER**		4,67	4,50	4,15	4,28	4,34	4,19	4,53	4,28	4,48	4,52
		Seasonal energy efficiency (3) **ηs,c**	%	184	177	163	168	170	165	178	168	176	178
Process Application		Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		7,29	6,77	5,88	6,20	6,38	5,63	6,32	5,67	5,72	5,74
		Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		4,77	4,56	4,26	4,64	4,33	4,01	4,73	4,28	4,29	4,30
Comfort Application	EC Fans	Seasonal Energy Efficiency Ratio (2) **SEER**		4,67	4,84	4,42	4,64	4,69	4,54	4,79	4,55	4,65	4,77
		Seasonal energy efficiency (3) **ηs,c**	%	190	197	180	188	190	185	194	185	189	194
Process Application		Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		7,29	6,76	5,85	6,25	6,52	5,64	6,26	5,55	5,61	5,74
		Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		3,39	3,52	3,51	3,62	346,00	344,00	372,00	360,00	368,00	360,00
Nominal thermal performances - Heating mode													
Heating capacity (1)			kW	19,8	24,5	31,9	36,7	39,2	44,6	53,6	61,3	67,6	79,3
Total absorbed power (1)			kW	6,6	8,2	10,6	12,2	13,1	14,9	17,9	20,3	21,7	26,0
COP (1)				3,00	3,00	3,01	3,00	3,00	3,00	3,00	3,02	3,11	3,05
Eurovent energy class (1) - Full load operation				B	B	B	B	B	B	B	B	B	B
Comfort Application	Standard Fans	Seasonal Coeficient of Performance (6) **SCOP**		3,45	3,27	3,27	3,35	3,33	3,32	3,39	3,38	3,49	3,51
		Seasonal energy efficiency (7) **ηs,h**	%	135	128	128	131	130	130	133	132	137	138
	EC Fans	Seasonal Coeficient of Performance (6) **SCOP**		3,45	3,46	3,37	3,48	3,45	3,43	3,57	3,45	3,57	3,62
		Seasonal energy efficiency (7) **ηs,h**	%	135	135	132	136	135	134	140	135	140	142
	Seasonal efficiency class (8)			A+	A+	A+	A+	A+	A+	A+	A+	A+	A+
Acoustic data													
Global sound power level - Standard unit			dB(A)	72,4	74,0	74,0	76,4	76,4	75,7	77,8	75,4	79,5	81,0
Electrical data													
Maximum power			kW	9,9	12,2	15,3	17,6	18,2	21,0	25,1	28,0	30,9	35,8
Maximum current			A	52,1	61,7	88,7	118,0	117,6	147,9	140,6	162,6	167,4	210,5
Starting current			A	16,6	18,8	25,8	31,2	30,5	37,1	42,2	47,0	51,8	68,1
Short circuit current			kA	10	10	10	10	10	10	10	10	10	10
Refrigeration circuit													
Number of circuits				1	1	1	1	1	1	1	1	1	1
Number of compressors				2	2	2	2	2	2	2	2	2	2
Total refrigerant load - R410a			kg	7,0	7,4	8,3	8,8	9,0	9,2	13,5	17,0	18,4	18,4
Evaporator													
Nominal water flow rate			m^3/h	3,45	4,21	5,35	6,28	6,80	7,71	9,31	10,37	11,80	14,04
Nominal pressure drop			kPa	17	25	26	35	29	38	32	39	17	24
Hydraulic connection													
Type				Threaded male						Victaulic or Welded			
Diameter				1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"

G(A) A(B) C(C) 020(D) S(E) M(F) 2(G) M(H)

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Air cooled version

Heat pump units

eCOMFORT - GAH				090S	110S	125S	110D	125D	140D	160D	185D
Nominal thermal performances - Cooling mode											
Cooling capacity (1)			kW	90,5	105,6	120,4	104,7	121,0	136,5	159,3	181,4
Total absorbed power (1)			kW	30,4	33,5	40,8	37,4	41,8	46,2	54,1	62,3
EER (1)				2,98	3,15	2,95	2,80	2,90	2,95	2,95	2,91
Eurovent energy class (1) - Full load operation				B	A	B	C	B	B	B	B
Comfort Application	Standard Fans	Seasonal Energy Efficiency Ratio (2) **SEER**		4,76	4,67	4,58	4,60	4,28	4,41	4,49	4,53
		Seasonal energy efficiency (3) **ηs,c**	%	187	184	180	181	168	173	176	178
Process Application		Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		5,93	5,63	5,47	6,05	5,39	5,38	5,48	5,37
		Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		4,32	4,18	4,08	4,57	4,04	4,05	4,12	4,05
Comfort Application	EC Fans	Seasonal Energy Efficiency Ratio (2) **SEER**		4,97	4,93	4,79	4,82	4,47	4,58	4,69	4,75
		Seasonal energy efficiency (3) **ηs,c**	%	202	200	195	196	182	186	191	193
Process Application		Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		6,01	5,40	5,36	6,18	5,44	5,41	5,60	5,42
		Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		3,59	3,36	3,39	3,83	3,39	3,48	3,53	3,39
Nominal thermal performances - Heating mode											
Heating capacity (1)			kW	91,2	103,4	118,1	106,3	121,1	135,8	157,2	174,6
Total absorbed power (1)			kW	30,3	34,1	39,4	34,0	40,2	43,5	51,5	58,5
COP (1)				3,01	3,03	3,00	3,13	3,02	3,12	3,05	2,99
Eurovent energy class (1) - Full load operation				B	B	B	B	B	B	B	B
Comfort Application	Standard Fans	Seasonal Coeficient of Performance (6) **SCOP**		3,71	3,58	3,49	3,81	3,49	3,58	3,63	3,38
		Seasonal energy efficiency (7) **ηs,h**	%	145	140	136	150	137	140	142	132
	EC Fans	Seasonal Coeficient of Performance (6) **SCOP**		3,76	3,71	3,69	3,84	3,65	3,58	3,74	3,70
		Seasonal energy efficiency (7) **ηs,h**	%	147	145	145	151	143	140	147	145
	Seasonal efficiency class (8)			A+	A+	A+	A+	A+	A+	A+	A+
Acoustic data											
Global sound power level - Standard unit			dB(A)	81,0	83,6	84,2	81,0	83,6	84,2	84,0	85,1
Electrical data											
Maximum power			kW	41,1	48,4	54,9	49,5	57,4	63,2	71,5	84,1
Maximum current			A	166,2	197,5	245,8	182,2	212,3	222,0	278,5	292,2
Starting current			A	69,8	82,0	103,4	83,8	96,8	106,5	136,1	149,9
Short circuit current			kA	10	10	10	10	10	10	10	10
Refrigeration circuit											
Number of circuits				1	1	1	2	2	2	2	2
Number of compressors				3	3	3	2 / 2	2 / 2	2 / 2	2 / 2	3 / 2
Total refrigerant load - R410a			kg	25,0	27,0	27,3	27,6	29,0	35,0	37,0	38,0
Evaporator											
Nominal water flow rate			m^3/h	15,61	18,21	20,77	18,06	20,87	23,54	27,48	31,29
Nominal pressure drop			kPa	29	25	31	41	54	44	59	56
Hydraulic connection											
Type				Victaulic or Welded							
Diameter				2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3"	3"	3"

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825 | **(6)** SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters.

Air cooled version

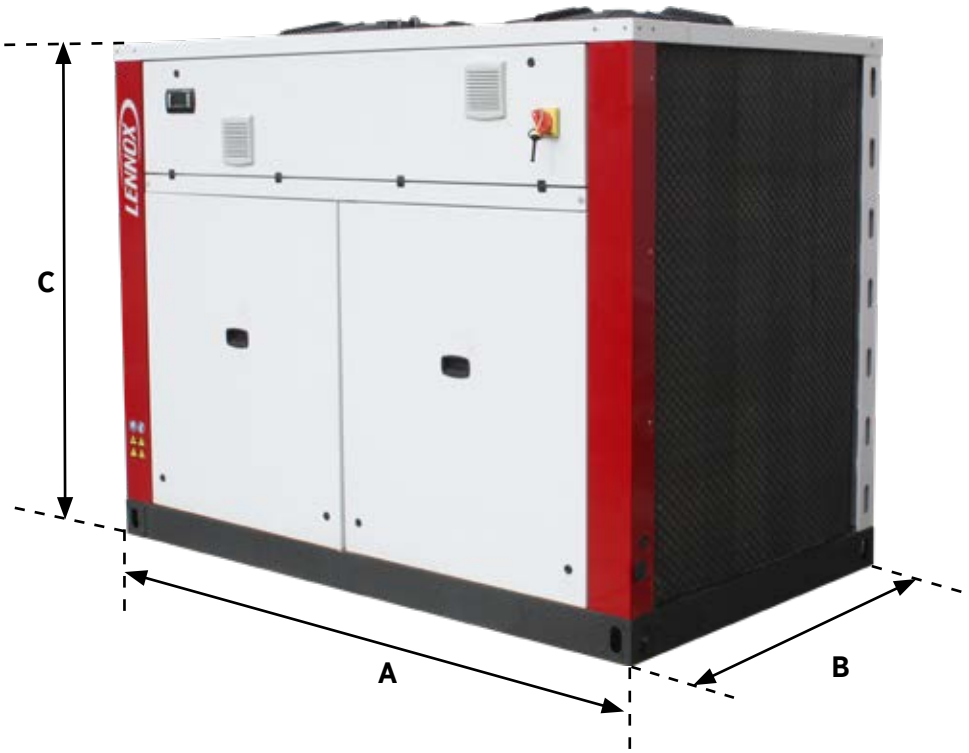
Cooling only units

eCOMFORT - GAC		020S	025S	030S	035S	040S	045S	055S	060S	070S	080S	090S	110S	125S	110D	125D	140D	160D	185D
A	mm	1320						2250				2250			2250		2650		
B		1125						1320				1320			1740		2250		
C		1540						1540				1815			1815		1815		
Weight of standard units																			
Basic unit	kg	312	319	342	366	371	386	602	627	657	706	876	892	892	989	1000	1401	1508	1575

Air cooled version

Heat pump units

eCOMFORT - GAH		020S	025S	030S	035S	040S	045S	055S	060S	070S	080S	090S	110S	125S	110D	125D	140D	160D	185D
A	mm	1320						2250				2250					2650		
B		1125						1320				1740					2250		
C		1540						1540				1815					1815		
Weight of standard units																			
Basic unit	kg	335	341	370	394	400	421	645	683	715	773	927	995	995	1061	1073	1483	1592	1663



Neosys

Air cooled chillers / Heat pumps

R410A

AIR COOLED

200 - **1000** kW

200 - **500** kW

LENNOX participates in the ECP programme for LCP-HP.
Check ongoing validity of certificate :
www.eurovent-certification.com

Flat top, aesthetic grilles and very low unit height (< 2 m) for **discrete installation on a roof** reducing the requirement for costly cladding solutions around the unit.

State of the art design with hidden compressors, fans and pump for perfect architectural integration.

Partial or total heat recovery achieved with two configurations of the desuperheater, that provides free hot water for domestic use.

Quiet operation with the thermodynamic and hydraulic modules mounted in a soundproofed technical cabinet.

CASING & DESIGN

Casing made of white painted galvanised steel.
Flat top that hides the fans and reduces noise level.
Compact design, granted by the V-shaped coils.
All thermodynamic and hydraulic components are installed inside the box reducing the noise level and protecting them against climatic conditions.
Electrical panel with top opening provides protection to the service team against rain or snow during commissioning and maintenance operations.
Aesthetic protection grilles.

eDRIVE

Variable speed drive pump option, which modulates the water flow through the evaporator and reduces energy costs:

Saves energy consumption especially at part-load conditions and during off period, reaching up to 75% reduction of the pump consumption.
Savings on the initial system cost, due to fewer pumps and piping connections than primary-secondary systems.
Flexibility and accuracy of the pump operation control: smooth start and stop, gradual change of speed, accuracy and stability of control.
Reduction of the repeated stress on the pump and piping resulting in longer equipment lifetime.
Elimination of the start-up current thanks to variable frequency drive that controls a gradual pump motor supply.

Photos and illustrations are not contractual.

ACOUSTIC COMFORT

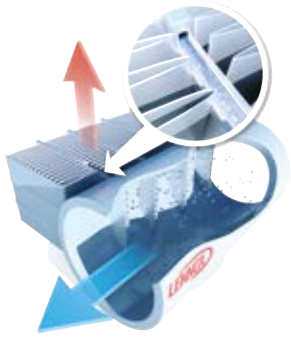
Quiet operation (standard), achieved with compact design, silent compressors and pumps, and with high-performance propeller fans, all installed in a closed box.
Active Acoustic Attenuation System with variable fan speed allows progressive adaptation of the unit to the building load while respecting the noise level constraints and the operating limits (as an option).

CONTROL

Climatic electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet or LonWorks®).
DC Advanced display, equipped with a graphic screen providing access to the main user parameters, with two optional displays:
- Remote Display
- Service Display

THERMODYNAMIC SYSTEM

Multi-scroll compressors, mounted in tandem or trio, to provide the best seasonal efficiencies.
Aluminium microchannel condenser coil (Cooling only version).
Variable speed fans with exclusive design with SKF hybrid Ceramic bearings that improves service life and reduces noise level.
Low water system volume to reduce the time to reach the setpoint.
Dynamic defrost (patented) to limit the number of defrost cycles.
Thermally insulated and frost-protected dual circuit water heat exchangers made from stainless steel plates with copper brazing.
Up to four independent circuits.
Desuperheater (as an option): additional plate heat exchanger on each circuit to recover the rejected heat and provide free hot water for sanitary or industrial purposes.
Single or dual pump.



REMOTE MONITORING

Connectivity through **LennoxHydrocontrol**, a user-friendly interface for local supervision of the entire hydraulic system.
Connectivity through **LennoxCloud** (LENNOX WEB PORTAL for Multi sites / units).
BMS through:
- **LennoxOneWeb**.
- **ADALINK II*** (LENNOX WEB SERVER One site / Several units).
- **LennoxTouch**.*

* Check the availability of this feature in your country.

N(A) A(B) C(C) 200(D) D(E) N(F) M(G) 7(H) M(I)

(A) **N** = Neosys
(B) **A** = Air cooled
(C) **C** = Cooling mode - **H** = Heat pump mode
(D) **200** = Cooling capacity in kW
(E) Number of circuits - **S** = 1 circuit - **D** = 2 circuits - **T** = 3 circuits - **F** = 4 circuits
(F) **N** = Non ducted
(G) **M** = R410A refrigerant
(H) **7** = Revision number
(I) **M** = 400V/3/50Hz

Air cooled version

Cooling only units

Neosys - NAC			200D	230D	270D	300D	340D	380D	420D	480D
Nominal thermal performances - Cooling mode										
Cooling capacity (1)		kW	208,2	235,7	272,8	307,6	351,3	387,3	429,6	489,9
Total absorbed power (1)		kW	72,1	85,7	106,7	106,9	125,6	149,1	152,3	174,3
EER (1)			2,89	2,75	2,56	2,88	2,80	2,60	2,82	2,81
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		4,72	4,62	4,36	4,73	4,70	4,57	4,86	4,79
Comfort Application	Seasonal energy efficiency (3) **ηs,c**	%	186	182	171	186	185	180	191	188
Process Application	Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		5,53	5,26	5,29	5,51	5,68	5,50	5,65	5,55
Process Application	Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		3,88	3,85	3,82	3,82	3,99	3,91	3,92	3,99
Nominal thermal performances - Heating mode										
Heating capacity (1)		kW	-	-	-	-	-	-	-	-
Total absorbed power (1)		kW	-	-	-	-	-	-	-	-
COP (1)			-	-	-	-	-	-	-	-
Comfort Application	Seasonal Coeficient of Performance (6) **SCOP**		-	-	-	-	-	-	-	-
Comfort Application	Seasonal energy efficiency (7) **ηs,h**	%	-	-	-	-	-	-	-	-
Comfort Application	Seasonal efficiency class (8)		-	-	-	-	-	-	-	-
Acoustic data										
Global sound power level - Standard unit		dB(A)	89,2	89,3	89,7	91,2	91,3	91,4	92,5	92,6
Electrical data										
Maximum power		kW	96,7	113,7	135,0	147,1	166,2	191,7	205,9	231,4
Maximum current		A	169,6	199,0	225,0	247,3	277,2	321,3	344,1	388,2
Starting current		A	397,0	449,7	475,7	498,0	527,9	572,0	594,8	638,9
Short circuit current		kA	10	10	50	50	50	50	50	50
Refrigeration circuit										
Number of circuits			2	2	2	2	2	2	2	2
Number of compressors			4	4	4	4	5	5	6	6
Total refrigerant load - R410a		kg	25,6	25,5	29,3	35,2	37,1	39,0	52,4	55,3
Evaporator										
Nominal water flow rate		m^3/h	35,80	40,60	46,90	52,90	60,40	66,60	73,90	84,30
Nominal pressure drop		kPa	43	54	56	48	35	42	50	49
Hydraulic connection										
Type			Victaulic							
Diameter			4"	4"	4"	4"	5"	5"	5"	5"

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825. |
(6) SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters.

N(A) A(B) C(C) 200(D) D(E) N(F) M(G) 7(H) M(I)

(A) **N** = Neosys
(B) **A** = Air cooled
(C) **C** = Cooling mode - **H** = Heat pump mode
(D) **200** = Cooling capacity in kW
(E) Number of circuits - **S** = 1 circuit - **D** = 2 circuits - **T** = 3 circuits - **F** = 4 circuits
(F) **N** = Non ducted
(G) **M** = R410A refrigerant
(H) **7** = Revision number
(I) **M** = 400V/3/50Hz

Air cooled version

Cooling only units

Neosys - NAC			540D	600D	640D	680F	760F	840F	960F	1080F
Nominal thermal performances - Cooling mode										
Cooling capacity (1)		kW	530,9	605,0	626,9	702,6	774,7	859,1	979,8	1061,9
Total absorbed power (1)		kW	201,9	219,1	226,1	251,3	298,2	304,6	348,7	403,8
EER (1)			2,63	2,76	2,77	2,80	2,60	2,82	2,81	2,63
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		4,62	4,59	4,60	4,63	4,55	4,84	4,78	4,60
	Seasonal energy efficiency (3) **ηs,c**	%	182	181	181	182	179	191	188	181
Process Application	Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		5,52	5,51	5,50	5,68	5,51	5,65	5,55	5,50
	Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		3,81	4,04	4,06	3,95	3,86	3,88	3,95	3,92
Nominal thermal performances - Heating mode										
Heating capacity (1)		kW	-	-	-	-	-	-	-	-
Total absorbed power (1)		kW	-	-	-	-	-	-	-	-
COP (1)			-	-	-	-	-	-	-	-
Comfort Application	Seasonal Coeficient of Performance (6) **SCOP**		-	-	-	-	-	-	-	-
	Seasonal energy efficiency (7) **ηs,h**	%	-	-	-	-	-	-	-	-
	Seasonal efficiency class (8)		-	-	-	-	-	-	-	-
Acoustic data										
Global sound power level - Standard unit		dB(A)	93,0	94,0	94,0	94,3	94,4	95,5	95,6	96,0
Electrical data										
Maximum power		kW	258,1	288,4	288,4	2 x 166,2	2 x 191,7	2 x 205,9	2 x 231,4	2 x 258,1
Maximum current		A	431,7	482,8	482,8	2 x 277,23	2 x 321,3	2 x 344,13	2 x 388,2	2 x 431,7
Starting current		A	765,9	817,0	817,0	2 x 527,93	2 x 572	2 x 594,83	2 x 638,9	2 x 765,9
Short circuit current		kA	50	50	50	50	50	50	50	50
Refrigeration circuit										
Number of circuits			2	2	2	4	4	4	4	4
Number of compressors			6	6	6	10	10	12	12	12
Total refrigerant load - R410a		kg	59,8	73,4	69,0	74,2	78,0	104,8	110,6	119,6
Evaporator										
Nominal water flow rate		m^3/h	91,30	104,10	107,90	120,90	133,30	147,80	168,60	182,70
Nominal pressure drop		kPa	57	59	58	57	51	56	66	71
Hydraulic connection										
Type			Victaulic							
Diameter			6"	6"	6"	8"	8"	8"	8"	8"

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825. |
(6) SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters.

N(A) A(B) C(C) 200(D) D(E) N(F) M(G) 7(H) M(I)

(A) **N** = Neosys
(B) **A** = Air cooled
(C) **C** = Cooling mode - **H** = Heat pump mode
(D) **200** = Cooling capacity in kW
(E) Number of circuits - **S** = 1 circuit - **D** = 2 circuits - **T** = 3 circuits - **F** = 4 circuits
(F) **N** = Non ducted
(G) **M** = R410A refrigerant
(H) **7** = Revision number
(I) **M** = 400V/3/50Hz

Air cooled version

Heat pump units

Neosys - NAH			200D	230D	270D	300D	340D	380D	420D	480D
Nominal thermal performances - Cooling mode										
Cooling capacity (1)		kW	191,0	217,0	265,9	295,4	323,6	360,9	398,5	442,2
Total absorbed power (1)		kW	73,5	92,7	104,7	117,1	131,8	133,4	159,1	183,5
EER (1)			2,60	2,34	2,54	2,52	2,46	2,71	2,50	2,41
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		4,23	4,10	4,40	4,30	4,45	4,80	4,66	4,63
	Seasonal energy efficiency (3) **ηs,c**	%	166	161	173	169	175	189	183	182
Process Application	Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		5,35	5,02	5,29	5,25	5,40	5,42	5,27	5,12
	Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		-	-	-	-	-	-	-	-
Nominal thermal performances - Heating mode										
Heating capacity (1)		kW	218,5	234,9	290,8	339,0	363,3	404,5	452,5	499,2
Total absorbed power (1)		kW	71,7	84,0	104,3	112,7	121,3	132,9	151,7	169,5
COP (1)			3,05	2,80	2,79	3,01	3,00	3,04	2,98	2,95
Comfort Application	Seasonal Coeficient of Performance (6) **SCOP**		3,44	3,32	3,39	3,45	3,47	3,39	3,33	3,35
	Seasonal energy efficiency (7) **ηs,h**	%	134	130	132	135	136	132	130	131
	Seasonal efficiency class (8)		A+	A+	A+	A+	A+	A+	A+	A+
Acoustic data										
Global sound power level - Standard unit		dB(A)	89,2	89,3	91,1	91,2	91,3	92,4	91,5	91,6
Electrical data										
Maximum power		kW	96,7	113,7	138,6	155,6	166,2	180,4	205,9	231,4
Maximum current		A	169,6	199,0	232,6	262,0	277,2	300,1	344,1	388,2
Starting current		A	397,0	449,7	483,3	512,7	527,9	527,4	594,8	638,9
Short circuit current		kA	10	10	50	50	50	50	50	50
Refrigeration circuit										
Number of circuits			2	2	2	2	2	2	2	2
Number of compressors			4	4	4	4	5	6	6	6
Total refrigerant load - R410a		kg	52,0	52,0	81,0	81,0	83,0	102,0	102,0	104,0
Evaporator										
Nominal water flow rate		m^3/h	33,07	37,52	45,60	51,29	55,96	62,29	68,46	76,88
Nominal pressure drop		kPa	37	47	53	51	28	34	41	36
Hydraulic connection										
Type			Victaulic							
Diameter			4"	4"	4"	4"	5"	5"	5"	5"

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825. |
(6) SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters.

Air cooled version

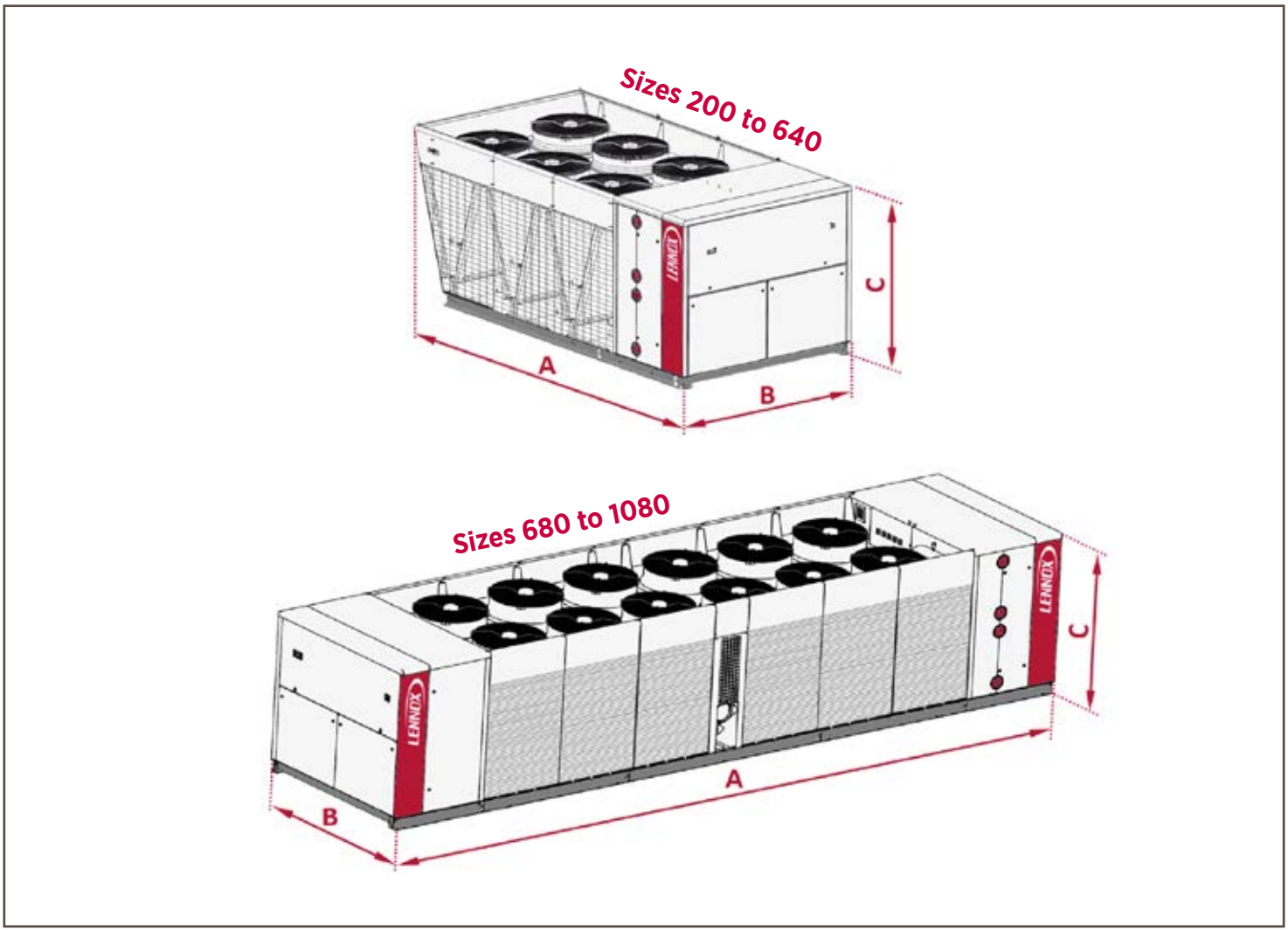
Cooling only units

Neosys - NAC		200D	230D	270D	300D	340D	380D	420D	480D	540D	600D	640D	680F	760F	840F	960F	1080F
A	mm	3593			4623			5653			6683		9040		11100		
B		2280			2280			2280			2280		2280		2280		
C		2025			2025			2025			2025		1965		1965		
Weight of standard units																	
Basic unit	kg	1983	2011	2278	2676	3003	3045	3580	3661	3712	4152	4175	6770	6854	7981	8141	8229

Air cooled version

Heat pump units

Neosys - NAH		200D	230D	270D	300D	340D	380D	420D	480D
A	mm	3593		4518			5548		
B		2280		2280			2280		
C		2025		2025			2025		
Weight of standard units									
Basic unit	kg	2176	2175	2906	3380	3349	4020	4066	4148



NOTES

Ecolean

Air cooled chillers / Heat pumps

R410A

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

AIR COOLED

40 - **200** kW

50 - **200** kW

LLENNOX participates in the ECP programme for LCP-HP.
Check ongoing validity of certificate :
www.eurovent-certification.com

R410A

Designed with the latest technologies to ensure **high energy performance** all year long.
Two basic models available, one for **outdoor installation** and another for **indoor installation** with ducted air flow on the condenser (fans designed for high available static pressure).
Compact solution for all air conditioning applications in light commercial buildings.
Two options for integrated hydraulic module for **plug & play installation**.

CONTROL

Climatic 60 electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet or LonWorks®).
DC Advanced display, equipped with a graphic screen providing access to the main user parameters, with two optional displays:
  - DC60 Customer Display (also available as remote display)
  - DS60 Service Display

CLIMATIC 60

DS60

DC60

eDRIVE

Variable speed drive pump option, which modulates the water flow through the evaporator and reduces energy costs:

Saves energy consumption especially at part-load conditions and during off period, reaching up to 75% reduction of the pump consumption.
Savings on the initial system cost, due to fewer pumps and piping connections than primary-secondary systems.
Flexibility and accuracy of the pump operation control: smooth start and stop, gradual change of speed, accuracy and stability of control.
Reduction of the repeated stress on the pump and piping resulting in longer equipment lifetime.
Elimination of the start-up current thanks to variable frequency drive that controls a gradual pump motor supply.

CASING & DESIGN

Casing made of powder coated galvanised steel, with rigid, hot dipped galvanised chassis.
Side grilles as an option to protect the unit during transportation and prevent accidental damage.

ACOUSTIC COMFORT

Two different noise level configurations available:

Low noise version (LN): average reduction of 7 dB(A) thanks to a fan running in low speed and compressor insulated in a high performance acoustic jacket.
Super low noise version (SLN): average reduction of 10 dB(A) thanks to a fan running in low speed and compressor insulated in a very high performance acoustic cabinet.

THERMODYNAMIC SYSTEM

Multi-scroll compressors, allowing capacity modulation.
High performance outdoor coil.
High performance fans to improve efficiency and reduce noise level (EC version available as an option).
Thermostatic expansion valves.
Insulated brazed plate heat exchangers made with stainless steel.
Up to two independent circuits, each equipped with thermostatic expansion valves.

WATER CIRCUIT

Water flow switch.
Water filter.
Hydraulic module with single pump and all necessary hydraulic devices (HY version).
Hydraulic module with single pump, buffer tank and all necessary hydraulic devices (HN version).
Twin pump as an option with operating time equalisation and automatic change-over in case of a pump fault.
Variable speed pump as an option to reduce annual pumping energy consumption based on a constant delta P or a constant delta T management.

Photos and illustrations are not contractual.

E(A) A(B) C(C) 100(D) 3(E) S(F) M(G) 4(H) HN(I) LN(J)

(A) **E** = EcoleanTM
(B) **A** = Air cooled
(C) **C** = Cooling only - **R** = Reversible heat pump
(D) **100** = Cooling capacity in kW
(E) **3** = Number of compressors
(F) **S** = Standard version - **F** = Fan pressure version
(G) **M** = R410A refrigerant
(H) **4** = Revision number
(I) **--** = Basic - **HY** = Hydraulic (pump) - **HN** = Hydronic (pump + buffer tank)
(J) **--** = Standard - **LN** = Low noise - **SLN** = Super low noise

Air cooled version

Cooling only units

Ecolean - EAC			472	552	672	812	1003	1103	1203	1303	1403	1604	1804	2104
Nominal thermal performances - Cooling mode														
Cooling capacity (1)		kW	44,1	50,7	63,4	75,4	88,2	102,4	111,8	125,7	138,8	149,2	174,0	199,0
Total absorbed power (1)		kW	15,2	18,1	22,4	26,8	31,2	35,3	40,1	43,9	48,3	54,1	60,0	71,0
EER (1)			2,90	2,79	2,83	2,82	2,83	2,90	2,79	2,86	2,87	2,76	2,90	2,80
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		4,22	4,21	4,16	4,20	4,20	4,16	4,11	4,11	4,14	4,12	4,22	4,11
Comfort Application	Seasonal energy efficiency (3) **ηs,c**	%	166	166	163	165	165	163	161	162	163	162	166	161
Process Application	Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		6,27	6,10	5,49	5,38	5,65	5,34	5,05	5,08	5,16	5,20	5,64	5,43
Process Application	Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		3,32	3,44	3,36	3,37	3,63	3,45	3,33	3,58	3,65	3,63	3,69	3,66
Nominal thermal performances - Heating mode														
Heating capacity (1)		kW	-	-	-	-	-	-	-	-	-	-	-	-
Total absorbed power (1)		kW	-	-	-	-	-	-	-	-	-	-	-	-
COP (1)			-	-	-	-	-	-	-	-	-	-	-	-
Comfort Application	Seasonal Coeficient of Performance (6) **SCOP**		-	-	-	-	-	-	-	-	-	-	-	-
Comfort Application	Seasonal energy efficiency (7) **ηs,h**	%	-	-	-	-	-	-	-	-	-	-	-	-
Comfort Application	Seasonal efficiency class (8)		-	-	-	-	-	-	-	-	-	-	-	-
Acoustic data														
Global sound power level - Standard unit		dB(A)	79,0	79,0	80,0	81,0	80,5	82,5	84,8	86,8	87,0	84,7	86,8	89,6
Electrical data														
Maximum power		kW	21,8	25,8	31,6	35,9	42,5	49,3	54,9	61	65,3	71,5	82,4	96,5
Maximum current		A	130,5	141,5	168,3	209,4	218,3	229,7	280,7	329,5	343,8	277,4	333,8	396,2
Starting current		A	36,1	43,2	52,8	67,1	75,9	87,3	92,2	102,1	116,4	135	145,3	168,8
Short circuit current		kA	10	10	10	10	10	10	10	10	10	10	10	10
Refrigeration circuit														
Number of circuits			1	1	1	1	2	2	2	2	2	2	2	2
Number of compressors			2	2	2	2	3	3	3	3	3	4	4	4
Total refrigerant load - R410a		kg	11,0	12,2	15,5	19,5	23,5	26,0	27,0	30,0	33,7	36,2	45,0	47,0
Evaporator														
Nominal water flow rate		m^3/h	7,64	8,74	10,86	13,06	15,17	17,55	19,24	21,63	24,10	25,83	29,76	34,01
Nominal pressure drop		kPa	49	56	75	87	40	43	51	64	79	62	67	90
Hydraulic connection														
Type			Threaded - Female									Flange		
Diameter			2"	2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3" (DN80)	3" (DN80)	3" (DN80)

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825. | **(6)** SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters.

E(A) A(B) C(C) 100(D) 3(E) S(F) M(G) 4(H) HN(I) LN(J)

(A) **E** = EcoleanTM
(B) **A** = Air cooled
(C) **C** = Cooling only - **R** = Reversible heat pump
(D) **100** = Cooling capacity in kW
(E) **3** = Number of compressors
(F) **S** = Standard version - **F** = Fan pressure version
(G) **M** = R410A refrigerant
(H) **4** = Revision number
(I) **--** = Basic - **HY** = Hydraulic (pump) - **HN** = Hydronic (pump + buffer tank)
(J) **--** = Standard - **LN** = Low noise - **SLN** = Super low noise

Air cooled version

Heat pump units

Ecolean - EAR			472	552	672	812	1003	1103	1203	1303	1403	1604	1804	2104
Nominal thermal performances - Cooling mode														
Cooling capacity (1)		kW	44,1	50,7	63,4	75,4	88,2	102,4	111,8	125,7	138,8	149,2	174,0	199,0
Total absorbed power (1)		kW	15,2	18,1	22,4	26,8	31,2	35,3	40,1	43,9	48,3	54,1	60,0	71,0
EER (1)			2,90	2,79	2,83	2,82	2,83	2,90	2,79	2,86	2,87	2,76	2,90	2,80
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		4,22	4,21	4,16	4,20	4,20	4,16	4,11	4,11	4,14	4,12	4,22	4,11
Comfort Application	Seasonal energy efficiency (3) **ηs,c**	%	166	166	163	165	165	163	161	162	163	162	166	161
Process Application	Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		6,27	6,10	5,49	5,38	5,65	5,34	5,05	5,08	5,16	5,20	5,64	5,43
Process Application	Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		3,70	3,93	3,71	3,65	3,66	3,46	3,34	3,30	3,41	3,37	3,43	3,17
Nominal thermal performances - Heating mode														
Heating capacity (1)		kW	47,8	54,8	68,0	75,7	95,0	107,8	118,2	130,4	142,5	158,7	179,4	205,0
Total absorbed power (1)		kW	15,9	18,6	22,7	26,0	31,1	35,9	39,3	44,6	47,9	52,8	60,7	71,8
COP (1)			3,0	3,0	3,0	2,9	3,1	3,0	3,0	2,9	3,0	3,0	3,0	2,9
Comfort Application	Seasonal Coeficient of Performance (6) **SCOP**		3,2	3,2	3,2	3,2	3,2	3,2	3,2	3,2	3,2	3,2	3,2	3,2
Comfort Application	Seasonal energy efficiency (7) **ηs,h**	%	126	126	126	126	126	126	126	126	126	126	126	126
Comfort Application	Seasonal efficiency class (8)		A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+
Acoustic data														
Global sound power level - Standard unit		dB(A)	79,0	79,0	80,0	81,0	80,5	82,5	84,8	86,8	87,0	84,7	86,8	89,6
Electrical data														
Maximum power		kW	21,8	25,8	31,6	35,9	42,5	49,3	54,9	61	65,3	71,5	82,4	96,5
Maximum current		A	130,5	141,5	168,3	209,4	218,3	229,7	280,7	329,5	343,8	277,4	333,8	396,2
Starting current		A	36,1	43,2	52,8	67,1	75,9	87,3	92,2	102,1	116,4	135	145,3	168,8
Short circuit current		kA	10	10	10	10	10	10	10	10	10	10	10	10
Refrigeration circuit														
Number of circuits			1	1	1	1	2	2	2	2	2	2	2	2
Number of compressors			2	2	2	2	3	3	3	3	3	4	4	4
Total refrigerant load - R410a		kg	12,5	13,5	16,0	19,3	23,3	28,0	29,5	32,2	35,5	40,0	52,0	54,0
Evaporator														
Nominal water flow rate		m^3/h	7,64	8,74	10,86	13,06	15,17	17,55	19,24	21,63	24,10	25,83	29,76	34,01
Nominal pressure drop		kPa	49	56	75	87	40	43	51	64	79	62	67	90
Hydraulic connection														
Type			Threaded - Female									Flange		
Diameter			2"	2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3" (DN80)	3" (DN80)	3" (DN80)

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825. | **(6)** SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters.

Air cooled version

Cooling only & Heat pump units

Ecolean EAC / EAR		472	552	672	812	1003	1103	1203	1303	1403	1604	1804	2104
A	mm	1960				2250					2250		
B		1195				1420					2300		
C		1616				2128					2227		
Weight of standard units													
Basic unit - Cooling only (EAC)	kg	470	482	518	562	640	809	938	990	1019	1328	1683	1703
Basic unit - Heat Pump (EAR)		480	492	534	578	663	831	964	1016	1045	1347	1703	1723

Aqua^4

Polyvalent air cooled heat pumps

R410A

AIR COOLED

50 - **300** kW

50 - **350** kW

Simultaneous and independent cooling and heating for air conditioning in the most efficient way.
Constantly balanced heating and cooling needs to obtain **maximum Total Efficiency Ratio**.
100% heat recovery at any condition.
4-pipe version with two independent circuits that provides **hot and cold water at the same time**.
2-pipe version with an independent **cooling or heating circuit** and a **dedicated hot sanitary water circuit**.

DEFROST WITHOUT IMPACTING COMFORT

Hydrophilic treatment on coil.
Dynamic control on defrost.
Circuits defrost completely independently.
Integrated water tank up to 765 litres.

SECURED OPERATING MAP

Winter cooling operation down to -15°C ambient.
Heating operation down to -10°C ambient with 45°C outlet water temperature.
Heat recovery or production of hot water temperature from 25°C to 55°C.

CASING & DESIGN

Casing and base frame made of powder coated galvanised steel.
Ventilated electrical control panel.
Victaulic connections.
Paddle water flow switch.
Fully accessible unit with removable panels.
All thermodynamic components installed inside the box.

Photos and illustrations are not contractual.

CONTROL

Climatic 60 electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet or LonWorks®).
DC Advanced display, equipped with a graphic screen providing access to the main user parameters, with two optional displays:
- Remote Display
- Service Display

CLIMATIC 60

DC Advanced

THERMODYNAMIC SYSTEM

High efficiency scroll compressors.
High efficiency brazed plate heat exchangers.
Copper tubes and aluminium fins coils with hydrophilic coating.
Axial fans with innovative hybrid structure of blades (EC version available as an option).
Insulated brazed plate heat exchangers made with austenitic stainless steel AISI 316, with AISI 316L connections.
Two independent circuits, each equipped with thermostatic expansion valves.

QUIETER UNIT

Standard version with 8 dB(A) noise level reduction vs traditional heat pumps.
Low noise version with additional noise level reduction of 12 dB(A).
Innovative hybrid structure of fan blades.
Sound proof cabinet enclosing all components to reduce radiated sound level.

R410A

A(A) A(B) H(C) 08(D) 1(E) M(F) S(G)

(A) **A** = Aqua[4]
(B) **A** = Air cooled
(C) **H** = Heat pump
(D) **08** = Nominal cooling capacity x10 [kW] (ex.: 08 = 80kW)
(E) **1** = 2 compressors / 2 circuits - **4** = 4 compressors / 2 circuits
(F) **M** = 2 pipes - **P** = 4 pipes
(G) **S** = Standard noise level - **L** = Low noise level

Air cooled version

Heat pump units

AQUA[4] - 2 pipes version		AAH041MS	AAH051MS	AAH061MS	AAH071MS	AAH081MS	AAH081MS	AAH104MS	AAH124MS
Nominal thermal performances - Cooling mode									
Cooling capacity (1)	kW	49,5	55,0	64,5	72,0	80,8	98,4	109,0	125,4
Total absorbed power (1)	kW	15,8	18,0	20,1	23,3	26,5	32,1	36,6	39,8
EER (1)		3,13	3,05	3,21	3,09	3,04	3,07	2,98	3,15
Nominal water flow rate	l/h	8499	9437	11075	12361	13875	16901	18716	21534
Nominal pressure drop	kPa	27	32	31	39	31	35	42	39
Nominal thermal performances - Heating mode									
Heating capacity (1)	kW	49,8	56,1	66,8	72,0	80,5	98,1	110,6	124,2
Total absorbed power (1)	kW	17,7	20,0	22,5	25,8	28,4	35,5	40,0	43,5
COP (1)		2,81	2,81	2,97	2,80	2,83	2,76	2,76	2,86
Nominal water flow rate	l/h	8648	9743	11612	12521	13982	17046	19214	21580
Nominal pressure drop	kPa	28	34	35	41	32	36	45	40
Seasonal Coeficient of Performance - **SCOP** (2)		3,43	3,4	3,49	3,44	3,47	3,57	3,64	3,83
Seasonal energy efficiency - **ηs,h** (3)	%	134,2	133,0	136,6	134,6	135,8	139,8	142,6	150,2
Seasonal efficiency class - L.T. Heat Pump (4)		A+	A+	A+	A+	A+	A+	A+	A++
Nominal thermal performances - Cooling mode with Domestic Hot Water									
Cooling capacity (5)	kW	47,3	52,9	61,4	69,3	79,6	94,9	106,5	122
Heating capacity (5)	kW	61,8	69,3	79,5	90,3	103	123,8	139,3	158,3
Total absorbed power (5)	kW	15,2	17,3	19	22,1	24,6	30,4	34,5	38,2
Nominal water flow rate - Cooling circuit	l/h	8128	9088	10546	11893	13662	16298	18295	20950
Nominal pressure drop - Cooling circuit	kPa	25	30	29	36	30	32	40	38
Nominal water flow rate - Heating circuit	l/h	10734	12051	13813	15685	17892	21511	24211	27515
Nominal pressure drop - Heating circuit	kPa	41	50	48	61	50	55	68	63
Total Efficiency Ratio - **TER**		7,18	7,07	7,41	7,22	7,41	7,19	7,12	7,33
Acoustic data									
Sound power level	dB(A)	80	80	81	81	81	82	82	79
Sound pressure level (6)	dB(A)	48	48	49	49	49	50	50	47
Electrical data									
Maximum power	kW	25,0	27,0	32,0	36,0	40,0	49,0	55,0	63,0
Maximum current	A	41	44	51	55	66	81	87	96
Starting current	A	159	162	185	183	191	194	198	220
Short circuit current (automatic breakers / fuse)	kA	2,5 / 2,5	2,5 / 2,5	2,5 / 2,5	2,5 / 2,5	2,5 / 2,5	6 / 8	6 / 8	6 / 8
Refrigeration circuit									
Number of circuits		2	2	2	2	2	2	2	2
Number of compressors		2	2	2	2	2	4	4	4
Total refrigerant load - R410a	kg	23	23	25,2	26	26	37	38	60
Hydraulic connection									
Type		Victaulic							
Diameter		2"	2"	2"	2"	2"	2 1/2"	2 1/2"	3"

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(3)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(4)** Following energy labelling regulation EU 811/2013 on space heaters. | **(5)** Cooling at 12/7°C and Heating at 40/45°C. | **(6)** Sound power level and sound pressure level at 10 m from the unit, in free field, conformity with ISO3744 norm.

A(A) A(B) H(C) 08(D) 1(E) M(F) S(G)

(A) **A** = Aqua[4]
(B) **A** = Air cooled
(C) **H** = Heat pump
(D) **08** = Nominal cooling capacity x10 [kW] (ex.: 08 = 80kW)
(E) **1** = 2 compressors / 2 circuits - **4** = 4 compressors / 2 circuits
(F) **M** = 2 pipes - **P** = 4 pipes
(G) **S** = Standard noise level - **L** = Low noise level

Air cooled version

Heat pump units

AQUA[4] - 2 pipes version		AAH144MS	AAH164MS	AAH194MS	AAH214MS	AAH244MS	AAH274MS	AAH294MS	AAH324MS
Nominal thermal performances - Cooling mode									
Cooling capacity (1)	kW	139,5	160,8	185,2	207,8	225,6	254,2	281,1	303,3
Total absorbed power (1)	kW	46,5	53,5	64,8	75,4	84,4	90,8	105,8	121,6
EER (1)		3,00	3,00	2,86	2,76	2,67	2,80	2,66	2,50
Nominal water flow rate	l/h	23957	27622	31808	35684	38742	43651	48273	52094
Nominal pressure drop	kPa	49	46	43	53	52	36	43	59
Nominal thermal performances - Heating mode									
Heating capacity (1)	kW	139,9	167,1	194,0	212,7	232,7	256,0	286,5	316,6
Total absorbed power (1)	kW	50,1	58,6	67,7	78,0	84,6	93,1	104,3	117,1
COP (1)		2,79	2,85	2,87	2,73	2,75	2,75	2,75	2,70
Nominal water flow rate	l/h	24306	29047	33719	36966	40439	44497	49796	55014
Nominal pressure drop	kPa	51	51	48	58	57	46	56	67
Seasonal Coeficient of Performance - **SCOP** (2)		3,85	3,55	3,67	3,62	3,68	3,62	3,55	3,55
Seasonal energy efficiency - **ηs,h** (3)	%	151,0	139,0	143,8	141,8	144,2	141,8	139,0	139,0
Seasonal efficiency class - L.T. Heat Pump (4)		A++	A+	A+	A+	A+	A+	A+	A+
Nominal thermal performances - Cooling mode with Domestic Hot Water									
Cooling capacity (5)	kW	137,4	157	185,9	211,1	234,3	258,9	293,8	324,5
Heating capacity (5)	kW	179,6	204,2	241,5	275,9	305,3	335,9	381,5	423,8
Total absorbed power (5)	kW	44,4	49,6	58,6	68,2	74,8	81	92,3	104,6
Nominal water flow rate - Cooling circuit	l/h	23599	26964	31921	36253	40230	44463	50449	55719
Nominal pressure drop - Cooling circuit	kPa	48	44	43	55	56	38	46	67
Nominal water flow rate - Heating circuit	l/h	31206	35480	41974	47944	53055	58376	66300	73660
Nominal pressure drop - Heating circuit	kPa	80	73	71	92	92	75	94	113
Total Efficiency Ratio - **TER**		7,15	7,28	7,3	7,14	7,22	7,34	7,31	7,15
Acoustic data									
Sound power level	dB(A)	79	85	85	86	86	86	87	87
Sound pressure level (6)	dB(A)	47	53	53	54	54	54	55	55
Electrical data									
Maximum power	kW	70,0	78,0	91,0	101,7	113,7	128,0	138,8	149,7
Maximum current	A	105	126	148	167	190	215	229	242
Starting current	A	222	241	307	318	382	398	464	472
Short circuit current (automatic breakers / fuse)	kA	6 / 8	6 / 8	6 / 8	6 / 8	6 / 10	6 / 10	6 / 10	6 / 10
Refrigeration circuit									
Number of circuits		2	2	2	2	2	2	2	2
Number of compressors		4	4	4	4	4	4	4	4
Total refrigerant load - R410a	kg	60	63	69	76	76	86	81	76
Hydraulic connection									
Type		Victaulic							
Diameter		3"	3"	3"	4"	4"	4"	4"	4"

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(3)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(4)** Following energy labelling regulation EU 811/2013 on space heaters. | **(5)** Cooling at 12/7°C and Heating at 40/45°C. | **(6)** Sound power level and sound pressure level at 10 m from the unit, in free field, conformity with ISO3744 norm.

A(A) A(B) H(C) 08(D) 1(E) M(F) S(G)

(A) **A** = Aqua[4]
(B) **A** = Air cooled
(C) **H** = Heat pump
(D) **08** = Nominal cooling capacity x10 [kW] (ex.: 08 = 80kW)
(E) **1** = 2 compressors / 2 circuits - **4** = 4 compressors / 2 circuits
(F) **M** = 2 pipes - **P** = 4 pipes
(G) **S** = Standard noise level - **L** = Low noise level

Air cooled version

Heat pump units

AQUA[4] - 4 pipes version		AAH041PS	AAH051PS	AAH061PS	AAH071PS	AAH081PS	AAH094PS	AAH104PS	AAH124PS
Nominal thermal performances - Cooling mode									
Cooling capacity (1)	kW	47,4	52,2	62,1	68,8	76,4	93,6	103	125,4
Total absorbed power (1)	kW	15,7	18,2	19,5	23,1	26,8	32	37,1	39,8
EER (1)		3,02	2,87	3,18	2,98	2,85	2,92	2,77	3,15
Nominal water flow rate	l/h	8136	8960	10673	11818	13117	16069	17689	21534
Nominal pressure drop	kPa	25	29	29	36	28	32	38	39
Nominal thermal performances - Heating mode									
Heating capacity (1)	kW	50,2	56,3	64,2	72,6	81	98,8	111,3	126,8
Total absorbed power (1)	kW	15,6	17,7	19,5	22,5	25	31	35,2	40,6
COP (1)		3,22	3,19	3,3	3,23	3,24	3,19	3,16	3,12
Nominal water flow rate	l/h	8717	9787	11159	12609	14083	17176	19339	22039
Nominal pressure drop	kPa	28	35	33	41	32	36	45	42
Seasonal Coeficient of Performance - **SCOP** (2)		3,86	3,82	3,98	3,88	3,88	4,38	4,38	4,13
Seasonal energy efficiency - **ηs,h** (3)	%	151,4	149,8	156,2	152,2	152,2	172,2	172,2	162,2
Seasonal efficiency class - L.T. Heat Pump (4)		A++	A+	A++	A++	A++	A++	A++	A++
Nominal thermal performances - Cooling and Heating modes									
Cooling capacity (5)	kW	47,3	52,9	61,4	69,3	79,6	94,9	106,5	122
Heating capacity (5)	kW	61,8	69,3	79,5	90,3	103	123,8	139,3	158,3
Total absorbed power (5)	kW	15,2	17,3	19	22,1	24,6	30,4	34,5	38,2
Nominal water flow rate - Cooling circuit	l/h	8128	9088	10546	11893	13662	16298	18295	20950
Nominal pressure drop - Cooling circuit	kPa	25	30	29	36	30	32	40	38
Nominal water flow rate - Heating circuit	l/h	10734	12051	13813	15685	17892	21511	24211	27515
Nominal pressure drop - Heating circuit	kPa	41	50	48	61	50	55	68	63
Total Efficiency Ratio - **TER**		7,18	7,07	7,41	7,22	7,41	7,19	7,12	7,33
Acoustic data									
Sound power level	dB(A)	80	80	81	81	81	82	82	84
Sound pressure level (6)	dB(A)	48	48	49	49	49	50	50	47
Electrical data									
Maximum power	kW	25,0	27,0	32,0	36,0	40,0	49,0	55,0	63,0
Maximum current	A	41	44	51	55	66	81	87	96
Starting current	A	159	162	185	183	191	194	198	220
Short circuit current (automatic breakers / fuse)	kA	2,5 / 2,5	2,5 / 2,5	2,5 / 2,5	2,5 / 2,5	2,5 / 2,5	6 / 8	6 / 8	6 / 8
Refrigeration circuit									
Number of circuits		2	2	2	2	2	2	2	2
Number of compressors		2	2	2	2	2	4	4	4
Total refrigerant load - R410a	kg	21	21	26	28	27	36	37	62
Hydraulic connection									
Type		Victaulic							
Diameter		2"	2"	2"	2"	2"	2 1/2"	2 1/2"	3"

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(3)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(4)** Following energy labelling regulation EU 811/2013 on space heaters. | **(5)** Cooling at 12/7°C and Heating at 40/45°C. | **(6)** Sound power level and sound pressure level at 10 m from the unit, in free field, conformity with ISO3744 norm.

A(A) A(B) H(C) 08(D) 1(E) M(F) S(G)

(A) **A** = Aqua[4]
(B) **A** = Air cooled
(C) **H** = Heat pump
(D) **08** = Nominal cooling capacity x10 [kW] (ex.: 08 = 80kW)
(E) **1** = 2 compressors / 2 circuits - **4** = 4 compressors / 2 circuits
(F) **M** = 2 pipes - **P** = 4 pipes
(G) **S** = Standard noise level - **L** = Low noise level

Air cooled version

Heat pump units

AQUA[4] - 4 pipes version		AAH144PS	AAH164PS	AAH194PS	AAH214PS	AAH244PS	AAH274PS	AAH294PS	AAH324PS
Nominal thermal performances - Cooling mode									
Cooling capacity (1)	kW	139,5	157,4	179,9	202,8	220,1	249,1	274,2	295,7
Total absorbed power (1)	kW	46,5	52,7	64,8	75,1	84,7	89,5	105,6	122,1
EER (1)		3	2,99	2,78	2,7	2,6	2,78	2,6	2,42
Nominal water flow rate	l/h	23957	27033	30897	34835	37796	42773	47089	50783
Nominal pressure drop	kPa	49	44	41	51	50	35	41	56
Nominal thermal performances - Heating mode									
Heating capacity (1)	kW	143,1	169,9	196,8	216,6	236,5	260,3	291,7	320,7
Total absorbed power (1)	kW	46,7	52,2	60,7	70	76,2	83,5	94,2	105,8
COP (1)		3,07	3,25	3,24	3,09	3,1	3,12	3,1	3,03
Nominal water flow rate	l/h	24867	29527	34200	37650	41109	45245	50689	55739
Nominal pressure drop	kPa	53	53	49	60	58	48	58	68
Seasonal Coeficient of Performance - **SCOP** (2)		4,16	4,19	4,22	4,14	4,16	4,2	4,01	4
Seasonal energy efficiency - **ηs,h** (3)	%	163,4	164,6	165,8	162,6	163,4	165	157,4	157
Seasonal efficiency class - L.T. Heat Pump (4)		A++	A++	A++	A++	A++	A++	A++	A++
Nominal thermal performances - Cooling and Heating modes									
Cooling capacity (5)	kW	137,4	157	185,9	211,1	234,3	258,9	293,8	324,5
Heating capacity (5)	kW	179,6	204,2	241,5	275,9	305,3	335,9	381,5	423,8
Total absorbed power (5)	kW	44,4	49,6	58,6	68,2	74,8	81	92,3	104,6
Nominal water flow rate - Cooling circuit	l/h	23599	26964	31921	36253	40230	44463	50449	55719
Nominal pressure drop - Cooling circuit	kPa	48	44	43	55	56	38	46	67
Nominal water flow rate - Heating circuit	l/h	31206	35480	41974	47944	53055	58376	66300	73660
Nominal pressure drop - Heating circuit	kPa	80	73	71	92	92	75	94	113
Total Efficiency Ratio - **TER**		7,15	7,28	7,3	7,14	7,22	7,34	7,31	7,15
Acoustic data									
Sound power level	dB(A)	84	85	85	86	86	86	87	87
Sound pressure level (6)	dB(A)	47	53	53	54	54	54	55	55
Electrical data									
Maximum power	kW	70,0	78,0	91,0	101,7	113,7	128,0	138,8	149,7
Maximum current	A	105	126	148	167	190	215	229	242
Starting current	A	222	241	307	318	382	398	464	472
Short circuit current (automatic breakers / fuse)	kA	6 / 8	6 / 8	6 / 8	6 / 8	6 / 10	6 / 10	6 / 10	6 / 10
Refrigeration circuit									
Number of circuits		2	2	2	2	2	2	2	2
Number of compressors		4	4	4	4	4	4	4	4
Total refrigerant load - R410a	kg	59	63	69	77	79	76	80	82
Hydraulic connection									
Type		Victaulic							
Diameter		3"	3"	3"	4"	4"	4"	4"	4"

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(3)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(4)** Following energy labelling regulation EU 811/2013 on space heaters. | **(5)** Cooling at 12/7°C and Heating at 40/45°C. | **(6)** Sound power level and sound pressure level at 10 m from the unit, in free field, conformity with ISO3744 norm.

Air cooled version

Heat pump units

AQUA⁴		AAH041	AAH051	AAH061	AAH071	AAH081	AAH094	AAH104	AAH124	AAH144	AAH164
A	mm	2440		2792			3540		3538		
B		1183		1183			1183		1653		
C		1735		1735			1679		1846		
Weight of standard units											
Basic unit (2 pipes)	kg	680	690	800	810	850	1190	1210	1550	1570	1690
Basic unit (4 pipes)		690	700	810	820	860	1210	1230	1550	1570	1710

AQUA⁴		AAH194	AAH214	AAH244	AAH274	AAH294	AAH324
A	mm	3538			4206		
B		1653			1653		
C		2330			2330		
Weight of standard units							
Basic unit (2 pipes)	kg	1710	1890	1910	2260	2290	2320
Basic unit (4 pipes)		1730	1920	1940	2290	2320	2350

Genesis

Air and water cooled screw chillers and heat pumps

R1234 ze

AIR COOLED Inverter
400 - **1350** kW

WATER COOLED Inverter
400 - **1650** kW
400 - **1950** kW

R513A

AIR COOLED Inverter
400 - **1100** kW
400 - **1200** kW

WATER COOLED Inverter
400 - **1300** kW
400 - **1500** kW

R134a

AIR COOLED Inverter
220 - **1600** kW
230 - **1440** kW

WATER COOLED Inverter
270 - **2470** kW

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

LENNOX participates in the ECP programme for LCP-HP.
Check ongoing validity of certificate : www.eurovent-certification.com

Air or water cooled units, with two refrigerant options, that meet any building and environmental requirements.

Precise control of the compressor speed which stabilises the water temperature and **ensures comfort** provision.

Partial or total heat recovery achieved with two configurations of the desuperheater, that provides free hot water for domestic use.

Free-Cooling version available with additional water coil in parallel with the refrigerant coil.

AIR COOLED VERSION

SILENT MODES

Silent version:
- Insulated compartment for compressors, made of soundproof polyurethane foam sheets (air-cooled version only).

Super Silent version (not available on Free-Cooling models):
- Insulated compartment for compressors, made of soundproof polyurethane foam sheets & polyethylene layers (all versions).
- Lower fans speed & empowerment of condensing coils (air-cooled version only).

THERMODYNAMIC SYSTEM

High efficiency screw compressors with built-in sliding valve for capacity control (inverter as an option).
Enhanced cooling capacity and efficiency with Economizer.
Screw compressor with integrated oil separator.
Shell and tube evaporator on air-cooled versions and flooded on water-cooled versions.
Aluminium microchannel condenser coil (Cooling only version).
High performance fans to improve efficiency and reduce noise level (EC version available in option).
Brazed plate heat exchanger on each refrigerant circuit to produce hot sanitary water up to 65°C.
Up to three independent circuits, each equipped with electronic expansion valve.

Photos and illustrations are not contractual.

CONTROL

Communication Controller-Display through proprietary device.
Connections to peripheral equipment take place through a gateway via CAN Bus connection.
64 x 128 pixel display (read-write).
Remote control panel (CR) available as accessory on all units.

WEB MONITORING

Remote monitoring via GPRS/EDGE/3G/TCP-IP protocol.
Monitors the functioning of the unit through a dedicated web portal.
Automatically send email warnings of system alarms.

WATER COOLED VERSION

WATER CIRCUIT

Single or dual pump (inverter as an option).
Shut-off valve on discharge and suction lines of each circuit.
Water differential pressure switch to avoid ice forming on the piping and to stop the system in case of pump breakage or leakage (alerts the user with dedicated warning).
Inertial tank combined with shell & tube evaporator in one unique piece to reduce the overall footprint (as an option).
Antifreeze heaters as optional feature on evaporator, tank, pumps and/or pipes (not available on Free-cooling version)
Low temperature water kit (as an option), to adjust system operation with water temperature from +5°C to -8°C.

$J_{(A)}$ $A_{(B)}$ $C_{(C)}$ $1100_{(D)}$ $D_{(E)}$ $X_{(F)}$ $1_{(G)}$ $-A_{(H)}$ $SSL_{(I)}$

(A) **J** = Genesis
(B) **A** = Air cooled - **W** = Water cooled
(C) **C** = Cooling only mode - **H** = Heat pump
(D) Approximate capacity in kW
(E) **S** = Single circuit - **D** = Double circuit - **T** = Triple circuit
(F) **A** = R134A - **J** = R513A - **X** = R1234ZE
(G) **1** = Revision number
(H) **-A** = Advanced - **-FC** = Free cooling
(I) **--** = Standard - **SSL** = Super low noise

Air cooled version

Cooling only units

GENESIS: JAC -A (R1234ze)			200D	250D	300D	350D	400D	450D	550D	600D	700D	850D	950D	1100D	1200D	1350D
Nominal thermal performances - Cooling mode																
Cooling capacity (1)		kW	197,0	261,0	309,0	366,0	406,0	464,0	548,0	608,0	717,0	809,0	980,0	1064,0	1228,0	1353,0
Total absorbed power (1)		kW	62,0	81,0	96,0	114,0	126,0	144,0	165,0	185,0	219,0	244,0	294,0	326,0	371,0	414,0
EER (1)			3,18	3,22	3,22	3,21	3,22	3,22	3,32	3,29	3,27	3,32	3,33	3,26	3,31	3,27
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		4,22	4,25	4,43	4,30	4,55	4,55	4,61	4,60	4,61	4,61	4,62	4,55	4,55	4,55
Comfort Application	Seasonal energy efficiency (2) **ηs,c**	%	166	167	174	169	179	179	181	181	181	181	182	179	179	179
Nominal thermal performances - Free Cooling mode																
Air temperature (3)		°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total absorbed power (3)		kW	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acoustic data																
Global sound power level Standard unit (4)		dB(A)	94,0	95,0	95,0	96,0	96,0	98,0	98,0	98,0	100,0	102,0	104,0	104,0	106,0	106,0
Electrical data																
Maximum current		A	203,0	275,0	319,0	355,0	413,0	467,0	512,0	597,0	670,0	731,0	764,0	831,0	951,0	1039,0
Starting current		A	291,0	417,0	488,0	586,0	642,0	723,0	783,0	896,0	947,0	1091,0	1206,0	1244,0	1450,0	1494,0
Refrigeration circuit																
Number of circuits			2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of compressors			2	2	2	2	2	2	2	2	2	2	2	2	2	2
Total refrigerant load - R1234ze		kg	39,0	42,0	52,0	65,0	67,0	67,0	87,0	89,0	110,0	226,0	263,0	289,0	323,0	335,0
Condenser																
Nominal water flow rate (1)		l/h	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nominal pressure drop (1)		kPa	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water connections		DN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Evaporator																
Nominal water flow rate (1)		l/h	9,41	12,47	14,76	17,49	19,40	22,17	26,18	29,05	34,26	38,65	46,82	50,84	58,67	64,64
Nominal pressure drop (1)		kPa	39	37	32	34	31	28	37	33	40	42	30	38	47	54
Water connections		DN	125	125	150	150	150	150	150	150	200	200	200	200	250	250

(1) EUROVENT certified data, in accordance with standard EN 14511. **Cooling mode:** Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C.
(2) Seasonal energy efficiency of ambient heating at low temperature. According to EU Regulation n. 2016/2281.
(3) Temperature at which cooling capacity is reached equal to that indicated at point (1).
(4) Sound power according to Standard ISO 3744 and Eurovent 8/1.

J(A) A(B) C(C) 1100(D) D(E) X(F) 1(G) -A(H) SSL(I)

(A) **J** = Genesis
(B) **A** = Air cooled - **W** = Water cooled
(C) **C** = Cooling only mode - **H** = Heat pump
(D) Approximate capacity in kW
(E) **S** = Single circuit - **D** = Double circuit - **T** = Triple circuit
(F) **A** = R134A - **J** = R513A - **X** = R1234ZE
(G) **1** = Revision number
(H) **-A** = Advanced - **-FC** = Free cooling
(I) **--** = Standard - **SSL** = Super low noise

Air cooled version

Free cooling units

GENESIS: JAC -FC (R1234ze)		200D	250D	300D	350D	400D	450D	550D	600D	700D	850D	950D	1100D
Nominal thermal performances - Cooling mode													
Cooling capacity (1)	kW	232,0	297,0	350,0	404,0	444,0	519,0	604,0	684,0	801,0	891,0	1044,0	1144,0
Total absorbed power (1)	kW	67,0	87,0	107,0	125,0	142,0	158,0	187,0	205,0	239,0	271,0	338,0	362,0
EER (1)		3,48	3,43	3,29	3,24	3,11	3,28	3,23	3,34	3,35	3,29	3,09	3,16
Process Application — Seasonal Energy Performance Ratio High Temperature (2) **SEPR HT**		5,59	5,57	5,52	5,63	5,50	5,67	5,63	5,66	5,71	5,74	5,50	5,50
Nominal thermal performances - Free Cooling mode													
Air temperature (2)	°C	2,0	0,0	1,3	1,0	-0,5	-0,5	0,5	-1,0	-0,5	-0,5	-1,0	0,0
Total absorbed power (2)	kW	10,8	10,8	14,4	14,4	14,4	18,0	21,6	21,6	21,6	25,2	28,8	32,4
Acoustic data													
Global sound power level Standard unit (3)	dB(A)	95,0	96,0	96,0	97,0	97,0	99,0	100,0	100,0	102,0	104,0	105,0	105,0
Electrical data													
Maximum current	A	211,0	275,0	327,0	355,0	413,0	467,0	520,0	605,0	670,0	731,0	764,0	831,0
Starting current	A	299,0	417,0	496,0	586,0	642,0	723,0	791,0	904,0	947,0	1091,0	1206,0	1244,0
Refrigeration circuit													
Number of circuits		2	2	2	2	2	2	2	2	2	2	2	2
Number of compressors		2	2	2	2	2	2	2	2	2	2	2	2
Total refrigerant load - R1234ze	kg	59,0	60,0	61,0	76,0	80,0	104,0	98,0	183,0	221,0	231,0	278,0	321,0
Condenser													
Nominal water flow rate (1)	l/h	-	-	-	-	-	-	-	-	-	-	-	-
Nominal pressure drop (1)	kPa	-	-	-	-	-	-	-	-	-	-	-	-
Water connections	DN	-	-	-	-	-	-	-	-	-	-	-	-
Evaporator													
Nominal water flow rate (1)	l/h	11,60	14,90	17,50	20,20	22,20	25,90	30,20	34,20	40,10	44,60	52,20	57,20
Nominal pressure drop (1)	kPa	77	96	143	118	132	77	104	124	98	108	138	169
Water connections	DN	100	100	100	125	125	125	150	150	150	150	200	200

(1) EUROVENT certified data, in accordance with standard EN 14511. **Cooling mode:** Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C.
(2) Temperature at which cooling capacity is reached equal to that indicated at point (1).
(3) Sound power according to Standard ISO 3744 and Eurovent 8/1.

J(A) A(B) C(C) 1100(D) D(E) X(F) 1(G) -A(H) SSL(I)

(A) **J** = Genesis
(B) **A** = Air cooled - **W** = Water cooled
(C) **C** = Cooling only mode - **H** = Heat pump
(D) Approximate capacity in kW
(E) **S** = Single circuit - **D** = Double circuit - **T** = Triple circuit
(F) **A** = R134A - **J** = R513A - **X** = R1234ZE
(G) **1** = Revision number
(H) **-A** = Advanced - **-FC** = Free cooling
(I) **--** = Standard - **SSL** = Super low noise

Water cooled version

Cooling only units

GENESIS: JWC -A (R1234ze)			250D	300D	350D	450D	500D	550D	650D	750D	850D	950D	1150D	1250D	1450D	1650D
Nominal thermal performances - Cooling mode																
Cooling capacity (1)		kW	234,0	310,0	375,0	437,0	488,0	558,0	655,0	736,0	868,0	980,0	1160,0	1278,0	1475,0	1650,0
Total absorbed power (1)		kW	44,0	57,0	66,0	80,0	89,0	100,0	117,0	131,0	154,0	174,0	222,0	242,0	275,0	304,0
EER (1)			5,32	5,44	5,68	5,46	5,48	5,58	5,60	5,62	5,64	5,63	5,23	5,28	5,36	5,43
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		5,68	5,71	5,89	6,76	6,79	6,80	6,84	6,92	7,02	6,98	7,06	7,14	7,28	7,28
	Seasonal energy efficiency (2) **ηs,c**	%	219	220	228	262	264	264	266	269	273	271	274	278	283	283
Nominal thermal performances - Free Cooling mode																
Air temperature (3)		°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total absorbed power (3)		kW	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acoustic data																
Global sound power level Standard unit (4)		dB(A)	94,0	94,0	95,0	95,0	95,0	95,0	96,0	96,0	97,0	98,0	100,0	100,0	102,0	103,0
Electrical data																
Maximum current		A	144,0	190,0	220,0	260,0	290,0	334,0	384,0	436,0	489,0	549,0	701,0	761,0	873,0	961,0
Starting current		A	199,0	257,0	318,0	373,0	420,0	504,0	492,0	576,0	692,0	782,0	1144,0	1174,0	1372,0	1416,0
Refrigeration circuit																
Number of circuits			2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of compressors			2	2	2	2	2	2	2	2	2	2	2	2	2	2
Total refrigerant load - R1234ze		kg	96	100	100	98	96	93	133	133	163	166	222	219	272	333
Condenser																
Nominal water flow rate (1)		l/h	13,28	17,53	21,07	24,70	27,57	31,44	36,88	41,42	48,83	55,14	66,03	72,62	83,61	93,36
Nominal pressure drop (1)		kPa	17	28	34	36	36	35	32	34	37	37	37	37	35	32
Water connections		DN	80	80	80	80	80	80	100	100	100	100	125	125	125	150
Evaporator																
Nominal water flow rate (1)		l/h	11,18	14,81	17,92	20,88	23,32	26,66	31,29	35,16	41,47	46,82	55,42	61,06	70,47	78,83
Nominal pressure drop (1)		kPa	36	37	42	39	32	31	35	45	39	38	39	49	57	54
Water connections		DN	125	150	150	150	200	200	200	200	200	250	250	250	250	250

(1) EUROVENT certified data, in accordance with standard EN 14511. **Cooling mode:** Evaporator water temperature = 12/7°C | Condenser water temperature = 30/35°C.
(2) Seasonal energy efficiency of ambient heating at low temperature. According to EU Regulation n. 2016/2281.
(3) Temperature at which cooling capacity is reached equal to that indicated at point (1).
(4) Sound power according to Standard ISO 3744 and Eurovent 8/1.

Air cooled version

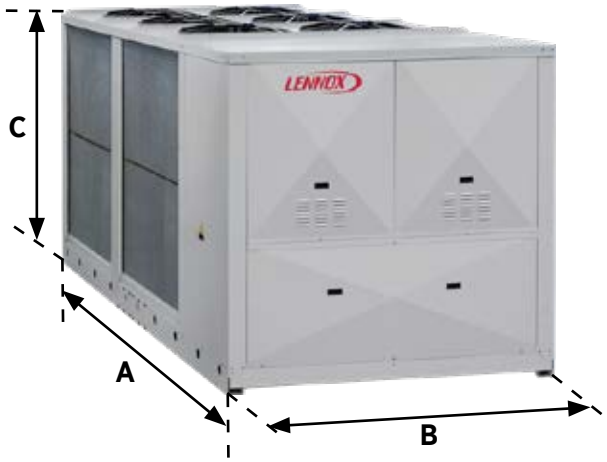
Cooling only units

GENESIS: JAC -A (R1234ze)		200D	250D	300D	350D	400D	450D	550D	600D	700D	850D	950D	1100D	1200D	1350D
A	mm	4400	5000		5550		6700			8900	10050	11100	12250	13400	
B		2200	2200		2200		2200			2200	2200	2200	2200	2200	
C		2100	2100		2100		2100			2100	2550	2550	2550	2550	
Weight of standard units															
Transport weight	kg	2600	3115	3340	3785	3860	4415	4935	5010	6000	7210	8355	8915	10820	11110

Air cooled version

Free cooling units

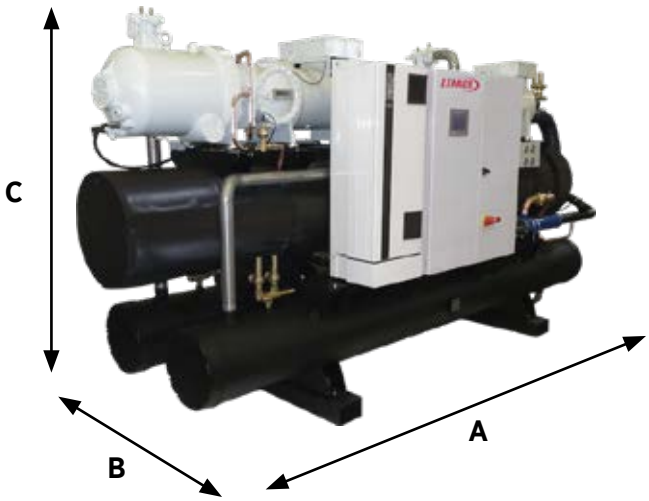
GENESIS: JAC -FC (R1234ze)		200D	250D	300D	350D	400D	450D	550D	600D	700D	850D	950D	1100D
A	mm	4400		5550			6700	10050		10050		12250	13400
B		2200		2200			2200	2200		2200		2200	2200
C		2360		2360			2360	2360		2750		2750	2750
Weight of standard units													
Transport weight	kg	3150	3420	4020	4410	4560	5440	6800	7280	8420	8900	10690	11570



Water cooled version

Cooling only units

GENESIS: JWC -A (R1234ze)		250D	300D	350D	450D	500D	550D	650D	750D	850D	950D	1150D	1250D	1450D	1650D
A	mm	3700			3800		3900			4900	4900	5300		5550	5550
B		1000			1150		1200			1300	1300	1400		2000	2000
C		1800			1950		2050			2250	2300	2450		2500	2500
Weight of standard units															
Transport weight	kg	2140	2445	2640	2860	3090	3230	4180	4560	5205	5670	6950	7080	9060	10050



J(A) A(B) C(C) 1100(D) D(E) J(F) 1(G) -A(H) SSL(I)

(A) **J** = Genesis
(B) **A** = Air cooled - **W** = Water cooled
(C) **C** = Cooling only mode - **H** = Heat pump
(D) Approximate capacity in kW
(E) **S** = Single circuit - **D** = Double circuit - **T** = Triple circuit
(F) **A** = R134A - **J** = R513A - **X** = R1234ZE
(G) **1** = Revision number
(H) **-A** = Advanced - **-FC** = Free cooling
(I) **--** = Standard - **SSL** = Super low noise

Air cooled version

Heat pump units

GENESIS: JAH -A (R513A)			250D	300D	350D	400D	450D	550D	700D	850D	950D	1100D
Nominal thermal performances - Cooling mode												
Cooling capacity (1)		kW	257	306	351	404	454	561	680	820	937	1110
Total absorbed power (1)		kW	78	92	113	129	144	175	214	247	299	341
EER (1)			3,3	3,31	3,12	3,13	3,15	3,21	3,18	3,32	3,14	3,26
Eurovent energy class (1) - Full load operation			A	A	A	A	A	A	A	A	A	A
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		4,85	4,93	4,86	4,68	4,69	4,73	4,6	4,82	4,8	4,64
Comfort Application	Seasonal energy efficiency (2) **ηs,c**	%	191	194	191	184	185	186	181	190	189	183
Nominal thermal performances - Heating mode												
Heating capacity (1)		kW	333,7	321,1	372	416	475,8	591	710,4	857,3	982,6	1184,1
Total absorbed power (1)		kW	77,9	88,9	107,1	123,2	137	166,9	204,1	237,5	284,8	328,1
COP (1)			4,28	3,61	3,47	3,38	3,47	3,54	3,48	3,61	3,45	3,61
Eurovent energy class (1) - Full load operation			A	A	A	A	A	A	A	A	A	A
Comfort Application	Seasonal Coeficient of Performance (2) **SCOP**		3,28	3,59	3,54	3,58	3,48	3,53	3,52	3,82	3,48	3,43
Comfort Application	Seasonal energy efficiency (2) **ηs,c**	%	128	140	138	140	136	168	137	143	136	134
Acoustic data												
Global sound power level Standard unit (3)		dB(A)	96	96	96	96	97	97	98	99	99	100
Electrical data												
Maximum current		A	201	237	261	301	337	393	485	580	664	720
Starting current		A	263	281	337	361	405	504	596	785	827	855
Refrigeration circuit												
Number of circuits			2	2	2	2	2	2	2	2	2	2
Number of compressors			2	2	2	2	2	2	2	2	2	2
Total refrigerant load - 513A (cooling only)		kg	62	66	68	86	88	134	170	232	232	282
Total refrigerant load - 513A (heat pump)		kg	66	68	74	92	98	146	178	222	242	296
Condenser												
Nominal water flow rate (1)		l/h	-	-	-	-	-	-	-	-	-	-
Nominal pressure drop (1)		kPa	-	-	-	-	-	-	-	-	-	-
Water connections		DN	-	-	-	-	-	-	-	-	-	-
Evaporator												
Nominal water flow rate (1)		l/h	12,57	14,95	17,15	19,73	22,17	27,42	33,25	40,09	45,82	54,28
Nominal pressure drop (1)		kPa	30	26	49	44	34	28	42	34	39	48
Water connections		DN	125	125	150	150	150	150	150	200	200	200

(1) EUROVENT certified data, in accordance with standard EN 14511. **Cooling mode:** Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C.
Heating mode: Evaporator water temperature = 40/45°C | Outdoor air temperature (DB/WB) = 7°C/6°C.
(2) Seasonal energy efficiency of ambient heating at low temperature. According to EU Regulation n. 2016/2281.
(3) Sound power according to Standard ISO 3744 and Eurovent 8/1.

J(A) A(B) C(C) 1100(D) D(E) J(F) 1(G) -A(H) SSL(I)

(A) **J** = Genesis
(B) **A** = Air cooled - **W** = Water cooled
(C) **C** = Cooling only mode - **H** = Heat pump
(D) Approximate capacity in kW
(E) **S** = Single circuit - **D** = Double circuit - **T** = Triple circuit
(F) **A** = R134A - **J** = R513A - **X** = R1234ZE
(G) **1** = Revision number
(H) **-A** = Advanced - **-FC** = Free cooling
(I) **--** = Standard - **SSL** = Super low noise

Air cooled version

Cooling only units

GENESIS: JAH -A (R513A)			250D	300D	350D	400D	450D	550D	700D	850D	950D	1100D	1250D	1400D	1550D
Nominal thermal performances - Cooling mode															
Cooling capacity (1)		kW	258	307	352	405	455	563	682	822	940	1113	1239	1370	1502
Total absorbed power (1)		kW	78	93	111	126	141	171	210	242	293	334	363	418	457
EER (1)			3,29	3,31	3,16	3,21	3,23	3,29	3,25	3,4	3,21	3,33	3,41	3,28	3,29
Eurovent energy class (1) - Full load operation			A	A	A	A	A	A	A	A	A	A	A	A	A
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		4,29	4,35	4,35	4,69	4,7	4,74	4,61	4,83	4,82	4,65	4,71	4,68	4,7
	Seasonal energy efficiency (2) **ηs,c**	%	167	171	171	185	185	187	181	190	190	183	185	184	185
Nominal thermal performances - Free Cooling mode															
Air temperature (3)		°C	-	-	-	-	-	-	-	-	-	-	-	-	-
Total absorbed power (3)		kW	-	-	-	-	-	-	-	-	-	-	-	-	-
Acoustic data															
Global sound power level Standard unit (4)		dB(A)	96	96	96	96	97	97	98	99	99	100	100	100	101
Electrical data															
Maximum current		A	201	237	261	301	337	393	485	580	664	720	922	876	1002
Starting current		A	263	281	337	361	405	504	596	785	827	855	1267	1261	1379
Refrigeration circuit															
Number of circuits			2	2	2	2	2	2	2	2	2	2	2	2	2
Number of compressors			2	2	2	2	2	2	2	2	2	2	2	2	2
Total refrigerant load - 513A (cooling only)		kg	44	46	48	52	64	70	96	84	104	128	158	170	194
Condenser															
Nominal water flow rate (1)		l/h	-	-	-	-	-	-	-	-	-	-	-	-	-
Nominal pressure drop (1)		kPa	-	-	-	-	-	-	-	-	-	-	-	-	-
Water connections		DN	-	-	-	-	-	-	-	-	-	-	-	-	-
Evaporator															
Nominal water flow rate (1)		l/h	12,57	14,95	17,15	19,73	22,17	27,42	33,25	40,09	45,82	54,28	60,39	66,79	73,24
Nominal pressure drop (1)		kPa	30	26	49	44	34	28	42	34	39	48	38	46	59
Water connections		DN	125	125	150	150	150	150	150	200	200	200	200	200	200

(1) EUROVENT certified data, in accordance with standard EN 14511. **Cooling mode:** Evaporator water temperature = 12/7°C | Condenser water temperature = 30/35°C.
(2) Seasonal energy efficiency of ambient heating at low temperature. According to EU Regulation n. 2016/2281.
(3) Temperature at which cooling capacity is reached equal to that indicated at point (1).
(4) Sound power according to Standard ISO 3744 and Eurovent 8/1.

$J_{(A)}$ $A_{(B)}$ $C_{(C)}$ $1100_{(D)}$ $D_{(E)}$ $J_{(F)}$ $1_{(G)}$ $-A_{(H)}$ $SSL_{(I)}$

(A) **J** = Genesis
(B) **A** = Air cooled - **W** = Water cooled
(C) **C** = Cooling only mode - **H** = Heat pump
(D) Approximate capacity in kW
(E) **S** = Single circuit - **D** = Double circuit - **T** = Triple circuit
(F) **A** = R134A - **J** = R513A - **X** = R1234ZE
(G) **1** = Revision number
(H) **-A** = Advanced - **-FC** = Free cooling
(I) **--** = Standard - **SSL** = Super low noise

Water cooled version

Cooling only units

GENESIS: JWC (R513A)			300D	350D	400D	450D	500D	600D	750D	800D	900D	1150D	1300D
Nominal thermal performances - Cooling mode													
Cooling capacity (1)		kW	274	333	383	438	496	612	695	774	939	1101	1260
Total absorbed power (1)		kW	49	59	68	78	87	106	119	130	158	185	214
EER (1)			5,56	5,64	5,64	5,63	5,72	5,75	5,83	5,95	5,96	5,94	5,89
Eurovent energy class (1) - Full load operation			A	A	A	A	A	A	A	A	A	A	A
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		6,96	7,13	7,18	7,04	7,2	7,27	7,39	7,55	7,58	7,59	7,54
Comfort Application	Seasonal energy efficiency (2) **ηs,c**	%	270	277	279	274	280	283	288	294	295	296	294
Nominal thermal performances - Free Cooling mode													
Air temperature (3)		°C	-	-	-	-	-	-	-	-	-	-	-
Total absorbed power (3)		kW	-	-	-	-	-	-	-	-	-	-	-
Acoustic data													
Global sound power level Standard unit (4)		dB(A)	95	95	96	96	96	96	96	98	99	100	100
Electrical data													
Maximum current		A	178	214	238	270	292	354	398	438	456	536	622
Starting current		A	240	258	314	330	434	465	487	549	558	598	775
Refrigeration circuit													
Number of circuits			1	1	1	1	1	1	1	1	1	1	2
Number of compressors			2	2	2	2	2	2	2	2	2	2	2
Total refrigerant load - R134a		kg	150	160	170	210	240	250	270	310	330	380	400
Condenser													
Nominal water flow rate (1)		l/h	15,77	19,16	22,03	25,18	28,43	35,07	39,75	44,15	53,56	62,78	71,95
Nominal pressure drop (1)		kPa	46	39	42	62	52	60	62	65	58	58	59
Water connections		DN	80	100	100	100	125	125	125	125	150	150	150
Evaporator													
Nominal water flow rate (1)		l/h	13,38	16,29	18,73	21,4	24,22	29,91	33,97	37,84	45,91	53,8	61,59
Nominal pressure drop (1)		kPa	28	32	26	60	54	57	57	54	56	57	61
Water connections		DN	100	100	100	125	125	125	125	150	150	150	150

(1) EUROVENT certified data, in accordance with standard EN 14511. **Cooling mode:** Evaporator water temperature = 12/7°C | Condenser water temperature = 30/35°C.
(2) Seasonal energy efficiency of ambient heating at low temperature. According to EU Regulation n. 2016/2281.
(3) Temperature at which cooling capacity is reached equal to that indicated at point (1).
(4) Sound power according to Standard ISO 3744 and Eurovent 8/1.

J(A) A(B) C(C) 1100(D) D(E) A(F) 1(G) -A(H) SSL(I)

(A) **J** = Genesis
(B) **A** = Air cooled - **W** = Water cooled
(C) **C** = Cooling only mode - **H** = Heat pump
(D) Approximate capacity in kW
(E) **S** = Single circuit - **D** = Double circuit - **T** = Triple circuit
(F) **A** = R134A - **J** = R513A - **X** = R1234ZE
(G) **1** = Revision number
(H) **-A** = Advanced - **-FC** = Free cooling
(I) **--** = Standard - **SSL** = Super low noise

Air cooled version

Heat pump units

GENESIS: JAH -A (R134a)			250D	300D	350D	400D	450D	550D	700D	850D	950D	1100D
Nominal thermal performances - Cooling mode												
Cooling capacity (1)		kW	263	313	359	413	464	574	696	839	959	1136
Total absorbed power (1)		kW	82	96	114	131	146	179	219	256	305	352
EER (1)			3,21	3,26	3,15	3,15	3,18	3,21	3,18	3,28	3,14	3,23
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		4,13	4,25	4,22	4,73	4,74	4,77	4,65	4,86	4,85	4,69
Comfort Application	Seasonal energy efficiency (2) **ηs,c**	%	162	167	166	186	187	188	183	191	191	185
Nominal thermal performances - Heating mode												
Heating capacity (1)		kW	272	324	372	428	480	594	721	869	993	1176,0
Total absorbed power (1)		kW	81	95	113	130	144	177	217	253	302	348,0
COP (1)			3,36	3,41	3,29	3,29	3,33	3,36	3,32	3,43	3,29	3,4
Eurovent energy class (1) - Full load operation			A	A	A	A	A	A	A	A	A	A
Comfort Application	Seasonal Coeficient of Performance (2) **SCOP**		3,20	3,32	3,34	3,33	3,32	3,34	3,32	3,36	3,32	3,36
Comfort Application	Seasonal energy efficiency (2) **ηs,c**	%	125	130	131	130	130	131	130	131	130	131
Nominal thermal performances - Free Cooling mode												
Air temperature (3)		°C	-	-	-	-	-	-	-	-	-	-
Total absorbed power (3)		kW	-	-	-	-	-	-	-	-	-	-
Acoustic data												
Global sound power level Standard unit (4)		dB(A)	96	96	96	96	97	97	98	99	99	100
Electrical data												
Maximum current		A	201	237	261	301	337	393	485	580	664	720
Starting current		A	263	281	337	361	405	504	596	785	827	855
Refrigeration circuit												
Number of circuits			2	2	2	2	2	2	2	2	2	2
Number of compressors			2	2	2	2	2	2	2	2	2	2
Total refrigerant load - R134a (cooling only)		kg	62	66	68	86	88	134	170	232	232	282
Total refrigerant load - R134a (heat pump)		kg	66	68	74	92	98	146	178	222	242	296
Condenser												
Nominal water flow rate (1)		l/h	-	-	-	-	-	-	-	-	-	-
Nominal pressure drop (1)		kPa	-	-	-	-	-	-	-	-	-	-
Water connections		DN	-	-	-	-	-	-	-	-	-	-
Evaporator												
Nominal water flow rate (1)		l/h	12,57	14,95	17,15	19,73	22,17	27,42	33,25	40,09	45,82	54,28
Nominal pressure drop (1)		kPa	30	26	49	44	34	28	42	34	39	48
Water connections		DN	125	125	150	150	150	150	150	200	200	200

(1) EUROVENT certified data, in accordance with standard EN 14511. **Cooling mode:** Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C.
Heating mode: Evaporator water temperature = 40/45°C | Outdoor air temperature (DB/WB) = 7°C/6°C.
(2) Seasonal energy efficiency of ambient heating at low temperature. According to EU Regulation n. 2016/2281.
(3) Temperature at which cooling capacity is reached equal to that indicated at point (1).
(4) Sound power according to Standard ISO 3744 and Eurovent 8/1.

J(A) A(B) C(C) 1100(D) D(E) A(F) 1(G) -A(H) SSL(I)

(A) **J** = Genesis
(B) **A** = Air cooled - **W** = Water cooled
(C) **C** = Cooling only mode - **H** = Heat pump
(D) Approximate capacity in kW
(E) **S** = Single circuit - **D** = Double circuit - **T** = Triple circuit
(F) **A** = R134A - **J** = R513A - **X** = R1234ZE
(G) **1** = Revision number
(H) **-A** = Advanced - **-FC** = Free cooling
(I) **--** = Standard - **SSL** = Super low noise

Air cooled version

Cooling only units

GENESIS: JAC-A (R134a)			250D	300D	350D	400D	450D	550D	700D	850D	950D	1100D	1250D	1400D	1550D
Nominal thermal performances - Cooling mode															
Cooling capacity (1)		kW	263,0	313,0	359,0	413,0	464,0	574,0	696,0	839,0	959,0	1136,0	1264,0	1398,0	1533,0
Total absorbed power (1)		kW	80,0	94,0	112,0	128,0	143,0	175,0	215,0	251,0	299,0	345,0	372	431	470
EER (1)			3,29	3,33	3,21	3,23	3,24	3,28	3,24	3,34	3,21	3,29	3,40	3,24	3,26
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		4,14	4,26	4,23	4,74	4,75	4,78	4,66	4,87	4,86	4,70	4,75	4,72	4,74
Comfort Application	Seasonal energy efficiency (2) **ηs,c**	%	163	167	166	187	187	188	183	192	191	185	187	186	187
Nominal thermal performances - Free Cooling mode															
Air temperature (3)		°C	-	-	-	-	-	-	-	-	-	-	-	-	-
Total absorbed power (3)		kW	-	-	-	-	-	-	-	-	-	-	-	-	-
Acoustic data															
Global sound power level Standard unit (4)		dB(A)	96	96	96	96	97	97	98	99	99	100	100	100	101
Electrical data															
Maximum current		A	201	237	261	301	337	393	485	580	664	720	922	876	1002
Starting current		A	263	281	337	361	405	504	596	785	827	855	1267	1261	1379
Refrigeration circuit															
Number of circuits			2	2	2	2	2	2	2	2	2	2	2	2	2
Number of compressors			2	2	2	2	2	2	2	2	2	2	2	2	2
Total refrigerant load - R134a (cooling only)		kg	44	46	48	52	64	70	96	84	104	128	158	170	194
Condenser															
Nominal water flow rate (1)		l/h	-	-	-	-	-	-	-	-	-	-	-	-	-
Nominal pressure drop (1)		kPa	-	-	-	-	-	-	-	-	-	-	-	-	-
Water connections		DN	-	-	-	-	-	-	-	-	-	-	-	-	-
Evaporator															
Nominal water flow rate (1)		l/h	12,57	14,95	17,15	19,73	22,17	27,42	33,25	40,09	45,82	54,28	60,39	66,79	73,24
Nominal pressure drop (1)		kPa	30	26	49	44	34	28	42	34	39	48	38	46	59
Water connections		DN	125	125	150	150	150	150	150	200	200	200	200	200	200

(1) EUROVENT certified data, in accordance with standard EN 14511. **Cooling mode:** Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C.
Heating mode: Evaporator water temperature = 40/45°C | Outdoor air temperature (DB/WB) = 7°C/6°C.
(2) Seasonal energy efficiency of ambient heating at low temperature. According to EU Regulation n. 2016/2281.
(3) Temperature at which cooling capacity is reached equal to that indicated at point (1).
(4) Sound pressure level according to Standard DIN 45635, measured in free field conditions at 1 m from the unit (condensing coil side) and at 1.5 m from the ground.

J(A) A(B) C(C) 1100(D) D(E) A(F) 1(G) -A(H) SSL(I)

(A) **J** = Genesis
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(C) **C** = Cooling only mode - **H** = Heat pump
(D) Approximate capacity in kW
(E) **S** = Single circuit - **D** = Double circuit - **T** = Triple circuit
(F) **A** = R134A - **J** = R513A - **X** = R1234ZE
(G) **1** = Revision number
(H) **-A** = Advanced - **-FC** = Free cooling
(I) **--** = Standard - **SSL** = Super low noise

Air cooled version

Free cooling units

GENESIS: JAC -FC (R134a)			200D	250D	300D	350D	400D	450D	550D	700D	850D	950D	1100D	1200D	1350D
Nominal thermal performances - Cooling mode															
Cooling capacity (1)		kW	217	258	315	375	418	473	569	709	847	994	1139	1288	1460
Total absorbed power (1)		kW	83	97	114	148	157	184	210	263	316	370	434	490	541
EER (1)			2,61	2,66	2,76	2,53	2,66	2,57	2,71	2,70	2,68	2,69	2,62	2,63	2,70
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		-	-	-	-	-	-	-	-	-	-	-	-	-
Comfort Application	Seasonal energy efficiency (2) **ηs,c**	%	-	-	-	-	-	-	-	-	-	-	-	-	-
Nominal thermal performances - Free Cooling mode															
Air temperature (3)		°C	-2,5	-2,0	-2,0	-4,5	-3,7	-4,0	-3,5	-4,3	-4,3	-4,6	-4,7	-4,1	-3,9
Total absorbed power (3)		kW	8	12	12	12	12	16	20	20	22	22	25	29	36
Acoustic data															
Global sound power level Standard unit (4)		dB(A)	79,8	80,6	80,8	81,1	81,7	82,6	83,6	85,8	86,1	86,4	87,4	88,3	90,6
Electrical data															
Maximum current		A	194	201	237	261	293	337	393	437	565	649	713	720	896
Starting current		A	256	263	281	337	353	405	504	526	770	812	848	855	1688
Refrigeration circuit															
Number of circuits			2	2	2	2	2	2	2	2	2	2	2	2	2
Number of compressors			2	2	2	2	2	2	2	2	2	2	2	2	2
Total refrigerant load - R134a		kg	36	38	50	54	64	72	118	160	170	216	230	240	300
Condenser															
Nominal water flow rate (1)		l/h	-	-	-	-	-	-	-	-	-	-	-	-	-
Nominal pressure drop (1)		kPa	-	-	-	-	-	-	-	-	-	-	-	-	-
Water connections		DN	-	-	-	-	-	-	-	-	-	-	-	-	-
Evaporator															
Nominal water flow rate (1)		l/h	11,22	13,34	16,29	19,38	21,61	24,45	29,42	36,65	43,79	51,38	58,88	66,58	75,47
Nominal pressure drop (1)		kPa	125	170	180	168	191	130	115	160	164	160	200	225	300
Water connections		DN	100	100	100	125	125	125	150	150	150	200	200	200	200

(1) EUROVENT certified data, in accordance with standard EN 14511. **Cooling mode:** Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C.
(2) Seasonal energy efficiency of ambient heating at low temperature. According to EU Regulation n. 2016/2281.
(3) Temperature at which cooling capacity is reached equal to that indicated at point (1).
(4) Sound pressure level according to Standard DIN 45635, measured in free field conditions at 1 m from the unit (condensing coil side) and at 1.5 m from the ground.

J(A) A(B) C(C) 1100(D) D(E) A(F) 1(G) -A(H) SSL(I)

(A) **J** = Genesis
(B) **A** = Air cooled - **W** = Water cooled
(C) **C** = Cooling only mode - **H** = Heat pump
(D) Approximate capacity in kW
(E) **S** = Single circuit - **D** = Double circuit - **T** = Triple circuit
(F) **A** = R134A - **J** = R513A - **X** = R1234ZE
(G) **1** = Revision number
(H) **-A** = Advanced - **-FC** = Free cooling
(I) **--** = Standard - **SSL** = Super low noise

Water cooled version

Cooling only units

GENESIS: JWC -A (R134a)			300S	350S	400S	450S	500S	600S	750S	800S	900S	1150S	1300S
Nominal thermal performances - Cooling mode													
Cooling capacity (1)		kW	280	341	392	448	507	626	711	792	961	1126	1289
Total absorbed power (1)		kW	50	60	69	79	88	108	121	132	160	188	217
EER (1)			5,60	5,68	5,68	5,67	5,76	5,80	5,88	6,00	6,01	5,99	5,94
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		7,03	7,20	7,25	7,11	7,27	7,34	7,46	7,63	7,66	7,67	7,62
Comfort Application	Seasonal energy efficiency (2) **ηs,c**	%	273	280	282	276	283	286	290	297	298	299	297
Nominal thermal performances - Free Cooling mode													
Air temperature (3)		°C	-	-	-	-	-	-	-	-	-	-	-
Total absorbed power (3)		kW	-	-	-	-	-	-	-	-	-	-	-
Acoustic data													
Global sound power level Standard unit (4)		dB(A)	95	95	96	96	96	96	96	98	99	100	100
Electrical data													
Maximum current		A	178	214	238	270	292	354	398	438	456	536	622
Starting current		A	240	258	314	330	434	465	487	549	558	598	775
Refrigeration circuit													
Number of circuits			1	1	1	1	1	1	1	1	1	1	1
Number of compressors			2	2	2	2	2	2	2	2	2	2	2
Total refrigerant load - R134a		kg	150	160	170	210	240	250	270	310	330	380	400
Condenser													
Nominal water flow rate (1)		l/h	15,77	19,16	22,03	25,18	28,43	35,07	39,75	44,15	53,56	62,78	71,95
Nominal pressure drop (1)		kPa	46	39	42	62	52	60	62	65	58	58	59
Water connections		DN	80	100	100	100	125	125	125	125	150	150	150
Evaporator													
Nominal water flow rate (1)		l/h	13,38	16,29	18,73	21,40	24,22	29,91	33,97	37,84	45,91	53,80	61,59
Nominal pressure drop (1)		kPa	28	32	26	60	54	57	57	54	56	57	61
Water connections		DN	100	100	100	125	125	125	125	150	150	150	150

(1) EUROVENT certified data, in accordance with standard EN 14511. **Cooling mode:** Evaporator water temperature = 12/7°C | Condenser water temperature = 30/35°C.
(2) Seasonal energy efficiency of ambient heating at low temperature. According to EU Regulation n. 2016/2281.
(3) Temperature at which cooling capacity is reached equal to that indicated at point (1).
(4) Sound power according to Standard ISO 3744 and Eurovent 8/1.

Air cooled version — Cooling only units

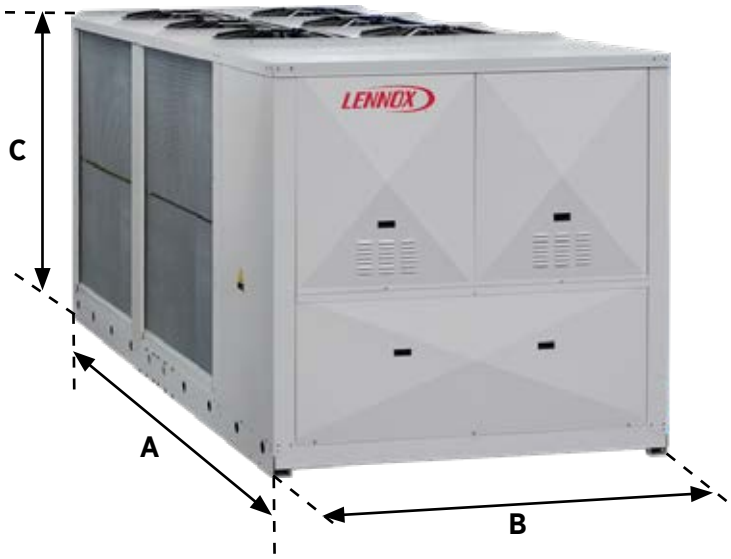
Genesis - JAC -A (R134a)		250D	300D	350D	400D	450D	550D	700D	850D	950D	1100D
A	mm	4400	4400	5000	5550	6200	6700	8900	11100	11100	11100
B		2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
C		2100	2100	2100	2100	2100	2100	2100	2100	2100	2500
Weight of standard units											
Transport weight	kg	3562	3609	3719	4127	4820	5311	6437	7583	7683	8656

Air cooled version — Heat pump units

Genesis - JAH -A (R134a)		250D	300D	350D	400D	450D	550D	700D	850D	950D	1100D
A	mm	5550	5550	5550	7750	7750	8900	10050	13400	13400	13400
B		2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
C		2100	2100	2100	2100	2100	2100	2100	2100	2100	2500
Weight of standard units											
Transport weight	kg	4172	4219	4457	4920	5561	6425	7527	8787	9183	10286

Air cooled version — Free cooling units

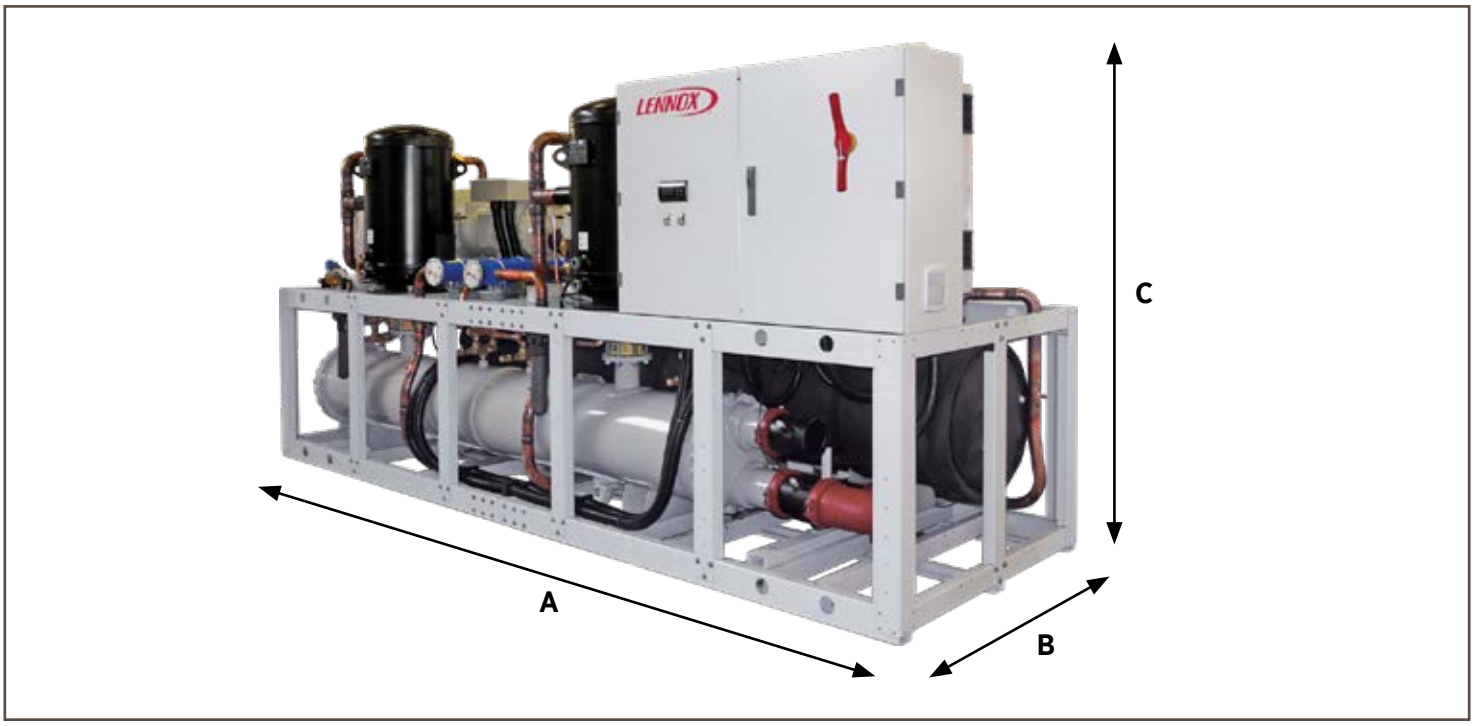
Genesis - JAC -FC (R134a)		200D	250D	300D	350D	400D	450D	550D	700D	850D	950D	1100D	1200D	1350D
A	mm	4400	4400	4400	4400	5550	5550	6700	10050	10050	10050	10050	11100	13400
B		2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
C		2360	2360	2360	2360	2360	2360	2360	2360	2360	2750	2750	2750	2750
Weight of standard units														
Transport weight	kg	3250	3320	3620	3805	4180	4510	5310	6820	7710	8605	9590	10070	11750



Water cooled version

Cooling only units

Genesis - JWC -A (R134a)		300S	350S	400S	450S	500S	600S	750S	1300S	1100D	1200D	1350D
A	mm	3700	3700	3700	4200	4200	4200	4200	4600	5000	4400	5000
B		1300	1300	1300	1400	1400	1400	1400	1600	2200	2200	2200
C		2100	2100	2100	2200	2200	2200	2200	2250	2100	2100	2100
Weight of standard units												
Transport weight	kg	2840	2980	3063	3415	3802	4180	4210	4745	5210	5675	6500



Hydrolean

Water cooled chillers & heat pumps / Condenserless liquid chillers

R410A

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

WATER COOLED

25 - **160** kW

30 - **170** kW

LENNOX participates in the ECP programme for LCP-HP.
Check ongoing validity of certificate : www.eurovent-certification.com

Compact units that can be stacked on other Hydrolean units to save space.
Fully enclosed units that allow **indoor or outdoor installation** and **quiet operation**.
Optimal access to all components **simplifies service and maintenance operations**.
Versatile units that allow operation with dry coolers or remote condensers.

CASING & DESIGN

Casing made of white painted galvanised steel.
Removable side and rear panels.
Front access via dismountable doors.
Unit lifting and handling via the base frame.
Stackable unit that can be placed on top of another for better use of space (up to size 080).
Fully enclosed unit for indoor or outdoor installation

THERMODYNAMIC SYSTEM

High efficiency screw compressors with built-in sliding valve for capacity control (inverter as an option).
Enhanced cooling capacity and efficiency with Economizer.
Screw compressor with integrated oil separator.
Shell and tube evaporator on air-cooled versions and flooded on water-cooled versions.
Aluminium microchannel condenser coil (Cooling only version).
High performance fans to improve efficiency and reduce noise level (EC version available as an option).
Brazed plate heat exchanger on each refrigerant circuit to produce hot sanitary water up to 65°C.
Up to three independent circuits, each equipped with electronic expansion valve.

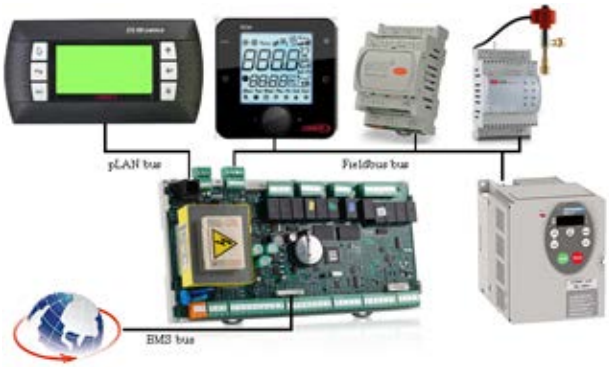
VERSATILITY

Optional version allows operation with dry coolers or remote condensers

Photos and illustrations are not contractual.

CONTROL

Climatic electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet or LonWorks®).
DC Advanced display, equipped with a graphic screen providing access to the main user parameters, with two optional displays:
- Remote Display
- Service Display



HIGH SEASONAL EFFICIENCY

Very high seasonal efficiency in comfort cooling and heating (ηs,c and ηs,h above 180 %, A+++ class)

S(A) W(B) C(C) 100(D) D(E) N(F) M(G) 2(H) M(I)

(A) **S** = Hydrolean
(B) **W** = Water cooled
(C) **C** = Cooling mode - **H** = Heat pump mode - **R** = Remote condensing
(D) Cooling capacity in kW
(E) **S** = Single circuit - **D** = Dual circuits
(F) **N** = Non ducted
(G) **M** = R410A
(H) **2** = Revision number
(I) **M** = 400v/3/50Hz

Water cooled version

Cooling only units

Hydrolean - SWC			25	35	50	70	80	100	120	135	160
Nominal thermal performances - Cooling mode											
Cooling capacity (1)		kW	25,8	37,9	50,8	71,9	83,6	95,7	117,5	132,7	156,4
Total absorbed power (1)		kW	5,9	8,9	11,9	18,5	22,2	22,5	29,1	31,7	39,5
EER (1)			4,37	4,25	4,26	3,89	3,77	4,25	4,04	4,19	3,96
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		5,33	5,26	5,72	5,12	5,03	5,43	5,19	5,30	5,10
	Seasonal energy efficiency (3) **ηs,c**	%	208	206	224	200	196	212	203	207	199
Process Application	Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		-	-	-	-	-	-	-	-	-
	Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		4,15	4,16	3,96	3,93	3,84	4,18	4,10	4,11	4,05
Nominal thermal performances - Heating mode											
Heating capacity (1)		kW	-	-	-	-	-	-	-	-	-
Total absorbed power (1)		kW	-	-	-	-	-	-	-	-	-
COP (1)			-	-	-	-	-	-	-	-	-
Comfort Application	Seasonal Coeficient of Performance (6) **SCOP**		-	-	-	-	-	-	-	-	-
	Seasonal energy efficiency (7) **ηs,h**	%	-	-	-	-	-	-	-	-	-
	Seasonal efficiency class (8)		-	-	-	-	-	-	-	-	-
Acoustic data											
Global sound power level - Standard unit		dB(A)	69,0	71,0	72,0	74,0	75,0	75,0	76,1	78,8	81,2
Electrical data											
Maximum power		kW	10,3	14,8	20,5	29,6	33,9	37,6	46,7	52,3	61,7
Maximum current		A	16,8	24,6	33,4	49,2	60,3	63,8	79,6	86,0	105,3
Starting current		A	111,2	140,2	127,8	164,7	204,3	207,8	223,6	274,6	332,3
Short circuit current		kA	10	10	10	10	10	10	10	10	10
Refrigeration circuit											
Number of circuits			1	1	1	1	1	2	2	2	2
Number of compressors			1	1	2	2	2	3	3	3	3
Total refrigerant load - R410a		kg	3,5	4,5	6,6	7,0	7,2	12,0	12,1	15,1	15,5
Condenser											
Nominal water flow rate		m^3/h	5,30	7,80	10,40	15,00	17,00	19,50	24,90	27,80	32,80
Nominal pressure drop		kPa	22	27	34	57	71	30	48	43	59
Evaporator											
Nominal water flow rate (9)		m^3/h	4,40	6,50	8,60	12,60	14,40	16,50	20,60	22,70	28,00
Nominal pressure drop (9)		kPa	17	21	25	41	53	25	35	32	42
Hydraulic connection											
Type			Threaded male								
Diameter			1 1/2" (DN40)					2" (DN50)			

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825. | **(6)** SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters. | **(9)** All data are at Eurovent condition. **Cooling mode:** Water temperature = 12/7°C | Condenser water = 30°C/35°C / **Heating mode:** Water temperature = 40/45°C | Evaporator water inlet = 30/35°C. | Evaporator water outlet temperature calculated with the same water flow as in cooling mode.

S(A) W(B) C(C) 100(D) D(E) N(F) M(G) 2(H) M(I)

(A) **S** = Hydrolean
(B) **W** = Water cooled
(C) **C** = Cooling mode - **H** = Heat pump mode - **R** = Remote condensing
(D) Cooling capacity in kW
(E) **S** = Single circuit - **D** = Dual circuits
(F) **N** = Non ducted
(G) **M** = R410A
(H) **2** = Revision number
(I) **M** = 400v/3/50Hz

Water cooled version

Heat pumps units

Hydrolean - SWH			25	35	50	70	80	100	120	135	160
Nominal thermal performances - Cooling mode											
Cooling capacity (1)		kW	25,5	37,6	50,3	71,6	81,8	95,0	116,5	131,9	155,8
Total absorbed power (1)		kW	6,0	9,1	12,1	18,7	21,0	22,8	29,5	32,1	39,7
EER (1)			4,25	4,14	4,15	3,83	3,90	4,17	3,95	4,11	3,92
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		5,32	5,23	5,76	5,13	5,03	5,55	5,22	5,25	5,12
	Seasonal energy efficiency (3) **ηs,c**	%	208	204	225	200	196	217	204	205	200
Process Application	Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		-	-	-	-	-	-	-	-	-
	Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		4,16	4,14	4,00	3,93	3,82	4,19	4,09	4,11	4,03
Nominal thermal performances - Heating mode											
Heating capacity (1)		kW	28,0	41,4	55,5	79,6	91,7	104,6	129,3	145,1	173,0
Total absorbed power (1)		kW	7,5	11,1	15,1	22,7	25,3	28,3	35,8	39,2	48,0
COP (1)			3,7	3,7	3,7	3,5	3,6	3,7	3,6	3,7	3,6
Comfort Application	Seasonal Coeficient of Performance (6) **SCOP**		5,0	5,0	5,2	4,9	4,7	5,2	5,1	5,1	4,8
	Seasonal energy efficiency (7) **ηs,h**	%	194	193	201	192	184	204	197	200	186
	Seasonal efficiency class (8)		A++								
Acoustic data											
Global sound power level - Standard unit		dB(A)	69,0	71,0	72,0	74,0	75,0	75,0	76,1	78,8	81,2
Electrical data											
Maximum power		kW	10,3	14,8	20,5	29,6	33,9	37,6	46,7	52,3	61,7
Maximum current		A	16,8	24,6	33,4	49,2	60,3	63,8	79,6	86,0	105,3
Starting current		A	111,2	140,2	127,8	164,7	204,3	207,8	223,6	274,6	332,3
Short circuit current		kA	10	10	10	10	10	10	10	10	10
Refrigeration circuit											
Number of circuits			1	1	1	1	1	2	2	2	2
Number of compressors			1	1	2	2	2	3	3	3	3
Total refrigerant load - R410a		kg	3,5	4,5	6,9	7,4	7,6	12,3	12,3	15,5	15,9
Condenser											
Nominal water flow rate		m^3/h	5,30	7,80	10,40	15,00	17,00	19,50	24,90	27,80	32,80
Nominal pressure drop		kPa	22	27	34	57	71	30	48	43	59
Evaporator											
Nominal water flow rate (9)		m^3/h	4,40	6,50	8,90	12,50	14,00	16,60	19,80	22,70	27,20
Nominal pressure drop (9)		kPa	13	18	24	41	51	23	31	29	41
Hydraulic connection											
Type			Threaded male								
Diameter			1 1/2" (DN40)					2" (DN50)			

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825. | **(6)** SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters. | **(9)** All data are at Eurovent condition. **Cooling mode:** Water temperature = 12/7°C | Condenser water = 30°C/35°C / **Heating mode:** Water temperature = 40/45°C | Evaporator water inlet = 30/35°C. | Evaporator water outlet temperature calculated with the same water flow as in cooling mode.

S(A) W(B) C(C) 100(D) D(E) N(F) M(G) 2(H) M(I)

(A) **S** = Hydrolean
(B) **W** = Water cooled
(C) **C** = Cooling mode - **H** = Heat pump mode - **R** = Remote condensing
(D) Cooling capacity in kW
(E) **S** = Single circuit - **D** = Dual circuits
(F) **N** = Non ducted
(G) **M** = R410A
(H) **2** = Revision number
(I) **M** = 400v/3/50Hz

Water cooled version

Cooling only units

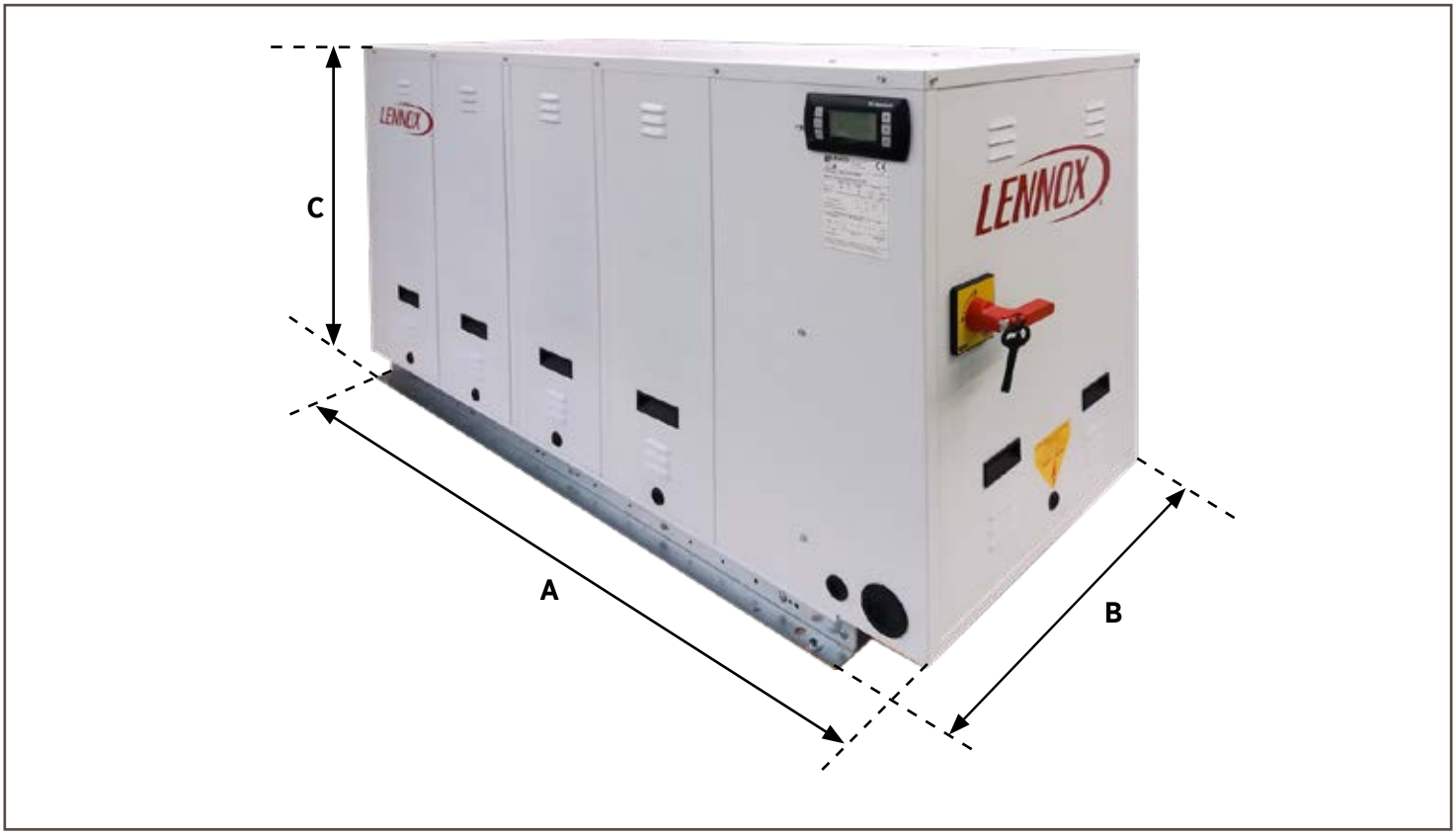
Hydrolean - SWR			25	35	50	70	80	100	120	135	160
Nominal thermal performances - Cooling mode											
Cooling capacity (1)		kW	23,9	35,3	47,3	68,2	80,1	89,4	110,9	124,2	148,2
Total absorbed power (1)		kW	6,8	10,1	13,7	20,5	24,7	25,4	32,3	35,9	43,7
EER (1)			3,51	3,50	3,45	3,33	3,24	3,52	3,43	3,46	3,39
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		-	-	-	-	-	-	-	-	-
	Seasonal energy efficiency (3) **ηs,c**	%	-	-	-	-	-	-	-	-	-
Process Application	Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		-	-	-	-	-	-	-	-	-
	Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		-	-	-	-	-	-	-	-	-
Nominal thermal performances - Heating mode											
Heating capacity (1)		kW	-	-	-	-	-	-	-	-	-
Total absorbed power (1)		kW	-	-	-	-	-	-	-	-	-
COP (1)			-	-	-	-	-	-	-	-	-
Comfort Application	Seasonal Coeficient of Performance (6) **SCOP**		-	-	-	-	-	-	-	-	-
	Seasonal energy efficiency (7) **ηs,h**	%	-	-	-	-	-	-	-	-	-
	Seasonal efficiency class (8)		-	-	-	-	-	-	-	-	-
Acoustic data											
Global sound power level - Standard unit		dB(A)	69,0	71,0	72,0	74,0	75,0	75,0	76,1	78,8	81,2
Electrical data											
Maximum power		kW	10,3	14,8	20,5	29,6	33,9	37,6	46,7	52,3	61,7
Maximum current		A	16,8	24,6	33,4	49,2	60,3	63,8	79,6	86,0	105,3
Starting current		A	111,2	140,2	127,8	164,7	204,3	207,8	223,6	274,6	332,3
Short circuit current		kA	10	10	10	10	10	10	10	10	10
Refrigeration circuit											
Number of circuits			1	1	1	1	1	2	2	2	2
Number of compressors			1	1	2	2	2	3	3	3	3
Total refrigerant load - R410a		kg	Nitrogen charge								
Condenser											
Nominal water flow rate		m^3/h	-	-	-	-	-	-	-	-	-
Nominal pressure drop		kPa	-	-	-	-	-	-	-	-	-
Evaporator											
Nominal water flow rate (9)		m^3/h	4,10	6,10	8,20	11,80	13,80	15,40	19,10	21,40	25,60
Nominal pressure drop (9)		kPa	12	16	20	37	48	20	29	26	36
Hydraulic connection											
Type			Threaded male								
Diameter			1 1/2" (DN40)					2" (DN50)			

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Outdoor air temperature = 35°C / **Heating mode:** Condenser water temperature = 40/45°C | Outdoor air temperature = 7°C
(2) SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825. | **(6)** SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters. | **(9)** All data are at Eurovent condition. **Cooling mode:** Water temperature = 12/7°C | Condenser water = 45°C.

Water cooled version

Cooling only units

Hydrolean		25	35	50	70	80	100	120	135	160
A	mm	802		1470			1470			
B		502		645			645			
C		815		854			1705			
Weight of standard units										
Basic unit - SWC	kg	176	249	333	378	396	606	617	739	760
Basic unit - SWH	kg	178	251	338	385	404	614	625	747	771
Basic unit - SWR	kg	155	196	293	314	321	499	510	600	621



NOTES

MWC / MRC

Water cooled chillers & heat pumps / Condenserless liquid chillers

R410A

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

WATER COOLED

180 - **380** kW

200 - **450** kW

LENNOX participates in the ECP programme for LCP-HP.
Check ongoing validity of certificate :
www.eurovent-certification.com

Compact units with limited footprint that saves space in technical rooms.
Optimal access to all components **simplifying service and maintenance operations**.
Versatile units that allow integration with dry coolers or remote condensers.

CONTROL

Climatic electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet or LonWorks®).
DC Advanced display, equipped with a graphic screen providing access to the main user parameters, with two optional displays:
- Remote Display
- Service Display

eCLIMATIC

DC Advanced

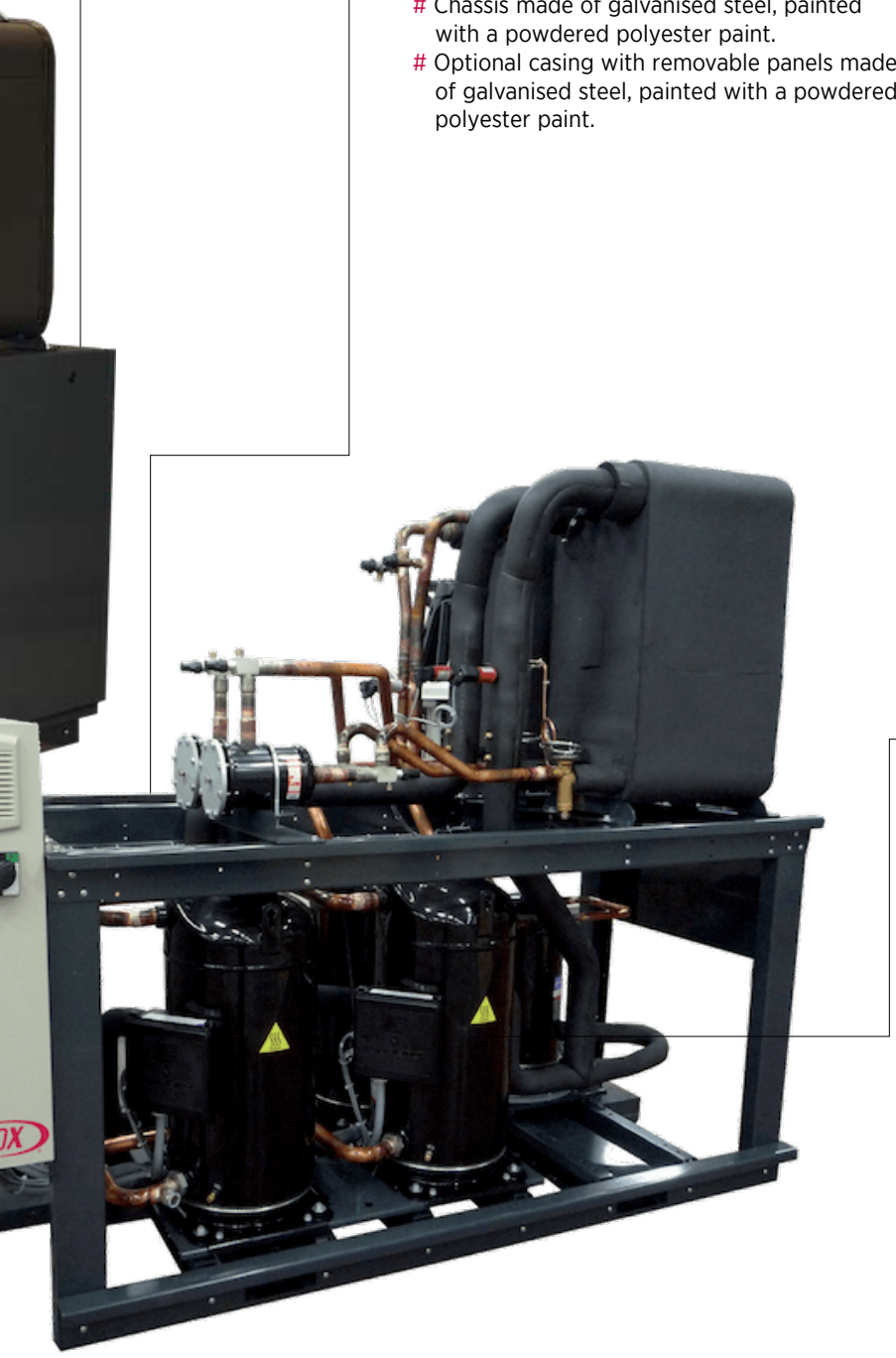
HIGH SEASONAL EFFICIENCY

Very high seasonal efficiency in comfort cooling, exceeding 2021 ErP target (ηs,c above 200 %)
Very high seasonal efficiency in comfort heating (ηs,h above 200 %, A+++ class)

Photos and illustrations are not contractual.

CASING & DESIGN

Chassis made of galvanised steel, painted with a powdered polyester paint.
Optional casing with removable panels made of galvanised steel, painted with a powdered polyester paint.



THERMODYNAMIC SYSTEM

High efficiency scroll compressors.
High efficiency brazed plate heat exchangers.
Insulated brazed plate heat exchangers made with stainless steel.
Two independent circuits, each equipped with electronic expansion valves.

M(A) W(B) C(C) 200(D) D(E) N(F) M(G) 2(H) M(I)

(A) **M** = Medium
(B) **W** = Water cooled - **R** = Remote condenser
(C) **C** = Cooling mode
(D) Cooling capacity in kW
(E) Number of circuits - **D** = circuits
(F) **N** = Non ducted
(G) **M** = R410A refrigerant
(H) **2** = Revision number
(I) **M** = 400V/3/50Hz

Water cooled version

Cooling only units & Heat pump units

MWC			180	230	280	330	380	450	510	570	650	720
Nominal thermal performances - Cooling mode												
Cooling capacity (1)		kW	179,9	232,1	279,7	332,7	379,1	432,7	482,2	551,3	620,5	691,9
Total absorbed power (1)		kW	40,9	51,6	61,6	73,4	83,9	98,3	112,8	127,2	145,3	166,1
EER (1)			4,40	4,50	4,54	4,53	4,52	4,40	4,27	4,33	4,27	4,17
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		5,64	5,80	5,89	5,85	5,96	-	-	-	-	-
	Seasonal energy efficiency (3) **ηs,c**	%	218	224	227	226	231	-	-	-	-	-
Process Application	Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		-	-	-	-	-	-	-	-	-	-
	Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		4,53	4,55	4,51	4,54	4,49	4,28	4,31	4,43	4,46	4,45
Nominal thermal performances - Heating mode												
Heating capacity (1)		kW	198,8	254,9	307,1	364,0	415,6	477,0	536,4	609,6	689,0	758,6
Total absorbed power (1)		kW	49,9	63,0	74,9	89,0	101,7	119,2	136,7	154,0	174,0	196,9
COP (1)			3,98	4,05	4,10	4,09	4,09	4,00	3,92	3,96	3,96	3,85
Comfort Application	Seasonal Coeficient of Performance (6) **SCOP**		5,49	5,69	5,57	5,60	5,65	5,70	5,52	5,62	5,43	5,26
	Seasonal energy efficiency (7) **ηs,h**	%	212	220	215	216	218	220	213	217	209	203
	Seasonal efficiency class (8)		A+++									
Acoustic data												
Global sound power level - Standard unit		dB(A)	81,6	87,1	89,4	90,9	92,0	92,8	93,3	93,8	96,1	97,7
Electrical data												
Maximum power		kW	69,0	88,0	107,0	126,0	145,0	166,0	192,0	217,0	244	271,0
Maximum current		A	129,0	158,0	184,0	212,0	240,0	272,0	314,0	358,0	402,0	445,0
Starting current		A	272,0	408,0	435,0	463,0	490,0	499,0	565,0	609,0	736,0	779,0
Short circuit current		kA	10	10	10	10	35	35	35	35	35	35
Refrigeration circuit												
Number of circuits			2	2	2	2	2	2	2	2	2	2
Number of compressors			4	4	4	4	4	6	6	6	6	6
Total refrigerant load - R410a		kg	16,0	24,0	28,0	28,0	44,0	54,0	58,0	62,0	60,0	60,0
Condenser												
Nominal water flow rate		m^3/h	37,70	48,50	58,40	69,40	79,10	90,70	101,60	115,80	130,90	146,60
Nominal pressure drop		kPa	46	40	32	44	43	39	43	52	28	33
Evaporator												
Nominal water flow rate (9)		m^3/h	31,00	39,90	48,20	57,20	65,30	74,50	83,10	94,90	106,90	99,20
Nominal pressure drop (9)		kPa	33	29	40	31	40	39	47	43	54	47
Hydraulic connection												
Type			Victaulic									
Diameter			4"	4"	4"	4"	4"	5"	5"	5"	5"	5"

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Evaporator water temperature = 12/7°C | Only for MWC 720: 13/7°C evaporator water temperature. Condenser water temperature = 30/35°C / **Heating mode:** Condenser water temperature = 40/45°C | Evaporator water inlet temperature = 10°C. | Evaporator water outlet temperature calculated with the same water flow as in cooling mode.
(2) SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825 |
(6) SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters.

M(A) W(B) C(C) 200(D) D(E) N(F) M(G) 2(H) M(I)

(A) **M** = Medium
(B) **W** = Water cooled - **R** = Remote condenser
(C) **C** = Cooling mode
(D) Cooling capacity in kW
(E) Number of circuits - **D** = circuits
(F) **N** = Non ducted
(G) **M** = R410A refrigerant
(H) **2** = Revision number
(I) **M** = 400V/3/50Hz

Air cooled version

Cooling only units

MRC - Remote Condenser			180	230	280	330	380	450	510	570	650	720
Nominal thermal performances - Cooling mode												
Cooling capacity (1)		kW	161,1	202,0	241,9	288,7	328,5	382,0	432,8	494,3	554,8	615,4
Total absorbed power (1)		kW	49,7	63,0	76,2	89,4	102,5	120,3	137,0	153,8	176,2	198,6
EER (1)			3,24	3,21	3,18	3,23	3,20	3,18	3,16	3,21	3,15	3,10
Comfort Application	Seasonal Energy Efficiency Ratio (2) **SEER**		-	-	-	-	-	-	-	-	-	-
Comfort Application	Seasonal energy efficiency (3) **ηs,c**	%	-	-	-	-	-	-	-	-	-	-
Process Application	Seasonal Energy Performance Ratio (4) **SEPR** - High temperature (7°C)		-	-	-	-	-	-	-	-	-	-
Process Application	Seasonal Energy Performance Ratio (5) **SEPR** - Medium temperature (-8°C)		-	-	-	-	-	-	-	-	-	-
Nominal thermal performances - Heating mode												
Heating capacity (1)		kW	-	-	-	-	-	-	-	-	-	-
Total absorbed power (1)		kW	-	-	-	-	-	-	-	-	-	-
COP (1)			-	-	-	-	-	-	-	-	-	-
Comfort Application	Seasonal Coeficient of Performance (6) **SCOP**		-	-	-	-	-	-	-	-	-	-
Comfort Application	Seasonal energy efficiency (7) **ηs,h**	%	-	-	-	-	-	-	-	-	-	-
Comfort Application	Seasonal efficiency class (8)		-	-	-	-	-	-	-	-	-	-
Acoustic data												
Global sound power level - Standard unit		dB(A)	81,0	87,0	89,0	90,0	92,0	92,8	93,3	93,8	96,1	97,7
Electrical data												
Maximum power		kW	69,0	88,0	107,0	126,0	145,0	166,0	192,0	217,0	244	271,0
Maximum current		A	129,0	158,0	184,0	212,0	240,0	272,0	314,0	358,0	402,0	445,0
Starting current		A	272,0	408,0	435,0	463,0	490,0	499,0	565,0	609,0	736,0	779,0
Short circuit current		kA	10	10	10	10	35	35	35	35	35	35
Refrigeration circuit												
Number of circuits			2	2	2	2	2	2	2	2	2	2
Number of compressors			4	4	4	4	4	6	6	6	6	6
Total refrigerant load - R410a		kg	Nitrogen charge									
Condenser												
Nominal water flow rate		m^3/h	-	-	-	-	-	-	-	-	-	-
Nominal pressure drop		kPa	-	-	-	-	-	-	-	-	-	-
Evaporator												
Nominal water flow rate (9)		m^3/h	27,70	34,80	41,60	49,70	56,50	65,70	74,50	85,00	95,50	105,90
Nominal pressure drop (9)		kPa	27	22	31	24	31	31	39	35	44	52
Hydraulic connection												
Type			Victaulic									
Diameter			4"	4"	4"	4"	4"	5"	5"	5"	5"	5"

(1) EUROVENT certified data, in accordance with standard EN 14511.
Cooling mode: Gross cooling capacity with 12/7°C water temperature. | Only for MWC 720: 13/7°C evaporator water temperature. **(2)** SEER in accordance with standard EN 14825. | **(3)** Following ecodesign regulation EU 2016/2281 on space cooling, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(4)** Following ecodesign regulation EU 2016/2281 on process cooling units, normalized leaving water temperature at 7°C, in accordance with standard EN 14825. | **(5)** Following ecodesign regulation EU 2015/1095 on process cooling chillers, normalized leaving water temperature at -8°C, in accordance with standard EN 14825 | **(6)** SCOP in accordance with standard EN 14825. Heating mode performance is defined for average climate conditions. | **(7)** Following ecodesign regulation EU 813/2013 on space heaters, normalized leaving water temperature at 7°C, in accordance with standard EN 14825, average climate conditions. | **(8)** Following energy labelling regulation EU 811/2013 on space heaters. | **(9)** MRC values calculated for 50°C condensing temperature.

Water cooled version

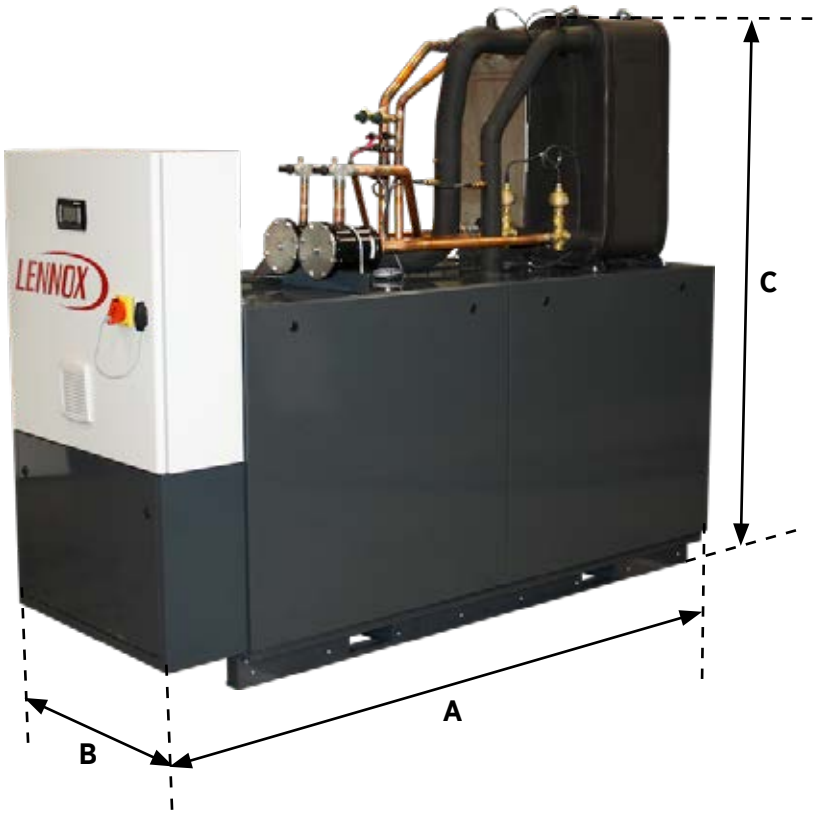
Cooling only units & Heat pump units

MWC		180	230	280	330	380	450	510	570	650	650
A	mm	2150					2200				
B		820					1200				
C		1645					1870				
Weight of standard units											
Basic unit	kg	756	974	1158	1328	1534	1984	2100	2240	2440	2480

Air cooled version

Cooling only units

MRC - Remote Condenser		180	230	280	330	380	450	510	570	650	720
A	mm	2200									
B		1200									
C		1870									
Weight of standard units											
Basic unit	kg	650	810	950	1120	1290	1660	1740	1870	1980	2020



ROOMTOP PACKAGED UNITS

Flatair 125

Compactair 131

Aqualean 137

ROOMTOP PACKAGED UNITS — AIR COOLED

Flatair Inverter

R410A

22 - 33 kW
20 - 29 kW
3700 - 5600 m³/h

-

Compactair Inverter

R410A

22 - 82 kW
20 - 80 kW
5400 - 18700 m³/h

-

ROOMTOP PACKAGED UNITS — WATER COOLED

Aqualean

R410A

2 - 40 kW
2,6 - 50 kW
285 - 7500 m³/h

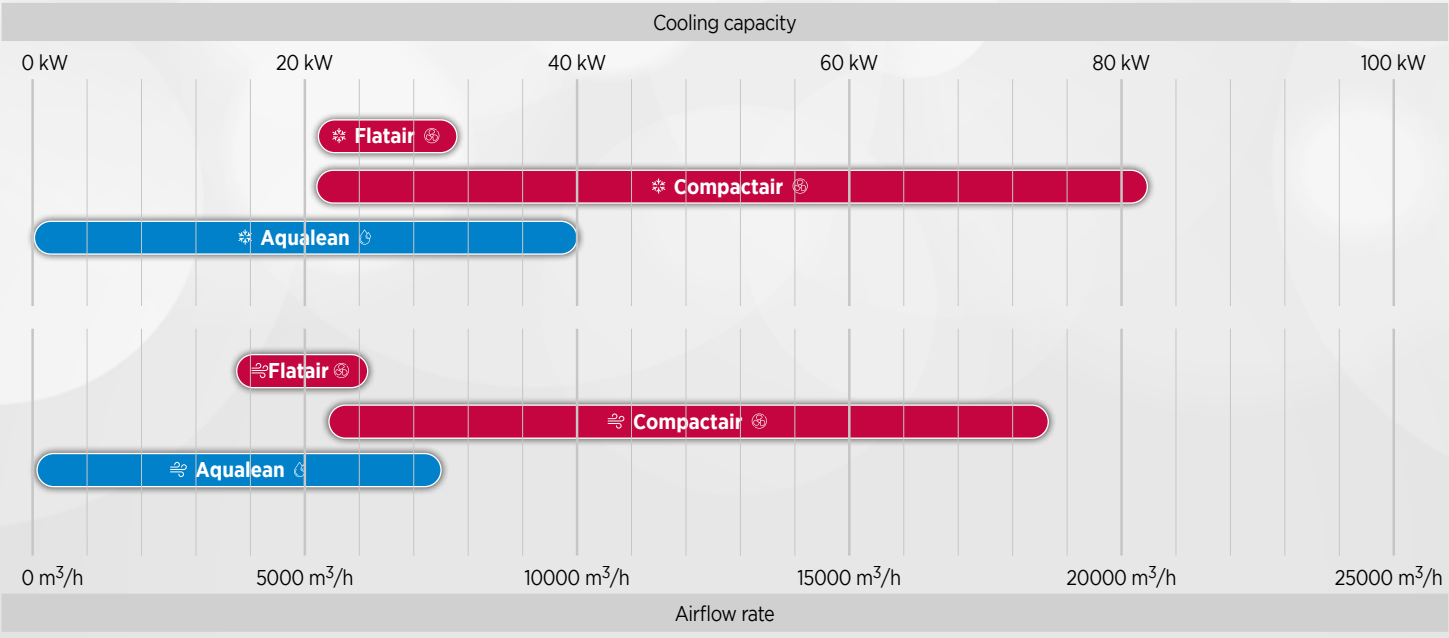
-

Air/Air
Water/Air

Cooling capacity
Heating capacity
Airflow rate

Cafés Restaurants
Convenience stores
Non food retail

Shopping malls
Industry
Office buildings

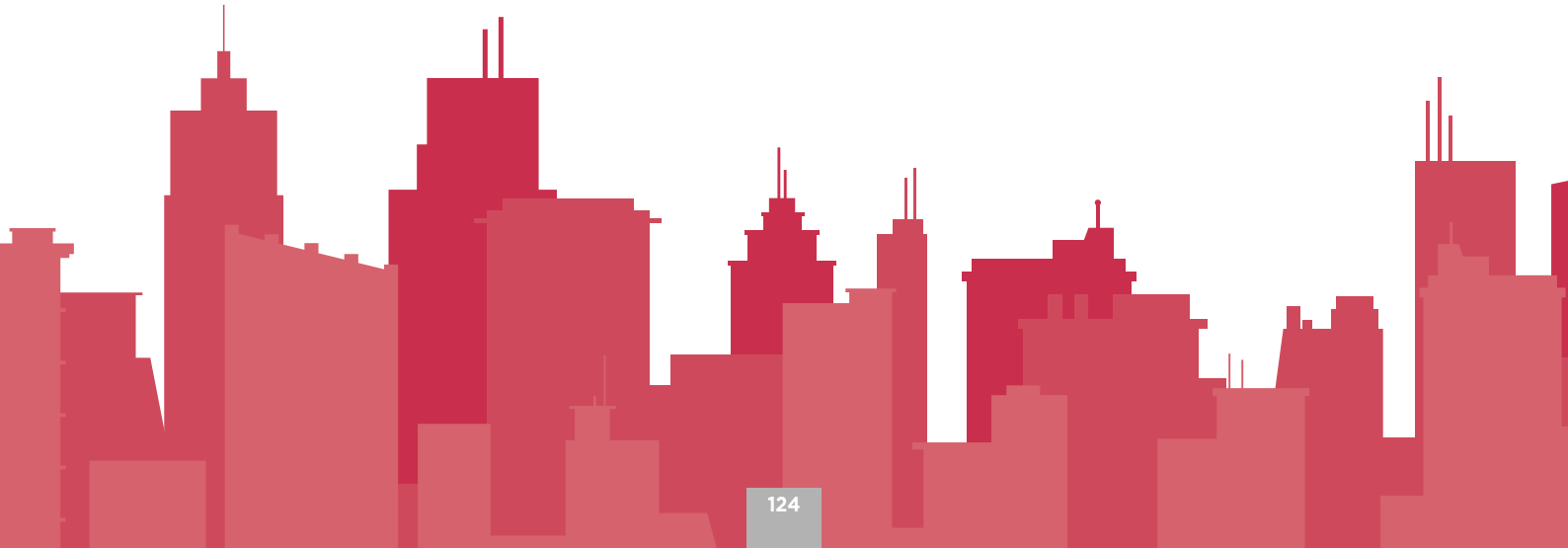


■ Standard equipment ● Option

Additional configurations/options are available on request, please contact your sales representative.

		AQUALEAN AWC/AWH	FLATAIR FAIH/FASH/FAMH	COMPACTAIR CAIH/CASH/CAMH
AUXILIARY HEATING	1 or 2 steps electric heater	●	●	●
	Modulating electric heater	-	●	●
REFRIGERANT	R410A	■	■	■
	Pressure transducers	-	■	■
COMPRESSORS	Scroll/MultiScroll	■	■	■
	Tandem	-	-	■
	Inverter compressor	-	■	■
	Compressor noise jacket	●	●	●
AIR FLOW CONFIGURATION	Horizontal supply	■	■	●
	Up supply	-	-	■
	Horizontal return	-	-	■
SUPPLY FANS	Direct drive fan	■	■	■
	Variable speed fan	-	■	■
CONDENSER FANS	Direct drive fan	-	■	■
	Variable speed fan	-	■	■
	Variable speed centrifugal fan	■	-	-
ECONOMISER	Motorised free-cooling/heating	-	●	●
CASING	Main disconnect switch	●	■	■
	Pre-coated galvanised steel (White)	-	■	■
INSULATION	A1 (M0) fire-proof	■	●	●
AIR FILTER	G2	■	■	-
	G4	-	-	■
	M5 + F7	-	●	●
ANTI-CORROSION PROTECTION	Blue fin coated coil protection for outdoor coil	-	-	●
	Blue fin coated coil protection for indoor and outdoor coil	-	-	●
EXHAUST	Exhaust fan	-	-	●
CONTROL AND COMMUNICATION	Dry & analogic contacts board	●	●	●
	ModBus RS485 interface	●	●	●
	LonWorks FTT10 interface	●	●	●
	BACnet RS485 interface	●	●	●
	ModBus & BACnet TCP/IP interface	●	●	●
	Service display	●	●	●
	Multi-units display	●	●	●
ADDITIONAL CONTROL AND SAFETY	Smoke detector	-	●	●
	Remote ambient temperature sensor	-	●	●
	CO_2 control	-	●	●
	Humidity control	-	●	●
	3 phase detector	-	●	●
HYDRAULIC OPTIONS	Water filter	●	-	-
	Flow switches (paddle one or through differential pressure measurement)	●	-	-
	3-way mixing valve	●	-	-

NOTES



FLATAIR

Horizontal packaged air conditioners

R410A

AIR COOLED Inverter

22 - **33** kW

20 - **29** kW

3700 - **5600** m³/h

Horizontal design allowing complete indoor installation and **preserving the building's architecture**
Packaged and split versions allowing **high adaptability** in any building configuration.
Optimised efficiency at full and part load operation, thanks to variable speed compressor and EC fans on both sides.
Variable speed technology stabilising the air flow and providing accurate supply temperature for **improved indoor air quality**.

THERMODYNAMIC SYSTEM

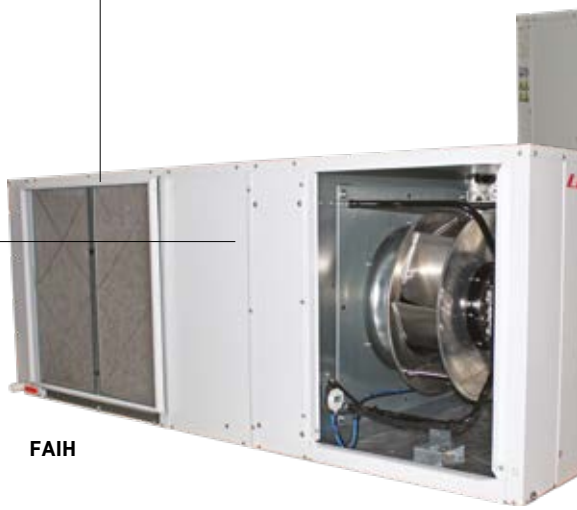
Inverter scroll compressor allowing capacity modulation.
Variable refrigerant control with electronic expansion valve.
Variable speed EC axial fans with optimised blade geometry to improve efficiency and reduce noise level.
Large surface exchangers for highly efficient heat transfer.
Dynamic defrost cycles.

AIR TREATMENT

EC motor fans ensuring a precise temperature for better comfort and energy savings.
Analogue filter detection to inform when the filters must be changed.
IAQ kits for improved indoor air quality inside buildings:
- G4 (standard)
- M5 (ePM10) + F7 (ePM1) available as an option.

AUXILIARY HEATING DEVICES

Electric heater made of welded blinded elements, with two safety switches to prevent overloading. Available in three different sizes:
- Standard capacity
- Medium capacity with one-stage regulation
- High modulating capacity



FAIH

Photos and illustrations are not contractual.

CONTROL

eClimatic electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet LonWorks®).
Several display solutions for different access levels.

eCLIMATIC

DS
Service display

DM
Multi-unit display

DC
Comfort display

CASING & DESIGN

Horizontal design for false ceiling installation.
Casing built with pre-coated galvanized steel (White).
A1 (M0) fire-proof insulation.

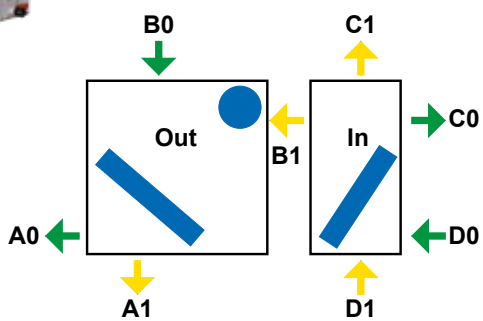
ADAPTABILITY

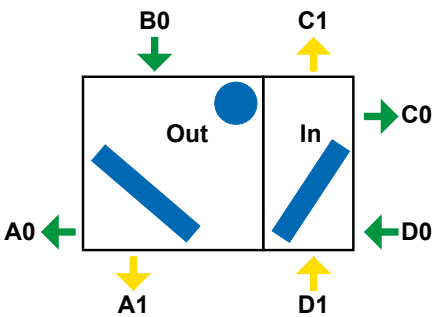
Horizontal design to be installed in false ceilings (complete indoor installation).
Packaged (FAMH) and split versions (FASH+FAIH), adaptable to any building configuration.
Allows connection up to 30m between condensing unit and air treatment unit.
Two available configurations:
- Packaged unit (FAMH);
- Split version, with outdoor condensing unit (FASH) and indoor air treatment unit (FAIH).

AIRFLOW

Several horizontal airflow configurations on both packaged and split versions.
Economiser option allows energy savings with free-cooling operation.
eDrive: high efficiency ventilation with direct transmission and variable speed drives.
Fresh air and free cooling management.

FASH





R410A

FA(A) M(B) H(C) 020(D) S(E) M(F) 2(G) M(H)

(A) **FA** = FLATAIR
(B) **M** = Packaged unit - **S** = Condensing unit (Outdoor unit / Split version) - **I** = Air treatment unit (Indoor unit / Split version)
(C) **H** = Heat pump unit
(D) Maximum cooling capacity in kW
(E) **S** = 1 circuit - **D** = 2 circuits
(F) **M** = R410A
(G) **2** = Revision number
(H) **M** = 400V/3/50Hz - **T** = 230V/1/50Hz

Air cooled version

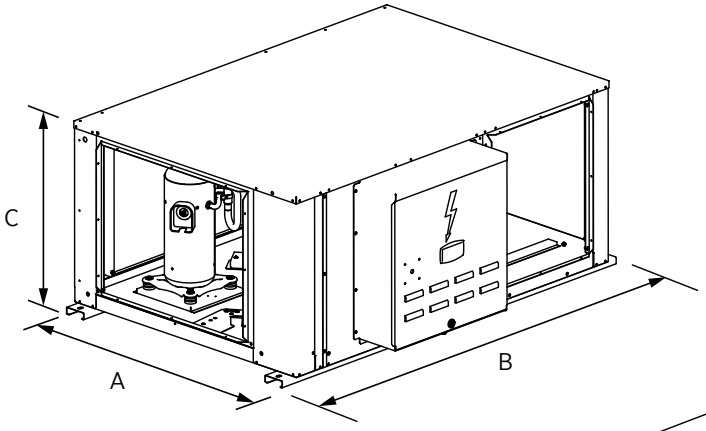
Heat pump units

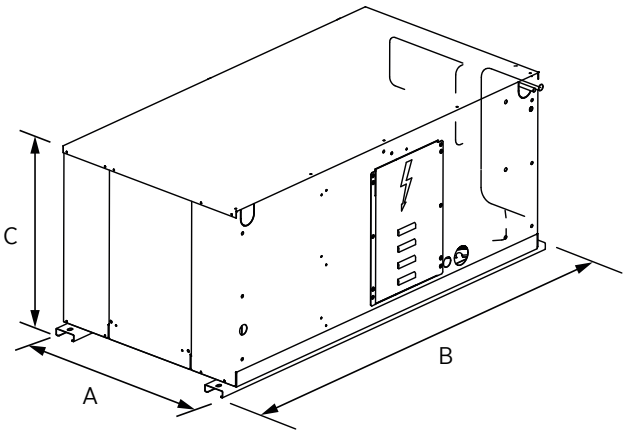
FLATAIR		FAMH : PACKAGED UNIT		FASH + FAIH : SPLIT VERSION	
		020	035	020	035
Nominal thermal performances - Cooling mode					
Cooling capacity (1)	kW	17,7	27,2	17,7	27,2
Total Power Input	kW	6,3	9,4	6,3	9,4
EER net (1)		2,81	2,91	2,81	2,91
Nominal thermal performances - Heating mode					
Heating capacity (2)	kW	16,1	22,6	16,1	22,6
Total Power Input	kW	4,5	7,1	4,5	7,1
COP net (2)		3,60	3,2	3,60	3,2
Seasonal efficiencies - Cooling mode					
Seasonal Energy Efficiency Ratio - **SEER** (3)		4,25	4,39	4,25	4,39
Seasonal energy efficiency - **ηs,c** (4)	%	167,1	172,5	167,1	172,5
Eurovent energy efficiency class - Part load operation		B	B	B	B
Seasonal efficiencies - Heating mode					
Seasonal Coefficient of Performance - **SCOP** (5)		3,32	3,32	3,32	3,32
Seasonal energy efficiency - **ηs,h** (6)	%	129,8	129,7	129,8	129,7
Eurovent energy efficiency class - Part load operation		A	B	A	B
Auxiliary heating					
Gas heating capacity - Standard / High	kW	-	-	-	-
Electric heater capacity - Standard / High	kW	4,5 / 15			
Electric pre-heater capacity - Standard / High	kW	-	-	-	-
Hot water coil capacity Air inlet 20°C/Water	kW	-	-	-	-
Ventilation data					
Minimum airflow rate	m^3/h	1800	2800	1800	2800
Nominal airflow rate	m^3/h	3700	5600	3700	5600
Maximum airflow rate	m^3/h	4500	6200	4500	6200
Acoustic data - Standard unit					
Outdoor sound power	dB(A)	83	89	83	89
Indoor blower outlet sound power	dB(A)	73	78	73	78
Electrical data					
Maximum power	kW	12,4	19,7	1,4 / 11,1	2,7 / 17
Maximum current	A	23,3	35,0	2,3 / 21,2	4,3 / 30,9
Starting current	A	23,3	35,0	2,3 / 21,2	4,3 / 30,9
Short circuit current	kA	10	10	10	10
Refrigeration circuit					
Number of circuits		1	1	1	1
Number of compressors		1	1	1	1
Refrigerant load	kg	6,6	8	6,6	8

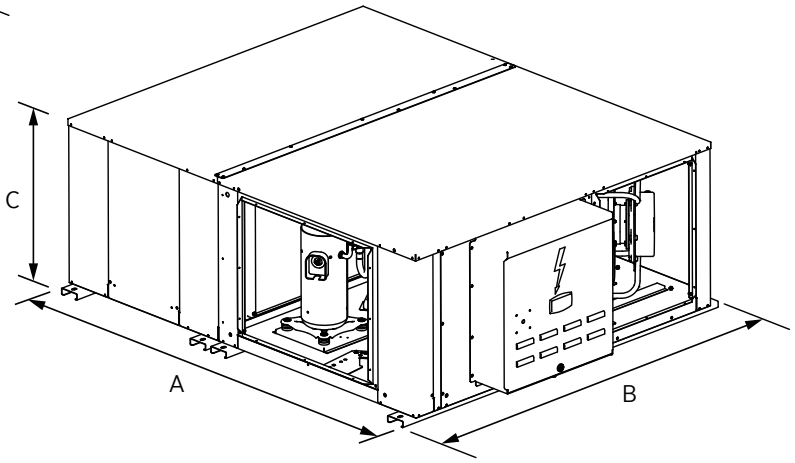
(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

Air cooled version

FLATAIR		FAMH : PACKAGED UNIT		FASH : OUTDOOR UNIT		FAIH : INDOOR UNIT	
		020	035	020	035	020	035
A	mm	1980	2050	1205	1060	775	990
B		1500	1950	1500	1950	1500	1950
C		670	770	670	770	670	770
Weight of standard units							
Basic unit	kg	340	555	220	330	135	225







NOTES

COMPACTAIR

Vertical packaged air conditioners

R410A

AIR COOLED Inverter

22 - **82** kW

20 - **80** kW

5400 - **18700** m³/h

Vertical design **offering a reduced footprint**.

Indoor unit **preserving the building's architecture**.

Packaged and split versions allowing **high adaptability** in any building configuration.

Optimised efficiency at full and part load operation, thanks to variable speed compressor and EC fans on both sides.

Variable speed technology stabilising the air flow and providing accurate supply temperature for **improved indoor air quality**.

AIR TREATMENT

EC motor fans ensuring a precise temperature for better comfort and energy savings.
Analogue filter detection to inform when the filters must be changed.
IAQ kits for improved indoor air quality inside buildings:
- G4 (standard)
- M5 (ePM10) + F7 (ePM1) available as an option.

THERMODYNAMIC SYSTEM

Inverter scroll compressor allowing capacity modulation.
Variable refrigerant control with electronic expansion valve.
Variable speed EC axial fans with optimised blade geometry to improve efficiency and reduce noise level.
Large surface exchangers for highly efficient heat transfer.
Dynamic defrost cycles.

AUXILIARY HEATING DEVICES

Electric heater made of welded blinded elements, with two safety switches to prevent overloading. Available in three different sizes:
- Standard capacity
- Medium capacity with a one-stage regulation
- High modulating capacity

CAIH - INDOOR UNIT

Photos and illustrations are not contractual.

CASING & DESIGN

Vertical design for machine room installation.
Casing built with pre-coated galvanized steel (White).
A1 (M0) fire-proof insulation.
Blue fin coated coil protection for outdoor and indoor coil (option)

CAMH - PACKAGED UNIT

ADAPTABILITY

Packaged (CAMH) and split versions (CASH+CAIH), adaptable to any building configuration.
Allows connection up to 30m between condensing unit and air treatment unit.
Two configurations available:
- Packaged unit (CAMH);
- Split version, with outdoor condensing unit (CASH) and indoor air treatment unit (CAIH).

CONTROL

eClimatic electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet LonWorks®).
Several display solutions for different access levels.

eCLIMATIC

DS
Service display

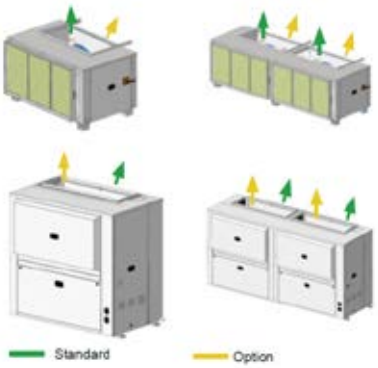
DM
Multi-unit display

DC
Comfort display

CASH - OUTDOOR UNIT

AIRFLOW

Horizontal or vertical air discharges on both configurations.
Economiser option allows energy savings with free-cooling operation.
eDrive: high efficiency ventilation with direct transmission and variable speed drives.
Fresh air and free cooling management.



R410A

CA(A) M(B) H(C) 020(D) S(E) M(F) 2(G) M(H)

(A) **CA** = COMPACTAIR
(B) **M** = Packaged unit - **S** = Condensing unit (Outdoor unit / Split version) - **I** = Air treatment unit (Indoor unit / Split version)
(C) **H** = Heat pump unit
(D) Maximum cooling capacity in kW
(E) **S** = 1 circuit - **D** = 2 circuits
(F) **M** = R410A
(G) **2** = Revision number
(H) **M** = 400V/3/50Hz - **T** = 230V/1/50Hz

Air cooled version

Heat pump units

COMPACTAIR		CAMH : PACKAGED UNIT					
		020	035	045	060	075	085
Nominal thermal performances - Cooling mode							
Cooling capacity (1)	kW	17,6	26,3	38,3	53,1	64,5	79,6
Total Power Input	kW	5,5	8,7	13,2	18,1	22,7	27,7
EER net (1)		3,19	3,02	2,90	2,92	2,83	2,88
Nominal thermal performances - Heating mode							
Heating capacity (2)	kW	15,7	23,7	30,8	46,4	57,0	66,8
Total Power Input	kW	3,8	6,8	9,0	13,7	18,9	21,9
COP net (2)		4,09	3,5	3,41	3,39	3,02	3,05
Seasonal efficiencies - Cooling mode							
Seasonal Energy Efficiency Ratio - **SEER** (3)		3,78	4,38	4,59	3,86	3,99	3,98
Seasonal energy efficiency - **ηs,c** (4)	%	148,1	172,2	180,5	151,2	156,5	156,1
Eurovent energy efficiency class - Part load operation		A	A	B	B	B	B
Seasonal efficiencies - Heating mode							
Seasonal Coefficient of Performance - **SCOP** (5)		3,33	3,38	3,30	3,41	3,36	3,35
Seasonal energy efficiency - **ηs,h** (6)	%	130,3	132,3	128,9	133,3	131,2	131,1
Eurovent energy efficiency class - Part load operation		A	A	A	B	C	C
Auxiliary heating							
Gas heating capacity	kW	-	-	-	-	-	-
Electric heater capacity - Standard / High		10 / 20	10 / 20	10 / 20	15 / 40	15 / 40	15 / 40
Electric pre-heater capacity - Standard / High		-	-	-	-	-	-
Hot water coil capacity Air inlet 20°C/Water		-	-	-	-	-	-
Ventilation data							
Minimum airflow rate	m^3/h	1800	2800	3700	6200	6700	7500
Nominal airflow rate		3700	5800	7500	12500	13500	15000
Maximum airflow rate		4500	6200	7500	12500	13500	15000
Acoustic data - Standard unit							
Outdoor sound power	dB(A)	84	88	95	90	95	98
Indoor blower outlet sound power		69	78	83	83	85	87
Electrical data							
Maximum power	kW	15,1	20,8	29,0	50,1	57,5	64,5
Maximum current	A	27,3	36,8	50,1	81,7	96,7	108,1
Starting current	A	27,3	36,8	50,1	124,6	183,4	194,8
Short circuit current	kA	10	10	10	10	10	10
Refrigeration circuit							
Number of circuits		1	1	1	2	2	2
Number of compressors		1	1	1	3	3	3
Refrigerant load	kg	6,7	6,7	9	12	14	18

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

CA(A) M(B) H(C) 020(D) S(E) M(F) 2(G) M(H)

(A) **CA** = COMPACTAIR
(B) **M** = Packaged unit - **S** = Condensing unit (Outdoor unit / Split version) - **I** = Air treatment unit (Indoor unit / Split version)
(C) **H** = Heat pump unit
(D) Maximum cooling capacity in kW
(E) **S** = 1 circuit - **D** = 2 circuits
(F) **M** = R410A
(G) **2** = Revision number
(H) **M** = 400V/3/50Hz - **T** = 230V/1/50Hz

Air cooled version

Heat pump units

COMPACTAIR		CASH + CAIH : SPLIT VERSION					
		020	035	045	060	075	085
Nominal thermal performances - Cooling mode							
Cooling capacity (1)	kW	17,6	26,3	38,3	53,1	64,5	79,6
Total Power Input	kW	5,5	8,7	13,2	18,1	22,7	27,7
EER net (1)		3,19	3,02	2,90	2,92	2,83	2,88
Nominal thermal performances - Heating mode							
Heating capacity (2)	kW	15,7	23,7	30,8	46,4	57,0	66,8
Total Power Input	kW	3,8	6,8	9,0	13,7	18,9	21,9
COP net (2)		4,09	3,49	3,41	3,39	3,02	3,0
Seasonal efficiencies - Cooling mode							
Seasonal Energy Efficiency Ratio - **SEER** (3)		3,78	4,38	4,59	3,86	3,99	3,98
Seasonal energy efficiency - **ηs,c** (4)	%	148,1	172,2	180,5	151,2	156,5	156,1
Eurovent energy efficiency class - Part load operation		A	A	B	B	B	B
Seasonal efficiencies - Heating mode							
Seasonal Coefficient of Performance - **SCOP** (5)		3,33	3,38	3,30	3,41	3,36	3,35
Seasonal energy efficiency - **ηs,h** (6)	%	130,3	132,3	128,9	133,3	131,2	131,1
Eurovent energy efficiency class - Part load operation		A	A	A	B	C	C
Auxiliary heating							
Gas heating capacity	kW	-	-	-	-	-	-
Electric heater capacity - Standard / High		10 / 20	10 / 20	10 / 20	15 / 40	15 / 40	15 / 40
Electric pre-heater capacity - Standard / High		-	-	-	-	-	-
Hot water coil capacity Air inlet 20°C/Water		-	-	-	-	-	-
Ventilation data							
Minimum airflow rate	m^3/h	1800	2800	3700	6200	6700	7500
Nominal airflow rate		3700	5800	7500	12500	13500	15000
Maximum airflow rate		4500	6200	7500	12500	13500	15000
Acoustic data - Standard unit							
Outdoor sound power	dB(A)	84	88	95	90	95	98
Indoor blower outlet sound power		69	78	83	83	85	87
Electrical data							
Maximum power	kW	2,7 / 12,4	2,7 / 18,2	3,9 / 25,2	5,4 / 44,8	7,7 / 49,9	7,7 / 56,9
Maximum current	A	4,3 / 23,2	4,3 / 32,7	6,1 / 44,2	8,4 / 73,5	12 / 84,9	12 / 96,3
Starting current	A	4,3 / 23,2	4,3 / 32,7	6,1 / 44,2	8,4 / 116,4	12 / 171,6	12 / 183
Short circuit current	kA	10	10	10	10	10	10
Refrigeration circuit							
Number of circuits		1	1	1	2	2	2
Number of compressors		1	1	1	3	3	3
Refrigerant load	kg	6,7	6,7	9	12	14	18

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

Air cooled version — Heat pump units

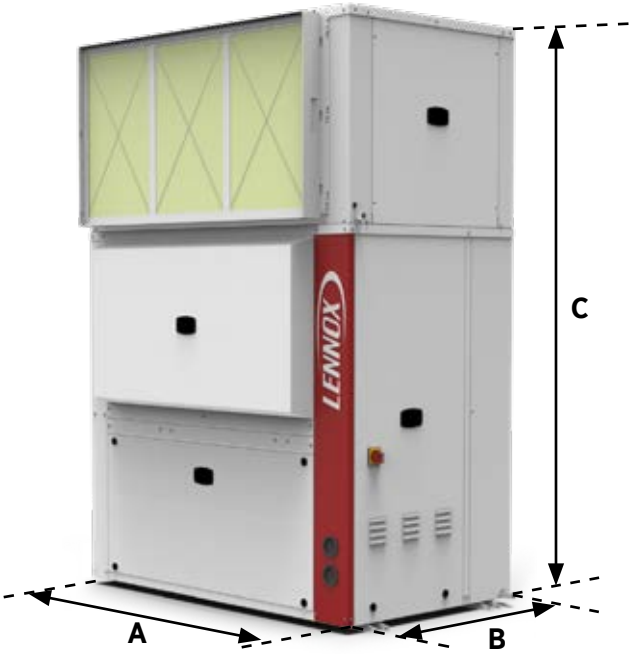
COMPACTAIR		CAMH : PACKAGED UNIT					
		020	035	045	060	075	085
A	mm	1445	1445	1445	2813	2813	2813
B		895	895	895	895	895	895
C		2145	2145	2145	2145	2145	2145
Weight of standard units							
Basic unit	kg	460	485	488	995	1040	1060

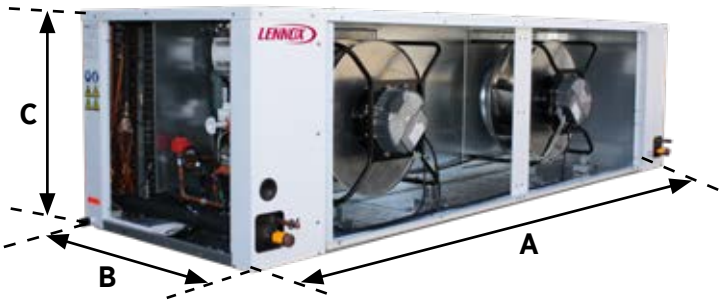
Air cooled version — Heat pump units

COMPACTAIR		CASH : OUTDOOR UNIT					
		020	035	045	060	075	085
A	mm	1445	1445	1445	2813	2813	2813
B		895	895	895	895	895	895
C		1410	1410	1410	1410	1410	1410
Weight of standard units							
Basic unit	kg	288	286	306	622	642	662

Air cooled version — Heat pump units

COMPACTAIR		CAIH : INDOOR UNIT					
		020	035	045	060	075	085
A	mm	1445	1445	1445	2813	2813	2813
B		895	895	895	895	895	895
C		836	836	836	836	836	836
Weight of standard units							
Basic unit	kg	172	204	186	378	398	408

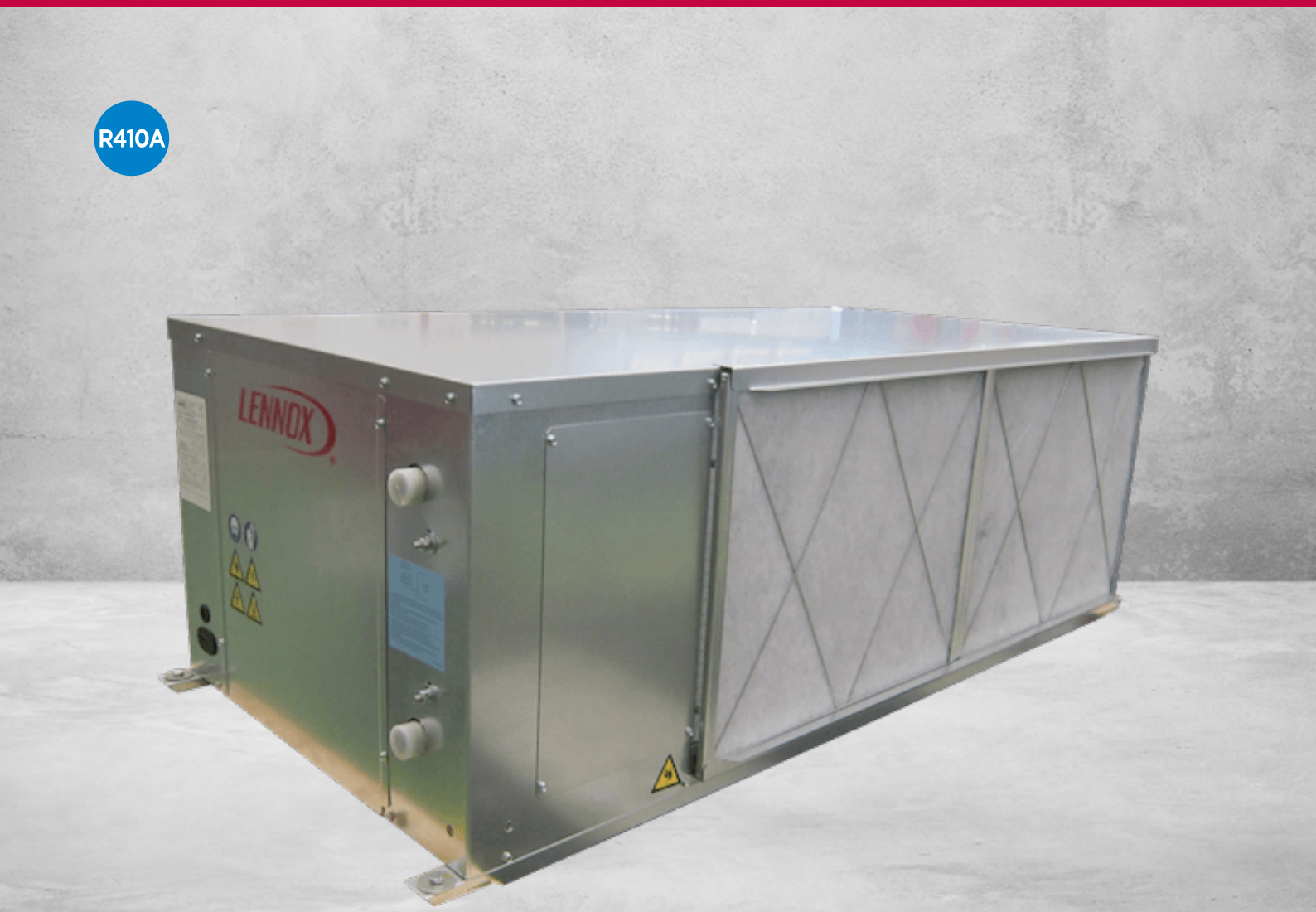




AQUALEAN

Horizontal water-cooled packaged air conditioners

R410A



AIR COOLED

2 - **40** kW

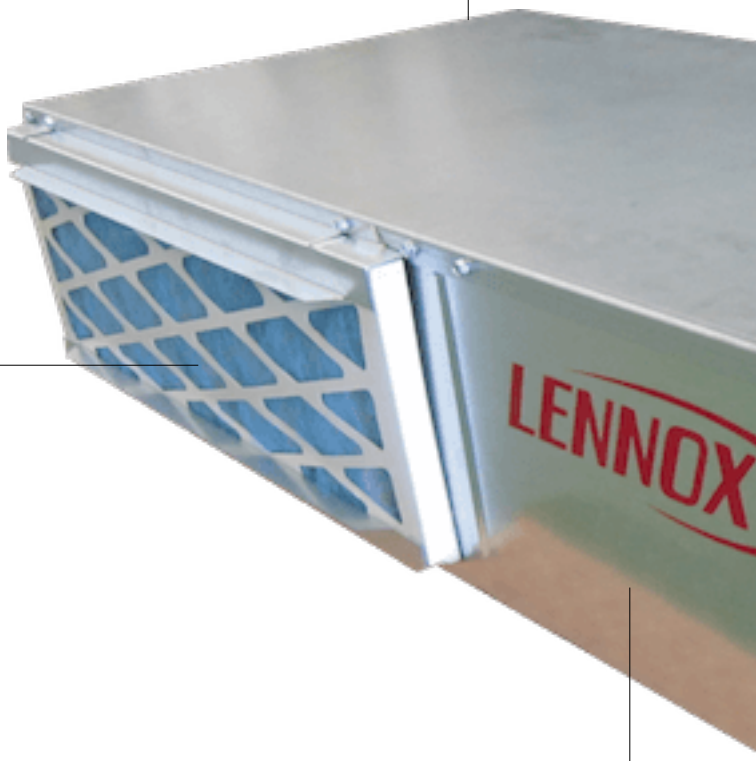
2,6 - **50** kW

285 - **7500** m³/h

Compact solution with reduced height for ceiling installation.
Each unit responds to heating or cooling loads of different individual zones, improving overall **comfort**.
Water source heat pump able to reach very **high efficiency** in cooling and heating modes.
Variable speed direct transmission ventilation to **save energy** and lower operating costs.

AUXILIARY HEATING DEVICES

Electric heater as option on units 007 to 040.
Available in three different sizes:
- Standard capacity
- Medium capacity
- High capacity (only available on models 012 to 040).



AIR TREATMENT

EC motor fans ensuring a precise temperature for better comfort and energy savings.
Analogue filter detection to inform when the filters must be changed.
IAQ kits for improved indoor air quality inside buildings:
- G2 (standard)
- M5 (ePM10) + F7 (ePM1) available as an option on models 020 to 040.

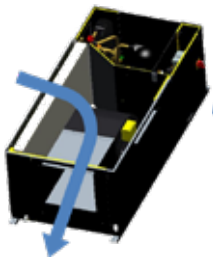
THERMODYNAMIC SYSTEM

Rotary compressor on models 002 and 003.
Scroll compressor on models 007 to 020.
Tandem scroll compressors on models 020 to 040.
Variable refrigerant control with electronic expansion valve.
Variable speed fans with optimized blade geometry to improve efficiency and reduce noise level.
Large surface exchangers for highly efficient heat transfer.

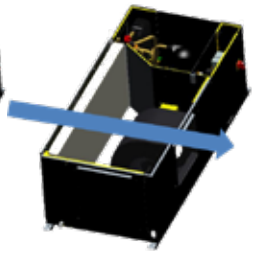
Photos and illustrations are not contractual.

AIRFLOW

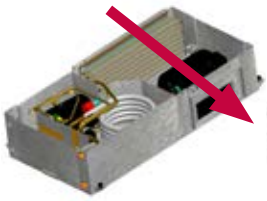
Horizontal return air on all models.
Models 002 to 020: In-line or perpendicular supply air configuration (both horizontal).
Models 025 to 040: horizontal or vertical supply air configuration.



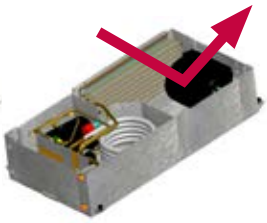
UNITS 007 to 020 Standard



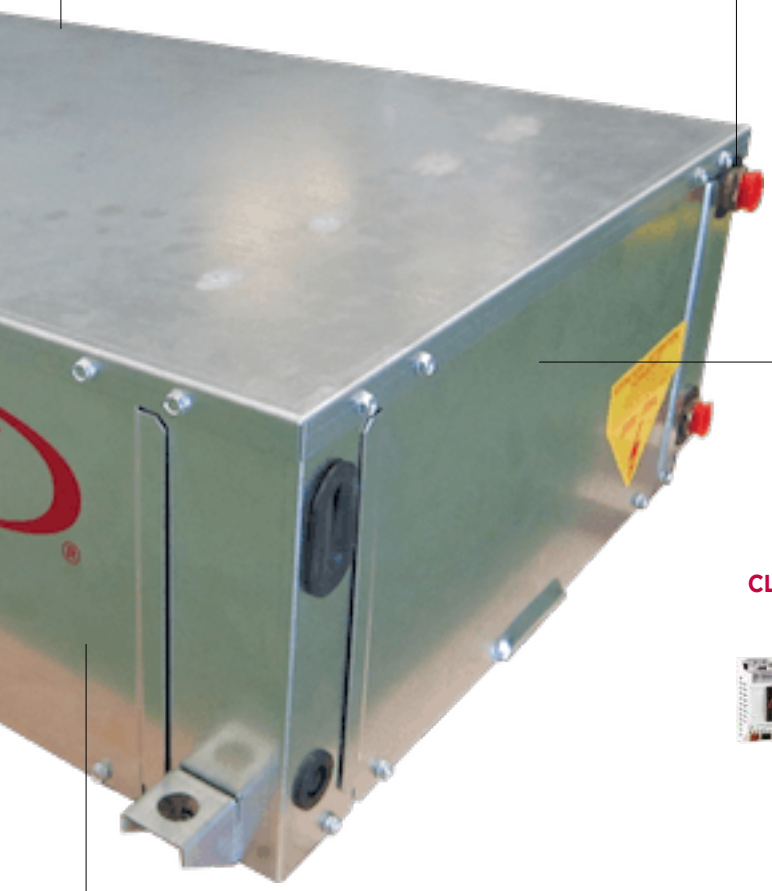
UNITS 007 to 020 On site



UNITS 002-003 Standard



UNITS 002-003 On site



WATER SYSTEM

Coaxial heat exchanger on units 002 and 003.
Brazed plate heat exchanger made of stainless steel on units 007 to 040.
Water threaded connections F-G on units 002 to 020.
Victaulic connections on units 025 to 040.

CONTROL

eClimatic electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet LonWorks®).
Several display solutions for different access levels.

CLIMATIC 60

DS Service display

DM Multi-unit display

DC Comfort display

CASING & DESIGN

Compact self-supporting casing with very low height to reduce dropped ceilings dimension.
Casing built with galvanized steel.
Thermal-acoustic insulation is installed in the compressor area to reduce noise level:
- Units 007 to 020: 25mm A2, s1, d0 (M0) in the air treatment area.
- Units 002-003,025 to 040: 10mm (M1) insulation in air section.

AW(A) C(B) 007(C) S(D) N(E) M(F) 1(G) M(H) LWT(I)

(A) **AW** = AQUALEAN
(B) **C** = Cooling only - **H** = Heat pump
(C) Approximate cooling capacity in kW
(D) **S** = 1 circuit
(E) ---
(F) **M** = R-410A
(G) Revision number
(H) **T** = 230V/1/50Hz - **M** = 400V/1/50Hz
(I) Low water temperature version (units 002-003)

Water cooled version

Cooling only units

AQUALEAN - AWC		007	008	010	012	015	018	020
Nominal thermal performances - Cooling mode								
Cooling capacity (1)	kW	6,8	8,0	10,2	11,2	14,5	17,0	19,0
Total Power Input	kW	1,7	2,1	2,6	2,8	3,4	4,2	4,8
EER net (1)		4,00	3,81	3,92	4,00	4,26	4,05	3,96
Nominal thermal performances - Heating mode								
Heating capacity (2)	kW	-	-	-	-	-	-	-
Total Power Input	kW	-	-	-	-	-	-	-
COP net (2)		-	-	-	-	-	-	-
Seasonal efficiencies - Cooling mode								
Seasonal Energy Efficiency Ratio - **SEER** (3)		-	-	-	-	-	-	-
Seasonal energy efficiency - **ηs,c** (4)	%	160,50	152,50	150,70	150,40	168,10	159,70	154,30
Eurovent energy efficiency class - Part load operation		-	-	-	-	-	-	-
Seasonal efficiencies - Heating mode								
Seasonal Coefficient of Performance - **SCOP** (5)		-	-	-	-	-	-	-
Seasonal energy efficiency - **ηs,h** (6)	%	-	-	-	-	-	-	-
Eurovent energy efficiency class - Part load operation		-	-	-	-	-	-	-
Auxiliary heating								
Gas heating capacity	kW	-	-	-	-	-	-	-
Electric heater capacity - Standard / High		2 / 5	2 / 5	3 / 9	3 / 9	3 / 9	5 / 12	5 / 12
Electric pre-heater capacity - Standard / High		-	-	-	-	-	-	-
Hot water coil capacity Air inlet 10°C/Water		-	-	-	-	-	-	-
Ventilation data								
Minimum airflow rate	m^3/h	1010	1250	1550	1620	1850	2060	2450
Nominal airflow rate		1250	1500	1900	2000	2450	2800	3100
Maximum airflow rate		1430	1620	2100	2200	2610	3100	3500
Acoustic data (7)								
Sound pressure level - Low speed	dB(A)	49	50	48	49	49	46	47
Sound pressure level - High speed		51	52	51	51	53	51	54
Electrical data								
Maximum power	kW	2,7	3,3	4,1	4,9	5,7	6,3	7,6
Maximum current	A	14,4	17,6	24,6	28,6	12,9	14,7	17,9
Starting current	A	61,6	68,6	100,6	130,6	54,1	66,9	77,9
Short circuit current	kA	10	10	10	10	10	10	10
Water cooled condenser								
Nominal water flow rate	l/h	1450	1730	2190	2410	3070	3640	4090
Water pressure drop	kPa	25	30	40	48	40	45	55
Refrigeration circuit								
Number of circuits		1	1	1	1	1	1	1
Number of compressors		1	1	1	1	1	1	1
Refrigerant load	kg	1,3	1,3	1,9	1,9	2,4	2,9	2,9

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.
(7) Sound pressure level has been tested at a distance of 2m from the unit, with duct in aspiration and air discharge, normal absorption in accordance with room size and unit capacity.

AW(A) C(B) 007(C) S(D) N(E) M(F) 1(G) M(H) LWT(I)

(A) **AW** = AQUALEAN
(B) **C** = Cooling only - **H** = Heat pump
(C) Approximate cooling capacity in kW
(D) **S** = 1 circuit
(E) ---
(F) **M** = R-410A
(G) Revision number
(H) **T** = 230V/1/50Hz - **M** = 400V/1/50Hz
(I) Low water temperature version (units 002-003)

Water cooled version

Heat pump units

AQUALEAN - AWH		002	003	007	008	010	012	015	018	020	025	030	040
Nominal thermal performances - Cooling mode													
Cooling capacity (1)	kW	2,0	2,8	6,8	8,0	10,2	11,2	14,5	17,0	19,0	24,8	30,8	41,0
Total Power Input	kW	0,47	0,6	1,7	2,1	2,6	2,8	3,4	4,2	4,8	5,20	6,70	9,50
EER net (1)		4,34	4,55	4,00	3,81	3,92	4,00	4,26	4,05	3,96	4,77	4,60	4,32
Nominal thermal performances - Heating mode													
Heating capacity (2)	kW	2,6	3,8	8,0	9,5	12,3	13,5	17,0	19,5	22,0	28,3	36,7	49,7
Total Power Input	kW	0,6	0,8	2,1	2,5	3,2	3,6	4,6	5,1	6,0	6,50	7,80	10,90
COP net (2)		4,48	4,68	3,81	3,80	3,84	3,75	3,70	3,82	3,67	4,35	4,71	4,56
Seasonal efficiencies - Cooling mode													
Seasonal Energy Efficiency Ratio - **SEER** (3)		-	-	-	-	-	-	-	-	-	-	-	-
Seasonal energy efficiency - **ηs,c** (4)	%	149,80	156,10	160,50	152,50	150,70	150,40	168,10	159,70	154,30	259	253	225
Eurovent energy efficiency class - Part load operation		-	-	-	-	-	-	-	-	-	-	-	-
Seasonal efficiencies - Heating mode													
Seasonal Coefficient of Performance - **SCOP** (5)		-	-	-	-	-	-	-	-	-	-	-	-
Seasonal energy efficiency - **ηs,h** (6)	%	113,50	120,90	103,30	102,50	108,80	105,30	106,30	105,60	99,00	158	166	161
Eurovent energy efficiency class - Part load operation		-	-	-	-	-	-	-	-	-	-	-	-
Auxiliary heating													
Gas heating capacity	kW	-	-	-	-	-	-	-	-	-	-	-	-
Electric heater capacity - Standard / High		-	-	2 / 5	2 / 5	3 / 9	3 / 9	3 / 9	5 / 12	5 / 12	10 / 20	10 / 20	10 / 20
Electric pre-heater capacity - Standard / High		-	-	-	-	-	-	-	-	-	-	-	-
Hot water coil capacity Air inlet 10°C/Water		-	-	-	-	-	-	-	-	-	-	-	-
Ventilation data													
Minimum airflow rate	m³/h	285	335	1010	1250	1550	1620	1850	2060	2450	1800	2800	7500
Nominal airflow rate		440	515	1250	1500	1900	2000	2450	2800	3100	3700	5800	7500
Maximum airflow rate		465	550	1430	1620	2100	2200	2610	3100	3500	4500	6200	3700
Acoustic data (7)													
Sound pressure level - Low speed	dB(A)	41	43	49	50	48	49	49	46	47	50	52	56
Sound pressure level - High speed		43	46	51	52	51	51	53	51	54	56	61	63
Electrical data													
Maximum power	kW	0,7	0,9	2,7	3,3	4,1	4,9	5,7	6,3	7,6	11,5	13,9	17,4
Maximum current	A	3,6	4,9	14,4	17,6	24,6	28,6	12,9	14,7	17,9	20,2	24,8	34,3
Starting current	A	15,3	17,3	61,6	68,6	100,6	130,6	54,1	66,9	77,9	55,2	66,0	94,3
Short circuit current	kA	10	10	10	10	10	10	10	10	10	10	10	10
Water cooled condenser													
Nominal water flow rate	l/h	480	560	1450	1730	2190	2410	3070	3640	4090	4970	6200	8300
Water pressure drop	kPa	19	24	25	30	40	48	40	45	55	32	32	39
Refrigeration circuit													
Number of circuits		1	1	1	1	1	1	1	1	1	1	1	1
Number of compressors		1	1	1	1	1	1	1	1	1	1	1	1
Refrigerant load	kg	0,6	0,7	1,3	1,3	1,9	1,9	2,4	2,9	2,9	5,2	5,2	9,0

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.
(7) Sound pressure level has been tested at a distance of 2m from the unit, with duct in aspiration and air discharge, normal absorption in accordance with room size and unit capacity.

Water cooled version

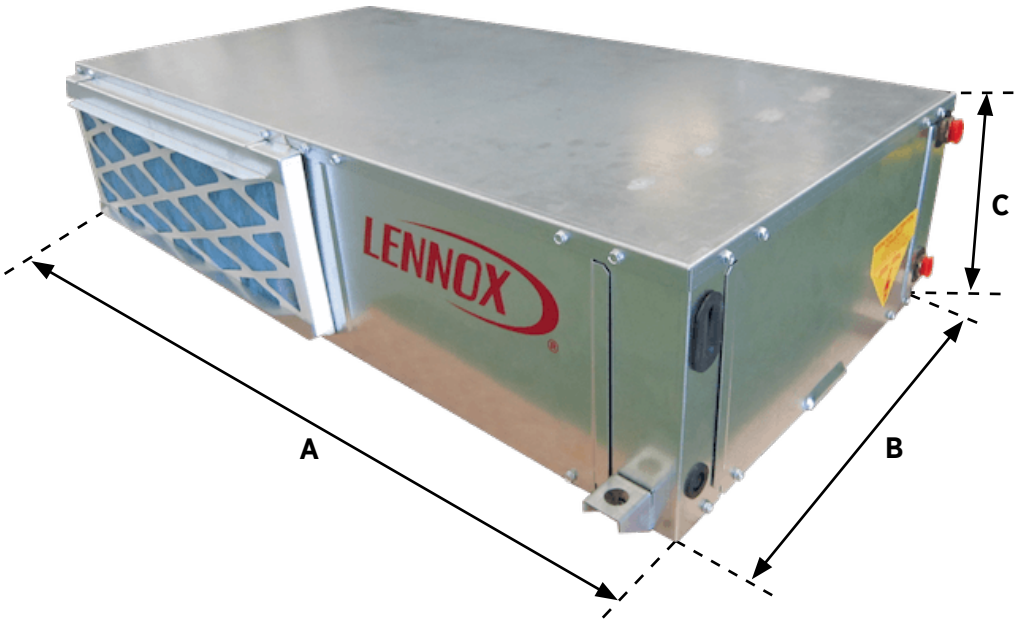
Cooling only units

AQUALEAN - AWC		07	08	10	12	15	18	20
A	mm	886	886	1180	1180	1180	1600	1600
B		492	492	623	623	623	703	703
C		441	441	491	491	491	531	531
Weight of standard units								
Basic unit	kg	69	70	109	111	113	148	148

Water cooled version

Heat pump units

AQUALEAN - AWH		02	03	07	08	10	12	15	18	20	25	30	40
A	mm	1000	1000	886	886	1180	1180	1180	1600	1600	2049	2049	2049
B		500	500	492	492	623	623	623	703	703	895	895	895
C		230	230	441	441	491	491	491	531	531	770	770	770
Weight of standard units													
Basic unit	kg	53	56	71	72	111	113	116	151	151	370	375	380



CONDENSING UNITS

ASC / ASH 145

CONDENSING UNITS

AIR COOLED

ASC / ASH

R410A

19,7 - **228** kW
19,8 - **218** kW

-

Air/Air

Water/Air

Cooling capacity

Heating capacity

Non food retail

Shopping malls

Office buildings

Hotels

Hospitals

Cooling capacity

ASC / ASH

Air cooled condensing units

R410A

AIR COOLED

19,7 - **228** kW

19,8 - **218** kW

Highly efficient design that allows modulation between each circuit.
Alternate defrost cycles improve system **reliability** and allows constant heating operation.
Morning anticipation can be programmed to **ensure comfort** before the occupation periods.
High adaptability to any load variation by managing up to four different operating modes and adapting the set point according to outdoor temperature.

CONTROL

eClimatic electronic controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet LonWorks®).
Several display solutions for different access levels.

CLIMATIC 60

DS
Service display

DM
Multi-Rooftop display

DC
Comfort display

CASING & DESIGN

Casing made of galvanized steel sheet metal painted with a white RAL 9002 powdered polyester paint.
Rigid, hot dipped galvanized chassis.
Unit lifting and handling via the base frame.
Side grilles as option to protect the unit during transportation.

EASY MAINTENANCE

Refrigerant pressures and superheat on each circuit can be read directly on the service display.
Units equipped with high and low-pressure transducers and refrigerant suction temperature sensors.
No need to access to refrigerant pressure gauges.

Photos and illustrations are not contractual.

REFRIGERANT CIRCUIT

Tandem scroll compressors allowing capacity modulation.
High performance fan blades to improve efficiency and reduce noise level.
Large surface exchangers for highly efficient heat transfer.
Crankcase heater as standard on heat pump and optional with winter operation down to 0°C for cooling only units.
Active Acoustic Attenuation System with variable fan speed allows progressive adaptation of the unit to the building load while respecting the noise level constraints and the operating limits (option).

REFRIGERANT CIRCUIT

Two circuits allow capacity modulation from units 045D to 230D.
On cooling only units, each circuit includes as standard:
  - High pressure switch with automatic reset.
  - Low and high-pressure transducers.
On heat pumps units, each circuit includes in addition, as standard:
  - Four-way valve.
  - Liquid receiver.
  - Thermostatic expansion valve.
  - Filter drier.

ENERGY SAVINGS

Dynamic and alternate defrost.
Morning anticipation and dynamic set point.
Scheduling / Time zone Management.

R410A

A(A) S(B) C(C) 020(D) S(E) N(F) M(G) 3(H) M(I)

(A) **A** = ASC/ASH
(B) **S** = Condensing unit
(C) **C** = Cooling only - **H** = Heat pump
(D) Cooling capacity in kW
(E) **S** = 1 circuit - **D** = 2 circuits
(F) **N** = Not used
(G) **M** = R410A
(H) Revision number
(I) **M** = 400V/3/50Hz

Air cooled version

ASC / ASH		020S	025S	030S	035S	040S	045D	055D
Nominal thermal performances - Cooling mode (ASC)								
Cooling capacity (1)	kW	19,7	24,7	28,4	36,1	42,0	49,4	56,7
Total Power Input	kW	6,4	8,1	9,6	11,9	14,1	16,2	19,3
EER net (1)		3,06	3,05	2,95	3,03	2,98	3,05	2,94
Nominal thermal performances - Heating mode (ASH)								
Heating capacity (2)	kW	19,8	25,0	28,6	36,0	40,2	50,1	57,1
Total Power Input	kW	6,2	7,8	9,2	11,1	13,5	15,6	18,4
COP net (2)		3,20	3,2	3,12	3,24	2,98	3,21	3,10
Acoustic data - Standard unit								
Sound power level	dB(A)	76	78	81	80	81	81	84
Electrical data								
Maximum power	kW	8,6	10,8	12,5	16,4	17,7	21,6	25,0
Voltage		400V - 3Ph - 50Hz						
Refrigeration circuit								
Number of circuits		1	1	1	1	1	2	2
Number of compressors		1	1	1	1	1	2	2
Capacity steps		1	1	1	1	1	2	2

(1) **Cooling mode :** Evaporating temperature = 7°C / Ambient temperature = 35°C
(2) **Heating mode : Condensing temperature = 50°C / Ambient temperature = 7°C DB/6°C WB**

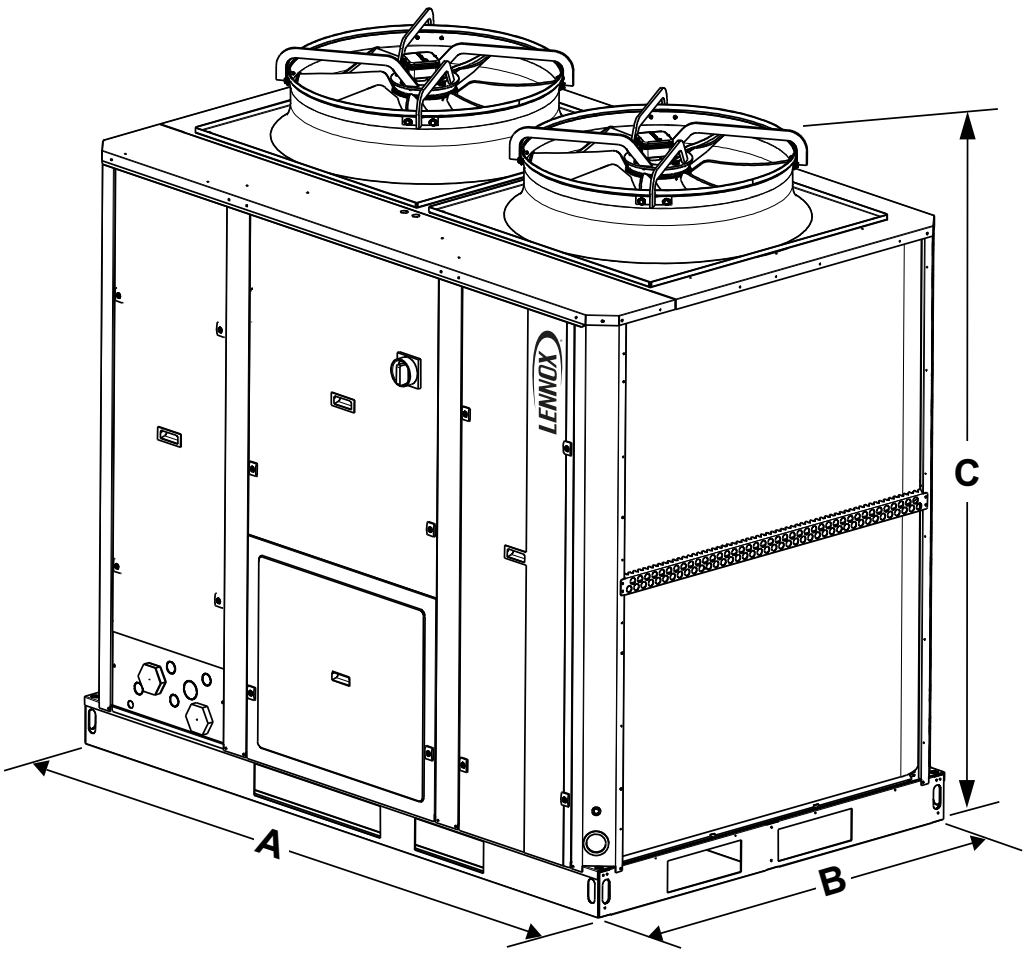
Air cooled version

ASC / ASH		070D	085D	100D	120D	140D	200D	230D
Nominal thermal performances - Cooling mode (ASC)								
Cooling capacity (1)	kW	72,1	83,9	104,0	115,0	141,0	197,0	228,0
Total Power Input	kW	23,7	28,3	34,3	37,1	46,2	63,3	74,5
EER net (1)		3,04	2,96	3,03	3,10	3,05	3,11	3,06
Nominal thermal performances - Heating mode (ASH)								
Heating capacity (2)	kW	71,9	80,3	105,0	114,0	137,0	191,0	218,0
Total Power Input	kW	22,2	25,9	32,4	35,6	43,8	59,9	71,2
COP net (2)		3,24	3,10	3,24	3,20	3,13	3,19	3,1
Acoustic data - Standard unit								
Sound power level	dB(A)	83	84	87	87	90	89	82
Electrical data								
Maximum power	kW	32,8	35,5	45,6	48,7	59,9	83,0	96,2
Voltage		400V - 3Ph - 50Hz						
Refrigeration circuit								
Number of circuits		2	2	2	2	2	2	2
Number of compressors		2	2	3	3	3	4	4
Capacity steps		2	2	2	2	2	2	2

(1) **Cooling mode :** Evaporating temperature = 7°C / Ambient temperature = 35°C
(2) **Heating mode :** Condensing temperature = 50°C / Ambient temperature = 7°C DB/6°C WB

Air cooled version

ASC / ASH		020S	025S	030S	035S	040S	045D	055D	070D	085D	100D	120D	140D	200D	230D
A	mm	1195	1195				1960				2250			2250	
B		660	980				1195				1420			2300	
C		1375	1635				1635				2155			2250	
Weight of standard units															
Basic unit	kg	168	219	221	239	258	452	463	499	537	748	828	932	1684	1704



NOTES

VRF

e-Lite 153

VRF

AIR COOLED / WATER COOLED

e-Lite

HFC

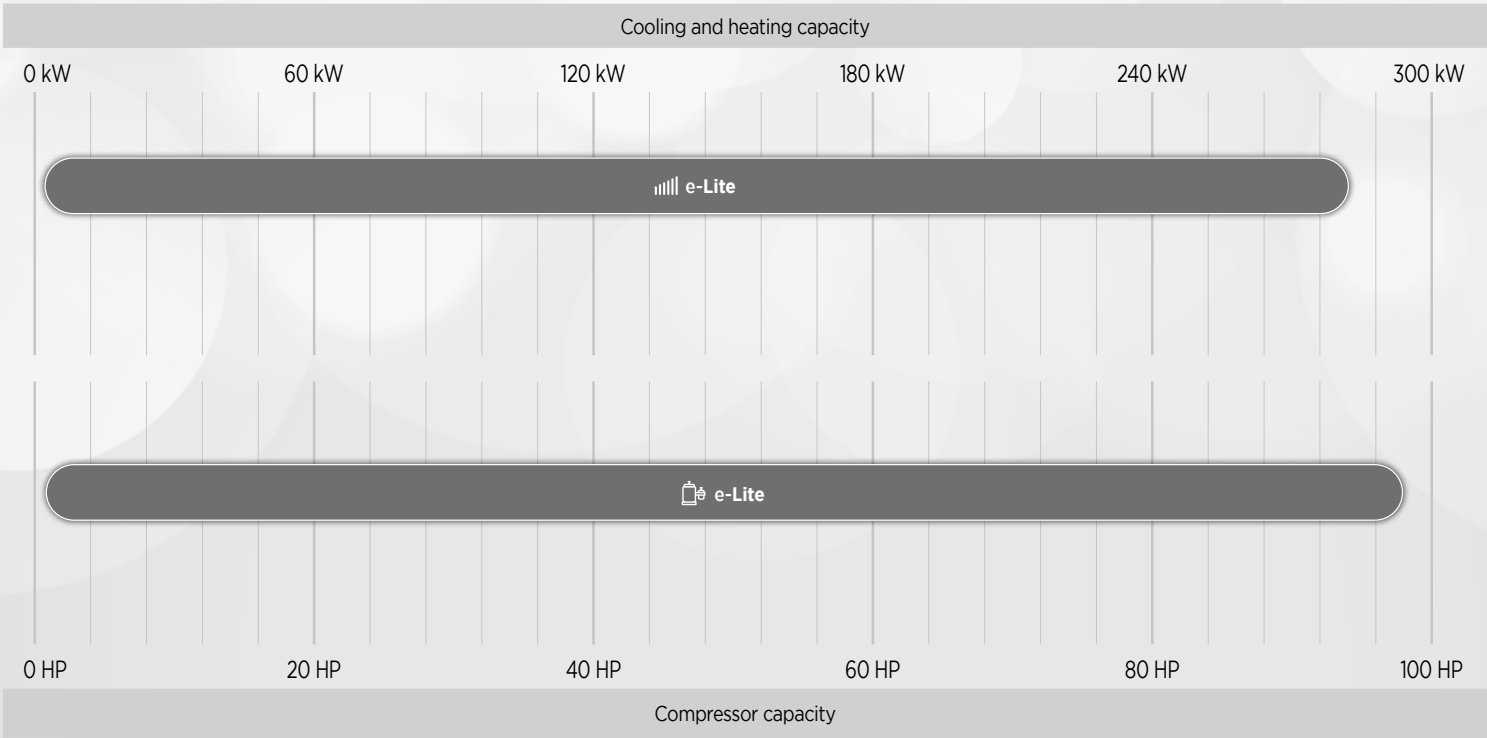
8 - 270 kW
3 - 96 HP

Air/Air
Water/Air

Cooling and heating capacity
Compressor capacity

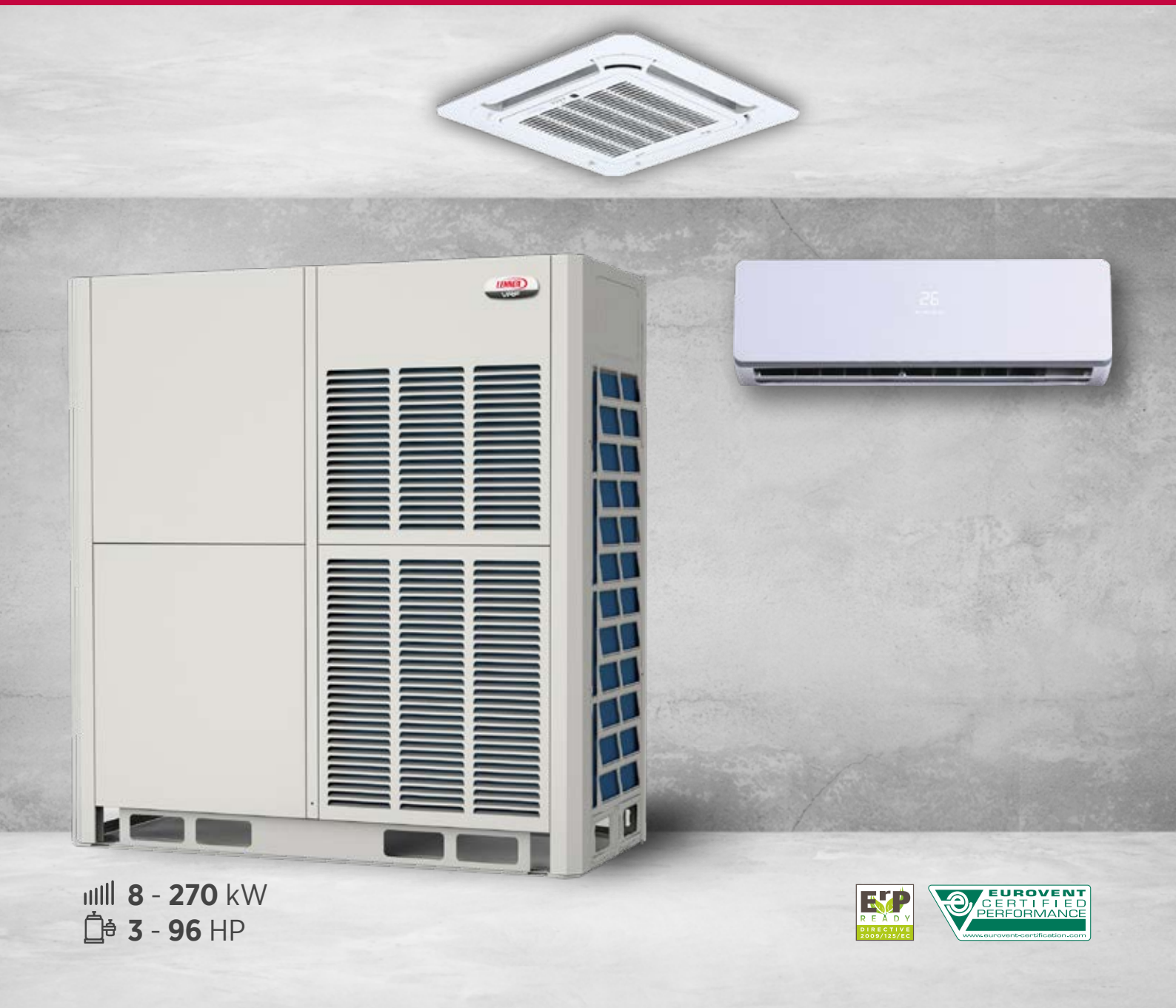
Cafés Restaurants
Convenience stores
Non food retail
Food retail

Cultural and sport centres
Office buildings
Hotels
Storage & Logistics



e-Lite

VRF Commercial Air Conditioners



8 - 270 kW

3 - 96 HP

ErP READY DIRECTIVE 2009/125/EC

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

The Energy Management System (EMS) allows a perfect adjustment of the evaporating and condensing temperatures for **maximised comfort and energy efficiency**.

The integration of cutting-edge technologies guarantees the units' optimal performance even under the harshest climates and environments, thus ensuring the installation's **robustness** in the long run.

Available in wall mounted, four-way cassette or floor standing configurations, the e-Lite indoor units **perfectly suit many applications** from office buildings to retail environments of all sizes.

Every indoor unit contains smart features to provide **optimal comfort** and increase **efficiency**.

PRECISION COOLING

40% to 100% cooling capacity modulation thanks to inverter compressors.

STEADY PERFORMANCE

The automatic refrigerant detection prevents fluctuations and ensures a constant level within the unit.

TOP PROTECTION

The innovatively designed auto snow-blowing & dust-clean functions prevent the accumulation of snow and dust on the outdoor unit.

REDUCED ENERGY CONSUMPTION

All indoor units feature DC fans for maximum energy efficiency.

PERFECT AIRFLOW

Thanks to the 5 swing angles for indoor unit louvres, the air flow direction can be controlled more precisely.

Photos and illustrations are not contractual.

WIDE OPERATING RANGE

The outdoor units operate in a wide ambient temperature range: from -5°C to 48°C in cooling mode and from -25°C to 24°C in heating mode.

INCREASED REFRIGERANT SUBCOOLING

+10% energy efficiency thanks to the integration of the Plate Heat Exchanger as a secondary intercooler.

HIGH RELIABILITY

The precise oil control technology eliminates any compressor oil shortage problems and thus ensures the system's smooth operation.

EXTENDED LIFESPAN

Outdoor units are given as standard an anti-corrosion treatment for non-extreme conditions and can also be customized with heavy anti-corrosion treatment on main components for surface protection against corrosive air, acid rain and saline air (for installations in coastal regions) to extend the overall lifetime .

QUIET OPERATION

The low sound operation fan motor and optimized fan blades guarantee the air discharges smoothly and provides a quiet living environment.

IDEAL INDOOR TEMPERATURE

The DC Inverter fan motor adjusts the airflow based on thermal load instantly providing less temperature fluctuation and an improved living environment.

HFC

Air cooled version

Heat pump units

PICTURE	TYPE	CAPACITY RANGE (kW)	KEY TECHNOLOGIES
	LV-XSO – Top Discharge	25,2 ~ 270,0	# R410A refrigerant # Wide capacity range # Full inverter compressors # Full DC fan motors # Precise oil control # Anti-corrosion protection # Intelligent defrosting technology # Multiple priority modes # Auto addressing
	LV-SO – Top Discharge	25,2 ~ 90,0	
	LV-MSO - Side Discharge	20,0 ~ 33,5	
	LV-MO - Side Discharge	20,0 ~ 45,0	
	LV-MO – MINI VRF	8,0 ~ 18,0	
	LV-MOC – MINI VRF	8,0 ~ 16,0	

Air cooled version

Heat recovery units

PICTURE	TYPE	CAPACITY RANGE (kW)	KEY TECHNOLOGIES
	LV-RSO – Top Discharge	22,4 ~ 150,0	# R410A refrigerant # Wide capacity range # Full inverter compressors # Full DC fan motors # Precise oil control # Anti-corrosion protection # Intelligent defrosting technology # Multiple priority modes # Auto addressing

Water cooled version

Heat pump units

PICTURE	TYPE	CAPACITY RANGE (kW)	KEY TECHNOLOGIES
	LV-WO	25,2 ~ 100,5	# R410A refrigerant # Wide capacity range # Full inverter compressors # Full DC fan motors # Precise oil control # Anti-corrosion protection # Intelligent defrosting technology # Multiple priority modes # Auto addressing

HFC

PICTURE	TYPE	CAPACITY RANGE (kW)	KEY TECHNOLOGIES
	One-way Cassette	1,8 ~ 7,1	# AC / DC motor # Cold air prevention # Quiet operation # Auto cooling-heating changeover # Digital display on/off # Buzzer sound on/off # Heat stratification compensation # Two thermistors control # 0.5°C/1°C setting temperature adjustment # Dirty filters indicator signal # Energy saving # Auto-restart # Self-diagnosis # Easy cleaning
	Two-way Cassette	2,2 ~ 7,1	
	Four-way Cassette	2,8 ~ 14	
	Compact Four-way Cassette	1,7 ~ 5,2	
	Medium Static Pressure Duct (1)	1,7 ~ 14,0	
	Medium Static Pressure Duct (ESP Increased Series) (1)	2,2 ~ 7,1	
	High Static Pressure Duct (1)	7,1 ~ 56,0	
	Wall Mounted	1,7 ~ 9,0	
	Ceiling & Floor	3,6 ~ 14,0	
	Floor Standing - Concealed	2,2 ~ 8,0	
	Floor Standing - Exposed	2,2 ~ 8,0	
	Console	2,2 ~ 4,5	
	Fresh Air Processing Unit	12,5 ~ 14,0	

(1) The indoor unit can be customized in order to use the Puro-air Kit.
Puro-Air kit, powered by OSRAM's UVC lamps, can effectively kill bacteria, viruses and odors from indoor air to provide a healthy and safe indoor environment. It is also innovatively designed so that it prevents UV damage to the eyes, skin, and respiratory tract.
The world's first air conditioning sterilization product certification.
99.9% Effective killing rate of white grape fungus.
99.9% Effective killing rate of H1N1.
98% Effective killing rate of natural bacteria.

CONTROL SYSTEM

Available connectivity: individual controllers, group controllers, centralised controllers, PC/network and BMS gateways, providing various control solutions. LENNOX patented technology can detect the ODU electricity consumption and distribute to each IDU, providing the electricity charge basis.

GROUP CONTROLLER

BMS GATEWAY

OUTDOOR UNIT

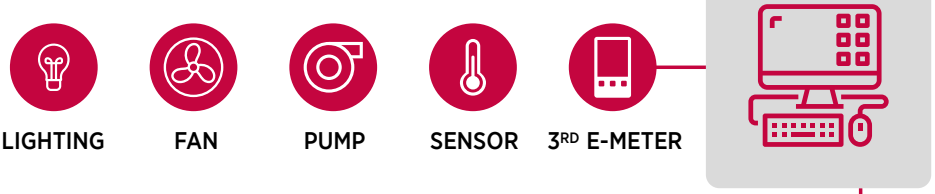
WIRED CONTROLLER

WIRELESS CONTROLLER

NETWORK CONTROL

CENTRALISED CONTROLLER

BMS SYSTEM

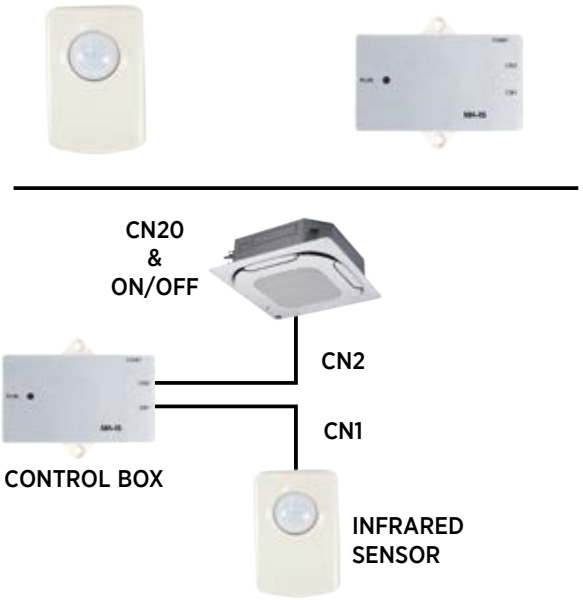


BMS PROTOCOL

BMS GATEWAY

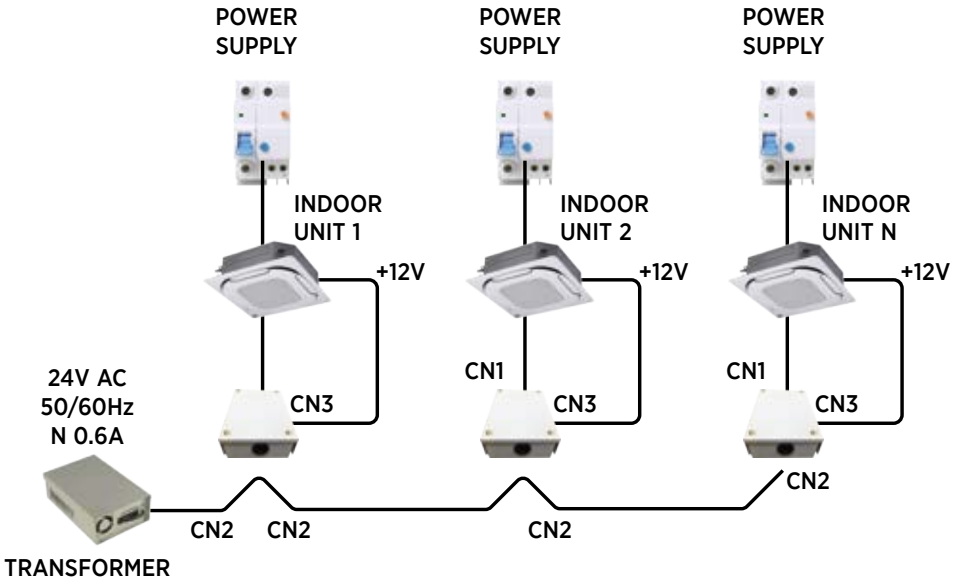
INFRARED SENSOR CONTROLLER

Using infrared sensors to detect movement, the Infrared Sensor Controller automatically turns indoor units on or off upon sensing that the room is occupied or unoccupied. Suitable for hotels,offices, conference rooms and residences, the Infrared Sensor Controller ensures climate control whilst minimising energy consumption.



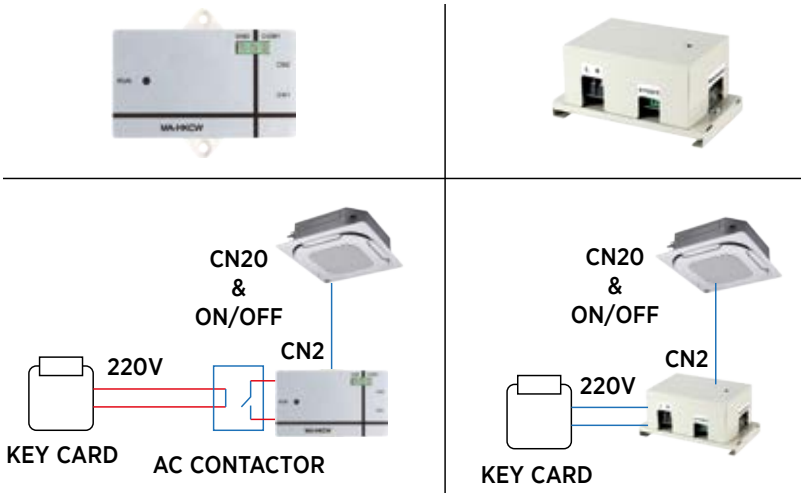
IDU ONLINE KIT

If the power supply for one indoor unit fails, the indoor unit will still remain online and the whole VRF system will not stop. The IDU online kit will keep the indoor unit online, thus allowing all other indoor units in the system to work normally and prevent unnecessary shutdowns.



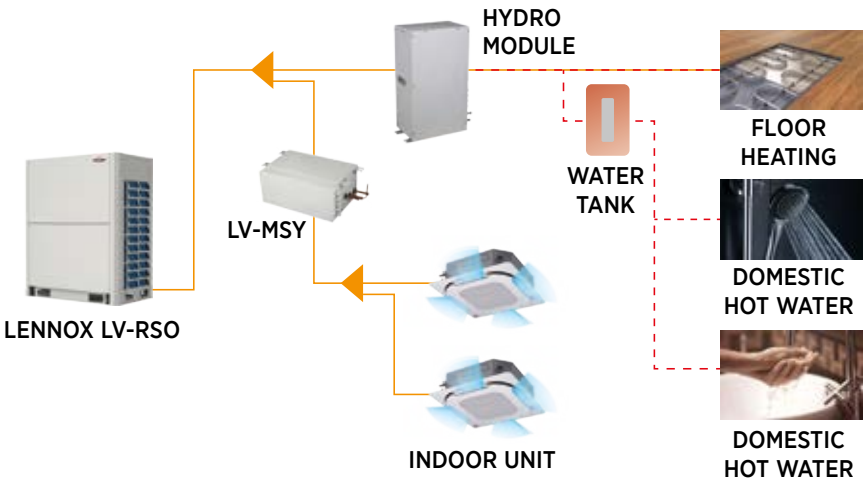
HOTEL KEY CARD INTERFACE MODULES

Enable power supply to indoor units to be integrated with hotel key card power supply management systems, which are designed to save energy by only running appliances whilst guests are present in their room.



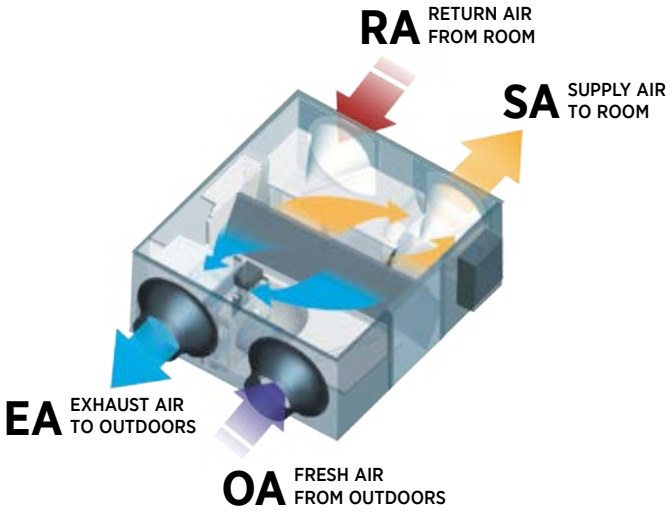
HOT WATER SUPPLY

The LV-RSO system can produce hot water (25°C to 80°C) when providing room air conditioning. The hot water can be used for space heating and domestic hot water, improving room comfort.



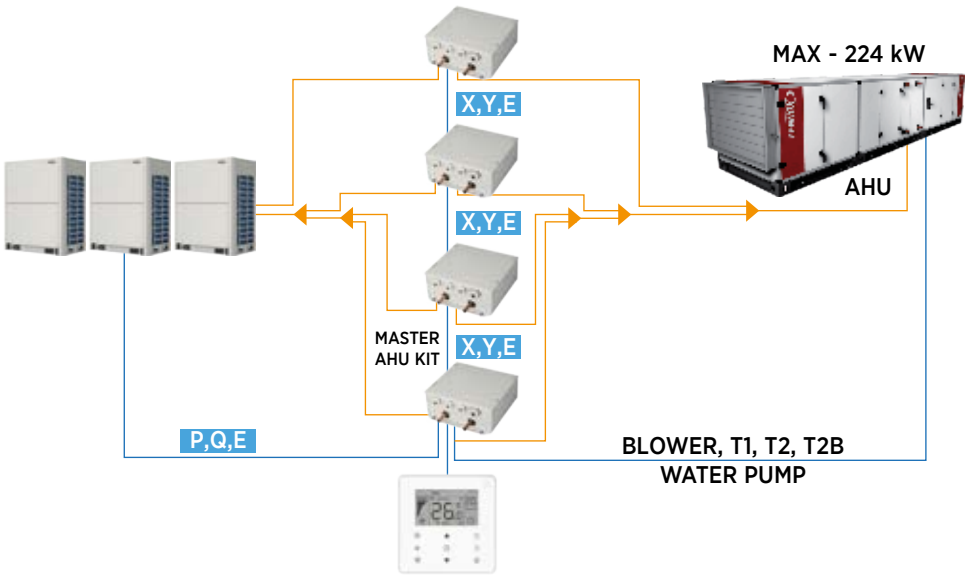
HEAT RECOVERY VENTILATOR

The heat recovery ventilator (LV-REC) can greatly reduce energy loss and room temperature fluctuations caused by the ventilation process.



VRF DX AHU CONTROL BOX

AHU Control Box facilitates raising the EER/COP of the complete AHU system.



DIAGNOSIS SOFTWARE

LENNOX VRF Diagnosis Software tool is used to monitor VRF systems and diagnose system errors. System settings and operating parameters can be accessed easily and data logs can be reviewed for fault prevention purposes.

FAN COIL UNITS

ALEGRA II 167

ARMONIA II 171

COMFAIR HD 177

INALTO 181

COMFAIR HH/HV 185

AXIL/EQUITHERM 189

FAN COIL UNITS — AIR COOLED

	**Allegra II**	Water/Air	WATER	0.5 - 8.9 kW 0.7 - 11.6 kW 60 - 1670 m³/h	EUROVENT CERTIFIED PERFORMANCE
	**Armonia II**	Water/Air	WATER	1.5 - 10.8 kW 1.9 - 13.5 kW 225 - 1536 m³/h	EUROVENT CERTIFIED PERFORMANCE
	**Comfair HD**	Water/Air	WATER	1.5 - 3.9 kW 1.8 - 4.9 kW 234 - 620 m³/h	EUROVENT CERTIFIED PERFORMANCE
	**Inalto**	Water/Air	WATER	3 - 28 kW 3,7 - 37,7 kW 516 - 5668 m³/h	EUROVENT CERTIFIED PERFORMANCE
	**Comfair HH/HV**	Water/Air	WATER	2,8 - 50,6 kW 4,9 - 60 kW 840 - 8000 m³/h	EUROVENT CERTIFIED PERFORMANCE
	**Axil / Equitherm**	Water/Air	WATER	4 - 20 kW 12 - 105 kW 1600 - 9100 m³/h	-

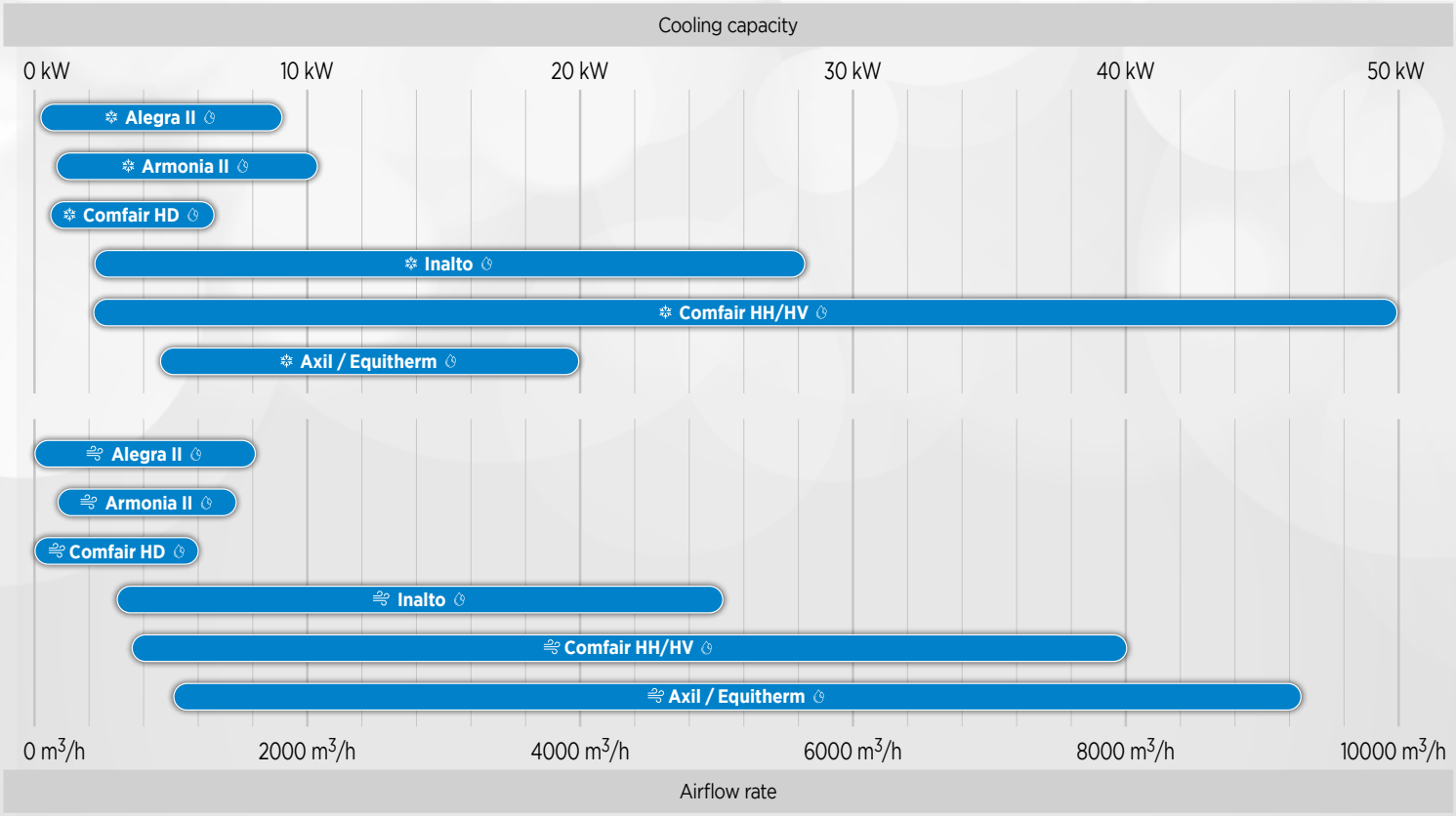
Water/Air

Cooling capacity
Heating capacity
Airflow rate

Non food retail
Shopping malls
Office buildings

Hotels

Industry



NOTES

Multiple Fan Coil models for **high adaptability** to any building design.

Low environmental impact on cooling and heating operations by using water as refrigerant.

Units available for wall, roof or false ceiling configurations, combining **aesthetics** and **perfect integration** to any space.

REDUCED ENERGY CONSUMPTION

EC motor fans for maximum energy efficiency and low noise operation.

QUIET OPERATION

EC motor fans with optimized fan blades designed to provide smooth and quiet air discharges.

GUARANTEED COMFORT

Low temperature fluctuation and improved living environment on cooling or heating operations.

ADAPTABILITY

Several Fan Coil solutions without casing, for false wall or false ceiling applications, preserving the aesthetics of the room.

Photos and illustrations are not contractual.

NOTES

ALLEGRA II

Fan coil units

WATER

0,5 - **8,9** kW
0,7 - **11,6** kW
60 - **1670** m³/h

LX(A) M(B) 1(C) L(D) EC(E)

(A) **LX** = Lennox
(B) **M** = Vertical and horizontal installation with cabinet (bottom air intake) - **MF** = Vertical and horizontal installation with cabinet (frontal air intake)
I = Vertical and horizontal concealed without cabinet (bottom air intake) - **IF** = Vertical concealed without cabinet (frontal air suppy)
(C) **1** = Size (from 1 to 10)
(D) Hydraulic connections - **R** = Right - **L** = Left
(E) EC fan motor

2 pipe system (3R coil)

ALLEGRA II				SPEED	1	2	3	4	5	6	7	8	9	10
Nominal thermal performances - Cooling mode														
COOLING MODE	Water inlet temperature.: 7°C Water outlet temperature.: 12°C Air inlet temp.: 27°C DB / 19°C WB	Total cooling capacity	W	Max	781	1298	1906	2322	2682	3139	3773	4150	5785	7739
				Med	694	1142	1691	1930	2231	2620	3168	3379	4957	7159
				Min	618	967	1455	1615	1710	2089	2527	2744	4255	6413
		Sensible cooling capacity	W	Max	631	928	1376	1662	2012	2229	2713	3122	4745	6479
				Med	554	822	1221	1360	1641	1850	2268	2509	4037	5959
				Min	478	697	1045	1140	1240	1469	1777	2014	3435	5293
		Water flow rate	l/h	Max	137	227	334	405	469	549	659	729	1014	1361
				Med	122	200	295	336	390	458	553	595	868	1260
				Min	108	169	255	282	300	364	441	483	744	1129
		Water pressure drop	kPa	Max	3,1	8,4	20,2	10,8	17,9	10,8	9	11,5	26,1	28,8
				Med	2,5	6,7	16,3	7,8	12,7	7,9	6,6	8	20	25
				Min	2	5	12,5	5,7	7,9	5,3	4,4	5,6	15,6	20,7
Nominal thermal performances - Heating mode														
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 45/40°C	Heating Capacity	W	Max	950	1390	2060	2560	3160	3480	4080	4820	6250	8580
				Med	790	1230	1810	2130	2650	2920	3450	3890	5440	7930
				Min	620	970	1580	1820	1980	2400	2940	3280	4660	7060
		Water flow rate	l/h	Max	167	243	359	446	551	607	711	840	1089	1495
				Med	126	214	315	370	462	508	601	677	948	1382
				Min	102	170	275	317	348	419	513	571	811	1229
		Water pressure drop	kPa	Max	3,5	7,8	18,9	10,6	17,7	10,7	8,5	11,4	19,9	22,9
				Med	2,3	6,3	15	7,6	13	7,8	6,3	7,8	15,6	19,9
				Min	1,6	4,1	11,8	5,8	7,9	5,6	4,8	5,8	11,8	16,2
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 50°C	Heating Capacity	W	Max	1120	1660	2460	3050	3740	4150	4870	5710	7450	10200
				Med	870	1470	2160	2530	3140	3470	4110	4610	6480	9430
				Min	710	1170	1880	2160	2370	2850	3490	3880	5550	8400
		Water flow rate	l/h	Max	137	227	334	405	469	549	659	729	1014	1361
				Med	122	200	295	336	390	458	553	595	868	1260
				Min	108	169	255	282	300	364	441	483	744	1129
		Water pressure drop	kPa	Max	2,5	6,9	16,4	8,8	14,6	8,8	7,3	9,3	21,3	23,5
				Med	1,8	5,5	13,2	6,4	10,4	6,4	5,4	6,5	16,2	20,5
				Min	1,4	4	10,2	4,7	6,4	4,3	3,6	4,5	12,4	16,9
Ventilation data														
Air flow rate			m^3/h	Max	120	211	292	359	398	503	619	728	1002	1511
				Med	100	184	256	295	336	419	519	586	865	1395
				Min	78	153	221	249	249	344	421	476	736	1224
Acoustic data														
Sound power level			dB(A)	Max	38	40	43	40	40	43	46	51	55	62
				Med	35	36	39	35	36	38	41	45	51	60
				Min	29	33	36	31	30	33	37	40	47	57
Sound pressure level			dB(A)	Max	29	31	34	31	31	34	37	42	46	53
				Med	26	27	30	26	27	29	32	36	42	51
				Min	20	24	27	22	21	24	28	31	38	48
Electrical data														
Power input (standard motor)			W	Max	19	22	34	38	48	61	67	98	125	191
				Med	16	18	29	30	39	50	52	81	103	181
				Min	12	13	25	25	30	41	43	66	85	167
Power input (EC motor)			W	Max	-	11	13	12	10	16	-	28	49	121
				Med	-	9	10	9	9	12	-	19	36	97
				Min	-	7	9	7	7	10	-	13	27	72
Absorbed current			A	Max	0,09	0,1	0,15	0,17	0,21	0,28	0,29	0,45	0,55	0,87
				Med	0,07	0,08	0,13	0,13	0,17	0,22	0,24	0,37	0,45	0,82
				Min	0,05	0,06	0,11	0,11	0,13	0,18	0,2	0,31	0,37	0,77

LX(A) M(B) 1(C) L(D) EC(E)

(A) **LX** = Lennox
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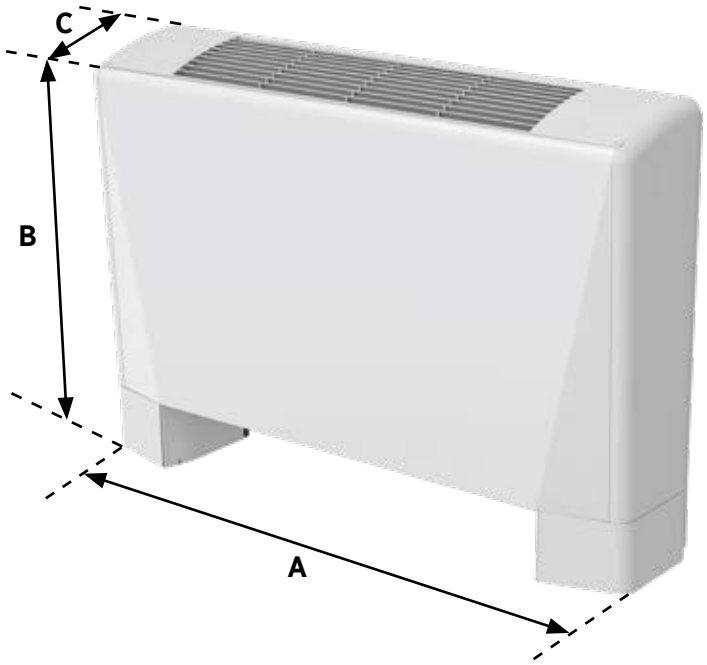
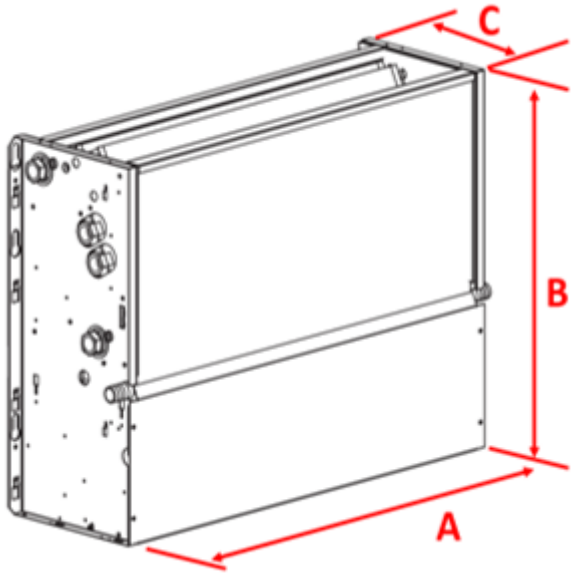
I = Vertical and horizontal concealed without cabinet (bottom air intake) - **IF** = Vertical concealed without cabinet (frontal air suppy)
(C) **1** = Size (from 1 to 10)
(D) Hydraulic connections - **R** = Right - **L** = Left
(E) EC fan motor

4 pipe system (3R+1 coil)

ALLEGRA II				SPEED	1	2	3	4	5	6	7	8	9	10
Nominal thermal performances - Cooling mode														
COOLING MODE	Water inlet temperature.: 7°C Water outlet temperature.: 12°C Air inlet temp.: 27°C DB / 19°C WB	Total cooling capacity	W	Max	830	1158	1876	2272	2687	3079	3223	4072	6395	7709
				Med	734	1012	1651	1890	2226	2570	2708	3349	5490	7169
				Min	658	867	1425	1585	1710	2049	2157	2744	4705	6408
		Sensible cooling capacity	W	Max	621	908	1356	1622	1982	2189	2658	3057	4655	5759
				Med	534	797	1196	1340	1621	1820	2218	2469	3957	5319
				Min	468	687	1030	1115	1220	1439	1747	1969	3365	4698
		Water flow rate	l/h	Max	147	195	327	397	464	539	564	711	1119	1362
				Med	130	174	289	329	401	451	473	606	958	1259
				Min	115	150	249	277	305	359	381	492	823	1130
		Water pressure drop	kPa	Max	1,8	7,6	18,7	10,1	17	10	8,4	11	25	24
				Med	1,5	6	15,1	7,2	11,9	7,3	6,2	7,7	18,9	20
				Min	1,1	4,5	11,6	5,3	7,4	4,9	4,1	5,5	14,4	17
Nominal thermal performances - Heating mode														
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 65/55°C	Heating Capacity	W	Max	760	1160	1680	1980	2700	2990	3000	3880	5620	6710
				Med	730	1090	1530	1710	2340	2600	2680	3450	5000	6260
				Min	610	940	1380	1520	1870	2270	2390	3050	4420	5750
		Water flow rate	l/h	Max	67	102	147	173	237	262	263	340	493	588
				Med	64	96	134	150	205	228	235	302	439	549
				Min	54	82	121	133	164	199	209	267	388	504
		Water pressure drop	kPa	Max	1	3,2	8,3	10,1	13,8	3,9	12,3	12,2	14,9	22,3
				Med	0,9	2,8	7,1	7,8	10,8	3,1	10	9,7	12,1	19,8
				Min	0,7	2,2	5,9	6,3	7,3	2,4	8,2	7,9	9,8	17
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 70/60°C	Heating Capacity	W	Max	870	1350	1901	2240	3070	3390	3400	4390	6370	7590
				Med	840	1270	1736	1940	2660	2950	3030	3910	5660	7090
				Min	710	1100	1553	1710	2120	2570	2700	3450	5010	6510
		Water flow rate	l/h	Max	77	119	167	197	270	298	299	386	560	667
				Med	74	112	153	170	233	259	266	343	498	623
				Min	62	97	137	151	186	226	238	303	440	572
		Water pressure drop	kPa	Max	1,2	3,5	10,2	12,3	17,7	4,8	15,6	15,3	18,2	27,3
				Med	1,2	3,1	8,7	9,5	13,9	3,8	12,7	12,2	14,8	24,2
				Min	0,9	2,4	7,3	7,7	9,4	3	10,3	9,9	11,9	20,8
Ventilation data														
Air flow rate			m^3/h	Max	117	197	291	349	401	496	603	733	990	1493
				Med	98	169	248	284	329	407	508	581	851	1368
				Min	77	142	214	241	245	335	411	469	725	1217
Acoustic data														
Sound power level			dB(A)	Max	38	40	43	40	42	43	49	53	57	62
				Med	35	36	39	35	36	38	43	45	53	60
				Min	29	30	36	32	34	33	37	40	47	57
Sound pressure level			dB(A)	Max	29	31	34	31	33	34	40	44	48	53
				Med	26	27	30	26	27	29	34	36	44	51
				Min	20	21	27	23	25	24	28	31	38	48
Electrical data														
Power input (standard motor)			W	Max	19	22	34	38	48	61	67	98	125	191
				Med	16	18	29	30	39	50	52	81	103	181
				Min	12	13	25	25	30	41	43	66	85	167
Power input (EC motor)			W	Max	-	11	13	12	10	16	-	28	49	121
				Med	-	9	10	9	9	12	-	19	36	97
				Min	-	7	9	7	7	10	-	13	27	72
Absorbed current			A	Max	0,09	0,1	0,15	0,17	0,21	0,28	0,29	0,45	0,55	0,87
				Med	0,07	0,08	0,13	0,13	0,17	0,22	0,24	0,37	0,45	0,82
				Min	0,05	0,06	0,11	0,11	0,13	0,18	0,2	0,31	0,37	0,77

ALLEGRA II		1	2	3	4	5	6	7	8	9	10
Dimensions with cabinet											
A	mm	610	760	910	1060	1210	1360	1510	1510	1660	1810
B		560	560	560	560	560	560	560	560	560	560
C		240	240	240	240	240	240	240	240	240	240
Dimensions without cabinet											
A	mm	380	530	680	830	980	1130	1280	1280	1430	1580
B		480	480	480	480	480	480	480	480	480	480
C		215	215	215	215	215	215	215	215	215	215
Weight of standard units											
2 pipe system (3R coil)	kg	13,2	16,6	19,2	22,7	26,1	29,9	36,1	36,1	40,7	46,5





ARMONIA II

Chilled water cassettes

WATER

1,5 - **10,8** kW
1,9 - **13,5** kW
225 - **1536** m³/h

LX(A) 6(B) 2(C) 1(D) NC(E) EC(F)

(A) **LX** = Lennox
(B) **6** = 600x600 - **9** = 900x900
(C) **2** = 2 pipes - **3** = 2 pipes + electrical heater - **4** = 4 pipes
(D) **1** = Size
(E) Modbus card (suitable for infrared remote control) - **NC** = Not included - **RC** = Included
(F) EC fan motor

600x600 - 2 pipe system

ARMONIA II				SPEED	621	622	623	624	625
Nominal thermal performances - Cooling mode									
COOLING MODE	Water inlet temperature.: 7°C Water outlet temperature.: 12°C Air inlet temp.: 27°C DB / 19°C WB	Total cooling capacity	W	Max	2223	2667	4247	4975	5381
				Med	1835	2433	3047	3648	4655
				Min	1556	1944	2144	2697	3967
		Sensible cooling capacity	W	Max	1843	2027	3107	3695	3991
				Med	1485	1813	2177	2628	3355
				Min	1236	1424	1494	1907	2797
		Water flow rate	l/h	Max	390	465	739	867	939
				Med	321	424	530	635	812
				Min	271	338	372	468	691
		Water pressure drop	kPa	Max	20	16	24	24	30
				Med	14	14	18	18	24
				Min	11	10	11	16	18
Nominal thermal performances - Heating mode									
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 45/40°C	Heating Capacity	W	Max	2340	2620	4080	4910	5420
				Med	1920	2370	2930	3440	4930
				Min	1590	1910	2090	2580	4090
		Water flow rate	l/h	Max	408	456	711	855	943
				Med	335	413	510	600	860
				Min	276	333	364	449	712
		Water pressure drop	kPa	Max	20,9	15,5	18,5	22,8	29,6
				Med	14,2	12,5	16,2	18	25,7
				Min	10,5	8,9	9,7	15,3	19,2
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 50°C	Heating Capacity	W	Max	2800	3150	4910	5900	6500
				Med	2300	2850	3522	4150	5900
				Min	1900	2300	2510	3100	4900
		Water flow rate	l/h	Max	390	465	739	867	939
				Med	321	424	530	635	812
				Min	271	338	372	468	691
		Water pressure drop	kPa	Max	19	16	19	23,1	29
				Med	13	13	17	19,8	23
				Min	10	9	10	16,5	18
Ventilation data									
Air flow rate			m^3/h	Max	367	398	550	660	760
				Med	295	355	398	468	660
				Min	225	269	269	328	550
Acoustic data									
Sound power level			dB(A)	Max	46	44	52	60	62
				Med	39	41	44	49	59
				Min	33	34	34	39	53
Sound pressure level			dB(A)	Max	37	35	43	51	53
				Med	30	32	35	40	50
				Min	24	25	25	30	44
Electrical data									
Power input (standard motor)			W	Max	48	43	63	75	89
Absorbed current (standard motor)			A	Max	0,22	0,19	0,28	0,33	0,39
Power input (EC motor)			W	Max	12	11	26	45	65
Absorbed current (EC motor)			A	Max	0,11	0,11	0,22	0,33	0,47

LX(A) 6(B) 2(C) 1(D) NC(E) EC(F)

(A) **LX** = Lennox
(B) **6** = 600x600 - **9** = 900x900
(C) **2** = 2 pipes - **3** = 2 pipes + electrical heater - **4** = 4 pipes
(D) **1** = Size
(E) Modbus card (suitable for infrared remote control) - **NC** = Not included - **RC** = Included
(F) EC fan motor

600x600 - 4 pipe system

ARMONIA II				SPEED	641	642	643	644	645	646
Nominal thermal performances - Cooling mode										
❄ COOLING MODE	Water inlet temperature.: 7°C Water outlet temperature.: 12°C Air inlet temp.: 27°C DB / 19°C WB	Total cooling capacity	W	Max	2303	2707	3337	3827	3825	4395
				Med	1905	2373	2507	2957	3048	3408
				Min	1606	1864	1884	1974	2367	2627
		Sensible cooling capacity	W	Max	1873	1977	2547	2857	2975	3345
				Med	1505	1713	1867	2157	2308	2518
				Min	1226	1344	1364	1404	1747	1897
		Water flow rate	l/h	Max	403	472	584	668	669	767
				Med	333	414	438	515	532	594
				Min	280	324	328	343	412	456
		Water pressure drop	kPa	Max	18	14	17	22	21	28
				Med	15	12	14	19	17	22
				Min	10	10	10	15	12	17
Nominal thermal performances - Heating mode										
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 45/40°C	Heating Capacity	W	Max	2690	3070	3900	2890	4380	3250
				Med	2300	2680	3070	2340	3510	2610
				Min	1780	2150	2150	1680	2760	2100
		Water flow rate	l/h	Max	236	269	342	254	384	285
				Med	201	235	269	206	307	229
				Min	156	187	189	147	242	184
		Water pressure drop	kPa	Max	12,2	20,4	14,4	18,1	17,5	21,2
				Med	11,3	16,5	11,9	14,9	15,1	18,8
				Min	8,8	12,2	7,1	11	9,6	13,3
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 50°C	Heating Capacity	W	Max	3050	3500	4450	3300	5000	3710
				Med	2600	3050	3500	2670	4000	2980
				Min	2010	2450	2450	1910	3150	2390
		Water flow rate	l/h	Max	268	307	391	290	439	326
				Med	228	268	307	235	351	262
				Min	177	215	215	168	277	210
		Water pressure drop	kPa	Max	15	15	18	23	22	27
				Med	14	12	15	19	19	24
				Min	11	9	9	14	12	17
Ventilation data										
Air flow rate			m^3/h	Max	367	398	550	550	660	660
				Med	295	355	398	398	468	468
				Min	224	269	269	269	328	328
Acoustic data										
Sound power level			dB(A)	Max	46	47	52	52	58	58
				Med	39	41	44	44	49	51
				Min	33	37	34	37	39	44
Sound pressure level			dB(A)	Max	37	38	43	43	49	49
				Med	30	32	35	35	40	42
				Min	24	28	25	28	30	35
Electrical data										
Power input (standard motor)			W	Max	48	43	63	63	75	75
Absorbed current (standard motor)			A	Max	0,22	0,19	0,28	0,28	0,33	0,33
Power input (EC motor)			W	Max	12	11,2	25,5	25,5	40	40
Absorbed current (EC motor)			A	Max	0,11	0,11	0,22	0,22	0,33	0,33

LX(A) 6(B) 2(C) 1(D) NC(E) EC(F)

(A) **LX** = Lennox
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(C) **2** = 2 pipes - **3** = 2 pipes + electrical heater - **4** = 4 pipes
(D) **1** = Size
(E) Modbus card (suitable for infrared remote control) - **NC** = Not included - **RC** = Included
(F) EC fan motor

900x900 - 2 pipe system and 4 pipe system

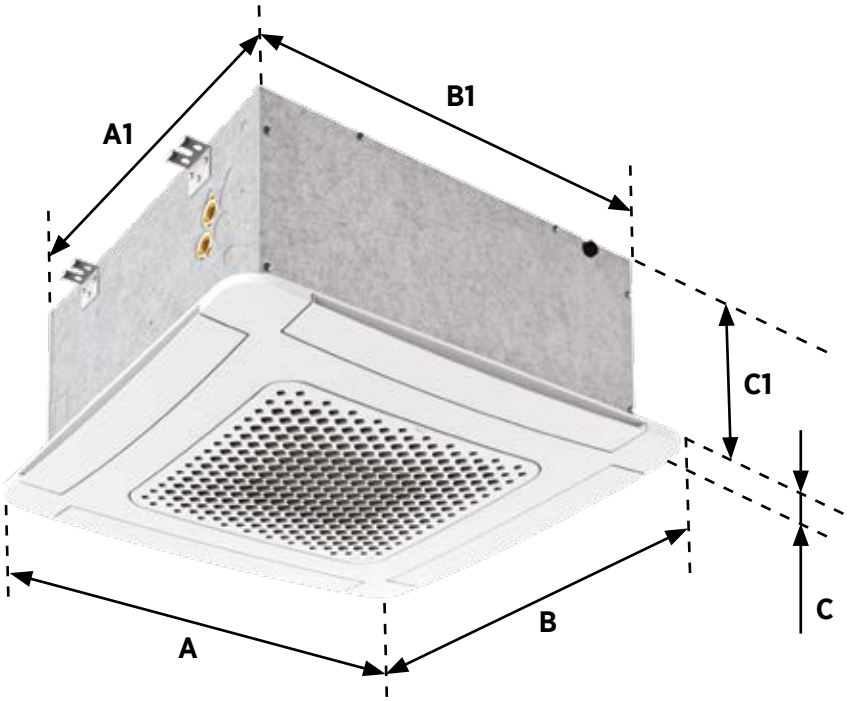
ARMONIA II				SPEED	2 PIPE SYSTEM			4 PIPE SYSTEM			
					921	922	923	941	942	943	944
Nominal thermal performances - Cooling mode											
COOLING MODE	Water inlet temperature.: 7°C Water outlet temperature.: 12°C Air inlet temp.: 27°C DB / 19°C WB	Total cooling capacity	W	Max	6128	9460	10865	6125	7100	8665	9965
				Med	4950	6609	8790	4847	5139	6560	7510
				Min	4152	5337	5336	4011	4257	4456	5056
		Sensible cooling capacity	W	Max	4558	6400	7965	4505	5340	6635	7515
				Med	3580	4339	6210	3497	3749	4880	5520
				Min	2982	3457	3716	2851	3047	3186	3596
		Water flow rate	l/h	Max	1064	1641	1888	1064	1236	1511	1734
				Med	858	1144	1523	841	893	1142	1304
				Min	719	923	923	695	738	772	876
		Water pressure drop	kPa	Max	31,5	33,5	53	20,5	29,6	38	34
				Med	21,5	13,5	36	13,5	18	24,5	21
				Min	16,5	8,5	12,5	9,5	11,5	14	14
Nominal thermal performances - Heating mode											
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 45/40°C	Heating Capacity	W	Max	6400	8610	11280	7940	9270	11030	8420
				Med	5000	5970	8660	6180	7060	8380	6500
				Min	4210	4590	5030	5130	5570	6010	4400
		Water flow rate	l/h	Max	1115	1500	1964	697	812	967	739
				Med	871	1039	1508	542	619	735	570
				Min	734	800	876	449	488	527	386
		Water pressure drop	kPa	Max	24,2	25	49,9	19,5	27,2	35,2	17,8
				Med	16,7	10,8	30,7	13,2	16,9	23,9	12,1
				Min	11,6	7,9	10,1	9,1	11,6	13,2	6,4
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 50°C	Heating Capacity	W	Max	7650	10400	13500	9000	10500	12500	9600
				Med	6000	7200	10400	7000	8000	9500	7400
				Min	5050	5550	6050	5800	6300	6800	5000
		Water flow rate	l/h	Max	1064	1641	1888	791	922	1098	843
				Med	858	1144	1523	615	703	835	650
				Min	719	923	923	510	554	598	439
		Water pressure drop	kPa	Max	22	29	46	23,5	33	42,5	22
				Med	16	12,5	31	16	20,5	29	15
				Min	11	10	11	11	14	16	8
Ventilation data											
Air flow rate			m^3/h	Max	1023	1270	1536	1023	1270	1536	1536
				Med	763	858	1175	763	858	1175	1175
				Min	623	662	669	623	662	669	669
Acoustic data											
Sound power level			dB(A)	Max	47	53	59	47	53	59	59
				Med	39	40	49	39	40	49	49
				Min	32	34	35	32	34	35	35
Sound pressure level			dB(A)	Max	38	44	50	38	44	50	50
				Med	30	31	40	30	31	40	40
				Min	23	25	26	23	25	26	26
Electrical data											
Power input (standard motor)			W	Max	102	108	156	98	106	163	163
Absorbed current (standard motor)			A	Max	0,52	0,6	0,75	0,52	0,6	0,75	0,75
Power input (EC motor)			W	Max	81	89	155	45	74	121	121
Absorbed current (EC motor)			A	Max							

600x600

ARMONIA II		2 PIPE SYSTEM					4 PIPE SYSTEM					
		621	622	623	624	625	641	642	643	644	645	646
Dimensions with cabinet												
A1	mm	575	575	575	575	575	575	575	575	575	575	575
B1		575	575	575	575	575	575	575	575	575	575	575
C1		286	286	286	286	286	286	286	286	286	286	286
Dimensions without cabinet												
A	mm	680	680	680	680	680	680	680	680	680	680	680
B		680	680	680	680	680	680	680	680	680	680	680
C		40	40	40	40	40	40	40	40	40	40	40
Weight of standard units												
Basic unit	kg	20	21	23	24	24	23	24	24	24	24	24

900x900

ARMONIA II		2 PIPE SYSTEM			4 PIPE SYSTEM			
		921	922	923	941	942	943	944
Dimensions with cabinet								
A1	mm	818	818	818	818	818	818	818
B1		818	818	818	818	818	818	818
C1		326	326	326	326	326	326	326
Dimensions without cabinet								
A	mm	900	900	900	900	900	900	900
B		900	900	900	900	900	900	900
C		55	55	55	55	55	55	55
Weight of standard units								
Basic unit	kg	40	45	45	41	46	46	46



NOTES

COMFAIR HD

High wall fan coil units

WATER

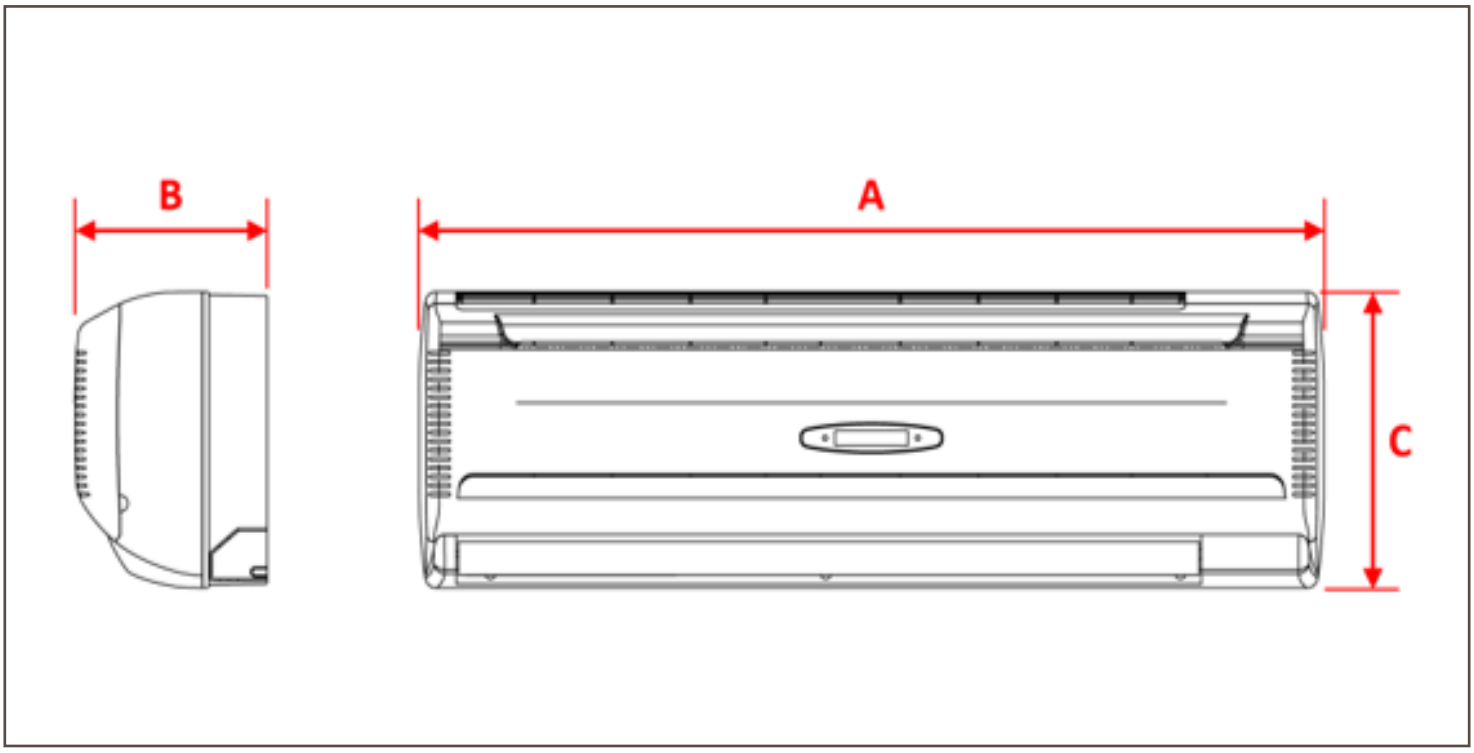
1,5 - **3,9** kW
1,8 - **4,9** kW
234 - **620** m³/h

HD(A) 1(B)

(A) **HD** = High pressure fan coil unit
(B) **1** = Unit size

COMFAIR HD				SPEED	1	2	3	4
Nominal thermal performances - Cooling mode								
❄ COOLING MODE	Water inlet temperature.: 7°C Water outlet temperature.: 12°C Air inlet temp.: 27°C DB / 19°C WB	Total cooling capacity	W	Max	1931	2351	3292	3949
				Med	1704	2073	2918	3595
				Min	1525	1805	2385	2885
		Sensible cooling capacity	W	Max	1520	1871	2632	3079
				Med	1330	1613	2278	2805
				Min	1170	1385	1855	2225
		Water flow rate	l/h	Max	337	409	573	687
				Med	297	360	508	625
				Min	266	314	415	501
		Water pressure drop	kPa	Max	15,9	22,9	17,4	21,6
				Med	12,5	18,3	13,3	17,8
				Min	10,0	14,3	11,4	11,8
Nominal thermal performances - Heating mode								
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 45/40°C	Heating Capacity	W	Max	2030	2490	3710	4110
				Med	1760	2180	3200	3720
				Min	1570	1910	2510	3240
		Water flow rate	l/h	Max	353	434	646	716
				Med	307	380	557	648
				Min	273	332	438	565
		Water pressure drop	kPa	Max	16,5	23,1	21,7	21,5
				Med	12,4	18,3	16,5	17,1
				Min	9,8	14,6	9,2	13,4
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 50°C	Heating Capacity	W	Max	2420	2970	4390	4920
				Med	2110	2610	3800	4450
				Min	1880	2280	3000	3860
		Water flow rate	l/h	Max	336	409	573	687
				Med	297	360	508	625
				Min	266	314	415	501
		Water pressure drop	kPa	Max	15,0	20,5	17,3	19,8
				Med	11,6	16,4	13,8	15,9
				Min	9,3	13,0	8,3	10,6
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 70/60°C	Heating Capacity	W	Max	4090	5030	7480	8280
				Med	3560	4400	6450	7500
				Min	3170	3850	5070	6540
		Water flow rate	l/h	Max	360	442	657	727
				Med	313	386	566	659
				Min	278	338	445	574
		Water pressure drop	kPa	Max	16,1	22,4	21,1	21,2
				Med	12,2	17,7	16,0	16,9
				Min	9,6	14,1	8,8	13,1
Ventilation data								
Air flow rate			m^3/h	Max	344	417	553	620
				Med	282	333	476	544
				Min	234	273	375	426
Acoustic data								
Sound power level			dB(A)	Max	53	54	54	56
				Med	50	50	50	52
				Min	47	45	43	45
Sound pressure level			dB(A)	Max	44	45	45	47
				Med	41	41	41	43
				Min	38	36	34	36
Electrical data								
Power input (standard motor)			W	Max	29	29	48	51
				Med	26	27	42	45
				Min	25	25	35	35
Power input (EC motor)			W	Max	0,13	0,13	0,26	0,3
				Med	0,12	0,12	0,22	0,24
				Min	0,11	0,11	0,17	0,18

COMFAIR HD		1	2	3	4
A	mm	880	990	1170	1170
B		205	210	220	220
C		298	305	360	360
Weight of standard units					
Basic unit	kg	11,0	11,8	15,5	17,5



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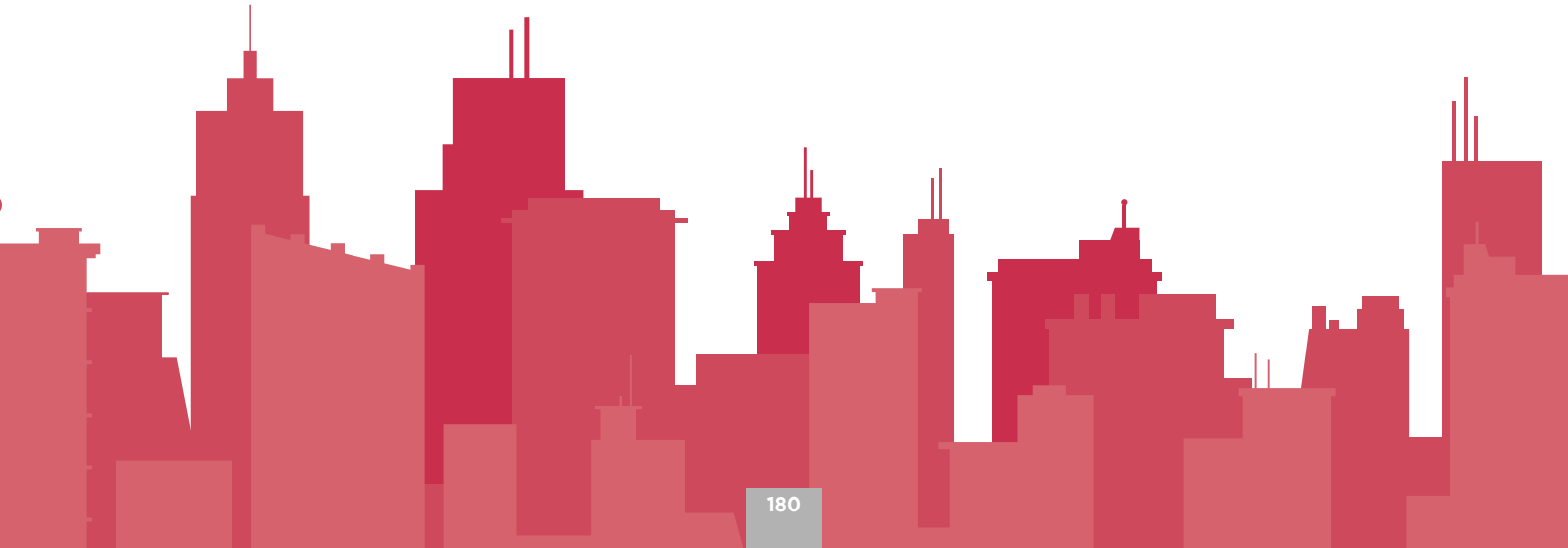


INALTO

Ductable air treatment units

WATER

3 - **28** kW
3,7 - **37,7** kW
516 - **5668** m³/h

A(A) 05(B) R(C) H(D) DS(E)

(A) **A** = 3-speed AC fan - **E** = EC fan
(B) **05** = Size
(C) Hydraulic connections - **R** = Right - **L** = Left
(D) **H** = Horizontal installation - **V** = Vertical installation
(E) **DS** = Double skin

4 pipe system (4R+2 coils)

INALTO				SPEED	05	11	15	25	28	49	57
Nominal thermal performances - Cooling mode											
❄ COOLING MODE	Water inlet temperature.: 7°C Water outlet temperature.: 12°C Air inlet temp.: 27°C DB / 19°C WB	Total cooling capacity	W	Max	3010	5728	8786	10924	14511	23350	26171
				Med	2896	5634	7725	8970	13009	21768	23958
				Min	2662	5408	6896	6550	11620	17549	21520
		Sensible cooling capacity	W	Max	2136	4138	6326	7864	10581	17320	19401
				Med	2047	4064	5505	6370	9389	16038	17608
				Min	1876	3888	4876	4590	8320	12689	15650
		Water flow rate	l/h	Max	536	1009	1551	1934	2589	4167	4687
				Med	513	991	1363	1586	2318	3878	4282
				Min	471	952	1217	1158	2071	3117	3845
		Water pressure drop	kPa	Max	9,9	13,3	17,8	17	19,5	20,2	26,4
				Med	9,1	12,9	14,2	12	16,1	18,4	22,2
				Min	7,9	12	11,6	6,9	13,2	12,1	18,8
Nominal thermal performances - Heating mode											
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 65/55°C	Heating Capacity	W	Max	4080	7580	11380	14170	19040	31190	34360
				Med	3930	7460	10070	11760	17130	29080	31460
				Min	3660	7180	9080	8770	15400	23600	28360
		Water flow rate	l/h	Max	358	665	997	1242	1669	2735	3012
				Med	345	654	883	1031	1502	2550	2758
				Min	321	630	797	769	1351	2069	2486
		Water pressure drop	kPa	Max	12,7	16,6	11,4	7,9	15,2	33,5	22,8
				Med	11,9	16,1	9,2	5,7	12,7	29,6	19,6
				Min	10,5	15,1	7,7	3,4	10,5	20,5	16,3
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 70/60°C	Heating Capacity	W	Max	4610	8560	12860	16030	21520	35230	38850
				Med	4430	8420	11380	13300	19360	32840	35570
				Min	4130	8110	10260	9910	17410	26640	32050
		Water flow rate	l/h	Max	405	752	1130	1408	1890	3095	3413
				Med	390	740	1000	1169	1702	2885	3124
				Min	362	712	901	870	1529	2341	2815
		Water pressure drop	kPa	Max	15,5	20,3	13,9	9,6	18,6	40,8	27,9
				Med	14,5	19,7	11,2	6,9	15,5	36,1	23,9
				Min	12,7	18,4	9,4	4,1	12,8	25	19,9

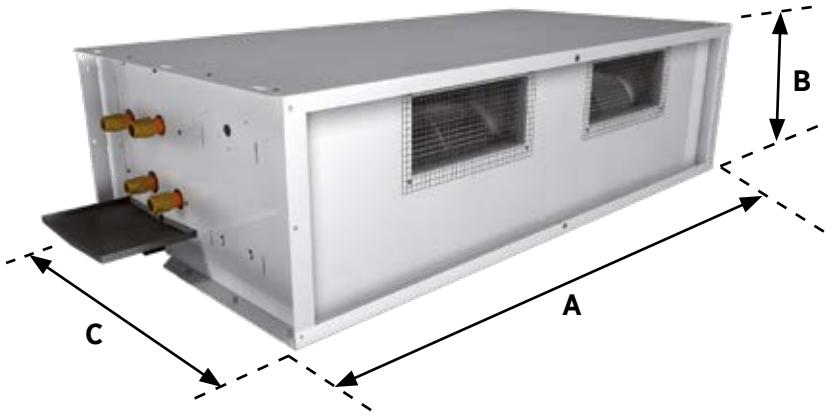
A(A) 05(B) R(C) H(D) DS(E)

(A) **A** = 3-speed AC fan - **E** = EC fan
(B) **05** = Size
(C) Hydraulic connections - **R** = Right - **L** = Left
(D) **H** = Horizontal installation - **V** = Vertical installation
(E) **DS** = Double skin

INALTO			SPEED	05	11	15	25	28	49	57
Ventilation data										
Air flow rate		m^3/h	Max	484	966	1478	1868	2651	4598	5187
			Med	459	944	1245	1437	2275	4144	4548
			Min	369	894	1079	963	1956	3062	3904
Acoustic data										
INALTO SINGLE SKIN UNIT	Sound power level	dB(A)	Max	61	65	66	67	71	74	75
			Med	59	64	60	59	66	70	69
			Min	55	64	54	56	62	61	65
	Sound pressure level	dB(A)	Max	52	56	57	58	62	65	66
			Med	50	55	51	50	57	61	60
			Min	46	55	45	47	53	52	56
INALTO-DS DOUBLE SKIN UNIT	Sound power level	dB(A)	Max	61	64	66	67	71	74	75
			Med	59	63	60	58	66	70	69
			Min	55	64	57	53	62	61	65
	Sound pressure level	dB(A)	Max	52	55	57	58	62	65	66
			Med	50	54	51	49	57	61	60
			Min	46	55	48	44	53	52	56
Electrical data										
Power input (standard motor)		W	Max	94	132	224	346	529	860	1059
			Med	82	126	195	270	461	762	922
			Min	73	122	174	200	410	561	820
Absorbed current (standard motor)		A	Max	0,45	0,64	1,08	1,67	2,56	4,15	5,11
			Med	0,4	0,61	0,94	1,29	2,23	3,68	4,46
			Min	0,35	0,59	0,84	0,95	1,98	2,71	3,96
Power input (EC motor)		W	Max	69	108	158	237	386	639	773
			Med	58	96	100	113	232	464	464
			Min	42	82	70	52	155	206	309
Absorbed current (EC motor)		A	Max	0,52	0,87	1,16	1,13	1,75	2,93	3,5
			Med	0,48	0,75	0,71	0,65	1,18	2,27	2,37
			Min	0,37	0,63	0,52	0,41	0,82	1,24	1,65

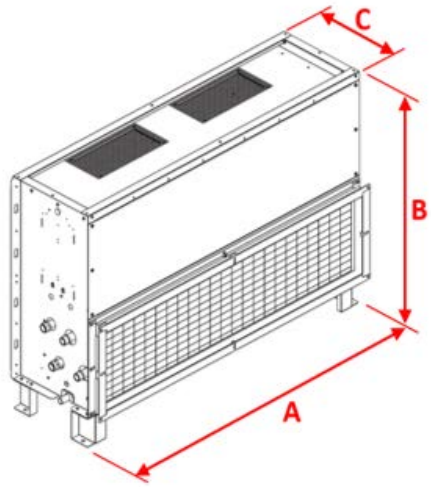
Horizontal unit

INALTO		SINGLE SKIN							DOUBLE SKIN						
		05	11	15	25	28	49	57	05	11	15	25	28	49	57
A	mm	770	1070	1270	1420	1520	2190	2190	793	1093	1293	1443	1543	2233	2233
B		297	297	347	372	397	373	398	325	325	375	400	425	401	426
C		643	643	643	770	770	770	770	643	643	643	770	770	770	770
Weight of standard units															
Basic unit	kg	29	40	51	65	76	133	141	43	59	71	92	101	167	175



Vertical unit

INALTO		SINGLE SKIN							DOUBLE SKIN						
		05	11	15	25	28	49	57	05	11	15	25	28	49	57
A1	mm	770	1070	1270	1420	1520	2190	2190	793	1093	1293	1443	1543	2213	2213
B1		740	740	815	890	915	891	916	754	754	829	904	929	905	930
C1		347	347	397	422	447	423	448	367	367	417	442	467	443	468
Weight of standard units															
Basic unit	kg	33	47	60	69	76	136	145	49	66	84	99	108	181	191



COMFAIR HH/HV

High pressure fan coil units

WATER

2,8 - **50,6** kW
4,9 - **60** kW
840 - **8000** m³/h

HH(A) 20(B)

(A) **HH** = Horizontal installation - **HV** = Vertical installation
(B) **20** = Unit size

2 PIPE SYSTEM

COMFAIR HH/HV				SPEED	10	20	30	40	50	60	70
Nominal thermal performances - Cooling mode											
COOLING MODE	Water inlet temperature.: 7°C Water outlet temperature.: 12°C Air inlet temp.: 27°C DB / 19°C WB	Total cooling capacity	W	Max	2735	4974	6936	8277	10850	23488	42068
				Med	2683	4711	6797	8066	9764	21629	39655
				Min	2543	4084	6536	7596	8081	19816	35610
		Sensible cooling capacity	W	Max	2025	3684	5216	6187	8250	16918	30788
				Med	1983	3471	5107	6016	7334	15469	28875
				Min	1873	2964	4856	5626	5971	14096	25670
		Water flow rate	l/h	Max	487	875	1225	1459	1936	4200	7550
				Med	479	828	1197	1418	1736	3858	7081
				Min	454	720	1143	1336	1438	3517	6352
		Water pressure drop	kPa	Max	13,5	24,5	28,3	27,7	23,9	34,4	36,4
				Med	13,1	22,2	27,2	26,3	19,7	29,6	32,5
				Min	12,0	17,4	25,0	23,7	14,1	25,1	26,9
Nominal thermal performances - Heating mode											
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 45/40°C	Heating Capacity	W	Max	3080	5370	7660	9040	12430	25450	46880
				Med	3030	5060	7470	8760	11010	23210	43630
				Min	2860	4350	7100	8210	8960	20970	38670
		Water flow rate	l/h	Max	537	936	1335	1575	2165	4433	8166
				Med	527	881	1301	1526	1918	4042	7604
				Min	498	758	1237	1430	1562	3652	6736
		Water pressure drop	kPa	Max	13,2	22,7	27,1	26,1	24,0	31,1	34,5
				Med	12,8	20,5	25,9	24,7	19,4	26,5	30,4
				Min	11,6	15,7	23,7	22,0	13,5	22,1	24,5
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 50°C	Heating Capacity	W	Max	3660	6410	9120	10770	14730	30440	55840
				Med	3600	6030	8890	10440	13070	27750	52020
				Min	3400	5200	8450	9790	10670	25100	46190
		Water flow rate	l/h	Max	487	875	1225	1459	1936	4200	7550
				Med	479	828	1197	1418	1736	3858	7081
				Min	454	720	1143	1336	1438	3517	6352
		Water pressure drop	kPa	Max	11,0	20,0	23,1	22,5	19,4	28,0	29,7
				Med	10,7	18,1	22,1	21,4	16,0	24,1	26,5
				Min	9,7	14,2	20,4	19,3	11,5	20,5	21,9
Ventilation data											
Air flow rate			m^3/h	Max	541	944	1419	1641	2401	4134	7985
				Med	528	873	1371	1575	2041	3676	7279
				Min	491	721	1282	1446	1560	3242	6246
Acoustic data											
Sound power level (inlet + radiated)			dB(A)	Max	58	62	63	65	67	70	72
				Med	57	59	62	64	68	66	67
				Min	56	56	60	62	62	61	62
Sound power level (outlet)			dB(A)	Max	61	63	66	66	66	74	75
				Med	60	60	65	65	67	69	70
				Min	58	56	62	63	63	64	65
Sound pressure level (inlet + radiated)			dB(A)	Max	49	53	54	56	58	61	63
				Med	48	50	53	55	59	57	58
				Min	47	47	51	53	53	52	53
Sound pressure level (outlet)			dB(A)	Max	52	54	57	57	57	65	66
				Med	51	51	56	56	58	60	61
				Min	49	47	53	54	54	55	56
Electrical data											
Power input (standard motor)			W	Max	105	126	204	223	430	992	1932
				Med	107	119	173	194	366	861	1615
				Min	107	116	164	194	299	684	1410
Absorbed current (standard motor)			A	Max	0,51	0,59	1,12	1,18	1,90	4,52	9,00
				Med	0,51	0,55	0,87	0,96	1,67	3,95	7,90
				Min	0,49	0,54	0,79	0,92	1,45	3,25	6,50
Power input (ECM motor)			W	Max	78	108	125	150	350	650	1180
				Med	75	88	110	140	220	450	880
				Min	58	60	98	110	117	300	540
Absorbed current (ECM motor)			A	Max	0,60	0,88	1,02	1,08	1,60	2,70	5,40
				Med	0,58	0,75	0,90	0,96	1,05	1,83	3,70
				Min	0,47	0,50	0,77	0,78	0,65	1,20	2,20

HH(A) 20(B)

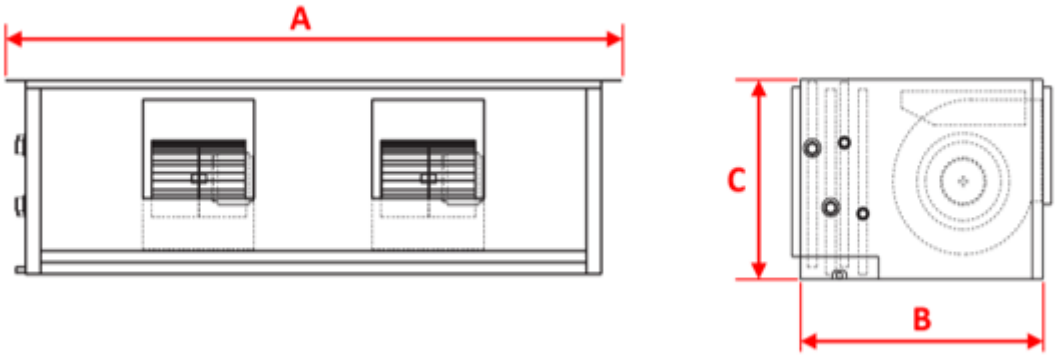
(A) **HH** = Horizontal installation - **HV** = Vertical installation
(B) **20** = Unit size

4 PIPE SYSTEM

COMFAIR HH/HV				SPEED	10	20	30	40	50	60	70
Nominal thermal performances - Cooling mode											
COOLING MODE	Water inlet temperature.: 7°C Water outlet temperature.: 12°C Air inlet temp.: 27°C DB / 19°C WB	Total cooling capacity	W	Max	2665	4854	6776	8117	10650	22958	40818
				Med	2623	4631	6657	7926	9644	21409	38985
				Min	2493	4044	6376	7506	8031	19636	35350
		Sensible cooling capacity	W	Max	1975	3584	5076	6047	8080	16498	29758
				Med	1933	3411	4987	5906	7244	15299	28335
				Min	1833	2944	4756	6016	5931	13956	25470
		Water flow rate	l/h	Max	475	855	1198	1431	1900	4109	7335
				Med	468	815	1172	1394	1718	3820	6966
				Min	446	714	1123	1320	1430	3487	6308
		Water pressure drop	kPa	Max	13,0	23,5	27,2	26,7	23,1	33,1	34,6
				Med	12,6	21,6	26,2	25,5	19,3	29,1	31,6
				Min	11,6	17,1	24,3	23,2	14,0	24,8	26,5
Nominal thermal performances - Heating mode											
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 65/55°C	Heating Capacity	W	Max	2560	4360	6130	7240	9810	29570	52860
				Med	2530	4180	6010	7070	8930	27580	50280
				Min	2420	3710	5770	6730	7560	25290	45700
		Water flow rate	l/h	Max	225	383	537	635	860	2593	4634
				Med	222	366	526	619	783	2418	4408
				Min	212	326	506	590	663	2217	4006
		Water pressure drop	kPa	Max	18,3	9,7	21,0	10,8	21,7	20,8	22,3
				Med	17,9	9,0	20,3	10,4	18,4	18,0	20,4
				Min	16,6	7,3	18,9	9,5	13,7	15,5	17,3
HEATING MODE	Air temperature.: 20°C Water inlet temp.: 70/60°C	Heating Capacity	W	Max	2900	4940	6930	8200	11110	33410	59740
				Med	2860	4730	6800	8010	10110	31150	56820
				Min	2740	4210	6530	7620	8560	28560	51630
		Water flow rate	l/h	Max	255	434	609	720	976	2935	5247
				Med	251	416	597	703	888	2737	4990
				Min	240	369	574	670	752	1509	4536
		Water pressure drop	kPa	Max	22,4	11,9	25,7	13,3	26,6	24,9	27,2
				Med	21,9	11,0	24,8	12,7	22,6	22,0	24,9
				Min	20,2	8,9	23,2	11,7	16,8	18,9	21,1
Ventilation data											
Air flow rate			m^3/h	Max	523	914	1372	1595	2335	4009	7657
				Med	512	855	1330	1536	2010	3627	7112
				Min	478	713	1249	1422	1547	3206	6186
Acoustic data											
Sound power level (inlet + radiated)			dB(A)	Max	58	62	63	65	67	70	72
				Med	57	59	62	64	68	66	67
				Min	56	56	60	62	62	61	62
Sound power level (outlet)			dB(A)	Max	61	60	66	66	66	74	75
				Med	60	60	65	65	67	69	70
				Min	58	56	62	63	63	64	65
Sound pressure level (inlet + radiated)			dB(A)	Max	49	53	54	56	58	61	63
				Med	48	50	53	55	59	57	58
				Min	47	47	51	53	53	52	53
Sound pressure level (outlet)			dB(A)	Max	52	51	57	57	57	65	66
				Med	51	51	56	56	58	60	61
				Min	49	47	53	54	54	55	56
Electrical data											
Power input (standard motor)			W	Max	105	126	204	223	430	992	1932
				Med	107	119	173	194	366	861	1615
				Min	107	116	164	194	299	684	1410
Absorbed current (standard motor)			A	Max	0,51	0,59	1,12	1,18	1,90	4,52	9,00
				Med	0,51	0,55	0,87	0,96	1,67	3,95	7,90
				Min	0,49	0,54	0,79	0,92	1,45	3,25	6,50
Power input (ECM motor)			W	Max	78	108	125	150	350	650	1180
				Med	75	88	110	140	220	450	880
				Min	58	60	98	110	117	300	540
Absorbed current (ECM motor)			A	Max	0,60	0,88	1,02	1,08	1,60	2,70	5,40
				Med	0,58	0,75	0,90	0,96	1,05	1,83	3,70
				Min	0,47	0,50	0,77	0,78	0,65	1,20	2,20

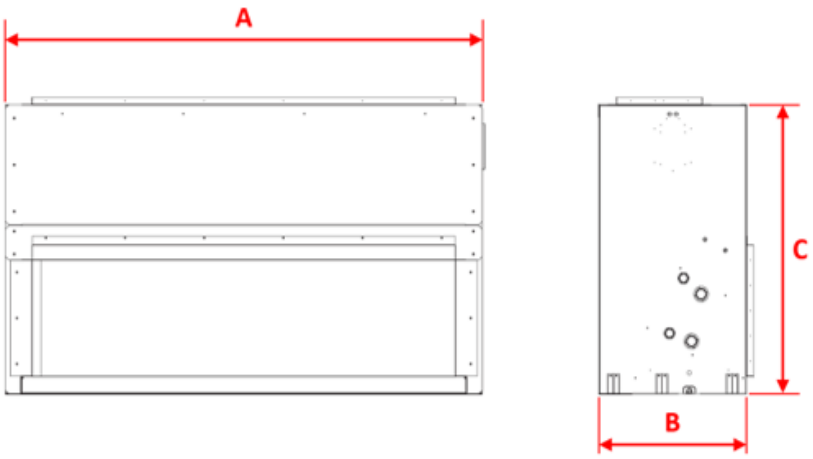
Horizontal unit

COMFAIR HH		10	20	30	40	50	60	70
A	mm	740	1090	1190	1430	1430	1480	2170
B		533	533	533	533	533	853	853
C		300	300	325	325	375	675	675
Weight of standard units								
Basic unit	kg	25	33	38	44	53	121	192



Vertical unit

COMFAIR HV		10	20	30	40	50	60	70
A	mm	740	1090	1190	1430	1430	1480	2170
B		300	300	325	325	375	672	672
C		573	573	643	643	693	1265	1265
Weight of standard units								
Basic unit	kg	27	35	41	46	56	117	192



AXIL/EQUITHERM

Unit heaters / Destratification fans

WATER

4 - **20** kW
12 - **105** kW
1600 - **9100** m³/h

AXIL(A) 4(B) 02(C) 4(D)

(A) **AXIL** = Hot water - **AXIL F** = Hot/chilled water - **AXIL V** = High temperature water/steam - **AXIL Z** = Electrical heater - **EQUITHERM** = Destratifier
(B) Cabinet size - **4** = 526 - **5** = 636 - **6** = 743 - **9** = 1011
(C) **AXIL/AXIL F/AXIL V** = Number of rows - 2R, 3R, 4R - **AXIL Z** = Electrical heater capacity 14kW/24kW/39kW - **EQUITHERM** = 4-pole or 6-pole motor
(D) **AXIL/AXIL F/AXIL V** - 4 = 4/6-pole motor - 6 = 6/8-pole motor = - **AXIL Z** - R = control power fitted on (for thermostat control)

AXIL
Heating only: Hot water maximum 120°C / 16bars
Airflow : 2000 to 9500 m^3/h
Heating capacity (Air 18°C - Water 90/70°C): 12 to 96 kW
4 Sizes – 4/5/6/9

AXIL F
Cooling and Heating:
Hot water maximum 120°C / 16 bars
Minimum Chilled water inlet 7°C
Airflow : 2000 to 9500 m^3/h
Cooling capacity (Air 26°C/55% - Water 7/12°C) : 4 to 22,4 kW
4 Sizes – 4/5/6/9

AXIL V
Heating only:
Hot water, Superheated water or Steam
Maximum 210°C / 20 bars
Airflow : 2100 to 9200 m^3/h
Heating capacity (Air 18°C - Steam 15bars) : 31 to 151 kW
4 Sizes – 4/5/6/9

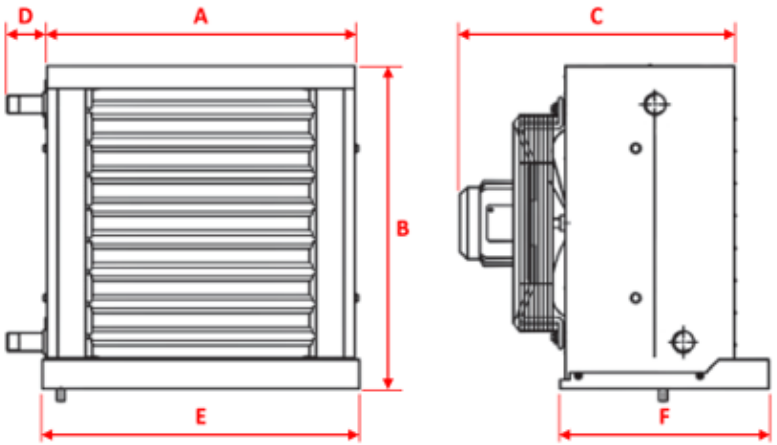
AXIL Z
Heating (electrical heater)
Airflow : 1560 to 4790 m^3/h
Heating capacity : 14 / 24 / 39 kW
3 Sizes – 4/5/6

EQUITHERM
Ventilation only
Airflow : 1700 to 13000 m^3/h
4 Sizes – 4/5/6/9

Photos and illustrations are not contractual.

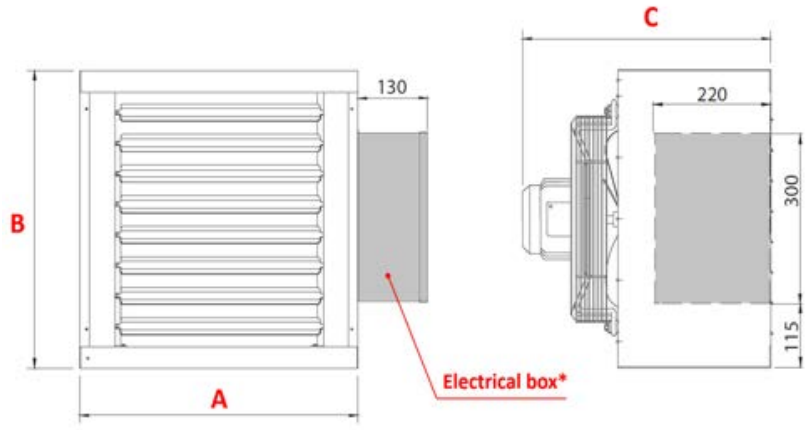
AXIL		AXIL (HOT WATER)				AXIL F (HOT/CHILLED WATER)				AXIL V (HIGH TEMPERATURE WATER/STEAM)			
		4	5	6	9	4	5	6	9	4	5	6	9
A	mm	526	636	743	1011	526	636	743	1011	526	636	743	1011
B		526	636	743	1011	537	647	754	1022	526	636	743	1011
C		468	468	468	576	468	468	468	576	468	468	468	576
D		69	69	60	92	69	69	60	92	69	69	60	92
E*		-	-	-	-	542	650	758	1026	-	-	-	-
F*		-	-	-	-	450	450	450	450	-	-	-	-
Weight of standard units													
2R	kg	22	25	34	81	22	25	34	81	22	25	34	81
3R		23	28	39	90	23	28	39	90	23	28	39	90
4R		25	32	45	100	25	32	45	100	25	32	45	100
Steam		-	-	-	-	-	-	-	-	30	38	51	92

* Drain pan only available on chilled water version (AXIL F).



AXIL		AXIL Z (ELECTRICAL HEATER)			EQUITHERM (DESTRATIFIER)			
		4	5	6	4	5	6	9
A	mm	525	633	741	525	633	741	1009
B		526	636	743	526	636	743	1011
C		515	515	515	515	515	515	532
Weight of standard units								
Base unit	kg	22	30	38	14	20	25	42

* Electrical box only available on AXIL Z.



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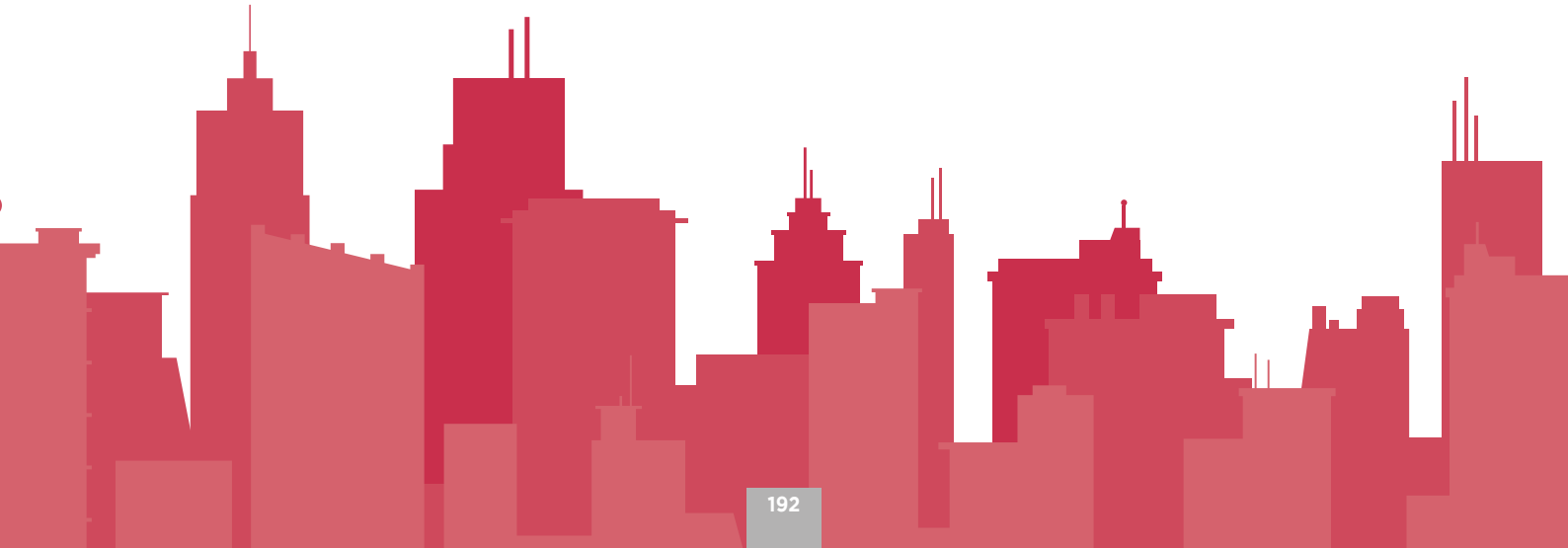


FRESH AIR UNITS

MiniAir 195

MaxiAir 195

e-MovAir 199

FRESH AIR UNITS

AIR COOLED

MiniAir Inverter — R410A — 320 - 4700 m³/h — -

MaxiAir Inverter — R410A — 1500 - 15000 m³/h — -

e-MovAir Inverter — R410A — 17 - 146 kW / 20 - 140 kW / 3500 - 30000 m³/h — -

Air/Air

Water/Air

Cooling capacity

Heating capacity

Airflow rate

Cafés Restaurants

Non food retail

Shopping malls

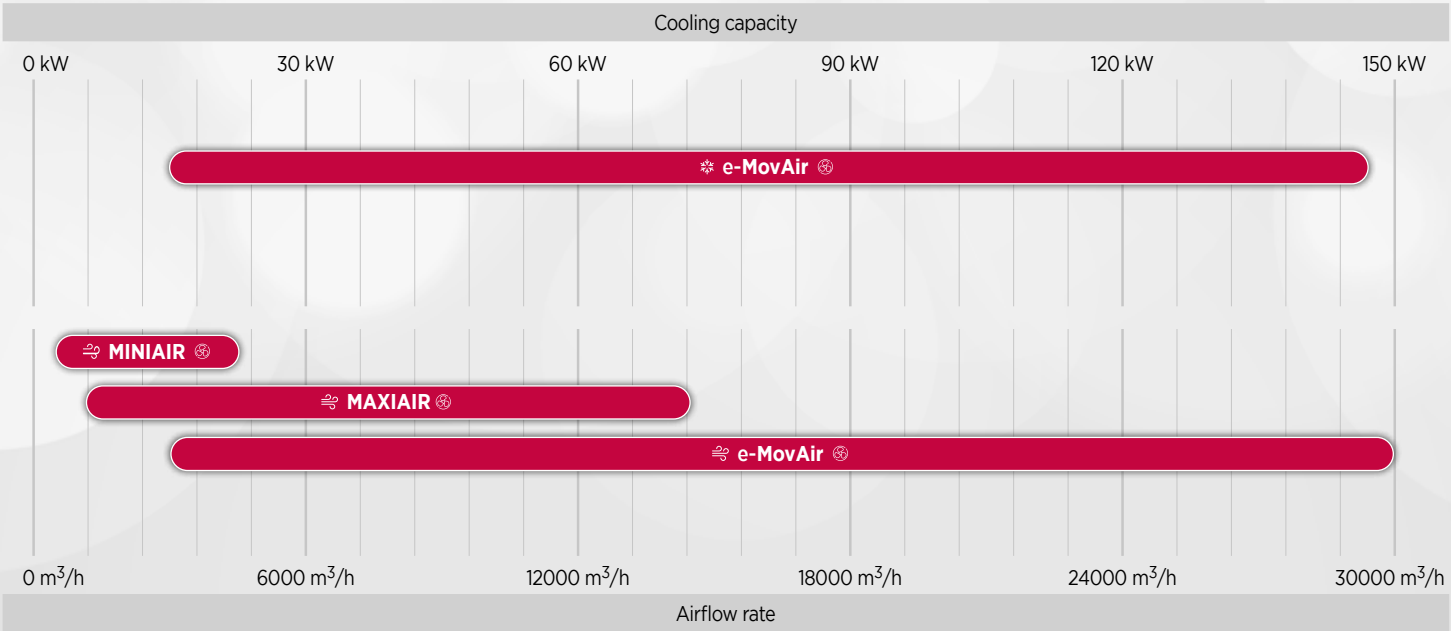
Industry

Convenience Stores

Hotels

Office buildings

Cultural and sport centres



MINIAIR/MAXIAIR

Heat recovery units

R410A

MINIAIR
AIR COOLED Inverter
320 - **4700** m³/h

MAXIAIR
AIR COOLED Inverter
1500 - **15000** m³/h

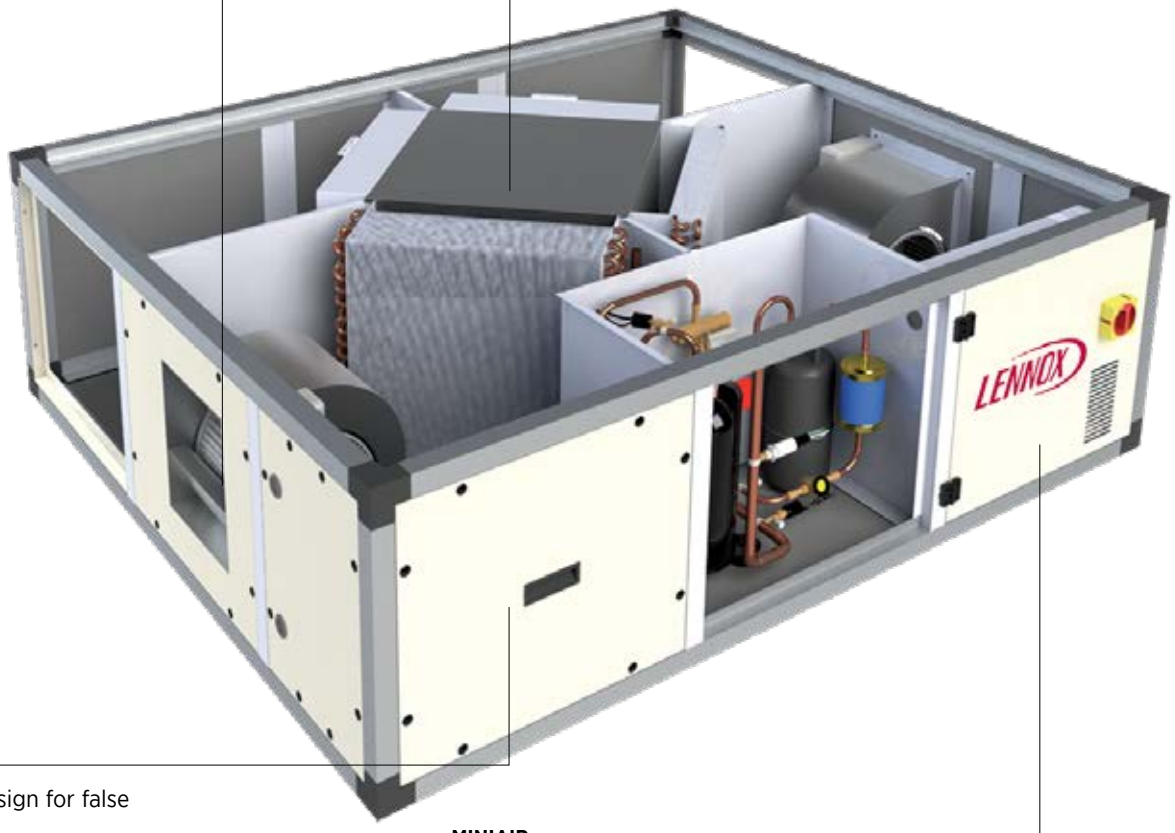
Twin heat recovery systems that combine high efficiency with **superior indoor air quality**.
Exhaust air is used to heat or cool the fresh air before suppling it to the building, resulting in **higher efficiency** than traditional units.
Adaptable units: Miniair for false ceiling and Maxiair for indoor or outdoor installation.

AIRFLOW

Several horizontal airflow configurations available.
Full capacity when supply air is fully delivered by recovered fresh air.
Free cooling and free heating modes.
By-Pass damper for fresh air management.

HEAT RECOVERY

Crossflow or Counter Flow heat exchangers.
Thermodynamic heat recovery with inverter scroll compressor.
Heat recovery wheel (only available on Maxiair).



MINIAIR

CASING & DESIGN

Miniair with horizontal design for false ceiling installation.
Maxiair designed for indoor or outdoor installation.
Casing built with painted metal sheet (sandwich type and removable).
Polyurethane insulation.
Bypass section for defrost or free cooling functions.

Photos and illustrations are not contractual.

AIR TREATMENT

EC motor fans ensuring a precise temperature for better comfort and energy savings.
Analogue filter detection to inform when the filters must be changed.
IAQ kits for improved indoor air quality within the building:

Miniair:
- F7 (ePM1) on supply air side (standard)
- M5 (ePM10) on exhaust air side (standard)
- Ionization (option)

Maxiair:
- F7 (ePM1) on supply air side (standard)
- G4 (ePM10) on fresh air intake (standard)
- Ionization (option)

AUXILIARY HEATING DEVICES

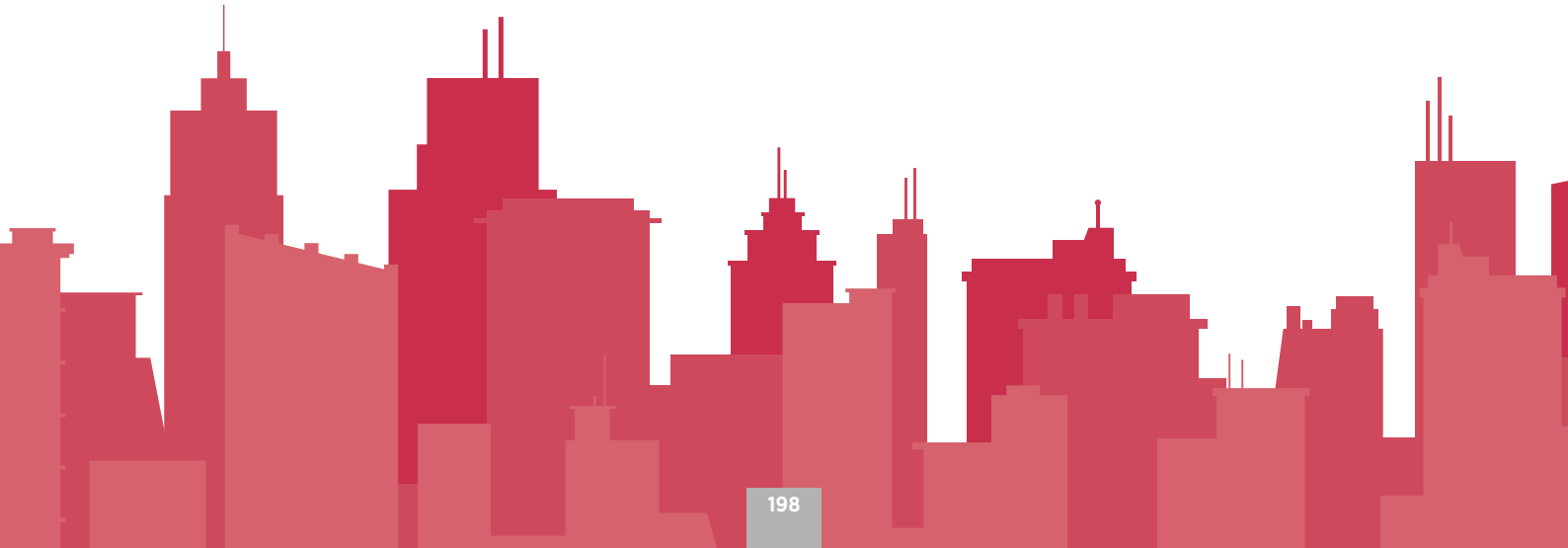
Electric post heater.
Heating and cooling water coil.

MAXIAIR

CONTROL

Built-in board controls air temperatures, free-cooling mode, air flow rates, defrost cycles, etc.
Integrated communication solution with Modbus.
Several control solutions for wall mounting installation.

NOTES



e-MovAir

Packaged air handling units

R410A

AIR COOLED Inverter

17 - **146** kW

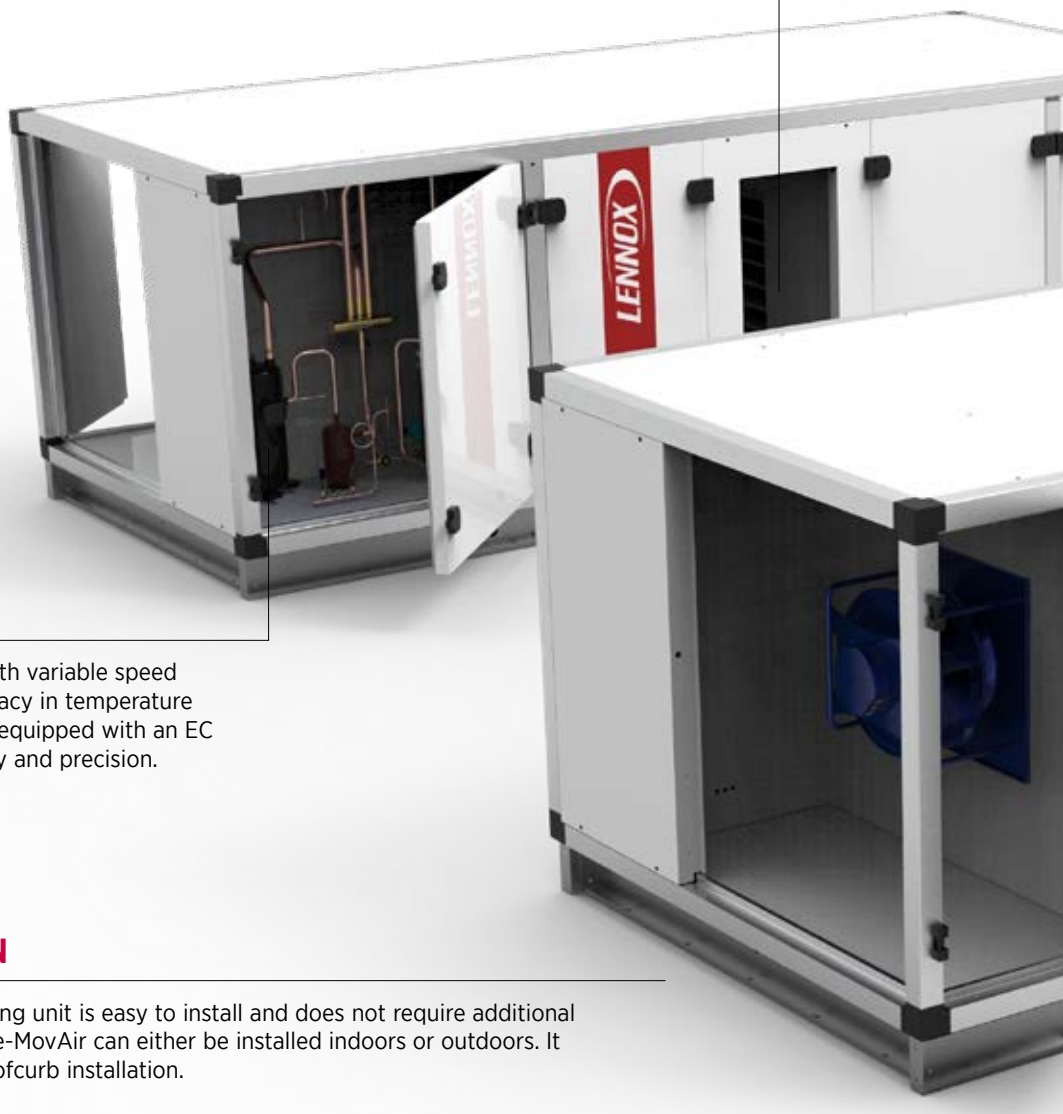
20 - **140** kW

3500 - **30000** m³/h

- # Combines the simplicity of a plug and play rooftop, while offering the **intelligence and flexibility** of an air handling unit.
- # Designed with **smart features** and **highly innovative components** that provide beyond expected energy efficiency performance.
- # Conceived to supply high fresh air rates, combining **comfort with superior indoor air quality**.
- # **Fully compliant with the VDI 6022 certification**, ensuring maximum hygiene in ventilation systems.

ALL YEAR LONG OPERATION

The intelligence and design of the unit enables the absence of defrost cycle, and thus prevents any temperature drop, while being able to provide continuous fresh clean air 365 days per year.



ACCURACY & SPEED

The inverter compressor combined with variable speed fans provide high flexibility and accuracy in temperature management. The unit has also been equipped with an EC motor to increase its energy efficiency and precision.

EASY INSTALLATION

This plug and play air handling unit is easy to install and does not require additional installation operations. The e-MovAir can either be installed indoors or outdoors. It is also compatible with a roofcurb installation.

ENERGY EFFICIENT

The e-MovAir has been designed to use the calorific or frigorific load of the rejected air, thus generating important energy savings.

Photos and illustrations are not contractual.

CUSTOMISED INSULATION

The e-MovAir is available with two insulation options in order to best fit the installation requirements.
Thermal Insulation - The unit is equipped with thermal insulation through 60mm thick double skin panels with injected polyurethane. Classified T2 for thermal transmittance and TB2 for thermal Bridge from the EN 1886 norm.
Acoustic Insulation - The unit is equipped with 50mm thick double skin panels with high-density mineral wool insulation (90kg/m3). Sound acoustic attenuation classified (32db at 500 Hz) from the EN 1886 norm.

PERFECT AIR

The e-MovAir combines the most hygienic components to deliver fresh, clean air.
- drain pan made of stainless steel AISI316
- internal panels made of prepainted steel
- coil frame made of aluminum
- filter frame made of prepainted steel
- painted fans
- internal closures made of prepainted steel
- non porous sealing

eM(A) 24(B) A(C) H(D) 140(E)

(A) **eM** = e-MovAir
(B) Air flow (xx000)
(C) Capacity range
(D) **H** = Heat pump
(E) **A** = Air cooled

Air cooled version

Heat pump units

e-MovAir		EM03AH025	EM04AH028	EM05AH030	EM06AH035	EM07AH040	EM09AH055
Nominal thermal performances - Cooling mode							
Cooling capacity (1)	kW	18,1	24,6	29,8	23,2	40,0	49,9
Total Power Input	kW	5,7	7,6	9,4	5,2	7,7	16,8
EER net (1)		3,20	3,24	3,16	4,47	5,22	2,96
Nominal thermal performances - Heating mode							
Heating capacity (2)	kW	22,6	25,7	37,4	34,2	36,1	60,5
Total Power Input	kW	4,9	6,4	9,6	6,6	8,2	15,0
COP net (2)		4,61	4,0	3,91	5,22	4,41	4,02
Seasonal efficiencies - Cooling mode							
Seasonal Energy Efficiency Ratio - **SEER** (3)		4,0	3,9	4,0	4,3	4,4	4,4
Seasonal energy efficiency - **ηs,c** (4)	%	156	155	156	169	174	171
Eurovent energy efficiency class - Part load operation		-	-	-	-	-	-
Seasonal efficiencies - Heating mode							
Seasonal Coefficient of Performance - **SCOP** (5)		4,0	4,2	3,7	3,9	4,2	4,0
Seasonal energy efficiency - **ηs,h** (6)	%	158	164	146	153	163	156
Eurovent energy efficiency class - Part load operation		-	-	-	-	-	-
Auxiliary heating							
Gas heating capacity - Standard / High	kW	-	-	-	-	-	-
Electric heater capacity - Standard / High		9 / 18	12 / 24	12 / 24	18 / 36	18 / 36	24 / 48
Electric pre-heater capacity - Standard / High		9 / 18	12 / 24	12 / 24	18 / 36	18 / 36	24 / 48
Hot water coil capacity Air inlet 20°C/Water		Capacity depends on air and water temperatures.					
Ventilation data (7)							
Minimum airflow rate	m^3/h	3500	3500	4000	5500	6300	8300
Nominal airflow rate		3500	4500	5500	5500	7200	9900
Maximum airflow rate		4500	5000	5500	6350	8280	9900
Acoustic data - Standard unit							
Outdoor sound power	dB(A)	48	53	58	53	58	65
Indoor blower outlet sound power		76	82	87	79	85	93
Electrical data							
Maximum power	kW	12,2	12,2	12,2	22,8	22,8	22,8
Maximum current	A	19,5	19,5	19,5	36,5	36,5	36,5
Starting current	A	Depends on operating conditions.					
Short circuit current	kA	Depends on operating conditions.					
Refrigeration circuit							
Number of circuits		1	1	1	1	1	1
Number of compressors		1	1	1	1	1	1
Refrigerant load	kg	11	12	12	18	24	24

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.
(7) Supply fan ESP: 250 Pa / Exhaust fan ESP: 150Pa / Fresh air percentage: 80%

eM(A) 24(B) A(C) H(D) 140(E)

(A) **eM** = e-MovAir
(B) Air flow (xx000)
(C) Capacity range
(D) **H** = Heat pump
(E) **A** = Air cooled

Air cooled version

Heat pump units

e-MovAir		EM10AH070	EM13AH085	EM17AH100	EM18AH110	EM24AH140	EM30AH170
Nominal thermal performances - Cooling mode							
Cooling capacity (1)	kW	45,8	70,0	102,3	99,2	118,6	147,0
Total Power Input	kW	10,0	18,5	34,5	31,1	37,8	54,5
EER net (1)		4,58	3,79	2,96	3,19	3,14	2,70
Nominal thermal performances - Heating mode							
Heating capacity (2)	kW	55,7	84,4	107,2	106,1	140,8	166,3
Total Power Input	kW	11,9	18,1	29,1	23,8	31,7	45,5
COP net (2)		4,70	4,67	3,68	4,47	4,45	3,7
Seasonal efficiencies - Cooling mode							
Seasonal Energy Efficiency Ratio - **SEER** (3)		4,1	4,6	4,3	4,4	4,8	4,2
Seasonal energy efficiency - **ηs,c** (4)	%	160	180	170	171	187	166
Eurovent energy efficiency class - Part load operation		-	-	-	-	-	-
Seasonal efficiencies - Heating mode							
Seasonal Coefficient of Performance - **SCOP** (5)		3,9	4,0	4,1	4,0	4,1	3,7
Seasonal energy efficiency - **ηs,h** (6)	%	153	155	160	156	161	143
Eurovent energy efficiency class - Part load operation		-	-	-	-	-	-
Auxiliary heating							
Gas heating capacity - Standard / High	kW	-	-	-	-	-	-
Electric heater capacity - Standard / High		24 / 48	36 / 72	36 / 72	48 / 96	48 / 96	66 / 126
Electric pre-heater capacity - Standard / High		24 / 48	36 / 72	36 / 72	48 / 96	48 / 96	66 / 126
Hot water coil capacity Air inlet 20°C/Water		Capacity depends on air and water temperatures.					
Ventilation data (7)							
Minimum airflow rate	m^3/h	8600	10000	15600	17500	20000	26000
Nominal airflow rate		8600	13500	18500	17500	24000	30000
Maximum airflow rate		10000	15600	18500	20300	27600	30000
Acoustic data - Standard unit							
Outdoor sound power	dB(A)	62	66	72	71	74	79
Indoor blower outlet sound power		90	87	95	93	91	97
Electrical data							
Maximum power	kW	43,5	43,5	43,5	72,3	72,3	72,3
Maximum current	A	69,8	69,8	69,8	116,0	116,0	116,0
Starting current	A	Depends on operating conditions.					
Short circuit current	kA	Depends on operating conditions.					
Refrigeration circuit							
Number of circuits		1	2	2	2	2	2
Number of compressors		2	2	2	2	3	3
Refrigerant load	kg	30	20+20	20+20	21+21	18+27	18+27

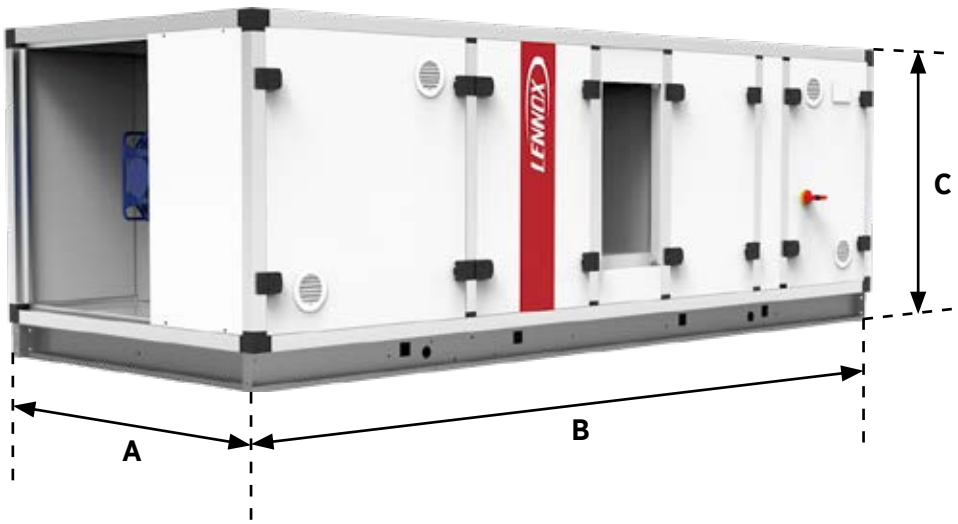
(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.
(7) Supply fan ESP: 250 Pa / Exhaust fan ESP: 150Pa / Fresh air percentage: 80%

Air cooled version

e-MovAir		EM03AH025	EM04AH028	EM05AH030	EM06AH035	EM07AH040	EM09AH055
A	mm	1630			2270		
B		3990			4770		
C		1360			1460		

Air cooled version

e-MovAir		EM10AH070	EM13AH085	EM17AH100	EM18AH110	EM24AH140	EM30AH170
A	mm	2270			2270		
B		5070			5670		
C		1940			2490		



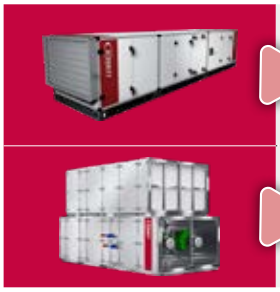
AIR HANDLING UNITS

Cleanair LX 207

OneAir 211

AIR HANDLING UNITS

AIR COOLED



Cleanair LX

2 - **550** kW
10 - **1300** kW
1000 - **100000** m³/h

OneAir

1100 - **100000** m³/h

Air/Air

Water/Air

Cooling capacity

Heating capacity

Airflow rate

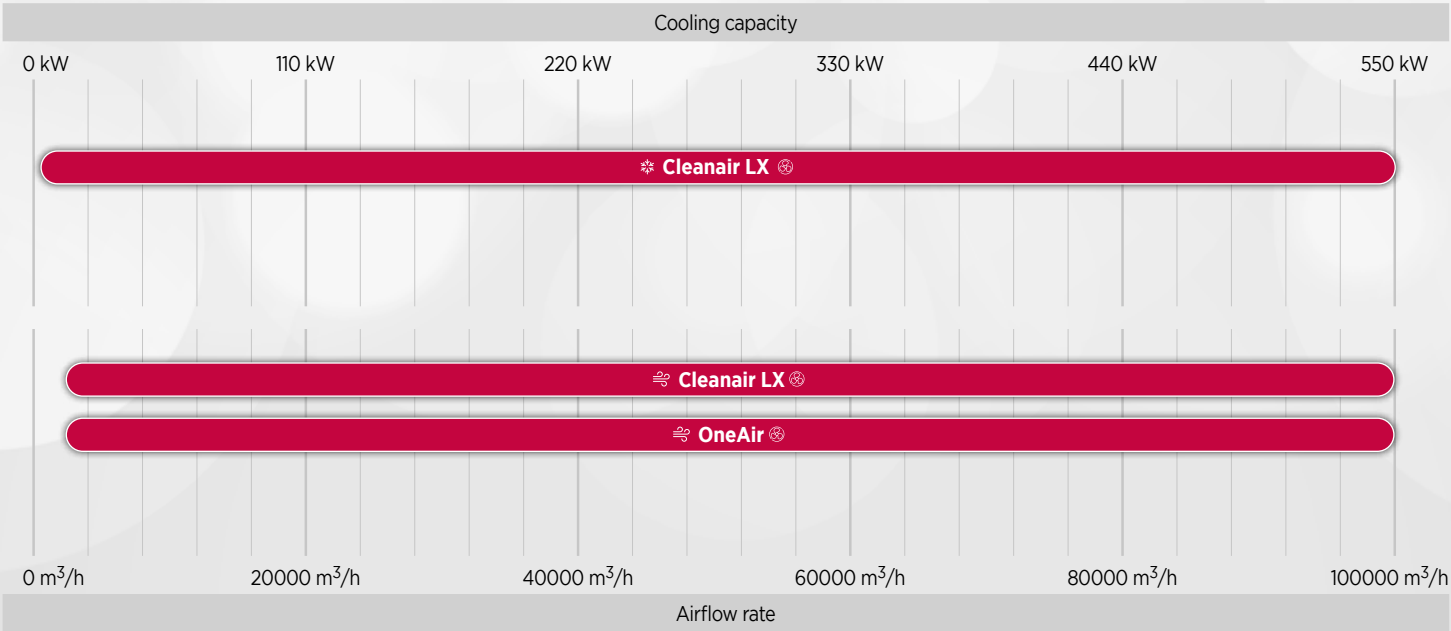
Non food retail

Shopping malls

Office buildings

Hotels

Industry



CLEANAIR LX

Modular air handling units

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

2 - **550** kW
10 - **1300** kW
1000 - **100000** m³/h

Fully modular unit with 44 available sizes to provide **high flexibility** to any building design.
The **best choice** for any air treatment application: ventilation, filtration, heating, cooling, humidity control and heat recovery.
For indoor or outdoor applications, this **versatile** unit can operate with chillers, heat pumps, VRF or boilers.

HEAT RECOVERY

Plate heat recovery.
Wheel recovery.
Heat recovery systems with run-around coils.
Heat pipe heat recovery.

CASING & DESIGN

60mm sandwich panels, insulated with injected polyurethane or mineral wool.
Smooth internal surface suitable for hygienic applications.
Pre-painted panels built with Galvanised or Stainless steel A304.
Aluminium profiles with natural finish or anodised.
Robust base with 150mm frame built with Galvanised or Stainless steel A304 with specific reinforced corners with lifting holes.
Condensate drain pans in aluminium or stainless-steel. As an option, it can be inclined to ensure complete drainage.
Aluminium alloy perimetral rain shelter suitable for outdoor unit applications, with PVC joint covers and man-safe covers on all angles (as an option).

AIRFLOW

Fan available in double inlet forward, backward, air foil blades or plug-fan and EC plug fan.
As an option single fan with double motor or double fan 100% with isolation dampers.
Several available airflow configurations: top, bottom or horizontal, to fit each building's needs.
Aluminium dampers provided with nylon gears optionally supplied with manually operated control or suitable linkages for motorised control application.

Photos and illustrations are not contractual.

CONTROL

This range can be delivered with full control managed by CAREL controller – with communication possibility in common protocols:
- ModBus®
- BACnet®
- LonWorks®
- TCP/IP – SNMP
- TREND

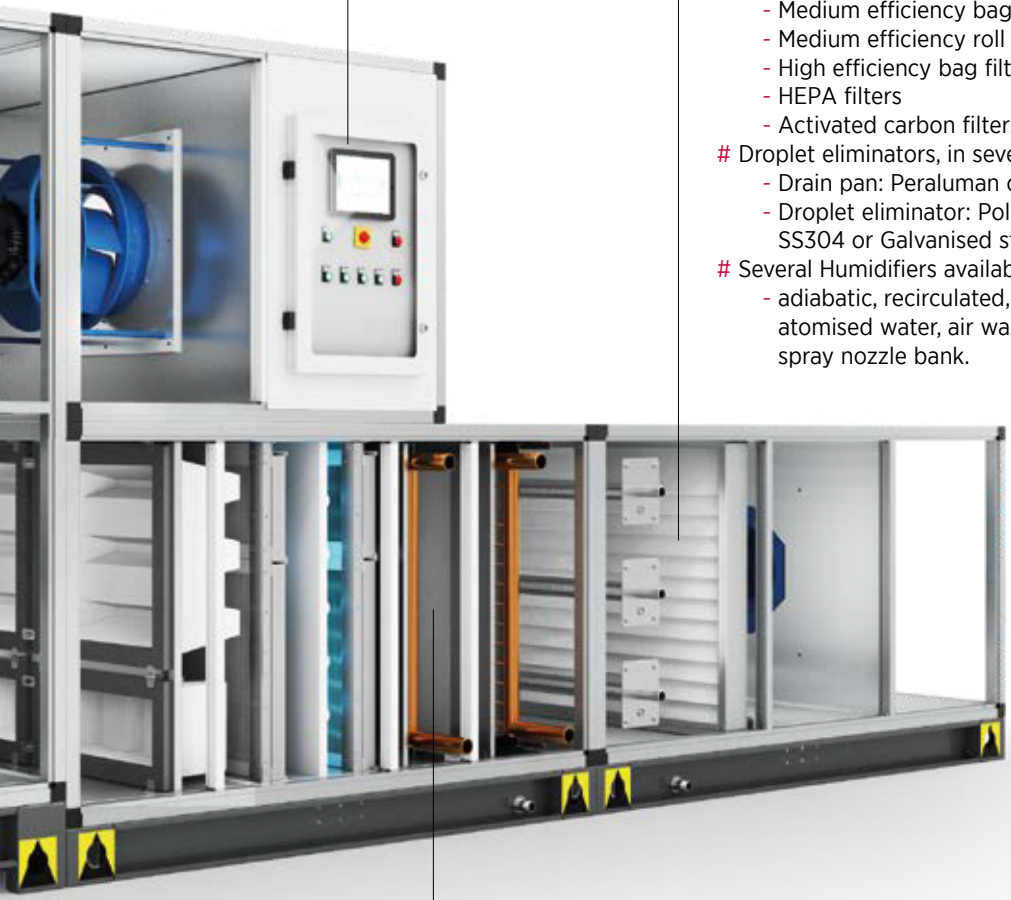
eCLIMATIC

AIR TREATMENT

Filters available from G3 to H14:
- Medium efficiency flat filters
- Medium efficiency bag filters (loose or rigid)
- Medium efficiency roll filters
- High efficiency bag filters (loose or rigid)
- HEPA filters
- Activated carbon filters

Droplet eliminators, in several materials
- Drain pan: Peraluman or stainless steel
- Droplet eliminator: Polypropylene, Aluminium, SS304 or Galvanised steel

Several Humidifiers available:
- adiabatic, recirculated, steam generators, atomised water, air washers with single or twin spray nozzle bank.



COILS

Several materials available: Cu/Al, Cu/AlPr, Cu/Cu, Cu/CuSn, Fe/Al
Water coils for chiller/heat pump applications.
Direct expansion coils for VRF applications.
Steam coils for boiler applications.
Electric coils supplied with safety thermostat with manual reset.

NOTES

OneAir

Modular air handling units

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

1100 - 100000 m³/h

Modular unit with 14 available sizes to provide **high flexibility** to any building design.
Highly efficient recovery system that provides up to 92% efficiency.
Durable and tight structure built with high-quality components to provide **high levels of reliability** to your installation.
Versatile air treatment unit that can operate with chillers, heat pumps or VRF systems.

HEAT RECOVERY

Heat recovery module available in R/A coils.
Cross flow heat exchanger.
Heat recovery wheel and heat pipes.
Heat recovery wheel and run around coils.

CASING & DESIGN

Casing structure made of C-shape 'sandwich' type panels and reinforced by a system of internal frames.
Panels built with steel skin with Aluzinc coating AZ150 for high corrosion resistance.
Rigid and durable casing with high resistance to weather conditions and UV radiation.
Fan section cage with improved longitudinal rigidity of the structure to facilitate jointing of additional sections.
Steel base frame as standard on any configuration.
Broken thermal bridges as standard.
Aluminium structural posts with additional sealing blade and thermal break.
Air dampers made of aluminium with rubber gasket on the edges.
Flexible connection installed on each duct joint to eliminate any vibration transferred by ductwork.

MANAGEMENT SYSTEM

Remote monitoring and management of units parameters.
Easy and intuitive change of the devices operating mode.
Quick setup up of the optimal units operating schedule.
Visualisations of any devices parameters - current and stored data.
Reading of consumed and saved energy.
Access from PC, mobile device, web browser.

AIR TREATMENT

Mixing section equipped with two air inlets/outlets fitted with dampers to enable regulation of fresh and recirculation air share.
Evaporative humidifier equipped with water drainage system and floating valve to control its refiling.
Panel filters made of polyester fibres and installed in 50mm thick frame applied as initial air filtration stage.
Bag filters made of polyester fibres and installed in 25mm thick frame applied as initial, secondary and final air filtration stages.
Filtration classes available:
- Panel filter: G4
- Bag filter: M5 (ePM10 50%)
- Bag filter: F7 (ePM2,5 65%)
- Bag filter: F9 (ePM1 70%)

DIRECT DRIVE PLUG FAN SET

Single inlet, radial, backward curved, free running fan.
Direct drive – fan impeller installed directly on motor shaft.
Fan section consisting of single or multiple fans (fan array) in order to ensure optimum working parameters.
AC or EC FAN type available.

AC FAN

EC FAN

COILS

Water coil for cooling and heating operations or for dehumidifying process.
Direct expansion coils for VRF applications or to be applied as a condenser in heat pump circuits.
Electric heaters equipped with power terminals and thermostat to protect against overheating.

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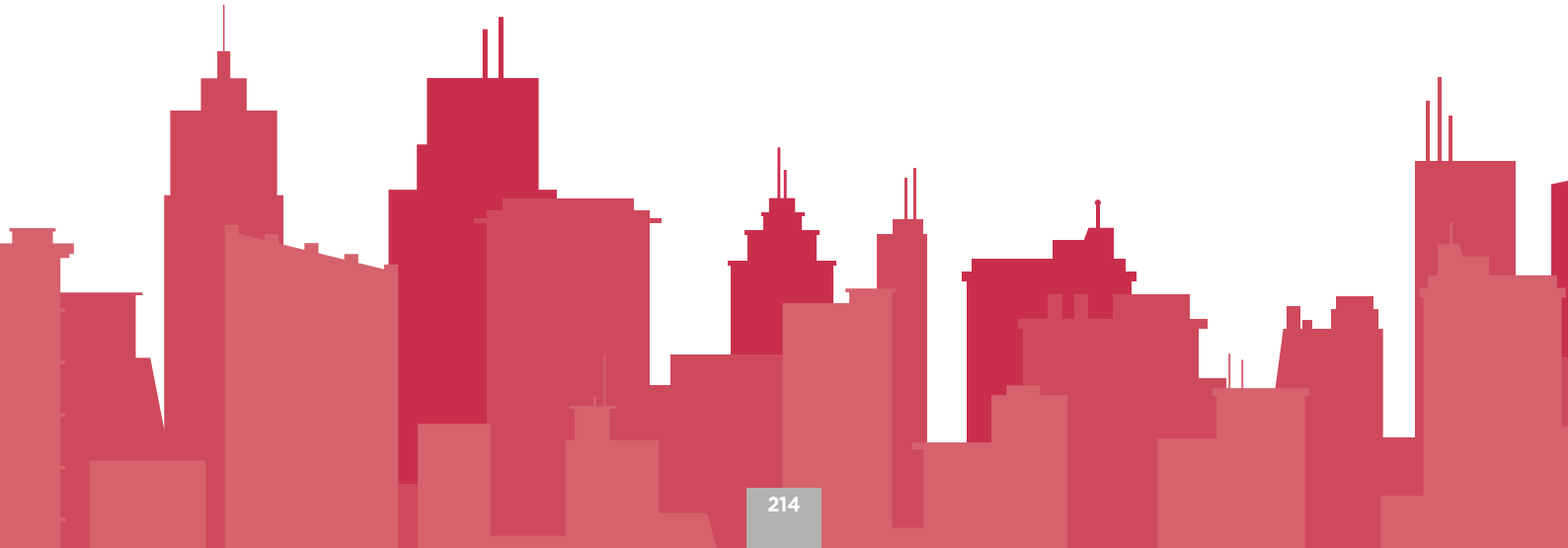
NOTES

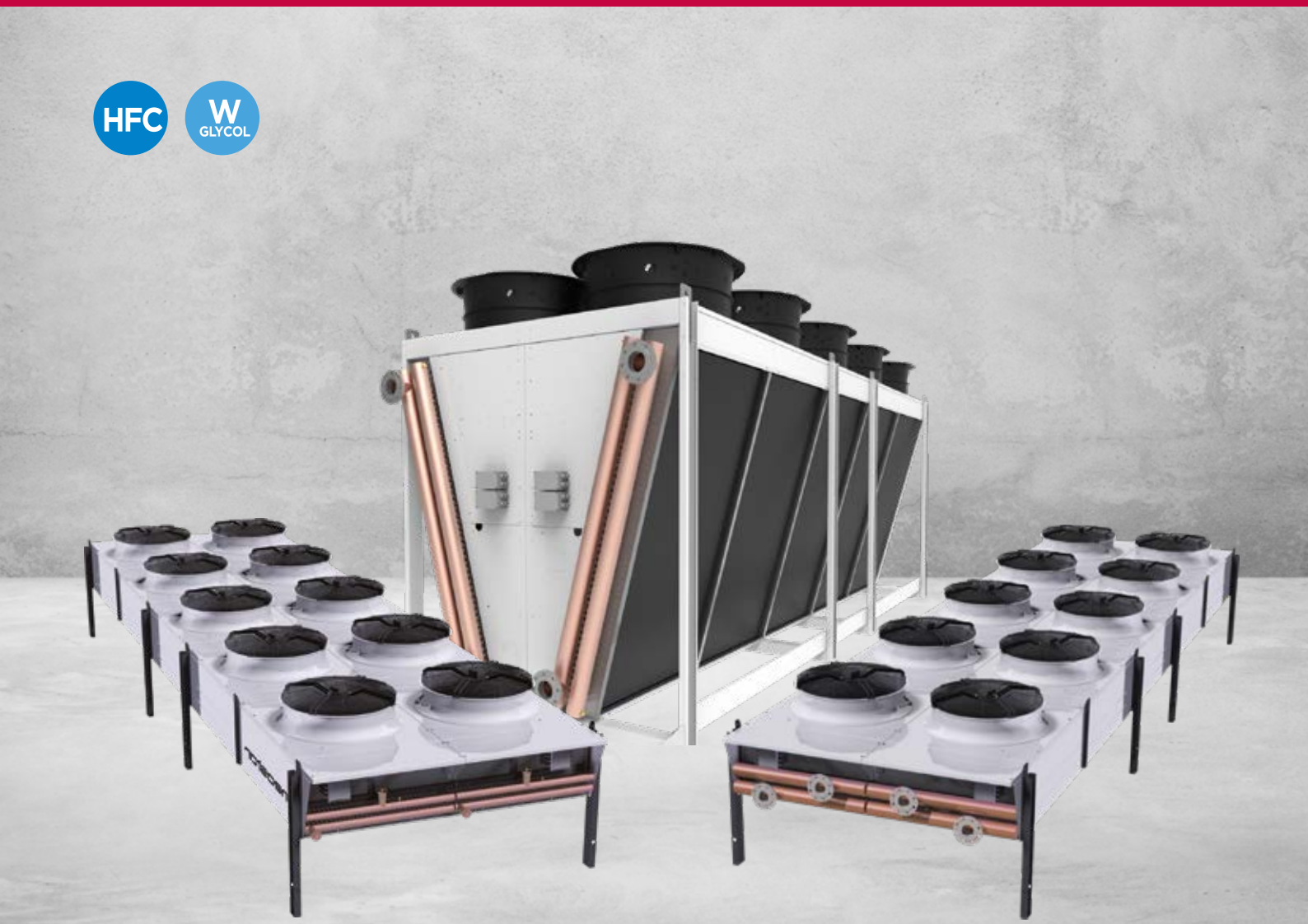


NEOSTAR
FC/FI NEOSTAR / V-KING

Air cooled condensers and dry-coolers

HFC

W GLYCOL



NEOSTAR
18 - 1280 kW

V-KING
50 - 2200 kW

FC/FI NEOSTAR
20 - 1200 kW

Versatile ranges available in multiple versions with thousands of models to suit any project and building requirement: **optimised efficiency**, **quiet operation** and **compactness**.

SOLUTIONS FOR ALL APPLICATIONS

NEOSTAR: remote air cooled condenser with flat coil design and low noise fans that allows perfect integration in urban environments.
FC NEOSTAR: flat dry cooler with compact and highly efficient coils.
FI NEOSTAR: flat dry cooler that operates with low pressure drop and high capacity, ideal for industrial applications.
V-KING: very powerful V-shaped dry cooler, with a smaller footprint than a flat model.

Contact us to select the right coil treatment to extend your unit's lifespan.

CASING & DESIGN

Casing made of white pre-painted galvanized sheet steel (NEOSTAR & FC/FI NEOSTAR) and epoxy painted metal structure (V-KING) for maximum corrosion resistance.
Fans arranged in line or in parallel, on both NEOSTAR and V-KING ranges:

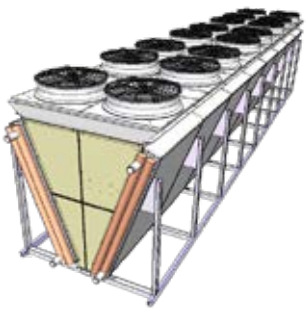
FC/FI Neostar:

In line configuration

Parallel configuration

V-King:

In line configuration



Parallel configuration

Photos and illustrations are not contractual.

VENTILATION

The NEOSTAR & FC/FI NEOSTAR ranges are equipped as standard with two-speed external rotor motor fans (triangle and star coupling).
EC motor fans enabling speed variation and reducing the energy consumption are available as an option.
Available with 800 and 910mm diameter fans.

COILS

Aluminium fins with 1.9 mm (NEOSTAR, FC NEOSTAR, V-KING VC) or 2.12 mm (FI NEOSTAR, V-KING VI) spacing.
Combined with staggered copper tubes, the coils are very efficient and compact.

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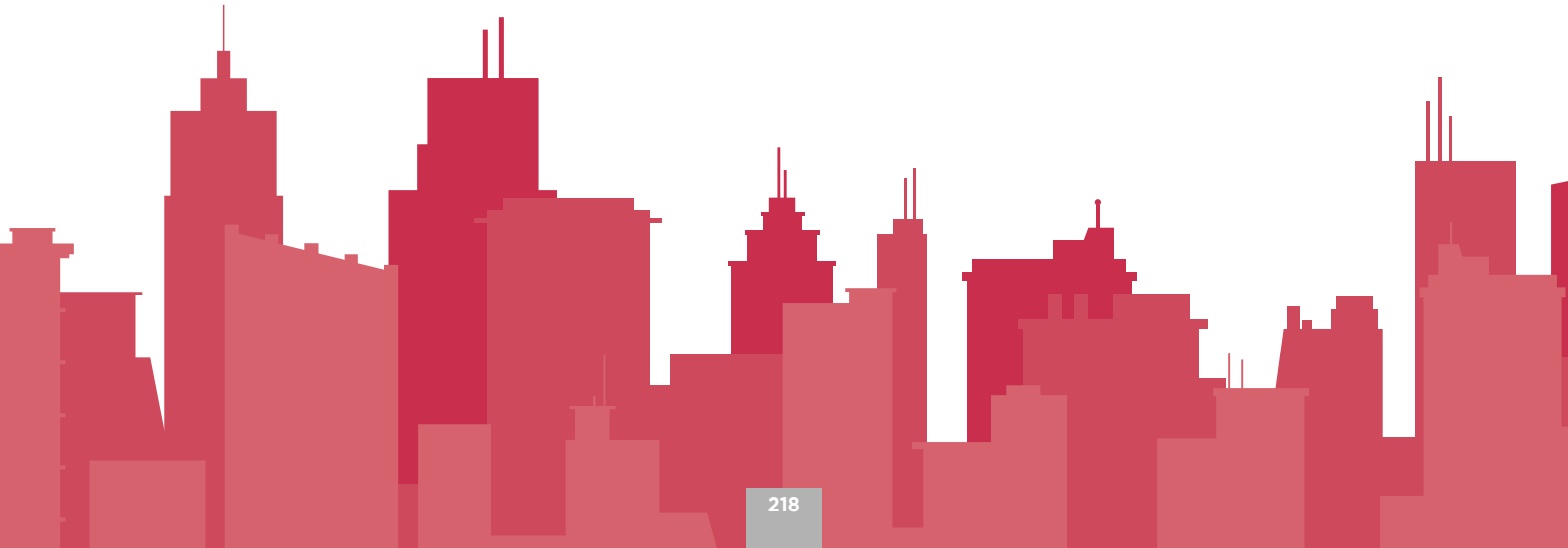


LennoxCloud

Multi-site & multi-unit connectivity solution

Convenience through remote monitoring: the units' performance data is accessible from the comfort of the office.

24/7 monitoring ensures the units' **reliability** and provides building operators with **peace of mind**.

The units' performance optimisation leads to **reduced energy consumption and operating costs**.

Evaluate **savings on each maintenance procedure** by using real time collected data.

Ensure comfort in any season with automatic management of CO_2 levels(1) and humidity(2).

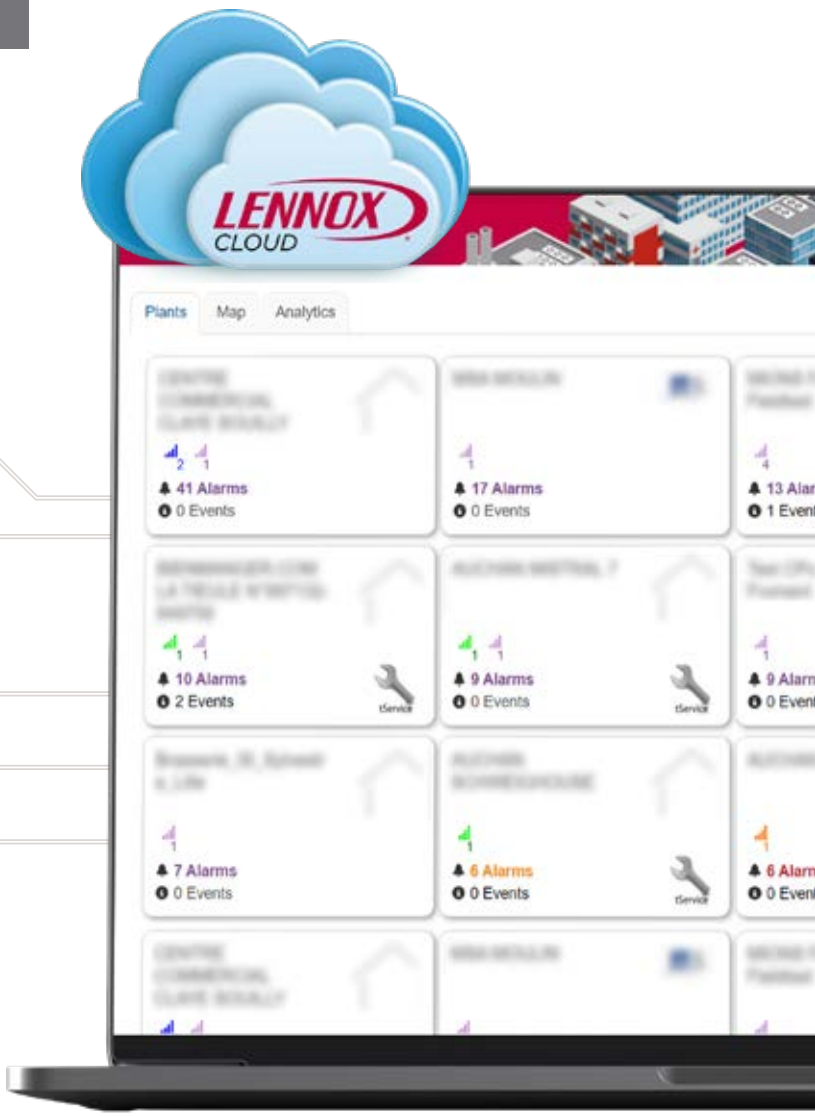
USER-FRIENDLY DASHBOARDS

The **SITE DASHBOARD** gives a complete overview of the site, presenting monthly or yearly performances, alarm history and energy consumption(3) of all installed units.

The **UNIT DASHBOARD** allows an overview of a single unit, presenting graphs with the history of indoor and outdoor temperature variations, CO_2 level(1) and relative humidity(2) in the supply air stream and energy consumption(3) for a specific period.

EXPERT ANALYSIS

Thanks to the analysis of the collected data, the Lennox experts will provide the end-users with quarterly reports and recommendations on how to optimise the system's performance and energy consumption(3).

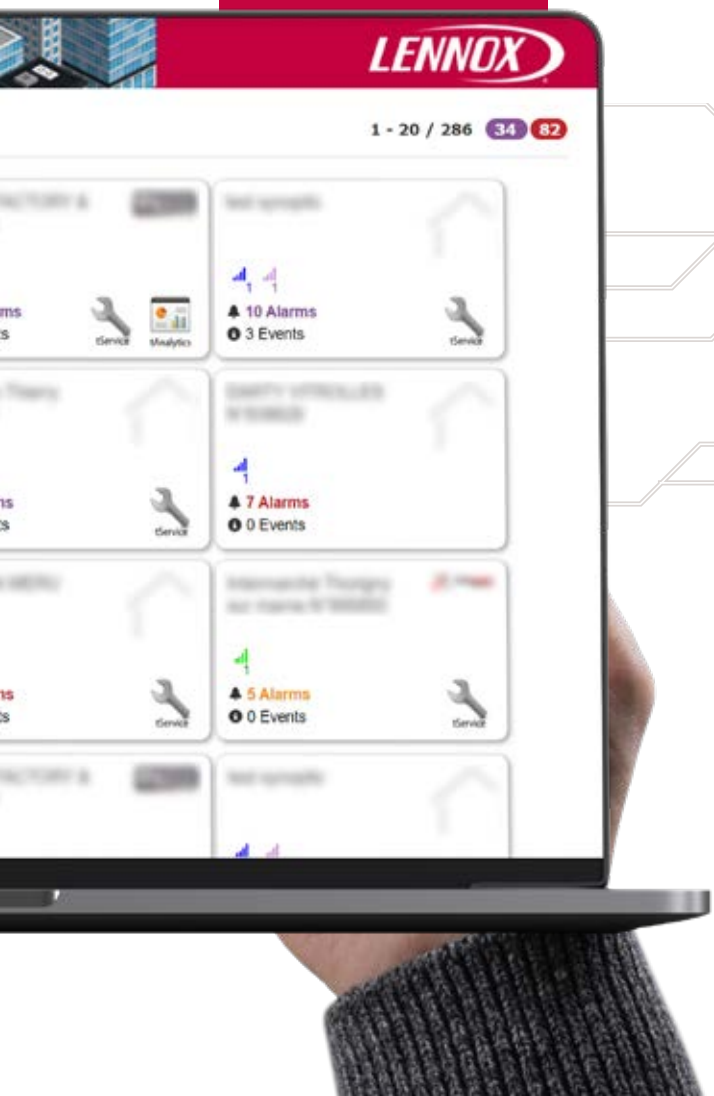


(1) Require Air Quality Sensor (CO_2) - optional feature on rooftops.
(2) Require Humidity Control Pack - optional feature on rooftops.
(3) Require Electric Energy Meter - optional feature on rooftops, chillers and heat pumps.

EASY MONITORING & CONTROL

Specifically designed for end-users, the **eDisplay** allows:
Remote access from any web browser.
Intuitive adjustment of the system's setpoints:
- Room temperature.
- Room temperature set points.
- Indoor CO_2 levels(1).
- Indoor humidity levels(2).
- System ON or OFF button.
- External temperature.
- Adjust settings.
- Adjust time schedule.
- Fan status.
- Time schedule status.

LennoxCloud is **available as an option on all units.**



IMPROVED RESPONSIVENESS

The alarm log allows easy identification of critical issues and enables speedy action on them, thus reducing downtime.
Email notifications are sent when high level alarms are activated.

e-Baltic

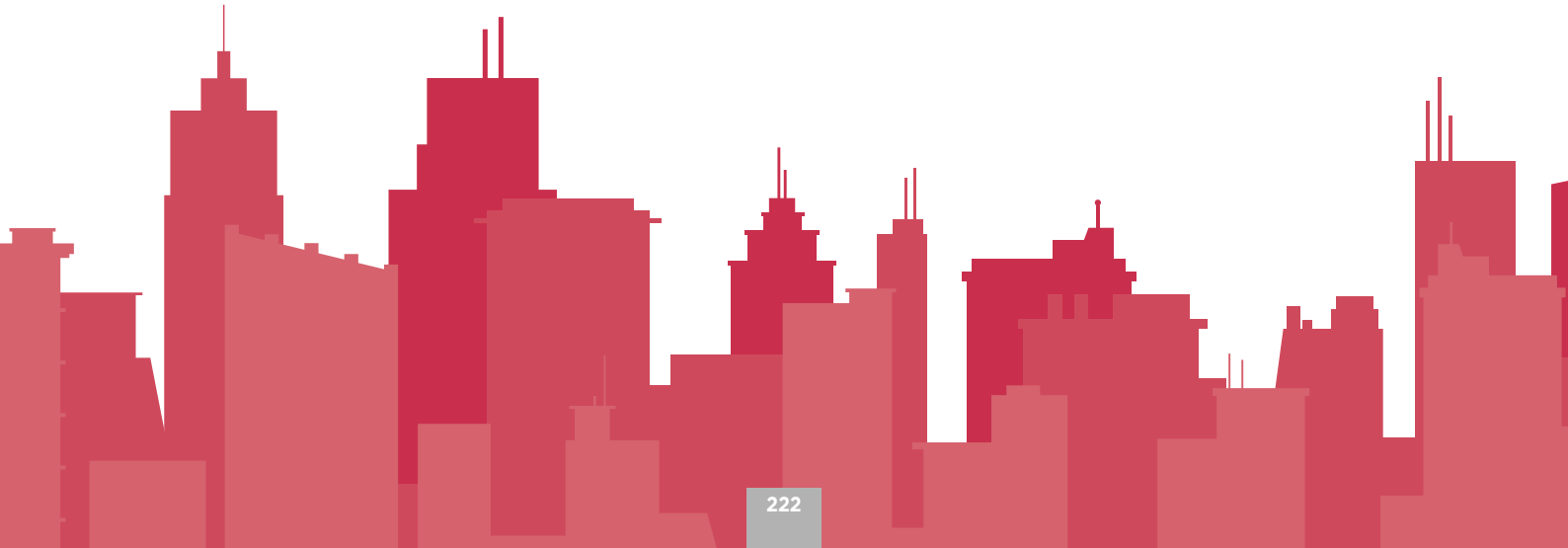
eNeRGy

EXTENDED UNITS' LIFESPAN

The permanent monitoring enables the optimisation of the units' performance and increases their lifespan.

Photos and illustrations are not contractual.

NOTES



Adalink II / LennoxOneWeb / LennoxHydroControl

Control & Supervision solutions

Easy monitoring of a single site.
Easy access from any web browser.

ADALINK II
One site – Up to 16 Lennox units

VERSATILITY

As an option, **ADALINK** can be paired with other communication devices (energy meters, boilers, lighting, etc.).

LennoxOneWeb
One site – One unit

USER-FRIENDLY DASHBOARDS

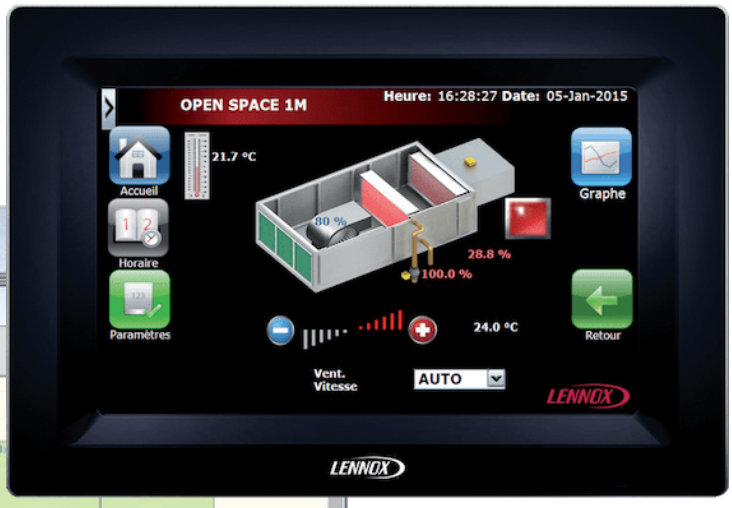
ADALINK II gives a complete overview of all the site units status' and enables the user to change the setpoints, access the alarm log & the trend curves.
LennoxOneWeb allows the overview of a single unit and enables the user to access the unit's parameters, the alarm log & the trend curves.
Easy scheduling and zonal management.
Alarm reports sent by email.

Photos and illustrations are not contractual.

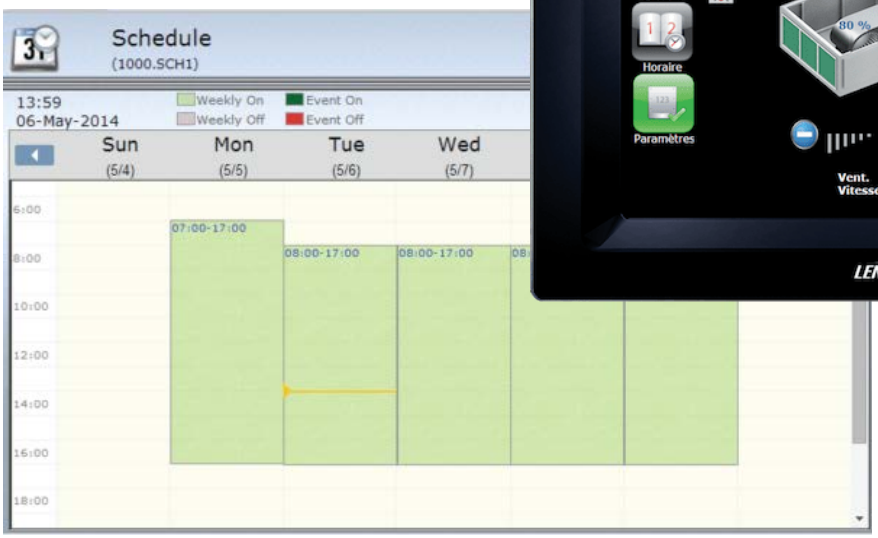
All-in-one solution: available for all hydronic installations (cooling only and reversible heat pump systems).

SMART CONTROL

Manages and coordinates cooling and heating production (chiller/heat pump units) through fan coils.
Ensures occupants' comfort, while providing significant energy savings via building zoning, time scheduling and setpoint configuration.
Manages up to 8 zones for fan coils and one for chiller/heat pump.



LennoxHydroControl



OPTIMAL EFFICIENCY

Based on a shared communication system among Lennox units, which ensures full compatibility, best performance and easy commissioning and maintenance.
High performance & energy savings compared to traditional cooling/heating systems.

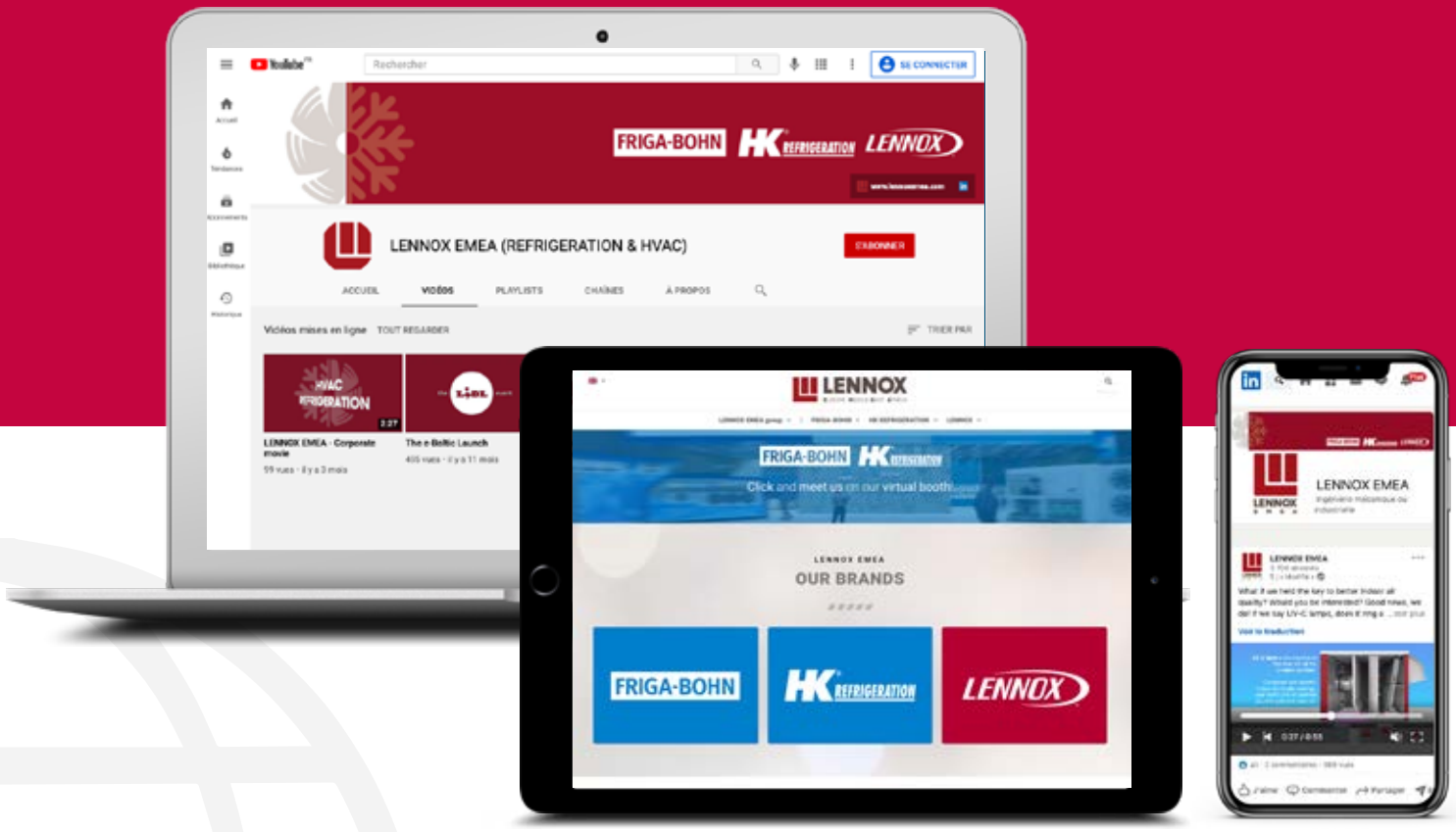
USER-FRIENDLY DASHBOARD

Locally managed through simplified color touch screen interface (HMI), or remotely by internet browser thanks to the web server embedded in the HMI.

NOTES

STAY TUNED!

DON'T MISS ANY INFORMATION



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