

LIRA
AIR TO AIR HEAT PUMP
COMMERCIAL & INDUSTRIAL
PRODUCT GUIDE

REZNOR®

THE HIGH PERFORMANCE REVERSIBLE SOLUTION

Industrial heat pumps for heating and cooling

The **LIRA** range is the perfect choice for transitioning industrial buildings to **gas-free heating and cooling**. Whether it's a warehouse, manufacturing facility, or showroom, LIRA delivers year-round comfort with a focus on sustainability and efficiency.

Designed as the vanguard solution for all European climates, LIRA meets the predominant need for heating in these regions while addressing the rising demand for cooling comfort. It seamlessly integrates these priorities with the increasingly stringent requirements for energy efficiency and lower emissions.

The outdoor unit features a variable-speed scroll compressor with advanced injection technology, enabling reliable operation even at temperatures as low as -20°C.

As an air-to-air heat pump, direct heat exchange between the outdoor and indoor units occurs via the refrigerant, maximising efficiency in both heating and cooling modes. This eliminates the need for a water circuit, mitigating the risk of freezing and reducing thermal inertia, allowing for quick adjustments to maintain optimal comfort.



Indoor units feature specially selected fans designed to minimise noise, ensuring a quieter working environment. Choose between free-blowing models or ducted models to meet your specific requirements.



FEATURES & BENEFITS



Heating mode with a maximum output of 50 kW and a COP of 4.38.



Cooling mode with a maximum output of 42 kW and an EER of 4.00.



Highest energy efficiency



Less refrigerant needed, zero ozone depletion



Suitable for industrial buildings such as warehouses and workshops



Suitable for commercial premises such as showrooms or supermarkets



Smart Grid ready - photovoltaic integration



Quiet operation:
38 dB(A) @ 5m Outdoor
30 dB(A) @ 3m Indoor
free blowing



No hydraulic circuits. No risk of freezing.



Simple and quick installation.



Touch control panels.

SPECIFICATION



OPTIMISED DEFROST CYCLE

The LIRA's optimised defrost cycle enhances comfort and energy efficiency by minimizing the frequency and duration of defrosts, allowing the system to remain in heating mode longer. This efficiency is further supported by pressure-controlled fan speed, which adjusts airflow based on actual obstruction, and precise 2.5 mm fin spacing that reduces frost buildup.

EVI: MAXIMUM COMPRESSOR PERFORMANCE

Enhanced Vapour Injection (EVI) boosts the LIRA's output and range. In a standard cycle, the refrigerant is compressed, condensed, expanded, and evaporated. With EVI, an additional stage introduces refrigerant vapour into the compressor at an intermediate pressure level. The refrigerant is first sub-cooled, enhancing its density. The injected vapour supports the compression process, stabilises the compressor's temperature and improves performance in extreme temperatures by reducing the compressor's workload.

The LIRA uses R32. The high-pressure and temperature capacities of this refrigerant make it well-suited for the additional compression stages and the the EVI system. R32 also has a lower global warming potential and causes zero ozone depletion.



These are the innovations that ensure the LIRA's optimised heat exchange and consistent performance, even in demanding conditions.

FANS AND MOTORS

The outdoor unit is equipped with fans with variable speed EC motors, as is the free-blowing indoor unit. The ductable indoor unit is equipped with with a variable speed EC plug fan. All fans have been selected for their low noise output.

ELECTRONICS

The LIRA range is equipped with high-quality electronics, featuring electronic pressure switches and temperature sensors managed by a programmable controller, along with remote control panels for enhanced convenience.

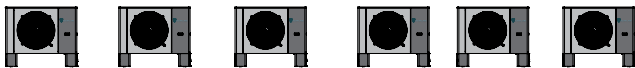
CONTROLS

Total control with just a few clicks.

Designed for precision and efficiency, our advanced control system optimises your heat pump's performance, ensuring peak efficiency at all times. The software also allows for remote monitoring of the entire system, supporting up to 15 units for seamless management.



Up to 15 units



Features & Benefits



Remote display with a digital screen to control a single unit.



7" touch display to control a single unit.



15.6" touch display for controlling multiple units in series, up to 15 units.



The display shows system parameters and faults for precise diagnostics and control of the system.



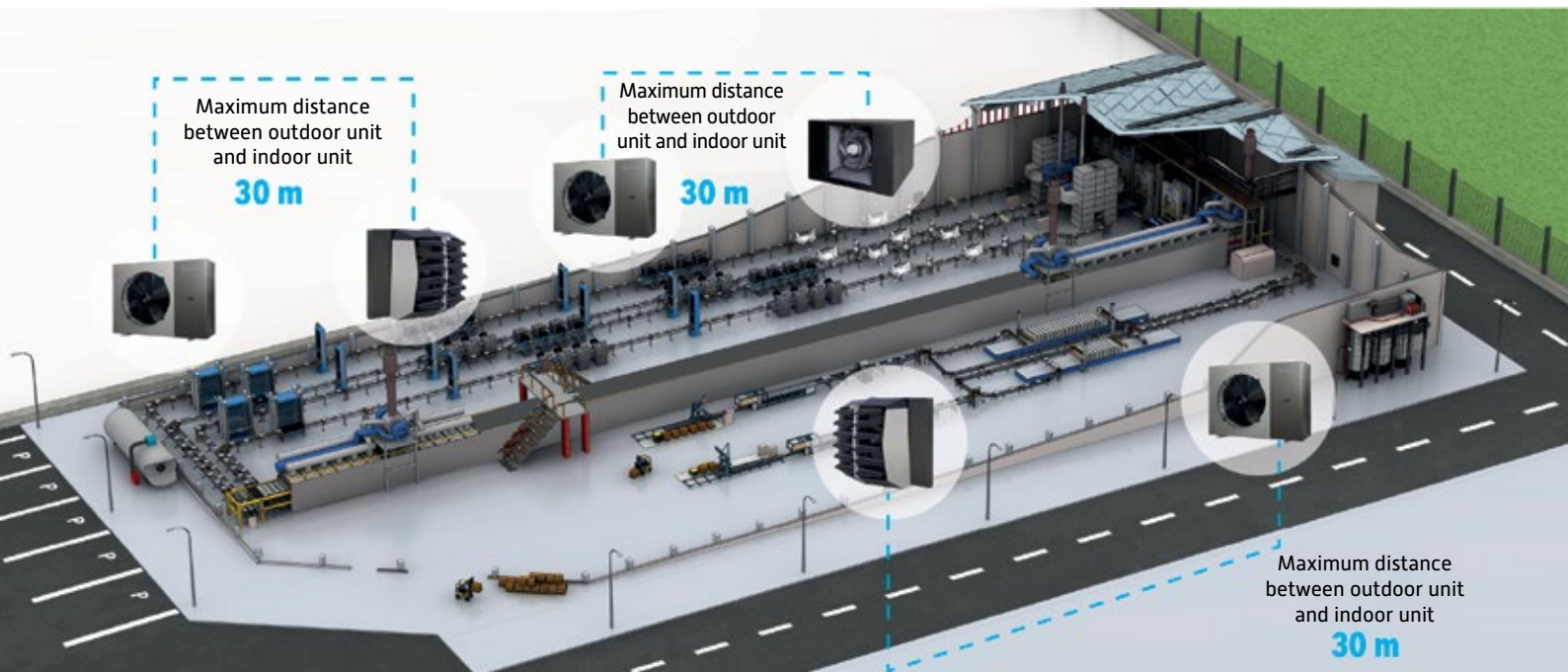
3 setpoints: day/night/ECO



7 day calendar



BMS compatible – TCP over IP Modbus





OUTDOOR MODELS
LIRA AIR / LIRA AIR COLD / LIRA AIR PLUS

ITEM	UNIT	LIRA AIR	LIRA AIR COLD	LIRA AIR PLUS
Electrical supply		V / Ph / Hz 400 / 3 / 50	V / Ph / Hz 400 / 3 / 50	V / Ph / Hz 400 / 3 / 50
Max electrical power	kW	14.2	14.2	16.7
Max current	A	27	38	40
Operating temperature Outdoor / Indoor	°C	Heating (winter) -30°C / 28°C Cooling (summer) 45°C / 16°C	Heating (winter) -30°C / 28°C Cooling (summer) 45°C / 16°C	Heating (winter) -30°C / 28°C Cooling (summer) 45°C / 16°C
Compressor		Inverter Scroll with Injection	Inverter Scroll with Injection	Inverter Scroll with Injection
Outdoor fan		Inverter BLDC nominal Ø: 910 mm 0.625 kW - 1.1 A Airflow: 15 000 m³/h	Inverter BLDC nominal Ø: 910 mm 0.625 kW - 1.1 A Airflow: 15 000 m³/h	Inverter BLDC nominal Ø: 910 mm 0.625 kW - 1.1 A Airflow: 15 000 m³/h
Sound power ERP	dB LWA	dB 60.2	dB 60.2	dB 60.2
Dimensions	mm	1 257 x 1 791 x 642	1 257 x 1 791 x 642	1 414 x 2 018 x 770
Refrigerant		R32 - volume 7.4 kg	R32 - volume 7.4 kg	R32 - volume 7.4 kg
Connections Heat pump side	mm	Gas: 22 mm Liquid: 12 mm	Gas: 22 mm Liquid: 12 mm	Gas: 28 mm Liquid: 16 mm
Heat exchanger		Number of rows: 3 Hydrophilic coating	Number of rows: 3 Hydrophilic coating	Number of rows: 3 Hydrophilic coating

Technical Data



INDOOR UNIT: FREE-BLOWING AXIAL FAN

ITEM	UNIT	
Type	Inverter BLDC	
Nominal diameter	mm	800
Max electrical power	kW	0.44
Max current	A	1.9 A [1Ph]
Max speed	rpm	600
Max airflow	6 000 m ³ /h	
Noise level (at 3 m)	dB(A)	30 dB(A)
Dimensions	mm	1 139 x 1 255 x 827
Heat exchanger	3 row / spacing 1.8 mm	
Weight	kg	120

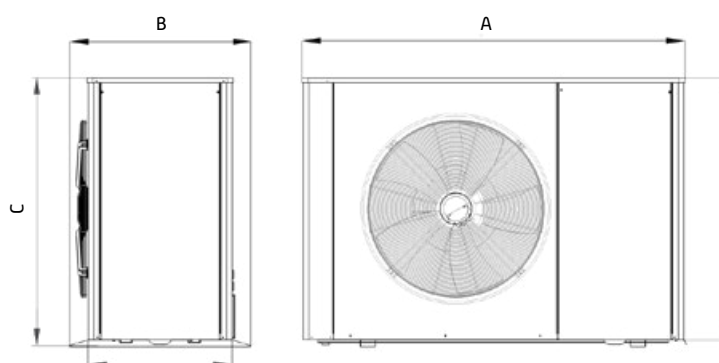


INDOOR UNIT: DUCTABLE PLUG FAN

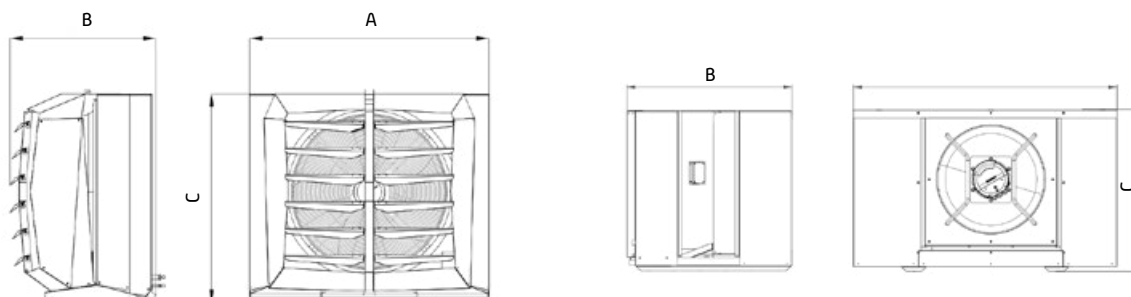
ITEM	UNIT	
Type	Inverter BLDC	
Nominal diameter	mm	630
Max electrical power	kW	1.4
Max current	A	2 A [1Ph]
Max speed	rpm	1 000
Max airflow	13 500 m ³ /h	
Max outlet pressure	Pa	380
Nominal airflow	9 800 m ³ /h	
Nominal outlet pressure	Pa	230
Minimum airflow with filtration	8 200 m ³ /h	
Outlet pressure with filtration	Pa	180
Dimensions	mm	978 x 1 598 x 1 011
Heat exchanger	4 row / spacing 1.5 mm	
Weight	kg	209

OUTDOOR UNITS			LIRA AIR	LIRA AIR COLD	LIRA AIR PLUS
Length	A	mm	1 791	1 791	2 018
Width	B	mm	642/725*	642/725*	770/956*
Height	C	mm	1 257	1 257	1 414
Weight		kg	285	285	370

* brackets length



INDOOR UNITS			FREE-BLOWING	DUCTABLE
Length	A	mm	1 255	1 598
Width	B	mm	827	1 011
Height	C	mm	1139	978
Weight		kg	120	209



Performance

MODEL	HEATING												COOLING	
	A 12°C / A 20° C		A 7°C / A 20° C		A 2°C / A 20° C		A -7°C / A 20° C		A -15°C / A 20° C		A -20°C / A 20° C		A 35°C / A 27° C	
	Qh	COP	Qh	COP	Qh	COP	Qh	COP	Qh	COP	Qh	COP	Qc	EER
kW		kW		kW		kW		kW		kW		kW		
LIRA AIR	39.00	4.70	39.00	4.45	35.00	3.75	32.00	3.20	32.00	2.70	27.00	2.50	35.00	4.02
LIRA AIR COLD	40.00	4.63	40.00	4.36	35.00	4.00	35.00	3.00	35.00	2.60	30.00	2.35	37.00	4.20
LIRA AIR PLUS	50.00	4.38	47.00	4.20	44.90	3.72	42.10	2.92	38.80	2.34	33.20	2.12	42.00	4.00

Qh= Thermal capacity COP= Coefficient of performance Qc= Cooling capacity EER= Cooling efficiency



WE ARE REZNOR®

We deliver sustainable HVAC products and solutions that improve the environment in which we live and work. We offer the widest and most complete range of HVAC products in the market. Our extensive product range and wealth of knowledge allows us to work with our customers to design the most efficient HVAC solutions to meet their unique requirements.

WHY CHOOSE REZNOR

With our forward-thinking approach, we're dedicated to fulfilling our customers' needs in the best way possible. We not only design and engineer, we are always ready to support you and truly listen.







Contact us today to get started.

REZNOR®

t. +(44) 0 1384 489700
e. reznorsales@nortek.com
w. reznor.co.uk

Nortek Global HVAC UK
Fens Pool Avenue, Brierley Hill
West Midlands DY5 1QA
United Kingdom

GB/EN/REZ/LIRA/001/0125