

One R290. Every Solution.



RESIDENTIAL

4÷16 kW

LIGHT COMMERCIAL

15÷71 kW

COMMERCIAL & INDUSTRIAL

50÷430 kW

EXP – MULTIFUNCTION SYSTEMS

51÷430 kW

Heat pumps, chillers and EXP
multifunction systems, all using
propane, for every comfort
requirement.



PART OF **NIBE** GROUP

All in R290

From residential
to commercial
applications.
From 4 to 430 kW.

The R290 solution for every project. Heat pumps, chillers and multifunction units are available in a range of configurations and technologies, providing maximum application flexibility and a complete, integrated solution for every comfort requirement.



R290 refrigerant

Propane is a naturally occurring hydrocarbon used in many different fields, both in pure form and in mixtures. It is mainly used as a fuel and as a refrigerant (designated R290). In recent years, it has gained widespread acceptance owing to its thermodynamic properties, non-toxicity and extremely low GWP.



R290 technology, integrated safety

The natural refrigerant R290 is combined with dedicated design solutions, specific safety devices and careful risk management to deliver high performance and maximum long-term reliability.



Efficiency and application flexibility

The R290 range was developed to meet the full range of needs in the HVAC market. High-efficiency solutions, available in a broad range of capacities and technologies, are designed to support projects in both the residential and commercial sectors.



MONOBLOCK UNITS	2027	2030	2032
Chillers < 12 kW	GWP 150		Natural refrigerants
Chillers > 12 kW	GWP 750		
Heat pumps < 12 kW	GWP 150		Natural refrigerants
Heat pumps from 12 to 50 kW	GWP 150		
Heat pumps > 50 kW		GWP 150	

F-gas Regulation (EU 2024/573)

The aim is to limit emissions of greenhouse gases (HFCs) into the atmosphere by progressively reducing the quantity of CO₂ equivalent.

Within the European Union, the Regulation prohibits the use of certain gases and stipulates that their GWP (Global Warming Potential) values must not exceed specified limits.

Refrigerants	GWP
R134a	1430
R410A	2088
R513A	629.5
R454C	146
R744	1
R1234ze	1.37
R32	675
R454B	465
R515B	288
R290	0.02
R1234yf	0.501

The Rhoss propane range meets all requirements:



Natural refrigerant, no F-gas requirements



GWP 0.02: extremely low climate impact compared with conventional HFC refrigerants



Extended operating limits



Technology: **Inverter**



Integrated management of **DHW production** and **anti-Legionella cycles**



Defrost logic: **SMART DEFROST**

DISCOVER ALL PROPANE PRODUCTS

Ideal for new low-emission systems and for upgrading conventional boiler systems.



Electa-PI high-temperature heat pump

Tax incentives*

ECO
BONUS

CONTRO TERMICO
3.0



Touchscreen control as standard
[133 × 88 × 22 mm]



Electa-PI
THAITP 104+114



Electa-PI
THAITP 116

Smart control

Multi-colour touchscreen control panel with an advanced interface for managing the main control functions and simplifying initial commissioning.

iOS and Android app

The dedicated app for control via smartphone or tablet enables remote unit management and displays operating temperatures and any alarms.

Reliability in all conditions

Operation at outdoor temperatures from -25 °C to +45 °C.

Hot-water production at 60 °C down to an outdoor temperature of -8 °C in winter and up to +45 °C in summer. Hot-water production at 40 °C down to an outdoor temperature of -25 °C in winter, without supplementary heaters.

Outdoor monoblock solution

Monoblock unit for outdoor installation, providing heating and cooling; domestic hot-water production via a diverter valve and storage cylinder controlled by the unit.

* Visit the Rhoss website to find out which heat pump models qualify for incentives.

Features



Reversible air-to-water heat pumps for residential and multi-family applications, available in a **full inverter** configuration.

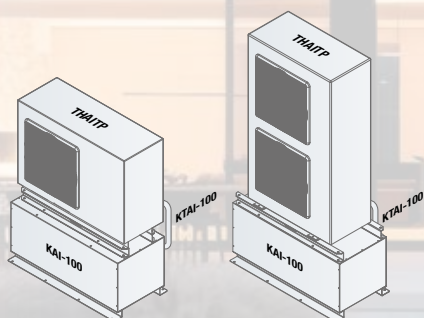
Designed for high seasonal efficiency up to energy efficiency class **A+++**, the units produce heating water up to **80 °C** and **domestic hot water** at outdoor temperatures from **-25 °C to +45 °C**. Equipped with an EC circulation pump, integrated deaerator and advanced system management, they provide coordinated control of space conditioning and DHW production; a 3-way diverter valve is available as an accessory.

Master/Slave management of up to 6 units and contacts for photovoltaic-system integration and connection to a **Smart Grid** are included as standard.

Simple installation and advanced comfort

Hydraulic components, such as the electronic circulation pump, expansion vessel and deaerator, are already integrated to reduce installation time, space requirements and complexity. The optional buffer tank, which can be installed beneath the unit, optimises space and simplifies system installation.

The new all-black styling and touchscreen control enhance both the functionality and appearance of the product. The dedicated app for iOS and Android smartphones enables intuitive control and remote monitoring of the unit's main functions, while offering maximum ease of use and consistent comfort.



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LIGHT COMMERCIAL - Air-cooled
20÷71 KW

LIGHT COMMERCIAL - Water-cooled
15÷45 KW

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50÷430 KW

EXP - MULTIFUNCTION SYSTEMS
51÷430 KW

MidiPACK-PI

high-temperature heat pumps and inverter chillers

Chillers **from 39 to 71 kW**, and reversible heat pumps for multi-family/light commercial applications **from 20 to 71 kW** in an **inverter** configuration, producing hot water up to **80 °C** with high seasonal efficiency, low noise and simplified parallel installation of up to 4 units.

A smart solution

Optimised components for maximum efficiency

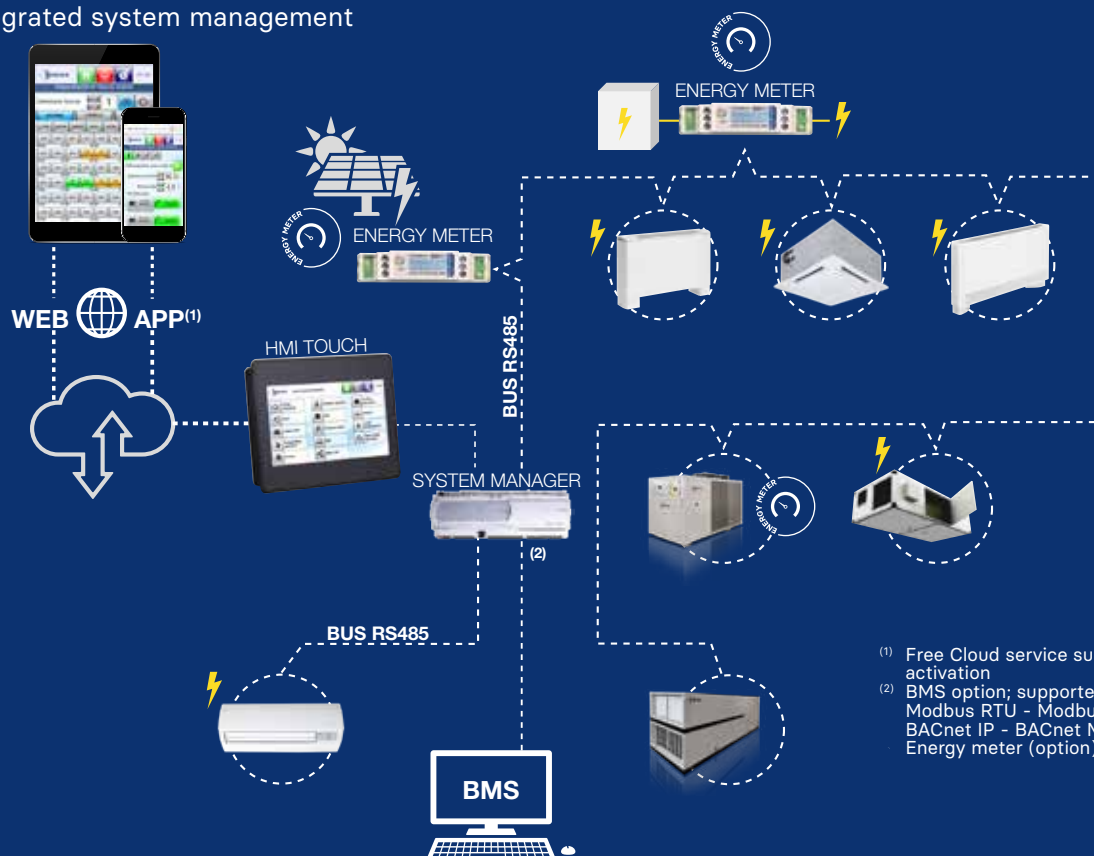
Latest-generation inverter scroll compressor, advanced electronics, brushless EC fans and heat exchangers designed for maximum performance with R290 propane refrigerant. The units can monitor their performance using the dedicated accessory.

Custom configurations for every application requirement

3-way valve for domestic hot-water production in summer/winter operation, frost-protection heaters, supplementary heat-source control, contacts for Smart Grid and photovoltaic-system integration, and the ability to produce chilled water down to -10 °C for process applications.

SYS-TO System Touch Manager & Web APP

Integrated system management



(1) Free Cloud service subject to activation

(2) BMS option; supported protocols: Modbus RTU - Modbus TCP/IP - BACnet IP - BACnet MS/TP - Energy meter (option)



Features



MidiPACK-PI 120-140



Simple installation through integrated solutions

Reduced refrigerant charge for installation without restrictions on use or access; integrated deaerator to simplify the system; compact footprint for easier heat-pump positioning; coils with hydrophilic coating to assist defrosting; and an optional buffer tank beneath the unit to optimise space.

MidiPACK-PI 139-171



Design for modern systems

Optimised chillers and heat pumps with refrigerant charge reduced to a minimum, allowing installation without restrictions on use or access. Compact units that can be equipped with numerous integrated hydraulic solutions to meet every system requirement.

The units can be configured with numerous accessories, including fans with increased static pressure, a touchscreen user interface (mounted on the unit or remotely located) and partial heat recovery for producing hot water in a dedicated system circuit in both winter and summer operation.

POKER-P&PI modular high-temperature heat pumps



Reversible heat pumps with a **modular** design and **ON/OFF** or **inverter** compressors. 50 kW units in energy efficiency class A, with a high SCOP, simplified electrical and hydraulic connection for up to 4 units, and integrated heating-load management for optimum capacity modulation of the individual heat pumps.



Water temperature **up to 80 °C** and operation at outdoor air temperatures **down to -20 °C**

Tax incentives*



A **modular**, quiet, **efficient**, reliable and flexible solution

Optimised components

Latest-generation scroll compressors, advanced electronics, low-noise ERP fans, hydrophilic coils, a gas leak detector and certain ATEX components for comprehensive safety.

Reduced refrigerant charge

Refrigerant charge below 5 kg. This allows outdoor installation without restrictions on use or access, for example in hotels,

restaurants, supermarkets, theatres, universities, hospitals and nursing homes, etc.

A **smart** solution

Proprietary electronic control designed specifically for modular management of up to 4 units with dynamic master logic (SDR).

Interface with the SYS-TO system for complete management, including fan coils, an air handling

unit and supplementary heat sources.

Control of 3-way valves for domestic hot-water production in summer/winter operation.

Partial heat recovery via a

desuperheater.

Control of an optional supplementary heat source

Centralised unit management via touchscreen display (option)

* Visit the Rhoss website to find out which heat pump models qualify for incentives.



MidiFLOW-PI

water-to-water heat pumps and water-cooled chillers



Reversible **water-to-water** heat pumps and water-cooled chillers with **inverter scroll compressors**. Range **from 15 to 45 kW** for applications using well water, mains water, ground-source heat exchangers or dry coolers. Available for outdoor installation or for indoor installation with a **ventilated enclosure**, the units produce hot water up to 80 °C.



Water temperature
up to 80 °C

Tax incentives*



A versatile **high-performance** solution designed for **maximum** installation **flexibility**

High performance

Inverter scroll compressor and R290 refrigerant for efficient year-round operation. Hot-water production up to 80 °C and the wide operating range meet the needs of numerous applications.

Ventilated enclosure

Thanks to the ventilated enclosure configuration, the unit can be installed easily in occupied spaces without the need for a machinery room, providing maximum installation flexibility.

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UniPACK-P UniPACK-P EXP heat pumps and EXP multifunction units



Units with 2–4 ON/OFF compressors and 1–2 refrigerant circuits, from 51 to 160 kW
Available in 11 sizes with optimised configurations and structures, the range is offered in **high-efficiency** and **ultra-low-noise versions**, producing hot water up to **72 °C**

The integrated sequencer for managing several units installed in parallel and the extensive range of accessories ensure straightforward **Plug&Play** installation.



Tax incentives*



UniPACK-PI heat pumps and chillers



Units rated from 75 to 150 kW, with ON/OFF and inverter technology and continuous capacity modulation.

Available in 8 sizes, the range is offered in **high-efficiency** and **ultra-low-noise versions** with numerous accessories, making it versatile. Depending on the model, the heat pumps can produce hot water up to **78 °C**.

The chiller is designed to produce chilled water **down to -10 °C** and operate at outdoor air temperatures **up to 50 °C**.



Tax incentives*



WinPACK-P WinPACK-P EXP heat pumps, chillers and EXP multifunction units



Available in 9 sizes from **200 to 430 kW**, the units use hermetic scroll compressors and are offered in the **high-efficiency T version** and the **ultra-low-noise Q version**.

The configuration with 4, 5 or 6 compressors across 2 circuits, hot-water production **up to 75 °C**, and the wide range of accessories and options meet a broad variety of application and design requirements.



Tax incentives*



Performance, flexibility and control for high-capacity systems

Performance and modulation

Scroll compressors specifically designed for R290, together with a configuration offering up to **6 capacity steps**, allow the delivered capacity to be progressively matched to system demand.

In heat pumps and EXP multifunction units, the complete independence of the refrigerant circuits enables precise load and defrost-cycle management.

Integrated safety

Rhoss units are specifically designed and engineered to use R290 refrigerant. Dedicated technical solutions include an **infrared gas sensor** and a **fan**, both of the **EX** type.

If a leak is detected, the system activates an audible and visual alarm and shuts down the unit. Extensive testing has made it possible to minimise safety clearances while ensuring safe installation.

EXP: Heating and cooling in a single solution

The multifunction solution from 51 to 430 kW

EXP multifunction units are designed to produce hot and chilled water simultaneously or to operate independently in heating or cooling mode, adapting to actual system requirements.

The ability to recover and transfer energy between the different loads optimises system operation in applications with simultaneous heating and cooling demand, maximising the use of energy available within the system.

Designed for 2- and 4-pipe systems, the range offers high application flexibility through numerous available configurations and advanced control logic, ensuring precise load management and continuous operation.

The **UniPACK-P EXP** and **WinPACK-P EXP** ranges, using natural R290 refrigerant, extend these benefits to medium- and high-capacity applications from 51 to 430 kW.

Technology: **EXP**

The unit produces hot and chilled water **simultaneously or independently**, adapting its operation to system demand and user-defined priorities.

UniPACK-P EXP

- 11 sizes from 51 to 160 kW
- Two independent refrigerant circuits
- Hot water up to 72 °C
- High-efficiency T and ultra-low-noise Q versions
- Configurable for 2-, 4- or 6-pipe systems

WinPACK-P EXP

- 9 sizes from 200 to 430 kW
- Two independent refrigerant circuits
- Up to 6 capacity steps
- Hot water up to 75 °C
- Management of up to 4 units in parallel

EXP SYSTEMS
Excellence in Polyvalent Technology



Technical data



Electa-PI		104 M	106 M	108 M	110 M	112 M	114 M	116 M	116 T
❶	Heating capacity	kW	4.5	6.1	8.2	10	12	14	15.5
❷	Cooling capacity	kW	4.5	6.1	7.5	8.9	11.6	12.8	14
❸	Sound power level	dB(A)	65	65	68	68	70	70	67
❹	SCOP (EN 14825)		3.87	3.87	3.87	3.87	3.57	3.55	3.43
❺	Energy efficiency class		A+++	A+++	A+++	A+++	A++	A++	A++
	L – Width	mm	1210	1210	1210	1210	1210	940	940
	H – Height	mm	880	880	880	880	880	1615	1615
	P – Depth	mm	450	450	450	450	450	460	460



MidiPACK-PI		120	125	130	135	140
❶	Nominal cooling capacity	kW	18.7	22.3	25.8	28.9
❷	Nominal heating capacity	kW	20.8	25.1	30.5	34.9
❸	Sound power level	dB(A)	72	73.5	74.5	75.5
❹	SCOP (EN 14825)		3.67	3.61	3.8	3.78
	Energy efficiency class		A++	A++	A++	A++
	L – Width	mm	1635	1635	1635	1635
	H – Height	mm	1290	1290	1670	1670
	P – Depth	mm	600	600	600	600



MidiPACK-PI		139	147	156	165	171
❶	Cooling capacity - TCAITP	kW	35.6	48	52.5	60.3
❷	Heating capacity	kW	38.2	49.1	56.1	64.7
❸	Sound power level	dB(A)	79	79	80	81
❹	SCOP (EN 14825)		3.4	3.5	3.45	3.34
	Energy efficiency class		A++	A++	A++	A++
	L – Width	mm	1715	2320	2320	2320
	H – Height	mm	1550	1550	1550	1550
	P – Depth	mm	1000	1000	1000	1000



		POKER-P 250		POKER-PI 170	
❶	Nominal cooling capacity	kW	44.8		41.8
❷	Nominal heating capacity	kW	47.4		47.5
❸	Sound power level	dB(A)	76		79
❹	SCOP (EN 14825)		3.2		3.4
	Energy efficiency class		A++		A++
	L – Width	mm	1224		1224
	H – Height	mm	2335		2335
	P – Depth	mm	1320		1320



UniPACK-P EXP		251	260	270	280	4100	4110	4120	4130	4140	4150	4160
❶	Nominal cooling capacity	kW	48.5	58.4	68.4	79.4	95.9	104.9	117.9	126.9	135.9	158.8
❷	Heat recovery capacity	kW	63.2	76.3	90.3	104.4	126.5	138.5	155.7	166.6	178.6	208.9
❸	T.E.R.		7.57	7.67	7.5	7.67	7.57	7.52	7.7	7.53	7.49	7.67
❹	Nominal heating capacity	kW	50.1	59.1	71.1	80.1	102.1	110.1	120.1	134.1	143.2	161.1
❺	Sound power level TXAETP	dB(A)	81	81	83	84	85	85	86	87	87	88
❻	Sound power level TXAEQP	dB(A)	76	76	78	79	80	80	81	82	82	83
①	SCOP (EN 14825)		3.15	3.11	3.12	3.14	3.22	3.19	3.16	3.23	3.2	3.18
	Energy efficiency class		A+	A+	A+	A+	-	-	-	-	-	-
	L – Width	mm	2550	2550	3250	3250	3250	3250	3250	3930	3930	3930
	H – Height	mm	2210	2210	2210	2210	2260	2260	2260	2260	2260	2260
	P – Depth	mm	1570	1570	1570	1570	1970	1970	1970	1970	1970	1970



WinPACK-P			4200	4220	4250	4270	4290	5320	5360	6380	6430
❶	Nominal cooling capacity	kW	199.7	220.7	249.7	270.7	291.7	321.7	360.7	385.7	430.7
❷	Nominal heating capacity	kW	201.3	220.3	256.3	276.3	295.3	332.3	372.3	397.3	435.3
❸	Sound power level TCAETP-THAETP	dB(A)	90	91	92	92	93	93	94	94	94
❹	Sound power level TCAEQP-THAEQP	dB(A)	84	85	86	86	87	87	88	88	89
①	SCOP (EN 14825)		3.2	3.24	3.29	3.27	3.26	3.23	3.26	3.29	3.25
	L – Width	mm	2730	2730	3830	3830	3830	4970	4970	4970	4970
	H – Height	mm	2480	2480	2480	2480	2480	2480	2480	2480	2480
	P – Depth	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260

WinPACK-P EXP		4200	4220	4250	4270	4290	5320	5360	6380	6430	
❶	Nominal cooling capacity	kW	192.7	212.7	240.7	260.7	281.7	309.7	347.7	372.7	414.7
❷	Heat recovery capacity	kW	248.9	279.4	307.9	336.2	367.6	396	451.4	485.6	542.9
❸	T.E.R.		8.04	8.14	7.97	8	8.02	7.75	7.77	7.93	7.88
❹	Nominal heating capacity	kW	199.3	217.3	253.3	273.3	293.3	328.3	367.3	392.3	430.3
❺	Sound power level TXAETP	dB(A)	90	91	92	92	93	93	94	94	94
❻	Sound power level TXAEQP	dB(A)	84	85	86	86	87	87	88	88	89
①	SCOP (EN 14825)		3.15	3.18	3.23	3.22	3.22	3.19	3.21	3.24	3.21
	L – Width	mm	2730	2730	3830	3830	3830	4970	4970	4970	4970
	H – Height	mm	2480	2480	2480	2480	2480	2480	2480	2480	2480
	P – Depth	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260

Data under the following conditions:

- ❶ Air: 35 °C - Water: 12/7 °C.
- ❷ Air: 7 °C dry bulb - 6 °C wet bulb - Water: 40/45 °C.
- ❸ Chilled water: 12/7 °C - Condenser water: 30/35 °C.
- ❹ Hot water: 40/45 °C - Evaporator water: 10/7 °C.
- ❺ Evaporator outlet water: 7 °C, nominal flow rate. Heat-recovery outlet water: 45 °C, nominal flow rate.
- ❻ Total sound power level in dB(A), based on measurements performed in accordance with UNI EN-ISO 9614.

Performance data in accordance with EN 14511.

T.E.R.: Total efficiency ratio.

Poker-P&PI: Performance data with P1 pump.

- ① Under Average climatic conditions, for a medium-temperature application at 55 °C.



New air for the future.

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