

AHI Carrier NZ is pleased to introduce a new Brand and Monobloc Air to Water heat pump to our ever growing product line up. Product offering starts from 4-16 kW in Single Phase and 12-30 kW in 3-Phase

1. Riello History

Riello was formed in Italy in 1920 and in 1923 was the first company to adapt domestic light oil burners for use in bakers' ovens and other specialist applications. In 1925 due to the gasoil crisis and following considerable R&D the company adapted burners to the new heavy fuel oil.

During the 1930s and 40s the company continued to innovate anticipating and responding to changes in the market to meet users' requirements and in 1950 invested heavily in more extensive production facilities. In 1958 a special department was set up for the automation of burner components.

Further expansion and product development kept the company at the leading edge of its sector through the 1960s, 70s and 80s with expansion across Europe entry into the USA market and the opening of a production facility in Canada. Between 1985 and 1990 subsidiaries were established in England, Germany, France, Belgium and Switzerland.

In 1998 the Riello Burners brand was created to focus on this area of the company's activities which by then had diversified into several product lines. By 2005 Riello Burners was selling around 500,000 burners per annum across domestic, commercial and industrial sectors.

Throughout this time the company's products were underpinned by extensive R&D at Riello's Combustion Research Centre which has continued to increase in scope and size.

Now, the company has achieved primacy in Europe with its pre-mix monobloc burners, combining high efficiency with very low NOx emissions

2. Product Line Up



4-6 kW (1 Ph)



8-16 kW (1 Ph)
12-16 kW (3 Ph)



18-30 kW (3 Ph)

3. Features

NXHM 004÷016: Main selling points

SUSTAINABILITY

operating on ecological R32 refrigerant with low GWP & CO2 emission

WIDE RANGE OFFER

10 models from 4kW to 16kW

CERTIFIED PERFORMANCE

from 3° party according to Ecodesign requirements (HP Keymark)

POWERFUL PERFORMANCE

with high efficiency: Energy class A+++ (35°C) or A++ (55°C) ensuring high heating power at less energy consumption

SILENT OPERATION

for comfort home

STABLE OPERATING CONDITION

High leaving water temperature of max 65°C or 60°C @-15°C outside air temperature

CASCADED SYSTEM:

Multiple units (up to 6) can be linked together to efficiently meet the peak heat demand



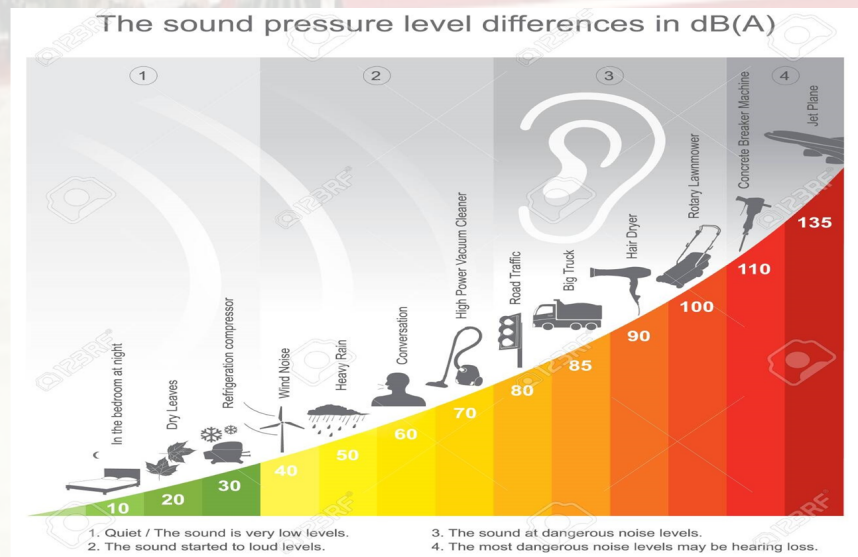
- Full range certified according to ErP directive **A+++ @A+7°C/W+35°C & A++ @A+7°C/ W+55°C**
- **Silent operation** with single **Keymark performance certificate**

New NXHM is very silent machine



Note: *Sound pressure level is measured at 1m distance in front of the unit and (1m+unit height)/2 above the floor. The data is the maximum value under conditions:

- Outdoor air temperature 7°C, 85% R.H., leaving water temperature 30/35°C;
- Outdoor air temperature 7°C, 85% R.H., leaving water temperature 47/55°C



- Brushless fan motor
- Fin-coil (plate type) heat exchanger with blue coating enduring **higher resistance against corrosive agents**
- **Anti-freeze program** protects the hydraulic parts from damage at low outdoor air temperature or during non-use period (e.g. holiday away)
- **Easy service and maintenance** with frontal access to different components

Features continue

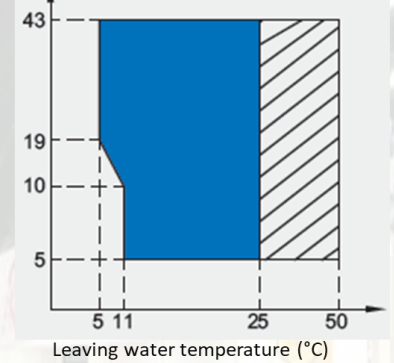
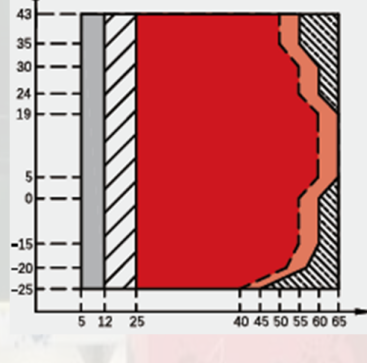
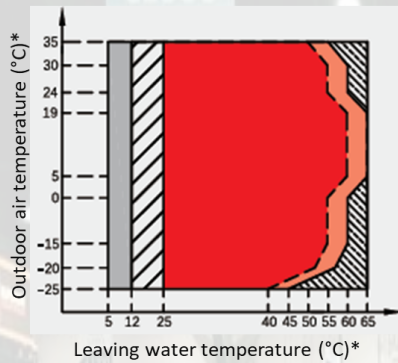
- Continuous hot water supply temperature at 60°C even at low air temperature of -20°C

Stable operating temperature

Stable LWT for Heating
(operating outdoor air temperature from -25°C to +35°C)

Stable LWT for DHW
(operating outdoor air temperature from -25°C to +43°C)

Stable LWT for Cooling mode
(operating outdoor air temperature from -5°C to +43°C)



--- Max. inlet water temperature for heat pump operation

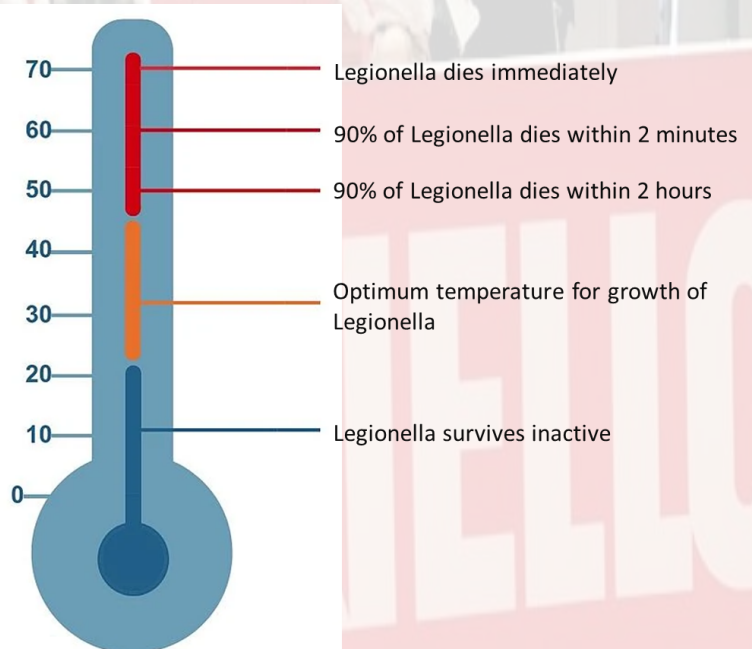
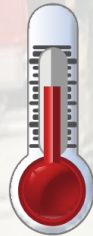
*Note:

- Heat pump turn off, only Back up electric heater/ Additional heat source turns on
- Operation range by heat pump with possible limitation and protection

If Backup electric heater (IBH)/ Additional heat source (AHS) setting is valid, only IBH/AHS turns on. If IBH/AHS setting is invalid, only heat pump turn on

- Disinfection function used in DHW mode for anti-legionella

DOMESTIC HOT WATER <DHW>			
DIS-INFECT	FAST DHW	TANK HEATER	DHW PUMP
CURRENT STATE			ON
OPERATE DAY			FRI
START			23:00
ON/OFF			



- “Disinfect function” is used to kill legionella at 70°C to ensure the health and safety.
- The function can be set by the customer via wired controller

- One single controller can manage up to 6 units in cascaded system (1 master & 5 slaves) even with different power outputs



Wired controller (included in the units):

- Modbus protocol and network flexibility
- Manage cascade system up to 6 units
- Multi-function working as customer’s needs
- Available in multiple languages (EN, IT, DE, ES, FR, GR, NL, PL, PT, RO, RU, TR)

Features continue

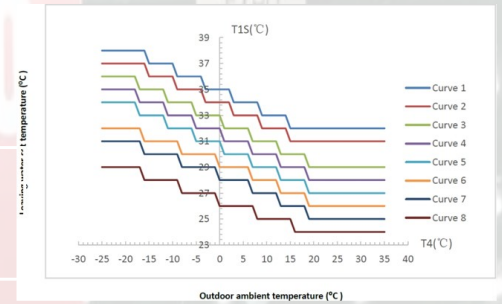
Room temperature control



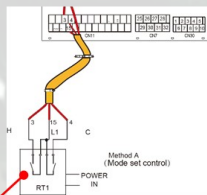
With room temp. sensor

Without thermostat

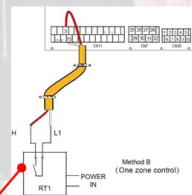
Using wired control, customers can set a target room temperature and choose a climate curve (there are 32 complete climate curve inside the controller), then the target leaving water temperature is adjusted according to climate curve



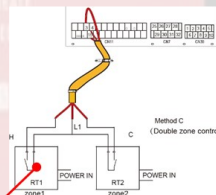
With external thermostat



Method A: the thermostat control ON/OFF and operation mode of the heat pump



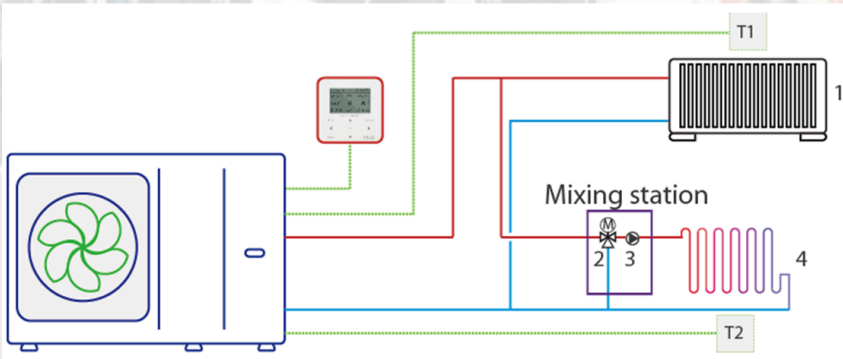
Method B: the thermostat control ON/OFF of the heat pump. Operation mode is set on wired control



Method C: the thermostat control ON/OFF of double zones. Customer can set 2 target leaving water temperatures on wired control

The heat pump is compatible with 3 kinds of thermostat control

Flexible control at maximum comfort and energy saving

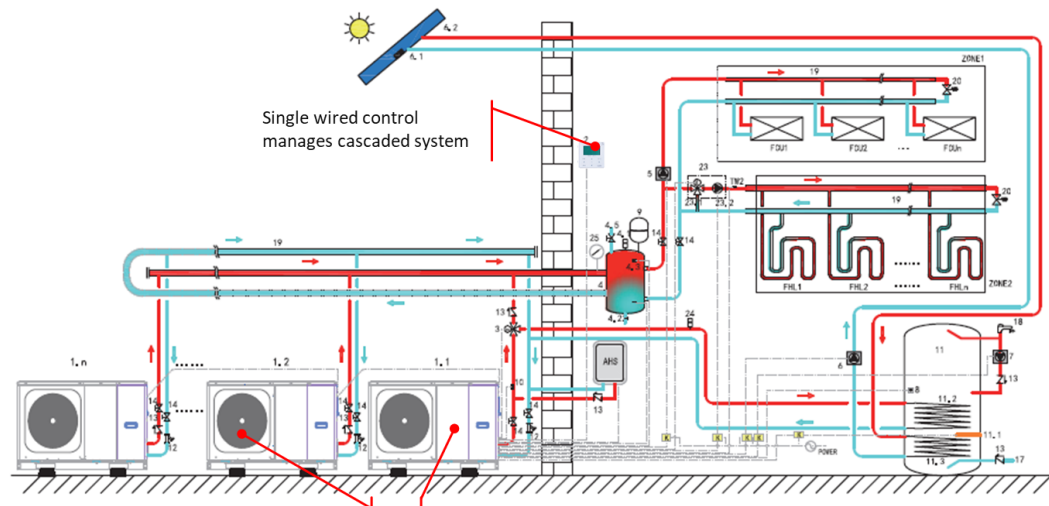


Double zones control functions ensures different indoor units working at its desire temperature:

- When the temperature of zone 1 is reached, the water pump stops but the heat pump keeps running
- When the temperatures of both zone 1 & zone 2 are reached and no DHW requirement, the heat pump will stop

Cascaded system

The cascaded system (up to 6 units even with different power capacities working together) adjusts between minimum and maximum heat demand satisfying both space heating/cooling and domestic hot water (DHW)



Slave units (up to 5 units) operate in space heating/ cooling mode Only master unit operates in DHW mode

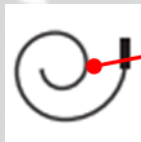
4. Accessories included with Unit



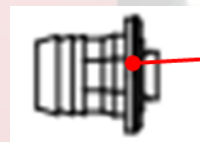
Wired controller



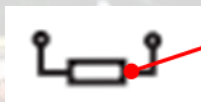
Y-shape water filter



Thermistor for DHW tank or zone2 water flow or balance tank



Drain collector



Network matching wire for cascade system

5. Specifications

NXHM 004-016 – Performance data

		004	006	008	010	012	014	016	012T	014T	016T
PERFORMANCE DATA IN HEATING											
Performance in heating (A7°C DB; W35°C)											
Nominal heating capacity	kW	4.20	6.35	8.40	10.00	12.10	14.50	15.90	12.10	14.50	15.90
Total input power	kW	0.82	1.28	1.63	2.02	2.44	3.15	3.53	2.44	3.15	3.53
COP		5.10	4.95	5.15	4.95	4.95	4.60	4.50	4.95	4.60	4.50
Energy efficiency class		A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
Performance in heating (A7°C DB; W45°C)											
Heating capacity	kW	4.30	6.30	8.10	10.00	12.30	14.10	16.00	12.30	14.10	16.00
COP		3.80	3.70	3.85	3.75	3.70	3.60	3.50	3.70	3.60	3.50
Performance in heating (A7°C DB; W55°)											
Heating capacity	kW	4.40	6.00	7.50	9.50	11.90	13.80	16.00	11.90	13.80	16.00
COP		2.95	2.95	3.18	3.10	3.05	2.95	2.85	3.05	2.95	2.85
Energy efficiency class		A++	A++	A++	A++	A++	A++	A++	A++	A++	A++
PERFORMANCE DATA IN COOLING											
Performance in cooling (A35°C; W18°C)											
Cooling capacity	kW	4.50	6.50	8.30	9.90	12.00	13.50	14.90	12.00	13.50	14.90
EER		5.50	4.80	5.05	4.55	3.95	3.60	3.40	3.95	3.60	3.40
Performance in cooling (A35°C; W7°C)											
Cooling capacity	kW	4.70	7.00	7.45	8.20	11.50	12.40	14.00	11.50	12.40	14.00
EER		3.45	3.00	3.35	3.25	2.75	2.50	2.50	2.75	2.50	2.50
SOUND DATA											
Sound pressure	dB(A)	45	48	49	51	53	54	58	54	54	58
Sound power	dB(A)	55	58	59	60	65	65	68	65	65	68

6. Availability

From late March early April 2022

7. POS

Hard and PDF Copy Brochure available in late March early April 2022

8. Sales Information

For further information please contact your local Sales Engineer.

Upper North Island

Jeremy Biggs	Mobile: 021 566 985	E-Mail: jeremy.biggs@ahi-carrier.co.nz
Glenn Spiller	Mobile: 027 248 1140	E-Mail: glenn.spiller@ahi-carrier.co.nz
Totaline Auckland	Landline: 09 355 6720	E-Mail: aucklandsales@ahi-carrier.co.nz

Lower North Island

Robin Doyle	Mobile: 021 565 921	E-Mail: robin.doyle@ahi-carrier.co.nz
Totaline Napier	Landline: 06 561 0183	E-Mail: napiersales@ahi-carrier.co.nz
Totaline Wellington	Landline: 04 473 5990	E-Mail: wellingtonsales@ahi-carrier.co.nz

Upper South Island

Andrew Templeman	Mobile: 027 248 1140	E-Mail: andrew.templeman@ahi-carrier.co.nz
Totaline Christchurch	Landline: 03 379 0894	E-Mail: christchurchsales@ahi-carrier.co.nz

Lower South Island

Ashar Khan	Mobile: 021 576 535	E-Mail: ashar.khan@ahi-carrier.co.nz
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Marketing/POS

Dani Marias	Mobile: 027 240 1569	E-Mail: dani@ahi-carrier.co.nz
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Customer Services	Landline: 09 355 6720	E-Mail: customer.services@ahi-carrier.co.nz
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Technical Support	Landline: 09 355 6720	E-Mail: warranty.rlc@ahi-carrier.co.nz
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Neil Marx

National Sales & Product Manager (RLC)

AHI Carrier NZ Ltd

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