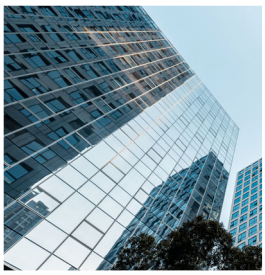
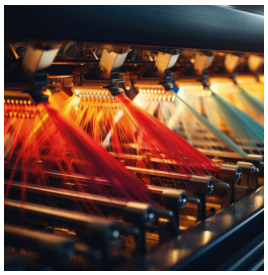
ENVIRONMENTAL
CLIMATE CONTROL
EQUIPMENT
& SOLUTIONS






NEROMAX

R290

High-temperature air-to-water heat pump - Packaged unit

www.ett-hvac.com

MADE IN FRANCE

CONTENTS

General description

The **ETT** packaged unit is delivered ready to operate. Its full aluminium structure (frame & casing) ensures an excellent corrosion protection (20-year anti-corrosion guarantee).

The **ETT** equipment can be installed either on a roof or on the ground.

EcoDesign favors DECONSTRUCTION : **ETT** units are 98% recyclable (Reuse and recycling rates based on an ULTI+ R32 21 unit).

Our technical choices have several impacts on the environment

- **Legal and regulatory framework:**
- Pursuant to the Directive 2008/98/EC on waste, considering clause 26: "The polluter pays principle is a guiding principle at European and international levels. "The producer and holder of the waste should manage it in such a way as to ensure a high level of protection for the environment and human health". ETT is a member of "Ecologic" in France.
- In accordance with articles 5.3, 5.4 and 11 of Regulation (EC) No 303/2008, ETT holds a certificate of capability to handle refrigerants (no. 637).
- **Aluminium: a good choice for the planet!**
- Aluminium is 100% recyclable indefinitely.
- Recycling provides over 30% of aluminium needs.

- **Consumables: efficient waste management:**
- Filtration: ETT units incorporate "Eco-Design" air filters (frame selective sorting - grille media)
- **Low polluting ETT manufacturing process:**
- Selective sorting by raw materials, all waste is recovered, 80% of which is recycled.
- No paint on casings, no use of solvent.
- **ETT certifications**
- **ISO 14001** certification: Environmental management system
- **ISO 9001** certification: Our quality organization is the subject of AFAQ certificate n° 1994/2016f. Each unit is inspected and tested in the factory before delivery, and a test certificate is issued.
- **CSR assessment :** Quality of CSR management system - **C**orporate **S**ocial **R**esponsibility

We have placed ease of operation at the heart of our units design:

- The separate **technical section** facilitates unit control and maintenance and allows measurement and adjustment during operation.
- The **PLC**, specially designed for this application, is highly flexible to ensure optimum operation of the **ETT** unit with user-friendly local or remote communication via a remote display, PC or BMS.

CE Moreover, each unit is delivered with an **EC certificate of conformity** and complies with the standards listed below:

- Machinery Directive 2006/42/EC - Operator's safety
- Low Voltage Directive (LVD) 2014/35/EU
- Electromagnetic Compatibility (EMC) Directive 2014/30/EU
- Regulation (EU) 2016/426 – Gas appliances
- Standard NF EN 60204 -1- Electrical appliances
- Standard EN 378-2 : 2017 – Safety and environmental requirements
- PED Directive 2014/68/EU (in accordance with Articles 2.10, 2.11, 3.4, 5a and 5d of Annex 1) - Pressure equipment
- EcoDesign regulations ErP UE 2281/2016

100% recyclable aluminium

20-year guarantee against corrosion frame - casing

ENERGY SAVING

ENVIRONMENTAL ATTITUDE

SERVICE LINK

Innovation for the environment

Commercial, industrial, tertiary and accommodation buildings are **major consumers of energy** and therefore have a **significant impact on CO_2 emissions**.
ETT's Research and Development department has designed an innovative **high-power, high-temperature air-to-water heat pump solution with very low noise levels.**

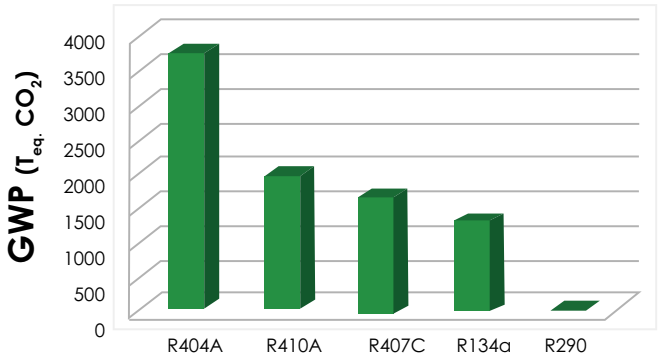
The **NEROMAX** range has been designed for:

- production of **hot water up to 70°C on the non-reversible NEROMAX HT version**
- **chilled water** production **on the NEROMAX reversible version**
- **reduction of energy consumption** by using EC propeller fans and staged compressors (up to 4 stages on 2 circuits to improve seasonal efficiency).

Environmental impact :

NEROMAX is an eco-friendly heat pump that uses propane (R290), a natural refrigerant with a low environmental impact:

- ✓ **Zero ozone depletion** (ODP = 0)
- ✓ Global Warming Potential **F-Gas 2027 compliant** (GWP = 3)
- ✓ **No PFAS** (synthetic chemical compounds) that could persist in the environment.



F-GAS READY 2027

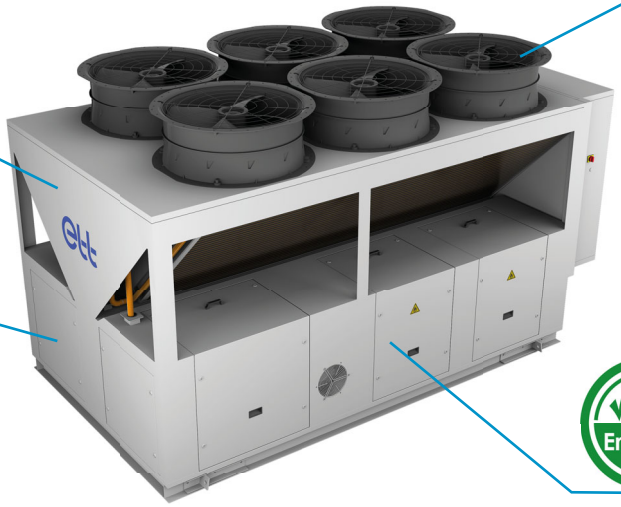
NO PFAS

Optimised seasonal efficiency

CLASS A+

SCOP

Compressors
Scroll type. Up to 4 control power stages



Variable speed EC propeller fan (dia. 910)

Solution ErP 2021

Operating principles

NEROMAX is a thermodynamic system for producing hot or cold water.

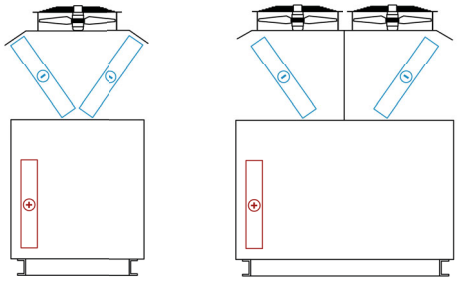
This new ETT unit is designed to meet all of the requirements of a building:

> Heating
> Cooling
> Domestic hot water (DHW) via a primary network

The unit operates as a heat pump:

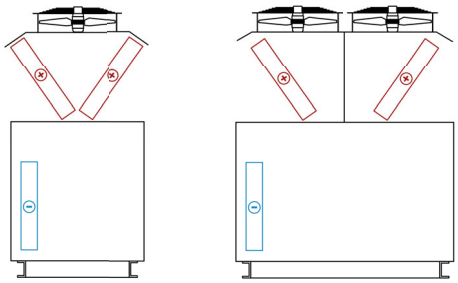
> Fluids handled: cold and hot water networks
> Rejection: outside air
> System: 2 pipes

Hot water mode :



Hot water mode: maintains the temperature of hot water networks using the thermodynamic system (up to 70°C with the NEROMAX HT version).

Cooling Mode:



Cooling mode: maintains the temperature of the cold water network using the thermodynamic system.

This mode is not available on the NEROMAX HT version.

COMPACT version

Each NEROMAX and NEROMAX HT machine is available in a "**COMPACT** " version for projects requiring shorter unit lengths. Hydraulic options are not available on " **COMPACT** " versions.

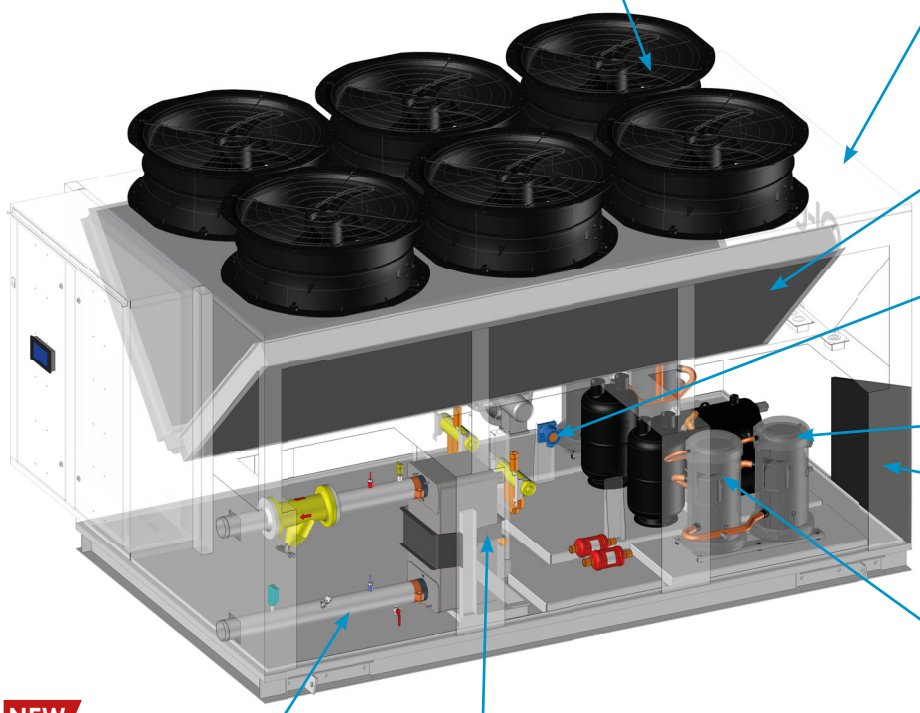
NEROMAX main components

Propeller fans Ø910 communicating, variable speed drive, bionic blade design, "EC" electronically commutated motor, optimum efficiency
Very low noise level on NEROMAX versions

Frame-casing assembly AG3 ALUMINIUM
20-Year anti-corrosion guarantee.

20-year guarantee against corrosion frame - casing

NEW
Copper/aluminium coil with 7mm tube (reduced weight and refrigerant charge)



Propane detector and safety system with ATEX exhaust fan

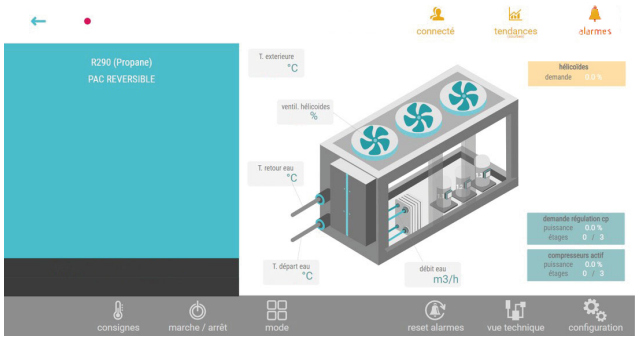
Sound jacket on the compressors

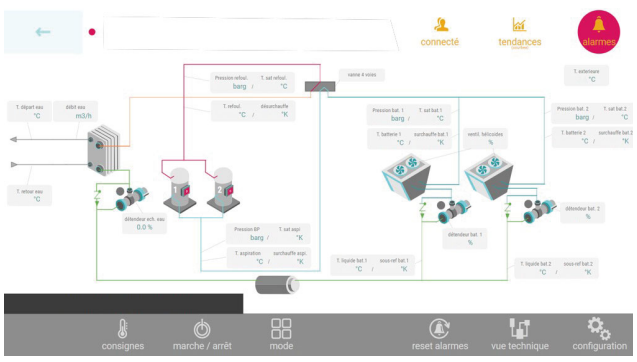
Sound insulation and cladding of the technical compartment

NEW
High temperature Scroll compressor up to 4 control stages on 2 circuits

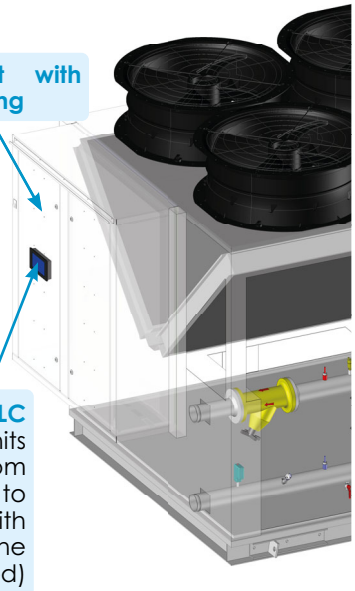
NEW
Minimum water flow check using **a calorimetric flowmeter**

DUAL hot and chilled water plate heat exchangers
Optimised part-load performance





Electrical cabinet with IP54 protection rating

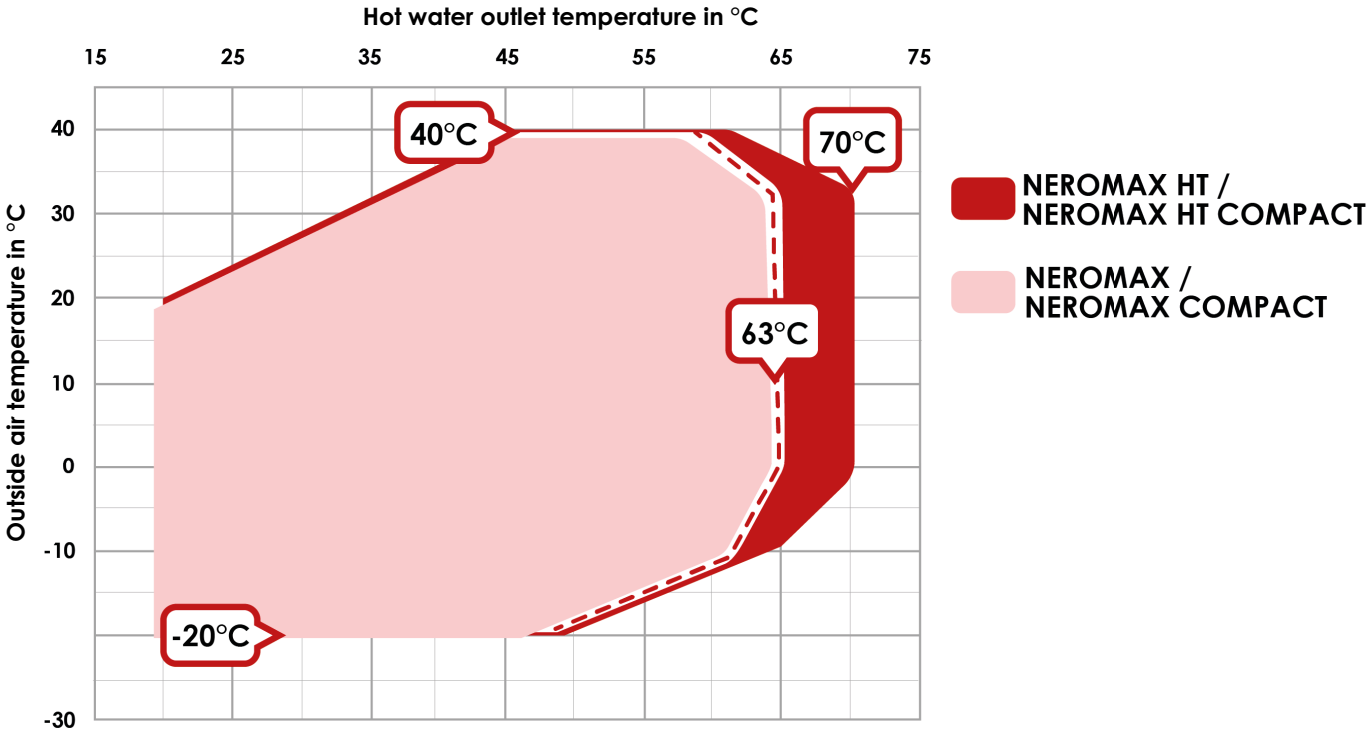


New Generation PLC
Communication between units and technical data transfer from the units to an external server to allow optimum remote control with **myETTvision** (depending on the country where the unit is installed)

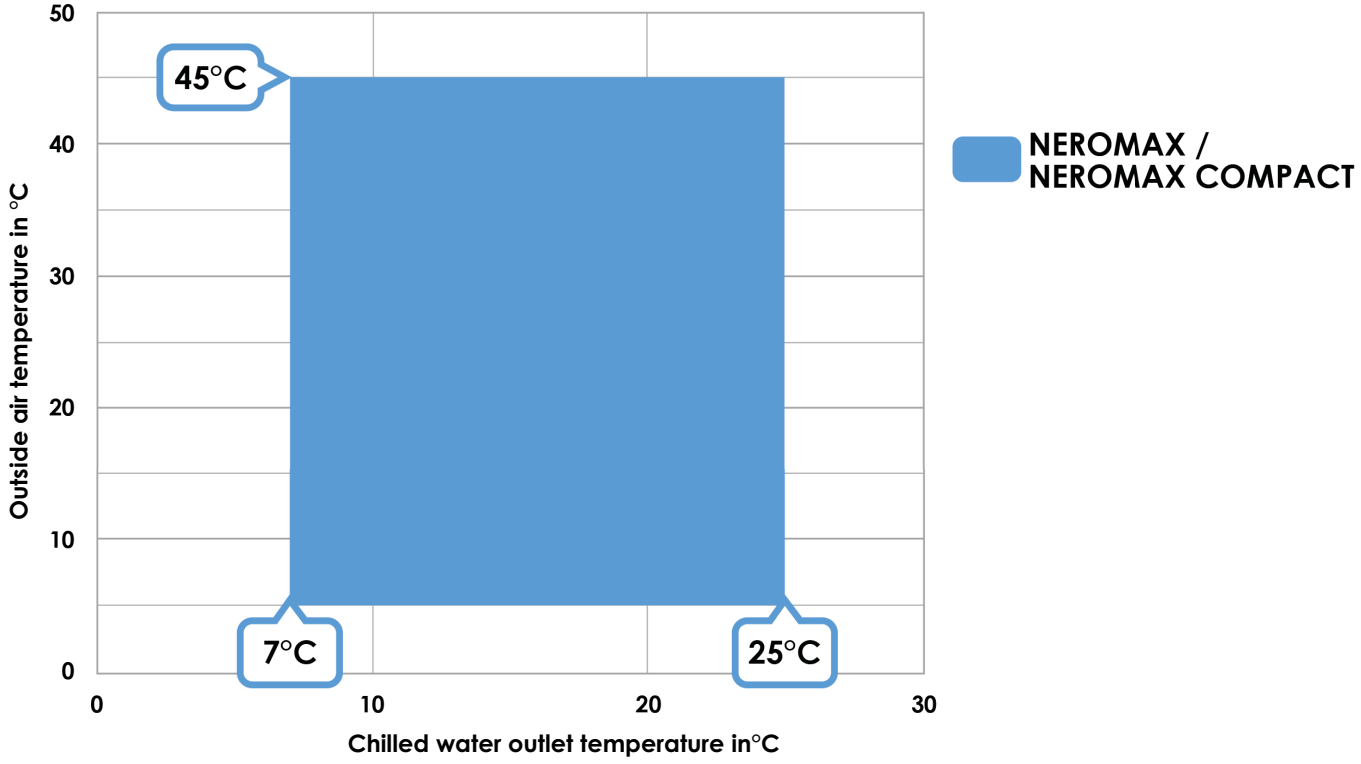
NEW
7'' touch display including a latest-generation PLC for easy machine configuration (setpoint management, heating/ cooling weather compensation, occupancy management and time scheduling, management of machine cascades, auxiliary load shedding, propeller fans "low noise" mode, pump control, fault and alarm reporting)

Operating range

HOT WATER MODE



CHILLED WATER MODE



Chilled water mode only available on NEROMAX and NEROMAX COMPACT reversible machines.

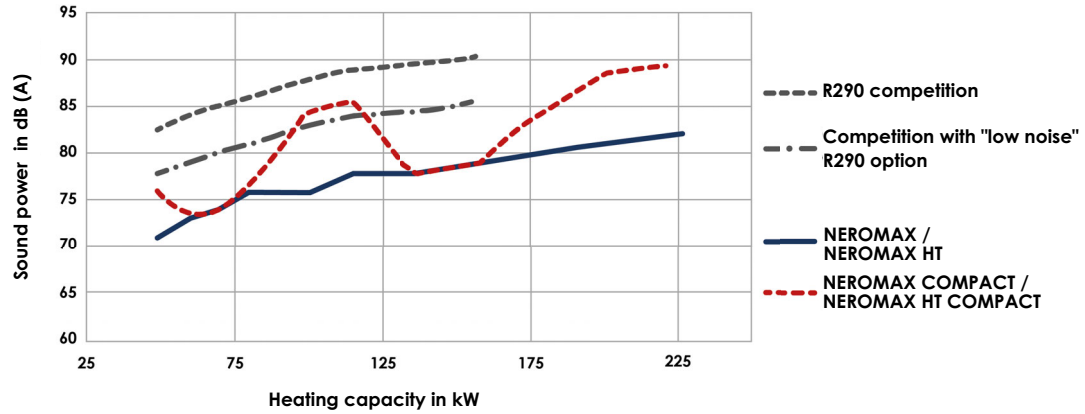
The reversible heat pump can be used on warm water loop networks.

Premium acoustic damping

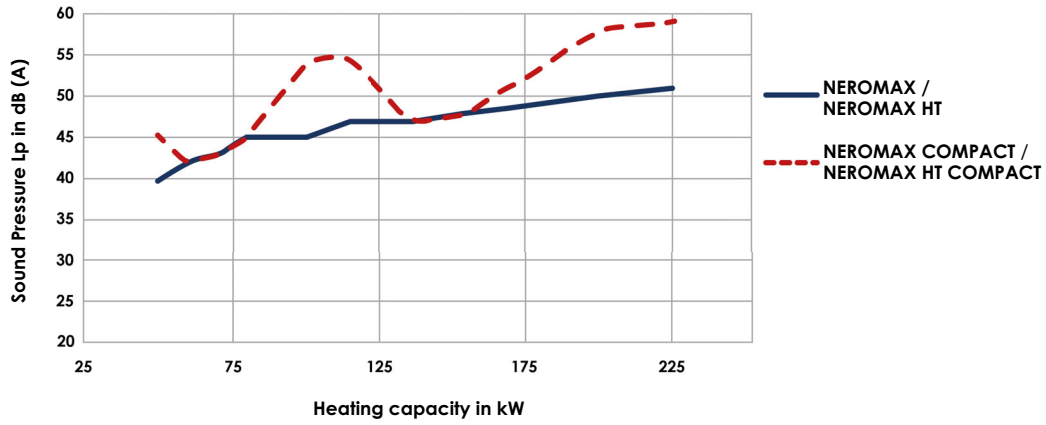
To reduce noise levels as much as possible, all NEROMAX machines are fitted with soundproofing for the technical compartment and with jackets on the compressors. This combination reduces the acoustic power of the units by more than 12 dB (A).

In addition, to achieve exceptional noise levels in this power range, the NEROMAX range also features very low-noise 910mm propeller fans which operate at very low rotation speed even at full load(1).[1]

Sound power level



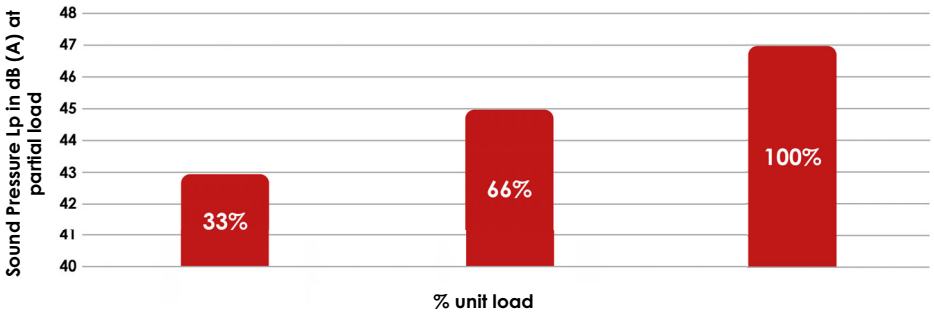
Sound pressure



Estimated pressure at 10m, with directivity factor = 1

Partial load

Over a heating season, the heat pump operates 87% of the time at less than 66% of its capacity. The average noise level during the heating season is reduced by 2 to 4 dB(A) at partial load compared with the announced noise level at full load.



[1] *propeller fans not available on the NEROMAX COMPACT version*

Unit description

Aluminium frame and casing assembly:

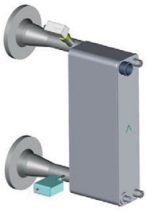
■ **A rigid**, compact and lightweight **packaged unit**, with perfect weather resistance and a 20-year warranty on the entire casing.
■ **Vertical panels and aluminium roof**
■ **Access via removable panels.**
■ **Electrical compartment with IP54 protection rating.**
■ **Acoustic insulation of the technical compartment.**

Size 50 to 80

Size 135 to 155

Energy and thermodynamic assembly:

■ **Refrigeration circuits** compliant with European Directive on pressure equipments (PED 2014/68/EU).
■ **R290** propane refrigerant.
■ **Direct expansion internal brazed plate** heat exchangers. The cold and hot water production exchanger is combined with an electronic expansion valve.



■ **Direct expansion** external exchanger, made of copper tube, aluminium fins with optional vinyl coating and aluminium frame, combined with an electronic expansion valve in "hot water production" mode.
External exchangers angled position and the separation by refrigeration circuit and by compressor ensure quick and efficient defrosting.

■ **Compressor power stages** : power is adapted according to requirements. Operation in part load considerably reduces the number of defrost cycles and their duration.
■ Completely independent **refrigeration circuit**: each refrigeration circuit has one or more independent EC propeller fans ventilating its exchanger.
■ **1 propane detector / unit:** Provides a safety shutdown if propane is detected in the technical compartment (20% of the lower explosive limit - LEL).
■ **EC propeller fan** : propeller fan(s) rotation speed is adjusted according to production in order to optimise the energy consumption of the units.
■ **Acid filter drier.**
■ **HP and LP** pressure switches.
■ **Switchover** valve.

Control description

Electrical assembly:

■ **Electric board** compliant with standards NF EN C 15-100 and NF EN 60204-01 including:

✔ETT PLC with 7" touch display.

✔Power switch with lockable external handle for full load cut-off. Standard universal cable connection. Optional copper/aluminium connection boxes.

✔A 400-230-24 volt transformer for control and regulation circuits.

✔A fault summary with a dry contact on standby on the terminal.

✔Numbered terminal blocks with sectional terminals for all remote controls and call-backs.

✔Internal wiring fully numbered at both ends with marking rings.

✔A basic breaking capacity Ik3 of 10 kA.

✔All components protected by circuit breakers.

✔The nominal LV distribution voltage is governed by the French interministerial order of 24 December 2007. This sets the nominal voltage at 230/400 V. It defines minimum and maximum values that are acceptable at a user's point of delivery (average value over 10 ml), corresponding to a range of -10 % / +10 % around the nominal values. and maximum acceptable value of the voltage drop gradient to 2%. This is the additional voltage drop generated at a network point if 1 Kw single-phase is added at that same point.

✔Mushroom head emergency push button

Control assembly:

✔ CTN type temperature sensors. Their accuracy and liability have been tested and validated both at the factory and on site.

✔One or more PLCs developed specifically by ETT for this range of machines.

The microprocessor, the memory and the size of the PLCs are adapted to the chosen applications and options by integrating a program set-up in the factory. The PLC is in a plastic box that guarantees a high mechanical protection and reduces electrostatic shock threats.

The PLC has also the following functions:

✔Start/Stop by remote contact

✔On/Off according to schedule (2 time slots a day).

✔Fault summary via dry contact for transfer to customer system.

✔ Hot and chilled water mode set points with weather compensation option

✔Management of safety devices (anti-freeze thermostat, gas detector, HP pressure switch, etc.) and faults.

✔Optimisation of compressor running times.

✔Flash-type analogue and economical management of alternate defrost cycles for each refrigeration circuit using frost detection and end of defrosting through analogue sensors, stop of the concerned exchanger's ventilation, coil drying and starting of a new heating cycle in heat pump mode. External coils angled position helps blowing water away from the coil, ensuring efficient defrosting.

✔Fault history in literal form (no code) with indication of time and outdoor temperature.

✔ Operating time record for unit, compressors and auxiliaries.

Main options

Basic unit

Type	NEROMAX COMPACT	NEROMAX HT COMPACT	NEROMAX	NEROMAX HT
Reversible mode	●		●	
Very high temperature mode		●		●
AG3 Aluminium casing	●	●	●	●
Casing arrangement			Arrangement A	Arrangement A
"Low Noise" propeller fans			●	●
Technical compartment "Low noise" cladding	●	●	●	●
"Low noise" compressor sound jacket	●	●	●	●
Low-water pressure switch and drain valve	●	●	●	●
Exchanger frost protection thermostat	●	●	●	●
Calorimetric flowmeter	●	●	●	●
R290 HP/LP pressure gauges	●	●	●	●
R290 safety system (ATEX emergency detector and built-in exhaust fan)	●	●	●	●
Copper / aluminium coil	●	●	●	●
ETT progressive PLC with built-in 7" touch display	●	●	●	●
Single or double pumps contact	●	●	●	●
Unit / compressor load shedding	●	●	●	●
Emergency stop button	●	●	●	●
Phase checker	●	●	●	●
Compressor crankcase heater	●	●	●	●
Defrosting tracer	●	●	●	●
With floating HP control (chilled water mode)	●		●	
MyETTvision remote communication platform (depending on the country where the machine is installed)	●	●	●	●

Additional options

Type	NEROMAX COMPACT	NEROMAX HT COMPACT	NEROMAX	NEROMAX HT
Coil fins with epoxy coating	●	●	●	●
Coil with heresite coating	●	●	●	●
Coil with electrofin coating	●	●	●	●
Anti-corrosion options - Screw and bolts - Stainless steel - Stainless steel grid for propeller fan	●	●	●	●
Refrigeration piping varnishing	●	●	●	●
Hydraulic arrangement B			●	●
Balancing valve	●	●	●	●
Filter strainer	(Supplied separately)		●	●
Unit shut-off valve(s)	●	●	●	●
Customer flange connection	●	●	●	●
Expansion vessel			●	●
Valve 3 or 4 bar			●	●
Single fixed-speed pump			●	●
Double fixed-speed pumps			●	●
Buffer tank without auxiliary			●	●
Buffer tank with 1 or 2-stage electrical auxiliary depending on size				●
Tracer on pipework	●	●	●	●
Electric counter	●	●	●	●
ALUMINIUM/COPPER connection terminal blocks	●	●	●	●
BACnet IP licence	●	●	●	●
Compressor soft starter	Only on sizes 50; 60; 70; 80			
Master/slave machine cascade for up to 4 units	●	●	●	●
Steel transport feet	●	●	●	●
Aluminium feet 200 / 400 mm	●	●	●	●

	DESCRIPTION	Unit	50
PERFORMANCE	**CHILLED WATER PRODUCTION**		
	Cooling capacity(1)	**kW**	42.1
	Absorbed power (1)	**kW**	15.5
	EER (1)	**kW/kW**	2.71
	HOT WATER PRODUCTION		
	Heating capacity(2)	**kW**	46.4
	Absorbed power (2)	**kW**	16.6
	COP (2)	**kW**	2.80
	Heating capacity - heating mode (3)	**kW**	35.5
	SCOP LT (4)	**kW/kW**	3.63
	η s, h LT (4)	**%**	142
	Energy efficiency class (SCOP LT)		A+
	SCOP MT (5)	**kW/kW**	2.96
	η s, h MT (5)	**%**	116
	Energy efficiency class (SCOP MT)		A+
HYDRAULICS	**WATER FLOW RATE**		
	Nominal flow for a reversible unit 7/12°C	**m³/h**	7.3
	Nominal flow on water loop 25/20°C	**m³/h**	10.1
	Exchanger pressure drop (7/12°C)	**mWC**	1.3
VENTILATION	**AIR FLOW RATE**		
	Rated flow rate	**m³/h**	17000
	ACOUSTICS - LOW NOISE STANDARD		
	Sound power level Lw	**dB (A)**	71
	Sound pressure level Lp (6)	**dB (A)**	40
GENERAL	**ELECTRICAL DATA**		
	Total installed electrical power	**kW**	24.4
	Total installed electrical current	**A**	46
	Starting current	**A**	171
	Starting current (Soft starter option)	**A**	113
	COMPRESSORS		
	Circuits / Quantity per circuit		1 / 2
	Type		Scroll
	WEIGHT		
	Unit without option / with water	**kg**	1095

(1) Complies with EN 14511: chilled water return/flow temperature: 12/7°C, outside temperature 35°C
(2) Complies with EN 14511: medium temperature hot water return/flow: 47/55°C, outside temperature +7°C DB/ +6°C WB
(3) Hot water return/flow temperature: 47/55°C, outside temperature -5°C DB/ -5.5°C WB
(4) SCOP LT 30/35°C in accordance with Regulation (EU) no. 813/2013
(5) SCOP MT 47/55°C in accordance with Regulation (EU) no. 813/2013
(6) Resulting sound pressure at 10m in free field

400 V- 50 Hz 3-phase power supply + earth without neutral

Note : Calculations based on the properties of air at atmospheric pressure, at sea level

DESCRIPTION	Unit	50

Technical features

NEROMAX HT 50

PERFORMANCE	**HOT WATER PRODUCTION**		
	Heating capacity[2]	**kW**	47.6
	Power input [2]	**kW**	16.1
	COP [2]	**kW**	2.96
	Heating capacity - heating mode [3]	**kW**	36.5
	SCOP LT [4]	**kW/kW**	3.64
	η s, h LT [4]	**%**	143
	Energy efficiency class (SCOP LT)		A+
	SCOP MT [5]	**kW/kW**	2.99
	η s, h MT [5]	**%**	117
	Energy efficiency class (SCOP MT)		A+
	η s, h MT [5]	**%**	
HYDRAULICS	**WATER FLOW RATE**		
	Nominal flow for a heating use 47/55°C	**m³/h**	5.2
	Nominal flow for a cooling and heating use 47/55°C	**m³/h**	7.7
	Exchanger pressure drop	**mWC**	0.6
VENTILATION	**AIR FLOW RATE**		
	Rated flow rate	**m³/h**	17000
	ACOUSTICS - LOW NOISE STANDARD		
	Sound power level Lw	**dB (A)**	71
	Sound pressure level Lp [6]	**dB (A)**	40
GENERAL	**ELECTRICAL DATA**		
	Total installed electrical power [7]	**kW**	24.4
	Total installed electrical current [7]	**A**	46
	Starting current [7]	**A**	171
	Starting current (Soft starter option)	**A**	113
	ELECTRICAL DATA WITH AUXILIARY		
	Auxiliary heating capacity	**kW**	18
	Total installed electrical power with auxiliary	**kW**	42.4
	Total rated installed electrical current with auxiliary	**kW**	72
	Starting current with auxiliary	**A**	197.4
	Starting current with soft starter option and with auxiliary	**A**	139
	COMPRESSORS		
	Circuits / Quantity per circuit		1/2
	Type		Scroll
	WEIGHT		
	Unit without option / with water	**kg**	1095

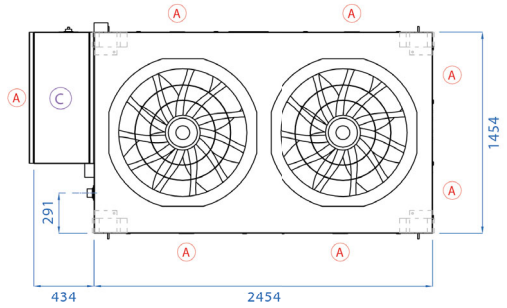
(1) Complies with EN 14511: chilled water return/flow temperature: 12/7°C, outside temperature 35°C
(2) Complies with EN 14511: medium temperature hot water return/flow: 47/55°C, outside temperature +7°C DB/ +6°C WB
(3) Hot water return/flow temperature: 47/55°C, outside temperature -5°C DB/ -6°C WB
(4) SCOP LT 30/35°C in accordance with Regulation (EU) no. 813/2013
(5) SCOP MT 47/55°C in accordance with Regulation (EU) no. 813/2013
(6) Resulting sound pressure at 10m in free field
(7) Excluding electric auxiliary option

400 V- 50 Hz 3-phase power supply + earth without neutral
Note : Calculations based on the properties of air at atmospheric pressure, at sea level

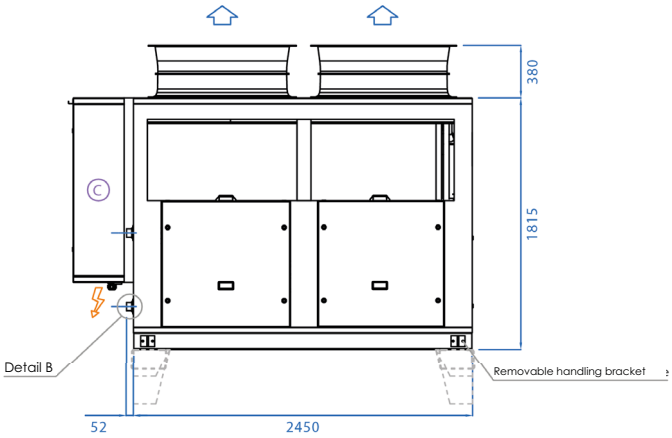
Dimensions and connections

NEROMAX 50
NEROMAX HT 50

Top view :

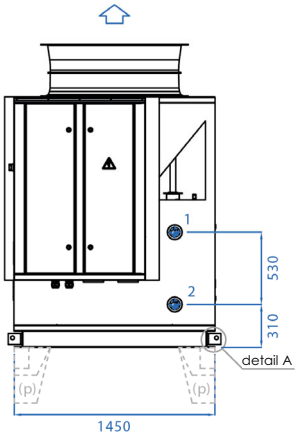


Side view:

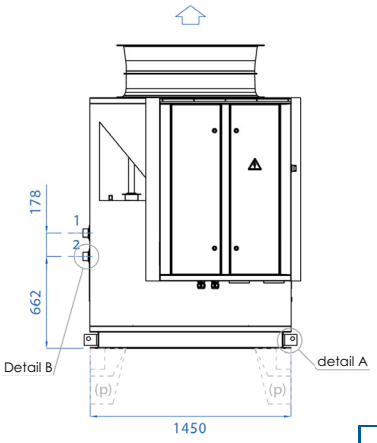


Front view:

ARRANGEMENT A

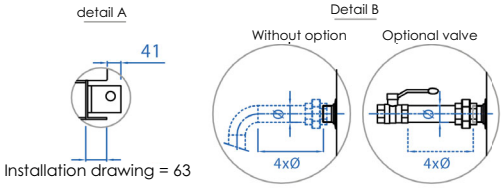


ARRANGEMENT B



ARRANGEMENT A: Left-hand electrical board

ARRANGEMENT B: Right-hand electrical board, side hydraulic outlets



Threaded connection * DN50	1	2
NEROMAX Reversible version	IN	OUT
NEROMAX HT Version with hot water only	OUT	IN

** Optional flange on request*

- Power supply
- Ⓐ Access
- Ⓒ Technical section
- Air flow direction

	Length	Width [1]	Height
Casing dimensions	2450	1450	2195

Provide 1200 mm clearance around the unit to ease access.

A straight length of 4 x the pipe diameter is required to enable the control system to read the unit's water flow better (see detail B).

Technical features

NEROMAX 60-80

	DESCRIPTION	Unit	60	70	80
PERFORMANCE	**CHILLED WATER PRODUCTION**				
	Cooling capacity(1)	**kW**	55.1	63.2	69.2
	Absorbed power (1)	**kW**	17.7	21.9	25.9
	EER (1)	**kW/kW**	3.11	2.89	2.68
	HOT WATER PRODUCTION				
	Heating capacity(2)	**kW**	57.5	67.2	74.1
	Absorbed power (2)	**kW**	19.9	23.5	26.8
	COP (2)	**kW**	2.89	2.86	2.77
	Heating capacity - heating mode (3)	**kW**	43.7	51.2	57.1
	SCOP LT (4)	**kW/kW**	3.57	3.61	3.62
	η s, h LT (4)	**%**	140	141	142
	Energy efficiency class (SCOP LT)		A+	A+	A+
	SCOP MT (5)	**kW/kW**	2.93	3.00	3.02
	η s, h MT (5)	**%**	114	117	118
	Energy efficiency class (SCOP MT)		A+	A+	A+
HYDRAULICS	**WATER FLOW RATE**				
	Nominal flow for a reversible unit 7/12°C	**m³/h**	9.3	10.8	11.9
	Nominal flow on water loop 25/20°C	**m³/h**	13.2	15.1	16.5
	Exchanger pressure drop (7/12°C)	**mWC**	0.8	1.1	1.3
VENTILATION	**AIR FLOW RATE**				
	Rated flow rate	**m³/h**	24500	25500	26500
	ACOUSTICS - LOW NOISE STANDARD				
	Sound power level Lw	**dB (A)**	73	74	76
	Sound pressure level Lp (6)	**dB (A)**	42	43	45
GENERAL	**ELECTRICAL DATA**				
	Total installed electrical power	**kW**	29.4	35.2	39.8
	Total installed electrical current	**A**	52	66	72
	Starting current	**A**	174	181	223
	Starting current (Soft starter option)	**A**	116	123	149
	COMPRESSORS				
	Circuits / Quantity per circuit		1 / 2	1 / 2	1 / 2
	Type		Scroll	Scroll	Scroll
	WEIGHT				
	Unit without option / with water	**kg**	1450	1450	1450

(1) Complies with EN 14511: chilled water return/flow temperature: 12/7°C, outside temperature 35°C
(2) Complies with EN 14511: medium temperature hot water return/flow: 47/55°C, outside temperature +7°C DB/ +6°C WB
(3) Hot water return/flow temperature: 47/55°C, outside temperature -5°C DB/ -5.5°C WB
(4) SCOP LT 30/35°C in accordance with Regulation (EU) no. 813/2013
(5) SCOP MT 47/55°C in accordance with Regulation (EU) no. 813/2013
(6) Resulting sound pressure at 10m in free field

400 V- 50 Hz 3-phase power supply + earth without neutral

Note : Calculations based on the properties of air at atmospheric pressure, at sea level

	DESCRIPTION	Unit	60	70	80
PERFORMANCE	**HOT WATER PRODUCTION**				
	Heating capacity[2]	**kW**	58.9	69.1	76.6
	Power input [2]	**kW**	19.2	23.4	26.1
	COP [2]	**kW**	3.07	2.95	2.93
	Heating capacity - heating mode [3]	**kW**	44.9	52.9	58.5
	SCOP LT [4]	**kW/kW**	3.60	3.64	3.68
	η s, h LT [4]	**%**	141	142	144
	Energy efficiency class (SCOP LT)		A+	A+	A+
	SCOP MT [5]	**kW/kW**	2.96	3.04	3.07
	η s, h MT [5]	**%**	115	119	120
	Energy efficiency class (SCOP MT)		A+	A+	A+
HYDRAULICS	**WATER FLOW RATE**				
	Nominal flow for a heating use 47/55°C	**m³/h**	6.4	7.5	8.4
	Nominal flow for a cooling and heating use 47/55°C	**m³/h**	9.5	10.9	12.5
	Exchanger pressure drop	**mWC**	0.3	0.5	0.6
VENTILATION	**AIR FLOW RATE**				
	Rated flow rate	**m³/h**	24500	25500	26500
	ACOUSTICS - LOW NOISE STANDARD				
	Sound power level Lw	**dB (A)**	73	74	76
	Sound pressure level Lp [6]	**dB (A)**	42	43	45
GENERAL	**ELECTRICAL DATA**				
	Total installed electrical power [7]	**kW**	29.4	35.2	39.8
	Total installed electrical current [7]	**A**	52	66	72
	Starting current [7]	**A**	174	181	223
	Starting current (Soft starter option)	**A**	116	123	149
	ELECTRICAL DATA WITH AUXILIARY				
	Auxiliary heating capacity	**kW**	36	36	36
	Total installed electrical current with auxiliary	**kW**	65.4	71.2	75.8
	Total rated installed electrical current with auxiliary	**kW**	104	118	124
	Starting current with auxiliary	**A**	226.4	233.4	275.4
	Starting current with soft starter option and with auxiliary	**A**	168	175	201
	COMPRESSORS				
	Circuits / Quantity per circuit		1 / 2	1 / 2	1 / 2
	Type		Scroll	Scroll	Scroll
	WEIGHT				
	Unit without option	**kg**	1450	1450	1450

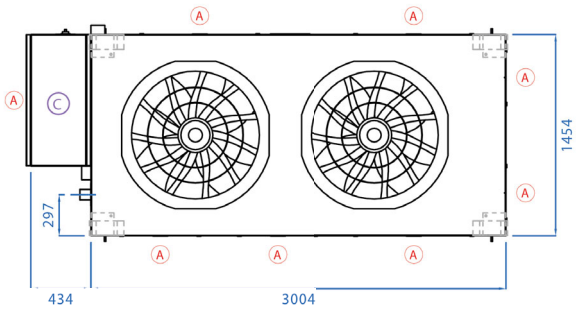
(1) Complies with EN 14511: chilled water return/flow temperature: 12/7°C, outside temperature 35°C
(2) Complies with EN 14511: medium temperature hot water return/flow: 47/55°C, outside temperature +7°C DB/ +6°C WB
(3) Hot water return/flow temperature: 47/55°C, outside temperature -5°C DB/ -6°C WB
(4) SCOP LT 30/35°C in accordance with Regulation (EU) no. 813/2013
(5) SCOP MT 47/55°C in accordance with Regulation (EU) no. 813/2013
(6) Resulting sound pressure at 10m in free field
(7) Excluding electric auxiliary option

400 V- 50 Hz 3-phase power supply + earth without neutral
Note : Calculations based on the properties of air at atmospheric pressure, at sea level

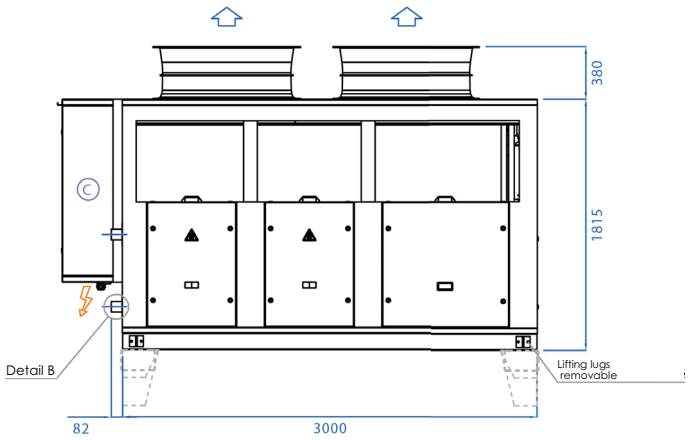
Dimensions and connections

NEROMAX 60-80
NEROMAX HT 60-80

Top view :

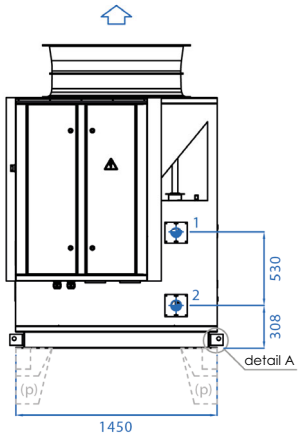


Side view:

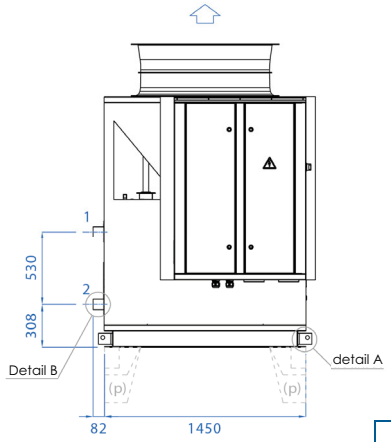


Front view:

ARRANGEMENT A

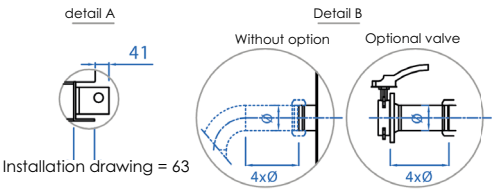


ARRANGEMENT B



ARRANGEMENT A: Left-hand electrical board

ARRANGEMENT B: Right-hand electrical board, side hydraulic outlets



Victaulic connection * DN65	1	2
NEROMAX Reversible version	IN	OUT
NEROMAX HT Version with hot water only	OUT	IN

** Optional flange on request*

- Power supply
- Ⓐ Access
- Ⓒ Technical section
- Air flow direction

	Length	Width [1]	Height
Casing dimensions	3000	1450	2195

Provide 1200 mm clearance around the unitto ease access.

A straight length of 4 x the pipe diameter is required to enable the control system to read the unit's water flow better (see detail B).

	DESCRIPTION	Unit	135	155
PERFORMANCE	**CHILLED WATER PRODUCTION**			
	Cooling capacity(1)	**kW**	125.1	139
	Absorbed power (1)	**kW**	44.0	51.9
	EER (1)	**kW/kW**	2.84	2.68
	HOT WATER PRODUCTION			
	Heating capacity(2)	**kW**	135.1	152.5
	Absorbed power (2)	**kW**	46.8	53.2
	COP (2)	**kW**	2.89	2.87
	Heating capacity - heating mode (3)	**kW**	102.9	114.8
	SCOP LT (4)	**kW/kW**	3.85	3.87
	η s, h LT (4)	**%**	151	152
	Energy efficiency class (SCOP LT)		A++	A++
	SCOP MT (5)	**kW/kW**	3.20	3.21
	η s, h MT (5)	**%**	125	126
	Energy efficiency class (SCOP MT)		A++	A++
HYDRAULICS	**WATER FLOW RATE**			
	Nominal flow for a reversible unit 7/12°C	**m³/h**	21.5	23.6
	Nominal flow on water loop 25/20°C	**m³/h**	29.9	32.7
	Exchanger pressure drop (7/12°C)	**mWC**	1.1	1.3
VENTILATION	**AIR FLOW RATE**			
	rated flow rate	**m³/h**	51000	53000
	ACOUSTICS - LOW NOISE STANDARD			
	Sound power level Lw	**dB (A)**	78	79
	Sound pressure level Lp (6)	**dB (A)**	47	48
GENERAL	**ELECTRICAL DATA**			
	Total installed electrical power	**kW**	70.3	79.5
	Total installed electrical current	**A**	133	145
	Starting current	**A**	248	296
	Starting current (Soft starter option)	**A**	n/a	n/a
	COMPRESSORS			
	Circuits / Quantity per circuit		2 / 2	2 / 2
	Type		Scroll	Scroll
	WEIGHT			
	Unit without option / with water	**kg**	2518	2518

(1) Complies with EN 14511: chilled water return/flow temperature: 12/7°C, outside temperature 35°C
(2) Complies with EN 14511: medium temperature hot water return/flow: 47/55°C, outside temperature +7°C DB/ +6°C WB
(3) Hot water return/flow temperature: 47/55°C, outside temperature -5°C DB/ -5.5°C WB
(4) SCOP LT 30/35°C in accordance with Regulation (EU) no. 813/2013
(5) SCOP MT 47/55°C in accordance with Regulation (EU) no. 813/2013
(6) Resulting sound pressure at 10m in free field

400 V- 50 Hz 3-phase power supply + earth without neutral

Note : Calculations based on the properties of air at atmospheric pressure, at sea level

Technical features

NEROMAX HT 135-155

	DESCRIPTION	Unit	135	155
PERFORMANCE	**HOT WATER PRODUCTION**			
	Heating capacity[2]	**kW**	138.7	155.1
	Power input [2]	**kW**	45.1	51.5
	COP [2]	**kW**	3.08	3.01
	Heating capacity - heating mode [3]	**kW**	104.9	117.4
	SCOP LT [4]	**kW/kW**	3.95	3.98
	η s, h LT [4]	**%**	155	156
	Energy efficiency class (SCOP LT)		A++	A++
	SCOP MT [5]	**kW/kW**	3.28	3.31
	η s, h MT [5]	**%**	128	130
	Energy efficiency class (SCOP MT)		A++	A++
HYDRAULICS	**WATER FLOW RATE**			
	Nominal flow for a heating use 47/55°C	**m³/h**	15.3	17.1
	Nominal flow for a cooling and heating use 47/55°C	**m³/h**	22.9	25.8
	Exchanger pressure drop	**mWC**	0.4	0.6
VENTILATION	**AIR FLOW RATE**			
	Rated flow rate	**m³/h**	51000	53000
	ACOUSTICS - LOW NOISE STANDARD			
	Sound power level Lw	**dB (A)**	78	79
	Sound pressure level Lp [6]	**dB (A)**	47	48
GENERAL	**ELECTRICAL DATA**			
	Total installed electrical power [7]	**kW**	70.3	79.5
	Total installed electrical current [7]	**A**	133	145
	Starting current [7]	**A**	248	296
	Starting current (Soft starter option)	**A**	n/a	n/a
	ELECTRICAL DATA WITH AUXILIARY			
	Auxiliary heating capacity	**kW**	54	54
	Total installed electrical current with auxiliary	**kW**	124.3	133.5
	Total rated installed electrical current with auxiliary	**kW**	211	223
	Starting current with auxiliary	**A**	325.7	373.7
	Starting current with soft starter option and with auxiliary	**A**	n/a	n/a
	COMPRESSORS			
	Circuits / Quantity per circuit		2 / 2	2 / 2
	Type		Scroll	Scroll
	WEIGHT			
	Unit without option	**kg**	2518	2518

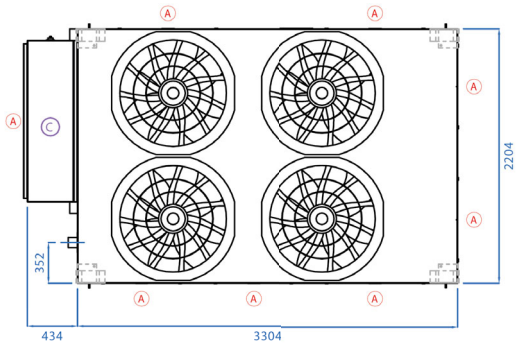
(1) Complies with EN 14511: chilled water return/flow temperature: 12/7°C, outside temperature 35°C
(2) Complies with EN 14511: medium temperature hot water return/flow: 47/55°C, outside temperature +7°C DB/ +6°C WB
(3) Hot water return/flow temperature: 47/55°C, outside temperature -5°C DB/ -6°C WB
(4) SCOP LT 30/35°C in accordance with Regulation (EU) no. 813/2013
(5) SCOP MT 47/55°C in accordance with Regulation (EU) no. 813/2013
(6) Resulting sound pressure at 10m in free field
(7) Excluding electric auxiliary option

400 V- 50 Hz 3-phase power supply + earth without neutral
Note : Calculations based on the properties of air at atmospheric pressure, at sea level

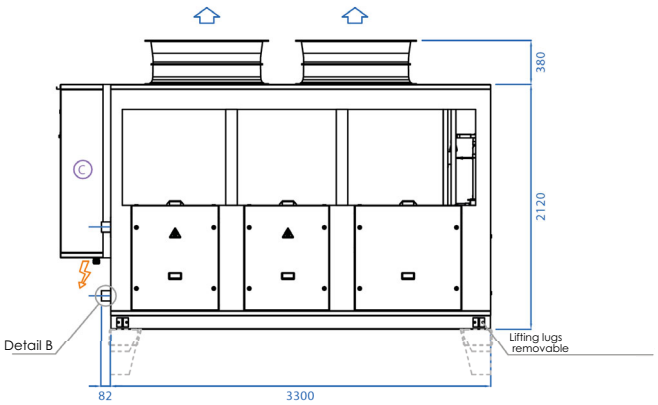
Dimensions and connections

NEROMAX 135-155
NEROMAX HT 135-155

Top view :

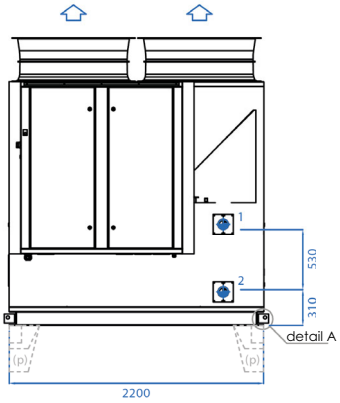


Side view:

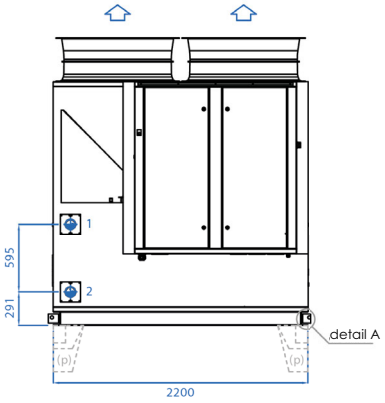


Front view:

ARRANGEMENT A

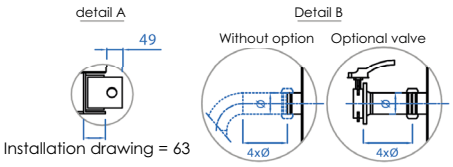


ARRANGEMENT B



ARRANGEMENT A: Left-hand electrical board

ARRANGEMENT B: Right-hand electrical board



Victaulic Connection * DN80	1	2
NEROMAX Reversible version	IN	OUT
NEROMAX HT Version with hot water only	OUT	IN

** Optional flange on request*

- Power supply
- Access
- Technical section
- Air flow direction

	Length	Width [1]	Height
Casing dimensions	3300	2200	2500

Provide 1200 mm clearance around the unit to ease access.

A straight length of 4 x the pipe diameter is required to enable the control system to read the unit's water flow better (see detail B).

	DESCRIPTION	Unit	50
PERFORMANCE	**CHILLED WATER PRODUCTION**		
	Cooling capacity(1)	kW	42.1
	Absorbed power (1)	kW	15.9
	EER (1)	kW/kW	2.65
	HOT WATER PRODUCTION		
	Heating capacity(2)	kW	46.4
	Absorbed power (2)	kW	17.1
	COP (2)	kW	2.71
	Heating capacity - heating mode (3)	kW	35.5
	SCOP LT (4)	kW/kW	3.54
	η s, h LT (4)	%	138
	Energy efficiency class (SCOP LT)		A+
	SCOP MT (5)	kW/kW	2.89
	η s, h MT (5)	%	113
	Energy efficiency class (SCOP MT)		A+
HYDRAULICS	**WATER FLOW RATE**		
	Nominal flow for a reversible unit 7/12°C	m^3/h	7.3
	Nominal flow on water loop 25/20°C	m^3/h	10.1
	Exchanger pressure drop (7/12°C)	mWC	1.3
VENTILATION	**AIR FLOW RATE**		
	Rated flow rate	m^3/h	17000
	ACOUSTICS - LOW NOISE STANDARD		
	Sound power level Lw	dB (A)	76
	Sound pressure level Lp (6)	dB (A)	45
GENERAL	**ELECTRICAL DATA**		
	Total installed electrical power	kW	25.0
	Total installed electrical current	A	46
	Starting current	A	171
	Starting current (Soft starter option)	A	113
	COMPRESSORS		
	Circuits / Quantity per circuit		1 / 2
	Type		Scroll
	WEIGHT		
	Unit without option / with water	kg	1029

(1) Complies with EN 14511: chilled water return/flow temperature: 12/7°C, outside temperature 35°C
(2) Complies with EN 14511: medium temperature hot water return/flow: 47/55°C, outside temperature +7°C DB/ +6°C WB
(3) Hot water return/flow temperature: 47/55°C, outside temperature -5°C DB/ -6°C WB
(4) SCOP LT 30/35°C in accordance with Regulation (EU) no. 813/2013
(5) SCOP MT 47/55°C in accordance with Regulation (EU) no. 813/2013
(6) Resulting sound pressure at 10m in free field

400 V- 50 Hz 3-phase power supply + earth without neutral

Note : Calculations based on the properties of air at atmospheric pressure, at sea level

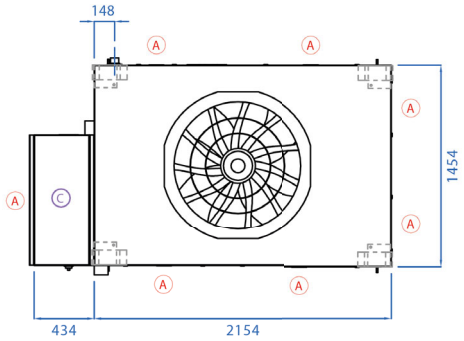
	DESCRIPTION	Unit	50
PERFORMANCE	**HOT WATER PRODUCTION**		
	Heating capacity[2]	**kW**	47.6
	Power input [2]	**kW**	17.5
	COP [2]	**kW**	2.72
	Heating capacity - heating mode [3]	**kW**	36.5
	SCOP LT [4]	**kW/kW**	3.54
	η s, h LT [4]	**%**	139%
	Energy efficiency class (SCOP LT)		A+
	SCOP MT [5]	**kW/kW**	2.91
	η s, h MT [5]	**%**	113%
	Energy efficiency class (SCOP MT)		A+
HYDRAULICS	**WATER FLOW RATE**		
	Nominal flow for a heating use 47/55°C	**m³/h**	5.2
	Nominal flow for a cooling and heating use 47/55°C	**m³/h**	7.7
	Exchanger pressure drop	**mWC**	1.3
VENTILATION	**AIR FLOW RATE**		
	Rated flow rate	**m³/h**	17000
	ACOUSTICS - LOW NOISE STANDARD		
	Sound power level Lw	**dB (A)**	76
	Sound pressure level Lp [6]	**dB (A)**	45
GENERAL	**ELECTRICAL DATA**		
	Total installed electrical power [7]	**kW**	25.0
	Total installed electrical intensity [7]	**A**	46
	Starting current [7]	**A**	171
	Starting current (Soft starter option)	**A**	113
	COMPRESSORS		
	Circuits / Quantity per circuit		1/2
	Type		Scroll
	WEIGHT		
	Unit without option / with water	**kg**	1029

(1) Complies with EN 14511: chilled water return/flow temperature: 12/7°C, outside temperature 35°C
(2) Complies with EN 14511: medium temperature hot water return/flow: 47/55°C, outside temperature +7°C DB/ +6°C WB
(3) Hot water return/flow temperature: 47/55°C, outside temperature -5°C DB/ -6°C WB
(4) SCOP LT 30/35°C in accordance with Regulation (EU) no. 813/2013
(5) SCOP MT 47/55°C in accordance with Regulation (EU) no. 813/2013
(6) Resulting sound pressure at 10m in free field
(7) Excluding electric auxiliary option

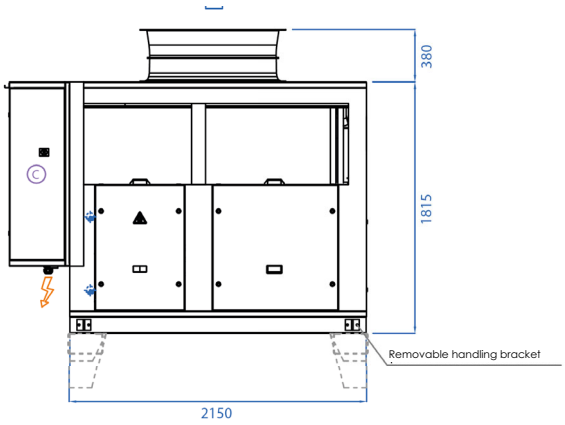
400 V- 50 Hz 3-phase power supply + earth without neutral
Note : Calculations based on the properties of air at atmospheric pressure, at sea level

"COMPACT" TYPE VERSION (not compatible with hydraulic option)

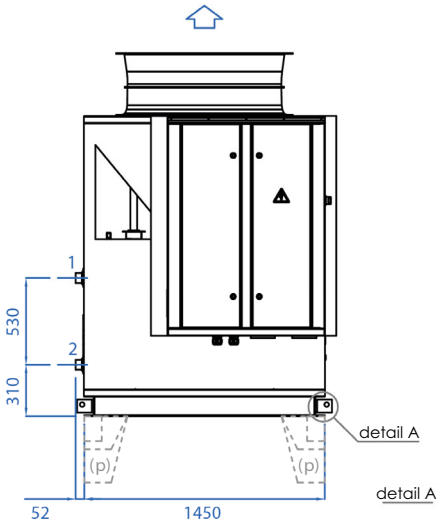
Top view :



Side view:



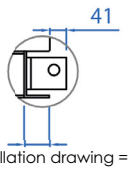
Front view:



Threaded connection * DN50	1	2
NEROMAX COMPACT Reversible version	IN	OUT
NEROMAX HT COMPACT Version with hot water only	OUT	IN

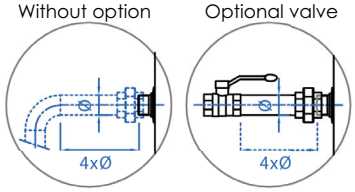
** Optional flange on request*

detail A



Installation drawing = 63

Detail B



- Power supply
- Ⓐ Access
- Ⓒ Technical section
- Air flow direction

	Length	Width [1]	Height
Casing dimensions	2150	1450	2195

Provide 1200 mm clearance around the unit to ease access.

A straight length of 4 x the pipe diameter is required to enable the control system to read the unit's water flow better (see detail B).

	DESCRIPTION	Unit	60	70	80
PERFORMANCE	**CHILLED WATER PRODUCTION**				
	Cooling capacity(1)	**kW**	55.1	63.2	69.2
	Absorbed power (1)	**kW**	17.7	21.9	25.9
	EER (1)	**kW/kW**	3.11	2.89	2.68
	HOT WATER PRODUCTION				
	Heating capacity(2)	**kW**	57.5	67.2	74.1
	Absorbed power (2)	**kW**	19.9	23.5	26.8
	COP (2)	**kW**	2.89	2.86	2.77
	Heating capacity - heating mode (3)	**kW**	43.7	51.2	57.1
	SCOP LT (4)	**kW/kW**	3.57	3.61	3.62
	η s, h LT (4)	**%**	140	141	142
	Energy efficiency class (SCOP LT)		A+	A+	A+
	SCOP MT (5)	**kW/kW**	2.93	3	3.02
	η s, h MT (5)	**%**	114	117%	118
	Energy efficiency class (SCOP MT)		A+	A+	A+
HYDRAULICS	**WATER FLOW RATE**				
	Nominal flow for a reversible unit 7/12°C	**m³/h**	9.3	10.8	11.9
	Nominal flow on water loop 25/20°C	**m³/h**	13.2	15.1	16.5
	Exchanger pressure drop (7/12°C)	**mWC**	0.8	1.1	1.3
VENTILATION	**AIR FLOW RATE**				
	Rated flow rate	**m³/h**	24500	25500	26500
	ACOUSTICS - LOW NOISE STANDARD				
	Sound power level Lw	**dB (A)**	73	74	76
	Sound pressure level Lp (6)	**dB (A)**	42	43	45
GENERAL	**ELECTRICAL DATA**				
	Total installed electrical power	**kW**	29.4	35.2	39.8
	Total installed electrical current	**A**	52	66	72
	Starting current	**A**	174	181	223
	Starting current (Soft starter option)	**A**	116	123	149
	COMPRESSORS				
	Circuits / Quantity per circuit		1 / 2	1 / 2	1 / 2
	Type		Scroll	Scroll	Scroll
	WEIGHT				
	Unit without option / with water	**kg**	1533	1533	1533

(1) Complies with EN 14511: chilled water return/flow temperature: 12/7°C, outside temperature 35°C
(2) Complies with EN 14511: medium temperature hot water return/flow: 47/55°C, outside temperature +7°C DB/ +6°C WB
(3) Hot water return/flow temperature: 47/55°C, outside temperature -5°C DB/ -6°C WB
(4) SCOP LT 30/35°C in accordance with Regulation (EU) no. 813/2013
(5) SCOP MT 47/55°C in accordance with Regulation (EU) no. 813/2013
(6) Resulting sound pressure at 10m in free field

400 V- 50 Hz 3-phase power supply + earth without neutral

Note : Calculations based on the properties of air at atmospheric pressure, at sea level

	DESCRIPTION	Unit	60	70	80
PERFORMANCE	**HOT WATER PRODUCTION**				
	Heating capacity[2]	**kW**	58.9	69.1	76.6
	Absorbed power [2]	**kW**	19.2	23.4	26.1
	COP [2]	**kW**	3.07	2.95	2.93
	Heating capacity - heating mode [3]	**kW**	44.9	52.9	58.5
	SCOP LT [4]	**kW/kW**	3.6	3.64	3.68
	η s, h LT [4]	**%**	141%	142%	144%
	Energy efficiency class (SCOP LT)		A+	A+	A+
	SCOP MT [5]	**kW/kW**	2.96	3.04	3.07
	η s, h MT [5]	**%**	115%	119%	120%
	Energy efficiency class (SCOP MT)		A+	A+	A+
HYDRAULICS	**WATER FLOW RATE**				
	Nominal flow for a heating use 47/55°C	**m³/h**	6.4	7.5	8.4
	Nominal flow for a cooling and heating use 47/55°C	**m³/h**	9.5	10.9	12.5
	Exchanger pressure drop	**mWC**	0.8	1.1	1.3
VENTILATION	**WATER FLOW RATE**				
	Rated flow rate	**m³/h**	24500	25500	26500
	ACOUSTICS - LOW NOISE STANDARD				
	Sound power level Lw	**db(A)**	73	74	76
	Sound pressure level Lp [6]	**db(A)**	42	43	45
GENERAL	**ELECTRICAL DATA**				
	Total installed electrical power [7]	**kW**	29.4	35.2	39.8
	Total installed electrical current [7]	**A**	52	66	72
	Starting current [7]	**A**	174	181	223
	Starting current (Soft starter option)	**A**	116	123	149
	COMPRESSORS				
	Circuits / Quantity per circuit		1 / 2	1 / 2	1 / 2
	Type		Scroll	Scroll	Scroll
	WEIGHT				
	Unit without option / with water	**kg**	1533	1533	1533

(1) Complies with EN 14511: chilled water return/flow temperature: 12/7°C, outside temperature 35°C
(2) Complies with EN 14511: medium temperature hot water return/flow: 47/55°C, outside temperature +7°C DB/ +6°C WB
(3) Hot water return/flow temperature: 47/55°C, outside temperature -5°C DB/ -6°C WB
(4) SCOP LT 30/35°C in accordance with Regulation (EU) no. 813/2013
(5) SCOP MT 47/55°C in accordance with Regulation (EU) no. 813/2013
(6) Resulting sound pressure at 10m in free field
(7) Excluding electric auxiliary option

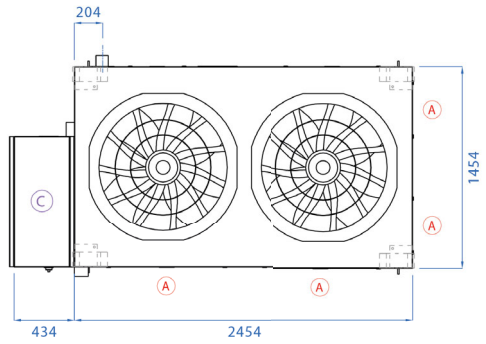
400 V- 50 Hz 3-phase power supply + earth without neutral
Note : Calculations based on the properties of air at atmospheric pressure, at sea level

Dimensions and connections

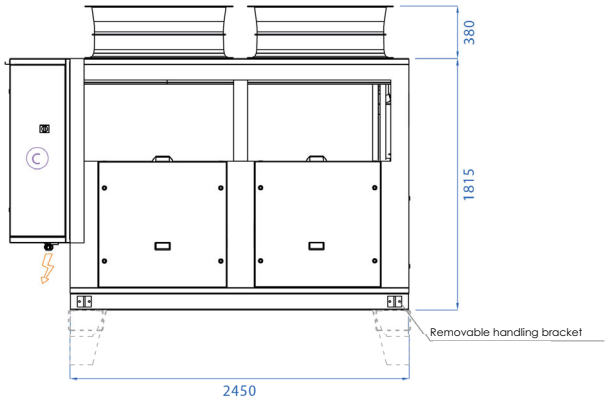
NEROMAX COMPACT 60- 80
NEROMAX HT COMPACT 60- 80

"COMPACT" TYPE VERSION (not compatible with hydraulic option)

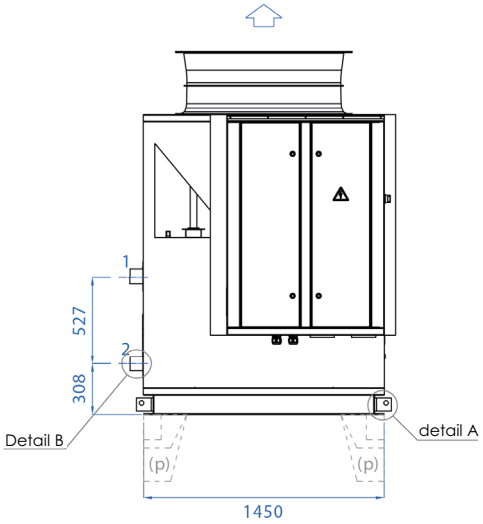
Top view :



Side view:

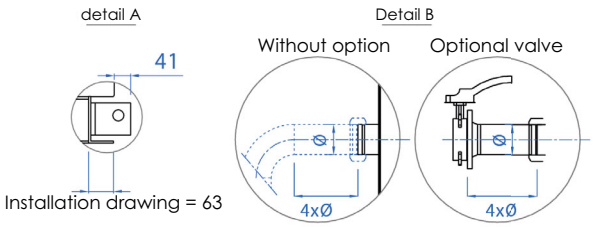


Front view:



Victaulic connection * DN65 - 60 to 80 Victaulic connection * DN80 - 90 to 115	1	2
NEROMAX COMPACT Reversible version	IN	OUT
NEROMAX HT COMPACT Version with hot water only	OUT	IN

** Optional flange on request*



- Power supply
- Ⓐ Access
- Ⓒ Technical section
- Air flow direction

	Length	Width [1]	Height
Casing dimensions	2450	1450	2195

Provide 1200 mm clearance around the unitto ease access.

A straight length of 4 x pipe diameter is required to enable the control system to read the unit's water flow better (see detail B).

NEROMAX COMPACT 135- 155

	DESCRIPTION	Unit	135	155
PERFORMANCE	**CHILLED WATER PRODUCTION**			
	Cooling capacity(1)	**kW**	125.1	139
	Absorbed power (1)	**kW**	44.0	51.9
	EER (1)	**kW/kW**	2.84	2.68
	HOT WATER PRODUCTION			
	Heating capacity(2)	**kW**	135.1	152.5
	Absorbed power (2)	**kW**	46.8	53.2
	COP (2)	**kW**	2.89	2.87
	Heating capacity - heating mode (3)	**kW**	102.9	114.8
	SCOP LT (4)	**kW/kW**	3.85	3.87
	η s, h LT (4)	**%**	151	152
	Energy efficiency class (SCOP LT)		A++	A++
	SCOP MT (5)	**kW/kW**	3.2	3.21
	η s, h MT (5)	**%**	125	126
	Energy efficiency class (SCOP MT)		A++	A++
HYDRAULICS	**WATER FLOW RATE**			
	Nominal flow for a reversible unit 7/12°C	**m³/h**	21.5	23.6
	Nominal flow on water loop 25/20°C	**m³/h**	29.9	32.7
	Exchanger pressure drop (7/12°C)	**mWC**	1.1	1.3
VENTILATION	**AIR FLOW RATE**			
	Rated flow rate	**m³/h**	51000	53000
	ACOUSTICS - LOW NOISE STANDARD			
	Sound power level Lw	**dB (A)**	78	79
	Sound pressure level Lp (6)	**dB (A)**	47	48
GENERAL	**ELECTRICAL DATA**			
	Total installed electrical power	**kW**	70.3	79.5
	Total installed electrical current	**A**	133	145
	Starting current	**A**	248	296
	Starting current (Soft starter option)	**A**	n/a	n/a
	COMPRESSORS			
	Circuits / Quantity per circuit		2 / 2	2 / 2
	Type		Scroll	Scroll
	WEIGHT			
	Unit without option / with water	**kg**	2380	2380

(1) Complies with EN 14511: chilled water return/flow temperature: 12/7°C, outside temperature 35°C
(2) Complies with EN 14511: medium temperature hot water return/flow: 47/55°C, outside temperature +7°C DB/ +6°C WB
(3) Hot water return/flow temperature: 47/55°C, outside temperature -5°C DB/ -6°C WB
(4) SCOP LT 30/35°C in accordance with Regulation (EU) no. 813/2013
(5) SCOP MT 47/55°C in accordance with Regulation (EU) no. 813/2013
(6) Resulting sound pressure at 10m in free field

400 V- 50 Hz 3-phase power supply + earth without neutral

Note : Calculations based on the properties of air at atmospheric pressure, at sea level

	DESCRIPTION	Unit	135	155
PERFORMANCE	**HOT WATER PRODUCTION**			
	Heating capacity[2]	**kW**	138.7	155.1
	Power input [2]	**kW**	45.1	51.5
	COP [2]	**kW**	3.08	3.01
	Heating capacity - heating mode [3]	**kW**	104.9	117.4
	SCOP LT [4]	**kW/kW**	3.95	3.98
	η s, h LT [4]	**%**	155%	156%
	Energy efficiency class (SCOP LT)		A++	A++
	SCOP MT [5]	**kW/kW**	3.28	3.31
	η s, h MT [5]	**%**	128%	130%
	Energy efficiency class (SCOP MT)		A++	A++
HYDRAULICS	**WATER FLOW RATE**			
	Nominal flow for a heating use 47/55°C	**m³/h**	15.3	17.1
	Nominal flow for a cooling and heating use 47/55°C	**m³/h**	22.9	25.8
	Exchanger pressure drop	**mWC**	1.1	1.3
VENTILATION	**WATER FLOW RATE**			
	Rated flow rate		51000	53000
	ACOUSTICS - LOW NOISE STANDARD			
	Sound power level Lw	**dB (A)**	78	79
	Sound pressure level Lp [6]	**dB (A)**	47	48
GENERAL	**ELECTRICAL DATA**			
	Total installed electrical power [7]	**kW**	70.3	79.5
	Total installed electrical current [7]	**A**	133	145
	Starting current [7]	**A**	248	296
	Starting current (Soft starter option)	**A**	n/a	n/a
	COMPRESSORS			
	Circuits / Quantity per circuit		2 / 2	2 / 2
	Type		Scroll	Scroll
	WEIGHT			
	Unit without option / with water	**kg**	2380	2380

(1) Complies with EN 14511: chilled water return/flow temperature: 12/7°C, outside temperature 35°C
(2) Complies with EN 14511: medium temperature hot water return/flow: 47/55°C, outside temperature +7°C DB/ +6°C WB
(3) Hot water return/flow temperature: 47/55°C, outside temperature -5°C DB/ -6°C WB
(4) SCOP LT 30/35°C in accordance with Regulation (EU) no. 813/2013
(5) SCOP MT 47/55°C in accordance with Regulation (EU) no. 813/2013
(6) Resulting sound pressure at 10m in free field
(7) Excluding electric auxiliary option

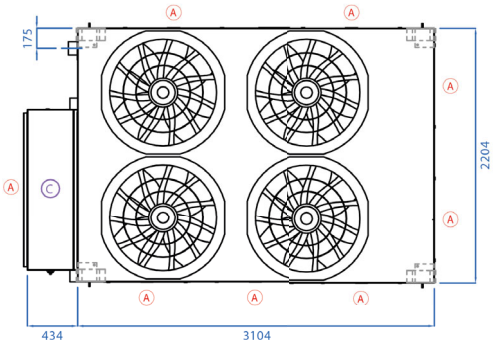
400 V- 50 Hz 3-phase power supply + earth without neutral
Note : Calculations based on the properties of air at atmospheric pressure, at sea level

Dimensions and connections

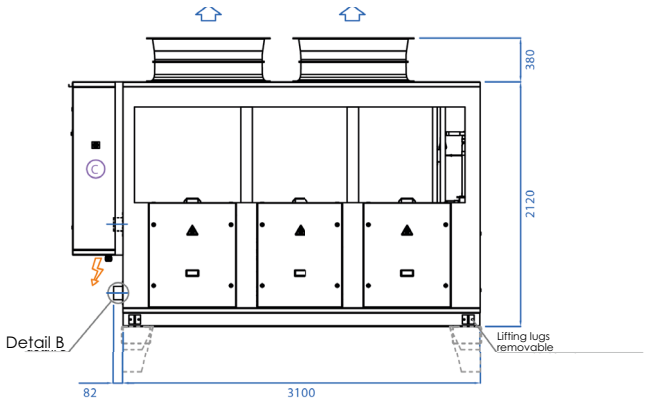
NEROMAX COMPACT 135- 155
NEROMAX HT COMPACT 135- 155

"COMPACT" TYPE VERSION (not compatible with hydraulic option)

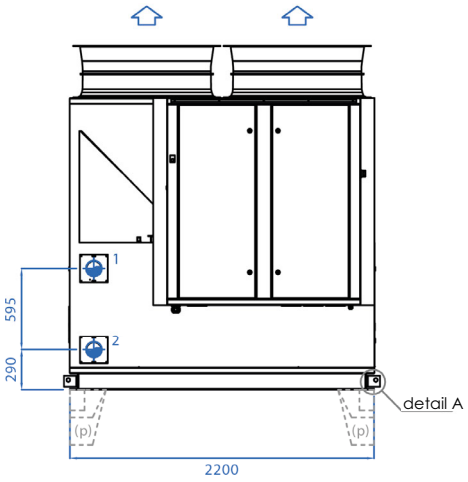
Top view :



Side view:

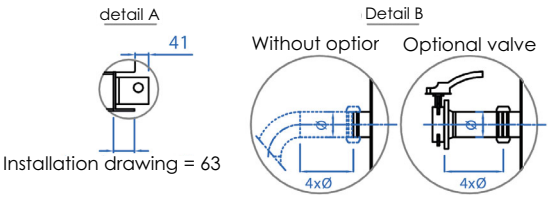


Front view:



Victaulic connection * DN80 - 140 to 155 Victaulic connection * DN100 - 175 to 225	1	2
NEROMAX COMPACT Reversible version	IN	OUT
NEROMAX HT COMPACT Version with hot water only	OUT	IN

** Optional flange on request*



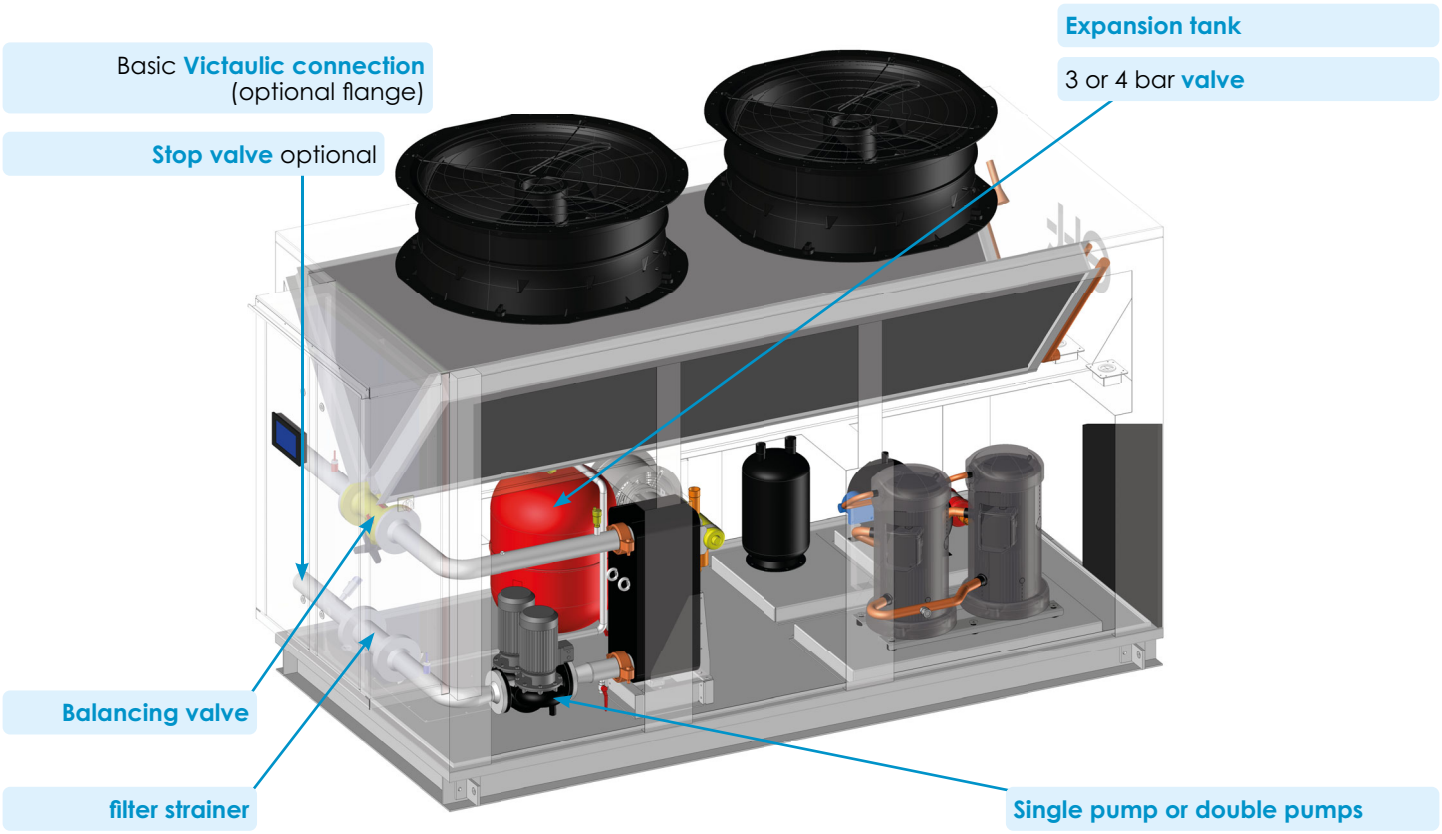
- Power supply
- Ⓐ Access
- Ⓒ Technical section
- Air flow direction

	Length	Width [1]	Height
Casing dimensions	3100	2200	2500

Provide 1200 mm clearance around the unitto ease access.

A straight length of 4 x pipe diameter is required to enable the control system to read the unit's water flow better (see detail B).

Hydraulic options



OPTIONAL: FILTER STRAINER 860 µm

A filter of at least 860 µm is required to ensure that the heat pump operates correctly and to guarantee the life of the exchanger. It can be offered as an option on the NEROMAX and NEROMAX HT versions integrated into the technical compartment.

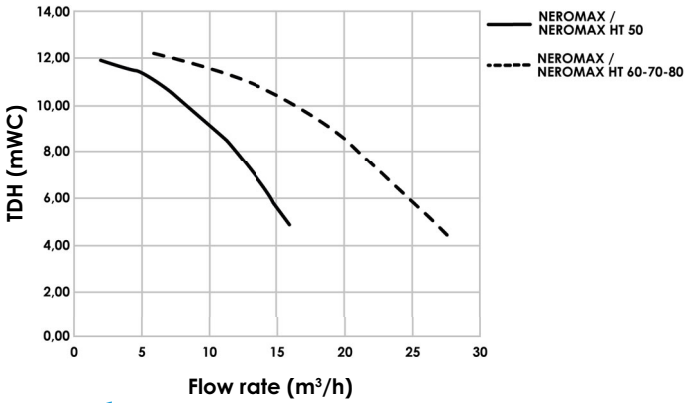
		Unit	50	60	70	80	135	155
47/55 °C water regime	P drop	mWC	0.2	0.1	0.1	0.2	0.3	0.3
Water flow rate		m³/h	7.7	9.5	10.9	12.5	22.9	25.8

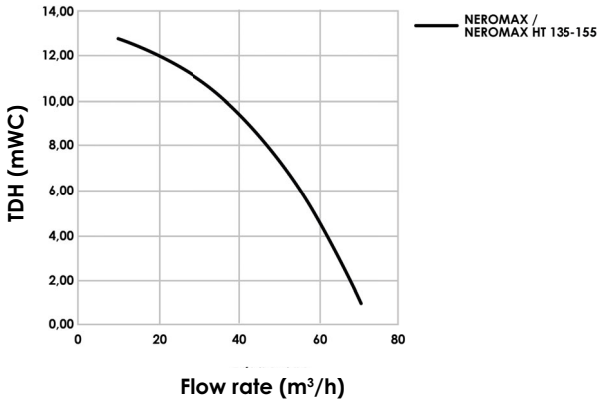
OPTIONAL: EXPANSION TANK

	Unit	50	60	70	80	135	155
Expansion vessel capacity	litres	50	75	75	75	100	100

OPTIONAL: SINGLE PUMP

	Unit	50	60	70	80	135	155
Installed power	kW	0.75	1.5	1.5	1.5	3	3
Pump intensity	A	1.84	3.2	3.2	3.2	6.15	6.15

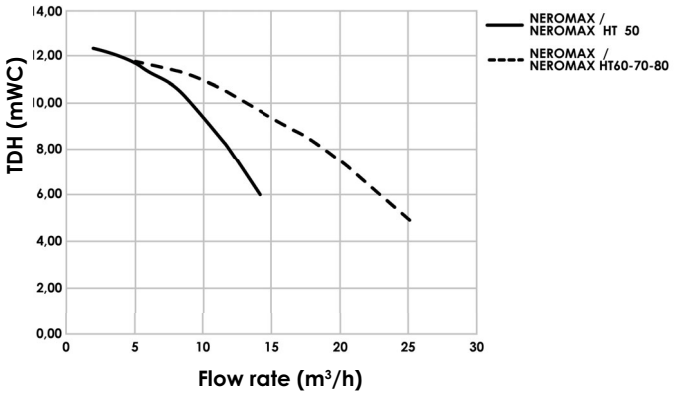


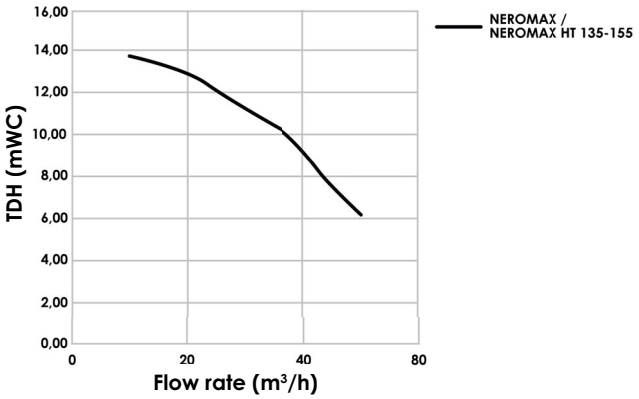


Hydraulic options

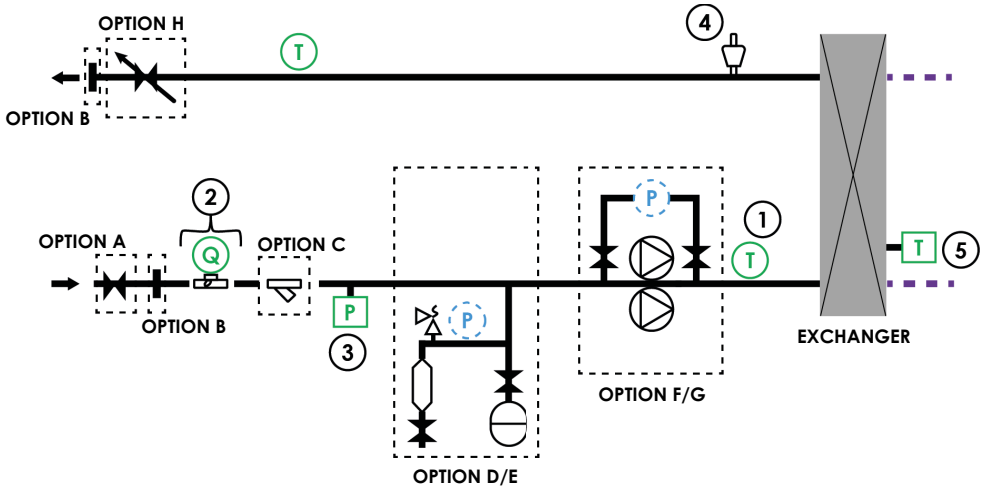
OPTIONAL: DOUBLE PUMPS

	Unit	50	60	70	80	135	155
Installed power	kW	0.55	0.75	0.75	0.75	1.5	1.5
Pump intensity	A	1.33	1.84	1.84	1.84	3.18	3.18





Hydraulic diagram with options



STANDARD EQUIPMENT

1: Water inlet & outlet control sensors
2: Flow meter
3: Insufficient water pressure switch
4: High level trap and low level drain
5: Frost protection thermostat

HYDRAULIC OPTIONS

A: Shut-off valve(s)
B: Flange connection
C: Filter strainer
D: Expansion tank
E: 3 or 4 bar valve (to be specified)
F / G: single pump or double pumps
H: balancing valve

Hydraulic connection diameter

	Unit	50	60	70	80	135	155
DN		DN50	DN65	DN65	DN65	DN80	DN80
Standard connection		Threaded	Victaulic				
Connection (Optional)		Flange					

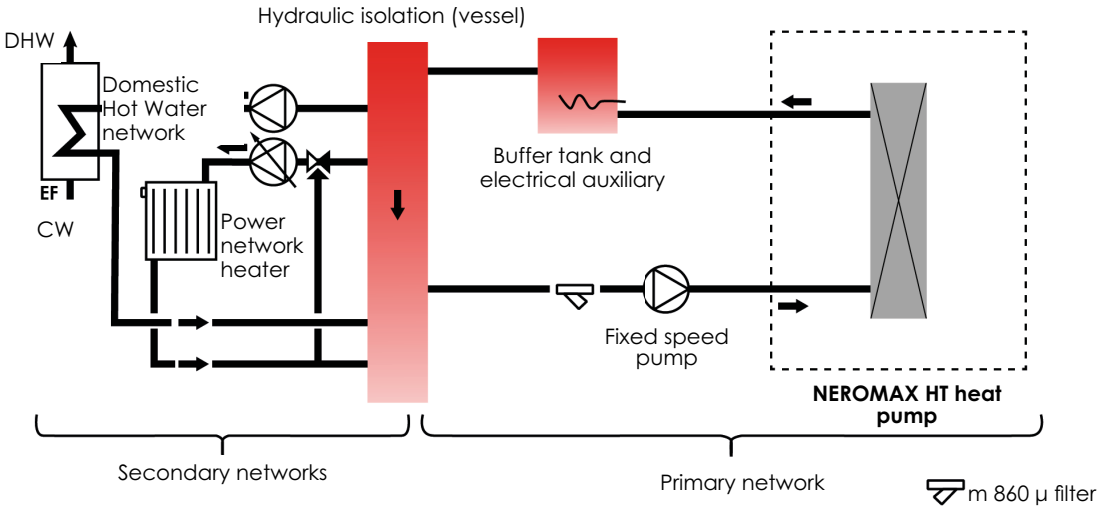
Hydraulic options

Hydraulic installation drawing

INSTALLATION WITH HOT WATER ONLY

The heat pump operates with a fixed flow of water in the primary production network. It is necessary to connect a buffer tank at the unit outlet with hydraulic isolation from the secondary network. A 4-inlet buffer tank can also be used for the hydraulic isolation.

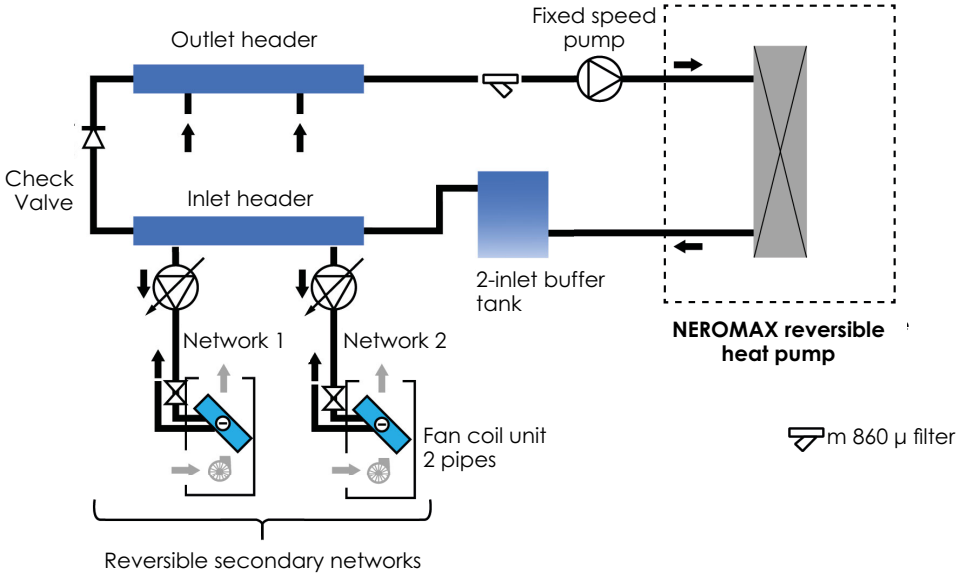
The flow rate of the primary network is greater than the total flow rate of the secondary networks to ensure that the flow temperature of the secondary networks is equal to the production temperature of the heat pump.



A weather compensation can be set in the PLC to optimise consumption according to the season.

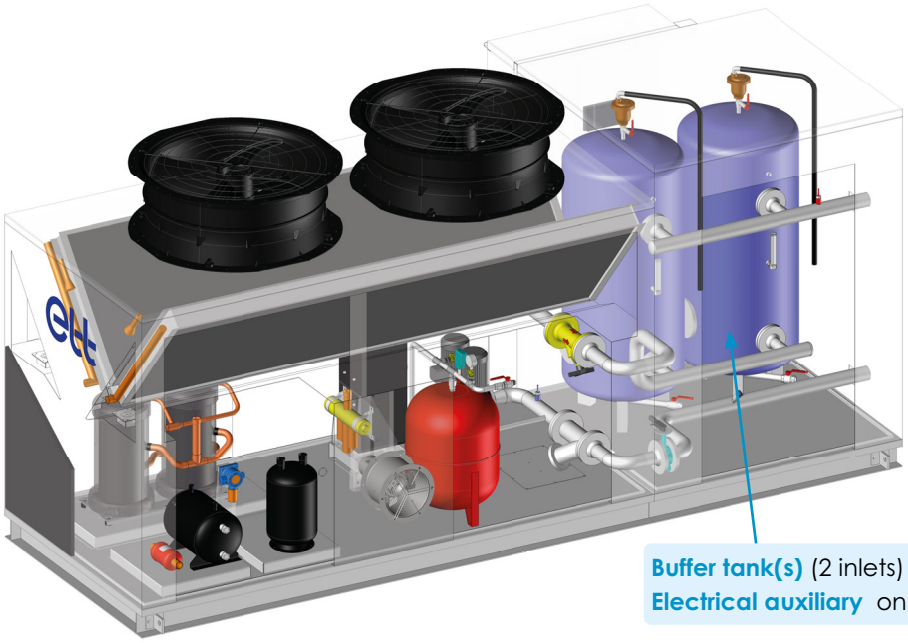
2-PIPE REVERSIBLE INSTALLATION

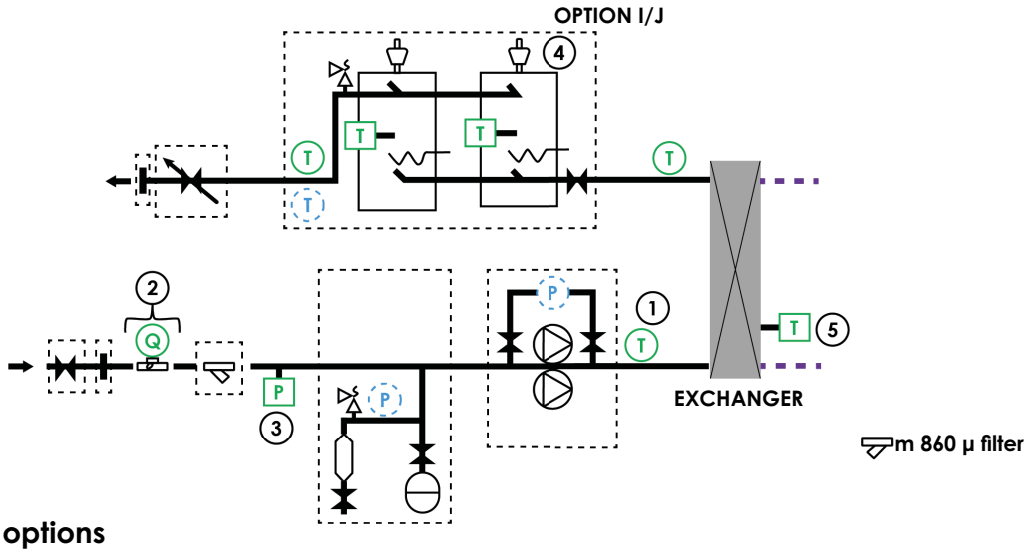
For reversible units, it is also recommended to operate at a fixed flow rate. It is essential to use a 2-inlet buffer tank to avoid poor temperature stratification in the buffer tank when switching from heating mode to chilled water mode. 4-Inlet buffer tanks are not recommended for these applications.



This type of installation can also be used on a regulated water loop for water/air emitters.

Hydraulic options with buffer tank





Hydraulic options

I: Buffer tank
J: Buffer tank with electrical auxiliaries

Optional: Buffer tank

	Unit	50	60	70	80	135	155
Buffer tank capacity	litres	300	600	600	600	900	900
"Optional buffer tank" capacity empty	kg	446	893	893	893	1260	1260
"Optional buffer tank" capacity with water	kg	840	1628	1628	1628	2336	2336

Optional: Electric auxiliary

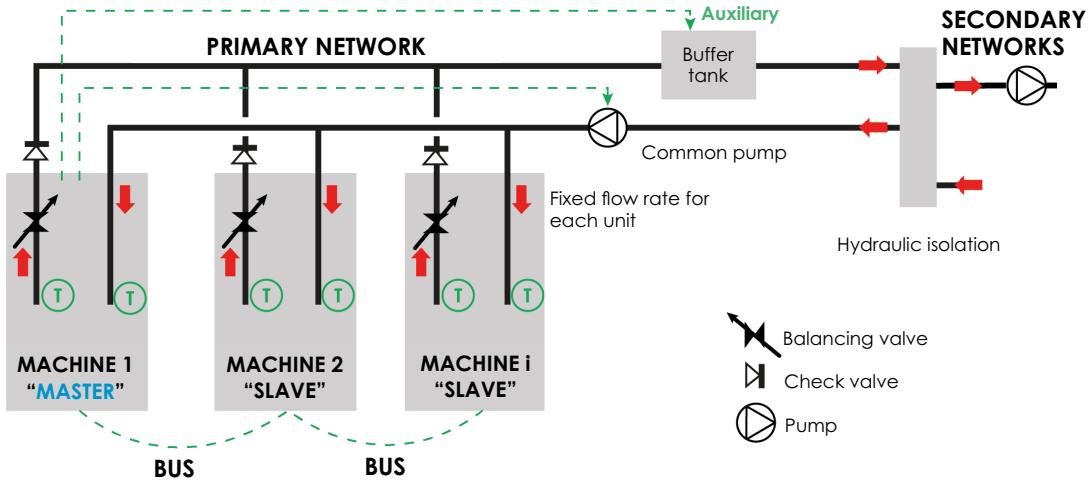
	Unit	50	60	70	80	135	155
Auxiliary electrical power	kW	18	36	36	36	54	54
Power stage(s)	kW	1x18	2x18	2x18	2x18	1x18 + 1x36	1x18 + 1x36
Auxiliary electric intensity	A	26	52	52	52	78	78

Auxiliary only available on NEROMAX HT range

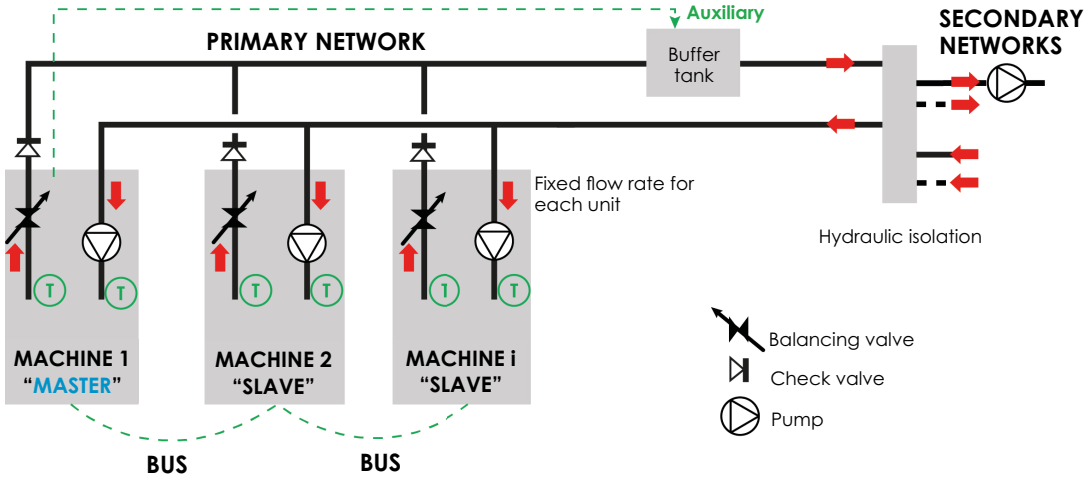
Option: Cascade of units

Cascade management of up to 4 units as an option. The pumps are fixed speed.

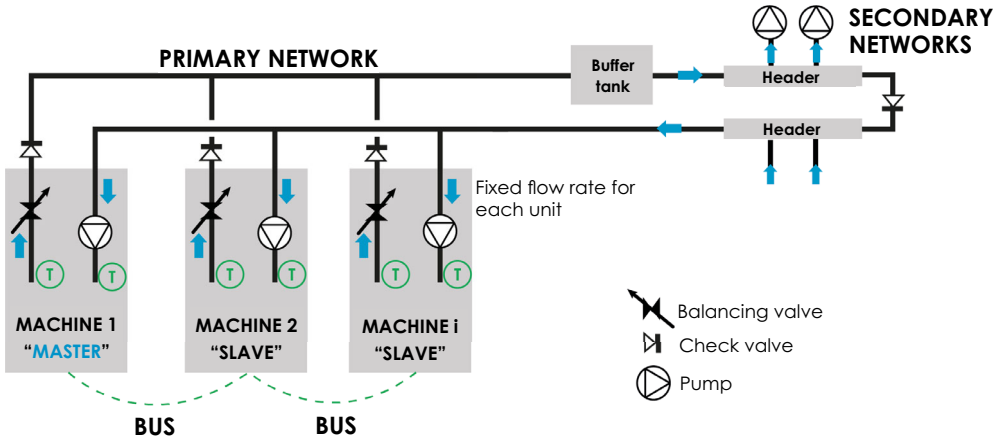
Example 1: cascade unit with r**eturn temperature control** and shared pump



Example 2: cascade unit **with return temperature control** and individual pump per unit



Example 3: cascade unit in reversible mode and with **return temperature control**



Note : Your sales contact will be happy to provide you with further information.

Acoustic spectra

NEROMAX version

	FREQUENCY BAND Hz ▶ / Propeller fans air flow rate (m³/h)	63	125	250	500	1000	2000	4000	8000	Overall level Lw (dB (A))
50	17000	52.0	53.0	58.0	67.0	63.0	63.0	61.0	58.0	71.0
60	24500	54.0	57.0	63.0	69.0	66.0	66.0	65.0	60.0	73.0
70	25500	54.0	58.0	64.0	70.0	67.0	66.0	65.0	61.0	74.0
80	26500	54.0	59.0	65.0	71.0	69.0	68.0	67.0	63.0	76.0
135	51000	57.0	62.0	67.0	73.0	71.0	70.0	69.0	64.0	78.0
155	53000	58.0	63.0	69.0	75.0	73.0	71.0	70.0	66.0	79.0

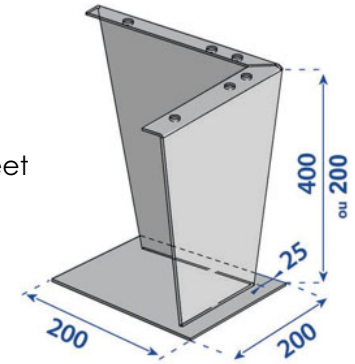
NEROMAX COMPACT version

	FREQUENCY BAND Hz ▶ / Propeller fans air flow rate (m³/h)	63	125	250	500	1000	2000	4000	8000	Overall level Lw (dB (A))
50	17000	55.0	61.0	67.0	71.0	69.0	68.0	66.0	61.0	76.0
60	24500	54.0	57.0	63.0	69.0	66.0	66.0	65.0	60.0	73.0
70	25500	54.0	58.0	64.0	70.0	67.0	66.0	65.0	61.0	74.0
80	26500	54.0	59.0	65.0	71.0	69.0	68.0	67.0	63.0	76.0
135	51000	57.0	62.0	67.0	73.0	71.0	70.0	69.0	64.0	78.0
155	53000	58.0	63.0	69.0	75.0	73.0	71.0	70.0	66.0	79.0

Data supplied in Hot Water Mode for a water regime of 47/55°C and an outside air temperature of +7°C DB / +6°C WB

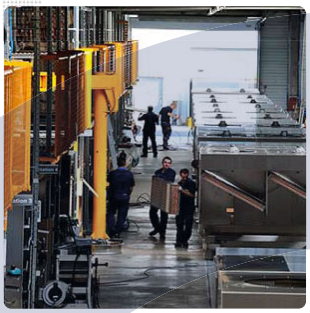
Installation accessories: Feet

Aluminium fixed feet
Unit weight: 1 kg



Number of feet

	50	60	70	80	135	155
Without optional buffer tank	4	4	4	4	6	6
With optional buffer tank	6	6	6	6	8	8



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