Airedale
APPLIED THERMAL INNOVATION

R410A

TECHNICAL - INSTALLATION MANUAL

CHILLERS
REVERSIBLE HEAT PUMPS
CONDENSING UNITS

- EXTERNAL UNITS
- HIGH EFFICIENCY
- HOT WATER PRODUCTION UP TO 50 °C

ECL-ECLH
020-202

EN

Dear Customer,
Thank you for choosing an AIREDALE product. This product is the result of many years of experience and in-depth research, and it is built using top quality material and advanced technologies.
Moreover, the CE mark guarantees that our appliances fully comply with the requirements of the European Machinery Directive in terms of safety. We constantly monitor the quality level of our products, and as a result they are synonymous with Safety, Quality, and Reliability.

Product data may be subject to modifications deemed necessary for improving the product without obligation to give prior notice.

Thank you again.
AIREDALE

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APPLIED THERMAL INNOVATION

ECL- ECLH

MODEL

SERIAL N°

DATE

CE DECLARATION OF CONFORMITY

We, the undersigned, declare under our exclusive responsibility that the assembly defined as:

NAME	ECL & ECL-H
TYPE	Chiller & Heat Pump | AIR/WATER
MODEL	

To which this declaration refers and conforms with the following harmonised standards:

IEC EN 60335-2-40	Safety standard regarding electrical heat pumps, air conditioners and dehumidifiers
IEC EN 61000-6-1 **IEC EN 61000-6-3**	Electromagnetic emissions and immunity for residential environments
IEC EN 61000-6-2 **IEC EN 61000-6-4**	Electromagnetic emissions and immunity for industrial environments
EN378	Refrigerating system and heat pumps - Safety and environmental requirements
EN12735	Copper and copper alloys - Seamless, round copper tubes for air conditioning and refrigeration
UNI 12735	Seamless round copper tubes for air conditioning and refrigeration
UNI 14276	Pressure equipment for cooling systems and heat pumps

Satisfy the essential requirements of the following directives:

- LVD Directive: 2006/95/CE

- Electromagnetic compatibility directive 2004/108/CE

- Machinery directive 2006/42/CE

- PED directive regarding pressurised devices 97/23/CE

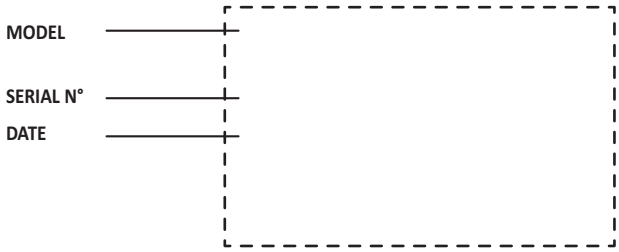
Signature of manufacturer

Position of Signatory

PRODUCT DEVELOPMENT DIRECTOR

Airedale
APPLIED THERMAL INNOVATION

ECL C



CE DECLARATION OF CONFORMITY

We, the undersigned, declare under our exclusive responsibility that the assembly defined as:

NAME	ECL-C
TYPE	Air Cooled Condensing Unit
MODEL	

To which this declaration refers and conforms with the following harmonised standards:

IEC EN 60335-2-40	Safety standard regarding electrical heat pumps, air conditioners and dehumidifiers
IEC EN 61000-6-1 **IEC EN 61000-6-3**	Electromagnetic emissions and immunity for residential environments
IEC EN 61000-6-2 **IEC EN 61000-6-4**	Electromagnetic emissions and immunity for industrial environments
EN378	Refrigerating system and heat pumps - Safety and environmental requirements
EN12735	Copper and copper alloys - Seamless, round copper tubes for air conditioning and refrigeration
UNI 12735	Seamless round copper tubes for air conditioning and refrigeration
UNI 14276	Pressure equipment for cooling systems and heat pumps

Satisfy the essential requirements of the following directives:

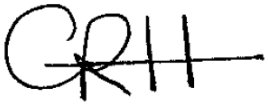
- LVD Directive: 2006/95/CE

- Electromagnetic compatibility directive 2004/108/CE

DECLARATION OF INCORPORATION

We, the undersigned, declare under our exclusive responsibility, in accordance with paragraph 2, art. 4 of the Machinery Directive 2006/42/CE, that start-up is prohibited before the machine into which it is incorporated has been declared to conform to the provisions of the Machinery Directive and/or all applicable Directives.

Signature of manufacturer



Position of Signatory

PRODUCT DEVELOPMENT DIRECTOR

Standards applied in the DESIGN and MANUFACTURE of the unit:

SAFETY

1. Machinery directive 2006/42/CE
2. Low voltage directive LVD 2006/95/CE
3. Electromagnetic compatibility directive EMC 2004/108/CE
4. Pressure vessel directive PED 97/23/CE, EN 378,
5. UNI12735, UNI14276

ELECTRICAL

1. IEC EN 60335-2-40,
2. IEC EN 61000-6-1/2/3/4

ACOUSTICAL

1. ISO DIS 9614/2 (intensity method)

PROTECTIVE RATING

IP24

CERTIFICATION

EUROVENT
UNI EN 14511:2011

REFRIGERANT

This unit contains fluoride gases with greenhouse effect covered by the Kyoto Protocol. Maintenance and disposal must only be carried out by qualified staff, in accordance with local regulations.

1. DESCRIPTION AND UNIT SELECTION

The EXTERNAL air cooled chillers and heat pump units of the ECL series with R410A have been designed and manufactured to meet the cooling/heating and production of domestic hot water (DHW) needs of small and medium systems in residential or commercial buildings.

The units are characterised by an extremely low noise operation and a high efficiency and reliability, through the use of high efficiency heat exchangers and scroll compressors of high performance and low noise.

They are available in versions:

1. **ECL "°" Standard chiller**
2. **ECL "H" Heat pump unit 1**
3. **ECL "C" Condensing unit**

There are several fitted options available to satisfy a large variety of system solutions:

1. **"°" STANDARD UNIT**
2. **"P" PUMP ONLY**
3. **"N" HIGH HEAD PUMP ONLY**
4. **"A" BUFFER TANK AND PUMP**
5. **"Q" BUFFER TANK AND HIGH HEAD PUMP**
6. **"D" DESUPERHEATER (DCPX standard)**

2. CONFIGURATOR

Field	Description
1,2,3	**ECL**

4,5,6	**SIZE**
	020 - 025 - 030 - 040 - 050 - 070 - 080 - 090 - 102 - 152 - 202

7		**MODEL**
	°	Cooling only
	H	Heat pump unit [1]

8		**VERSION**
	°	Standard
	P	With pump
	N	With high head pump (only sizes ECL 100 - 150 - 202)
	A	With buffer tank and pump
	Q	With buffer tank and high head pump (only sizes ECL 50 - 70 - 80 - 90 - 102 - 152 - 202)

9		**HEAT RECOVERY**
	°	Without heat recovery
	D	With desuperheater [2] **(Condensing temperature control - DCPX standard)**

10		**CONDENSER COIL**
	°	Aluminium
	R	Copper For sizes 102 - 152 - 202 only in heat pump models
	S	Tinned copper For sizes 102 - 152 - 202 only in heat pump models
	V	Treated aluminium (epoxy coated) **epoxy paint** for sizes 102 - 152 - 202 in heat pump models **cataphoresis treatment** for sizes 102 - 152 - 202 in cooling only models

11		**FIELD OF USE**
	°	Standard (water temperature produced down to 4°C)
	Z	Low temperature (liquid temperature produced from 4°C to 0°C)
	Y	Low temperature (liquid temperature produced from 0°C to -6°C)

12		**EVAPORATOR**
	°	Standard (water temperature produced down to 4°C)
	C	Condensing unit (without evaporator)

13		**POWER SUPPLY**
	°	400V/3/N/50Hz
	M	230V/1/50Hz (only sizes ECL 020 - 025 - 030 - 040)

[1] DHW production possible (DCPX | VMF-ACS |MODU-485A required)

[2] DESUPERHEATER not possible with:

- Versions "C"
- Thermostatic expansion valve Y
- Standard models sizes 020 to 090

3. COMPONENTS AND CONFIGURATIONS POSSIBLE

Circuit Components				
Refrigerant circuit **Model**	**°**	**H**	**C**	**con D**
Compressor crankcase heater	std	std	std	std
High pressure pressostat	std	std	std	std
Low pressure pressostat	std	no	std	std
High pressure transducer	no	std	no	std
Low pressure transducer	no	std	no	no
Condensing temperature control (DCPX)	no	no	no	std
Solenoid valve hot gas injection	no	std	no	no
Bypass valve hot gas injection	no	no	no	std
Heat exchanger (EV- EV/CN)	std	std	no	std
Heat exchanger (desuperheater)	no	no	no	std
Heat exchanger (total heat recovery)	no	no	no	no
Discharge and liquid valve	no	no	std	no

Hydraulic circuit **Version "°"**	**020**	**025**	**030**	**040**	**050**	**070**	**080**	**090**	**102**	**152**	**202**
Water filter	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Differential pressure switch	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Safety valve	no	no	no	no	no	no	no	no	no	no	no
Air vent	no	no	no	no	no	no	no	no	no	no	no

Hydraulic circuit **Version "P/N"**	**020**	**025**	**030**	**040**	**050**	**070**	**080**	**090**	**102**	**152**	**202**
Water filter	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Differential pressure switch	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Flow switch	no	no	no	no	no	no	no	no	no	no	no
Safety valve	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Air vent	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Pump	**vers. P**	**vers. P**	**vers. P**	**vers. P**	**vers. P**	**vers. P**	**vers. P**	**vers. P**	**vers. P**	**vers. P**	**vers. P**
High head pump	no	no	no	no	no	no	no	no	**vers. N**	**vers. N**	**vers. N**
Expansion tank	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes

Hydraulic circuit **Version "A/Q"**	**020**	**025**	**030**	**040**	**050**	**070**	**080**	**090**	**102**	**152**	**202**
Water filter	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Differential pressure switch	no	no	no	no	yes	yes	yes	yes	yes	yes	yes
Flow switch	yes	yes	yes	yes	no	no	no	no	no	no	no
Safety valve	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Air vent	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Pump (P)	**vers.A**	**vers.A**	**vers.A**	**vers.A**	**vers.A**	**vers.A**	**vers.A**	**vers.A**	**vers.A**	**vers.A**	**vers.A**
High head pump	no	no	no	no	**vers.Q**	**vers.Q**	**vers.Q**	**vers.Q**	**vers.Q**	**vers.Q**	**vers.Q**
Expansion tank	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Buffer tank	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes

Versions with DESUPERHEATER "D"

Hydraulic circuit **Version "° with D"**	**020**	**025**	**030**	**040**	**050**	**070**	**080**	**090**	**102**	**152**	**202**
Water filter	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	yes	yes	yes
Differential pressure switch	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	yes	yes	yes
Flow switch	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	no	no	no
Heat exchanger (desuperheater)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	yes	yes	yes

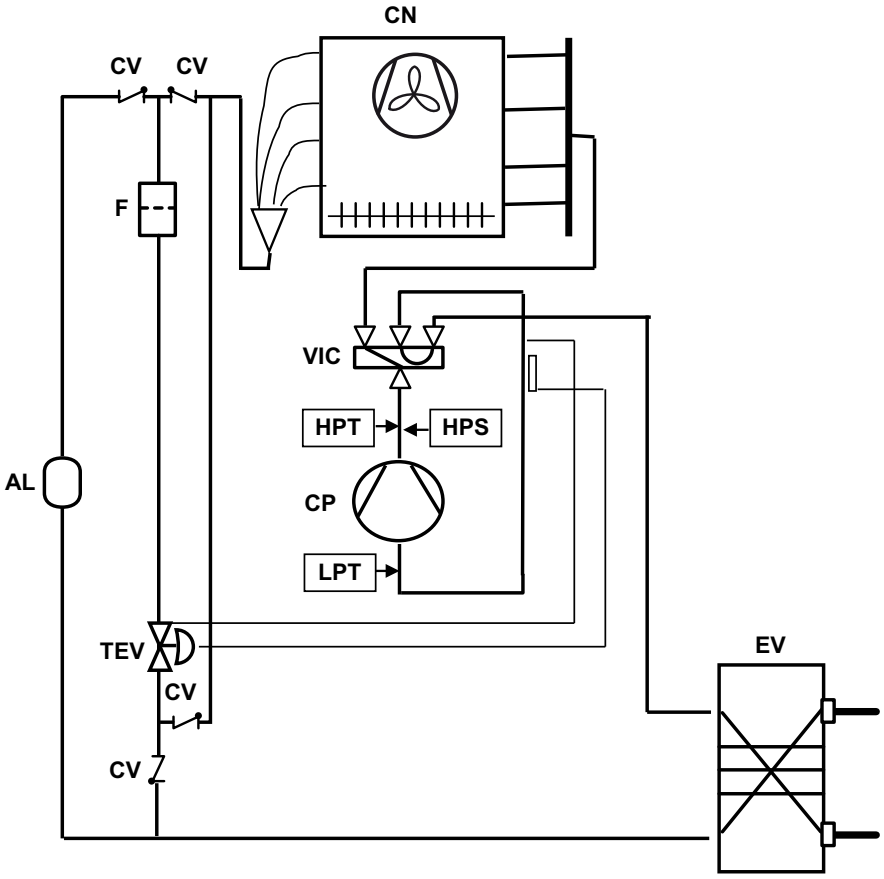
Hydraulic circuit **Version "A with D "**	**020**	**025**	**030**	**040**	**050**	**070**	**080**	**090**	**102**	**152**	**202**
Water filter	N.A.	N.A.	N.A.	N.A.	yes	yes	yes	yes	yes	yes	yes
Differential pressure switch	N.A.	N.A.	N.A.	N.A.	yes	yes	yes	yes	yes	yes	yes
Flow switch	N.A.	N.A.	N.A.	N.A.	no	no	no	no	no	no	no
Heat exchanger (desuperheater)	N.A.	N.A.	N.A.	N.A.	yes	yes	yes	yes	yes	yes	yes
Safety valve	N.A.	N.A.	N.A.	N.A.	yes	yes	yes	yes	yes	yes	yes
Air vent	N.A.	N.A.	N.A.	N.A.	yes	yes	yes	yes	yes	yes	yes
Pump (P)	N.A.	N.A.	N.A.	N.A.	yes	yes	yes	yes	yes	yes	yes
Expansion tank	N.A.	N.A.	N.A.	N.A.	yes	yes	yes	yes	yes	yes	yes
Buffer tank	N.A.	N.A.	N.A.	N.A.	yes	yes	yes	yes	yes	yes	yes

LEGEND

N.A.	Not Available

4. REFRIGERANT CIRCUIT SCHEMATIC

4.1. HEAT PUMP MODEL



LEGEND	
AL	Liquid accumulator
CN	Coil finned - microchannel
CP	Compressor
F	Filter drier
HPS	High pressure pressostat
EV	Plate heat exchanger
HPT	High pressure transducer
LPT	Low pressure transducer
VIC	Reversing valve
TEV	Thermostatic expansion valve
CV	Check valve

5. DESCRIPTION OF COMPONENTS

5.1. REFRIGERANT CIRCUIT

SCROLL COMPRESSORS
High efficiency rotary scroll hermetic compressor (mounted on elastic anti-vibration mounts) with two pole electric motor. Crankcase heaters as standard, automatically activated when the unit stops, as long as power is maintained to the unit.

SYSTEM SIDE HEAT EXCHANGER
Brazed plate heat exchanger in stainless steel AISI 316. The heat exchanger is externally insulated with closed cell neoprene anti-condensation material.

DESUPERHEATER
(Only version "D")
Brazed plate heat exchanger in stainless steel AISI 316. The heat exchanger is externally insulated with closed cell neoprene anti-condensation material.

5.2. WATER CHARACTERISTICS

PH	**6-8**
Electrical conductivity	Less than 200 mV/cm (25°C)
Chloride ions	Less than 50 ppm
Sulphuric acid ions	Less than 50 ppm
Total iron	Less than 0.3 ppm
Alkalinity M	Less than 50 ppm
Total hardness	Less than 50 ppm
Sulphur ions	None
Ammonia ions	None
Silicone ions	Less than 30 ppm

SOURCE SIDE MICROCHANNEL HEAT EXCHANGER
(ECL 102 ÷ 202 COOLING ONLY)
All aluminium finned coil heat exchanger of microchannel type. Ensures:
1. Higher energy efficiency that standard coils.
2. Lower refrigerant charge.

SOURCE SIDE STANDARD HEAT EXCHANGER
(ECL 020 ÷ 090 COOLING ONLY)
(ECL 020 ÷ 202 HEAT PUMP)
Finned coil heat exchanger with copper tubes and aluminium fins adequately spaced to ensure high efficiencies.

REVERSING VALVE
(only versions "H")
4 way reversing valve. Reverses the flow of refrigerant.

LIQUID ACCUMULATOR
(only versions "H")
Compensates for the difference in volume between the finned coil and the plpate heat exchanger, retaining the excessive liquid.

FILTER DRIER
Hermetic type with ceramic cartridge and hygroscopic material, capable of retaining impurities and moisture within the refrigerant circuit.

CHECK VALVE
Allows the flow of refrigerant in one direction only.

THERMOSTATIC EXPANSION VALVE
Mechanical type, with external equaliser located at the evaporator outlet, modulates the flow of refrigerant into the evaporator based on the load and ensures the correct superheat of the suction gas.

HOT GAS INJECTION VALVE
(only version "D")
Hot gas injection device upstream of the evaporator.

LIQUID SIGHT GLASS WITH MOISTURE INDICATOR
Used to check for the presence of moisture in the refrigerant circuit.

LIQUID AND DISCHARGE ISOLATING VALVES
(version "C)
Permit the isolation of refrigerant in case of special maintenance.

5.3. STRUCTURE AND FANS

STRUCTURE
The main structure is made from hot dip galvanised steel panels, polyester powder coated and designed to ensure the maximum access for service and maintenance.
The base for sizes 102 - 152 - 202 heat pump units has holes in the proximity of the coil to permit drainage of water during the defrost cycle.

FAN ASSEMBLY
External rotor axial fan with helicoidal blades, housed in a casing, complete with protective grilles. 6 pole electric motor with thermal protection.

5.4. STANDARD HYDRAULIC CIRCUIT

WATER FILTER
The water filter is provided with a filter mesh with holes no greater than one millimetre, blocking and removing from the unit any impurities found in the hydraulic circuit.

FLOW SWITCH
(on ECL 025...040°A|HA)
The flow switch monitors the flow rate through the heat exchanger and stops the unit in case of insufficient flow.

DIFFERENTIAL PRESSURE SWITCH
(on ECL 020...202° -°P N|H - HP N)
(on ECL 050...202°A Q |HA Q)
Located between the inlet and outlet of the evaporator. Monitors the flow rate through the heat exchanger and stops the unit in case of insufficient flow.

5.4.1. ADDITIONAL COMPONENTS DETAILED IN THE CONFIGURATOR

PUMPS
Standard or high head

EXPANSION TANK
Membrane type precharged with nitrogen.

SAFETY VALVE
With discharge pipe connection facility, and will operate in cases of hydraulic system overpressure.

AIR VENT
(Versions "P-N-A-Q")
Mounted at the highest level of the hydraulic system. The air vent is used for the release of any air pockets from the hydraulic circuit.

SYSTEM BUFFER TANK
Manufactured in steel and to reduce heat gain and avoid the formation of condensation is insulated with polyurethane material of adequate thickness.
The buffer tank reduces the number of compressor starts and stabilises the water temperature delivered to the system.

5.5. CONTROL AND SAFETY COMPONENTS

HIGH PRESSURE PRESSOSTAT (manual reset)
Fixed setting, fitted on the refrigerant high pressure side, stops the operation of the compressor in case of abnormal pressures.

LOW PRESSURE PRESSOSTAT
(only versions "° | C")
Fixed setting, fitted on the refrigerant low pressure side, stops the operation of the compressor in case of abnormal pressures.

HIGH PRESSURE TRANSDUCER
Mounted on the refrigerant circuit high pressure side provides the operating pressure to the control board and generates a pre-alarm in case of abnormal pressure.

LOW PRESSURE TRANSDUCER
(only version "H")
Mounted on the refrigerant circuit low pressure side provides the operating pressure to the control board and generates a pre-alarm in case of abnormal pressure.

5.6. ELECTRICAL CONTROL AND POWER PANEL

Electrical panel conforming to EN 60204-1/IEC 204-1, complete with:
- Control circuit transformer
- Door interlocked isolator
- Circuit breakers and contactors for compressors and fans
- Terminals for REMOTE PANEL
- Spring type terminals for control circuit
- Externally rated cabinet with double panel and seals
- Electronic controller
- Relay output for evaporator pump and heat recovery pump enable (only for versions without pump assembly)
- All cables numbered

DOOR INTERLOCKED ISOLATOR
Access to the electrical panel is by operating the handle of the door interlocked isolator which removes power to the unit. To avoid accidentally powering up the unit during maintenance the isolator is fitted with a locking mechanism.

CONTROLLER KEYPAD
Allows complete control of the unit. For further information refer to the user manual

Electronic controller
MODU CONTROL

Control of the leaving water temperature with a proportional-integral algorithm: maintains the average leaving temperature to the desired valve
- Auto-adaptive differential starter timer: ensures the compressor minimum required running time for systems with low water content
- Intelligent defrost by decreasing pressure: determines when the coil is frosted avoiding unnecessary defrost cycles
- External air temperature setpoint compensation (with external air temperature sensor accessory): reduces electrical consumption
- Condensing control based on pressure, rather than temperature, for absolute stability (with DCPX fan speed controller accessory)
- Inverted condensing control for operation in heat pump mode even in the summer (with DCPX fan speed controller accessory)
- Pre-alarms with automatic reset: in case of alarms a number of restarts are permitted before a definitive lock out
- Alarm based on ΔT: to identify errors (reverse rotation) or reversing valve blocked
- Compressor hour run counter
- Compressor number of starts counter
- Alarm history
- Automatic restart after power failure
- Local or remote control

Display of unit status:
1. Power on
2. Compressor ON/OFF
3. Operating mode (heating/cooling)
4. Alarm active

Display of sensors, transducers and parameters
1. Water outlet temperature
2. Water inlet temperature
3. Coil temperature (heat pump unit)
4. Discharge refrigerant temperature
5. External air temperature (heat pump, cooling only with DCPX and sensor)
6. Discharge pressure (heat pump unit)
7. Suction pressure (heat pump unit)
8. Error from setpoint temperature (sum of the proportional and integral error)
9. Delay time to start / stop the compressor
10. Control of alarms
11. Low pressure
12. High pressure (pre-alarm: pressostat directly removes power to the compressor)
13. High discharge temperature
14. Anti-freeze
15. Flow protection
16. Alarm based on ΔT

- Alarms with automatic reset and limited number of resets before definitive lock out
- ON/OFF control from remote contact
- Change of season from remote contact

For further information refer to the user manual.

6. ACCESSORIES

VT ANTI-VIBRATION MOUNTS
Set of anti-vibration mounts.

MODU-485A [4]
Interface RS-485 for supervisory systems with MODBUS protocol.

DCPX [4]
Fan speed controller which allows correct operation in cooling mode between external air temperatures of +20°C and -10°C, in heat pump mode, in the summer for production of domestic hot water, up to +42°C (refer to the operating limits diagram).
In versions with desuperheater fitted as standard.

DRE [5]
Electronic soft starter (reduces approximately 30% in single circuits, 26% in dual circuits, 22% in three circuits).

RA [7]
Buffer tank electric heater (in versions A|Q). Provides freeze protection of the buffer tank in winter off periods.

KR [6] [7]
Evaporator electric heater
Plate heat exchanger electric heater. Provides freeze protection of the evaporator in winter off periods.

AERWEB300
Allows the remote control of a chiller using a normal PC connected via ethernet through a normal browser. Available in 4 models:
AERWEB300-6: Web server for monitor and control of a maximum of 6 units on a network **RS485**;
AERWEB300-18: Web server for monitor and control of a maximum of 18 units on a network **RS485**;
AERWEB300-6G: Web server for monitor and control of a maximum of 6 units on a network **RS485** with modem **GPRS integrated**;
AERWEB300-18G: Web server for monitor and control of a maximum of 18 units on a network **RS485** with modem **GPRS integrated**.

BDX
Condensate drain pan.

KR B3 [7]
Base electric heater kit: avoids ice forming in the base.

MULTICONTROL
Allows the simultaneous control of multiple chillers or heat pump units (up to 4) installed in a common system, fitted with our MODU-CONTROL controller.
For a more complete function the following accessories are available:
SPLW
System water sensor. In most cases the use of the sensors supplied loose with each chiller/heat pump unit is sufficient. In the case of common flow / return header installation this sensor can be used to control the common water temperature of the chillers connected to the header or just for reading values.
SDHW
Domestic hot water sensor. To be used with a storage tank for the control of water temperature produced.

VMF-ACS
Electrical panel for enabling / complete control of a domestic hot water tank:
1. 3 way valve control
2. Anti-legionella
3. Temperature sensor
4. Immersion heater of:
   3 kW single |three phase
   6 kW three phase
   8 kW three phase

VMF-E5B|N
Recess mounted panel or white or black colour with back-lit LCD graphical display and capacitive keypad.
Allows enabling/centralised control of:
1. A complete hydronic system comprising 1 master and maximum of 5 slave fan coil units
2. ChillerPump (**INTERFACE RS 485 FROM MODU-485A REQUIRED ACCESSORY)**
3. Circulating pumps: maximum configuration of 12 zone circulators
4. Boiler: control of boiler enable for the production of hot water
5. Heat recovery units: maximum of 3 enables for heat recovery units programmable by time-clock and/or air quality sensor VMF-VOC, domestic hot water module
6. Complete control of domestic hot water production **(ACCESSORY VMF-ACS see above)**.

[4] Accessories **MODU-485A |DCPX** are required for the control and production of DHW.

[5] Only available with power supply 400V/3N Factory fitted only.

[6] Accessory not available for versions ECL 020...040°A | HA.

[7] Factory fitted only.

x2 Indicates the quantity to order.

		ECL 020	ECL 025	ECL 030	ECL 040	ECL 050	ECL 070	ECL 080	ECL 090	ECL 102	ECL 152	ECL 202
PR3	**(°) - H - C**	•	•	•	•	•	•	•	•	•	•	•
MODU-485A [4]	**ALL**	•	•	•	•	•	•	•	•	•	•	•
AERWEB300-6	ALL	•	•	•	•	•	•	•	•	•	•	•
AERWEB300-18	ALL	•	•	•	•	•	•	•	•	•	•	•
AERWEB300-6G	ALL	•	•	•	•	•	•	•	•	•	•	•
AERWEB300-18G	ALL	•	•	•	•	•	•	•	•	•	•	•
DRE [5]	**(°) - H - C**	-	-	-	-	5	5	5	5	5x2	5x2	5X2
MULTICONTROL	ALL	•	•	•	•	•	•	•	•	•	•	•
SPLW		•	•	•	•	•	•	•	•	•	•	•
SDHW		•	•	•	•	•	•	•	•	•	•	•
DCPX [4]	**(°) - C**	50	50	50	50	50	50	50	50	52	52	52
	H	51	51	51	51	51	51	51	51	53	53	53
VT	**(°) - H - HP - C**	9	9	9	9	9	9	9	9	15	15	15
	A	9	9	9	9	15	15	15	15	15	15	15
RA	**A**	•	•	•	•	•	•	•	•	•	•	•
BDX	**(°) / P**	5	5	5	5	5	5	5	5	-	-	-
	A	5	5	5	5	6	6	6	6	-	-	-
KR [6]	**(°) / P**	2	2	2	2	2	2	2	2	2	2	2
	A	-	-	-	-	2	2	2	2	2	2	2
KRB [7]		-	-	-	-	-	-	-	-	3	3	3
VMF-E5B|N [4]	**ALL**	•	•	•	•	•	•	•	•	•	•	•
VMF-ACS3KM [4]	**230V/1**	•	•	•	•							
VMF-ACS3KTN [4]	**400V/3N**	•	•	•	•	•	•	•	•	•	•	•
VMF-ACS6KTN [4]	**400V/3N**	•	•	•	•	•	•	•	•	•	•	•
VMF-ACS8KTN [4]	**400V/3N**	•	•	•	•	•	•	•	•	•	•	•

7. TECHNICAL DATA

Cooling only model ECL				020	025	030	040	050	070	080	090	102	152	202
Cooling capacity **1**		°	kW	5,65	6,15	7,44	9,53	13,31	16,39	20,35	22,14	26,34	32,69	42,60
		P|A	kW	5,71	6,21	7,52	9,64	13,47	16,59	20,60	22,40	26,93	33,48	43,49
		N|Q	kW	-	-	-	-	13,73	16,9	20,9	22,7	27,1	33,7	43,7
Power input		°	kW	1,89	2,05	2,52	3,32	4,12	4,99	6,48	6,79	8,06	10,31	13,53
		P|A	kW	1,92	2,07	2,52	3,30	4,10	4,93	6,39	6,69	8,07	10,53	13,76
		N|Q	kW	-	-	-	-	4,18	5,01	6,48	6,79	8,46	10,58	13,80
Water flow rate		**ALL**	l/h	980	1066	1290	1651	2305	2838	3526	3836	4575	5676	7396
Total pressure drop		°	kPa	21	21	22	24	25	26	34	35	58	61	68
Available head		**P|A**	kPa	60	60	59	55	82	81	69	66	84	115	90
SYSTEM SIDE		**N|Q**	kPa	-	-	-	-	160	159	144	140	140	185	158
EFFICIENCIES														
EER		°	W/W	3,00	3,00	2,96	2,87	3,23	3,29	3,14	3,26	3,27	3,17	3,15
		P|A	W/W	2,98	3,00	2,98	2,92	3,28	3,37	3,22	3,35	3,34	3,18	3,15
		N|Q	W/W	-	-	-	-	3,28	3,37	3,22	3,35	3,20	3,18	3,16
ESEER		°		3,43	3,43	3,40	3,33	3,74	3,82	3,65	3,71	3,85	3,99	3,94
		P|A		3,50	3,54	3,55	3,48	3,85	3,97	3,80	3,95	3,96	3,94	3,82
		N|Q		-	-	-	-	3,66	3,77	3,61	3,75	3,61	3,74	3,62
DESUPERHEATER (AVAILABLE ONLY WITH VERSIONS WITH BUFFER TANK "A)														
Recovered capacity **2**			kW	-	-	-	-	5,4	6,6	8,2	8,9	13,8	17,10	18,90
Water flow rate desuperheater			l/h	-	-	-	-	930	1140	1410	1530	2374	2941	3251
Pressure drop desuperheater			kPa	-	-	-	-	8	10	11	13	14	24	30
UNIT PROTECTIVE RATING														
IP				24	24	24	24	24	24	24	24	24	24	24
ELECTRICAL DATA														
Total current input	230V/1	°	A	6,43	7,30	8,17	10,78	-	-	-	-	-	-	-
	400V/3N	°	A	3,70	4,20	4,70	6,20	8,70	9,70	12,20	12,80	15,57	18,81	24,67
	230V/1	**P|A**	A	7,26	8,13	9,01	11,64	-	-	-	-	-	-	-
	400V/3N	**P|A**	A	4,5	5,0	5,5	7,1	10,0	11,1	13,7	14,3	16,6	20,5	26,6
	400V/3N	**N|Q**	A	-	-	-	-	9,5	10,6	13,1	13,8	17,5	20,9	27,1
Maximum current (FLA)	230V/1	°	A	16,5	16,5	19,7	23,7	-	-	-	-	-	-	-
	400V/3N	°	A	6,0	6,0	6,7	8,7	11,3	13,5	16,3	17,3	22,0	26,0	32,0
	230V/1	**P|A**	A	17,32	17,33	20,54	24,56	-	-	-	-	-	-	-
	400V/3N	**P|A**	A	6,82	6,83	7,54	9,56	12,65	14,90	17,76	18,79	23,03	27,73	33,95
	400V/3N	**N|Q**	A	-	-	-	-	12	14	17	18	24	28	34
Starting current (LRA)	230V/1	°	A	59,5	62,5	83,7	98,7	-	-	-	-	-	-	-
	400V/3N	°	A	26,5	32,5	35,7	48,7	65,3	75,3	102,3	96,3	76,0	87,0	117,0
	230V/1	**P|A**	A	60,32	63,33	84,54	99,56	-	-	-	-	-	-	-
	400V/3N	**P|A**	A	27,32	33,33	36,54	49,56	66,65	76,70	103,76	97,79	77,03	88,73	118,95
	400V/3N	**N|Q**	A	-	-	-	-	66,11	76,17	103,25	97,28	77,93	89,12	119,40

Data in accordance with UNI EN14511: 2011

1. COOLING

Evaporator outlet water temperature	7°C
Evaporator inlet water temperature	12°C
External air temperature	35°C

2. COOLING with HEAT RECOVERY

Heat recovery outlet water temperature	50°C
Evaporator outlet water temperature	7°C
Δt water	5 K

Cooling only model ECL				020	025	030	040	050	070	080	090	102	152	202
Cooling capacity **1**		°	kW	6,82	7,41	8,96	11,48	16,08	19,74	24,54	26,57	32,19	39,83	51,53
		P|A	kW	6,90	7,50	9,07	11,62	16,28	19,99	24,84	26,87	32,82	40,61	52,31
		N|Q	kW	-	-	-	-	16,55	20,28	25,16	27,21	32,92	40,91	52,72
Power input		°	kW	1,97	2,14	2,63	3,47	4,30	5,21	6,77	7,10	8,45	10,80	14,17
		P|A	kW	1,98	2,14	2,61	3,42	4,25	5,12	6,64	6,96	8,49	11,15	14,66
		N|Q	kW	-	-	-	-	4,35	5,22	6,75	7,07	8,97	11,09	14,54
Water flow rate		**ALL**	l/h	1185	1286	1556	1991	2789	3423	4259	4610	5605	6930	8964
Total pressure drop		°	kPa	30	30	31	34	35	37	48	49	84	88	97
Available head		**P|A**	kPa	52	52	50	45	69	67	51	47	42	52	19
SYSTEM SIDE		**N|Q**	kPa	-	-	-	-	138	137	117	112	71	138	102
EFFICIENCIES														
EER		°	W/W	3,47	3,46	3,40	3,31	3,74	3,79	3,63	3,74	3,81	3,69	3,64
		P|A	W/W	3,49	3,50	3,47	3,40	3,83	3,91	3,74	3,86	3,86	3,64	3,57
		N|Q	W/W	-	-	-	-	3,81	3,89	3,73	3,85	3,67	3,69	3,63
ESEER		°		3,43	3,43	3,40	3,33	3,74	3,82	3,65	3,71	3,85	3,99	3,94
		P|A		3,50	3,54	3,55	3,48	3,85	3,97	3,80	3,95	3,96	3,94	3,82
		N|Q		-	-	-	-	3,66	3,77	3,61	3,75	3,61	3,74	3,62
DESUPERHEATER (AVAILABLE ONLY WITH VERSIONS WITH BUFFER TANK "A")														
Recovered capacity **2**			kW	-	-	-	-	5,4	6,6	8,2	8,9	13,8	17,10	18,90
Water flow rate desuperheater			l/h	-	-	-	-	930	1140	1410	1530	2374	2941	3251
Pressure drop desuperheater			kPa	-	-	-	-	8	10	11	13	14	24	30
UNIT PROTECTIVE RATING														
IP				24	24	24	24	24	24	24	24	24	24	24
ELECTRICAL DATA														
Total current input	230V/1	°	A	6,66	7,57	8,47	11,17	-	-	-	-	-	-	-
	400V/3N	°	A	3,83	4,35	4,87	6,42	9,01	10,04	12,63	13,25	16,15	19,46	25,57
	230V/1	**P|A**	A	7,5	8,4	9,3	12,0	-	-	-	-	-	-	-
	400V/3N	**P|A**	A	4,7	5,2	5,7	7,3	10,4	11,5	14,2	14,8	17,3	21,4	27,7
	400V/3N	**N|Q**	A	-	-	-	-	9,5	10,5	13,1	13,8	17,2	20,5	26,7
Maximum current (FLA)	230V/1	°	A	16,5	16,5	19,7	23,7	-	-	-	-	-	-	-
	400V/3N	°	A	6,0	6,0	6,7	8,7	11,3	13,5	16,3	17,3	22,0	26,0	32,0
	230V/1	**P|A**	A	17,32	17,33	20,54	24,56	-	-	-	-	-	-	-
	400V/3N	**P|A**	A	6,82	6,83	7,54	9,56	12,65	14,90	17,76	18,79	23,03	27,73	33,95
	400V/3N	**N|Q**	A	-	-	-	-	12	14	17	18	24	28	34
Starting current (LRA)	230V/1	°	A	59,5	62,5	83,7	98,7	-	-	-	-	-	-	-
	400V/3N	°	A	26,5	32,5	35,7	48,7	65,3	75,3	102,3	96,3	76,0	87,0	117,0
	230V/1	**P|A**	A	60,32	63,33	84,54	99,56	-	-	-	-	-	-	-
	400V/3N	**P|A**	A	27,32	33,33	36,54	49,56	66,65	76,70	103,76	97,79	77,03	88,73	118,95
	400V/3N	**N|Q**	A	-	-	-	-	66,11	76,17	103,25	97,28	77,93	89,12	119,40

Data in accordance with UNI EN 14511: 2011

1. COOLING

Evaporator outlet water temperature	18°C
Evaporator inlet water temperature	23°C
External air temperature	35°C

2. COOLING with HEAT RECOVERY

Heat recovery outlet water temperature	50°C
Evaporator outlet water temperature	7 °C
Δt water	5 K

Heat pump model ECL H				020H	025H	030H	040H	050H	070H	080H	090H	102H	152H	202H
Cooling capacity **1**		°	kW	5,64	6,14	7,43	9,52	13,29	16,37	20,32	22,06	25,75	31,71	40,58
		P|A	kW	5,71	6,21	7,52	9,64	13,47	16,59	20,59	22,40	26,33	32,47	41,41
		N|Q	kW	-	-	-	-	13,73	16,87	20,90	22,72	26,47	32,65	41,63
Power input		°	kW	1,90	2,06	2,53	3,33	4,14	5,01	6,51	6,87	8,82	10,48	14,28
		P|A	kW	1,92	2,07	2,52	3,30	4,10	4,94	6,39	6,69	8,84	10,72	14,57
		N|Q	kW	-	-	-	-	4,18	5,02	6,48	6,79	9,23	10,77	14,60
Water flow rate		ALL	l/h	980	1066	1290	1651	2305	2838	3526	3836	4472	5504	7042
Total pressure drop		°	kPa	30	31	32	30	34	35	44	60	55	57	62
Available head		P|A	kPa	60	60	59	55	82	80	69	66	84	115	91
SYSTEM SIDE		N|Q	kPa	-	-	-	-	160	158	144	140	140	185	159
Heating capacity **2**		°	kW	6,27	7,08	8,49	10,70	14,12	17,44	22,40	24,46	29,31	35,35	45,78
		P|A	kW	6,19	6,98	8,37	10,56	13,93	17,21	22,11	24,10	28,69	34,55	44,90
		N|Q	kW	-	-	-	-	13,67	16,92	21,79	23,77	28,56	34,34	44,64
Power input		°	kW	1,98	2,20	2,71	3,28	4,42	5,04	6,50	7,11	8,87	10,45	13,76
		P|A	kW	1,98	2,19	2,68	3,23	4,37	4,95	6,36	6,91	8,88	10,67	14,04
		N|Q	kW	-	-	-	-	4,45	5,04	6,46	7,02	9,30	10,72	14,06
Water flow rate		ALL	l/h	1066	1204	1445	1823	2408	2976	3818	4162	4988	6020	7795
Total pressure drop		°	kPa	33	37	37	34	34	36	48	65	69	68	78
Available head		P|A	kPa	58	56	55	51	82	79	65	61	70	100	68
SYSTEM SIDE		N|Q	kPa	-	-	-	-	159	157	137	132	117	174	141
EFFICIENCIES														
EER		°	W/W	2,97	2,98	2,93	2,86	3,21	3,26	3,12	3,21	2,92	3,02	2,84
		P|A	W/W	2,98	3,00	2,98	2,92	3,28	3,36	3,22	3,35	2,98	3,03	2,84
		N|Q	W/W	-	-	-	-	3,28	3,36	3,22	3,35	2,87	3,03	2,85
COP		°	W/W	3,17	3,22	3,13	3,26	3,20	3,46	3,45	3,44	3,30	3,38	3,33
		P|A	W/W	3,12	3,19	3,12	3,27	3,19	3,48	3,48	3,49	3,23	3,24	3,20
		N|Q	W/W	-	-	-	-	3,07	3,36	3,37	3,39	3,07	3,20	3,17
ESEER		°		3.43	3.43	3.40	3.33	3.74	3.82	3.65	3.71	3.85	3.99	3.94
		P|A		3.50	3.54	3.55	3.48	3.85	3.97	3.80	3.95	3.96	3.94	3.82
		N|Q		-	-	-	-	3.66	3.77	3.61	3.75	3.61	3.74	3.62
ELECTRICAL DATA														
Total current input cooling mode	230V/1	°	A	6,4	7,3	8,2	10,8	-	-	-	-	-	-	-
	400V/3N	°	A	3,7	4,2	4,7	6,2	8,7	9,7	12,2	12,8	15,6	18,8	24,7
	230V/1	P|A	A	7,3	8,1	9,0	11,6	-	-	-	-	-	-	-
	400V/3N	P|A	A	4,5	5,0	5,5	7,1	10,0	11,1	13,7	14,3	16,6	20,5	26,6
	400V/3N	N|Q	A	-	-	-	-	9,5	10,6	13,1	13,8	17,5	20,9	27,0
Total current input heating mode	230V/1	°	A	6,6	7,7	9,4	11,8	-	-	-	-	-	-	-
	400V/3N	°	A	3,8	4,4	5,4	6,8	9,5	10,3	12,9	13,8	17,0	19,0	25,0
	230V/1	P|A	A	7,4	8,5	10,2	12,7	-	-	-	-	-	-	-
	400V/3N	P|A	A	4,6	5,2	6,2	7,7	10,9	11,7	14,4	15,3	18,1	20,7	27,0
	400V/3N	N|Q	A	-	-	-	-	10,3	11,2	13,9	14,8	19,0	21,2	27,5
Maximum current (FLA)	230V/1	°	A	16,5	16,5	19,7	23,7	-	-	-	-	-	-	-
	400V/3N	°	A	6,0	6,0	6,7	8,7	11,3	13,5	16,3	17,3	22,0	26,0	32,0
	230V/1	P|A	A	17,32	17,33	20,54	24,56	-	-	-	-	-	-	-
	400V/3N	P|A	A	6,82	6,83	7,54	9,56	12,65	14,90	17,76	18,79	23,03	27,73	33,95
	400V/3N	N|Q	A	-	-	-	-	12	14	17	18	24	28	34
Starting current (LRA)	230V/1	°	A	59,5	62,5	83,7	98,7	-	-	-	-	-	-	-
	400V/3N	°	A	26,5	32,5	35,7	48,7	65,3	75,3	102,3	96,3	76,0	87,0	117,0
	230V/1	P|A	A	60,32	63,33	84,54	99,56	-	-	-	-	-	-	-
	400V/3N	P|A	A	27,32	33,33	36,54	49,56	66,65	76,70	103,76	97,79	77,03	88,73	118,95
	400V/3N	N|Q	A	-	-	-	-	66,11	76,17	103,25	97,28	77,93	89,12	119,40

Data in accordance with UNI EN14511: 2011

1. COOLING

Evaporator outlet water temperature	7°C
Evaporator inlet water temperature	12°C
External air temperature	35°C

2. HEATING

Condenser water outlet temperature	45°C
Condenser inlet water temperature	40°C
Δt water	5 K

Heat pump model ECL H				020H	025H	030H	040H	050H	070H	080H	090H	102H	152H	202H
Cooling capacity **1**		°	kW	6,81	7,39	8,93	11,46	16,05	19,71	24,50	26,46	31,48	38,64	49,09
		P|A	kW	6,90	7,49	9,06	11,61	16,27	19,98	24,83	26,87	32,09	39,39	49,80
		N|Q	kW	-	-	-	-	16,55	20,28	25,16	27,21	32,19	39,68	50,20
Power input		°	kW	1,98	2,16	2,66	3,48	4,33	5,24	6,81	7,20	9,24	10,99	14,94
		P|A	kW	1,98	2,14	2,61	3,42	4,25	5,12	6,64	6,96	9,29	11,34	15,45
		N|Q	kW	-	-	-	-	4,36	5,22	6,75	7,07	9,76	11,30	15,34
Water flow rate		**ALL**	l/h	1185	1287	1555	1992	2788	3423	4259	4610	5478	6720	8533
Total pressure drop		°	kPa	43	44	45	42	48	49	62	84	80	82	88
Available head		**P|A**	kPa	52	52	50	45	69	67	51	47	42	52	20
SYSTEM SIDE		**N|Q**	kPa	-	-	-	-	138	137	117	112	72	138	103
Heating capacity **2**		°	kW	6,54	7,39	8,87	11,17	14,74	18,21	23,39	25,54	30,60	36,91	47,80
		P|A	kW	6,46	7,29	8,74	11,02	14,54	17,96	23,08	25,17	29,98	36,11	46,96
		N|Q	kW	-	-	-	-	14,28	17,67	22,76	24,83	29,85	35,87	46,64
Power input		°	kW	1,70	1,90	2,34	2,92	3,81	4,50	5,81	6,37	8,04	9,53	12,59
		P|A	kW	1,71	1,88	2,31	2,87	3,75	4,39	6,16	6,15	8,06	9,79	12,95
		N|Q	kW	-	-	-	-	3,84	4,49	5,76	6,26	8,48	9,80	12,91
Water flow rate		**ALL**	l/h	1113	1256	1508	1902	2513	3105	3985	4343	5205	6281	8134
Total pressure drop		°	kPa	37	41	41	38	38	40	53	72	77	76	87
Available head		**P|A**	kPa	56	54	53	49	78	76	60	56	58	82	47
SYSTEM SIDE		**N|Q**	kPa	-	-	-	-	153	151	130	124	98	161	124
EFFICIENCIES														
EER		°	W/W	3,43	3,42	3,36	3,29	3,70	3,76	3,59	3,67	3,40	3,51	3,28
		P|A	W/W	3,49	3,50	3,47	3,40	3,83	3,91	3,74	3,86	3,46	3,47	3,22
		N|Q	W/W	-	-	-	-	3,79	3,89	3,73	3,85	3,30	3,51	3,27
COP		°	W/W	3,84	3,90	3,79	3,83	3,87	4,05	4,02	4,01	3,71	3,87	3,80
		P|A	W/W	3,78	3,87	3,79	3,84	3,88	4,09	4,08	4,09	3,72	3,69	3,63
		N|Q	W/W	-	-	-	-	3,73	3,94	3,96	3,97	3,52	3,67	3,61
ESEER		°		3.43	3.43	3.40	3.33	3.74	3.82	3.65	3.71	3.85	3.99	3.94
		P|A		3.50	3.54	3.55	3.48	3.85	3.97	3.80	3.95	3.96	3.94	3.82
		N|Q		-	-	-	-	3.66	3.77	3.61	3.75	3.61	3.74	3.62
ELECTRICAL DATA														
Total current input cooling mode	230V/1	°	A	6,6	7,6	8,5	11,1	-	-	-	-	-	-	-
	400V/3N	°	A	3,8	4,3	4,9	6,4	9,0	10,0	12,6	13,2	16,2	19,5	25,5
	230V/1	**P|A**	A	7,5	8,4	9,3	12,0	-	-	-	-	-	-	-
	400V/3N	**P|A**	A	4,7	5,2	5,7	7,3	10,4	11,5	14,2	14,8	17,3	21,4	27,6
	400V/3N	**N|Q**	A	-	-	-	-	9,9	11,0	13,6	14,3	18,3	21,8	28,1
Total current input heating mode	230V/1	°	A	5,6	6,5	8,0	10,5							
	400V/3N	°	A	3,2	3,8	4,6	6,0	8,1	9,1	11,4	12,2	15,3	17,2	22,7
	230V/1	**P|A**	A	6,5	7,4	8,9	11,3	-	-	-	-	-	-	-
	400V/3N	**P|A**	A	4,1	4,6	5,5	6,9	9,5	10,5	12,9	13,8	16,4	18,9	24,7
	400V/3N	**N|Q**	A	-	-	-	-	9,0	10,0	12,4	13,3	17,3	19,4	25,2
Maximum current (FLA)	230V/1	°	A	16,5	16,5	19,7	23,7	-	-	-	-	-	-	-
	400V/3N	°	A	6,0	6,0	6,7	8,7	11,3	13,5	16,3	17,3	22,0	26,0	32,0
	230V/1	**P|A**	A	17,32	17,33	20,54	24,56	-	-	-	-	-	-	-
	400V/3N	**P|A**	A	6,82	6,83	7,54	9,56	12,65	14,90	17,76	18,79	23,03	27,73	33,95
	400V/3N	**N|Q**	A	-	-	-	-	12	14	17	18	24	28	34
Starting current (LRA)	230V/1	°	A	59,5	62,5	83,7	98,7	-	-	-	-	-	-	-
	400V/3N	°	A	26,5	32,5	35,7	48,7	65,3	75,3	102,3	96,3	76,0	87,0	117,0
	230V/1	**P|A**	A	60,32	63,33	84,54	99,56	-	-	-	-	-	-	-
	400V/3N	**P|A**	A	27,32	33,33	36,54	49,56	66,65	76,70	103,76	97,79	77,03	88,73	118,95
	400V/3N	**N|Q**	A	-	-	-	-	66,11	76,17	103,25	97,28	77,93	89,12	119,40

Data in accordance with UNI EN14511: 2011

1. COOLING

Evaporator outlet water temperature	18°C
Evaporator inlet water temperature	23°C
External air temperature	35°C

2. HEATING

Condenser outlet water temperature	35°C
Condenser inlet water temperature	30°C
Δt water	5 K

Cooling only model ECL				020	025	030	040	050	070	080	090	102	152	202
SCROLL COMPRESSORS														
Quantity /circuits		n°/n°		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	2/1	2/1	2/1
Compressor crankcase heaters		n°/kW		1x70	1x70	1x70	1x70	1x35	1x35	1x35	1x65	2X35	2X35	2X65
Capacity control		%		0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-50-100	0-50-100	0-50-100
HEAT EXCHANGER SYSTEM SIDE														
Quantity			n°	1	1	1	1	1	1	1	1	1	1	1
Water content			dm^3											
Hydraulic connections	IN|OUT		Ø	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼
PROTECTIVE RATING														
IP				24										
HYDRONIC MODULE SYSTEM SIDE														
BUFFER TANK														
Volume			l	25	25	35	35	75	75	75	75	100	100	100
Heater quantity / electrical input			n°/W	ACCESSORY										
EXPANSION TANK														
Quantity/ volume			n°/l	2	2	2	2	5	5	5	5	8	8	8
Pressure setting			bar	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5
SAFETY VALVE														
Quantity / pressure relief rating			n°/bar	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6
DESUPERHEATER														
Quantity			n°	-	-	-	-	1	1	1	1	1	1	1
Water content			dm^3	-	-	-	-							
Hydraulic connections	IN|OUT		Ø	-	-	-	-	1"	1"	1"	1"	1"	1"	1"
STANDARD AXIAL FANS														
Quantity			n°	1	1	1	1	2	2	2	2	2	2	2
Air flow cooling mode			m^3/h	2500	2500	3500	3500	7200	7200	7300	7200	14000	13500	13500
Current input cooling mode			A	0,085	0,085	0,14	0,14	0,28	0,28	0,28	0,28	0,74	0,74	0,74
Power input cooling mode			kW	0,45	0,45	0,66	0,66	1,32	1,32	1,32	1,32	3,2	3,2	3,2
SOUND DATA														
Sound pressure			dB(A)	30	30	37	37	38	38	38	37	44	45	46
Sound power			dB(A)	61	61	68	68	69	69	69	68	76	77	78
CHARGE (The data provided can be amended at any time by AIREDALE if deemed necessary)														
Refrigerant R410A	°	**°**	kg	1.25	1.30	1.56	2.00	3.48	3.79	3.73	4.70	5.9	5.9	5.9
		P	kg	1.25	1.30	1.50	2.00	3.48	3.79	3.73	4.70			
		A	kg	1.30	1.30	1.56	2.00	3.41	3.74	3.73	4.70			
	H	**°**	kg	1.50	1.50	1.80	1.99	4.15	4.10	4.14	5.08	12.7	16.0	17.0
		P	kg	1.50	1.50	1.80	1.99	4.15	4.10	4.14	5.08			
		A	kg	1.50	1.50	1.80	1.99	4.15	4.15	4.14	5.08			
Oil			kg											
		A	tipo											
DIMENSIONS - WEIGHTS														
Height		**°|P**	mm	868	868	1000	1000	1252	1252	1252	1252	1450	1450	1450
		A	mm	868	868	1015	1015	1281	1281	1281	1281			
		Q	mm	-	-	-	-	1281	1281	1281	1281			
Width		**°|P**	mm	900	900	900	900	1124	1124	1124	1124	750	750	750
		A	mm	1124	1124	1124	1124	1165	1165	1165	1165			
		Q	mm	-	-	-	-	1165	1165	1165	1165			
Depth (without feet/with feet)		**°|P**	mm	310/354	310/354	310/354	310/354	384/428	384/428	384/428	384/428	1750	1750	1750
		A	mm	384/428	384/428	384/428	384/428	550	550	550	550			
		Q	mm	-	-	-	-	550	550	550	550			
Weight		**°**	kg	75	75	86	86	120	120	120	156	270	293	329
		P	kg	77	77	91	91	127	127	163	163	288	314	350
		A	kg	99	99	103	103	147	147	147	183	338	364	400
		Q	kg	-	-	-	-	151	151	187	187			

Sound power
AIREDALE determines the value of sound power on the basis of measurements made in accordance with ISO 9614-2, as required for Eurovent certification.

Sound pressure
Sound pressure in free field conditions over a reflective plane (directivity factor Q=2), at 10 m distance from the external surface of the unit, in accordance with ISO 3744.

Condensing unit model ECL C				020C	025C	030C	040C	050C	070C	080C	090C	102C	152C	202C
Cooling capacity			kW	5,7	6	7,5	9,6	13,7	16,8	20,8	22,5	26,9	33,4	43,7
Power input		°	kW	1,85	2,05	2,5	3,3	4,1	5	6,5	6,8	8,0	10,2	13,5
EFFICIENCIES														
EER		°	W/W	3,08	2,93	3,00	2,91	3,34	3,36	3,20	3,31	3,36	3,27	3,24
UNIT PROTECTIVE RATING														
IP				24	24	24	24	24	24	24	24	24	24	24
ELECTRICAL DATA														
Total current input	230V/1		A	9,50	10,00	13,00	16,30	-	-	-	-	-	-	-
	400V/3N		A	3,70	4,20	4,70	6,30	8,90	9,90	12,40	13,10	15,6	18,8	24,7
Maximum current (FLA)	230V/1		A	16,5	16,5	19,7	23,7	-	-	-	-	-	-	-
	400V/3N		A	6	6	6,7	8,7	11,3	13,5	16,3	17,3	22	26	32
Starting current (LRA)	230V/1		A	59,5	62,5	83,7	98,7	-	-	-	-	-	-	-
	400V/3N		A	26,5	32,5	35,7	48,7	65,3	75,3	102,3	96,3	76	87	117
SCROLL COMPRESSORS														
Quantity /circuits		n°/n°		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	2/1	2/1	2/1
Compressor crankcase heaters		n°/kW		1x70	1x70	1x70	1x70	1x35	1x35	1x35	1x65	2X35	2X35	2X65
Capacity control		%		0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-50-100	0-50-100	0-50-100
STANDARD AXIAL FANS														
Quantity			n°	1	1	1	1	2	2	2	2	2	2	2
Air flow cooling mode			m^3/h	2500	2500	3500	3500	7200	7200	7300	7200	14000	13500	13500
Current input cooling mode			A	0,085	0,085	0,14	0,14	0,28	0,28	0,28	0,28	3,2	3,2	3,2
Power input cooling mode			kW	0,45	0,45	0,66	0,66	1,32	1,32	1,32	1,32	0,74	0,74	0,74
CHARGE (The data provided can be amended at any time by AIREDALE if deemed necessary)														
Refrigerant R410A			kg	1,25	1,30	1,56	2,00	3,48	3,79	3,73	4,70			
Oil			kg											
REFRIGERANT CONNECTIONS														
Gas line			Ø	15,88	15,88	15,88	15,88	22	22	22	28	28	28	28
Liquid line			Ø	9,52	9,52	12,7	12,7	15,88	15,88	15,88	15,88	15,88	15,88	15,88
DIMENSIONS - WEIGHTS														
Height			mm	868	868	1000	1000	1252	1252	1252	1252	1450	1450	1450
Width			mm	900	900	900	900	1124	1124	1124	1124	750	750	750
Depth (without feet/with feet)			mm	310/354	310/354	310/354	310/354	384/428	384/428	384/428	384/428	1750	1750	1750
Weight			kg	70	70	78	78	110	110	141	141			

COOLING

Evaporating temperature	5°C
External air temperature	35 °C

Sound power

AIREDALE determines the value of sound power on the basis of measurements made in accordance with ISO 9614-2, as required for Eurovent certification.

Sound pressure

Sound pressure in free field conditions over a reflective plane (directivity factor Q=2), at 10 m distance from the external surface of the unit, in accordance with ISO 3744.

8. OPERATING LIMITS

The units in standard configuration are not suited for installation in saline environments.
For the operating limits refer to the diagrams which are valid for Δt= 5K.

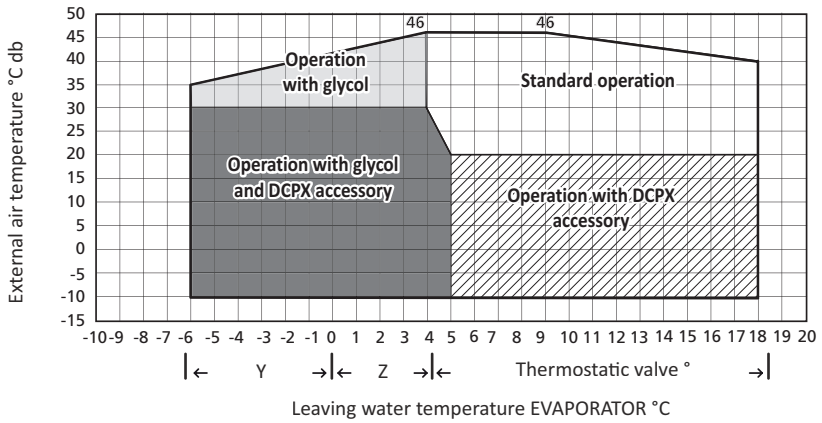
WARNING
If operation outside of these limits is required we first recommend contacting our commercial technical services.

WARNING
If the unit is installed in particularly windy locations the provision of wind barriers may be necessary to avoid malfunctions.

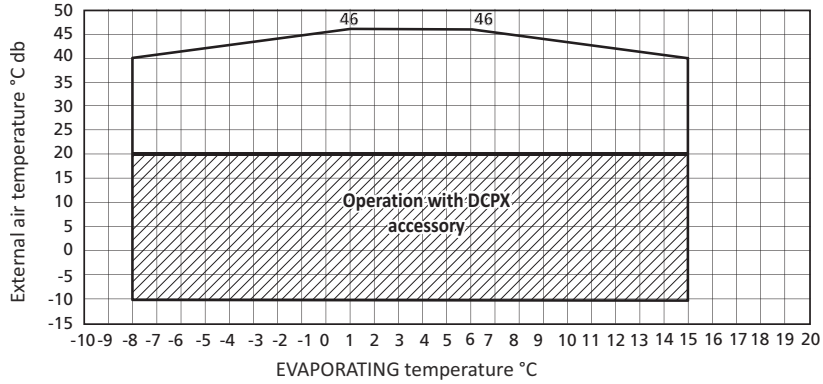
Note:

8 **In SUMMER mode the unit can be started with external air 46°C and inlet water 35°C.**
In WINTER operation the unit can be started with external air -15°C and inlet water 20°C.
Operation in these conditions is only permitted for a short time and to bring the system to operating temperature.
To reduce this operating time it is recommended to install a three way valve to allow water to be bypassed from the system, until the permitted operating limits of the unit are reached.

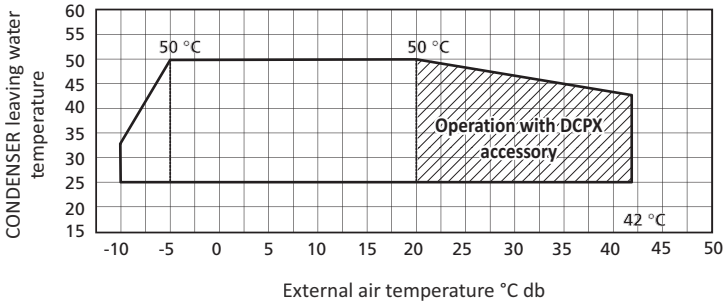
8.1. COOLING MODE [8]



8.2. COOLING MODE FOR CONDENSING UNIT VERSIONS "C"



8.3. HEATING MODE [8]



8.4. MAXIMUM RATINGS

REFRIGERANT SIDE		High pressure side	Low pressure side
Maximum permitted pressure	bar	42	25
Maximum permitted temperature	°C	120	52
Minimum permitted temperature COOLING ONLY VERSIONS	°C	-10	-16
Minimum permitted temperature HEAT PUMP VERSIONS	°C	-10	-10

9. OUTPUTS AND CAPACITIES DIFFERENT THAN NOMINAL FOR COOLING ONLY

9.1. ECL 020 COOLING ONLY version STANDARD (230V/1/50Hz - 400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	4,87	1,27	3,82	4,60	1,45	3,16	4,31	1,63	2,64	4,02	1,80	2,24	-	-	-	-	-	-	-	-	-
-4	30	5,15	1,29	3,99	4,86	1,47	3,31	4,56	1,64	2,77	4,26	1,81	2,35	-	-	-	-	-	-	-	-	-
-2	25	5,46	1,30	4,19	5,15	1,48	3,48	4,84	1,65	2,93	4,52	1,82	2,48	-	-	-	-	-	-	-	-	-
0	20	5,77	1,31	4,41	5,45	1,49	3,66	5,11	1,66	3,07	4,77	1,83	2,61	4,43	1,97	2,25	-	-	-	-	-	-
2	15	6,07	1,32	4,61	5,73	1,49	3,84	5,38	1,67	3,22	5,03	1,84	2,74	4,68	1,98	2,36	-	-	-	-	-	-
4	10	6,37	1,33	4,79	6,01	1,51	3,98	5,65	1,69	3,35	5,28	1,85	2,85	4,91	2,00	2,46	4,55	2,10	2,17	4,48	2,11	2,12
6	0	6,70	1,34	5,00	6,32	1,52	4,17	5,94	1,70	3,50	5,56	1,87	2,97	5,17	2,02	2,57	4,80	2,12	2,26	4,72	2,14	2,21
7	0	6,83	1,34	5,08	6,44	1,52	4,23	6,06	1,70	3,55	**5,65**	**1,89**	**3,00**	5,28	2,02	2,61	4,90	2,13	2,30	4,82	2,15	2,24
8	0	6,95	1,37	5,08	6,57	1,54	4,25	6,17	1,72	3,58	5,77	1,89	3,06	5,38	2,03	2,65	4,99	2,14	2,34	4,92	2,15	2,28
10	0	7,21	1,39	5,19	6,80	1,56	4,35	6,40	1,74	3,67	5,99	1,91	3,14	5,59	2,05	2,73	5,19	2,15	2,41	-	-	-
12	0	7,45	1,40	5,30	7,04	1,58	4,45	6,62	1,76	3,76	6,20	1,92	3,22	5,79	2,06	2,81	-	-	-	-	-	-
14	0	7,69	1,42	5,42	7,27	1,60	4,55	6,84	1,77	3,85	6,41	1,94	3,31	5,99	2,07	2,89	-	-	-	-	-	-
16	0	7,93	1,44	5,52	7,50	1,61	4,64	7,06	1,79	3,94	6,62	1,95	3,39	6,19	2,09	2,97	-	-	-	-	-	-
18	0	8,17	1,45	5,61	7,72	1,63	4,72	7,27	1,81	4,02	**6,82**	**1,97**	**3,46**	6,39	2,10	3,04	-	-	-	-	-	-

9.2. ECL 020 COOLING ONLY WITH PUMP version P - WITH PUMP AND BUFFER TANK

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	4,93	1,30	3,79	4,65	1,49	3,13	4,36	1,67	2,60	4,06	1,85	2,20	-	-	-	-	-	-	-	-	-
-4	30	5,22	1,31	3,98	4,92	1,49	3,30	4,61	1,68	2,75	4,30	1,85	2,33	-	-	-	-	-	-	-	-	-
-2	25	5,53	1,32	4,19	5,21	1,50	3,47	4,89	1,69	2,90	4,56	1,86	2,45	-	-	-	-	-	-	-	-	-
0	20	5,84	1,33	4,41	5,51	1,51	3,64	5,17	1,69	3,05	4,82	1,86	2,59	4,48	2,01	2,23	-	-	-	-	-	-
2	15	6,14	1,33	4,61	5,80	1,51	3,83	5,44	1,70	3,20	5,08	1,87	2,71	4,72	2,02	2,34	-	-	-	-	-	-
4	10	6,44	1,34	4,80	6,08	1,53	3,98	5,70	1,71	3,33	5,33	1,88	2,83	4,96	2,03	2,44	4,59	2,14	2,14	4,51	2,16	2,09
6	0	6,77	1,35	5,01	6,39	1,54	4,16	6,00	1,72	3,48	5,61	1,90	2,95	5,22	2,06	2,54	4,83	2,17	2,23	4,76	2,19	2,18
7	0	6,90	1,35	5,10	6,51	1,54	4,23	6,12	1,73	3,54	**5,71**	**1,92**	**2,98**	5,32	2,06	2,58	4,93	2,18	2,26	4,86	2,20	2,21
8	0	7,03	1,38	5,11	6,64	1,56	4,26	6,23	1,74	3,57	5,83	1,92	3,04	5,43	2,07	2,63	5,04	2,18	2,31	4,96	2,20	2,25
10	0	7,29	1,39	5,23	6,88	1,58	4,37	6,46	1,76	3,67	6,05	1,93	3,13	5,64	2,08	2,71	5,23	2,19	2,39	-	-	-
12	0	7,54	1,41	5,36	7,12	1,59	4,48	6,69	1,77	3,77	6,27	1,95	3,22	5,84	2,09	2,80	-	-	-	-	-	-
14	0	7,78	1,42	5,49	7,35	1,60	4,59	6,92	1,79	3,87	6,48	1,96	3,31	6,05	2,10	2,88	-	-	-	-	-	-
16	0	8,03	1,43	5,62	7,58	1,61	4,70	7,14	1,80	3,97	6,69	1,97	3,40	6,25	2,11	2,96	-	-	-	-	-	-
18	0	8,27	1,44	5,72	7,81	1,63	4,79	7,36	1,81	4,05	**6,90**	**1,98**	**3,49**	6,46	2,12	3,04	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

Data to UNI EN14511: 2011

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table.
For temperatures and % glycol different than shown refer to Magellano

Selection not possible:

- Outside of operating limits

9.3. ECL 025 COOLING ONLY version STANDARD (230V/1/50Hz - 400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																						
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	5,30	1,38	3,84	5,00	1,58	3,17	4,69	1,77	2,65	4,38	1,95	2,24	-	-	-	-	-	-	-	-	-
-4	30	5,61	1,40	4,01	5,29	1,59	3,33	4,97	1,78	2,78	4,63	1,96	2,36	-	-	-	-	-	-	-	-	-
-2	25	5,94	1,41	4,21	5,61	1,60	3,50	5,26	1,80	2,93	4,91	1,97	2,49	-	-	-	-	-	-	-	-	-
0	20	6,27	1,42	4,41	5,92	1,61	3,67	5,56	1,81	3,08	5,19	1,99	2,61	4,82	2,14	2,25	-	-	-	-	-	-
2	15	6,61	1,43	4,62	6,24	1,62	3,84	5,86	1,82	3,23	5,47	1,99	2,74	5,09	2,15	2,37	-	-	-	-	-	-
4	10	6,93	1,44	4,80	6,54	1,63	4,00	6,14	1,83	3,36	5,74	2,01	2,85	5,34	2,17	2,47	4,95	2,28	2,17	4,87	2,29	2,12
6	0	7,29	1,45	5,01	6,88	1,65	4,17	6,46	1,85	3,50	6,05	2,03	2,98	5,63	2,19	2,57	5,22	2,31	2,26	5,14	2,32	2,21
7	0	7,43	1,46	5,10	7,01	1,65	4,24	6,59	1,85	3,56	**6,15**	**2,05**	**3,00**	5,74	2,20	2,61	5,33	2,32	2,30	5,24	2,34	2,25
8	0	7,57	1,48	5,10	7,14	1,68	4,26	6,71	1,87	3,59	6,28	2,05	3,06	5,85	2,21	2,65	5,43	2,32	2,34	5,35	2,34	2,29
10	0	7,84	1,51	5,20	7,40	1,70	4,36	6,96	1,89	3,68	6,52	2,07	3,15	6,08	2,22	2,73	5,65	2,34	2,42	-	-	-
12	0	8,11	1,52	5,32	7,66	1,72	4,46	7,20	1,91	3,77	6,75	2,09	3,23	6,30	2,24	2,81	-	-	-	-	-	-
14	0	8,37	1,54	5,43	7,91	1,74	4,56	7,44	1,93	3,86	6,98	2,10	3,31	6,52	2,25	2,89	-	-	-	-	-	-
16	0	8,63	1,56	5,54	8,16	1,75	4,65	7,68	1,95	3,95	7,20	2,12	3,40	6,73	2,27	2,97	-	-	-	-	-	-
18	0	8,89	1,58	5,63	8,40	1,77	4,74	7,91	1,97	4,02	**7,41**	**2,14**	**3,46**	6,95	2,28	3,04	-	-	-	-	-	-

9.4. ECL 025 COOLING ONLY WITH PUMP version P - WITH BUFFER TANK AND PUMP version A (230V/1/50Hz - 400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																						
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	5,36	1,40	3,83	5,06	1,60	3,15	4,74	1,81	2,62	4,42	1,99	2,22	-	-	-	-	-	-	-	-	-
-4	30	5,68	1,41	4,02	5,36	1,61	3,32	5,02	1,81	2,77	4,68	2,00	2,35	-	-	-	-	-	-	-	-	-
-2	25	6,02	1,43	4,23	5,68	1,62	3,50	5,33	1,82	2,93	4,97	2,01	2,48	-	-	-	-	-	-	-	-	-
0	20	6,35	1,43	4,44	5,99	1,63	3,67	5,62	1,83	3,07	5,25	2,02	2,60	4,87	2,17	2,25	-	-	-	-	-	-
2	15	6,69	1,44	4,65	6,31	1,64	3,86	5,92	1,84	3,22	5,53	2,02	2,73	5,14	2,18	2,36	-	-	-	-	-	-
4	10	7,01	1,45	4,84	6,61	1,65	4,01	6,21	1,85	3,36	5,80	2,04	2,85	5,39	2,20	2,45	4,99	2,32	2,15	4,91	2,34	2,10
6	0	7,37	1,46	5,06	6,95	1,66	4,19	6,53	1,86	3,50	6,10	2,06	2,97	5,68	2,22	2,56	5,26	2,35	2,24	5,18	2,37	2,19
7	0	7,51	1,46	5,15	7,09	1,66	4,27	6,66	1,87	3,56	**6,21**	**2,07**	**3,00**	5,80	2,23	2,60	5,37	2,36	2,28	5,29	2,38	2,23
8	0	7,65	1,48	5,16	7,22	1,68	4,29	6,79	1,88	3,60	6,35	2,07	3,06	5,91	2,24	2,64	5,48	2,36	2,32	5,40	2,38	2,27
10	0	7,93	1,50	5,28	7,49	1,70	4,40	7,04	1,90	3,70	6,58	2,09	3,15	6,14	2,25	2,73	5,70	2,37	2,40	-	-	-
12	0	8,20	1,52	5,41	7,75	1,72	4,51	7,28	1,92	3,80	6,82	2,10	3,24	6,36	2,26	2,81	-	-	-	-	-	-
14	0	8,47	1,53	5,54	8,00	1,73	4,63	7,53	1,93	3,90	7,05	2,11	3,33	6,58	2,27	2,90	-	-	-	-	-	-
16	0	8,74	1,54	5,67	8,25	1,74	4,73	7,77	1,94	4,00	7,28	2,13	3,42	6,81	2,28	2,98	-	-	-	-	-	-
18	0	9,00	1,56	5,77	8,50	1,76	4,83	8,01	1,96	4,08	**7,50**	**2,14**	**3,54**	7,03	2,29	3,06	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

Data to UNI EN14511: 2011

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table.
For temperatures and % glycol different than shown refer to Magellano

Selection not possible:

- Outside of operating limits

9.5. ECL 030 COOLING ONLY version STANDARD (230V/1/50Hz - 400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	6,41	1,69	3,78	6,06	1,94	3,12	5,68	2,18	2,60	5,30	2,40	2,21	-	-	-	-	-	-	-	-	-
-4	30	6,78	1,72	3,95	6,40	1,95	3,28	6,01	2,19	2,74	5,61	2,41	2,32	-	-	-	-	-	-	-	-	-
-2	25	7,19	1,73	4,15	6,79	1,97	3,44	6,37	2,21	2,89	5,95	2,42	2,46	-	-	-	-	-	-	-	-	-
0	20	7,59	1,75	4,35	7,17	1,98	3,62	6,73	2,22	3,03	6,28	2,44	2,58	5,84	2,62	2,23	-	-	-	-	-	-
2	15	8,00	1,75	4,56	7,55	1,99	3,80	7,09	2,23	3,18	6,62	2,45	2,70	6,16	2,64	2,33	-	-	-	-	-	-
4	10	8,38	1,77	4,73	7,91	2,01	3,94	7,43	2,25	3,30	6,95	2,47	2,81	6,47	2,66	2,43	5,99	2,80	2,14	5,90	2,82	2,09
6	0	8,82	1,78	4,94	8,32	2,02	4,11	7,82	2,27	3,45	7,31	2,50	2,93	6,81	2,69	2,53	6,31	2,83	2,23	6,22	2,86	2,18
7	0	8,99	1,79	5,02	8,48	2,03	4,18	7,97	2,27	3,51	**7,44**	**2,52**	**2,96**	6,95	2,70	2,57	6,44	2,85	2,26	6,35	2,87	2,21
8	0	9,16	1,82	5,02	8,64	2,06	4,20	8,12	2,30	3,54	7,60	2,52	3,02	7,08	2,71	2,61	6,57	2,85	2,30	6,47	2,88	2,25
10	0	9,49	1,85	5,13	8,96	2,09	4,29	8,42	2,32	3,62	7,88	2,55	3,10	7,35	2,73	2,69	6,83	2,87	2,38	-	-	-
12	0	9,81	1,87	5,24	9,26	2,11	4,39	8,71	2,35	3,71	8,16	2,57	3,18	7,62	2,75	2,77	-	-	-	-	-	-
14	0	10,13	1,89	5,36	9,57	2,13	4,49	9,00	2,37	3,80	8,44	2,59	3,27	7,88	2,77	2,85	-	-	-	-	-	-
16	0	10,44	1,91	5,46	9,87	2,15	4,59	9,29	2,39	3,89	8,72	2,61	3,35	8,15	2,79	2,93	-	-	-	-	-	-
18	0	10,75	1,94	5,55	10,16	2,18	4,67	9,57	2,41	3,97	**8,96**	**2,63**	**3,40**	8,41	2,81	3,00	-	-	-	-	-	-

9.6. ECL 030 COOLING ONLY WITH PUMP version P - WITH BUFFER TANK AND PUMP version A (230V/1/50Hz - 400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	6,49	1,70	3,83	6,13	1,95	3,15	5,75	2,20	2,61	5,35	2,43	2,20	-	-	-	-	-	-	-	-	-
-4	30	6,88	1,71	4,02	6,49	1,96	3,32	6,08	2,20	2,76	5,68	2,43	2,33	-	-	-	-	-	-	-	-	-
-2	25	7,29	1,72	4,23	6,87	1,97	3,49	6,45	2,21	2,92	6,02	2,44	2,46	-	-	-	-	-	-	-	-	-
0	20	7,69	1,74	4,43	7,26	1,99	3,66	6,81	2,22	3,06	6,36	2,45	2,59	5,90	2,64	2,24	-	-	-	-	-	-
2	15	8,10	1,74	4,64	7,64	1,99	3,85	7,17	2,23	3,21	6,70	2,46	2,72	6,23	2,66	2,34	-	-	-	-	-	-
4	10	8,49	1,76	4,84	8,01	2,00	4,00	7,52	2,25	3,34	7,03	2,48	2,84	6,53	2,68	2,44	6,05	2,83	2,14	5,95	2,85	2,09
6	0	8,92	1,77	5,05	8,42	2,01	4,18	7,91	2,27	3,49	7,39	2,50	2,95	6,88	2,71	2,54	6,37	2,86	2,23	6,27	2,88	2,18
7	0	9,10	1,77	5,14	8,58	2,02	4,25	8,06	2,27	3,55	**7,52**	**2,52**	**2,98**	7,02	2,72	2,58	6,51	2,87	2,27	6,41	2,90	2,21
8	0	9,27	1,80	5,15	8,74	2,04	4,28	8,22	2,29	3,59	7,69	2,52	3,05	7,16	2,72	2,63	6,64	2,88	2,31	6,54	2,90	2,26
10	0	9,60	1,82	5,27	9,06	2,07	4,38	8,52	2,31	3,68	7,97	2,54	3,13	7,43	2,74	2,71	6,90	2,89	2,39	-	-	-
12	0	9,93	1,84	5,40	9,38	2,09	4,50	8,82	2,33	3,78	8,26	2,56	3,22	7,70	2,76	2,80	-	-	-	-	-	-
14	0	10,26	1,86	5,53	9,69	2,10	4,61	9,11	2,35	3,88	8,54	2,58	3,32	7,97	2,77	2,88	-	-	-	-	-	-
16	0	10,57	1,87	5,65	9,99	2,12	4,71	9,40	2,37	3,98	8,82	2,59	3,40	8,24	2,78	2,96	-	-	-	-	-	-
18	0	10,89	1,89	5,76	10,29	2,14	4,81	9,69	2,39	4,06	**9,07**	**2,61**	**3,47**	8,51	2,80	3,04	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

Data to UNI EN14511: 2011

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table.
For temperatures and % glycol different than shown refer to Magellano

Selection not possible:

- Outside of operating limits

9.7. ECL 040 COOLING ONLY version STANDARD (230V/1/50Hz - 400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																						
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	8,21	2,23	3,67	7,75	2,55	3,03	7,27	2,87	2,53	6,78	3,17	2,14	-	-	-	-	-	-	-	-	-
-4	30	8,69	2,26	3,84	8,20	2,58	3,18	7,69	2,89	2,66	7,18	3,18	2,25	-	-	-	-	-	-	-	-	-
-2	25	9,20	2,28	4,03	8,69	2,60	3,34	8,16	2,91	2,80	7,61	3,20	2,38	-	-	-	-	-	-	-	-	-
0	20	9,72	2,30	4,23	9,17	2,61	3,51	8,61	2,93	2,94	8,04	3,22	2,50	7,47	3,46	2,16	-	-	-	-	-	-
2	15	10,25	2,31	4,43	9,66	2,62	3,68	9,07	2,94	3,08	8,48	3,23	2,62	7,88	3,48	2,26	-	-	-	-	-	-
4	10	10,73	2,34	4,60	10,13	2,65	3,82	9,51	2,96	3,21	8,89	3,26	2,72	8,28	3,51	2,36	7,67	3,70	2,07	7,54	3,72	2,03
6	0	11,29	2,35	4,80	10,66	2,67	3,99	10,01	2,99	3,35	9,36	3,29	2,84	8,72	3,55	2,45	8,08	3,74	2,16	7,96	3,77	2,11
7	0	11,51	2,36	4,88	10,86	2,68	4,06	10,21	3,00	3,40	**9,53**	**3,32**	**2,87**	8,89	3,57	2,49	8,25	3,76	2,19	8,12	3,79	2,14
8	0	11,72	2,40	4,88	11,06	2,71	4,08	10,40	3,03	3,43	9,73	3,33	2,93	9,07	3,58	2,53	8,42	3,77	2,23	8,29	3,80	2,18
10	0	12,14	2,44	4,98	11,47	2,75	4,17	10,78	3,06	3,52	10,09	3,36	3,01	9,41	3,61	2,61	8,75	3,79	2,31	-	-	-
12	0	12,56	2,47	5,10	11,86	2,78	4,27	11,16	3,09	3,61	10,45	3,39	3,09	9,76	3,63	2,69	-	-	-	-	-	-
14	0	12,97	2,49	5,21	12,25	2,81	4,36	11,53	3,12	3,69	10,81	3,41	3,17	10,09	3,65	2,76	-	-	-	-	-	-
16	0	13,37	2,52	5,31	12,63	2,84	4,45	11,89	3,15	3,78	11,16	3,44	3,25	10,43	3,68	2,84	-	-	-	-	-	-
18	0	13,77	2,55	5,40	13,01	2,87	4,54	12,26	3,18	3,85	**11,48**	**3,47**	**3,31**	10,77	3,70	2,91	-	-	-	-	-	-

9.8. ECL 040 COOLING ONLY WITH PUMP version P - WITH BUFFER TANK AND PUMP version A (230V/1/50Hz - 400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																						
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	8,32	2,21	3,76	7,85	2,54	3,09	7,36	2,87	2,56	6,86	3,17	2,16	-	-	-	-	-	-	-	-	-
-4	30	8,81	2,23	3,95	8,31	2,55	3,25	7,79	2,88	2,71	7,27	3,18	2,29	-	-	-	-	-	-	-	-	-
-2	25	9,33	2,25	4,15	8,80	2,57	3,42	8,26	2,89	2,86	7,71	3,19	2,41	-	-	-	-	-	-	-	-	-
0	20	9,85	2,26	4,35	9,29	2,58	3,60	8,72	2,91	3,00	8,14	3,21	2,54	7,56	3,46	2,18	-	-	-	-	-	-
2	15	10,36	2,27	4,56	9,78	2,59	3,77	9,18	2,92	3,14	8,58	3,22	2,66	7,97	3,48	2,29	-	-	-	-	-	-
4	10	10,87	2,29	4,74	10,25	2,62	3,92	9,63	2,94	3,27	9,00	3,25	2,77	8,37	3,51	2,39	7,75	3,70	2,09	7,63	3,73	2,05
6	0	11,42	2,31	4,95	10,78	2,63	4,09	10,13	2,96	3,42	9,47	3,28	2,89	8,81	3,55	2,49	8,17	3,75	2,18	8,04	3,77	2,13
7	0	11,64	2,31	5,04	10,99	2,64	4,16	10,32	2,97	3,47	**9,64**	**3,30**	**2,92**	8,99	3,56	2,53	8,34	3,76	2,22	8,21	3,79	2,16
8	0	11,86	2,35	5,04	11,20	2,67	4,19	10,52	3,00	3,51	9,84	3,30	2,98	9,17	3,57	2,57	8,51	3,77	2,26	8,37	3,80	2,21
10	0	12,29	2,38	5,16	11,60	2,70	4,29	10,91	3,03	3,60	10,21	3,33	3,06	9,52	3,59	2,65	8,84	3,79	2,34	-	-	-
12	0	12,71	2,41	5,28	12,00	2,73	4,40	11,29	3,05	3,70	10,57	3,35	3,15	9,87	3,61	2,73	-	-	-	-	-	-
14	0	13,12	2,43	5,40	12,40	2,75	4,50	11,66	3,08	3,79	10,93	3,37	3,24	10,21	3,63	2,82	-	-	-	-	-	-
16	0	13,53	2,45	5,52	12,78	2,78	4,60	12,04	3,10	3,88	11,29	3,40	3,32	10,55	3,64	2,90	-	-	-	-	-	-
18	0	13,93	2,48	5,62	13,17	2,81	4,69	12,40	3,13	3,97	**11,62**	**3,42**	**3,40**	10,89	3,67	2,97	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

Data to UNI EN14511: 2011

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING
Outputs calculated with % glycol shown in table.
For temperatures and % glycol different than shown refer to Magellano

Selection not possible:
- Outside of operating limits

9.9. ECL 050 COOLING ONLY version STANDARD (400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	11,46	2,78	4,13	10,82	3,17	3,41	10,15	3,57	2,85	9,47	3,93	2,41	-	-	-	-	-	-	-	-	-
-4	30	12,13	2,81	4,32	11,45	3,20	3,58	10,75	3,59	2,99	10,03	3,95	2,54	-	-	-	-	-	-	-	-	-
-2	25	12,86	2,84	4,53	12,14	3,22	3,76	11,39	3,61	3,15	10,63	3,97	2,68	-	-	-	-	-	-	-	-	-
0	20	13,58	2,86	4,75	12,81	3,25	3,95	12,03	3,63	3,31	11,24	3,99	2,82	10,44	4,30	2,43	-	-	-	-	-	-
2	15	14,30	2,87	4,98	13,49	3,26	4,14	12,67	3,65	3,47	11,84	4,01	2,95	11,00	4,32	2,55	-	-	-	-	-	-
4	10	14,99	2,90	5,17	14,15	3,29	4,30	13,29	3,68	3,61	12,42	4,05	3,07	11,56	4,36	2,65	10,71	4,59	2,33	10,53	4,62	2,28
6	0	15,77	2,92	5,40	14,88	3,31	4,49	13,98	3,71	3,77	13,08	4,09	3,20	12,18	4,41	2,76	11,29	4,64	2,43	11,11	4,68	2,38
7	0	16,07	2,93	5,49	15,17	3,32	4,56	14,26	3,72	3,83	**13,31**	**4,12**	**3,23**	12,42	4,43	2,81	11,52	4,67	2,47	11,34	4,70	2,41
8	0	16,37	2,98	5,49	15,45	3,37	4,58	14,52	3,76	3,86	13,59	4,13	3,29	12,67	4,44	2,85	11,75	4,68	2,51	11,57	4,71	2,46
10	0	16,96	3,03	5,60	16,02	3,42	4,69	15,06	3,81	3,96	14,10	4,17	3,38	13,15	4,48	2,94	12,21	4,70	2,60	-	-	-
12	0	17,54	3,06	5,73	16,57	3,45	4,80	15,58	3,84	4,06	14,60	4,20	3,47	13,62	4,51	3,02	-	-	-	-	-	-
14	0	18,12	3,10	5,85	17,11	3,49	4,91	16,10	3,88	4,15	15,09	4,23	3,56	14,10	4,53	3,11	-	-	-	-	-	-
16	0	18,68	3,13	5,97	17,65	3,52	5,01	16,61	3,91	4,25	15,58	4,27	3,65	14,57	4,56	3,19	-	-	-	-	-	-
18	0	19,23	3,17	6,07	18,18	3,56	5,10	17,12	3,95	4,33	**16,08**	**4,30**	**3,74**	15,04	4,60	3,27	-	-	-	-	-	-

9.10. ECL 050 COOLING ONLY WITH PUMP version P - WITH PUMP AND BUFFER TANK version A (400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	11,63	2,75	4,23	10,97	3,16	3,48	10,29	3,56	2,89	9,60	3,94	2,44	-	-	-	-	-	-	-	-	-
-4	30	12,31	2,77	4,44	11,61	3,18	3,66	10,90	3,58	3,05	10,17	3,95	2,58	-	-	-	-	-	-	-	-	-
-2	25	13,04	2,80	4,66	12,31	3,20	3,85	11,55	3,59	3,22	10,78	3,96	2,72	-	-	-	-	-	-	-	-	-
0	20	13,77	2,82	4,89	12,99	3,21	4,05	12,19	3,61	3,38	11,38	3,98	2,86	10,57	4,30	2,46	-	-	-	-	-	-
2	15	14,49	2,83	5,12	13,67	3,22	4,24	12,83	3,62	3,54	11,99	4,00	3,00	11,14	4,32	2,58	-	-	-	-	-	-
4	10	15,19	2,85	5,33	14,33	3,25	4,41	13,46	3,65	3,68	12,58	4,03	3,12	11,70	4,36	2,69	10,83	4,59	2,36	10,66	4,63	2,30
6	0	15,96	2,87	5,56	15,07	3,27	4,60	14,15	3,68	3,84	13,23	4,07	3,25	12,32	4,40	2,80	11,42	4,65	2,46	11,24	4,69	2,40
7	0	16,27	2,88	5,66	15,36	3,28	4,68	14,43	3,69	3,91	**13,47**	**4,10**	**3,28**	12,57	4,42	2,84	11,65	4,67	2,49	11,47	4,71	2,44
8	0	16,57	2,93	5,66	15,64	3,32	4,71	14,70	3,73	3,95	13,76	4,10	3,35	12,82	4,43	2,89	11,89	4,68	2,54	11,71	4,71	2,48
10	0	17,17	2,96	5,79	16,21	3,36	4,82	15,24	3,76	4,05	14,27	4,14	3,45	13,30	4,46	2,98	12,36	4,70	2,63	-	-	-
12	0	17,76	2,99	5,93	16,77	3,39	4,94	15,77	3,79	4,16	14,78	4,17	3,55	13,79	4,48	3,08	-	-	-	-	-	-
14	0	18,34	3,02	6,07	17,32	3,42	5,06	16,30	3,82	4,26	15,28	4,19	3,64	14,27	4,50	3,17	-	-	-	-	-	-
16	0	18,91	3,05	6,20	17,86	3,45	5,17	16,82	3,85	4,37	15,78	4,22	3,74	14,75	4,53	3,26	-	-	-	-	-	-
18	0	19,47	3,09	6,30	18,40	3,49	5,27	17,33	3,89	4,46	**16,28**	**4,25**	**3,83**	15,22	4,55	3,34	-	-	-	-	-	-

9.11. ECL 050 COOLING ONLY WITH BUFFER TANK AND HIGH HEAD PUMP version Q - (400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	11,88	2,83	4,20	11,22	3,24	3,47	10,54	3,64	2,89	**(2)**			-	-	-	-	-	-	-	-	-
-4	30	12,57	2,86	4,39	11,87	3,26	3,64	11,15	3,66	3,05	10,41	4,03	2,58	-	-	-	-	-	-	-	-	-
-2	25	13,30	2,89	4,60	12,56	3,28	3,83	11,80	3,67	3,21	11,03	4,04	2,73	-	-	-	-	-	-	-	-	-
0	20	14,03	2,91	4,82	13,25	3,29	4,02	12,45	3,69	3,37	11,63	4,06	2,87	10,82	4,38	2,47	-	-	-	-	-	-
2	15	14,75	2,92	5,05	13,93	3,31	4,21	13,09	3,71	3,53	12,24	4,08	3,00	11,39	4,40	2,59	-	-	-	-	-	-
4	10	15,46	2,95	5,25	14,60	3,34	4,37	13,72	3,74	3,67	12,83	4,12	3,12	11,95	4,43	2,70	11,08	4,66	2,38	10,91	4,70	2,32
6	0	16,23	2,97	5,47	15,33	3,36	4,56	14,41	3,77	3,83	13,49	4,15	3,25	12,57	4,48	2,81	11,66	4,72	2,47	11,48	4,76	2,41
7	0	16,54	2,97	5,56	15,62	3,37	4,63	14,69	3,78	3,89	**13,73**	**4,18**	**3,28**	12,82	4,50	2,85	11,90	4,74	2,51	11,72	4,78	2,45
8	0	16,85	3,03	5,57	15,91	3,42	4,66	14,97	3,81	3,92	14,01	4,19	3,35	13,07	4,51	2,90	12,14	4,75	2,55	11,95	4,79	2,50
10	0	17,45	3,07	5,69	16,48	3,46	4,77	15,51	3,85	4,02	14,53	4,22	3,44	13,56	4,54	2,99	12,61	4,78	2,64	-	-	-
12	0	18,04	3,10	5,82	17,04	3,49	4,88	16,04	3,89	4,13	15,04	4,25	3,54	14,05	4,57	3,08	-	-	-	-	-	-
14	0	18,61	3,13	5,94	17,60	3,53	4,99	16,57	3,92	4,23	15,54	4,28	3,63	14,53	4,59	3,17	-	-	-	-	-	-
16	0	19,18	3,17	6,06	18,14	3,56	5,10	17,09	3,95	4,32	16,04	4,31	3,72	15,01	4,61	3,25	-	-	-	-	-	-
18	0	19,75	3,21	6,16	18,68	3,60	5,19	17,61	3,99	4,41	**16,55**	**4,35**	**3,81**	15,49	4,64	3,33	-	-	-	-	-	-

Data to UNI EN14511: 2011

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table.
For temperatures and % glycol different than shown refer to Magellano

Selection not possible:

- Outside of operating limits

9.12. ECL 070 COOLING ONLY version STANDARD (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	14,12	3,35	4,21	13,33	3,84	3,47	12,51	4,32	2,90	11,66	4,76	2,45	-	-	-	-	-	-	-	-	-
-4	30	14,95	3,39	4,40	14,11	3,87	3,65	13,24	4,35	3,05	12,35	4,78	2,58	-	-	-	-	-	-	-	-	-
-2	25	15,84	3,43	4,62	14,95	3,89	3,84	14,03	4,37	3,21	13,10	4,81	2,72	-	-	-	-	-	-	-	-	-
0	20	16,73	3,45	4,84	15,78	3,94	4,01	14,82	4,40	3,37	13,84	4,84	2,86	12,86	5,20	2,47	-	-	-	-	-	-
2	15	17,61	3,48	5,06	16,62	3,95	4,21	15,60	4,42	3,53	14,58	4,86	3,00	13,55	5,23	2,59	-	-	-	-	-	-
4	10	18,47	3,50	5,27	17,43	3,98	4,38	16,37	4,44	3,68	15,30	4,90	3,12	14,24	5,28	2,70	13,18	5,55	2,37	12,98	5,59	2,32
6	0	19,42	3,53	5,51	18,33	4,00	4,58	17,22	4,48	3,84	16,11	4,94	3,26	15,00	5,32	2,82	13,90	5,61	2,48	13,69	5,65	2,42
7	0	19,80	3,54	5,60	18,69	4,01	4,66	17,56	4,50	3,90	**16,39**	**4,98**	**3,29**	15,30	5,35	2,86	14,19	5,64	2,52	13,97	5,68	2,46
8	0	20,17	3,60	5,60	19,04	4,07	4,68	17,89	4,54	3,94	16,74	4,99	3,36	15,60	5,36	2,91	14,48	5,65	2,56	14,25	5,69	2,51
10	0	20,90	3,65	5,72	19,73	4,12	4,78	18,55	4,60	4,04	17,36	5,03	3,45	16,19	5,41	2,99	15,04	5,68	2,65	-	-	-
12	0	21,61	3,70	5,85	20,41	4,17	4,89	19,19	4,64	4,14	17,98	5,08	3,54	16,78	5,44	3,08	-	-	-	-	-	-
14	0	22,32	3,74	5,97	21,08	4,21	5,01	19,83	4,68	4,24	18,59	5,11	3,64	17,36	5,48	3,17	-	-	-	-	-	-
16	0	23,01	3,78	6,09	21,74	4,25	5,11	20,46	4,72	4,33	19,20	5,15	3,73	17,94	5,51	3,26	-	-	-	-	-	-
18	0	23,69	3,83	6,19	22,39	4,30	5,20	21,09	4,77	4,42	**19,74**	**5,21**	**3,79**	18,52	5,55	3,34	-	-	-	-	-	-

9.13. ECL 070 COOLING ONLY WITH PUMP version P - WITH PUMP AND BUFFER TANK version A (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	14,33	3,30	4,35	13,52	3,78	3,58	12,68	4,27	2,97	11,83	4,73	2,50	-	-	-	-	-	-	-	-	-
-4	30	15,17	3,33	4,56	14,31	3,80	3,76	13,43	4,29	3,13	12,53	4,74	2,65	-	-	-	-	-	-	-	-	-
-2	25	16,06	3,35	4,80	15,16	3,83	3,96	14,23	4,31	3,30	13,28	4,75	2,79	-	-	-	-	-	-	-	-	-
0	20	16,96	3,37	5,03	16,00	3,84	4,17	15,02	4,33	3,47	14,03	4,78	2,94	13,03	5,17	2,52	-	-	-	-	-	-
2	15	17,84	3,39	5,27	16,84	3,86	4,36	15,81	4,34	3,64	14,77	4,80	3,08	13,73	5,19	2,65	-	-	-	-	-	-
4	10	18,71	3,41	5,48	17,65	3,90	4,53	16,58	4,38	3,78	15,50	4,84	3,20	14,42	5,23	2,76	13,35	5,51	2,42	13,14	5,56	2,36
6	0	19,66	3,44	5,72	18,56	3,92	4,73	17,43	4,42	3,95	16,30	4,88	3,34	15,18	5,29	2,87	14,07	5,59	2,52	13,85	5,63	2,46
7	0	20,04	3,44	5,82	18,92	3,93	4,81	17,77	4,43	4,01	**16,59**	**4,92**	**3,37**	15,48	5,31	2,92	14,36	5,61	2,56	14,14	5,66	2,50
8	0	20,41	3,51	5,82	19,27	3,99	4,83	18,11	4,47	4,05	16,95	4,93	3,44	15,79	5,32	2,97	14,65	5,62	2,61	14,42	5,66	2,55
10	0	21,15	3,55	5,95	19,97	4,03	4,95	18,77	4,52	4,16	17,58	4,97	3,54	16,39	5,36	3,06	15,22	5,65	2,70	-	-	-
12	0	21,87	3,59	6,09	20,66	4,07	5,07	19,43	4,55	4,27	18,20	5,00	3,64	16,99	5,39	3,15	-	-	-	-	-	-
14	0	22,58	3,62	6,23	21,33	4,11	5,19	20,07	4,59	4,37	18,82	5,03	3,74	17,58	5,41	3,25	-	-	-	-	-	-
16	0	23,28	3,66	6,36	22,00	4,14	5,31	20,71	4,63	4,48	19,43	5,07	3,83	18,16	5,44	3,34	-	-	-	-	-	-
18	0	23,97	3,70	6,47	22,66	4,19	5,41	21,34	4,67	4,57	**19,99**	**5,12**	**3,91**	18,75	5,47	3,43	-	-	-	-	-	-

9.14. ECL 070 COOLING ONLY WITH BUFFER TANK AND HIGH HEAD PUMP version Q - (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	14,61	3,38	4,32	13,80	3,88	3,56	12,95	4,36	2,97	12,09	4,81	2,51	-	-	-	-	-	-	-	-	-
-4	30	15,45	3,42	4,52	14,59	3,90	3,74	13,70	4,37	3,13	12,80	4,83	2,65	-	-	-	-	-	-	-	-	-
-2	25	16,35	3,45	4,74	15,44	3,92	3,94	14,51	4,41	3,29	13,55	4,85	2,80	-	-	-	-	-	-	-	-	-
0	20	17,25	3,47	4,96	16,29	3,95	4,13	15,30	4,42	3,46	14,30	4,87	2,94	13,30	5,25	2,53	-	-	-	-	-	-
2	15	18,14	3,48	5,21	17,13	3,97	4,32	16,09	4,45	3,62	15,05	4,90	3,07	14,00	5,28	2,65	-	-	-	-	-	-
4	10	19,00	3,52	5,40	17,94	4,00	4,49	16,87	4,47	3,77	15,78	4,93	3,20	14,69	5,32	2,76	13,62	5,61	2,43	13,41	5,64	2,38
6	0	19,96	3,54	5,64	18,85	4,02	4,69	17,72	4,51	3,93	16,58	4,97	3,34	15,45	5,37	2,88	14,33	5,66	2,53	14,11	5,71	2,47
7	0	20,34	3,55	5,73	19,21	4,03	4,77	18,06	4,52	3,99	**16,87**	**5,01**	**3,37**	15,76	5,39	2,92	14,63	5,69	2,57	14,40	5,73	2,51
8	0	20,71	3,61	5,73	19,56	4,09	4,79	18,40	4,56	4,03	17,23	5,02	3,43	16,06	5,40	2,97	14,92	5,70	2,62	14,69	5,74	2,56
10	0	21,45	3,66	5,86	20,27	4,14	4,90	19,07	4,61	4,13	17,86	5,06	3,53	16,67	5,44	3,06	15,50	5,73	2,71	-	-	-
12	0	22,18	3,70	5,99	20,96	4,18	5,02	19,72	4,65	4,24	18,49	5,10	3,63	17,27	5,47	3,15	-	-	-	-	-	-
14	0	22,89	3,74	6,12	21,64	4,22	5,13	20,37	4,69	4,34	19,11	5,13	3,72	17,86	5,50	3,25	-	-	-	-	-	-
16	0	23,59	3,78	6,24	22,31	4,26	5,24	21,01	4,73	4,44	19,73	5,17	3,82	18,45	5,53	3,34	-	-	-	-	-	-
18	0	24,28	3,83	6,34	22,97	4,31	5,33	21,65	4,78	4,53	**20,34**	**5,21**	**3,90**	19,04	5,57	3,42	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table.
For temperatures and % glycol different than shown refer to Magellano

Selection not possible:

- Outside of operating limits

Data to UNI EN14511: 2011

9.15. ECL 080 COOLING ONLY version STANDARD (400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	17,52	4,37	4,01	16,54	4,99	3,31	15,52	5,61	2,77	14,47	6,19	2,34	-	-	-	-	-	-	-	-	-
-4	30	18,55	4,43	4,19	17,51	5,04	3,48	16,43	5,65	2,91	15,33	6,22	2,46	-	-	-	-	-	-	-	-	-
-2	25	19,66	4,47	4,40	18,55	5,07	3,66	17,42	5,68	3,07	16,26	6,26	2,60	-	-	-	-	-	-	-	-	-
0	20	20,76	4,50	4,61	19,59	5,11	3,83	18,39	5,72	3,22	17,18	6,27	2,74	15,96	6,76	2,36	-	-	-	-	-	-
2	15	21,86	4,52	4,83	20,63	5,13	4,02	19,37	5,75	3,37	18,10	6,31	2,87	16,83	6,80	2,47	-	-	-	-	-	-
4	10	22,92	4,57	5,02	21,63	5,17	4,18	20,32	5,79	3,51	18,99	6,37	2,98	17,67	6,86	2,58	16,37	7,21	2,27	16,12	7,27	2,22
6	0	24,11	4,60	5,24	22,75	5,21	4,36	21,38	5,84	3,66	20,00	6,43	3,11	18,62	6,93	2,69	17,26	7,30	2,37	16,99	7,35	2,31
7	0	24,57	4,61	5,33	23,20	5,23	4,44	21,80	5,86	3,72	**20,35**	**6,48**	**3,14**	18,99	6,96	2,73	17,62	7,34	2,40	17,35	7,39	2,35
8	0	25,03	4,70	5,33	23,63	5,30	4,45	22,21	5,92	3,75	20,78	6,49	3,20	19,37	6,98	2,77	17,97	7,35	2,45	17,70	7,40	2,39
10	0	25,93	4,77	5,44	24,49	5,37	4,56	23,02	5,99	3,85	21,56	6,56	3,29	20,10	7,04	2,86	18,68	7,40	2,53	-	-	-
12	0	26,82	4,82	5,56	25,33	5,43	4,66	23,82	6,04	3,94	22,32	6,61	3,38	20,83	7,09	2,94	-	-	-	-	-	-
14	0	27,69	4,88	5,68	26,16	5,49	4,77	24,62	6,10	4,04	23,08	6,66	3,47	21,56	7,13	3,02	-	-	-	-	-	-
16	0	28,55	4,93	5,79	26,98	5,55	4,86	25,40	6,15	4,13	23,83	6,71	3,55	22,27	7,17	3,11	-	-	-	-	-	-
18	0	29,40	4,99	5,89	27,79	5,61	4,95	26,17	6,22	4,21	**24,54**	**6,77**	**3,63**	22,99	7,23	3,18	-	-	-	-	-	-

9.16. ECL 080 COOLING ONLY WITH PUMP version P - WITH PUMP AND BUFFER TANK version A (400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	17,78	4,27	4,17	16,78	4,90	3,43	15,75	5,53	2,85	14,69	6,12	2,40	-	-	-	-	-	-	-	-	-
-4	30	18,82	4,31	4,36	17,76	4,93	3,60	16,68	5,56	3,00	15,56	6,14	2,53	-	-	-	-	-	-	-	-	-
-2	25	19,93	4,35	4,58	18,81	4,97	3,78	17,66	5,58	3,16	16,49	6,17	2,67	-	-	-	-	-	-	-	-	-
0	20	21,03	4,38	4,80	19,85	5,00	3,97	18,64	5,62	3,32	17,41	6,20	2,81	16,18	6,69	2,42	-	-	-	-	-	-
2	15	22,14	4,40	5,03	20,89	5,02	4,17	19,62	5,63	3,48	18,34	6,22	2,95	17,05	6,72	2,54	-	-	-	-	-	-
4	10	23,20	4,44	5,23	21,90	5,06	4,33	20,59	5,68	3,62	19,24	6,27	3,07	17,95	6,78	2,65	16,58	7,15	2,32	16,32	7,20	2,27
6	0	24,39	4,47	5,45	23,03	5,10	4,52	21,64	5,73	3,77	20,24	6,33	3,20	18,84	6,85	2,75	17,47	7,24	2,41	17,20	7,29	2,36
7	0	24,86	4,48	5,55	23,47	5,11	4,59	22,06	5,75	3,84	**20,60**	**6,39**	**3,22**	19,22	6,88	2,79	17,83	7,27	2,45	17,56	7,33	2,40
8	0	25,32	4,57	5,55	23,91	5,18	4,61	22,47	5,80	3,87	21,03	6,39	3,29	19,60	6,90	2,84	18,19	7,28	2,50	17,91	7,34	2,44
10	0	26,23	4,63	5,66	24,77	5,25	4,72	23,30	5,87	3,97	21,82	6,45	3,38	20,35	6,95	2,93	18,90	7,32	2,58	-	-	-
12	0	27,12	4,69	5,79	25,62	5,30	4,83	24,11	5,92	4,07	22,59	6,50	3,48	21,08	6,99	3,02	-	-	-	-	-	-
14	0	28,00	4,74	5,91	26,46	5,35	4,94	24,90	5,97	4,17	23,35	6,54	3,57	21,81	7,02	3,11	-	-	-	-	-	-
16	0	28,86	4,79	6,02	27,28	5,41	5,05	25,69	6,02	4,27	24,11	6,59	3,66	22,54	7,06	3,19	-	-	-	-	-	-
18	0	29,70	4,86	6,12	28,09	5,47	5,13	26,47	6,08	4,35	**24,84**	**6,64**	**3,74**	23,26	7,11	3,27	-	-	-	-	-	-

9.17. ECL 080 COOLING ONLY WITH BUFFER TANK AND HIGH HEAD PUMP version Q - (400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	18,09	4,37	4,15	17,08	4,99	3,42	16,04	5,62	2,85	14,97	6,21	2,41	-	-	-	-	-	-	-	-	-
-4	30	19,13	4,42	4,33	18,07	5,03	3,59	16,97	5,65	3,00	15,85	6,23	2,55	-	-	-	-	-	-	-	-	-
-2	25	20,25	4,46	4,54	19,12	5,07	3,77	17,97	5,68	3,16	16,79	6,26	2,68	-	-	-	-	-	-	-	-	-
0	20	21,36	4,49	4,76	20,17	5,10	3,96	18,95	5,72	3,31	17,72	6,29	2,82	16,47	6,78	2,43	-	-	-	-	-	-
2	15	22,45	4,51	4,98	21,22	5,13	4,14	19,94	5,75	3,47	18,64	6,32	2,95	17,35	6,81	2,55	-	-	-	-	-	-
4	10	23,53	4,55	5,17	22,22	5,16	4,31	20,89	5,78	3,61	19,54	6,37	3,07	18,20	6,87	2,65	16,87	7,23	2,33	16,61	7,29	2,28
6	0	24,72	4,58	5,39	23,35	5,20	4,49	21,95	5,83	3,76	20,55	6,43	3,20	19,15	6,94	2,76	17,76	7,32	2,43	17,49	7,38	2,37
7	0	25,19	4,60	5,48	23,80	5,22	4,56	22,38	5,85	3,82	**20,91**	**6,48**	**3,22**	19,53	6,97	2,80	18,13	7,36	2,46	17,85	7,41	2,41
8	0	25,65	4,68	5,48	24,23	5,29	4,58	22,79	5,91	3,86	21,35	6,49	3,29	19,91	6,99	2,85	18,49	7,37	2,51	18,21	7,42	2,45
10	0	26,57	4,75	5,60	25,10	5,36	4,68	23,62	5,97	3,95	22,13	6,55	3,38	20,66	7,04	2,93	19,20	7,41	2,59	-	-	-
12	0	27,46	4,81	5,71	25,96	5,42	4,79	24,43	6,03	4,05	22,91	6,60	3,47	21,40	7,09	3,02	-	-	-	-	-	-
14	0	28,34	4,86	5,83	26,79	5,47	4,90	25,23	6,08	4,15	23,67	6,65	3,56	22,13	7,12	3,11	-	-	-	-	-	-
16	0	29,21	4,92	5,94	27,62	5,53	5,00	26,03	6,14	4,24	24,43	6,70	3,65	22,86	7,16	3,19	-	-	-	-	-	-
18	0	30,06	4,98	6,03	28,44	5,60	5,08	26,81	6,20	4,32	**25,19**	**6,76**	**3,73**	23,59	7,22	3,27	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table.
For temperatures and % glycol different than shown refer to Magellano

Selection not possible:

- Outside of operating limits

Data to UNI EN14511: 2011

9.18. ECL 090 COOLING ONLY version STANDARD (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																						
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	19,07	4,58	4,16	18,00	5,24	3,44	16,88	5,88	2,87	15,75	6,48	2,43	-	-	-	-	-	-	-	-	-
-4	30	20,19	4,64	4,35	19,06	5,28	3,61	17,87	5,92	3,02	16,68	6,52	2,56	-	-	-	-	-	-	-	-	-
-2	25	21,39	4,68	4,57	20,18	5,32	3,79	18,95	5,96	3,18	17,69	6,55	2,70	-	-	-	-	-	-	-	-	-
0	20	22,58	4,72	4,78	21,31	5,36	3,98	20,01	5,99	3,34	18,69	6,58	2,84	17,36	7,08	2,45	-	-	-	-	-	-
2	15	23,78	4,74	5,01	22,44	5,38	4,17	21,07	6,03	3,50	19,69	6,61	2,98	18,31	7,12	2,57	-	-	-	-	-	-
4	10	24,93	4,79	5,20	23,53	5,42	4,34	22,10	6,07	3,64	20,66	6,68	3,09	19,22	7,18	2,68	17,81	7,55	2,36	17,53	7,62	2,30
6	0	26,23	4,82	5,44	24,75	5,47	4,53	23,26	6,12	3,80	21,75	6,74	3,23	20,25	7,26	2,79	18,78	7,65	2,46	18,49	7,70	2,40
7	0	26,73	4,84	5,53	25,23	5,48	4,60	23,71	6,14	3,86	**22,14**	**6,79**	**3,26**	20,66	7,29	2,83	19,17	7,69	2,49	18,87	7,74	2,44
8	0	27,23	4,93	5,53	25,71	5,56	4,62	24,16	6,20	3,90	22,61	6,80	3,32	21,07	7,32	2,88	19,55	7,70	2,54	19,25	7,76	2,48
10	0	28,21	5,00	5,64	26,64	5,64	4,73	25,04	6,28	3,99	23,45	6,87	3,41	21,87	7,38	2,96	20,32	7,75	2,62	-	-	-
12	0	29,18	5,06	5,77	27,55	5,70	4,83	25,92	6,34	4,09	24,28	6,93	3,50	22,66	7,43	3,05	-	-	-	-	-	-
14	0	30,13	5,12	5,89	28,46	5,76	4,94	26,78	6,39	4,19	25,10	6,98	3,60	23,45	7,47	3,14	-	-	-	-	-	-
16	0	31,06	5,17	6,00	29,35	5,82	5,05	27,63	6,45	4,28	25,92	7,04	3,68	24,23	7,52	3,22	-	-	-	-	-	-
18	0	31,99	5,24	6,10	30,23	5,89	5,14	28,48	6,52	4,37	**26,57**	**7,10**	**3,74**	25,01	7,58	3,30	-	-	-	-	-	-

9.19. ECL 090 COOLING ONLY WITH PUMP version P - WITH PUMP AND BUFFER TANK version A (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																						
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	19,34	4,46	4,33	18,25	5,13	3,56	17,13	5,79	2,96	15,97	6,40	2,49	-	-	-	-	-	-	-	-	-
-4	30	20,46	4,51	4,54	19,31	5,17	3,74	18,14	5,82	3,12	16,92	6,42	2,63	-	-	-	-	-	-	-	-	-
-2	25	21,67	4,56	4,75	20,46	5,20	3,93	19,21	5,85	3,28	17,93	6,45	2,78	-	-	-	-	-	-	-	-	-
0	20	22,87	4,59	4,98	21,59	5,23	4,13	20,27	5,88	3,45	18,94	6,49	2,92	17,60	7,00	2,51	-	-	-	-	-	-
2	15	24,07	4,61	5,22	22,72	5,25	4,33	21,34	5,90	3,62	19,94	6,51	3,06	18,54	7,04	2,64	-	-	-	-	-	-
4	10	25,23	4,65	5,42	23,82	5,30	4,49	22,39	5,95	3,76	20,92	6,56	3,19	19,47	7,09	2,74	18,03	7,48	2,41	17,75	7,54	2,35
6	0	26,52	4,69	5,66	25,04	5,34	4,69	23,53	6,00	3,92	22,01	6,63	3,32	20,50	7,17	2,86	19,00	7,57	2,51	18,71	7,63	2,45
7	0	27,03	4,70	5,75	25,52	5,35	4,77	23,99	6,02	3,98	**22,40**	**6,69**	**3,35**	20,91	7,20	2,90	19,39	7,61	2,55	19,10	7,67	2,49
8	0	27,53	4,79	5,75	26,00	5,43	4,79	24,44	6,08	4,02	22,88	6,69	3,42	21,32	7,22	2,95	19,78	7,62	2,60	19,48	7,68	2,54
10	0	28,52	4,86	5,87	26,94	5,50	4,90	25,33	6,15	4,12	23,73	6,75	3,51	22,13	7,27	3,04	20,56	7,66	2,68	-	-	-
12	0	29,49	4,92	6,00	27,86	5,56	5,01	26,21	6,20	4,23	24,56	6,80	3,61	22,93	7,32	3,13	-	-	-	-	-	-
14	0	30,44	4,97	6,12	28,77	5,61	5,12	27,08	6,26	4,33	25,39	6,85	3,71	23,72	7,35	3,23	-	-	-	-	-	-
16	0	31,37	5,03	6,23	29,66	5,67	5,23	27,94	6,31	4,43	26,21	6,90	3,80	24,51	7,40	3,31	-	-	-	-	-	-
18	0	32,29	5,11	6,32	30,54	5,74	5,32	28,78	6,38	4,51	**26,87**	**6,96**	**3,86**	25,30	7,45	3,40	-	-	-	-	-	-

9.20. ECL 090 COOLING ONLY WITH BUFFER TANK AND HIGH HEAD PUMP version Q - (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																						
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	19,65	4,57	4,30	18,57	5,23	3,55	17,43	5,88	2,96	16,27	6,49	2,51	-	-	-	-	-	-	-	-	-
-4	30	20,78	4,62	4,50	19,63	5,27	3,73	18,44	5,92	3,12	17,22	6,52	2,64	-	-	-	-	-	-	-	-	-
-2	25	22,00	4,67	4,71	20,78	5,31	3,91	19,52	5,95	3,28	18,24	6,55	2,79	-	-	-	-	-	-	-	-	-
0	20	23,21	4,70	4,93	21,92	5,34	4,11	20,60	5,98	3,44	19,25	6,58	2,92	17,90	7,09	2,53	-	-	-	-	-	-
2	15	24,41	4,72	5,17	23,05	5,36	4,30	21,67	6,01	3,60	20,26	6,61	3,06	18,85	7,13	2,64	-	-	-	-	-	-
4	10	25,57	4,77	5,36	24,15	5,41	4,47	22,70	6,06	3,75	21,24	6,67	3,19	19,78	7,19	2,75	18,33	7,57	2,42	18,05	7,62	2,37
6	0	26,87	4,80	5,59	25,38	5,45	4,66	23,86	6,11	3,91	22,33	6,73	3,32	20,81	7,26	2,86	19,31	7,66	2,52	19,01	7,72	2,46
7	0	27,38	4,82	5,68	25,86	5,46	4,73	24,32	6,13	3,97	**22,72**	**6,79**	**3,35**	21,22	7,30	2,91	19,70	7,70	2,56	19,40	7,76	2,50
8	0	27,88	4,91	5,68	26,34	5,54	4,75	24,77	6,19	4,00	23,20	6,79	3,42	21,63	7,32	2,96	20,09	7,71	2,61	19,79	7,77	2,55
10	0	28,87	4,98	5,80	27,28	5,61	4,86	25,67	6,26	4,10	24,05	6,86	3,51	22,45	7,37	3,04	20,87	7,75	2,69	-	-	-
12	0	29,84	5,04	5,92	28,21	5,68	4,97	26,55	6,32	4,20	24,90	6,91	3,60	23,25	7,42	3,13	-	-	-	-	-	-
14	0	30,80	5,10	6,04	29,12	5,74	5,08	27,42	6,37	4,30	25,73	6,96	3,70	24,05	7,46	3,22	-	-	-	-	-	-
16	0	31,74	5,16	6,15	30,02	5,80	5,18	28,28	6,43	4,40	26,56	7,01	3,79	24,85	7,50	3,31	-	-	-	-	-	-
18	0	32,66	5,23	6,24	30,90	5,87	5,26	29,13	6,50	4,48	**27,37**	**7,08**	**3,87**	25,64	7,56	3,39	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table.
For temperatures and % glycol different than shown refer to Magellano

Selection not possible:

- Outside of operating limits

Data to UNI EN14511: 2011

9.21. ECL 102 COOLING ONLY version STANDARD (400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	22,67	5,46	4,15	21,40	6,22	3,44	20,08	6,98	2,88	18,73	7,67	2,44	-	-	-	-	-	-	-	-	-
-4	30	23,98	5,54	4,33	22,65	6,28	3,61	21,25	7,03	3,02	19,83	7,71	2,57	-	-	-	-	-	-	-	-	-
-2	25	25,42	5,60	4,54	24,00	6,34	3,78	22,53	7,08	3,18	21,04	7,77	2,71	-	-	-	-	-	-	-	-	-
0	20	26,85	5,65	4,75	25,34	6,39	3,97	23,80	7,12	3,34	22,23	7,81	2,84	20,66	8,38	2,46	-	-	-	-	-	-
2	15	28,28	5,67	4,99	26,69	6,40	4,17	25,07	7,15	3,51	23,43	7,84	2,99	21,78	8,43	2,58	-	-	-	-	-	-
4	10	29,65	5,74	5,17	27,99	6,47	4,33	26,29	7,22	3,64	24,58	7,91	3,11	22,88	8,51	2,69	21,19	8,94	2,37	20,87	9,01	2,32
6	0	31,19	5,77	5,40	29,44	6,52	4,52	27,67	7,28	3,80	25,88	7,99	3,24	24,11	8,60	2,80	22,35	9,05	2,47	22,01	9,11	2,42
7	0	31,79	5,79	5,49	30,01	6,54	4,59	28,21	7,30	3,86	**26,34**	**8,06**	**3,27**	24,59	8,64	2,85	22,81	9,09	2,51	22,46	9,16	2,45
8	0	32,38	5,90	5,49	30,57	6,64	4,61	28,74	7,38	3,90	26,90	8,07	3,33	25,07	8,67	2,89	23,27	9,11	2,55	22,92	9,18	2,50
10	0	33,55	5,99	5,60	31,68	6,73	4,71	29,79	7,47	3,99	27,90	8,16	3,42	26,02	8,75	2,98	24,18	9,17	2,64	-	-	-
12	0	34,69	6,07	5,71	32,77	6,81	4,81	30,83	7,55	4,08	28,89	8,23	3,51	26,96	8,81	3,06	-	-	-	-	-	-
14	0	35,82	6,15	5,83	33,84	6,89	4,91	31,85	7,62	4,18	29,86	8,30	3,60	27,90	8,87	3,15	-	-	-	-	-	-
16	0	36,93	6,22	5,94	34,90	6,96	5,01	32,86	7,70	4,27	30,83	8,37	3,68	28,83	8,93	3,23	-	-	-	-	-	-
18	0	38,02	6,31	6,03	35,94	7,05	5,10	33,86	7,79	4,35	**32,19**	**8,45**	**3,81**	29,75	9,00	3,31	-	-	-	-	-	-

9.22. ECL 102 COOLING ONLY WITH PUMP version P - BUFFER TANK version A (400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	23,25	5,49	4,23	21,97	6,25	3,52	20,63	7,00	2,95	**(2)**			-	-	-	-	-	-	-	-	-
-4	30	24,57	5,58	4,40	23,22	6,32	3,68	21,82	7,05	3,09	20,39	7,74	2,63	-	-	-	-	-	-	-	-	-
-2	25	26,02	5,64	4,61	24,59	6,36	3,86	23,11	7,10	3,25	21,60	7,79	2,77	-	-	-	-	-	-	-	-	-
0	20	27,45	5,68	4,83	25,94	6,41	4,05	24,39	7,14	3,42	22,80	7,83	2,91	**(2)**			-	-	-	-	-	-
2	15	28,91	5,69	5,08	27,31	6,41	4,26	25,67	7,16	3,59	24,01	7,85	3,06	22,35	8,45	2,65	-	-	-	-	-	-
4	10	30,26	5,77	5,25	28,60	6,49	4,40	26,90	7,23	3,72	25,17	7,93	3,17	23,44	8,53	2,75	**(2)**			**(2)**		
6	0	31,81	5,81	5,48	30,06	6,54	4,60	28,27	7,29	3,88	26,47	8,00	3,31	24,67	8,62	2,86	**(2)**			**(2)**		
7	0	32,41	5,83	5,56	30,63	6,56	4,67	28,82	7,32	3,94	**26,93**	**8,07**	**3,34**	25,17	8,66	2,91	**(2)**			**(2)**		
8	0	33,00	5,95	5,55	31,19	6,66	4,68	29,35	7,39	3,97	27,50	8,09	3,40	25,65	8,69	2,95	23,83	9,13	2,61	**(2)**		
10	0	34,16	6,06	5,64	32,30	6,76	4,77	30,41	7,49	4,06	28,51	8,17	3,49	26,61	8,76	3,04	24,75	9,19	2,69	-	-	-
12	0	35,29	6,16	5,73	33,39	6,86	4,87	31,45	7,57	4,15	29,50	8,25	3,58	27,57	8,82	3,13	-	-	-	-	-	-
14	0	36,39	6,27	5,81	34,45	6,95	4,96	32,47	7,66	4,24	30,48	8,32	3,66	28,51	8,88	3,21	-	-	-	-	-	-
16	0	**(1)**			35,49	7,05	5,04	33,48	7,74	4,32	31,45	8,39	3,75	29,44	8,94	3,29	-	-	-	-	-	-
18	0	**(1)**			36,51	7,18	5,09	34,47	7,85	4,39	**32,82**	**8,49**	**3,86**	30,37	9,01	3,37	-	-	-	-	-	-

9.23. ECL 102 COOLING ONLY WITH HIGH HEAD PUMP version N - WITH HIGH HEAD PUMP AND BUFFER TANK version Q - (400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	23,36	5,91	3,95	22,09	6,64	3,33	20,77	7,37	2,82	**(2)**			-	-	-	-	-	-	-	-	-
-4	30	24,67	6,02	4,10	23,34	6,73	3,47	21,95	7,44	2,95	20,53	8,11	2,53	-	-	-	-	-	-	-	-	-
-2	25	26,12	6,09	4,29	24,71	6,79	3,64	23,24	7,50	3,10	21,73	8,16	2,66	-	-	-	-	-	-	-	-	-
0	20	27,56	6,14	4,49	26,06	6,84	3,81	24,52	7,54	3,25	22,93	8,21	2,79	**(2)**			-	-	-	-	-	-
2	15	29,03	6,13	4,73	27,45	6,83	4,02	25,81	7,55	3,42	24,16	8,22	2,94	22,50	8,80	2,56	-	-	-	-	-	-
4	10	30,37	6,23	4,87	28,72	6,93	4,14	27,03	7,64	3,54	25,31	8,31	3,04	23,59	8,89	2,65	**(2)**			**(2)**		
6	0	31,91	6,27	5,09	30,18	6,98	4,33	28,40	7,70	3,69	26,61	8,39	3,17	24,82	8,98	2,76	**(2)**			**(2)**		
7	0	32,51	6,30	5,16	30,75	7,00	4,39	28,95	7,73	3,74	**27,07**	**8,46**	**3,20**	25,31	9,03	2,80	**(2)**			**(2)**		
8	0	33,09	6,43	5,15	31,31	7,11	4,40	29,48	7,82	3,77	27,64	8,48	3,26	25,79	9,06	2,85	23,98	9,49	2,53	**(2)**		
10	0	34,24	6,56	5,22	32,40	7,24	4,48	30,53	7,93	3,85	28,64	8,58	3,34	26,76	9,14	2,93	24,90	9,56	2,61	-	-	-
12	0	35,35	6,69	5,28	33,48	7,35	4,56	31,56	8,03	3,93	29,63	8,67	3,42	27,70	9,22	3,01	-	-	-	-	-	-
14	0	36,43	6,83	5,33	34,53	7,46	4,63	32,58	8,13	4,01	30,61	8,75	3,50	28,64	9,29	3,08	-	-	-	-	-	-
16	0	**(1)**			35,56	7,59	4,69	33,58	8,23	4,08	31,57	8,84	3,57	29,57	9,36	3,16	-	-	-	-	-	-
18	0	**(1)**			36,56	7,74	4,72	34,55	8,36	4,13	**32,52**	**8,95**	**3,63**	30,50	9,45	3,23	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

(1) Excessive water flow rate beyond operating limit of pump

(2) Insufficient water flow rate bellow operating limit of pump

9.24. ECL 152 COOLING ONLY version STANDARD (400V/3/N/50Hz)

TWP	GLYCOL %	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
		Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	28,13	6,97	4,03	26,56	7,95	3,34	24,92	8,92	2,79	23,24	9,81	2,37	-	-	-	-	-	-	-	-	-
-4	30	29,77	7,07	4,21	28,11	8,02	3,50	26,38	8,99	2,93	24,61	9,87	2,49	-	-	-	-	-	-	-	-	-
-2	25	31,55	7,15	4,41	29,78	8,10	3,68	27,97	9,05	3,09	26,11	9,94	2,63	-	-	-	-	-	-	-	-	-
0	20	33,32	7,21	4,62	31,45	8,16	3,85	29,53	9,10	3,24	27,58	9,99	2,76	25,64	10,73	2,39	-	-	-	-	-	-
2	15	35,10	7,24	4,85	33,13	8,18	4,05	31,11	9,14	3,40	29,07	10,03	2,90	27,03	10,78	2,51	-	-	-	-	-	-
4	10	36,80	7,32	5,03	34,73	8,26	4,20	32,63	9,23	3,54	30,50	10,12	3,02	28,39	10,89	2,61	26,30	11,44	2,30	25,90	11,53	2,25
6	0	38,71	7,36	5,26	36,55	8,32	4,39	34,34	9,30	3,69	32,12	10,22	3,14	29,92	11,00	2,72	27,74	11,57	2,40	27,31	11,66	2,34
7	0	39,46	7,39	5,34	37,25	8,35	4,46	35,01	9,34	3,75	**32,69**	**10,31**	**3,17**	30,52	11,05	2,76	28,31	11,64	2,43	27,88	11,72	2,38
8	0	40,19	7,53	5,34	37,94	8,48	4,48	35,67	9,43	3,78	33,38	10,33	3,23	31,11	11,09	2,80	28,88	11,66	2,48	28,44	11,75	2,42
10	0	41,64	7,65	5,45	39,32	8,59	4,57	36,97	9,55	3,87	34,62	10,43	3,32	32,29	11,19	2,89	30,01	11,74	2,56	-	-	-
12	0	43,06	7,74	5,56	40,67	8,70	4,68	38,26	9,65	3,97	35,85	10,53	3,41	33,46	11,27	2,97	-	-	-	-	-	-
14	0	44,45	7,84	5,67	42,00	8,79	4,78	39,53	9,74	4,06	37,06	10,61	3,49	34,62	11,34	3,05	-	-	-	-	-	-
16	0	45,83	7,93	5,78	43,31	8,89	4,87	40,78	9,83	4,15	38,26	10,70	3,58	35,78	11,41	3,13	-	-	-	-	-	-
18	0	47,19	8,04	5,87	44,61	9,00	4,96	42,02	9,94	4,23	**39,83**	**10,80**	**3,69**	36,92	11,50	3,21	-	-	-	-	-	-

9.25. ECL 152 COOLING ONLY WITH PUMP version P - WITH PUMP AND BUFFER TANK version A (400V/3/N/50Hz)

TWP	GLYCOL %	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
		Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	28,88	7,25	3,99	27,31	8,19	3,33	25,67	9,15	2,81	23,97	10,04	2,39	-	-	-	-	-	-	-	-	-
-4	30	30,51	7,38	4,13	28,85	8,30	3,48	27,14	9,23	2,94	25,37	10,09	2,51	-	-	-	-	-	-	-	-	-
-2	25	32,30	7,47	4,33	30,55	8,37	3,65	28,73	9,29	3,09	26,86	10,15	2,65	-	-	-	-	-	-	-	-	-
0	20	34,08	7,53	4,53	32,23	8,43	3,82	30,31	9,34	3,24	28,35	10,22	2,77	26,39	10,94	2,41	-	-	-	-	-	-
2	15	35,90	7,52	4,77	33,94	8,43	4,03	31,91	9,36	3,41	29,87	10,23	2,92	27,80	10,98	2,53	-	-	-	-	-	-
4	10	37,57	7,65	4,91	35,52	8,55	4,15	33,43	9,47	3,53	31,29	10,34	3,03	29,16	11,10	2,63	27,05	11,63	2,33	26,64	11,71	2,28
6	0	39,48	7,70	5,13	37,33	8,61	4,34	35,14	9,54	3,68	32,91	10,44	3,15	30,69	11,21	2,74	28,49	11,77	2,42	28,05	11,86	2,37
7	0	40,23	7,73	5,20	38,04	8,64	4,40	35,81	9,59	3,74	**33,48**	**10,53**	**3,18**	31,29	11,26	2,78	29,07	11,84	2,46	28,63	11,92	2,40
8	0	40,95	7,89	5,19	38,73	8,78	4,41	36,47	9,69	3,76	34,18	10,56	3,24	31,90	11,30	2,82	29,64	11,86	2,50	29,19	11,95	2,44
10	0	42,36	8,06	5,26	40,09	8,93	4,49	37,77	9,83	3,84	35,42	10,68	3,32	33,09	11,41	2,90	30,78	11,94	2,58	-	-	-
12	0	43,73	8,23	5,31	41,42	9,06	4,57	39,05	9,95	3,92	36,65	10,78	3,40	34,26	11,50	2,98	-	-	-	-	-	-
14	0				42,72	9,21	4,64	40,30	10,07	4,00	37,86	10,89	3,48	35,43	11,58	3,06	-	-	-	-	-	-
16	0		(1)		43,99	9,37	4,69	41,54	10,20	4,07	39,06	11,00	3,55	36,58	11,67	3,13	-	-	-	-	-	-
18	0					(1)		42,76	10,35	4,13	**40,61**	**11,15**	**3,64**	37,73	11,78	3,20	-	-	-	-	-	-

9.26. ECL 152 COOLING ONLY WITH HIGH HEAD PUMP version N - WITH HIGH HEAD PUMP AND BUFFER TANK version Q - (400V/3/N/50Hz)

TWP	GLYCOL %	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
		Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	29,10	7,26	4,01	27,50	8,23	3,34	25,84	9,21	2,81	24,12	10,10	2,39	-	-	-	-	-	-	-	-	-
-4	30	30,76	7,36	4,18	29,07	8,31	3,50	27,32	9,27	2,95	25,52	10,15	2,51	-	-	-	-	-	-	-	-	-
-2	25	32,57	7,44	4,38	30,78	8,38	3,67	28,92	9,32	3,10	27,03	10,21	2,65	-	-	-	-	-	-	-	-	-
0	20	34,36	7,49	4,59	32,46	8,44	3,85	30,51	9,38	3,25	28,52	10,27	2,78	26,53	11,02	2,41	-	-	-	-	-	-
2	15	36,16	7,51	4,81	34,16	8,45	4,04	32,10	9,41	3,41	30,03	10,29	2,92	27,94	11,06	2,53	-	-	-	-	-	-
4	10	37,86	7,60	4,98	35,77	8,54	4,19	33,63	9,50	3,54	31,47	10,40	3,03	29,31	11,16	2,63	27,18	11,72	2,32	26,77	11,80	2,27
6	0	39,77	7,65	5,20	37,58	8,60	4,37	35,35	9,57	3,69	33,09	10,49	3,16	30,84	11,28	2,74	28,62	11,86	2,41	28,18	11,94	2,36
7	0	40,53	7,68	5,28	38,30	8,63	4,44	36,02	9,61	3,75	**33,66**	**10,58**	**3,18**	31,45	11,33	2,78	29,20	11,92	2,45	28,76	12,00	2,40
8	0	41,27	7,82	5,28	39,00	8,75	4,45	36,69	9,70	3,78	34,37	10,60	3,24	32,06	11,36	2,82	29,78	11,94	2,49	29,33	12,02	2,44
10	0	42,73	7,95	5,38	40,39	8,88	4,55	38,02	9,82	3,87	35,63	10,70	3,33	33,26	11,46	2,90	30,93	12,01	2,57	-	-	-
12	0	44,16	8,06	5,48	41,75	8,98	4,65	39,32	9,92	3,96	36,88	10,80	3,42	34,45	11,54	2,99	-	-	-	-	-	-
14	0	45,57	8,17	5,58	43,10	9,09	4,74	40,60	10,02	4,05	38,11	10,88	3,50	35,63	11,61	3,07	-	-	-	-	-	-
16	0	46,95	8,28	5,67	44,42	9,20	4,83	41,87	10,12	4,14	39,33	10,98	3,58	36,80	11,68	3,15	-	-	-	-	-	-
18	0	48,30	8,41	5,74	45,72	9,33	4,90	43,13	10,24	4,21	**40,53**	**11,08**	**3,66**	37,97	11,78	3,22	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	1	1,02	1,03
Input power correction factors	0,99	1	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	1	0,98	0,94
Input power correction factors	1	0,98	0,95

Data to UNI EN14511: 2011

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

(1) Excessive water flow rate beyond operating limit of pump

9.27. ECL 202 COOLING ONLY version STANDARD (400V/3/N/50Hz)

TWP	GLYCOL %	EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
		Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	36,67	9,15	4,01	34,61	10,44	3,32	32,48	11,71	2,77	30,30	12,88	2,35	-	-	-	-	-	-	-	-	-
-4	30	38,80	9,28	4,18	36,64	10,53	3,48	34,37	11,80	2,91	32,09	12,94	2,48	-	-	-	-	-	-	-	-	-
-2	25	41,12	9,38	4,38	38,81	10,63	3,65	36,45	11,88	3,07	34,03	13,05	2,61	-	-	-	-	-	-	-	-	-
0	20	43,43	9,46	4,59	40,99	10,71	3,83	38,49	11,95	3,22	35,95	13,12	2,74	33,41	14,08	2,37	-	-	-	-	-	-
2	15	45,74	9,50	4,82	43,17	10,74	4,02	40,54	12,00	3,38	37,89	13,17	2,88	35,23	14,16	2,49	-	-	-	-	-	-
4	10	47,95	9,60	4,99	45,26	10,84	4,18	42,52	12,12	3,51	39,75	13,28	2,99	37,00	14,30	2,59	34,28	15,02	2,28	33,75	15,14	2,23
6	0	50,45	9,66	5,22	47,63	10,92	4,36	44,75	12,21	3,67	41,86	13,41	3,12	38,99	14,44	2,70	36,15	15,20	2,38	35,59	15,31	2,32
7	0	51,42	9,70	5,30	48,54	10,96	4,43	45,62	12,25	3,72	**42,60**	**13,53**	**3,15**	39,77	14,51	2,74	36,89	15,28	2,41	36,33	15,39	2,36
8	0	52,38	9,88	5,30	49,45	11,12	4,45	46,48	12,38	3,76	43,50	13,55	3,21	40,54	14,56	2,78	37,63	15,31	2,46	37,06	15,42	2,40
10	0	54,26	10,03	5,41	51,24	11,28	4,54	48,18	12,53	3,85	45,12	13,70	3,29	42,08	14,69	2,87	39,10	15,41	2,54	-	-	-
12	0	56,11	10,16	5,52	53,00	11,41	4,64	49,86	12,66	3,94	46,72	13,82	3,38	43,61	14,79	2,95	-	-	-	-	-	-
14	0	57,93	10,28	5,64	54,73	11,53	4,75	51,51	12,78	4,03	48,30	13,93	3,47	45,12	14,88	3,03	-	-	-	-	-	-
16	0	59,73	10,40	5,74	56,44	11,66	4,84	53,15	12,90	4,12	49,86	14,04	3,55	46,62	14,98	3,11	-	-	-	-	-	-
18	0	61,50	10,54	5,83	58,14	11,80	4,93	54,77	13,04	4,20	**51,53**	**14,17**	**3,64**	48,12	15,10	3,19	-	-	-	-	-	-

9.28. ECL 202 COOLING ONLY WITH PUMP version P - WITH PUMP AND BUFFER TANK version A (400V/3/N/50Hz)

TWP	GLYCOL %	EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
		Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	37,47	9,51	3,94	35,44	10,73	3,30	33,33	11,97	2,78	31,14	13,10	2,38	-	-	-	-	-	-	-	-	-
-4	30	39,55	9,71	4,07	37,43	10,89	3,44	35,22	12,09	2,91	32,94	13,18	2,50	-	-	-	-	-	-	-	-	-
-2	25	41,88	9,84	4,26	39,63	10,98	3,61	37,29	12,17	3,06	34,88	13,29	2,62	-	-	-	-	-	-	-	-	-
0	20	44,20	9,91	4,46	41,82	11,07	3,78	39,35	12,24	3,21	36,81	13,37	2,75	34,27	14,31	2,39	-	-	-	-	-	-
2	15	46,58	9,89	4,71	44,06	11,05	3,99	41,44	12,26	3,38	38,79	13,38	2,90	36,12	14,36	2,51	-	-	-	-	-	-
4	10	48,71	10,09	4,83	46,10	11,23	4,11	43,41	12,41	3,50	40,64	13,54	3,00	37,88	14,52	2,61	35,14	15,21	2,31	34,62	15,30	2,26
6	0	51,20	10,16	5,04	48,46	11,31	4,29	45,63	12,51	3,65	42,75	13,66	3,13	39,87	14,66	2,72	37,01	15,40	2,40	36,45	15,50	2,35
7	0	52,16	10,22	5,10	49,37	11,36	4,35	46,50	12,57	3,70	**43,49**	**13,79**	**3,15**	40,66	14,74	2,76	37,77	15,48	2,44	37,19	15,59	2,39
8	0	53,05	10,48	5,06	50,26	11,55	4,35	47,35	12,71	3,72	44,39	13,83	3,21	41,43	14,80	2,80	38,51	15,52	2,48	37,93	15,63	2,43
10	0				52,00	11,77	4,42	49,02	12,91	3,80	46,00	14,00	3,29	42,98	14,94	2,88	39,99	15,63	2,56	-	-	-
12	0				53,65	12,03	4,46	50,67	13,09	3,87	47,59	14,15	3,36	44,50	15,06	2,95	-	-	-	-	-	-
14	0		(1)					52,27	13,28	3,94	49,15	14,30	3,44	46,01	15,18	3,03	-	-	-	-	-	-
16	0				(1)			53,81	13,52	3,98	50,68	14,46	3,50	47,50	15,31	3,10	-	-	-	-	-	-
18	0							(1)			**52,31**	**14,66**	**3,57**	48,98	15,46	3,17	-	-	-	-	-	-

9.29. ECL 202 COOLING ONLY WITH HIGH HEAD PUMP version N - WITH HIGH HEAD PUMP AND BUFFER TANK version Q - (400V/3/N/50Hz)

TWP	GLYCOL %	EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
		Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-6	30	37,75	9,48	3,98	35,68	10,75	3,32	33,53	12,01	2,79	31,30	13,18	2,37	-	-	-	-	-	-	-	-	-
-4	30	39,90	9,64	4,14	37,71	10,87	3,47	35,45	12,10	2,93	33,13	13,25	2,50	-	-	-	-	-	-	-	-	-
-2	25	42,25	9,74	4,34	39,93	10,95	3,65	37,53	12,18	3,08	35,08	13,33	2,63	-	-	-	-	-	-	-	-	-
0	20	44,57	9,82	4,54	42,12	11,04	3,82	39,60	12,25	3,23	37,02	13,41	2,76	34,45	14,38	2,40	-	-	-	-	-	-
2	15	46,92	9,83	4,77	44,34	11,05	4,01	41,67	12,29	3,39	38,99	13,44	2,90	36,29	14,44	2,51	-	-	-	-	-	-
4	10	49,12	9,96	4,93	46,42	11,18	4,15	43,67	12,41	3,52	40,86	13,58	3,01	38,06	14,58	2,61	35,30	15,29	2,31	34,77	15,39	2,26
6	0	51,62	10,03	5,15	48,78	11,26	4,33	45,89	12,51	3,67	42,97	13,70	3,14	40,06	14,73	2,72	37,17	15,48	2,40	36,60	15,59	2,35
7	0	52,60	10,07	5,22	49,71	11,30	4,40	46,77	12,56	3,72	**43,72**	**13,83**	**3,16**	40,85	14,80	2,76	37,93	15,56	2,44	37,35	15,67	2,38
8	0	53,55	10,27	5,21	50,62	11,47	4,41	47,64	12,70	3,75	44,63	13,85	3,22	41,64	14,85	2,80	38,68	15,59	2,48	38,10	15,70	2,43
10	0	55,43	10,45	5,30	52,41	11,64	4,50	49,35	12,86	3,84	46,27	14,00	3,30	43,20	14,98	2,88	40,17	15,70	2,56	-	-	-
12	0	57,28	10,62	5,39	54,17	11,80	4,59	51,03	13,01	3,92	47,88	14,13	3,39	44,74	15,09	2,97	-	-	-	-	-	-
14	0	59,08	10,78	5,48	55,91	11,96	4,68	52,69	13,15	4,01	49,47	14,26	3,47	46,27	15,19	3,05	-	-	-	-	-	-
16	0	60,84	10,96	5,55	57,61	12,12	4,75	54,33	13,30	4,09	51,04	14,39	3,55	47,78	15,30	3,12	-	-	-	-	-	-
18	0	62,56	11,19	5,59	59,28	12,31	4,81	55,95	13,47	4,16	**52,72**	**14,54**	**3,63**	49,29	15,43	3,20	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

Data to UNI EN14511: 2011

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

(1) Excessive water flow rate beyond operating limit of pump

10. OUTPUTS AND CAPACITIES DIFFERENT THAN NOMINAL FOR HEAT PUMP UNITS

10.1. ECL 020 H version STANDARD - COOLING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	6,35	1,35	4,71	5,99	1,52	3,93	5,63	1,70	3,31	5,27	1,86	2,83	4,90	2,01	2,44	4,54	2,11	2,15	4,47	2,12	2,11
6	0	6,68	1,36	4,93	6,31	1,53	4,12	5,93	1,71	3,46	5,54	1,88	2,95	5,16	2,03	2,55	4,79	2,13	2,25	4,71	2,15	2,20
7	0	6,81	1,36	5,00	6,43	1,54	4,18	6,04	1,72	3,51	**5,64**	**1,90**	**2,97**	5,27	2,04	2,59	4,89	2,14	2,28	4,81	2,16	2,23
8	0	6,94	1,39	5,00	6,55	1,56	4,19	6,16	1,74	3,54	5,76	1,90	3,03	5,37	2,04	2,63	4,98	2,15	2,32	4,91	2,16	2,27
10	0	7,18	1,41	5,10	6,79	1,58	4,29	6,38	1,76	3,63	5,98	1,92	3,11	5,57	2,06	2,71	5,18	2,16	2,40	-	-	-
12	0	7,43	1,43	5,21	7,02	1,60	4,38	6,60	1,78	3,72	6,19	1,94	3,19	5,78	2,07	2,78	-	-	-	-	-	-
14	0	7,67	1,44	5,31	7,25	1,62	4,48	6,82	1,79	3,80	6,40	1,95	3,27	5,98	2,09	2,86	-	-	-	-	-	-
16	0	7,91	1,46	5,41	7,47	1,64	4,57	7,04	1,81	3,89	6,60	1,97	3,35	6,17	2,10	2,94	-	-	-	-	-	-
18	0	8,14	1,48	5,50	7,70	1,66	4,64	7,25	1,83	3,96	**6,81**	**1,99**	**3,42**	6,37	2,12	3,01	-	-	-	-	-	-

10.2. ECL 020 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A COOLING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	6,44	1,34	4,80	6,08	1,53	3,98	5,70	1,71	3,33	5,33	1,88	2,83	4,96	2,03	2,44	4,59	2,14	2,14	4,51	2,16	2,09
6	0	6,77	1,35	5,01	6,39	1,54	4,16	6,00	1,72	3,48	5,61	1,90	2,95	5,22	2,06	2,54	4,83	2,17	2,23	4,76	2,19	2,18
7	0	6,90	1,35	5,10	6,51	1,54	4,23	6,12	1,73	3,54	**5,71**	**1,92**	**2,98**	5,32	2,06	2,58	4,93	2,18	2,26	4,86	2,20	2,21
8	0	7,03	1,38	5,11	6,64	1,56	4,26	6,23	1,74	3,58	5,83	1,92	3,04	5,43	2,07	2,63	5,04	2,18	2,31	4,96	2,20	2,25
10	0	7,29	1,39	5,23	6,88	1,58	4,37	6,46	1,76	3,67	6,05	1,93	3,13	5,64	2,08	2,71	5,23	2,19	2,39	-	-	-
12	0	7,54	1,41	5,36	7,12	1,59	4,48	6,69	1,77	3,77	6,27	1,95	3,22	5,84	2,09	2,80	-	-	-	-	-	-
14	0	7,78	1,42	5,49	7,35	1,60	4,59	6,92	1,79	3,87	6,48	1,96	3,31	6,05	2,10	2,88	-	-	-	-	-	-
16	0	8,03	1,43	5,62	7,58	1,61	4,70	7,14	1,80	3,97	6,69	1,97	3,40	6,25	2,11	2,96	-	-	-	-	-	-
18	0	8,27	1,44	5,72	7,81	1,63	4,79	7,36	1,81	4,05	**6,90**	**1,98**	**3,49**	6,46	2,12	3,04	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

Data to UNI EN14511: 2011

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

10.3. ECL 025 H version STANDARD - COOLING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	6,91	1,46	4,72	6,52	1,66	3,94	6,13	1,85	3,32	5,73	2,03	2,83	5,33	2,18	2,44	4,94	2,29	2,16	4,86	2,30	2,11
6	0	7,27	1,47	4,93	6,86	1,67	4,12	6,45	1,86	3,46	6,03	2,04	2,95	5,62	2,20	2,55	5,21	2,32	2,25	5,13	2,33	2,20
7	0	7,41	1,48	5,01	6,99	1,67	4,18	6,57	1,87	3,52	**6,14**	**2,06**	**2,98**	5,73	2,21	2,59	5,32	2,33	2,28	5,23	2,35	2,23
8	0	7,54	1,51	5,01	7,12	1,70	4,20	6,70	1,89	3,55	6,27	2,07	3,03	5,84	2,22	2,63	5,42	2,33	2,32	5,34	2,35	2,27
10	0	7,82	1,53	5,11	7,38	1,72	4,29	6,94	1,91	3,63	6,50	2,09	3,11	6,06	2,24	2,71	5,63	2,35	2,40	-	-	-
12	0	8,08	1,55	5,21	7,63	1,74	4,39	7,18	1,93	3,72	6,73	2,11	3,19	6,28	2,25	2,79	-	-	-	-	-	-
14	0	8,34	1,57	5,32	7,88	1,76	4,48	7,42	1,95	3,81	6,96	2,12	3,28	6,50	2,27	2,86	-	-	-	-	-	-
16	0	8,60	1,59	5,42	8,13	1,78	4,57	7,66	1,97	3,89	7,18	2,14	3,35	6,72	2,28	2,94	-	-	-	-	-	-
18	0	8,86	1,61	5,50	8,37	1,80	4,65	7,89	1,99	3,96	**7,39**	**2,16**	**3,42**	6,93	2,30	3,01	-	-	-	-	-	-

10.4. ECL 025 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A COOLING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	7,01	1,45	4,84	6,61	1,65	4,01	6,21	1,85	3,36	5,80	2,04	2,85	5,39	2,20	2,45	4,99	2,32	2,15	4,91	2,34	2,10
6	0	7,37	1,46	5,06	6,95	1,66	4,19	6,53	1,86	3,50	6,10	2,06	2,97	5,68	2,22	2,56	5,26	2,35	2,24	5,18	2,37	2,19
7	0	7,51	1,46	5,15	7,09	1,66	4,27	6,66	1,87	3,56	**6,21**	**2,07**	**3,00**	5,80	2,23	2,60	5,37	2,36	2,28	5,29	2,38	2,23
8	0	7,65	1,48	5,16	7,22	1,68	4,29	6,79	1,88	3,60	6,35	2,07	3,06	5,91	2,24	2,64	5,48	2,36	2,32	5,40	2,38	2,27
10	0	7,93	1,50	5,28	7,49	1,70	4,40	7,04	1,90	3,70	6,58	2,09	3,15	6,14	2,25	2,73	5,70	2,37	2,40	-	-	-
12	0	8,20	1,52	5,41	7,75	1,72	4,51	7,28	1,92	3,80	6,82	2,10	3,24	6,36	2,26	2,81	-	-	-	-	-	-
14	0	8,47	1,53	5,54	8,00	1,73	4,63	7,53	1,93	3,90	7,05	2,11	3,33	6,58	2,27	2,90	-	-	-	-	-	-
16	0	8,74	1,54	5,67	8,25	1,74	4,73	7,77	1,94	4,00	7,28	2,13	3,42	6,81	2,28	2,98	-	-	-	-	-	-
18	0	9,00	1,56	5,77	8,50	1,76	4,83	8,01	1,96	4,08	**7,49**	**2,14**	**3,50**	7,03	2,29	3,06	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

Data to UNI EN14511: 2011

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

10.5. ECL 030 H version STANDARD - COOLING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	8,36	1,79	4,66	7,89	2,03	3,88	7,41	2,27	3,27	6,93	2,49	2,79	6,45	2,68	2,41	5,98	2,81	2,12	5,88	2,83	2,08
6	0	8,80	1,81	4,87	8,30	2,04	4,06	7,80	2,28	3,42	7,30	2,51	2,91	6,80	2,70	2,51	6,30	2,85	2,21	6,20	2,87	2,16
7	0	8,96	1,81	4,94	8,46	2,05	4,13	7,95	2,29	3,47	**7,43**	**2,53**	**2,93**	6,93	2,72	2,55	6,43	2,86	2,25	6,33	2,88	2,20
8	0	9,13	1,85	4,94	8,62	2,08	4,14	8,10	2,32	3,50	7,58	2,54	2,99	7,07	2,73	2,59	6,56	2,87	2,29	6,46	2,89	2,24
10	0	9,46	1,88	5,04	8,93	2,11	4,23	8,40	2,34	3,58	7,87	2,56	3,07	7,34	2,75	2,67	6,82	2,89	2,36	-	-	-
12	0	9,78	1,90	5,15	9,24	2,13	4,33	8,69	2,37	3,67	8,14	2,59	3,15	7,60	2,77	2,75	-	-	-	-	-	-
14	0	10,10	1,92	5,26	9,54	2,16	4,42	8,98	2,39	3,76	8,42	2,61	3,23	7,87	2,79	2,82	-	-	-	-	-	-
16	0	10,41	1,94	5,36	9,84	2,18	4,51	9,27	2,41	3,84	8,69	2,63	3,31	8,13	2,80	2,90	-	-	-	-	-	-
18	0	10,72	1,97	5,44	10,13	2,21	4,59	9,55	2,44	3,91	**8,93**	**2,66**	**3,37**	8,39	2,83	2,97	-	-	-	-	-	-

10.6. ECL 030 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A COOLING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	8,49	1,75	4,84	8,01	2,00	4,00	7,52	2,25	3,34	7,03	2,48	2,84	6,53	2,68	2,44	6,05	2,83	2,14	5,95	2,85	2,09
6	0	8,92	1,77	5,05	8,42	2,01	4,18	7,91	2,27	3,49	7,39	2,50	2,95	6,88	2,71	2,54	6,37	2,86	2,23	6,28	2,88	2,18
7	0	9,10	1,77	5,14	8,58	2,02	4,25	8,06	2,27	3,55	**7,52**	**2,52**	**2,98**	7,02	2,72	2,58	6,51	2,87	2,27	6,41	2,90	2,21
8	0	9,27	1,80	5,15	8,74	2,04	4,28	8,22	2,29	3,59	7,69	2,52	3,05	7,16	2,72	2,63	6,64	2,88	2,31	6,54	2,90	2,26
10	0	9,60	1,82	5,27	9,06	2,07	4,38	8,52	2,31	3,68	7,97	2,54	3,13	7,43	2,74	2,71	6,90	2,89	2,39	-	-	-
12	0	9,93	1,84	5,40	9,38	2,09	4,50	8,82	2,33	3,78	8,26	2,56	3,22	7,70	2,76	2,80	-	-	-	-	-	-
14	0	10,26	1,85	5,53	9,69	2,10	4,61	9,11	2,35	3,88	8,54	2,58	3,32	7,97	2,77	2,88	-	-	-	-	-	-
16	0	10,57	1,87	5,65	9,99	2,12	4,71	9,40	2,36	3,98	8,82	2,59	3,40	8,24	2,78	2,96	-	-	-	-	-	-
18	0	10,89	1,89	5,76	10,29	2,14	4,81	9,69	2,39	4,06	**9,06**	**2,61**	**3,47**	8,51	2,80	3,04	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

Data to UNI EN14511: 2011

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

10.7. ECL 040 H version STANDARD - COOLING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	10,72	2,35	4,56	10,11	2,67	3,79	9,50	2,98	3,19	8,88	3,27	2,72	8,27	3,53	2,34	7,66	3,71	2,06	7,54	3,73	2,02
6	0	11,27	2,37	4,76	10,64	2,68	3,97	10,00	3,00	3,33	9,35	3,30	2,83	8,71	3,56	2,45	8,07	3,75	2,15	7,95	3,78	2,10
7	0	11,49	2,38	4,84	10,85	2,69	4,03	10,19	3,01	3,38	**9,52**	**3,33**	**2,86**	8,88	3,58	2,48	8,24	3,77	2,19	8,11	3,80	2,14
8	0	11,70	2,42	4,84	11,05	2,73	4,05	10,39	3,04	3,41	9,72	3,34	2,91	9,06	3,59	2,52	8,41	3,78	2,23	8,28	3,81	2,18
10	0	12,13	2,46	4,94	11,45	2,77	4,14	10,77	3,08	3,50	10,08	3,37	2,99	9,40	3,62	2,60	8,74	3,80	2,30	-	-	-
12	0	12,54	2,49	5,04	11,84	2,80	4,23	11,14	3,11	3,58	10,44	3,40	3,07	9,74	3,64	2,67	-	-	-	-	-	-
14	0	12,95	2,51	5,15	12,23	2,83	4,33	11,51	3,14	3,67	10,79	3,43	3,15	10,08	3,67	2,75	-	-	-	-	-	-
16	0	13,35	2,54	5,25	12,61	2,86	4,42	11,88	3,17	3,75	11,14	3,45	3,23	10,42	3,69	2,82	-	-	-	-	-	-
18	0	13,74	2,58	5,34	12,99	2,89	4,49	12,24	3,20	3,82	**11,46**	**3,48**	**3,29**	10,75	3,72	2,89	-	-	-	-	-	-

10.8. ECL 040 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A COOLING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	10,87	2,29	4,74	10,25	2,62	3,92	9,63	2,94	3,27	9,00	3,24	2,78	8,37	3,51	2,39	7,75	3,70	2,09	7,63	3,73	2,05
6	0	11,42	2,31	4,95	10,78	2,63	4,09	10,13	2,96	3,42	9,47	3,28	2,89	8,81	3,55	2,49	8,17	3,75	2,18	8,04	3,77	2,13
7	0	11,64	2,31	5,04	10,99	2,64	4,16	10,32	2,97	3,47	**9,64**	**3,30**	**2,92**	8,99	3,56	2,53	8,34	3,76	2,22	8,21	3,79	2,16
8	0	11,86	2,35	5,04	11,20	2,67	4,19	10,52	3,00	3,51	9,84	3,30	2,98	9,17	3,57	2,57	8,51	3,77	2,26	8,38	3,80	2,21
10	0	12,29	2,38	5,16	11,60	2,70	4,29	10,91	3,03	3,60	10,21	3,33	3,06	9,52	3,59	2,65	8,84	3,79	2,34	-	-	-
12	0	12,71	2,41	5,28	12,00	2,73	4,40	11,29	3,05	3,70	10,57	3,35	3,15	9,87	3,61	2,73	-	-	-	-	-	-
14	0	13,12	2,43	5,41	12,40	2,75	4,50	11,66	3,08	3,79	10,93	3,37	3,24	10,21	3,63	2,82	-	-	-	-	-	-
16	0	13,53	2,45	5,52	12,79	2,78	4,60	12,04	3,10	3,88	11,29	3,40	3,32	10,55	3,64	2,90	-	-	-	-	-	-
18	0	13,93	2,48	5,62	13,17	2,81	4,69	12,40	3,13	3,97	**11,62**	**3,42**	**3,40**	10,89	3,67	2,97	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

Data to UNI EN14511: 2011

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

10.9. ECL 050 H version STANDARD - COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	14,96	2,93	5,11	14,12	3,32	4,25	13,27	3,71	3,58	12,40	4,07	3,05	11,54	4,38	2,63	10,69	4,61	2,32	10,53	4,63	2,27
6	0	15,74	2,95	5,34	14,86	3,34	4,45	13,96	3,73	3,74	13,06	4,11	3,18	12,16	4,43	2,75	11,27	4,66	2,42	11,10	4,69	2,37
7	0	16,04	2,96	5,42	15,14	3,35	4,52	14,23	3,75	3,80	**13,29**	**4,14**	**3,21**	12,40	4,45	2,79	11,51	4,68	2,46	11,33	4,72	2,40
8	0	16,34	3,02	5,42	15,43	3,40	4,54	14,50	3,79	3,83	13,57	4,15	3,27	12,65	4,46	2,84	11,74	4,69	2,50	11,56	4,73	2,45
10	0	16,93	3,06	5,53	15,98	3,45	4,64	15,03	3,83	3,92	14,07	4,19	3,36	13,13	4,50	2,92	12,20	4,72	2,58	-	-	-
12	0	17,51	3,10	5,65	16,53	3,49	4,74	15,55	3,87	4,02	14,57	4,23	3,45	13,60	4,53	3,00	-	-	-	-	-	-
14	0	18,08	3,14	5,77	17,08	3,52	4,85	16,07	3,91	4,11	15,07	4,26	3,54	14,07	4,56	3,09	-	-	-	-	-	-
16	0	18,64	3,17	5,88	17,61	3,56	4,95	16,58	3,94	4,20	15,56	4,30	3,62	14,54	4,59	3,17	-	-	-	-	-	-
18	0	19,19	3,21	5,97	18,14	3,60	5,03	17,09	3,99	4,29	**16,05**	**4,34**	**3,70**	15,01	4,62	3,25	-	-	-	-	-	-

10.10. ECL 050 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	15,19	2,85	5,33	14,34	3,25	4,41	13,46	3,65	3,68	12,59	4,03	3,13	11,70	4,36	2,69	10,83	4,60	2,36	10,66	4,63	2,30
6	0	15,96	2,87	5,56	15,06	3,27	4,60	14,15	3,68	3,84	13,23	4,07	3,25	12,32	4,40	2,80	11,42	4,65	2,45	11,24	4,69	2,40
7	0	16,27	2,88	5,66	15,36	3,28	4,68	14,43	3,69	3,91	**13,47**	**4,10**	**3,28**	12,57	4,42	2,84	11,65	4,67	2,49	11,47	4,71	2,44
8	0	16,57	2,93	5,66	15,64	3,32	4,70	14,70	3,73	3,95	13,76	4,10	3,35	12,81	4,43	2,89	11,89	4,68	2,54	11,71	4,71	2,48
10	0	17,17	2,97	5,79	16,21	3,36	4,82	15,24	3,76	4,05	14,27	4,14	3,45	13,30	4,46	2,98	12,36	4,70	2,63	-	-	-
12	0	17,76	3,00	5,93	16,77	3,40	4,94	15,77	3,80	4,16	14,78	4,17	3,55	13,79	4,48	3,08	-	-	-	-	-	-
14	0	18,34	3,02	6,06	17,32	3,42	5,06	16,30	3,82	4,26	15,28	4,19	3,64	14,27	4,50	3,17	-	-	-	-	-	-
16	0	18,90	3,05	6,19	17,86	3,46	5,17	16,82	3,85	4,36	15,77	4,22	3,74	14,75	4,53	3,26	-	-	-	-	-	-
18	0	19,46	3,09	6,30	18,40	3,49	5,27	17,33	3,89	4,46	**16,27**	**4,25**	**3,82**	15,22	4,55	3,34	-	-	-	-	-	-

10.11. ECL 050 H WITH BUFFER TANK AND HIGH HEAD PUMP version Q COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	15,45	2,95	5,25	14,60	3,34	4,37	13,72	3,74	3,67	12,84	4,11	3,13	11,95	4,43	2,70						
6	0	16,23	2,97	5,47	15,33	3,36	4,56	14,41	3,77	3,83	13,49	4,15	3,25	12,57	4,48	2,81	**(2)**			**(2)**		
7	0	16,54	2,97	5,57	15,62	3,37	4,63	14,69	3,78	3,89	**13,73**	**4,18**	**3,28**	12,82	4,50	2,85						
8	0	16,85	3,02	5,57	15,91	3,42	4,66	14,97	3,81	3,93	14,02	4,19	3,35	13,07	4,51	2,90	12,14	4,75	2,56	11,95	4,79	2,50
10	0	17,45	3,07	5,69	16,48	3,46	4,77	15,51	3,85	4,02	14,53	4,22	3,44	13,56	4,54	2,99	12,61	4,78	2,64	-	-	-
12	0	18,04	3,10	5,82	17,04	3,49	4,88	16,04	3,89	4,13	15,04	4,25	3,54	14,05	4,57	3,08	-	-	-	-	-	-
14	0	18,62	3,13	5,95	17,60	3,53	4,99	16,57	3,92	4,23	15,55	4,28	3,63	14,53	4,59	3,17	-	-	-	-	-	-
16	0	19,19	3,16	6,06	18,14	3,56	5,10	17,09	3,95	4,33	16,04	4,31	3,72	15,01	4,61	3,25	-	-	-	-	-	-
18	0	19,75	3,20	6,16	18,68	3,60	5,19	17,61	3,99	4,41	**16,55**	**4,36**	**3,80**	15,49	4,64	3,34	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

Data to UNI EN14511: 2011

SELECTION NOT POSSIBLE:

- Outside of operating limits

(2) Insufficient water flow rate bellow operating limit of pump

10.12. ECL 070 H version STANDARD - COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	18,43	3,54	5,20	17,39	4,02	4,33	16,34	4,49	3,64	15,28	4,92	3,10	14,21	5,30	2,68	13,17	5,58	2,36	12,96	5,61	2,31
6	0	19,39	3,57	5,43	18,30	4,04	4,53	17,20	4,52	3,80	16,08	4,97	3,24	14,98	5,36	2,80	13,88	5,64	2,46	13,67	5,68	2,41
7	0	19,76	3,58	5,52	18,65	4,05	4,60	17,53	4,54	3,86	**16,37**	**5,01**	**3,26**	15,28	5,38	2,84	14,17	5,67	2,50	13,95	5,71	2,44
8	0	20,13	3,65	5,52	19,00	4,11	4,62	17,86	4,58	3,90	16,71	5,02	3,33	15,58	5,40	2,89	14,46	5,68	2,55	14,24	5,72	2,49
10	0	20,85	3,70	5,63	19,69	4,17	4,72	18,51	4,64	3,99	17,34	5,07	3,42	16,17	5,44	2,97	15,02	5,72	2,63	-	-	-
12	0	21,57	3,75	5,75	20,37	4,22	4,83	19,16	4,68	4,09	17,95	5,12	3,51	16,75	5,48	3,06	-	-	-	-	-	-
14	0	22,27	3,79	5,87	21,04	4,26	4,94	19,79	4,73	4,19	18,56	5,16	3,60	17,34	5,52	3,14	-	-	-	-	-	-
16	0	22,96	3,84	5,99	21,69	4,31	5,04	20,42	4,77	4,28	19,16	5,20	3,69	17,91	5,55	3,23	-	-	-	-	-	-
18	0	23,64	3,89	6,08	22,34	4,36	5,13	21,05	4,82	4,36	**19,71**	**5,24**	**3,76**	18,49	5,59	3,31	-	-	-	-	-	-

10.13. ECL 070 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	18,70	3,42	5,46	17,65	3,91	4,51	16,58	4,39	3,77	15,50	4,84	3,20	14,41	5,24	2,75	13,35	5,53	2,41	13,14	5,57	2,36
6	0	19,66	3,45	5,70	18,55	3,93	4,72	17,43	4,43	3,94	16,30	4,90	3,33	15,18	5,30	2,86	14,07	5,60	2,51	13,85	5,64	2,45
7	0	20,04	3,45	5,80	18,91	3,94	4,80	17,77	4,44	4,00	**16,59**	**4,94**	**3,36**	15,48	5,32	2,91	14,36	5,62	2,55	14,14	5,67	2,49
8	0	20,41	3,52	5,80	19,27	4,00	4,82	18,11	4,48	4,04	16,94	4,94	3,43	15,79	5,33	2,96	14,65	5,63	2,60	14,42	5,67	2,54
10	0	21,15	3,56	5,94	19,97	4,04	4,94	18,77	4,53	4,15	17,58	4,98	3,53	16,39	5,37	3,05	15,22	5,66	2,69	-	-	-
12	0	21,87	3,60	6,07	20,65	4,08	5,06	19,43	4,57	4,25	18,20	5,02	3,63	16,98	5,40	3,15	-	-	-	-	-	-
14	0	22,58	3,63	6,21	21,33	4,12	5,18	20,07	4,60	4,36	18,82	5,05	3,73	17,57	5,42	3,24	-	-	-	-	-	-
16	0	23,28	3,67	6,34	22,00	4,16	5,29	20,71	4,64	4,47	19,43	5,08	3,82	18,16	5,45	3,33	-	-	-	-	-	-
18	0	23,97	3,72	6,45	22,66	4,20	5,39	21,34	4,68	4,56	**19,98**	**5,12**	**3,91**	18,75	5,49	3,42	-	-	-	-	-	-

10.14. ECL 070 H WITH BUFFER TANK AND HIGH HEAD PUMP version Q COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	19,00	3,52	5,39	17,94	4,01	4,48	16,86	4,48	3,76	15,78	4,93	3,20	14,69	5,32	2,76	13,61	5,61	2,43	13,40	5,65	2,37
6	0	19,96	3,55	5,62	18,85	4,03	4,68	17,72	4,52	3,92	16,58	4,98	3,33	15,45	5,38	2,87	14,33	5,68	2,53	14,11	5,72	2,47
7	0	20,34	3,56	5,72	19,21	4,04	4,75	18,06	4,53	3,98	**16,87**	**5,02**	**3,36**	15,76	5,40	2,92	14,63	5,70	2,57	14,40	5,75	2,51
8	0	20,71	3,62	5,72	19,56	4,10	4,78	18,40	4,58	4,02	17,23	5,03	3,43	16,06	5,42	2,97	14,92	5,71	2,61	14,69	5,75	2,55
10	0	21,45	3,67	5,85	20,27	4,15	4,89	19,07	4,62	4,12	17,86	5,07	3,52	16,67	5,46	3,06	15,50	5,74	2,70	-	-	-
12	0	22,18	3,71	5,98	20,96	4,19	5,00	19,72	4,67	4,23	18,49	5,11	3,62	17,27	5,49	3,15	-	-	-	-	-	-
14	0	22,89	3,75	6,11	21,64	4,23	5,12	20,37	4,70	4,33	19,11	5,14	3,72	17,86	5,51	3,24	-	-	-	-	-	-
16	0	23,59	3,79	6,23	22,31	4,27	5,23	21,01	4,74	4,43	19,73	5,18	3,81	18,45	5,54	3,33	-	-	-	-	-	-
18	0	24,28	3,84	6,33	22,97	4,32	5,32	21,65	4,79	4,52	**20,28**	**5,22**	**3,89**	19,04	5,58	3,41	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

Data to UNI EN14511: 2011

SELECTION NOT POSSIBLE:

- Outside of operating limits

(2) Insufficient water flow rate bellow operating limit of pump

10.15. ECL 080 H version STANDARD - COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	22,88	4,61	4,96	21,59	5,22	4,14	20,28	5,83	3,48	18,97	6,39	2,97	17,65	6,89	2,56	16,35	7,24	2,26	16,10	7,28	2,21
6	0	24,07	4,64	5,19	22,72	5,25	4,33	21,35	5,87	3,64	19,97	6,45	3,09	18,59	6,95	2,67	17,24	7,32	2,36	16,97	7,37	2,30
7	0	24,53	4,66	5,27	23,16	5,27	4,40	21,76	5,89	3,69	**20,32**	**6,51**	**3,12**	18,97	6,99	2,72	17,60	7,36	2,39	17,33	7,41	2,34
8	0	24,99	4,74	5,27	23,59	5,34	4,41	22,17	5,95	3,73	20,75	6,52	3,18	19,34	7,01	2,76	17,95	7,37	2,43	17,68	7,43	2,38
10	0	25,89	4,82	5,38	24,44	5,42	4,51	22,98	6,02	3,82	21,52	6,59	3,27	20,07	7,07	2,84	18,65	7,42	2,51	-	-	-
12	0	26,77	4,88	5,49	25,28	5,48	4,61	23,78	6,09	3,91	22,28	6,65	3,35	20,80	7,12	2,92	-	-	-	-	-	-
14	0	27,64	4,93	5,60	26,11	5,54	4,71	24,57	6,14	4,00	23,04	6,70	3,44	21,52	7,16	3,01	-	-	-	-	-	-
16	0	28,50	4,99	5,71	26,93	5,60	4,81	25,35	6,20	4,09	23,79	6,75	3,52	22,24	7,21	3,09	-	-	-	-	-	-
18	0	29,34	5,06	5,80	27,73	5,67	4,89	26,13	6,27	4,17	**24,50**	**6,81**	**3,59**	22,95	7,26	3,16	-	-	-	-	-	-

10.16. ECL 080 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	23,20	4,44	5,22	21,90	5,07	4,32	20,57	5,69	3,62	19,24	6,27	3,07	17,90	6,78	2,64	16,58	7,15	2,32	16,32	7,20	2,27
6	0	24,39	4,47	5,45	23,03	5,10	4,52	21,64	5,73	3,77	20,24	6,34	3,19	18,84	6,85	2,75	17,47	7,24	2,41	17,20	7,29	2,36
7	0	24,86	4,49	5,54	23,47	5,11	4,59	22,06	5,75	3,84	**20,59**	**6,39**	**3,22**	19,22	6,88	2,79	17,83	7,27	2,45	17,56	7,33	2,40
8	0	25,32	4,57	5,54	23,91	5,18	4,61	22,47	5,81	3,87	21,03	6,39	3,29	19,60	6,90	2,84	18,19	7,28	2,50	17,91	7,34	2,44
10	0	26,23	4,63	5,66	24,77	5,25	4,72	23,29	5,87	3,97	21,81	6,45	3,38	20,35	6,95	2,93	18,90	7,32	2,58	-	-	-
12	0	27,12	4,69	5,78	25,62	5,30	4,83	24,10	5,92	4,07	22,59	6,50	3,48	21,08	6,99	3,02	-	-	-	-	-	-
14	0	27,99	4,74	5,91	26,45	5,36	4,94	24,90	5,97	4,17	23,35	6,54	3,57	21,81	7,02	3,11	-	-	-	-	-	-
16	0	28,85	4,79	6,02	27,28	5,41	5,04	25,69	6,02	4,27	24,11	6,59	3,66	22,54	7,06	3,19	-	-	-	-	-	-
18	0	29,70	4,86	6,11	28,09	5,48	5,13	26,47	6,09	4,35	**24,83**	**6,64**	**3,74**	23,26	7,11	3,27	-	-	-	-	-	-

10.17. ECL 080 H WITH BUFFER TANK AND HIGH HEAD PUMP version Q COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	23,53	4,55	5,17	22,22	5,17	4,30	20,89	5,79	3,61	19,55	6,36	3,07	18,20	6,87	2,65	16,87	7,23	2,33	16,61	7,29	2,28
6	0	24,72	4,58	5,39	23,35	5,20	4,49	21,95	5,83	3,76	20,55	6,43	3,20	19,15	6,94	2,76	17,76	7,32	2,43	17,49	7,38	2,37
7	0	25,19	4,60	5,48	23,79	5,22	4,56	22,38	5,85	3,82	**20,90**	**6,48**	**3,22**	19,53	6,97	2,80	18,13	7,36	2,46	17,85	7,41	2,41
8	0	25,65	4,68	5,48	24,23	5,29	4,58	22,79	5,91	3,86	21,35	6,49	3,29	19,91	6,99	2,85	18,49	7,37	2,51	18,21	7,42	2,45
10	0	26,57	4,75	5,59	25,10	5,36	4,68	23,62	5,97	3,95	22,13	6,55	3,38	20,65	7,04	2,93	19,20	7,41	2,59	-	-	-
12	0	27,46	4,81	5,71	25,95	5,42	4,79	24,43	6,03	4,05	22,91	6,60	3,47	21,40	7,09	3,02	-	-	-	-	-	-
14	0	28,34	4,86	5,83	26,79	5,47	4,90	25,23	6,08	4,15	23,67	6,65	3,56	22,13	7,12	3,11	-	-	-	-	-	-
16	0	29,21	4,92	5,94	27,62	5,53	5,00	26,03	6,14	4,24	24,43	6,70	3,65	22,86	7,17	3,19	-	-	-	-	-	-
18	0	30,06	4,98	6,03	28,44	5,60	5,08	26,81	6,20	4,32	**25,16**	**6,76**	**3,73**	23,59	7,22	3,27	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

Data to UNI EN14511: 2011

SELECTION NOT POSSIBLE:

- Outside of operating limits

10.18. ECL 090 H version STANDARD - COOLING MODE (400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	24,83	4,89	5,08	23,44	5,53	4,24	22,02	6,15	3,58	20,60	6,74	3,06	19,17	7,25	2,64	17,75	7,61	2,33	17,49	7,65	2,28
6	0	26,13	4,92	5,31	24,67	5,56	4,44	23,18	6,20	3,74	21,68	6,80	3,19	20,19	7,32	2,76	18,73	7,70	2,43	18,44	7,75	2,38
7	0	26,63	4,94	5,39	25,14	5,58	4,51	23,63	6,22	3,80	**22,06**	**6,87**	**3,21**	20,60	7,36	2,80	19,11	7,74	2,47	18,82	7,80	2,41
8	0	27,12	5,04	5,38	25,61	5,66	4,52	24,07	6,29	3,83	22,53	6,88	3,28	21,00	7,38	2,84	19,50	7,76	2,51	19,20	7,81	2,46
10	0	28,10	5,12	5,49	26,53	5,74	4,62	24,95	6,37	3,92	23,37	6,95	3,36	21,80	7,45	2,93	20,26	7,81	2,59	-	-	-
12	0	29,05	5,19	5,60	27,44	5,81	4,72	25,82	6,44	4,01	24,20	7,02	3,45	22,59	7,50	3,01	-	-	-	-	-	-
14	0	29,99	5,25	5,71	28,34	5,88	4,82	26,67	6,50	4,10	25,01	7,07	3,54	23,37	7,55	3,09	-	-	-	-	-	-
16	0	30,92	5,32	5,82	29,22	5,94	4,92	27,52	6,57	4,19	25,82	7,13	3,62	24,15	7,60	3,18	-	-	-	-	-	-
18	0	31,84	5,39	5,90	30,10	6,02	5,00	28,36	6,64	4,27	**26,46**	**7,20**	**3,67**	24,92	7,67	3,25	-	-	-	-	-	-

10.20. ECL 090 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A COOLING MODE (400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	25,23	4,66	5,42	23,82	5,31	4,49	22,38	5,96	3,76	20,92	6,56	3,19	19,47	7,09	2,74	18,03	7,48	2,41	17,75	7,54	2,35
6	0	26,52	4,69	5,66	25,04	5,34	4,69	23,53	6,00	3,92	22,01	6,63	3,32	20,50	7,17	2,86	19,00	7,57	2,51	18,71	7,63	2,45
7	0	27,03	4,70	5,75	25,52	5,35	4,77	23,99	6,02	3,98	**22,40**	**6,69**	**3,35**	20,91	7,20	2,90	19,39	7,61	2,55	19,10	7,67	2,49
8	0	27,53	4,79	5,75	26,00	5,43	4,79	24,44	6,08	4,02	22,87	6,69	3,42	21,32	7,22	2,95	19,78	7,62	2,60	19,48	7,68	2,54
10	0	28,52	4,86	5,87	26,94	5,50	4,90	25,33	6,15	4,12	23,72	6,75	3,51	22,13	7,27	3,04	20,56	7,66	2,68	-	-	-
12	0	29,49	4,92	5,99	27,86	5,56	5,01	26,21	6,20	4,22	24,56	6,81	3,61	22,93	7,32	3,13	-	-	-	-	-	-
14	0	30,44	4,98	6,12	28,76	5,62	5,12	27,08	6,26	4,33	25,39	6,85	3,71	23,72	7,35	3,23	-	-	-	-	-	-
16	0	31,37	5,04	6,23	29,66	5,68	5,23	27,93	6,31	4,42	26,21	6,90	3,80	24,51	7,40	3,31	-	-	-	-	-	-
18	0	32,29	5,11	6,32	30,54	5,75	5,31	28,78	6,38	4,51	**26,87**	**6,96**	**3,86**	25,30	7,45	3,40	-	-	-	-	-	-

10.19. ECL 090 H WITH BUFFER TANK AND HIGH HEAD PUMP version Q COOLING MODE (400V/3/N/50Hz)

TWP		EXTERNAL AIR TEMPERATURE (°C)																				
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	25,57	4,77	5,36	24,15	5,42	4,46	22,70	6,06	3,75	21,24	6,66	3,19	19,78	7,19	2,75	18,33	7,57	2,42	18,05	7,63	2,37
6	0	26,87	4,80	5,59	25,38	5,45	4,66	23,86	6,11	3,91	22,33	6,73	3,32	20,81	7,26	2,86	19,31	7,66	2,52	19,01	7,72	2,46
7	0	27,38	4,82	5,68	25,86	5,46	4,73	24,32	6,13	3,97	**22,72**	**6,79**	**3,35**	21,22	7,30	2,91	19,70	7,70	2,56	19,40	7,76	2,50
8	0	27,88	4,91	5,68	26,34	5,54	4,75	24,77	6,19	4,00	23,20	6,79	3,42	21,63	7,32	2,96	20,09	7,71	2,61	19,79	7,77	2,55
10	0	28,87	4,98	5,80	27,28	5,61	4,86	25,67	6,26	4,10	24,05	6,86	3,51	22,45	7,37	3,04	20,87	7,75	2,69	-	-	-
12	0	29,84	5,04	5,92	28,21	5,68	4,97	26,55	6,32	4,20	24,90	6,91	3,60	23,25	7,42	3,13	-	-	-	-	-	-
14	0	30,80	5,10	6,04	29,12	5,74	5,08	27,42	6,37	4,30	25,73	6,96	3,70	24,05	7,46	3,22	-	-	-	-	-	-
16	0	31,74	5,16	6,15	30,02	5,80	5,18	28,28	6,43	4,40	26,56	7,01	3,79	24,85	7,50	3,31	-	-	-	-	-	-
18	0	32,66	5,23	6,24	30,90	5,87	5,26	29,13	6,50	4,48	**27,21**	**7,07**	**3,85**	25,64	7,56	3,39	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

Data to UNI EN14511: 2011

SELECTION NOT POSSIBLE:

- Outside of operating limits

10.21. ECL 102 H version STANDARD - COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	28,99	6,24	4,65	27,36	7,07	3,87	25,71	7,89	3,26	24,04	8,65	2,78	22,37	9,32	2,40	20,72	9,80	2,11	20,41	9,85	2,07
6	0	30,50	6,28	4,86	28,79	7,11	4,05	27,06	7,95	3,40	25,31	8,74	2,90	23,57	9,41	2,50	21,85	9,91	2,21	21,51	9,98	2,16
7	0	31,09	6,31	4,93	29,35	7,13	4,11	27,58	7,98	3,46	**25,75**	**8,82**	**2,92**	24,04	9,46	2,54	22,30	9,96	2,24	21,96	10,03	2,19
8	0	31,66	6,42	4,93	29,89	7,24	4,13	28,10	8,06	3,49	26,30	8,83	2,98	24,51	9,49	2,58	22,75	9,98	2,28	22,40	10,05	2,23
10	0	32,80	6,52	5,03	30,98	7,34	4,22	29,13	8,16	3,57	27,28	8,92	3,06	25,44	9,57	2,66	23,64	10,05	2,35	-	-	-
12	0	33,92	6,60	5,14	32,04	7,42	4,32	30,14	8,24	3,66	28,24	9,00	3,14	26,36	9,64	2,74	-	-	-	-	-	-
14	0	35,02	6,68	5,24	33,09	7,50	4,41	31,14	8,32	3,74	29,20	9,07	3,22	27,28	9,70	2,81	-	-	-	-	-	-
16	0	36,11	6,76	5,34	34,12	7,58	4,50	32,13	8,40	3,83	30,14	9,14	3,30	28,19	9,76	2,89	-	-	-	-	-	-
18	0	37,17	6,85	5,43	35,14	7,68	4,58	33,11	8,49	3,90	**31,48**	**9,24**	**3,40**	29,09	9,84	2,96	-	-	-	-	-	-

10.22.ECL 102 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	29,59	6,29	4,70	27,96	7,10	3,94	26,29	7,91	3,32	24,61	8,67	2,84	22,92	9,34	2,45						
6	0	31,09	6,33	4,91	29,38	7,14	4,11	27,64	7,98	3,46	25,88	8,77	2,95	24,12	9,44	2,55						
7	0	31,68	6,36	4,98	29,95	7,17	4,18	28,17	8,01	3,52	**26,33**	**8,84**	**2,98**	24,60	9,48	2,59		(2)			(2)	
8	0	32,26	6,48	4,98	30,49	7,28	4,19	28,69	8,09	3,55	26,88	8,85	3,04	25,08	9,51	2,64						
10	0	33,39	6,60	5,06	31,58	7,39	4,28	29,73	8,19	3,63	27,87	8,95	3,12	26,02	9,59	2,71	24,19	10,07	2,40	-	-	-
12	0	34,50	6,70	5,15	32,64	7,48	4,36	30,74	8,28	3,71	28,84	9,02	3,20	26,95	9,66	2,79	-	-	-	-	-	-
14	0	35,57	6,81	5,22	33,68	7,58	4,44	31,74	8,36	3,80	29,80	9,10	3,27	27,87	9,72	2,87	-	-	-	-	-	-
16	0		(1)		34,70	7,68	4,52	32,73	8,45	3,87	30,75	9,18	3,35	28,78	9,79	2,94	-	-	-	-	-	-
18	0				35,69	7,81	4,57	33,70	8,56	3,93	**32,09**	**9,29**	**3,46**	29,69	9,87	3,01	-	-	-	-	-	-

10.23.ECL 102 H WITH HIGH HEAD PUMP version N - WITH BUFFER TANK AND HIGH HEAD PUMP version Q COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	29,69	6,75	4,40	28,08	7,53	3,73	26,42	8,32	3,18	24,75	9,05	2,74	23,06	9,71	2,37						
6	0	31,20	6,80	4,59	29,50	7,58	3,89	27,77	8,38	3,31	26,02	9,15	2,84	24,26	9,81	2,47		(2)			(2)	
7	0	31,78	6,83	4,66	30,06	7,61	3,95	28,30	8,42	3,36	**26,47**	**9,23**	**2,87**	24,74	9,85	2,51						
8	0	32,35	6,96	4,65	30,60	7,72	3,96	28,82	8,51	3,39	27,02	9,25	2,92	25,22	9,89	2,55						
10	0	33,47	7,10	4,71	31,68	7,85	4,03	29,85	8,62	3,46	28,00	9,35	2,99	26,16	9,98	2,62	24,34	10,44	2,33	-	-	-
12	0	34,56	7,23	4,78	32,73	7,97	4,11	30,85	8,73	3,53	28,97	9,44	3,07	27,08	10,05	2,69	-	-	-	-	-	-
14	0	35,62	7,37	4,83	33,76	8,09	4,17	31,85	8,83	3,61	29,92	9,53	3,14	28,00	10,13	2,77	-	-	-	-	-	-
16	0		(1)		34,76	8,21	4,23	32,82	8,94	3,67	30,86	9,63	3,21	28,91	10,20	2,83	-	-	-	-	-	-
18	0				35,74	8,37	4,27	33,78	9,07	3,72	**32,19**	**9,76**	**3,30**	29,81	10,30	2,90	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

(1) Excessive water flow rate beyond operating limit of pump

(2) Insufficient water flow rate bellow operating limit of pump

Data to UNI EN14511: 2011

10.24. ECL 152 H version STANDARD - COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	35,70	7,42	4,81	33,69	8,40	4,01	31,65	9,38	3,37	29,60	10,29	2,88	27,54	11,09	2,48	25,51	11,65	2,19	25,12	11,72	2,14
6	0	37,56	7,47	5,03	35,45	8,45	4,19	33,31	9,45	3,52	31,16	10,39	3,00	29,02	11,20	2,59	26,91	11,78	2,28	26,49	11,87	2,23
7	0	38,28	7,50	5,11	36,13	8,48	4,26	33,96	9,49	3,58	**31,71**	**10,48**	**3,02**	29,60	11,25	2,63	27,46	11,85	2,32	27,04	11,93	2,27
8	0	38,99	7,64	5,11	36,81	8,61	4,28	34,60	9,58	3,61	32,38	10,50	3,08	30,18	11,29	2,67	28,01	11,87	2,36	27,58	11,96	2,31
10	0	40,39	7,75	5,21	38,14	8,72	4,37	35,87	9,70	3,70	33,59	10,61	3,17	31,33	11,38	2,75	29,11	11,95	2,44	-	-	-
12	0	41,77	7,85	5,32	39,45	8,82	4,47	37,11	9,80	3,79	34,78	10,70	3,25	32,46	11,46	2,83	-	-	-	-	-	-
14	0	43,13	7,94	5,43	40,74	8,92	4,57	38,34	9,89	3,88	35,95	10,78	3,33	33,59	11,53	2,91	-	-	-	-	-	-
16	0	44,46	8,03	5,54	42,02	9,01	4,66	39,56	9,98	3,96	37,12	10,87	3,41	34,70	11,61	2,99	-	-	-	-	-	-
18	0	45,78	8,14	5,62	43,28	9,13	4,74	40,77	10,09	4,04	**38,64**	**10,99**	**3,51**	35,82	11,70	3,06	-	-	-	-	-	-

10.25.ECL 152 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	36,43	7,77	4,69	34,45	8,70	3,96	32,42	9,64	3,36	30,36	10,51	2,89	28,28	11,30	2,50	26,23	11,86	2,21	25,84	11,93	2,17
6	0	38,29	7,82	4,89	36,20	8,76	4,13	34,07	9,72	3,51	31,92	10,63	3,00	29,76	11,42	2,61	27,63	12,00	2,30	27,20	12,08	2,25
7	0	39,01	7,86	4,96	36,89	8,79	4,20	34,73	9,76	3,56	**32,47**	**10,72**	**3,03**	30,35	11,47	2,65	28,19	12,06	2,34	27,76	12,15	2,29
8	0	39,71	8,02	4,95	37,56	8,93	4,21	35,36	9,86	3,59	33,15	10,75	3,08	30,93	11,51	2,69	28,75	12,08	2,38	28,31	12,17	2,33
10	0	41,08	8,19	5,02	38,88	9,08	4,28	36,63	10,00	3,66	34,35	10,87	3,16	32,09	11,62	2,76	29,85	12,17	2,45	-	-	-
12	0	42,41	8,36	5,08	40,17	9,22	4,36	37,87	10,12	3,74	35,54	10,98	3,24	33,23	11,71	2,84	-	-	-	-	-	-
14	0				41,43	9,36	4,43	39,09	10,24	3,82	36,72	11,08	3,31	34,36	11,79	2,91	-	-	-	-	-	-
16	0	(1)			42,66	9,52	4,48	40,28	10,37	3,88	37,88	11,19	3,38	35,48	11,88	2,99	-	-	-	-	-	-
18	0				(1)			41,46	10,53	3,94	**39,39**	**11,34**	**3,47**	36,59	11,99	3,05	-	-	-	-	-	-

10.26. ECL 152 H WITH HIGH HEAD PUMP version N - WITH BUFFER TANK AND HIGH HEAD PUMP version Q COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																					
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	36,72	7,73	4,75	34,69	8,70	3,99	32,62	9,67	3,37	30,53	10,57	2,89	28,43	11,37	2,50	26,36	11,94	2,21	25,96	12,02	2,16
6	0	38,58	7,78	4,96	36,45	8,75	4,16	34,28	9,74	3,52	32,09	10,68	3,00	29,91	11,49	2,60	27,76	12,08	2,30	27,33	12,17	2,25
7	0	39,31	7,81	5,04	37,14	8,78	4,23	34,94	9,78	3,57	**32,65**	**10,77**	**3,03**	30,51	11,54	2,64	28,32	12,14	2,33	27,89	12,23	2,28
8	0	40,03	7,95	5,03	37,83	8,91	4,25	35,59	9,87	3,60	33,34	10,79	3,09	31,09	11,57	2,69	28,89	12,16	2,38	28,45	12,25	2,32
10	0	41,44	8,08	5,13	39,17	9,03	4,34	36,87	9,99	3,69	34,56	10,90	3,17	32,26	11,67	2,76	30,00	12,24	2,45	-	-	-
12	0	42,83	8,19	5,23	40,50	9,14	4,43	38,13	10,10	3,78	35,77	10,99	3,25	33,42	11,75	2,84	-	-	-	-	-	-
14	0	44,19	8,30	5,33	41,80	9,25	4,52	39,38	10,20	3,86	36,96	11,08	3,34	34,56	11,82	2,92	-	-	-	-	-	-
16	0	45,53	8,41	5,41	43,08	9,35	4,61	40,61	10,30	3,94	38,14	11,17	3,41	35,70	11,90	3,00	-	-	-	-	-	-
18	0	46,84	8,54	5,48	44,34	9,48	4,68	41,82	10,42	4,01	**39,68**	**11,30**	**3,51**	36,82	11,99	3,07	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

(1) Excessive water flow rate beyond operating limit of pump

(2) Insufficient water flow rate bellow operating limit of pump

Data to UNI EN14511: 2011

10.27. ECL 202 H version STANDARD - COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	45,68	10,08	4,53	43,12	11,44	3,77	40,51	12,77	3,17	37,88	14,02	2,70	35,24	15,11	2,33	32,64	15,89	2,05	32,15	15,99	2,01
6	0	48,06	10,15	4,73	45,37	11,50	3,94	42,63	12,87	3,31	39,88	14,16	2,82	37,13	15,26	2,43	34,43	16,07	2,14	33,89	16,19	2,09
7	0	48,98	10,19	4,81	46,24	11,54	4,01	43,46	12,92	3,36	**40,57**	**14,28**	**2,84**	37,88	15,33	2,47	35,14	16,15	2,18	34,60	16,28	2,13
8	0	49,89	10,38	4,81	47,10	11,71	4,02	44,28	13,05	3,39	41,44	14,31	2,90	38,62	15,38	2,51	35,84	16,19	2,21	35,30	16,30	2,16
10	0	51,69	10,53	4,91	48,81	11,87	4,11	45,90	13,20	3,48	42,98	14,45	2,97	40,09	15,51	2,58	37,24	16,29	2,29	-	-	-
12	0	53,45	10,66	5,01	50,49	12,00	4,21	47,49	13,34	3,56	44,50	14,57	3,05	41,54	15,62	2,66	-	-	-	-	-	-
14	0	55,19	10,78	5,12	52,14	12,12	4,30	49,07	13,46	3,65	46,01	14,69	3,13	42,98	15,71	2,74	-	-	-	-	-	-
16	0	56,90	10,90	5,22	53,77	12,25	4,39	50,63	13,58	3,73	47,50	14,80	3,21	44,41	15,81	2,81	-	-	-	-	-	-
18	0	58,59	11,05	5,30	55,38	12,40	4,47	52,17	13,73	3,80	**49,09**	**14,94**	**3,28**	45,83	15,93	2,88	-	-	-	-	-	-

10.28. ECL 202 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	46,43	10,56	4,40	43,93	11,84	3,71	41,33	13,08	3,16	38,74	14,28	2,71	36,07	15,35	2,35	33,47	16,09	2,08	32,97	16,19	2,04
6	0	48,76	10,67	4,57	46,15	11,91	3,88	43,45	13,20	3,29	40,71	14,44	2,82	37,96	15,51	2,45	35,25	16,29	2,16	34,71	16,40	2,12
7	0	49,67	10,73	4,63	47,02	11,96	3,93	44,28	13,26	3,34	**41,41**	**14,57**	**2,84**	38,72	15,58	2,49	35,97	16,38	2,20	35,42	16,49	2,15
8	0	50,53	10,99	4,60	47,86	12,16	3,94	45,09	13,41	3,36	42,27	14,60	2,89	39,46	15,64	2,52	36,68	16,41	2,23	36,12	16,53	2,19
10	0				49,52	12,39	4,00	46,69	13,61	3,43	43,81	14,78	2,96	40,93	15,79	2,59	38,08	16,53	2,30	-	-	-
12	0				51,10	12,64	4,04	48,25	13,79	3,50	45,32	14,93	3,03	42,38	15,91	2,66	-	-	-	-	-	-
14	0		(1)					49,78	13,98	3,56	46,80	15,08	3,10	43,81	16,03	2,73	-	-	-	-	-	-
16	0					(1)		51,25	14,21	3,61	48,28	15,23	3,17	45,24	16,16	2,80	-	-	-	-	-	-
18	0								(1)		**49,80**	**15,45**	**3,22**	46,65	16,31	2,86	-	-	-	-	-	-

10.29. ECL 202 H WITH HIGH HEAD PUMP version N - WITH BUFFER TANK AND HIGH HEAD PUMP version Q COOLING MODE (400V/3/N/50Hz)

TWP	EXTERNAL AIR TEMPERATURE (°C)																							
		FROM -10°C TO 20°C			25			30			35			40			45			46		
	GLYCOL %	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
4	10	46,82	10,45	4,48	44,24	11,80	3,75	41,58	13,11	3,17	38,95	14,32	2,72	36,25	15,41	2,35	33,61	16,18	2,08	33,11	16,28	2,03
6	0	49,17	10,54	4,66	46,46	11,87	3,92	43,70	13,21	3,31	40,92	14,48	2,83	38,15	15,57	2,45	35,40	16,37	2,16	34,86	16,49	2,11
7	0	50,09	10,59	4,73	47,34	11,91	3,98	44,54	13,26	3,36	**41,63**	**14,60**	**2,85**	38,91	15,64	2,49	36,13	16,45	2,20	35,58	16,57	2,15
8	0	51,00	10,80	4,72	48,21	12,09	3,99	45,37	13,39	3,39	42,51	14,63	2,91	39,65	15,69	2,53	36,84	16,49	2,23	36,29	16,60	2,19
10	0	52,79	10,99	4,81	49,92	12,27	4,07	47,00	13,57	3,46	44,06	14,78	2,98	41,14	15,83	2,60	38,26	16,59	2,31	-	-	-
12	0	54,55	11,16	4,89	51,60	12,43	4,15	48,60	13,72	3,54	45,60	14,92	3,06	42,61	15,94	2,67	-	-	-	-	-	-
14	0	56,26	11,32	4,97	53,24	12,58	4,23	50,18	13,86	3,62	47,11	15,04	3,13	44,06	16,04	2,75	-	-	-	-	-	-
16	0	57,94	11,50	5,04	54,87	12,75	4,30	51,74	14,01	3,69	48,61	15,18	3,20	45,51	16,15	2,82	-	-	-	-	-	-
18	0	59,58	11,72	5,08	56,45	12,94	4,36	53,28	14,19	3,76	**50,20**	**15,34**	**3,27**	46,94	16,29	2,88	-	-	-	-	-	-

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	**1**	1,02	1,03
Input power correction factors	0,99	**1**	1,01	1,02

FOULING FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

LEGEND	FUNCTION
Pc	Cooling capacity in kW
Pe	Power input in kW
	Operation with glycol and DCPX acessory
	Operation with glycol only
	Operation with DCPX accessory
TWP	Temperature of Water Produced °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

(1) Excessive water flow rate beyond operating limit of pump

(2) Insufficient water flow rate bellow operating limit of pump

Data to UNI EN14511: 2011

10.31. ECL 020 H version STANDARD - HEATING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	4,00	1,01	3,96	3,93	1,42	2,76	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	4,25	1,01	4,19	4,16	1,42	2,92	4,06	1,65	2,46	-	-	-	-	-	-	-	-	-
-6	0	4,50	1,02	4,42	4,38	1,43	3,07	4,27	1,65	2,58	4,15	1,79	2,32	4,03	1,93	2,09	-	-	-
-4	0	4,74	1,02	4,64	4,60	1,43	3,21	4,47	1,66	2,69	4,34	1,79	2,42	4,22	1,93	2,19	4,08	2,16	1,89
-2	0	4,98	1,03	4,86	4,81	1,44	3,35	4,66	1,66	2,81	4,53	1,80	2,52	4,40	1,93	2,28	4,28	2,16	1,98
0	0	5,22	1,03	5,06	5,02	1,44	3,49	4,86	1,67	2,92	4,72	1,80	2,62	4,59	1,94	2,37	4,47	2,17	2,06
2	0	5,19	1,03	5,03	5,16	1,44	3,57	5,07	1,67	3,03	4,94	1,81	2,73	4,81	1,94	2,48	4,69	2,17	2,16
4	0	6,27	1,06	5,94	6,14	1,47	4,19	6,03	1,69	3,56	5,92	1,83	3,24	5,80	1,96	2,96	5,67	2,19	2,59
6	0	6,66	1,07	6,25	6,51	1,48	4,41	6,38	1,70	3,75	6,25	1,84	3,40	6,12	1,97	3,10	5,97	2,20	2,72
7	0	6,85	1,07	6,39	6,69	1,48	4,52	**6,54**	**1,71**	**3,83**	6,40	1,84	3,48	**6,27**	**1,98**	**3,17**	6,10	2,20	2,77
8	0	7,03	1,08	6,53	6,85	1,49	4,61	6,70	1,71	3,91	6,55	1,85	3,55	6,40	1,98	3,23	6,23	2,21	2,83
10	0	7,37	1,09	6,78	7,17	1,50	4,80	6,99	1,72	4,07	6,82	1,85	3,68	6,65	1,99	3,35	6,47	2,21	2,92
12	0	7,71	1,10	7,02	7,48	1,50	4,97	7,28	1,73	4,21	7,08	1,86	3,80	6,89	1,99	3,45	6,68	2,22	3,01
14	0	8,04	1,11	7,25	7,79	1,51	5,14	7,56	1,74	4,35	7,34	1,87	3,93	7,12	2,00	3,56	6,89	2,23	3,10
16	0	8,38	1,12	7,49	8,10	1,52	5,31	7,84	1,75	4,49	7,60	1,88	4,05	7,36	2,01	3,66	7,10	2,23	3,18
18	0	8,74	1,13	7,73	8,43	1,53	5,49	8,14	1,76	4,64	7,87	1,89	4,17	7,60	2,02	3,77	7,33	2,24	3,27
20	0	9,13	1,14	7,99	8,78	1,54	5,69	8,47	1,76	4,80	8,17	1,89	4,31	7,87	2,02	3,89	7,57	2,24	3,37
21 TO 42	0	9,13	1,14	7,99	8,78	1,54	5,69	8,47	1,76	4,80	8,17	1,89	4,31	7,87	2,02	3,89	7,57	2,24	3,37

10.30. ECL 020 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A HEATING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	3,97	1,07	3,71	3,91	1,48	2,64	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	4,22	1,07	3,95	4,13	1,48	2,79	4,04	1,71	2,36	-	-	-	-	-	-	-	-	-
-6	0	4,46	1,06	4,19	4,35	1,48	2,94	4,24	1,71	2,48	4,13	1,85	2,23	4,00	1,98	2,02	-	-	-
-4	0	4,70	1,06	4,42	4,56	1,48	3,09	4,43	1,71	2,60	4,31	1,85	2,34	4,19	1,98	2,11	4,06	2,21	1,83
-2	0	4,94	1,06	4,64	4,77	1,48	3,23	4,62	1,71	2,71	4,49	1,85	2,44	4,37	1,98	2,20	4,25	2,21	1,92
0	0	5,17	1,06	4,86	4,98	1,48	3,37	4,82	1,71	2,82	4,68	1,85	2,53	4,55	1,98	2,29	4,43	2,21	2,00
2	0	5,14	1,07	4,82	5,11	1,48	3,45	5,02	1,71	2,94	4,90	1,85	2,65	4,77	1,98	2,40	4,65	2,21	2,10
4	0	6,19	1,07	5,81	6,07	1,48	4,10	5,96	1,71	3,49	5,85	1,84	3,17	5,74	1,98	2,89	5,61	2,21	2,54
6	0	6,58	1,07	6,16	6,43	1,48	4,34	6,30	1,71	3,69	6,17	1,85	3,34	6,04	1,98	3,05	5,90	2,21	2,67
7	0	6,76	1,07	6,32	6,60	1,48	4,46	**6,46**	**1,71**	**3,78**	6,32	1,85	3,42	**6,19**	**1,99**	**3,12**	6,03	2,21	2,72
8	0	6,94	1,07	6,48	6,77	1,48	4,56	6,61	1,71	3,86	6,47	1,85	3,50	6,32	1,99	3,18	6,16	2,22	2,78
10	0	7,27	1,07	6,77	7,08	1,49	4,76	6,90	1,71	4,03	6,73	1,85	3,64	6,57	1,99	3,30	6,38	2,22	2,88
12	0	7,60	1,08	7,05	7,38	1,49	4,96	7,18	1,72	4,18	6,99	1,85	3,77	6,80	1,99	3,42	6,60	2,22	2,97
14	0	7,93	1,08	7,33	7,68	1,49	5,15	7,45	1,72	4,33	7,24	1,86	3,90	7,03	1,99	3,53	6,80	2,22	3,06
16	0	8,26	1,09	7,61	7,98	1,50	5,34	7,73	1,72	4,49	7,49	1,86	4,03	7,25	1,99	3,64	7,01	2,22	3,15
18	0	8,61	1,09	7,90	8,31	1,50	5,54	8,03	1,73	4,65	7,76	1,86	4,17	7,50	2,00	3,75	7,23	2,22	3,25
20	0	8,99	1,09	8,21	8,65	1,50	5,76	8,34	1,73	4,83	8,05	1,86	4,32	7,76	2,00	3,88	7,46	2,23	3,35
21 TO 42	0	8,99	1,09	8,21	8,65	1,50	5,76	8,34	1,73	4,83	8,05	1,86	4,32	7,76	2,00	3,88	7,46	2,23	3,35

Data to UNI EN14511: 2011

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0,99	**1**	1,01	1,02
Input power correction factors	1,01	**1**	0,98	0,96

LEGEND	FUNCTION
Ph	Heating capacity in kW
Pe	Power input in kW
	Operation with DCPX accessory
TAE	Temperature of Air External in °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

10.33. ECL 025 H version STANDARD - HEATING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	4,51	1,12	4,02	4,44	1,58	2,81	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	4,80	1,13	4,26	4,70	1,58	2,97	4,59	1,84	2,50	-	-	-	-	-	-	-	-	-
-6	0	5,08	1,13	4,49	4,94	1,59	3,12	4,82	1,84	2,62	4,69	1,99	2,36	4,55	2,14	2,13	-	-	-
-4	0	5,35	1,14	4,71	5,19	1,59	3,26	5,04	1,84	2,74	4,91	1,99	2,46	4,76	2,14	2,22	4,61	2,40	1,92
-2	0	5,63	1,14	4,93	5,43	1,60	3,40	5,27	1,85	2,85	5,12	2,00	2,56	4,97	2,15	2,32	4,83	2,40	2,01
0	0	5,90	1,15	5,14	5,68	1,60	3,54	5,49	1,85	2,96	5,33	2,00	2,66	5,18	2,15	2,41	5,05	2,41	2,10
2	0	5,86	1,15	5,10	5,82	1,61	3,62	5,72	1,86	3,08	5,58	2,01	2,78	5,43	2,16	2,52	5,29	2,41	2,20
4	0	7,08	1,18	6,02	6,94	1,63	4,25	6,81	1,88	3,62	6,69	2,03	3,29	6,56	2,18	3,00	6,41	2,43	2,63
6	0	7,53	1,19	6,33	7,36	1,64	4,48	7,20	1,89	3,80	7,06	2,04	3,46	6,91	2,19	3,15	6,74	2,44	2,76
7	0	7,74	1,19	6,48	7,55	1,65	4,58	**7,39**	**1,90**	**3,90**	7,23	2,05	3,53	**7,08**	**2,20**	**3,22**	6,89	2,45	2,82
8	0	7,94	1,20	6,61	7,74	1,65	4,68	7,57	1,90	3,97	7,40	2,05	3,60	7,23	2,20	3,28	7,04	2,45	2,87
10	0	8,33	1,21	6,87	8,10	1,67	4,87	7,90	1,91	4,13	7,71	2,06	3,74	7,51	2,21	3,40	7,30	2,46	2,97
12	0	8,71	1,23	7,11	8,45	1,68	5,04	8,22	1,92	4,27	8,00	2,07	3,86	7,78	2,22	3,51	7,55	2,47	3,06
14	0	9,08	1,24	7,34	8,80	1,69	5,21	8,54	1,94	4,41	8,29	2,08	3,98	8,04	2,23	3,61	7,79	2,48	3,15
16	0	9,47	1,25	7,57	9,15	1,70	5,39	8,86	1,95	4,55	8,58	2,09	4,11	8,31	2,24	3,72	8,03	2,48	3,23
18	0	9,88	1,26	7,82	9,52	1,71	5,57	9,20	1,96	4,70	8,89	2,10	4,23	8,59	2,24	3,83	8,28	2,49	3,32
20	0	10,31	1,28	8,07	9,92	1,72	5,76	9,56	1,97	4,86	9,22	2,11	4,37	8,89	2,25	3,95	8,55	2,50	3,42
21 TO 42	0	10,31	1,28	8,07	9,92	1,72	5,76	9,56	1,97	4,86	9,22	2,11	4,37	8,89	2,25	3,95	8,55	2,50	3,42

10.32. ECL 025 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A HEATING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	4,48	1,17	3,82	4,41	1,63	2,70	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	4,76	1,17	4,07	4,66	1,63	2,86	4,55	1,88	2,42	-	-	-	-	-	-	-	-	-
-6	0	5,03	1,17	4,31	4,90	1,63	3,01	4,78	1,88	2,54	4,65	2,03	2,29	4,51	2,19	2,06	-	-	-
-4	0	5,30	1,17	4,54	5,14	1,63	3,16	5,00	1,88	2,66	4,86	2,03	2,39	4,72	2,19	2,16	4,57	2,44	1,87
-2	0	5,57	1,17	4,77	5,38	1,63	3,31	5,22	1,88	2,77	5,07	2,03	2,49	4,93	2,19	2,25	4,79	2,44	1,96
0	0	5,83	1,17	4,99	5,61	1,63	3,45	5,43	1,88	2,89	5,27	2,03	2,59	5,13	2,19	2,35	5,00	2,44	2,05
2	0	5,80	1,17	4,96	5,76	1,63	3,54	5,66	1,88	3,01	5,52	2,04	2,71	5,38	2,19	2,46	5,24	2,44	2,15
4	0	6,99	1,17	5,97	6,85	1,63	4,21	6,72	1,88	3,57	6,60	2,03	3,24	6,47	2,19	2,96	6,33	2,44	2,59
6	0	7,42	1,17	6,33	7,26	1,63	4,45	7,11	1,88	3,77	6,97	2,04	3,42	6,82	2,19	3,12	6,66	2,44	2,72
7	0	7,63	1,17	6,49	7,45	1,63	4,56	**7,29**	**1,89**	**3,86**	7,14	2,04	3,50	**6,98**	**2,19**	**3,19**	6,81	2,44	2,78
8	0	7,83	1,18	6,65	7,63	1,63	4,67	7,46	1,89	3,95	7,30	2,04	3,58	7,13	2,19	3,25	6,95	2,45	2,84
10	0	8,21	1,18	6,95	7,99	1,64	4,88	7,79	1,89	4,12	7,60	2,04	3,72	7,41	2,19	3,38	7,20	2,45	2,94
12	0	8,58	1,19	7,24	8,33	1,64	5,07	8,10	1,89	4,28	7,89	2,05	3,86	7,67	2,20	3,49	7,45	2,45	3,04
14	0	8,95	1,19	7,52	8,67	1,65	5,27	8,41	1,90	4,43	8,17	2,05	3,99	7,93	2,20	3,60	7,68	2,45	3,13
16	0	9,33	1,20	7,80	9,01	1,65	5,46	8,73	1,90	4,59	8,46	2,05	4,12	8,19	2,20	3,72	7,91	2,46	3,22
18	0	9,72	1,20	8,10	9,38	1,65	5,67	9,06	1,90	4,76	8,76	2,05	4,26	8,46	2,20	3,84	8,16	2,46	3,32
20	0	10,15	1,21	8,41	9,77	1,66	5,89	9,42	1,91	4,93	9,08	2,06	4,42	8,76	2,21	3,97	8,42	2,46	3,43
21 TO 42	0	10,15	1,21	8,41	9,77	1,66	5,89	9,42	1,91	4,93	9,08	2,06	4,42	8,76	2,21	3,97	8,42	2,46	3,43

Data to UNI EN14511: 2011

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0,99	**1**	1,01	1,02
Input power correction factors	1,01	**1**	0,98	0,96

LEGEND	FUNCTION
Ph	Heating capacity in kW
Pe	Power input in kW
	Operation with DCPX accessory
TAE	Temperature of Air External in °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

10.35. ECL 030 H version STANDARD - HEATING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	5,42	1,39	3,91	5,33	1,95	2,73	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	5,76	1,39	4,14	5,63	1,95	2,88	5,51	2,27	2,43	-	-	-	-	-	-	-	-	-
-6	0	6,09	1,39	4,37	5,93	1,96	3,03	5,78	2,27	2,55	5,63	2,46	2,29	5,46	2,64	2,07	-	-	-
-4	0	6,42	1,40	4,59	6,23	1,96	3,17	6,05	2,27	2,66	5,88	2,46	2,39	5,71	2,65	2,16	5,53	2,96	1,87
-2	0	6,75	1,41	4,80	6,52	1,97	3,31	6,32	2,28	2,77	6,14	2,47	2,49	5,97	2,65	2,25	5,79	2,96	1,96
0	0	7,07	1,41	5,00	6,81	1,98	3,45	6,58	2,29	2,88	6,39	2,47	2,59	6,22	2,66	2,34	6,05	2,97	2,04
2	0	7,03	1,42	4,96	6,99	1,98	3,53	6,86	2,29	2,99	6,70	2,48	2,70	6,51	2,66	2,45	6,35	2,98	2,13
4	0	8,49	1,45	5,87	8,32	2,01	4,14	8,17	2,32	3,52	8,02	2,51	3,20	7,86	2,69	2,92	7,68	3,00	2,56
6	0	9,03	1,46	6,17	8,82	2,02	4,36	8,64	2,33	3,70	8,47	2,52	3,36	8,29	2,70	3,07	8,09	3,01	2,69
7	0	9,28	1,47	6,31	9,06	2,03	4,46	**8,86**	**2,34**	**3,79**	8,67	2,52	3,44	**8,49**	**2,71**	**3,13**	8,27	3,02	2,74
8	0	9,52	1,48	6,45	9,29	2,04	4,56	9,07	2,35	3,87	8,87	2,53	3,51	8,67	2,71	3,19	8,44	3,02	2,79
10	0	9,99	1,49	6,70	9,72	2,05	4,74	9,48	2,36	4,02	9,24	2,54	3,64	9,01	2,72	3,31	8,76	3,03	2,89
12	0	10,45	1,51	6,94	10,14	2,06	4,91	9,86	2,37	4,16	9,60	2,55	3,76	9,33	2,73	3,41	9,05	3,04	2,98
14	0	10,90	1,52	7,17	10,55	2,08	5,08	10,24	2,38	4,30	9,94	2,56	3,88	9,65	2,74	3,52	9,34	3,05	3,06
16	0	11,36	1,54	7,40	10,98	2,09	5,25	10,63	2,39	4,44	10,29	2,57	4,00	9,96	2,75	3,62	9,62	3,06	3,15
18	0	11,84	1,55	7,64	11,42	2,10	5,43	11,03	2,41	4,59	10,66	2,58	4,13	10,30	2,76	3,73	9,92	3,07	3,24
20	0	12,37	1,57	7,89	11,90	2,12	5,62	11,47	2,42	4,74	11,06	2,59	4,26	10,66	2,77	3,85	10,25	3,07	3,34
21 TO 42	0	12,37	1,57	7,89	11,90	2,12	5,62	11,47	2,42	4,74	11,06	2,59	4,26	10,66	2,77	3,85	10,25	3,07	3,34

10.34. ECL 030 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A HEATING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	5,37	1,42	3,78	5,28	1,99	2,66	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	5,70	1,42	4,02	5,58	1,98	2,81	5,45	2,30	2,37	-	-	-	-	-	-	-	-	-
-6	0	6,03	1,41	4,26	5,87	1,98	2,96	5,72	2,30	2,49	5,57	2,49	2,24	5,41	2,68	2,02	-	-	-
-4	0	6,35	1,41	4,49	6,16	1,98	3,11	5,99	2,30	2,61	5,83	2,49	2,34	5,66	2,68	2,11	5,48	2,99	1,83
-2	0	6,67	1,41	4,72	6,45	1,98	3,25	6,25	2,30	2,72	6,08	2,49	2,44	5,91	2,68	2,21	5,74	2,99	1,92
0	0	6,99	1,42	4,94	6,73	1,98	3,39	6,51	2,30	2,83	6,32	2,49	2,54	6,16	2,68	2,30	5,99	3,00	2,00
2	0	6,95	1,42	4,90	6,90	1,98	3,48	6,78	2,30	2,95	6,62	2,49	2,66	6,44	2,68	2,41	6,28	2,99	2,10
4	0	8,38	1,42	5,90	8,21	1,99	4,13	8,06	2,30	3,50	7,91	2,49	3,18	7,76	2,68	2,90	7,59	2,99	2,54
6	0	8,90	1,42	6,25	8,70	1,99	4,37	8,52	2,30	3,70	8,35	2,49	3,35	8,18	2,68	3,05	7,98	2,99	2,67
7	0	9,15	1,43	6,42	8,93	1,99	4,49	**8,74**	**2,30**	**3,79**	8,56	2,49	3,43	**8,37**	**2,68**	**3,12**	8,16	2,99	2,72
8	0	9,39	1,43	6,57	9,15	1,99	4,59	8,95	2,31	3,88	8,75	2,49	3,51	8,55	2,68	3,19	8,33	3,00	2,78
10	0	9,84	1,43	6,87	9,58	2,00	4,80	9,34	2,31	4,04	9,11	2,50	3,65	8,88	2,69	3,31	8,64	3,00	2,88
12	0	10,29	1,44	7,15	9,99	2,00	4,99	9,72	2,31	4,20	9,46	2,50	3,78	9,20	2,69	3,42	8,93	3,00	2,97
14	0	10,73	1,44	7,43	10,39	2,01	5,18	10,09	2,32	4,35	9,80	2,51	3,91	9,51	2,69	3,53	9,21	3,01	3,06
16	0	11,18	1,45	7,71	10,81	2,01	5,37	10,47	2,32	4,50	10,14	2,51	4,04	9,82	2,70	3,64	9,49	3,01	3,15
18	0	11,66	1,46	8,00	11,24	2,02	5,57	10,86	2,33	4,67	10,50	2,51	4,18	10,15	2,70	3,76	9,78	3,01	3,25
20	0	12,17	1,46	8,31	11,72	2,02	5,79	11,29	2,33	4,84	10,89	2,52	4,33	10,50	2,70	3,89	10,10	3,01	3,35
21 TO 42	0	12,17	1,46	8,31	11,72	2,02	5,79	11,29	2,33	4,84	10,89	2,52	4,33	10,50	2,70	3,89	10,10	3,01	3,35

Data to UNI EN14511: 2011

LEGEND	FUNCTION
Ph	Heating capacity in kW
Pe	Power input in kW
	Operation with DCPX accessory
TAE	Temperature of Air External in °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

10.37. ECL 040 H version STANDARD - HEATING MODE (230V/1/50Hz - 400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	6,83	1,68	4,07	6,72	2,47	2,72	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	7,26	1,68	4,31	7,10	2,47	2,88	6,94	2,85	2,44	-	-	-	-	-	-	-	-	-
-6	0	7,68	1,69	4,55	7,48	2,47	3,02	7,29	2,85	2,56	7,09	3,03	2,34	6,88	3,20	2,15	-	-	-
-4	0	8,10	1,69	4,78	7,85	2,48	3,17	7,63	2,86	2,67	7,42	3,03	2,45	7,20	3,21	2,25	6,97	3,59	1,94
-2	0	8,51	1,70	5,00	8,22	2,49	3,31	7,97	2,86	2,78	7,74	3,04	2,55	7,52	3,21	2,34	7,30	3,59	2,03
0	0	8,92	1,71	5,21	8,58	2,49	3,44	8,30	2,87	2,89	8,06	3,04	2,65	7,84	3,22	2,43	7,63	3,60	2,12
2	0	8,86	1,71	5,18	8,81	2,50	3,52	8,65	2,88	3,01	8,44	3,05	2,76	8,21	3,23	2,54	8,01	3,61	2,22
4	0	10,71	1,75	6,13	10,48	2,53	4,14	10,29	2,91	3,54	10,11	3,08	3,28	9,91	3,26	3,04	9,69	3,63	2,66
6	0	11,38	1,76	6,45	11,12	2,55	4,37	10,89	2,92	3,72	10,67	3,10	3,45	10,44	3,27	3,19	10,19	3,65	2,79
7	0	11,69	1,77	6,60	11,42	2,55	4,47	**11,17**	**2,92**	**3,83**	10,93	3,10	3,52	**10,70**	**3,28**	**3,26**	10,42	3,65	2,85
8	0	12,00	1,78	6,74	11,70	2,56	4,57	11,43	2,94	3,89	11,18	3,11	3,59	10,92	3,28	3,33	10,64	3,66	2,91
10	0	12,59	1,80	7,01	12,25	2,58	4,75	11,94	2,95	4,05	11,65	3,12	3,73	11,35	3,29	3,45	11,04	3,67	3,01
12	0	13,16	1,81	7,26	12,77	2,59	4,93	12,42	2,97	4,19	12,09	3,14	3,86	11,76	3,31	3,56	11,41	3,68	3,10
14	0	13,73	1,83	7,50	13,29	2,61	5,10	12,90	2,98	4,33	12,53	3,15	3,98	12,15	3,32	3,66	11,77	3,69	3,19
16	0	14,31	1,85	7,75	13,83	2,62	5,27	13,39	2,99	4,47	12,97	3,16	4,10	12,55	3,33	3,77	12,13	3,70	3,28
18	0	14,92	1,86	8,01	14,39	2,64	5,46	13,90	3,01	4,62	13,43	3,17	4,24	12,97	3,34	3,89	12,50	3,71	3,37
20	0	15,58	1,88	8,28	14,99	2,65	5,65	14,45	3,02	4,79	13,94	3,18	4,38	13,43	3,35	4,01	12,92	3,72	3,47
21 TO 42	0	15,58	1,88	8,28	14,99	2,65	5,65	14,45	3,02	4,79	13,94	3,18	4,38	13,43	3,35	4,01	12,92	3,72	3,47

10.36. ECL 040 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A HEATING MODE

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	6,76	1,70	3,98	6,65	2,49	2,68	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	7,18	1,69	4,25	7,03	2,48	2,83	6,87	2,86	2,40	-	-	-	-	-	-	-	-	-
-6	0	7,59	1,69	4,50	7,40	2,48	2,98	7,21	2,86	2,52	7,02	3,04	2,31	6,81	3,22	2,12	-	-	-
-4	0	8,00	1,69	4,74	7,76	2,48	3,13	7,55	2,86	2,64	7,34	3,04	2,41	7,13	3,22	2,21	6,90	3,60	1,92
-2	0	8,41	1,69	4,98	8,12	2,48	3,28	7,88	2,86	2,75	7,66	3,04	2,52	7,44	3,22	2,31	7,23	3,60	2,01
0	0	8,81	1,69	5,22	8,48	2,48	3,42	8,21	2,86	2,87	7,97	3,04	2,62	7,75	3,22	2,41	7,55	3,60	2,09
2	0	8,76	1,70	5,16	8,70	2,49	3,50	8,55	2,87	2,98	8,35	3,05	2,74	8,12	3,22	2,52	7,92	3,61	2,20
4	0	10,57	1,70	6,21	10,35	2,49	4,16	10,16	2,87	3,54	9,98	3,05	3,27	9,79	3,23	3,04	9,57	3,61	2,65
6	0	11,23	1,71	6,58	10,98	2,49	4,40	10,75	2,88	3,74	10,54	3,05	3,45	10,31	3,23	3,19	10,07	3,61	2,79
7	0	11,54	1,71	6,75	11,27	2,50	4,51	**11,02**	**2,88**	**3,83**	10,79	3,05	3,53	**10,56**	**3,23**	**3,27**	10,29	3,61	2,85
8	0	11,84	1,71	6,91	11,55	2,50	4,62	11,29	2,88	3,92	11,04	3,06	3,61	10,78	3,23	3,33	10,50	3,61	2,91
10	0	12,42	1,72	7,22	12,09	2,51	4,82	11,78	2,89	4,08	11,50	3,06	3,75	11,21	3,24	3,46	10,90	3,62	3,01
12	0	12,98	1,73	7,51	12,60	2,51	5,01	12,26	2,89	4,24	11,93	3,07	3,89	11,61	3,24	3,58	11,26	3,62	3,11
14	0	13,54	1,74	7,79	13,12	2,52	5,20	12,73	2,90	4,39	12,36	3,07	4,02	12,00	3,25	3,69	11,61	3,63	3,20
16	0	14,12	1,75	8,08	13,64	2,53	5,39	13,21	2,91	4,55	12,80	3,08	4,16	12,39	3,25	3,81	11,97	3,63	3,30
18	0	14,72	1,76	8,38	14,19	2,54	5,59	13,71	2,91	4,71	13,25	3,08	4,30	12,80	3,26	3,93	12,34	3,64	3,39
20	0	15,37	1,77	8,69	14,79	2,55	5,81	14,26	2,92	4,88	13,75	3,09	4,45	13,25	3,26	4,06	12,75	3,64	3,50
21 TO 42	0	15,37	1,77	8,69	14,79	2,55	5,81	14,26	2,92	4,88	13,75	3,09	4,45	13,25	3,26	4,06	12,75	3,64	3,50

Data to UNI EN14511: 2011

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0,99	**1**	1,01	1,02
Input power correction factors	1,01	**1**	0,98	0,96

LEGEND	FUNCTION
Ph	Heating capacity in kW
Pe	Power input in kW
	Operation with DCPX accessory
TAE	Temperature of Air External in °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

10.38. ECL 050 H version STANDARD - HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																			
		25			30			35			40			45			50			
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	
-10	0	9,01	2,26	3,98	8,87	3,19	2,78	-	-	-	-	-	-	-	-	-	-	-	-	
-8	0	9,58	2,27	4,22	9,37	3,19	2,93	9,16	3,71	2,47	-	-	-	-	-	-	-	-	-	
-6	0	10,14	2,27	4,46	9,87	3,20	3,09	9,62	3,71	2,59	9,36	4,02	2,33	9,09	4,32	2,10	-	-	-	
-4	0	10,69	2,28	4,68	10,36	3,21	3,23	10,07	3,72	2,71	9,79	4,02	2,43	9,51	4,33	2,20	9,20	4,84	1,90	
-2	0	11,23	2,29	4,90	10,85	3,22	3,37	10,52	3,73	2,82	10,22	4,03	2,53	9,93	4,34	2,29	9,64	4,85	1,99	
0	0	11,77	2,30	5,11	11,33	3,22	3,51	10,96	3,74	2,93	10,64	4,04	2,63	10,35	4,35	2,38	10,07	4,86	2,07	
2	0	11,70	2,31	5,07	11,62	3,23	3,59	11,42	3,75	3,05	11,14	4,05	2,75	10,84	4,36	2,49	10,57	4,87	2,17	
4	0	14,13	2,35	6,02	13,84	3,27	4,23	13,58	3,78	3,59	13,34	4,09	3,26	13,08	4,39	2,98	12,78	4,90	2,61	
6	0	15,01	2,37	6,34	14,67	3,29	4,46	14,37	3,80	3,78	14,08	4,10	3,43	13,78	4,41	3,13	13,45	4,92	2,73	
7	0	15,43	2,38	6,49	15,07	3,30	4,56	**14,74**	**3,81**	**3,87**	14,43	4,11	3,51	**14,12**	**4,42**	**3,20**	13,75	4,93	2,79	
8	0	15,84	2,39	6,63	15,44	3,31	4,66	15,09	3,82	3,95	14,75	4,12	3,58	14,41	4,42	3,26	14,04	4,93	2,85	
10	0	16,61	2,41	6,89	16,16	3,33	4,86	15,76	3,84	4,11	15,37	4,14	3,72	14,98	4,44	3,38	14,57	4,95	2,94	
12	0	17,36	2,43	7,15	16,86	3,35	5,04	16,39	3,85	4,26	15,96	4,15	3,84	15,52	4,45	3,48	15,05	4,96	3,04	
14	0	18,11	2,45	7,39	17,54	3,37	5,21	17,02	3,87	4,40	16,53	4,17	3,97	16,04	4,47	3,59	15,53	4,97	3,12	
16	0	18,88	2,47	7,64	18,24	3,38	5,39	17,66	3,89	4,55	17,11	4,18	4,09	16,57	4,48	3,70	16,00	4,98	3,21	
18	0	19,68	2,49	7,90	18,98	3,40	5,58	18,34	3,90	4,70	17,72	4,20	4,22	17,12	4,49	3,81	16,50	5,00	3,30	
20	0	20,55	2,51	8,18	19,77	3,42	5,78	19,06	3,92	4,86	18,39	4,21	4,37	17,72	4,51	3,93	17,05	5,01	3,40	
21 TO 42	0	20,55	2,51	8,18	19,77	3,42	5,78	19,06	3,92	4,86	18,39	4,21	4,37	17,72	4,51	3,93	17,05	5,01	3,40	

10.39. ECL 050 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																			
		25			30			35			40			45			50			
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	
-10	0	8,92	2,30	3,88	8,77	3,23	2,72	-	-	-	-	-	-	-	-	-	-	-	-	
-8	0	9,47	2,29	4,13	9,27	3,22	2,88	9,06	3,74	2,42	-	-	-	-	-	-	-	-	-	
-6	0	10,02	2,29	4,38	9,76	3,22	3,03	9,51	3,74	2,55	9,26	4,05	2,29	8,99	4,36	2,06	-	-	-	
-4	0	10,56	2,29	4,61	10,24	3,22	3,18	9,95	3,74	2,66	9,68	4,05	2,39	9,40	4,36	2,16	9,11	4,88	1,87	
-2	0	11,09	2,29	4,85	10,72	3,22	3,33	10,39	3,74	2,78	10,10	4,05	2,50	9,82	4,36	2,25	9,53	4,87	1,96	
0	0	11,62	2,29	5,07	11,19	3,22	3,47	10,82	3,74	2,90	10,51	4,05	2,60	10,23	4,36	2,35	9,96	4,88	2,04	
2	0	11,55	2,30	5,03	11,48	3,22	3,56	11,28	3,74	3,02	11,01	4,05	2,72	10,71	4,36	2,46	10,44	4,88	2,14	
4	0	13,94	2,30	6,06	13,65	3,23	4,23	13,40	3,74	3,58	13,16	4,05	3,25	12,91	4,36	2,96	12,62	4,88	2,59	
6	0	14,81	2,31	6,42	14,47	3,23	4,48	14,18	3,75	3,78	13,89	4,06	3,42	13,60	4,37	3,12	13,27	4,88	2,72	
7	0	15,22	2,31	6,59	14,86	3,24	4,59	**14,54**	**3,75**	**3,88**	14,23	4,06	3,51	**13,93**	**4,37**	**3,19**	13,57	4,88	2,78	
8	0	15,62	2,31	6,75	15,23	3,24	4,70	14,88	3,76	3,96	14,55	4,06	3,58	14,22	4,37	3,25	13,85	4,89	2,83	
10	0	16,38	2,32	7,05	15,94	3,25	4,91	15,54	3,76	4,13	15,16	4,07	3,73	14,78	4,38	3,38	14,37	4,89	2,94	
12	0	17,12	2,33	7,34	16,62	3,26	5,10	16,17	3,77	4,29	15,74	4,08	3,86	15,31	4,38	3,49	14,85	4,90	3,03	
14	0	17,86	2,34	7,62	17,30	3,27	5,30	16,79	3,78	4,44	16,30	4,08	3,99	15,82	4,39	3,60	15,31	4,90	3,12	
16	0	18,61	2,35	7,91	17,99	3,28	5,49	17,42	3,79	4,60	16,87	4,09	4,13	16,34	4,40	3,72	15,78	4,91	3,22	
18	0	19,41	2,37	8,20	18,71	3,28	5,70	18,08	3,79	4,77	17,48	4,10	4,27	16,88	4,40	3,84	16,27	4,91	3,31	
20	0	20,26	2,38	8,52	19,50	3,29	5,92	18,80	3,80	4,94	18,13	4,10	4,42	17,48	4,41	3,97	16,81	4,92	3,42	
21 TO 42	0	20,26	2,38	8,52	19,50	3,29	5,92	18,80	3,80	4,94	18,13	4,10	4,42	17,48	4,41	3,97	16,81	4,92	3,42	

10.40.ECL 050 H WITH PUMP version N - WITH BUFFER TANK AND HIGH HEAD PUMP version Q HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																			
		25			30			35			40			45			50			
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	
-10	0										-	-	-	-	-	-	-	-	-	
-8	0										-	-	-	-	-	-	-	-	-	
-6	0		(2)														-	-	-	
-4	0					(2)			(2)			(2)			(2)					
-2	0																	(2)		
0	0	11,37	2,36	4,81																
2	0		(1)																	
4	0	13,68	2,38	5,74	13,39	3,31	4,05	13,14	3,82	3,44	12,90	4,13	3,12	12,65	4,44	2,85	12,37	4,95	2,50	
6	0	14,54	2,40	6,07	14,21	3,32	4,28	13,92	3,83	3,63	13,63	4,14	3,29	13,34	4,45	3,00	13,02	4,96	2,62	
7	0	14,95	2,40	6,23	14,59	3,33	4,39	**14,28**	**3,84**	**3,72**	13,97	4,15	3,37	**13,67**	**4,45**	**3,07**	13,31	4,97	2,68	
8	0	15,35	2,41	6,37	14,96	3,33	4,49	14,62	3,84	3,80	14,29	4,15	3,44	13,96	4,46	3,13	13,59	4,97	2,73	
10	0	16,11	2,42	6,65	15,67	3,34	4,69	15,27	3,85	3,96	14,89	4,16	3,58	14,51	4,47	3,25	14,11	4,98	2,83	
12	0	16,85	2,44	6,92	16,35	3,36	4,87	15,90	3,87	4,11	15,47	4,17	3,71	15,04	4,47	3,36	14,58	4,99	2,93	
14	0	17,58	2,45	7,18	17,02	3,37	5,05	16,51	3,88	4,26	16,03	4,18	3,83	15,55	4,48	3,47	15,05	4,99	3,01	
16	0	18,34	2,47	7,44	17,71	3,38	5,24	17,14	3,89	4,41	16,60	4,19	3,96	16,06	4,49	3,58	15,51	5,00	3,10	
18	0	19,13	2,48	7,70	18,44	3,40	5,43	17,80	3,90	4,56	17,20	4,20	4,10	16,61	4,50	3,69	16,00	5,01	3,20	
20	0	19,98	2,50	7,99	19,22	3,41	5,63	18,52	3,91	4,73	17,85	4,21	4,24	17,20	4,51	3,81	16,53	5,01	3,30	
21 TO 42	0	19,98	2,50	7,99	19,22	3,41	5,63	18,52	3,91	4,73	17,85	4,21	4,24	17,20	4,51	3,81	16,53	5,01	3,30	

Data to UNI EN14511: 2011

LEGEND	FUNCTION
Ph	Heating capacity in kW
Pe	Power input in kW
	Operation with DCPX accessory
TAE	Temperature of Air External in °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- **-** Outside of operating limits
- **(1)** Excessive water flow rate beyond operating limit of pump
- **(2)** Insufficient water flow rate bellow operating limit of pump

10.43. ECL 070 H version STANDARD - HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	11,14	2,58	4,31	10,96	3,80	2,89	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	11,84	2,59	4,57	11,58	3,80	3,05	11,32	4,38	2,58	-	-	-	-	-	-	-	-	-
-6	0	12,53	2,60	4,83	12,20	3,81	3,20	11,89	4,39	2,71	11,57	4,66	2,48	11,23	4,93	2,28	-	-	-
-4	0	13,20	2,61	5,07	12,80	3,81	3,36	12,44	4,40	2,83	12,10	4,67	2,59	11,75	4,94	2,38	11,37	5,52	2,06
-2	0	13,88	2,62	5,30	13,40	3,82	3,50	12,99	4,41	2,95	12,62	4,68	2,70	12,27	4,95	2,48	11,91	5,53	2,15
0	0	14,54	2,63	5,53	14,00	3,84	3,65	13,54	4,42	3,06	13,14	4,69	2,80	12,78	4,96	2,58	12,45	5,54	2,25
2	0	14,45	2,63	5,49	14,36	3,85	3,73	14,11	4,43	3,18	13,77	4,70	2,93	13,39	4,97	2,70	13,06	5,55	2,35
4	0	17,45	2,68	6,50	17,09	3,89	4,39	16,78	4,47	3,75	16,48	4,74	3,47	16,16	5,01	3,22	15,79	5,59	2,82
6	0	18,55	2,71	6,85	18,13	3,92	4,63	17,75	4,50	3,95	17,40	4,76	3,65	17,03	5,03	3,39	16,62	5,61	2,96
7	0	19,07	2,72	7,01	18,61	3,93	4,74	**18,21**	**4,51**	**4,05**	17,82	4,77	3,73	**17,44**	**5,04**	**3,46**	16,99	5,62	3,02
8	0	19,56	2,73	7,16	19,08	3,94	4,84	18,64	4,52	4,13	18,23	4,78	3,81	17,80	5,05	3,53	17,34	5,63	3,08
10	0	20,52	2,76	7,44	19,97	3,96	5,04	19,47	4,54	4,29	18,99	4,80	3,95	18,51	5,07	3,65	17,99	5,64	3,19
12	0	21,45	2,78	7,72	20,82	3,98	5,23	20,25	4,56	4,44	19,71	4,82	4,09	19,17	5,08	3,77	18,60	5,66	3,29
14	0	22,38	2,80	7,98	21,67	4,00	5,41	21,03	4,58	4,59	20,42	4,84	4,22	19,81	5,10	3,89	19,18	5,67	3,38
16	0	23,32	2,83	8,25	22,54	4,02	5,60	21,82	4,60	4,75	21,14	4,86	4,35	20,47	5,12	4,00	19,77	5,69	3,48
18	0	24,32	2,85	8,52	23,45	4,05	5,79	22,65	4,62	4,91	21,89	4,87	4,49	21,15	5,13	4,12	20,39	5,70	3,57
20	0	25,38	2,88	8,82	24,43	4,07	6,00	23,55	4,64	5,08	22,71	4,89	4,64	21,89	5,15	4,25	21,06	5,72	3,68
21 TO 42	0	25,38	2,88	8,82	24,43	4,07	6,00	23,55	4,64	5,08	22,71	4,89	4,64	21,89	5,15	4,25	21,06	5,72	3,68

10.41. ECL 070 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	11,01	2,59	4,25	10,83	3,80	2,85	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	11,70	2,58	4,53	11,45	3,80	3,01	11,19	4,39	2,55	-	-	-	-	-	-	-	-	-
-6	0	12,37	2,58	4,80	12,05	3,80	3,17	11,75	4,39	2,68	11,43	4,66	2,45	11,10	4,94	2,25	-	-	-
-4	0	13,04	2,58	5,06	12,65	3,79	3,33	12,29	4,38	2,80	11,95	4,66	2,57	11,61	4,94	2,35	11,24	5,53	2,03
-2	0	13,70	2,58	5,31	13,23	3,80	3,49	12,83	4,38	2,93	12,47	4,66	2,68	12,12	4,94	2,46	11,77	5,53	2,13
0	0	14,35	2,58	5,56	13,82	3,80	3,64	13,37	4,39	3,05	12,98	4,66	2,78	12,63	4,94	2,56	12,29	5,53	2,22
2	0	14,27	2,59	5,51	14,17	3,80	3,73	13,93	4,39	3,17	13,59	4,66	2,91	13,23	4,94	2,68	12,89	5,53	2,33
4	0	17,22	2,59	6,64	16,86	3,81	4,43	16,55	4,39	3,77	16,26	4,67	3,48	15,95	4,94	3,23	15,59	5,53	2,82
6	0	18,30	2,60	7,03	17,88	3,82	4,69	17,51	4,40	3,98	17,16	4,67	3,67	16,80	4,95	3,40	16,40	5,54	2,96
7	0	18,80	2,61	7,21	18,36	3,82	4,81	**17,96**	**4,39**	**4,08**	17,58	4,68	3,76	**17,21**	**4,95**	**3,47**	16,76	5,54	3,03
8	0	19,29	2,61	7,38	18,82	3,82	4,92	18,39	4,41	4,17	17,98	4,68	3,84	17,56	4,96	3,54	17,11	5,54	3,09
10	0	20,24	2,62	7,71	19,69	3,83	5,13	19,20	4,42	4,34	18,73	4,69	3,99	18,26	4,96	3,68	17,75	5,55	3,20
12	0	21,15	2,64	8,02	20,53	3,85	5,34	19,97	4,43	4,51	19,44	4,70	4,14	18,91	4,97	3,80	18,35	5,56	3,30
14	0	22,07	2,65	8,33	21,37	3,86	5,54	20,74	4,44	4,67	20,14	4,71	4,28	19,54	4,98	3,93	18,92	5,56	3,40
16	0	23,00	2,66	8,64	22,23	3,87	5,75	21,52	4,45	4,84	20,85	4,72	4,42	20,18	4,98	4,05	19,50	5,57	3,50
18	0	23,98	2,68	8,96	23,12	3,88	5,96	22,34	4,46	5,01	21,59	4,72	4,57	20,86	4,99	4,18	20,11	5,57	3,61
20	0	25,04	2,69	9,29	24,09	3,89	6,19	23,22	4,47	5,20	22,40	4,73	4,73	21,59	5,00	4,32	20,77	5,58	3,72
21 TO 42	0	25,04	2,69	9,29	24,09	3,89	6,19	23,22	4,47	5,20	22,40	4,73	4,73	21,59	5,00	4,32	20,77	5,58	3,72

10.42.ECL 070 H WITH PUMP version N - WITH BUFFER TANK AND HIGH HEAD PUMP version Q HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0		(2)			(2)		-	-	-	-	-	-	-	-	-	-	-	-
-8	0	11,44	2,65	4,31					(2)		-	-	-	-	-	-	-	-	-
-6	0	12,12	2,65	4,57	11,80	3,87	3,05	11,49	4,45	2,58		(2)			(2)		-	-	-
-4	0	12,78	2,65	4,82	12,39	3,87	3,20	12,03	4,46	2,70	11,70	4,73	2,47	11,36	5,00	2,27		(2)	
-2	0	13,43	2,66	5,06	12,97	3,87	3,35	12,57	4,46	2,82	12,21	4,73	2,58	11,87	5,01	2,37	11,52	5,59	2,06
0	0	14,08	2,66	5,29	13,55	3,88	3,50	13,10	4,46	2,94	12,71	4,74	2,68	12,37	5,01	2,47	12,04	5,60	2,15
2	0	14,00	2,67	5,25	13,91	3,88	3,58	13,66	4,47	3,06	13,33	4,74	2,81	12,96	5,01	2,58	12,63	5,60	2,25
4	0	16,93	2,68	6,31	16,58	3,90	4,25	16,27	4,48	3,63	15,98	4,75	3,36	15,67	5,03	3,12	15,31	5,61	2,73
6	0	18,00	2,70	6,67	17,59	3,91	4,50	17,23	4,49	3,83	16,88	4,77	3,54	16,52	5,04	3,28	16,11	5,62	2,87
7	0	18,51	2,71	6,84	18,06	3,92	4,61	**17,67**	**4,50**	**3,94**	17,29	4,77	3,62	**16,92**	**5,04**	**3,36**	16,48	5,63	2,93
8	0	19,00	2,71	7,00	18,52	3,92	4,72	18,09	4,51	4,02	17,69	4,78	3,70	17,28	5,05	3,42	16,82	5,63	2,99
10	0	19,94	2,73	7,31	19,39	3,94	4,93	18,90	4,52	4,18	18,44	4,79	3,85	17,97	5,06	3,55	17,46	5,64	3,10
12	0	20,85	2,75	7,59	20,23	3,95	5,12	19,67	4,53	4,34	19,14	4,80	3,99	18,61	5,07	3,67	18,05	5,65	3,19
14	0	21,76	2,76	7,87	21,07	3,97	5,31	20,44	4,55	4,50	19,84	4,81	4,12	19,25	5,08	3,79	18,62	5,66	3,29
16	0	22,69	2,78	8,16	21,92	3,98	5,50	21,21	4,56	4,65	20,54	4,82	4,26	19,88	5,09	3,91	19,20	5,67	3,39
18	0	23,67	2,80	8,45	22,81	4,00	5,70	22,03	4,57	4,82	21,29	4,84	4,40	20,56	5,10	4,03	19,80	5,68	3,49
20	0	24,72	2,82	8,75	23,78	4,02	5,92	22,91	4,59	4,99	22,09	4,85	4,56	21,29	5,11	4,17	20,46	5,69	3,60
21 TO 42	0	24,72	2,82	8,75	23,78	4,02	5,92	22,91	4,59	4,99	22,09	4,85	4,56	21,29	5,11	4,17	20,46	5,69	3,60

Data to UNI EN14511: 2011

LEGEND	FUNCTION
	Operation with DCPX accessory
TAE	Temperature of Air External in °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

(2) Insufficient water flow rate bellow operating limit of pump

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0,99	**1**	1,01	1,02
Input power correction factors	1,01	**1**	0,98	0,96

10.46. ECL 080 H version STANDARD - HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																			
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	14,30	3,33	4,30	14,07	4,89	2,88	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	15,20	3,34	4,55	14,87	4,90	3,04	14,54	5,65	2,57	-	-	-	-	-	-	-	-	-
-6	0	16,09	3,35	4,80	15,66	4,90	3,19	15,26	5,66	2,70	14,86	6,00	2,48	14,41	6,35	2,27	-	-	-
-4	0	16,96	3,36	5,04	16,44	4,92	3,34	15,98	5,67	2,82	15,54	6,01	2,58	15,09	6,36	2,37	14,60	7,11	2,05
-2	0	17,82	3,38	5,28	17,21	4,93	3,49	16,68	5,68	2,94	16,21	6,02	2,69	15,76	6,37	2,47	15,29	7,12	2,15
0	0	18,68	3,40	5,50	17,97	4,95	3,63	17,38	5,69	3,05	16,87	6,04	2,79	16,42	6,38	2,57	15,98	7,13	2,24
2	0	18,56	3,40	5,46	18,44	4,96	3,72	18,12	5,71	3,17	17,68	6,06	2,92	17,20	6,40	2,69	16,77	7,15	2,34
4	0	22,42	3,47	6,46	21,96	5,03	4,37	21,55	5,77	3,73	21,16	6,12	3,46	20,76	6,46	3,21	20,29	7,21	2,81
6	0	23,83	3,51	6,79	23,29	5,06	4,60	22,81	5,80	3,93	22,35	6,15	3,64	21,87	6,49	3,37	21,34	7,23	2,95
7	0	24,49	3,52	6,95	23,91	5,07	4,71	**23,39**	**5,82**	**4,02**	22,89	6,16	3,72	**22,40**	**6,50**	**3,45**	21,82	7,25	3,01
8	0	25,13	3,54	7,10	24,51	5,09	4,82	23,95	5,83	4,11	23,41	6,17	3,79	22,87	6,51	3,51	22,28	7,26	3,07
10	0	26,37	3,58	7,37	25,65	5,12	5,01	25,01	5,86	4,27	24,40	6,20	3,93	23,78	6,54	3,64	23,11	7,28	3,17
12	0	27,56	3,61	7,64	26,75	5,15	5,19	26,02	5,89	4,42	25,32	6,23	4,07	24,63	6,56	3,75	23,89	7,30	3,27
14	0	28,75	3,64	7,89	27,84	5,18	5,37	27,02	5,92	4,57	26,24	6,25	4,20	25,46	6,58	3,87	24,64	7,32	3,37
16	0	29,97	3,68	8,15	28,96	5,21	5,56	28,03	5,94	4,72	27,16	6,27	4,33	26,29	6,61	3,98	25,40	7,34	3,46
18	0	31,25	3,71	8,42	30,13	5,24	5,75	29,10	5,97	4,87	28,13	6,30	4,47	27,17	6,63	4,10	26,19	7,36	3,56
20	0	32,62	3,75	8,70	31,39	5,28	5,95	30,26	6,00	5,04	29,18	6,33	4,61	28,13	6,65	4,23	27,05	7,38	3,67
21 TO 42	0	32,62	3,75	8,70	31,39	5,28	5,95	30,26	6,00	5,04	29,18	6,33	4,61	28,13	6,65	4,23	27,05	7,38	3,67

10.44. ECL 080 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																			
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	14,12	3,29	4,29	13,90	4,86	2,86	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	15,01	3,29	4,56	14,69	4,85	3,03	14,36	5,61	2,56	-	-	-	-	-	-	-	-	-
-6	0	15,88	3,29	4,83	15,47	4,85	3,19	15,07	5,61	2,69	14,67	5,96	2,46	14,24	6,31	2,26	-	-	-
-4	0	16,74	3,29	5,09	16,23	4,85	3,35	15,78	5,61	2,81	15,34	5,96	2,57	14,90	6,31	2,36	14,42	7,07	2,04
-2	0	17,59	3,29	5,34	16,99	4,85	3,50	16,47	5,61	2,94	16,00	5,96	2,68	15,56	6,31	2,46	15,10	7,07	2,14
0	0	18,43	3,30	5,59	17,74	4,86	3,65	17,16	5,61	3,06	16,66	5,97	2,79	16,21	6,32	2,56	15,78	7,08	2,23
2	0	18,32	3,30	5,54	18,20	4,87	3,74	17,88	5,62	3,18	17,45	5,97	2,92	16,98	6,33	2,68	16,55	7,08	2,34
4	0	22,12	3,33	6,65	21,67	4,89	4,43	21,27	5,64	3,77	20,88	5,99	3,49	20,48	6,34	3,23	20,02	7,09	2,82
6	0	23,51	3,35	7,02	22,98	4,90	4,68	22,50	5,66	3,98	22,05	6,00	3,67	21,59	6,35	3,40	21,06	7,11	2,96
7	0	24,17	3,36	7,20	23,59	4,91	4,80	**23,08**	**5,66**	**4,07**	22,59	6,01	3,76	**22,11**	**6,36**	**3,48**	21,54	7,11	3,03
8	0	24,80	3,37	7,36	24,18	4,92	4,91	23,63	5,67	4,17	23,11	6,02	3,84	22,57	6,37	3,54	21,98	7,12	3,09
10	0	26,02	3,39	7,67	25,32	4,94	5,12	24,68	5,69	4,34	24,07	6,04	3,99	23,46	6,38	3,68	22,81	7,13	3,20
12	0	27,21	3,42	7,96	26,41	4,97	5,32	25,68	5,71	4,50	24,99	6,05	4,13	24,31	6,40	3,80	23,58	7,14	3,30
14	0	28,39	3,45	8,24	27,49	4,99	5,51	26,67	5,73	4,65	25,89	6,07	4,27	25,12	6,41	3,92	24,32	7,16	3,40
16	0	29,60	3,48	8,51	28,60	5,01	5,70	27,68	5,75	4,81	26,81	6,09	4,40	25,95	6,43	4,04	25,07	7,17	3,50
18	0	30,88	3,51	8,79	29,76	5,04	5,90	28,74	5,77	4,98	27,78	6,11	4,55	26,82	6,44	4,16	25,85	7,18	3,60
20	0	32,26	3,56	9,06	31,02	5,08	6,11	29,89	5,80	5,15	28,82	6,13	4,70	27,77	6,46	4,30	26,71	7,19	3,71
21 TO 42	0	32,26	3,56	9,06	31,02	5,08	6,11	29,89	5,80	5,15	28,82	6,13	4,70	27,77	6,46	4,30	26,71	7,19	3,71

10.45.ECL 080 H WITH PUMP version N - WITH BUFFER TANK AND HIGH HEAD PUMP version Q HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																			
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	13,85	3,37	4,11	13,62	4,93	2,76	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	14,73	3,37	4,38	14,41	4,93	2,92	14,08	5,68	2,48	-	-	-	-	-	-	-	-	-
-6	0	15,60	3,37	4,63	15,18	4,93	3,08	14,79	5,68	2,60	14,40	6,04	2,39	13,96	6,39	2,19	-	-	-
-4	0	16,45	3,37	4,88	15,95	4,93	3,23	15,49	5,69	2,72	15,06	6,04	2,49	14,62	6,39	2,29	14,15	7,15	1,98
-2	0	17,29	3,38	5,12	16,70	4,94	3,38	16,18	5,69	2,84	15,72	6,04	2,60	15,27	6,39	2,39	14,82	7,15	2,07
0	0	18,13	3,39	5,35	17,44	4,95	3,53	16,87	5,70	2,96	16,37	6,05	2,71	15,92	6,40	2,49	15,50	7,16	2,17
2	0	18,02	3,39	5,31	17,90	4,95	3,61	17,59	5,71	3,08	17,16	6,06	2,83	16,69	6,41	2,60	16,26	7,16	2,27
4	0	21,80	3,43	6,35	21,35	4,99	4,28	20,95	5,74	3,65	20,57	6,09	3,38	20,17	6,44	3,13	19,71	7,19	2,74
6	0	23,19	3,46	6,71	22,66	5,01	4,52	22,18	5,76	3,85	21,73	6,11	3,56	21,27	6,45	3,30	20,75	7,20	2,88
7	0	23,84	3,47	6,87	23,27	5,02	4,63	**22,76**	**5,76**	**3,96**	22,27	6,12	3,64	**21,79**	**6,46**	**3,37**	21,22	7,21	2,94
8	0	24,47	3,48	7,03	23,86	5,03	4,74	23,30	5,78	4,03	22,78	6,13	3,72	22,25	6,47	3,44	21,66	7,22	3,00
10	0	25,69	3,51	7,32	24,98	5,06	4,94	24,35	5,80	4,20	23,75	6,15	3,86	23,14	6,49	3,57	22,49	7,24	3,11
12	0	26,87	3,54	7,59	26,07	5,08	5,13	25,35	5,83	4,35	24,66	6,17	4,00	23,98	6,51	3,68	23,25	7,25	3,21
14	0	28,04	3,57	7,86	27,15	5,11	5,31	26,33	5,85	4,50	25,56	6,19	4,13	24,79	6,52	3,80	23,99	7,27	3,30
16	0	29,25	3,60	8,12	28,25	5,14	5,50	27,33	5,87	4,65	26,47	6,21	4,27	25,62	6,54	3,92	24,73	7,28	3,40
18	0	30,52	3,64	8,38	29,41	5,17	5,69	28,39	5,90	4,81	27,43	6,23	4,40	26,48	6,56	4,04	25,51	7,30	3,50
20	0	31,89	3,69	8,65	30,66	5,21	5,89	29,54	5,93	4,98	28,47	6,25	4,55	27,43	6,58	4,17	26,37	7,31	3,61
21 TO 42	0	31,89	3,69	8,65	30,66	5,21	5,89	29,54	5,93	4,98	28,47	6,25	4,55	27,43	6,58	4,17	26,37	7,31	3,61

Data to UNI EN14511: 2011

LEGEND	FUNCTION
	Operation with DCPX accessory
TAE	Temperature of Air External in °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0,99	1	1,01	1,02
Input power correction factors	1,01	1	0,98	0,96

10.49. ECL 090 H version STANDARD - HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	15,61	3,64	4,29	15,35	5,33	2,88	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	16,59	3,65	4,55	16,23	5,34	3,04	15,87	6,16	2,58	-	-	-	-	-	-	-	-	-
-6	0	17,56	3,66	4,79	17,10	5,35	3,19	16,66	6,17	2,70	16,21	6,55	2,48	15,73	6,92	2,27	-	-	-
-4	0	18,51	3,68	5,03	17,95	5,37	3,34	17,44	6,18	2,82	16,96	6,56	2,59	16,47	6,93	2,37	15,94	7,75	2,06
-2	0	19,45	3,70	5,26	18,79	5,39	3,49	18,21	6,20	2,94	17,69	6,57	2,69	17,20	6,95	2,47	16,69	7,76	2,15
0	0	20,39	3,72	5,48	19,62	5,41	3,63	18,98	6,22	3,05	18,42	6,59	2,79	17,92	6,96	2,57	17,44	7,78	2,24
2	0	20,27	3,73	5,44	20,13	5,42	3,71	19,78	6,24	3,17	19,30	6,61	2,92	18,78	6,99	2,69	18,30	7,80	2,35
4	0	24,48	3,82	6,41	23,98	5,51	4,35	23,53	6,32	3,72	23,11	6,69	3,45	22,66	7,06	3,21	22,15	7,87	2,81
6	0	26,03	3,86	6,73	25,43	5,55	4,58	24,91	6,36	3,92	24,41	6,73	3,63	23,89	7,10	3,37	23,31	7,91	2,95
7	0	26,75	3,89	6,88	26,11	5,57	4,69	**25,54**	**6,37**	**4,01**	25,00	6,74	3,71	**24,46**	**7,11**	**3,44**	23,83	7,92	3,01
8	0	27,45	3,91	7,03	26,77	5,59	4,79	26,15	6,39	4,09	25,57	6,76	3,78	24,98	7,13	3,50	24,33	7,94	3,07
10	0	28,80	3,95	7,29	28,02	5,63	4,98	27,31	6,43	4,25	26,65	6,79	3,92	25,97	7,16	3,63	25,24	7,96	3,17
12	0	30,11	3,99	7,54	29,23	5,66	5,16	28,42	6,46	4,40	27,66	6,83	4,05	26,90	7,19	3,74	26,09	7,99	3,27
14	0	31,41	4,04	7,79	30,42	5,70	5,33	29,52	6,50	4,54	28,66	6,86	4,18	27,81	7,22	3,85	26,91	8,01	3,36
16	0	32,75	4,08	8,03	31,64	5,74	5,51	30,63	6,53	4,69	29,67	6,89	4,31	28,72	7,24	3,96	27,74	8,04	3,45
18	0	34,15	4,12	8,28	32,92	5,78	5,69	31,80	6,57	4,84	30,74	6,92	4,44	29,69	7,27	4,08	28,61	8,06	3,55
20	0	35,65	4,17	8,54	34,31	5,83	5,89	33,07	6,61	5,00	31,89	6,95	4,59	30,73	7,30	4,21	29,55	8,09	3,65
21 TO 42	0	35,65	4,17	8,54	34,31	5,83	5,89	33,07	6,61	5,00	31,89	6,95	4,59	30,73	7,30	4,21	29,55	8,09	3,65

10.47. ECL 090 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	15,40	3,57	4,31	15,15	5,27	2,87	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	16,36	3,57	4,59	16,01	5,26	3,04	15,65	6,09	2,57	-	-	-	-	-	-	-	-	-
-6	0	17,31	3,56	4,86	16,86	5,26	3,20	16,43	6,08	2,70	15,99	6,47	2,47	15,52	6,85	2,26	-	-	-
-4	0	18,25	3,57	5,12	17,70	5,26	3,36	17,20	6,09	2,83	16,72	6,47	2,58	16,24	6,85	2,37	15,72	7,68	2,05
-2	0	19,17	3,57	5,37	18,52	5,27	3,52	17,95	6,09	2,95	17,44	6,47	2,69	16,96	6,86	2,47	16,46	7,68	2,14
0	0	20,09	3,58	5,61	19,34	5,28	3,67	18,71	6,10	3,07	18,16	6,48	2,80	17,67	6,86	2,58	17,20	7,68	2,24
2	0	19,97	3,59	5,57	19,84	5,28	3,76	19,50	6,10	3,19	19,02	6,49	2,93	18,51	6,87	2,70	18,04	7,69	2,35
4	0	24,12	3,62	6,67	23,63	5,31	4,45	23,19	6,13	3,78	22,77	6,51	3,50	22,33	6,89	3,24	21,83	7,71	2,83
6	0	25,64	3,64	7,05	25,06	5,33	4,70	24,54	6,15	3,99	24,05	6,53	3,69	23,54	6,90	3,41	22,97	7,72	2,97
7	0	26,36	3,65	7,22	25,73	5,34	4,82	**25,17**	**6,16**	**4,09**	24,63	6,53	3,77	**24,10**	**6,91**	**3,49**	23,48	7,73	3,04
8	0	27,05	3,66	7,38	26,37	5,35	4,93	25,77	6,17	4,18	25,20	6,54	3,85	24,61	6,92	3,56	23,97	7,74	3,10
10	0	28,38	3,69	7,69	27,61	5,38	5,13	26,91	6,19	4,35	26,25	6,56	4,00	25,59	6,94	3,69	24,87	7,75	3,21
12	0	29,68	3,72	7,97	28,80	5,40	5,33	28,01	6,21	4,51	27,26	6,58	4,14	26,51	6,95	3,81	25,71	7,77	3,31
14	0	30,97	3,76	8,24	29,98	5,43	5,52	29,09	6,23	4,67	28,24	6,60	4,28	27,40	6,97	3,93	26,52	7,78	3,41
16	0	32,29	3,79	8,51	31,19	5,46	5,71	30,19	6,26	4,82	29,24	6,62	4,41	28,30	6,99	4,05	27,33	7,80	3,51
18	0	33,70	3,84	8,77	32,47	5,50	5,91	31,35	6,29	4,99	30,30	6,65	4,56	29,26	7,01	4,17	28,19	7,81	3,61
20	0	35,23	3,92	8,99	33,85	5,54	6,11	32,61	6,32	5,16	31,44	6,67	4,71	30,29	7,03	4,31	29,13	7,83	3,72
21 TO 42	0	35,23	3,92	8,99	33,85	5,54	6,11	32,61	6,32	5,16	31,44	6,67	4,71	30,29	7,03	4,31	29,13	7,83	3,72

10.48.ECL 090 H WITH PUMP version N - WITH BUFFER TANK AND HIGH HEAD PUMP version Q HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	15,11	3,65	4,14	14,87	5,35	2,78	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	16,07	3,65	4,41	15,72	5,34	2,94	15,37	6,17	2,49	-	-	-	-	-	-	-	-	-
-6	0	17,02	3,65	4,66	16,57	5,35	3,10	16,14	6,17	2,62	15,71	6,55	2,40	15,24	6,93	2,20	-	-	-
-4	0	17,95	3,65	4,91	17,40	5,35	3,25	16,90	6,17	2,74	16,43	6,55	2,51	15,95	6,93	2,30	15,44	7,75	1,99
-2	0	18,87	3,66	5,15	18,22	5,36	3,40	17,66	6,18	2,86	17,15	6,56	2,62	16,67	6,94	2,40	16,17	7,76	2,08
0	0	19,78	3,67	5,39	19,03	5,37	3,55	18,40	6,18	2,98	17,86	6,57	2,72	17,37	6,95	2,50	16,91	7,77	2,18
2	0	19,66	3,68	5,35	19,53	5,38	3,63	19,19	6,19	3,10	18,72	6,58	2,85	18,21	6,96	2,62	17,74	7,78	2,28
4	0	23,79	3,72	6,39	23,30	5,42	4,30	22,86	6,23	3,67	22,45	6,61	3,40	22,01	6,99	3,15	21,51	7,81	2,76
6	0	25,30	3,75	6,75	24,72	5,44	4,54	24,21	6,25	3,87	23,71	6,63	3,58	23,21	7,01	3,31	22,64	7,82	2,89
7	0	26,01	3,77	6,91	25,39	5,45	4,66	**24,83**	**6,27**	**3,96**	24,30	6,64	3,66	**23,77**	**7,02**	**3,39**	23,15	7,83	2,96
8	0	26,70	3,78	7,06	26,03	5,47	4,76	25,43	6,28	4,05	24,86	6,65	3,74	24,27	7,03	3,45	23,64	7,84	3,01
10	0	28,03	3,81	7,35	27,26	5,50	4,96	26,57	6,30	4,21	25,91	6,68	3,88	25,25	7,05	3,58	24,54	7,86	3,12
12	0	29,32	3,85	7,62	28,45	5,52	5,15	27,66	6,33	4,37	26,91	6,70	4,02	26,16	7,07	3,70	25,37	7,88	3,22
14	0	30,60	3,88	7,88	29,62	5,56	5,33	28,73	6,36	4,52	27,89	6,72	4,15	27,05	7,09	3,82	26,18	7,90	3,32
16	0	31,92	3,92	8,14	30,83	5,59	5,52	29,83	6,38	4,67	28,89	6,75	4,28	27,95	7,11	3,93	26,99	7,91	3,41
18	0	33,31	3,97	8,40	32,10	5,62	5,71	30,99	6,41	4,83	29,94	6,77	4,42	28,90	7,13	4,05	27,84	7,93	3,51
20	0	34,81	4,02	8,66	33,47	5,67	5,91	32,24	6,45	5,00	31,07	6,80	4,57	29,93	7,15	4,19	28,77	7,95	3,62
21 TO 42	0	34,81	4,02	8,66	33,47	5,67	5,91	32,24	6,45	5,00	31,07	6,80	4,57	29,93	7,15	4,19	28,77	7,95	3,62

Data to UNI EN14511: 2011

LEGEND	FUNCTION
	Operation with DCPX accessory
TAE	Temperature of Air External in °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

(2) Insufficient water flow rate bellow operating limit of pump

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0,99	**1**	1,01	1,02
Input power correction factors	1,01	**1**	0,98	0,96

10.52. ECL 102 H version STANDARD - HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	18,70	4,54	4,12	18,40	6,66	2,76	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	19,88	4,55	4,37	19,45	6,67	2,92	19,01	7,69	2,47	-	-	-	-	-	-	-	-	-
-6	0	21,04	4,57	4,60	20,48	6,68	3,06	19,96	7,70	2,59	19,43	8,17	2,38	18,85	8,64	2,18	-	-	-
-4	0	22,18	4,59	4,83	21,50	6,70	3,21	20,90	7,72	2,71	20,32	8,19	2,48	19,73	8,66	2,28	19,10	9,68	1,97
-2	0	23,31	4,61	5,05	22,51	6,72	3,35	21,82	7,74	2,82	21,20	8,21	2,58	20,60	8,68	2,37	20,00	9,69	2,06
0	0	24,43	4,64	5,26	23,51	6,75	3,48	22,74	7,76	2,93	22,07	8,23	2,68	21,47	8,70	2,47	20,90	9,71	2,15
2	0	24,28	4,65	5,23	24,12	6,77	3,57	23,70	7,78	3,04	23,12	8,25	2,80	22,50	8,72	2,58	21,93	9,74	2,25
4	0	29,34	4,76	6,17	28,73	6,87	4,18	28,20	7,88	3,58	27,69	8,35	3,32	27,15	8,81	3,08	26,54	9,83	2,70
6	0	31,18	4,81	6,48	30,47	6,91	4,41	29,84	7,93	3,77	29,24	8,39	3,49	28,62	8,85	3,23	27,92	9,86	2,83
7	0	32,05	4,83	6,63	31,29	6,94	4,51	**30,60**	**8,04**	**3,71**	29,96	8,41	3,56	**29,31**	**8,87**	**3,30**	28,55	9,88	2,89
8	0	32,89	4,86	6,77	32,07	6,96	4,61	31,34	7,97	3,93	30,64	8,43	3,63	29,92	8,89	3,37	29,15	9,90	2,94
10	0	34,51	4,91	7,03	33,57	7,01	4,79	32,73	8,01	4,08	31,92	8,47	3,77	31,11	8,93	3,49	30,24	9,93	3,04
12	0	36,08	4,96	7,27	35,01	7,05	4,96	34,05	8,05	4,23	33,14	8,51	3,90	32,23	8,96	3,60	31,26	9,97	3,14
14	0	37,64	5,01	7,51	36,45	7,10	5,13	35,36	8,09	4,37	34,34	8,54	4,02	33,31	9,00	3,70	32,25	10,00	3,23
16	0	39,23	5,06	7,75	37,91	7,15	5,31	36,70	8,14	4,51	35,55	8,58	4,14	34,41	9,03	3,81	33,24	10,02	3,32
18	0	40,91	5,12	7,99	39,44	7,19	5,48	38,10	8,18	4,66	36,82	8,62	4,27	35,57	9,06	3,92	34,27	10,05	3,41
20	0	42,72	5,18	8,25	41,10	7,24	5,67	39,61	8,22	4,82	38,20	8,66	4,41	36,82	9,10	4,05	35,41	10,08	3,51
21 TO 42	0	42,72	5,18	8,25	41,10	7,24	5,67	39,61	8,22	4,82	38,20	8,66	4,41	36,82	9,10	4,05	35,41	10,08	3,51

10.50. ECL 102 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0							-	-	-	-	-	-	-	-	-	-	-	-
-8	0										-	-	-	-	-	-	-	-	-
-6	0		(2)			(2)											-	-	-
-4	0								(2)			(2)			(2)			(2)	
-2	0																		
0	0	23,86	4,65	5,13	22,95	6,76	3,39												
2	0	23,71	4,66	5,09	23,56	6,78	3,47	23,14	7,80	2,97									
4	0	28,72	4,77	6,02	28,11	6,87	4,09	27,59	7,89	3,50	27,08	8,35	3,24	26,55	8,82	3,01	25,94	9,83	2,64
6	0	30,56	4,83	6,33	29,85	6,93	4,31	29,22	7,93	3,68	28,62	8,40	3,41	28,00	8,86	3,16	27,31	9,87	2,77
7	0	31,42	4,86	6,47	30,66	6,95	4,41	**29,98**	**8,06**	**3,72**	29,33	8,42	3,48	**28,69**	**8,88**	**3,23**	27,93	9,89	2,83
8	0	32,27	4,89	6,59	31,44	6,98	4,50	30,71	7,98	3,85	30,01	8,44	3,56	29,30	8,90	3,29	28,52	9,90	2,88
10	0	33,90	4,97	6,82	32,95	7,05	4,67	32,10	8,04	3,99	31,29	8,49	3,69	30,48	8,94	3,41	29,61	9,94	2,98
12	0	35,49	5,06	7,01	34,40	7,12	4,83	33,43	8,10	4,13	32,51	8,54	3,81	31,59	8,98	3,52	30,63	9,98	3,07
14	0				35,87	7,21	4,98	34,75	8,16	4,26	33,71	8,59	3,92	32,68	9,03	3,62	31,61	10,01	3,16
16	0		(1)					36,12	8,25	4,38	34,94	8,65	4,04	33,78	9,07	3,72	32,60	10,05	3,24
18	0					(1)			(1)		36,24	8,73	4,15	34,95	9,13	3,83	33,64	10,09	3,33
20	0											(1)		36,23	9,20	3,94	34,79	10,14	3,43
21 TO 42	0		(1)			(1)			(1)			(1)		36,23	9,20	3,94	34,79	10,14	3,43

10.51.ECL 102 H WITH PUMP version N - WITH BUFFER TANK AND HIGH HEAD PUMP version Q HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0							-	-	-	-	-	-	-	-	-	-	-	-
-8	0										-	-	-	-	-	-	-	-	-
-6	0		(2)			(2)											-	-	-
-4	0								(2)			(2)			(2)			(2)	
-2	0																		
0	0	23,71	5,02	4,73	22,80	7,12	3,20												
2	0	23,57	5,02	4,69	23,41	7,14	3,28	22,99	8,16	2,82									
4	0	28,59	5,19	5,51	27,98	7,29	3,84	27,45	8,29	3,31	26,94	8,75	3,08	26,41	9,21	2,87	25,79	10,22	2,53
6	0	30,44	5,28	5,77	29,72	7,36	4,04	29,09	8,36	3,48	28,49	8,81	3,23	27,86	9,27	3,01	27,17	10,27	2,65
7	0	31,32	5,33	5,88	30,54	7,41	4,12	**29,85**	**8,48**	**3,52**	29,20	8,85	3,30	**28,56**	**9,30**	**3,07**	27,80	10,29	2,70
8	0	32,17	5,38	5,98	31,33	7,45	4,21	30,59	8,44	3,63	29,89	8,88	3,37	29,17	9,32	3,13	28,39	10,32	2,75
10	0	33,82	5,49	6,17	32,85	7,54	4,36	31,99	8,51	3,76	31,18	8,95	3,49	30,36	9,38	3,24	29,49	10,37	2,84
12	0	35,44	5,62	6,31	34,33	7,64	4,49	33,34	8,60	3,88	32,41	9,02	3,59	31,48	9,44	3,33	30,51	10,42	2,93
14	0				35,82	7,77	4,61	34,68	8,69	3,99	33,62	9,09	3,70	32,58	9,51	3,43	31,50	10,47	3,01
16	0		(1)					36,07	8,81	4,09	34,87	9,18	3,80	33,69	9,58	3,52	32,50	10,53	3,09
18	0					(1)			(1)		36,19	9,29	3,89	34,88	9,66	3,61	33,55	10,59	3,17
20	0											(1)		36,18	9,76	3,71	34,71	10,66	3,25
21 TO 42	0		(1)			(1)			(1)			(1)		36,18	9,76	3,71	34,71	10,66	3,25

Data to UNI EN14511: 2011

LEGEND	FUNCTION
	Operation with DCPX accessory
TAE	Temperature of Air External in °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- **-** Outside of operating limits
- **(1)** Excessive water flow rate beyond operating limit of pump
- **(2)** Insufficient water flow rate bellow operating limit of pump

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0,99	**1**	1,01	1,02
Input power correction factors	1,01	**1**	0,98	0,96

10.55. ECL 152 H version STANDARD - HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0	22,56	5,35	4,22	22,19	7,85	2,83	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	23,98	5,36	4,47	23,46	7,86	2,99	22,93	9,06	2,53	-	-	-	-	-	-	-	-	-
-6	0	25,38	5,38	4,72	24,71	7,87	3,14	24,08	9,08	2,65	23,44	9,63	2,43	22,74	10,19	2,23	-	-	-
-4	0	26,75	5,40	4,95	25,94	7,89	3,29	25,21	9,09	2,77	24,51	9,65	2,54	23,80	10,20	2,33	23,04	11,40	2,02
-2	0	28,11	5,43	5,18	27,15	7,92	3,43	26,32	9,12	2,89	25,57	9,67	2,64	24,85	10,22	2,43	24,13	11,42	2,11
0	0	29,46	5,46	5,40	28,36	7,95	3,57	27,42	9,14	3,00	26,62	9,69	2,75	25,90	10,25	2,53	25,21	11,45	2,20
2	0	29,29	5,47	5,36	29,10	7,97	3,65	28,59	9,17	3,12	27,89	9,72	2,87	27,14	10,27	2,64	26,45	11,47	2,31
4	0	35,38	5,59	6,33	34,65	8,08	4,29	34,01	9,28	3,67	33,40	9,83	3,40	32,75	10,38	3,15	32,01	11,58	2,76
6	0	37,60	5,65	6,65	36,75	8,14	4,52	35,99	9,33	3,86	35,26	9,88	3,57	34,52	10,43	3,31	33,68	11,62	2,90
7	0	38,65	5,68	6,80	37,73	8,16	4,62	**36,91**	**9,53**	**3,87**	36,13	9,90	3,65	**35,35**	**10,45**	**3,38**	34,44	11,64	2,96
8	0	39,67	5,71	6,95	38,68	8,19	4,72	37,79	9,38	4,03	36,95	9,92	3,72	36,09	10,47	3,45	35,15	11,66	3,01
10	0	41,61	5,77	7,22	40,48	8,24	4,91	39,46	9,43	4,19	38,50	9,97	3,86	37,52	10,51	3,57	36,48	11,70	3,12
12	0	43,50	5,82	7,47	42,22	8,29	5,09	41,06	9,47	4,33	39,97	10,01	3,99	38,87	10,55	3,68	37,70	11,73	3,21
14	0	45,38	5,88	7,71	43,95	8,35	5,27	42,64	9,52	4,48	41,40	10,05	4,12	40,17	10,59	3,79	38,89	11,77	3,30
16	0	47,30	5,94	7,96	45,71	8,40	5,44	44,25	9,57	4,62	42,87	10,10	4,25	41,50	10,63	3,91	40,08	11,80	3,40
18	0	49,33	6,00	8,22	47,56	8,45	5,63	45,94	9,62	4,78	44,40	10,14	4,38	42,89	10,66	4,02	41,33	11,83	3,49
20	0	51,50	6,07	8,49	49,55	8,51	5,82	47,76	9,67	4,94	46,07	10,18	4,52	44,40	10,70	4,15	42,70	11,87	3,60
21 TO 42	0	51,50	6,07	8,49	49,55	8,51	5,82	47,76	9,67	4,94	46,07	10,18	4,52	44,40	10,70	4,15	42,70	11,87	3,60

10.53. ECL 152 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0		(2)			(2)		-	-	-	-	-	-	-	-	-	-	-	-
-8	0	23,29	5,56	4,19	22,78	8,06	2,83		(2)		-	-	-	-	-	-	-	-	-
-6	0	24,67	5,58	4,42	24,01	8,07	2,98	23,39	9,27	2,52	22,76	9,83	2,32	22,07	10,39	2,12	-	-	-
-4	0	26,02	5,60	4,65	25,22	8,09	3,12	24,50	9,29	2,64	23,81	9,85	2,42	23,12	10,40	2,22	22,36	11,60	1,93
-2	0	27,37	5,63	4,86	26,42	8,11	3,26	25,60	9,31	2,75	24,86	9,86	2,52	24,15	10,42	2,32	23,44	11,62	2,02
0	0	28,70	5,66	5,07	27,61	8,14	3,39	26,69	9,34	2,86	25,89	9,89	2,62	25,18	10,44	2,41	24,50	11,64	2,10
2	0	28,53	5,67	5,03	28,34	8,17	3,47	27,83	9,37	2,97	27,15	9,92	2,74	26,40	10,47	2,52	25,72	11,67	2,20
4	0	34,59	5,84	5,92	33,85	8,32	4,07	33,21	9,51	3,49	32,60	10,05	3,24	31,96	10,60	3,02	31,22	11,79	2,65
6	0	36,82	5,94	6,20	35,95	8,40	4,28	35,19	9,58	3,67	34,46	10,12	3,41	33,71	10,66	3,16	32,88	11,84	2,78
7	0	37,87	5,99	6,32	36,94	8,45	4,37	**36,11**	**9,79**	**3,75**	35,33	10,15	3,48	**34,55**	**10,69**	**3,23**	33,63	11,87	2,83
8	0	38,90	6,04	6,44	37,89	8,49	4,46	37,00	9,66	3,83	36,15	10,19	3,55	35,29	10,72	3,29	34,35	11,90	2,89
10	0	40,88	6,16	6,64	39,72	8,59	4,62	38,68	9,75	3,97	37,71	10,26	3,67	36,72	10,78	3,41	35,67	11,95	2,98
12	0	42,84	6,31	6,79	41,50	8,70	4,77	40,31	9,84	4,10	39,19	10,34	3,79	38,07	10,85	3,51	36,90	12,00	3,07
14	0				43,29	8,85	4,89	41,92	9,94	4,22	40,65	10,42	3,90	39,39	10,91	3,61	38,09	12,06	3,16
16	0		(1)					43,60	10,08	4,33	42,14	10,52	4,01	40,73	10,99	3,71	39,29	12,12	3,24
18	0					(1)			(1)		43,75	10,65	4,11	42,16	11,08	3,81	40,56	12,19	3,33
20	0											(1)		43,73	11,19	3,91	41,96	12,27	3,42
21 TO 42	0		(1)			(1)			(1)			(1)		43,73	11,19	3,91	41,96	12,27	3,42

10.54.ECL 152 H WITH PUMP version N - WITH BUFFER TANK AND HIGH HEAD PUMP version Q HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																		
		25			30			35			40			45			50		
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-10	0		(2)			(2)		-	-	-	-	-	-	-	-	-	-	-	-
-8	0	23,19	5,66	4,10	22,69	8,16	2,78		(2)		-	-	-	-	-	-	-	-	-
-6	0	24,56	5,67	4,33	23,91	8,17	2,93	23,29	9,38	2,48	22,66	9,94	2,28		(2)		-	-	-
-4	0	25,90	5,69	4,55	25,11	8,18	3,07	24,39	9,39	2,60	23,71	9,95	2,38	23,02	10,51	2,19		(2)	
-2	0	27,24	5,71	4,77	26,30	8,20	3,21	25,48	9,40	2,71	24,75	9,96	2,48	24,05	10,52	2,29	23,34	11,72	1,99
0	0	28,56	5,74	4,98	27,47	8,23	3,34	26,56	9,42	2,82	25,77	9,98	2,58	25,07	10,54	2,38	24,40	11,74	2,08
2	0	28,38	5,74	4,94	28,20	8,24	3,42	27,70	9,45	2,93	27,02	10,00	2,70	26,28	10,56	2,49	25,61	11,76	2,18
4	0	34,37	5,86	5,86	33,65	8,35	4,03	33,02	9,55	3,46	32,42	10,10	3,21	31,78	10,65	2,98	31,05	11,85	2,62
6	0	36,56	5,93	6,17	35,72	8,41	4,25	34,97	9,60	3,64	34,25	10,15	3,38	33,52	10,69	3,13	32,69	11,89	2,75
7	0	37,60	5,96	6,31	36,69	8,44	4,35	**35,87**	**9,80**	**3,67**	35,10	10,17	3,45	**34,34**	**10,72**	**3,20**	33,44	11,91	2,81
8	0	38,60	5,99	6,44	37,62	8,47	4,44	36,74	9,65	3,81	35,91	10,19	3,52	35,07	10,74	3,27	34,14	11,93	2,86
10	0	40,53	6,06	6,68	39,41	8,53	4,62	38,40	9,71	3,96	37,44	10,24	3,66	36,48	10,78	3,38	35,45	11,97	2,96
12	0	42,40	6,14	6,91	41,13	8,59	4,79	39,98	9,76	4,09	38,89	10,29	3,78	37,80	10,83	3,49	36,66	12,00	3,05
14	0	44,28	6,22	7,12	42,84	8,66	4,95	41,55	9,82	4,23	40,32	10,34	3,90	39,10	10,87	3,60	37,82	12,04	3,14
16	0	46,20	6,31	7,32	44,60	8,74	5,11	43,14	9,89	4,36	41,77	10,40	4,02	40,41	10,91	3,70	39,00	12,08	3,23
18	0	48,24	6,41	7,52	46,45	8,82	5,27	44,83	9,95	4,50	43,29	10,45	4,14	41,78	10,96	3,81	40,24	12,12	3,32
20	0	50,44	6,54	7,71	48,46	8,92	5,43	46,65	10,03	4,65	44,95	10,52	4,27	43,29	11,02	3,93	41,60	12,16	3,42
21 TO 42	0	50,44	6,54	7,71	48,46	8,92	5,43	46,65	10,03	4,65	44,95	10,52	4,27	43,29	11,02	3,93	41,60	12,16	3,42

Data to UNI EN14511: 2011

LEGEND	FUNCTION
	Operation with DCPX accessory
TAE	Temperature of Air External in °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

(1) Excessive water flow rate beyond operating limit of pump

(2) Insufficient water flow rate bellow operating limit of pump

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0,99	**1**	1,01	1,02
Input power correction factors	1,01	**1**	0,98	0,96

10.58. ECL 202 H version STANDARD - HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																			
		25			30			35			40			45			50			
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	
-10	0	29,21	7,04	4,15	28,74	10,33	2,78	-	-	-	-	-	-	-	-	-	-	-	-	
-8	0	31,05	7,06	4,40	30,38	10,35	2,94	29,70	11,93	2,49	-	-	-	-	-	-	-	-	-	
-6	0	32,86	7,09	4,64	32,00	10,37	3,09	31,18	11,95	2,61	30,35	12,69	2,39	29,44	13,42	2,19	-	-	-	
-4	0	34,65	7,12	4,87	33,59	10,40	3,23	32,64	11,98	2,73	31,74	12,71	2,50	30,82	13,44	2,29	29,83	15,02	1,99	
-2	0	36,41	7,15	5,09	35,16	10,43	3,37	34,08	12,01	2,84	33,11	12,73	2,60	32,19	13,46	2,39	31,24	15,05	2,08	
0	0	38,16	7,19	5,31	36,72	10,46	3,51	35,51	12,04	2,95	34,47	12,76	2,70	33,54	13,49	2,49	32,65	15,08	2,17	
2	0	37,93	7,20	5,27	37,68	10,49	3,59	37,02	12,08	3,07	36,12	12,80	2,82	35,14	13,53	2,60	34,25	15,11	2,27	
4	0	45,82	7,36	6,22	44,87	10,64	4,22	44,04	12,22	3,60	43,25	12,94	3,34	42,41	13,67	3,10	41,45	15,25	2,72	
6	0	48,70	7,44	6,54	47,59	10,71	4,44	46,61	12,28	3,79	45,67	13,01	3,51	44,70	13,73	3,26	43,61	15,30	2,85	
7	0	50,06	7,48	6,69	48,86	10,75	4,55	**47,80**	**12,59**	**3,80**	46,78	13,04	3,59	**45,78**	**13,76**	**3,33**	44,60	15,33	2,91	
8	0	51,37	7,52	6,83	50,09	10,78	4,65	48,94	12,35	3,96	47,85	13,07	3,66	46,74	13,79	3,39	45,52	15,35	2,96	
10	0	53,89	7,59	7,10	52,43	10,85	4,83	51,11	12,41	4,12	49,86	13,13	3,80	48,59	13,84	3,51	47,24	15,40	3,07	
12	0	56,34	7,67	7,35	54,68	10,92	5,01	53,18	12,48	4,26	51,76	13,18	3,93	50,33	13,89	3,62	48,83	15,45	3,16	
14	0	58,77	7,74	7,59	56,91	10,99	5,18	55,22	12,54	4,40	53,62	13,24	4,05	52,03	13,94	3,73	50,36	15,50	3,25	
16	0	61,26	7,82	7,83	59,19	11,06	5,35	57,30	12,60	4,55	55,51	13,29	4,18	53,74	13,99	3,84	51,90	15,54	3,34	
18	0	63,88	7,90	8,09	61,59	11,13	5,54	59,49	12,66	4,70	57,50	13,35	4,31	55,54	14,04	3,96	53,53	15,58	3,43	
20	0	66,68	7,98	8,36	64,17	11,20	5,73	61,86	12,73	4,86	59,66	13,41	4,45	57,50	14,09	4,08	55,30	15,63	3,54	
21 TO 42	0	66,68	7,98	8,36	64,17	11,20	5,73	61,86	12,73	4,86	59,66	13,41	4,45	57,50	14,09	4,08	55,30	15,63	3,54	

10.56. ECL 202 H WITH PUMP version P - WITH BUFFER TANK AND PUMP version A HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																			
		25			30			35			40			45			50			
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	
-10	0	28,44	7,23	3,94	27,97	10,52	2,66	-	-	-	-	-	-	-	-	-	-	-	-	
-8	0	30,25	7,24	4,18	29,59	10,53	2,81	28,91	12,12	2,39	-	-	-	-	-	-	-	-	-	
-6	0	32,04	7,27	4,41	31,18	10,55	2,95	30,38	12,14	2,50	29,55	12,87	2,30	28,66	13,60	2,11	-	-	-	
-4	0	33,80	7,31	4,62	32,76	10,58	3,09	31,82	12,16	2,62	30,93	12,89	2,40	30,02	13,62	2,20	29,04	15,20	1,91	
-2	0	35,55	7,35	4,83	34,31	10,62	3,23	33,24	12,19	2,73	32,28	12,92	2,50	31,37	13,65	2,30	30,44	15,23	2,00	
0	0	37,29	7,41	5,04	35,86	10,67	3,36	34,66	12,23	2,83	33,63	12,95	2,60	32,70	13,68	2,39	31,82	15,26	2,09	
2	0	37,06	7,41	5,00	36,81	10,70	3,44	36,16	12,28	2,94	35,26	13,00	2,71	34,29	13,72	2,50	33,41	15,30	2,18	
4	0	44,96	7,69	5,85	44,00	10,94	4,02	43,16	12,50	3,45	42,36	13,21	3,21	41,52	13,92	2,98	40,56	15,48	2,62	
6	0	47,89	7,85	6,10	46,75	11,08	4,22	45,75	12,62	3,63	44,80	13,31	3,36	43,82	14,01	3,13	42,73	15,56	2,75	
7	0	49,28	7,94	6,21	48,05	11,15	4,31	**46,96**	**12,68**	**3,70**	45,92	13,37	3,44	**44,90**	**14,06**	**3,19**	43,71	15,61	2,80	
8	0	50,65	8,04	6,30	49,30	11,23	4,39	48,12	12,75	3,77	47,00	13,43	3,50	45,87	14,11	3,25	44,64	15,65	2,85	
10	0				51,76	11,44	4,52	50,35	12,90	3,90	49,05	13,55	3,62	47,75	14,21	3,36	46,37	15,74	2,95	
12	0										51,01	13,69	3,73	49,53	14,32	3,46	47,98	15,83	3,03	
14	0		(1)			(1)			(1)			(1)		51,28	14,45	3,55	49,55	15,92	3,11	
16	0														(1)		51,14	16,03	3,19	
18	0																	(1)		
20	0																			
21 TO 42	0		(1)			(1)			(1)			(1)			(1)			(1)		

10.57.ECL 202 H WITH PUMP version N - WITH BUFFER TANK AND HIGH HEAD PUMP version Q HEATING MODE (400V/3/N/50Hz)

TAE (°C)	LEAVING WATER TEMPERATURE (°C)																			
		25			30			35			40			45			50			
	GLYCOL %	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	
-10	0	28,33	7,33	3,86	27,86	10,63	2,62	-	-	-	-	-	-	-	-	-	-	-	-	
-8	0	30,13	7,35	4,10	29,47	10,64	2,77	28,80	12,22	2,36	-	-	-	-	-	-	-	-	-	
-6	0	31,90	7,37	4,33	31,06	10,65	2,92	30,26	12,24	2,47	29,44	12,97	2,27	28,55	13,71	2,08	-	-	-	
-4	0	33,65	7,40	4,55	32,62	10,68	3,06	31,69	12,26	2,58	30,80	12,99	2,37	29,90	13,72	2,18	28,93	15,31	1,89	
-2	0	35,39	7,43	4,76	34,16	10,71	3,19	33,10	12,29	2,69	32,15	13,02	2,47	31,24	13,75	2,27	30,32	15,33	1,98	
0	0	37,11	7,47	4,97	35,70	10,74	3,32	34,51	12,32	2,80	33,49	13,04	2,57	32,57	13,77	2,36	31,69	15,36	2,06	
2	0	36,88	7,48	4,93	36,64	10,77	3,40	35,99	12,35	2,91	35,10	13,08	2,68	34,14	13,81	2,47	33,27	15,39	2,16	
4	0	44,68	7,68	5,82	43,74	10,94	4,00	42,92	12,51	3,43	42,13	13,24	3,18	41,30	13,96	2,96	40,35	15,53	2,60	
6	0	47,54	7,78	6,11	46,44	11,04	4,21	45,46	12,60	3,61	44,53	13,31	3,34	43,57	14,03	3,11	42,49	15,59	2,73	
7	0	48,90	7,83	6,24	47,70	11,08	4,30	**46,64**	**12,91**	**3,61**	45,64	13,35	3,42	**44,64**	**14,06**	**3,17**	43,46	15,62	2,78	
8	0	50,21	7,89	6,36	48,92	11,13	4,39	47,78	12,69	3,77	46,69	13,39	3,49	45,59	14,10	3,23	44,38	15,66	2,83	
10	0	52,73	8,01	6,59	51,26	11,24	4,56	49,94	12,77	3,91	48,69	13,47	3,61	47,43	14,17	3,35	46,08	15,72	2,93	
12	0	55,20	8,14	6,78	53,52	11,34	4,72	52,01	12,87	4,04	50,59	13,55	3,73	49,16	14,24	3,45	47,66	15,78	3,02	
14	0	57,67	8,28	6,96	55,78	11,46	4,86	54,06	12,97	4,17	52,45	13,63	3,85	50,85	14,31	3,55	49,18	15,84	3,11	
16	0	60,24	8,47	7,11	58,09	11,60	5,01	56,17	13,08	4,29	54,35	13,73	3,96	52,56	14,38	3,65	50,73	15,90	3,19	
18	0		(1)		60,57	11,79	5,14	58,39	13,21	4,42	56,36	13,83	4,08	54,37	14,47	3,76	52,35	15,97	3,28	
20	0					(1)		60,83	13,39	4,54	58,55	13,95	4,20	56,35	14,56	3,87	54,12	16,05	3,37	
21 TO 42	0		(1)			(1)		60,83	13,39	4,54	58,55	13,95	4,20	56,35	14,56	3,87	54,12	16,05	3,37	

Data to UNI EN14511: 2011

LEGEND	FUNCTION
	Operation with DCPX accessory
TAE	Temperature of Air External in °C

WARNING

Outputs calculated with % glycol shown in table. For temperatures and % glycol different than shown refer to Magellano

SELECTION NOT POSSIBLE:

- Outside of operating limits

(1) Excessive water flow rate beyond operating limit of pump

ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0,99	1	1,01	1,02
Input power correction factors	1,01	1	0,98	0,96

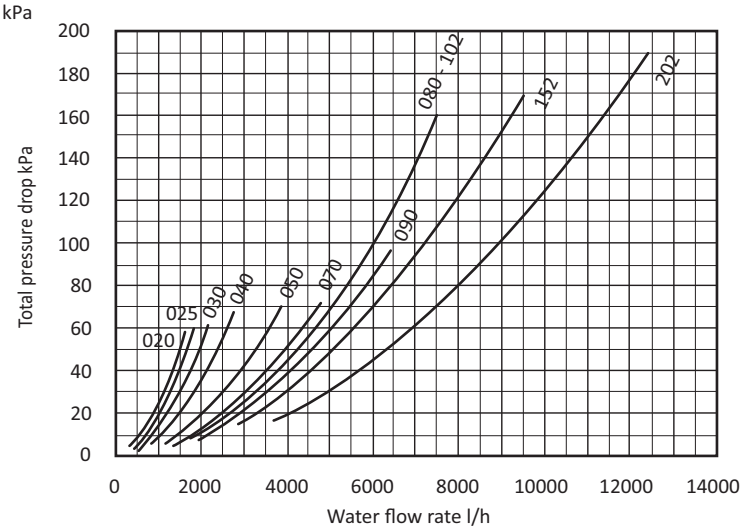
11. PRESSURE DROP AND AVAILABLE HEAD

11.1. PRESSURE DROP

Evaporator outlet water temperature	7°C
Evaporator inlet water temperature	12°C
External air temperature	35 °C
Average water temperature	10° C

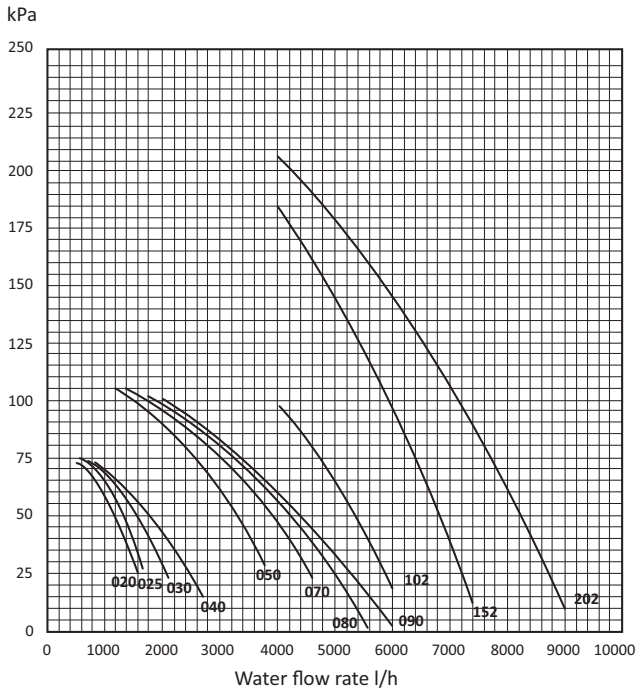
For temperatures different than 10° C use the correction factor table.

Average water temperature	5	**10**	15	20	30	40	50
Coefficient multiplier	1,02	**1**	0,98	0,97	0,95	0,93	0,91

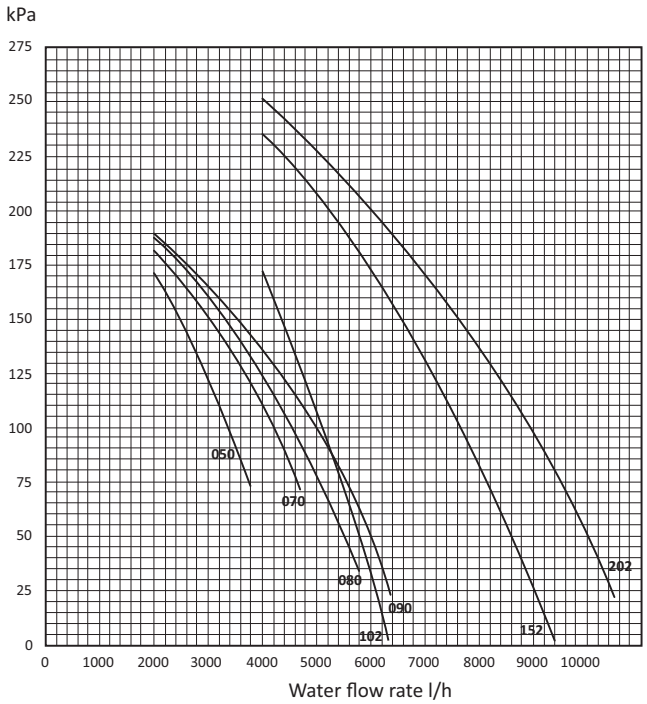


11.2. AVAILABLE HEAD

11.1.1. AVAILABLE HEAD WITH BUFFER TANK AND/OR STANDARD PUMP (A - P)



11.1.2. AVAILABLE HEAD WITH BUFFER TANKS AND/OR HIGH HEAD PUMP VERSION Q



12. ETHYLENE GLYCOL SOLUTION

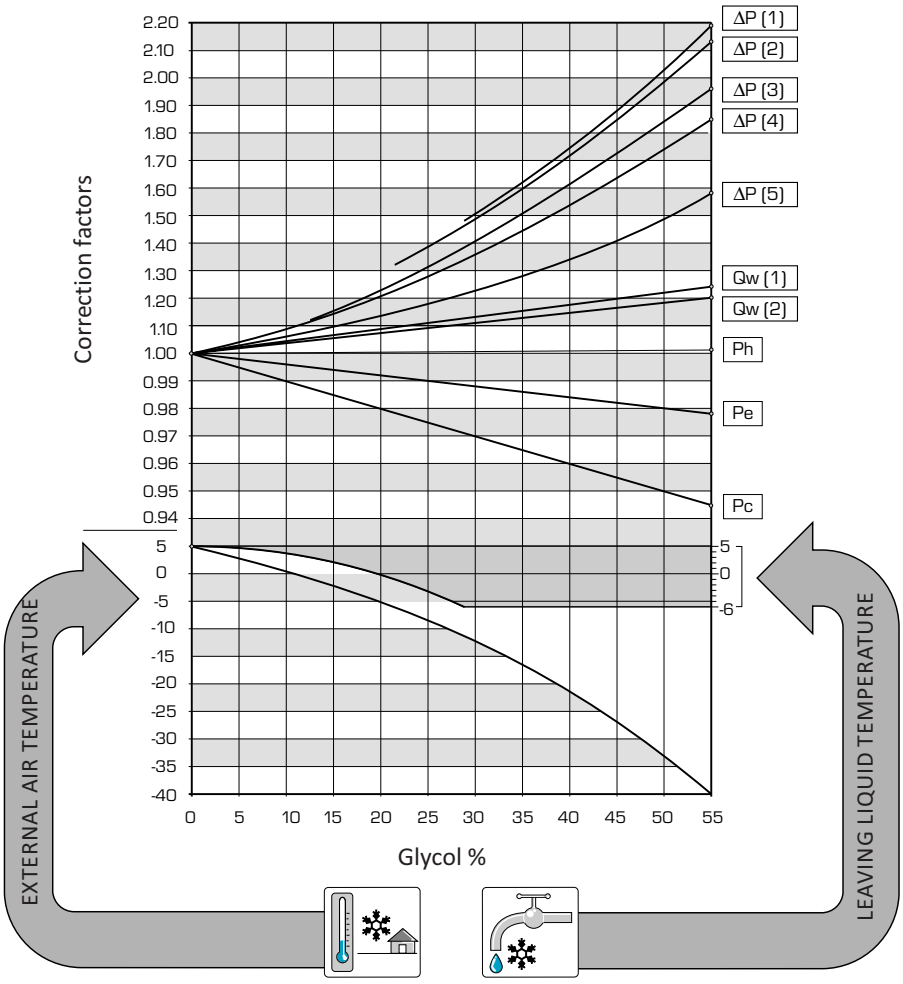
- The correction factors for cooling capacity and power input take into account the presence of glycol and the different evaporating temperatures.
- The correction factor for pressure drop takes into account the different flow rates derived from the application of the correction factor for flow rates.
- The correction factor for water flow rate is calculated to maintain the same Δt that would be without glycol.

NOTE:
To understand how to read the diagram an example is given below.
Using the diagram the necessary percentage of glycol can be determined, taking into consideration one of the two following factors:
Based on the fluid considered (water or air) enter the diagram from the right or the left and intersect the leaving water temperature or external air temperature curve and draw a vertical line from this point to identify the glycol percentage and the relative correction factors.

11.3. HOW TO READ THE DIAGRAM

The curves shown on the diagram summarise a large quantity of data, with each curve representing a particular function, for whose correct understanding it is necessary to make certain initial considerations:
In case the percentage glycol required is based on external air temperature enter the diagram horizontally from the left to intersect the curve and draw a vertical line through this point. The intersections with the curves above present the correction factors for cooling capacity, power input, pressure drop and flow rate (the correction factors are applied to the nominal performance data of the unit size in consideration). The intersection with the curve below gives the recommended percentage of glycol for the external air temperature.
In case the percentage glycol required is based on the leaving liquid temperature enter the diagram horizontally from the right to intersect the curve and draw a vertical line through this point. The intersections with the curves above present the correction factors for cooling capacity, power input, pressure drop and flow rate (the correction factors are applied to the nominal performance data of the unit size in consideration). The intersection with the curve below gives the recommended percentage of glycol for the leaving liquid temperature.

It is reminded that the initial parameters of "EXTERNAL AIR TEMPERATURE" and "LEAVING LIQUID TEMPERATURE" are not linked with each other so it is not possible to enter the diagram from one parameter to determine the corresponding value of the other.



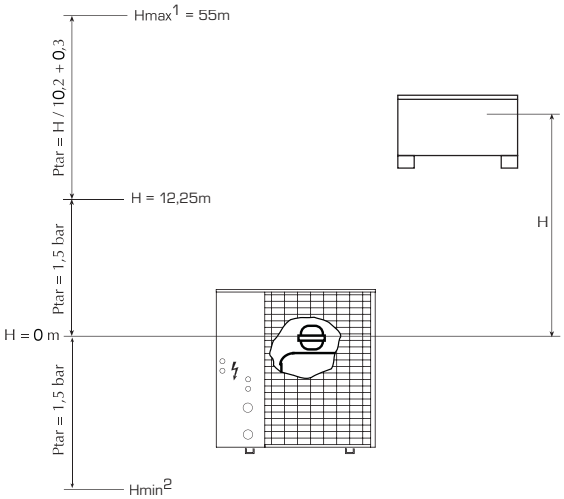
LEGEND:

Pc	Correction factor cooling capacity
Pe	Correction factor power input
Ph	Correction factor heating capacity
ΔP (1)	Correction factor pressure drop with average fluid temperature = -3.5 °C
ΔP (2)	Correction factor pressure drop with average fluid temperature = 0.5 °C
ΔP (3)	Correction factor pressure drop with average fluid temperature = 5.5 °C
ΔP (4)	Correction factor pressure drop with average fluid temperature = 9.5 °C
ΔP (5)	Correction factor pressure drop with average fluid temperature = 47.5 °C
Qw (1)	Correction factor flow rate (evaporator) with average fluid temperature = 9.5 °C
Qw (2)	Correction factor flow rate (condenser) with average fluid temperature = 47.5 °C

NOTE
Although the diagram goes down to external air temperatures of -40 °C refer to the operating limits of the unit.

13. EXPANSION TANK PRESSURE SETTING

The standard pressure setting that the expansion tank is pre-charged to is 1.5 bar, the maximum value is 6 bar.
The expansion tank pressure setting has to be adjusted based on the difference in height (H) of the installation (see figure) according to the formula:
p (rating) [bar] = H [m] / 10.2 + 0.3.
For example, if the difference in height H is 20 m then the value of the expansion tank pressure setting p is 2.3 bar.
If the calculated pressure setting value is less than 1.5 bar (when H < 12.25), maintain the standard pressure setting



LEGEND

(1) Ensure highest system point does not exceed 55 m difference.

(2) Ensure that the lowest point of the system can handle the total pressure.

ECL 020-025-030						
Hydraulic height	**H m**	**30**	**25**	**20**	**15**	**≥ 12.25**
Expansion tank setting	bar	3.2	2.8	2.3	1.8	1.5
Water content reference value	l (1)	103	121	139	158	168
Water content reference value	l (2)	46	55	63	71	76

ECL 040-050-080-090						
Hydraulic height	**H m**	**30**	**25**	**20**	**15**	**≥ 12.25**
Expansion tank setting	bar	3.2	2.8	2.3	1.8	1.5
Water content reference value	l (1)	257	303	348	394	419
Water content reference value	l (2)	116	136	157	177	189

Glycol mix	**Water temperature °C**		**Correction factor**	**Reference condition**
	max.	min.		
10%	40	-2	0,507	(1)
10%	60	-2	0,686	(2)
20%	40	-6	0,434	(1)
20%	60	-6	0,604	(2)
35%	40	-6	0,393	(1)
35%	60	-6	0,555	(2)

Reference operating conditions:
(1) Cooling: Maximum water temperature = 40 °C, minimum water temperature = 4 °C.
(2) Heating (heat pump): Maximum water temperature = 60 °C, minimum water temperature = 4 °C

14. MINIMUM WATER CONTENT

ECL|ECLH		**020**	**025**	**030**	**040**	**050**	**070**	**080**	**090**	**102**	**152**	**202**
Number of compressors	n°	1	1	1	1	1	1	1	1	2	2	2
Minimum recommended water content	l/kW	4	4	4	4	4	4	4	4	4	4	4

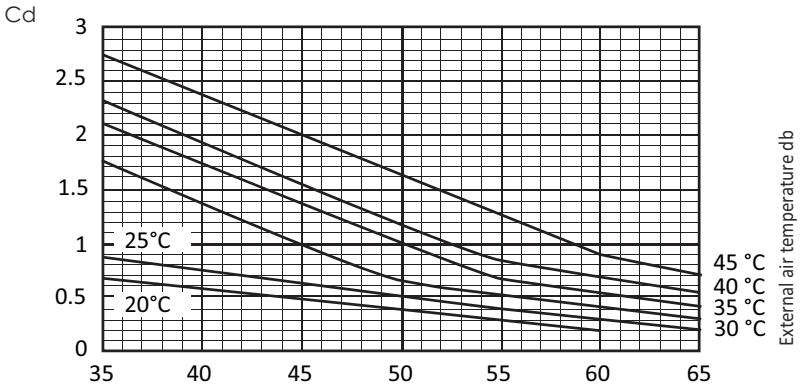
WARNING
t is recommended to design for a high system water content (the table shows the minimum recommended), to limit:
1. The frequency of changes in operating modes.
2. The reduction of water temperature during the defrost cycle in winter periods.

15. DESUPERHEATER

15.1. CORRECTION FACTORS

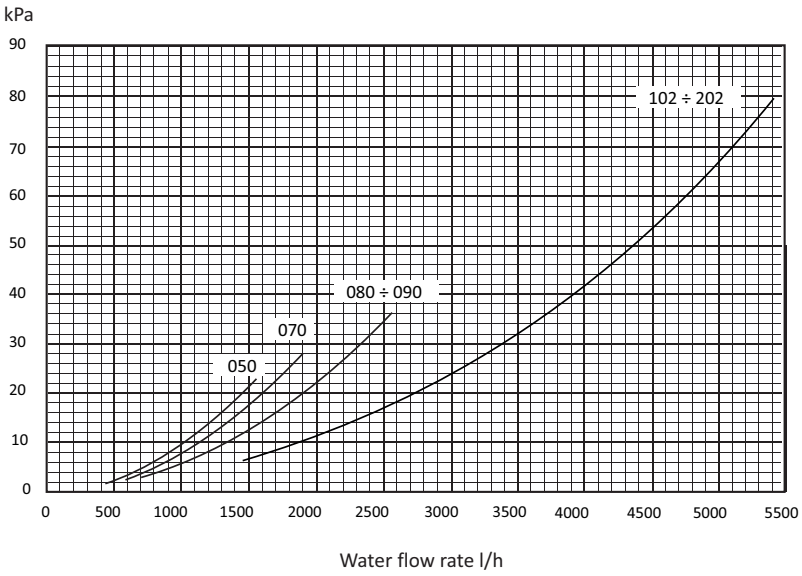
The heating capacity provided by the desuperheater is obtained by multiplying the nominal value with the coefficient (Cd).
The diagram allows the correction coefficient to be obtained as a function of external air temperature and water temperature produced by the desuperheater.

WARNING
The desuperheater can only be used in cooling mode. In heating mode is must be isolated.



Water temperature produced by the desuperheater Δt 5 K

15.2. PRESSURE DROP

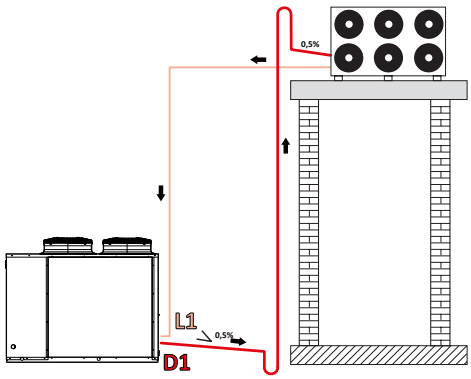


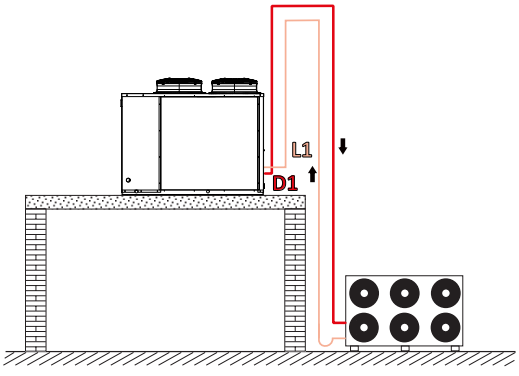
Water flow rate l/h

Average water temperature °C	30	40	50	60	70
Correction coefficient	1,04	1,02	**1,00**	0,98	0,96

16. REFRIGERANT PIPING

REFRIGERANT PIPING				
Model	Piping length [m]	Gas line Ø [mm]	Liquid line Ø [mm]	R410A [g/m]
ECL 020 C	0-10	12,7	9,52	70
	10-20	12,7	9,52	70
	20-30	12,7	9,52	70
ECL 025 C	0-10	12,7	9,52	70
	10-20	12,7	9,52	70
	20-30	12,7	9,52	70
ECL 030 C	0-10	12,7	12,7	120
	10-20	12,7	12,7	120
	20-30	15,88	12,7	130
ECL 040 C	0-10	12,7	12,7	120
	10-20	15,88	12,7	130
	20-30	15,88	12,7	130
ECL 050 C	0-10	15,88	15,88	190
	10-20	15,88	15,88	190
	20-30	18	15,88	190
ECL 070 C	0-10	15,88	15,88	190
	10-20	18	15,88	190
	20-30	18	15,88	190
ECL 080 C	0-10	15,88	15,88	190
	10-20	18	15,88	190
	20-30	22	15,88	210
ECL 090 C	0-10	18	15,88	190
	10-20	22	15,88	210
	20-30	22	15,88	210
ECL 102 C	0-10	28,00	15,88	230
	10-20	28,00	15,88	230
	20-30	28,00	15,88	230
ECL 152 C	0-10	28,00	15,88	230
	10-20	28,00	15,88	230
	20-30	28,00	15,88	230
ECL 202 C	0-10	35,00	15,88	260
	10-20	35,00	18,00	310
	20-30	35,00	18,00	310





17. SOUND DATA

Sound power
AIREDALE determines the value of sound power on the basis of measurements made in accordance with ISO 9614-2, as required for Eurovent certification.

Sound pressure
Sound pressure in free field conditions over a reflective plane (directivity factor Q=2) in accordance with ISO 3744.

COOLING

Evaporator outlet water temperature	7°C
Evaporator inlet water temperature	12°C
External air temperature	35 °C

ECL/ ECLH	Total sound levels			Octave band [Hz]						
	Power dB(A)	Pressure		125	250	500	1000	2000	4000	8000
		dB(A) 10 m	dB(A) 1 m	Sound power by centre octave band [dB] (A)						
020	**61,0**	**30,0**	**46,8**	70,0	64,1	59,1	52,7	46,7	41,0	35,7
025	**61,0**	**30,0**	**46,8**	70,0	64,1	59,1	52,7	46,7	41,0	35,7
030	**68,0**	**37,0**	**53,6**	75,4	69,6	64,0	63,5	56,7	51,2	44,6
040	**68,0**	**37,0**	**53,6**	75,4	69,6	64,0	63,5	56,7	51,2	44,6
050	**69,0**	**38,0**	**53,9**	76,5	69,2	64,8	64,6	58,9	53,7	46,1
070	**69,0**	**38,0**	**54,0**	76,5	69,2	64,8	64,6	58,9	53,7	46,1
080	**69,0**	**38,0**	**54,0**	73,8	69,4	65,8	64,1	59,5	56,5	51,0
090	**68,0**	**37,0**	**53,0**	74,0	68,5	64,5	62,2	59,3	56,4	48,1
102	**76,0**	**44,0**	**60,0**	61,2	66,0	71,4	72,0	68,9	60,5	48,6
152	**77,0**	**45,0**	**61,0**	62,4	67,3	72,2	72,7	69,7	61,5	49,6
202	**78,0**	**46,0**	**62,0**	63,6	68,4	73,4	73,5	70,5	62,5	50,6

18. CONTROL AND SAFETY PARAMETER SETTINGS

COOLING SETPOINT	min	max	default
Water inlet temperature (cooling mode)	-6 °C	18 °C	7° C

HEATING SETPOINT			
Water inlet temperature (heating mode)	35 °C	55 °C	48 °C

ANTI-FREEZE ALARM SETTING			
EVAPORATOR side temperature setting	-9 °C	4 °C	3 °C

TOTAL DIFFERENTIAL			
Proportional temperature band within which compressors are enabled and disabled	3 °C	10 °C	5 °C

			020	025	030	040	050	070	080	090	102	152	202
VERSIONS COOLING ONLY													
FAN CIRCUIT BREAKERS													
MTV1	A		2	2	2	2	2	2	2	2	2	2	2
MTV2	A		-	-	-	-	2	2	2	2	2	2	2
COMPRESSOR CIRCUIT BREAKERS													
MTC1	A	230V	16	16	20	25	-	-	-	-	-	-	-
	A	400V/3N	2,2	2,2	6	8	10	13	15	16	10	12,5	15
MTC2	A	400V/3N	-	-	-	-	-	-	-	-	10	12,5	15
HIGH PRESSURE PRESSOSTAT													
PA	bar				42	42	42	42	42	42	42	42	42
HIGH PRESSURE TRANSDUCER													
TAP	bar				39	39	39	39	39	39	39	39	39
LOW PRESSURE TRANSDUCER													
TBP	bar				4	4	4	4	4	4	4	4	4

VERSIONS HEAT PUMP													
FAN CIRCUIT BREAKERS													
MTV1	A		2	2	2	2	2	2	2	2	2	2	2
MTV2	A		-	-	-	-	2	2	2	2	2	2	2
COMPRESSOR CIRCUIT BREAKERS													
MTC1	A	230V	16	16	20	25	-	-	-	-	-	-	-
	A	400V/3N	2,2	2,2	6	8	10	13	15	16	10	12,5	15
MTC2	A	400V/3N	-	-	-	-	-	-	-	-	10	12,5	15
HIGH PRESSURE PRESSOSTAT													
PA	bar		42	42	42	42	42	42	42	42	42	42	42
LOW PRESSURE PRESSOSTAT													
PA	bar	**vers."°"**	2	2	2	2	2	2	2	2	2	2	2
LOW PRESSURE TRANSDUCER													
TAP	bar	**vers."°"**	4	4	4	4	4	4	4	4	4	4	4
TAP	bar	**vers."H"**	2	2	2	2	2	2	2	2	2	2	2
HIGH PRESSURE TRANSDUCER													
TBP	bar		40	40	40	40	40	40	40	40	40	40	40

Standards applied in the DESIGN and MANUFACTURE of the unit:

SAFETY

1. Machinery directive 2006/42/CE
2. Low voltage directive LVD 2006/95/CE
3. Electromagnetic compatibility directive EMC 2004/108/CE
4. Pressure vessel directive PED 97/23/CE, EN 378,
5. UNI12735, UNI14276

ELECTRICAL

1. IEC EN 60335-2-40,
2. IEC EN 61000-6-1/2/3/4

ACOUSTICAL

1. ISO DIS 9614/2 (intensity method)

PROTECTIVE RATING

IP24

CERTIFICATION

EUROVENT
UNI EN 14511:2011

REFRIGERANT

This unit contains fluoride gases with greenhouse effect covered by the Kyoto Protocol. Maintenance and disposal must only be carried out by qualified staff, in accordance with local regulations

WARNING

1. The refrigerant circuit is under pressure. Additionally, high temperatures can be generated. The unit can only be worked on by a TAS technical assistance operative or a qualified technician. Interventions on the refrigerant circuit can only be carried out by a qualified refrigeration technician.

2. **GAS R410A**
   The units are delivered with their operating charges of refrigerant R410A. This is a refrigerant without chlorine which does not damage the ozone layer. R410A is not flammable. All maintenance procedures must be carried out by a qualified technician with the appropriate safety equipment.

3. **Danger of electrical shock!**
   Completely disconnect the unit from the power supply before starting procedures.

19. GENERAL INSTRUCTIONS FOR THE INSTALLER

The AIREDALE ECL units are manufactured in accordance with recognised technical and safety standards. They are designed for air conditioning and production of domestic hot water (DHW) and must be used in a manner compatible with their performance characteristics. All contractual and extra-contractual liabilities causing damage to persons, animals or objects or through errors of installation, control or maintenance or from improper use are excluded by the Company. Any uses not expressly indicated in this manual are not permitted.

19.1. CONSERVATION OF DOCUMENTATION

1. Submit the manual with all supplementary documentation to the system user who will be responsible for the conservation of documents so that they can be available when needed.
2. Read this manual fully: all works must be carried out by qualified personnel, in accordance with any applicable current local regulations.
3. The unit must be installed in a manner to render possible maintenance and/or repair operations.
4. The equipment warranty does not cover any costs associated with lifting or access equipment necessary for warranty procedures.
5. Do not modify or tamper with the equipment as this could result in accidents for which the manufacturer will not be held responsible. The warranty will be voided if the above mentioned warnings are not respected.

19.2. SAFETY INSTRUCTIONS AND INSTALLATION STANDARDS

1. The equipment must be installed by a competent and qualified technician, in compliance with the applicable national legislation of the country of destination. AIREDALE assumes no responsibility for any losses incurred by not observing these instructions.
2. Before commencing any works it is necessary to **CAREFULLY READ THE INSTRUCTIONS AND MINIMISE ANY RISKS BY TAKING APPROPRIATE SAFETY PRECAUTIONS**. All relevant personnel must be made aware of the procedures and possible risks that may arise at the time of installation of the unit.

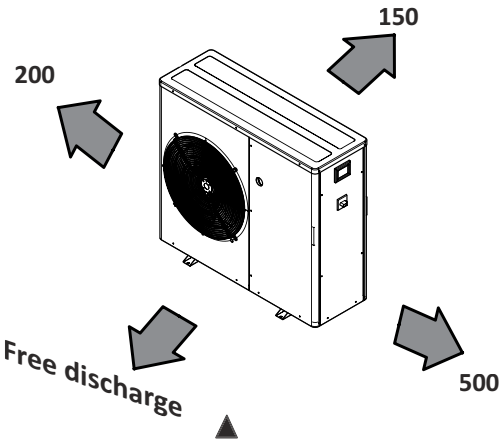
20. SELECTION AND POSITION OF INSTALLATION

Before proceeding with the installation of the equipment agree the location with the client, taking into account the following points:

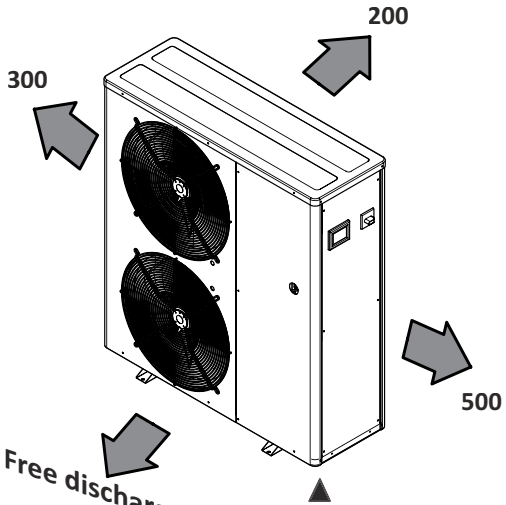
1. The base must be able to support the weight of the unit.
2. The safe distances between the unit and other equipment or structures must be strictly respected to ensure the intake and outlet air is free to circulate.
3. The equipment must be installed by a competent and qualified technician, in compliance with the applicable national legislation of the country of destination, respecting the required minimum maintenance access spaces.

20.2.1. POSITIONING

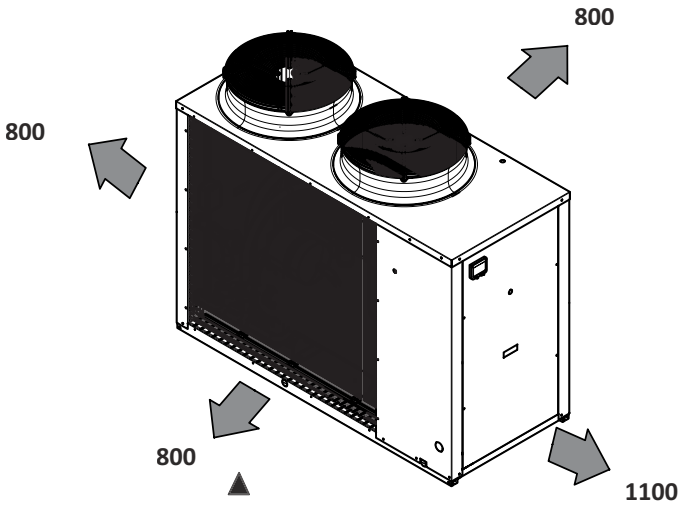
Before lifting the unit verify the lifting capability of the equipment being used, taking into account the information provided with the packaging.
To move units (ECL 020-090) over horizontal planes use forklifts or similar in the most appropriate manner taking into account the weight distribution of the unit.
When lifting (ECL 102-202) insert through the unit's base holes lifting bars (NOT PROVIDED) of sufficient length to locate the lifting chains and safety lugs.
Position the unit in the place indicated by the client, inserting between the unit's base and the base support a rubber pad (minimum 10 mm thick) or feet anti-vibration mounts (ACCESSORY). For further information refer to the dimensional tables.
Secure the unit and ensure it is level; check that sufficient access is provided for hydraulic and electrical connections.
In the case of installation where gusts of wind may occur adequately secure the unit using appropriate ties.
Ensure the installation of the condensate drain tray on units that require it (as ACCESSORY).



ECL 020 - 025 - 030 - 040



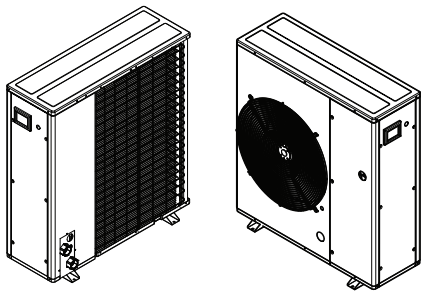
ECL 050 - 080 - 090



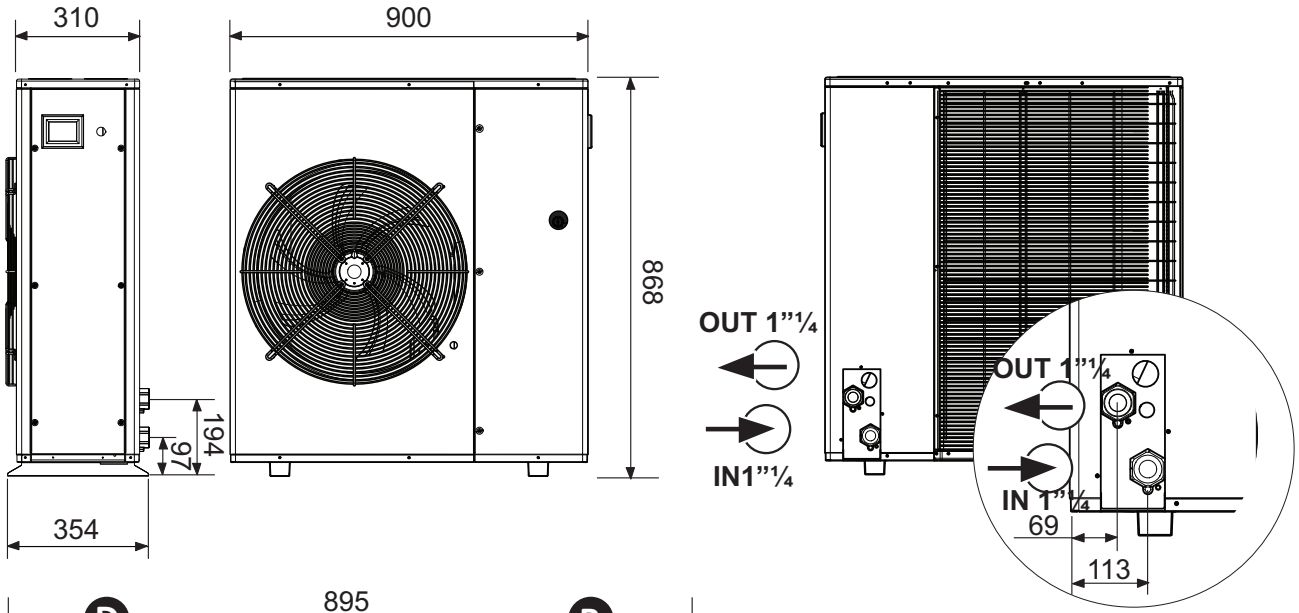
ECL 102 - 152 - 202

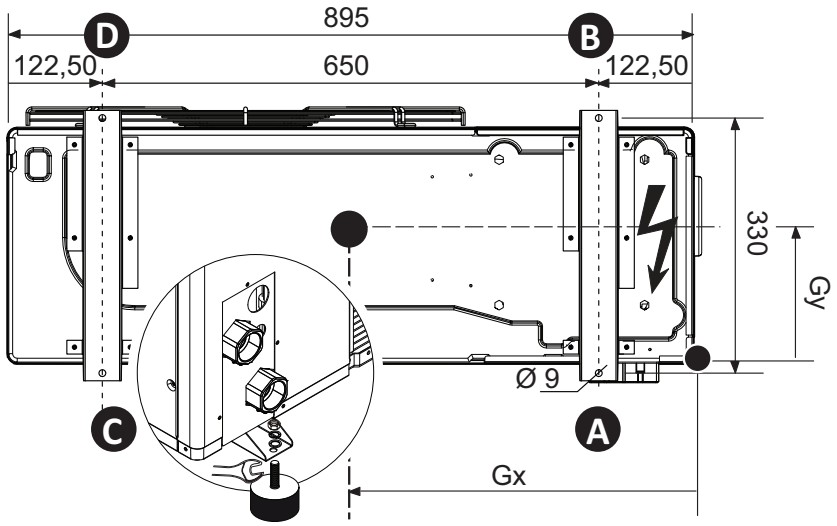
21. DIMENSIONS

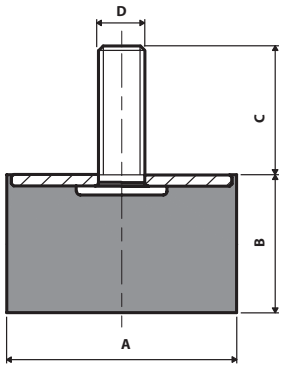
21.1. ECL 020 ÷ 025 version °|P|H|HP



ECL	MOD.	VERS.	WEIGHTS	C. OF G.		A	B	C	D	KIT
				Gy	Gx	%	%	%	%	VT
020	°/H	°	75	174	325	32,1%	31,8%	18,2%	18,0%	9
020	°/H	P	77	177	326	31,6%	32,2%	17,9%	18,3%	9
025	°/H	°	75	174	325	32,1%	31,8%	18,2%	18,0%	9
025	°/H	P	77	177	326	31,6%	32,2%	17,9%	18,3%	9

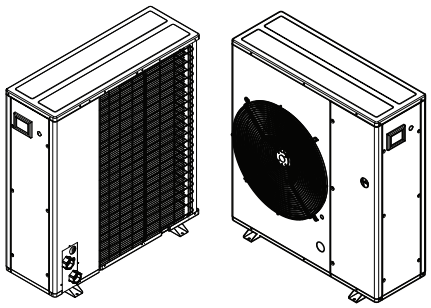




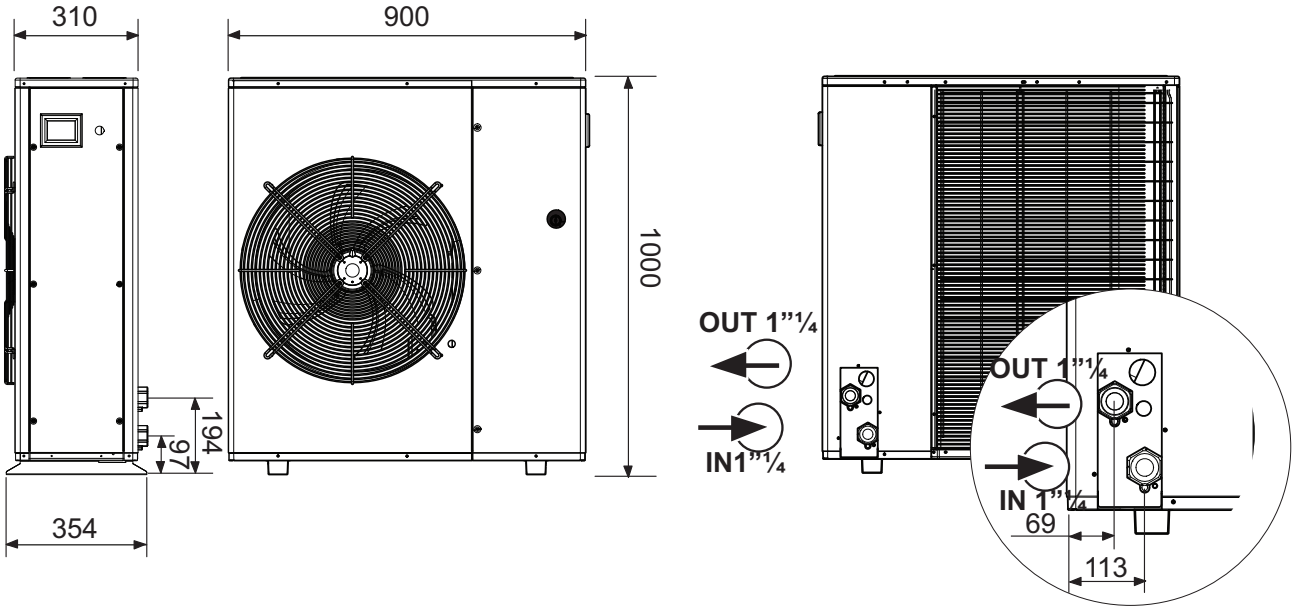


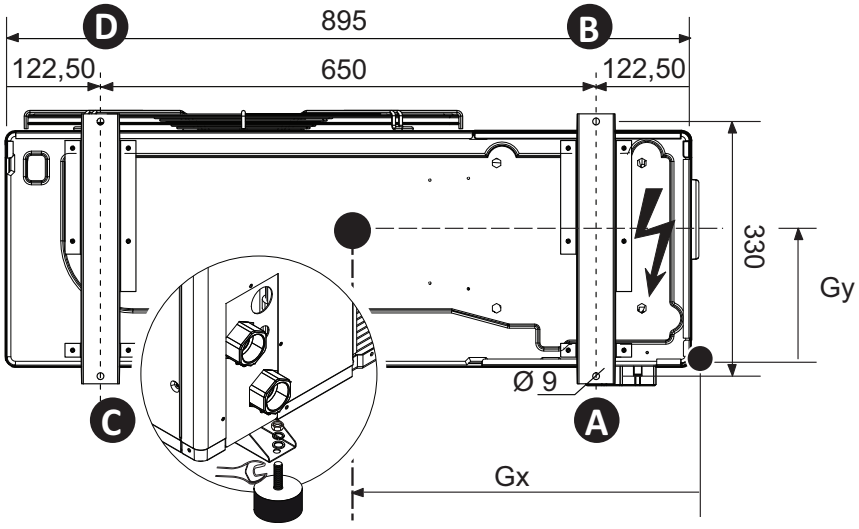
Mod.	A	B	C	D
VT9	40	30	23	M8

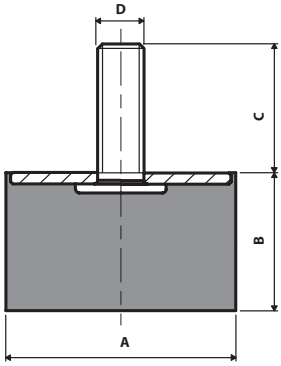
21.2. ECL 030 ÷ 040 version °|P|H|HP



ECL	MOD.	VERS.	WEIGHTS	C. OF G.		A	B	C	D	KIT
				Gy	Gx	%	%	%	%	VT
030	°/H	°	86	183	336	30%	33%	18%	19%	9
030	°/H	P	91	180	327	31%	33%	18%	19%	9
040	°/H	°	86	183	336	30%	33%	18%	19%	9
040	°/H	P	91	180	327	31%	33%	18%	19%	9

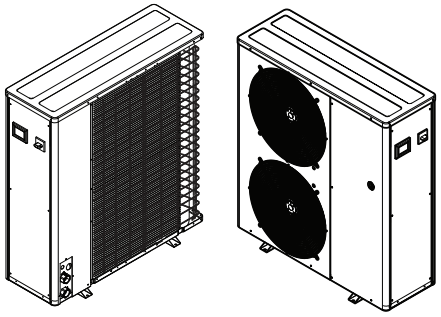




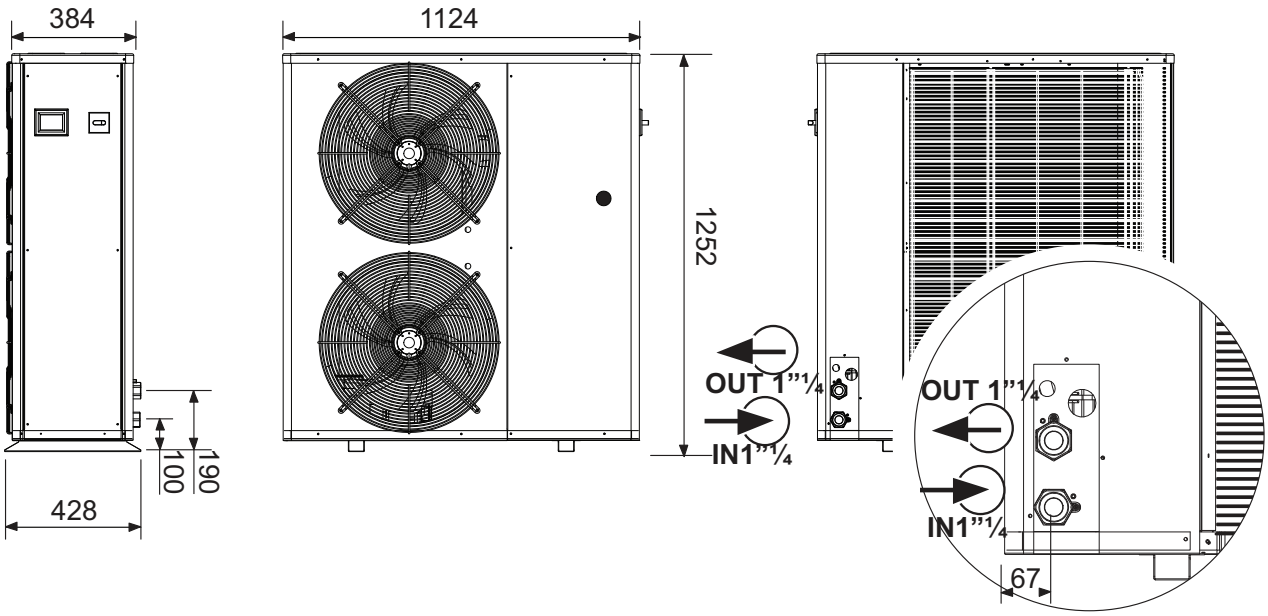


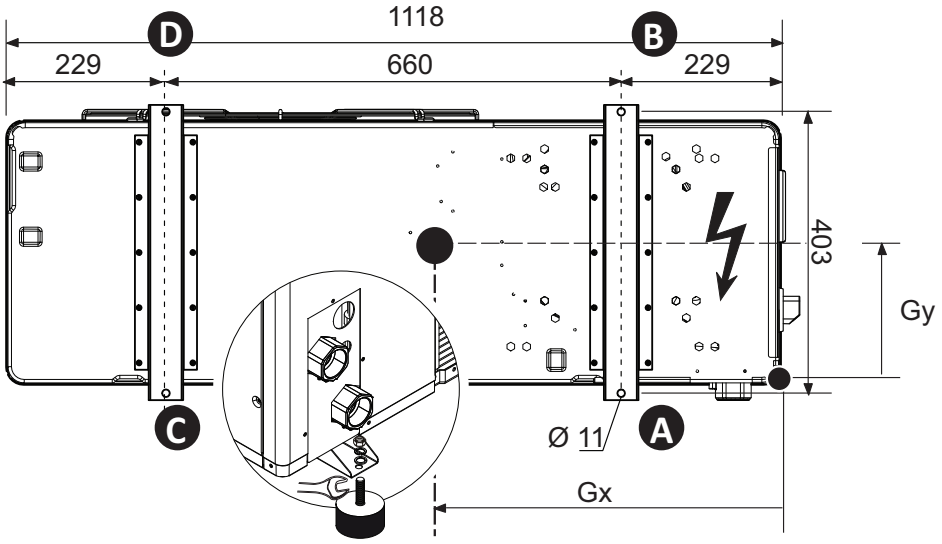
Mod.	A	B	C	D
VT9	40	30	23	M8

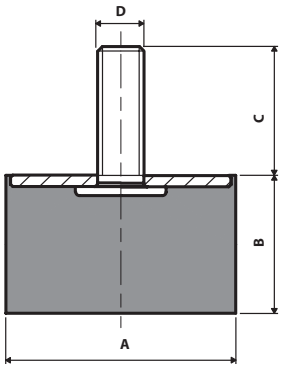
21.3. ECL 050 ÷ 090 version °|P|H|HP



ECL	MOD.	VERS.	WEIGHTS	C. OF G.		A	B	C	D	KIT
				Gy	Gx	%	%	%	%	VT
50	°/H	°	120	213	447	30,3%	29,8%	20,1%	19,8%	9
50	°/H	P	127	212	436	31,0%	30,1%	19,8%	19,2%	9
70	°/H	°	120	213	447	30,3%	29,8%	20,1%	19,8%	9
70	°/H	P	127	212	436	31,0%	30,1%	19,8%	19,2%	9
80	°/H	°	156	217	453	30,3%	29,8%	20,1%	19,8%	9
80	°/H	P	163	216	444	31,0%	30,1%	19,8%	19,2%	9
90	°/H	°	156	217	453	29,5%	30,1%	20,0%	20,4%	9
90	°/H	P	163	216	444	30,0%	30,3%	19,8%	19,9%	9

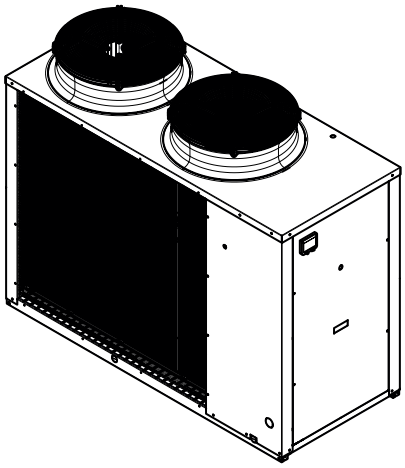




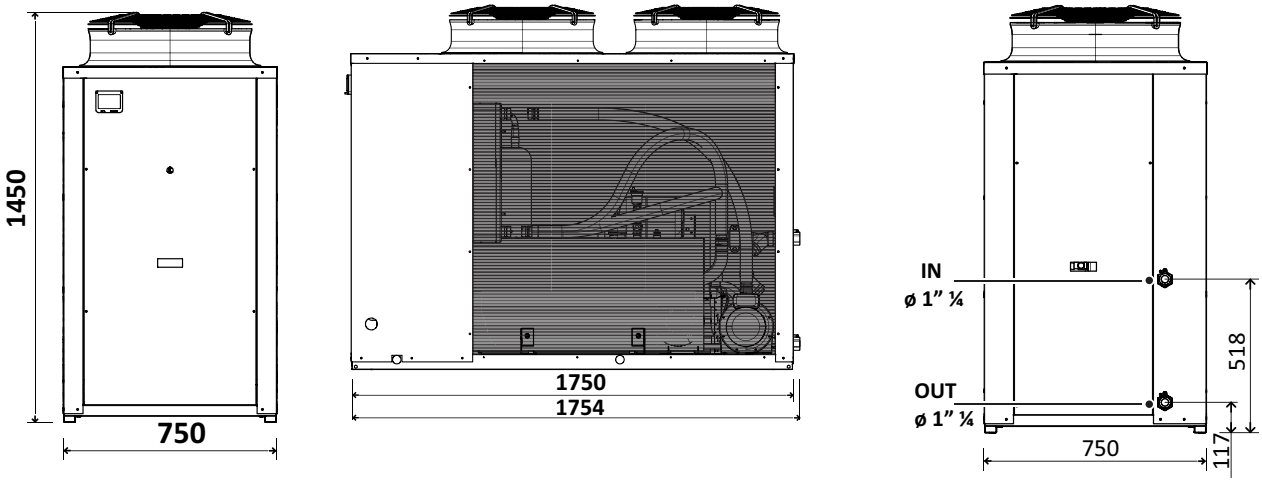


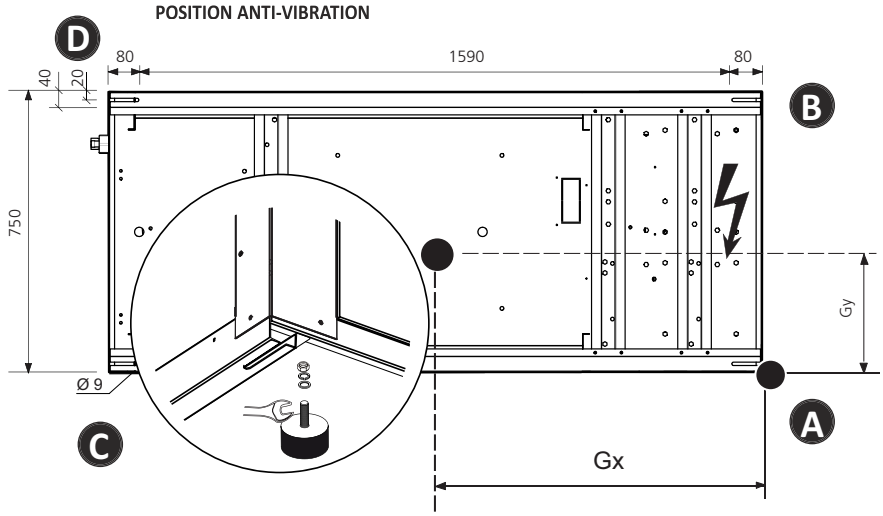
Mod.	A	B	C	D
VT9	40	30	23	M8

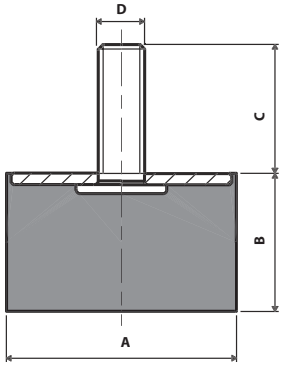
21.4. ECL 102 ÷ 202 version °|P|A|N|Q / H|HP|HA|HN|HQ



ECL	VERS.	WEIGHTS	C. OF G.		A	B	C	D	KIT
			Gy	Gx	%	%	%	%	VT
ECL102	°	270	381	620	31,7%	32,8%	17,4%	18,0%	15
	P	288	382	659	30,6%	31,7%	18,5%	19,1%	15
	A	338	382	659	29,5%	30,4%	19,8%	20,4%	15
ECL102H	°	295	381	604	32,2%	33,3%	17,0%	17,5%	15
	P	313	381	640	31,2%	32,2%	18,0%	18,6%	15
	A	363	381	640	30,1%	30,9%	19,2%	19,8%	15
ECL152	°	293	383	650	30,8%	32,1%	18,2%	18,9%	15
	P	314	383	693	29,6%	30,8%	19,4%	20,2%	15
	A	364	383	693	28,7%	29,7%	20,4%	21,2%	15
ECL152H	°	322	382	630	31,4%	32,6%	17,7%	18,3%	15
	P	343	382	671	30,3%	31,4%	18,8%	19,5%	15
	A	393	382	671	29,3%	30,3%	19,9%	20,5%	15
ECL 202	°	329	383	600	32,1%	33,6%	16,8%	17,5%	15
	P	350	383	641	31,0%	32,4%	17,9%	18,7%	15
	A	400	383	641	30,0%	31,2%	19,1%	19,8%	15
ECL 202H	°	358	383	586	32,6%	33,9%	16,4%	17,1%	15
	P	379	383	626	31,5%	32,8%	17,5%	18,2%	15
	A	429	383	626	30,5%	31,6%	18,6%	19,3%	15

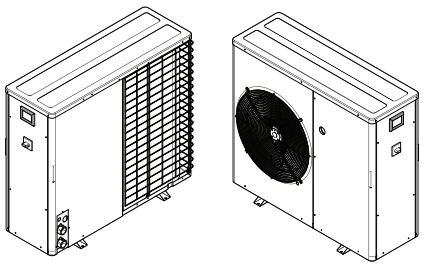




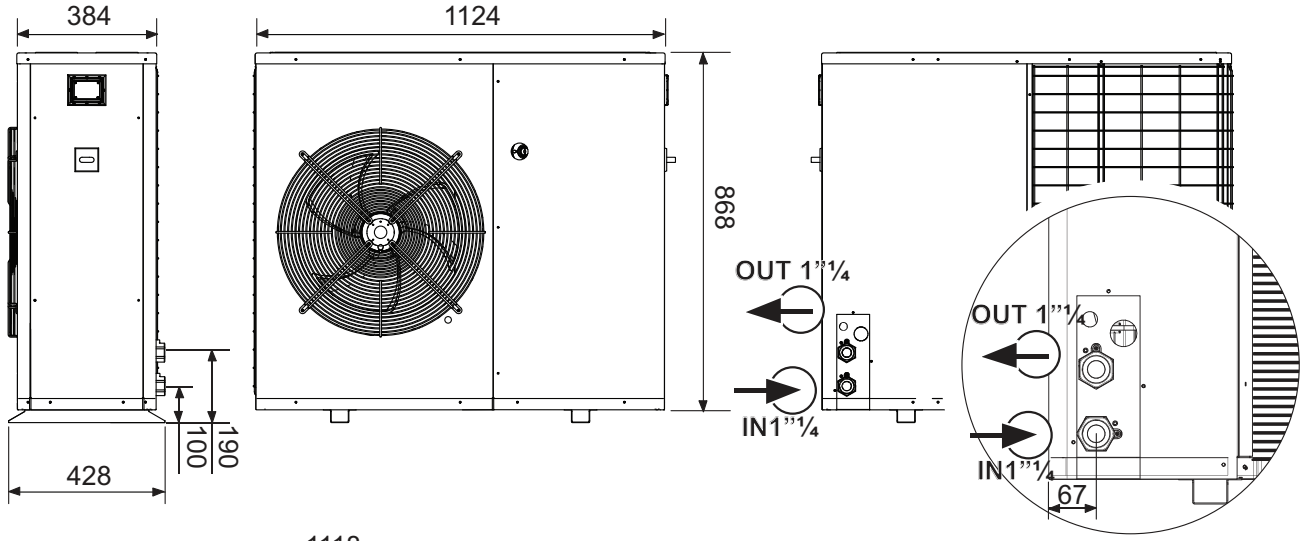


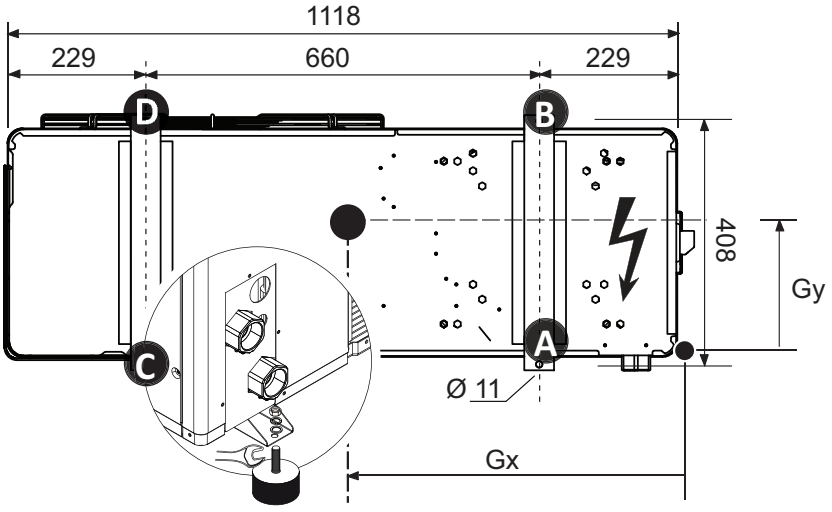
Mod.	A	B	C	D
VT15	50	30	28,5	M10

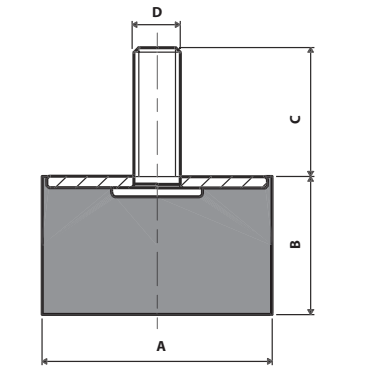
21.5. ECL 020 ÷ 025 version °A|HA



ECL	MOD.	VERS.	WEIGHTS	C. OF G.		A	B	C	D	KIT
				Gy	Gx	%	%	%	%	VT
020	°/H	A	99	177	326	35,6%	31,5%	17,4%	15,5%	9
025	°/H	A	77	177	326	31,6%	32,2%	17,9%	18,3%	9

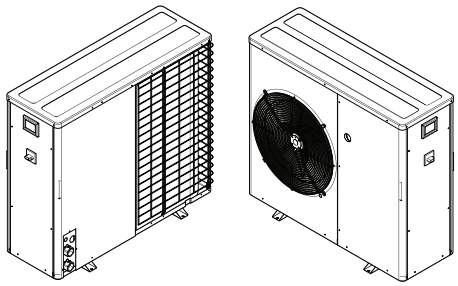




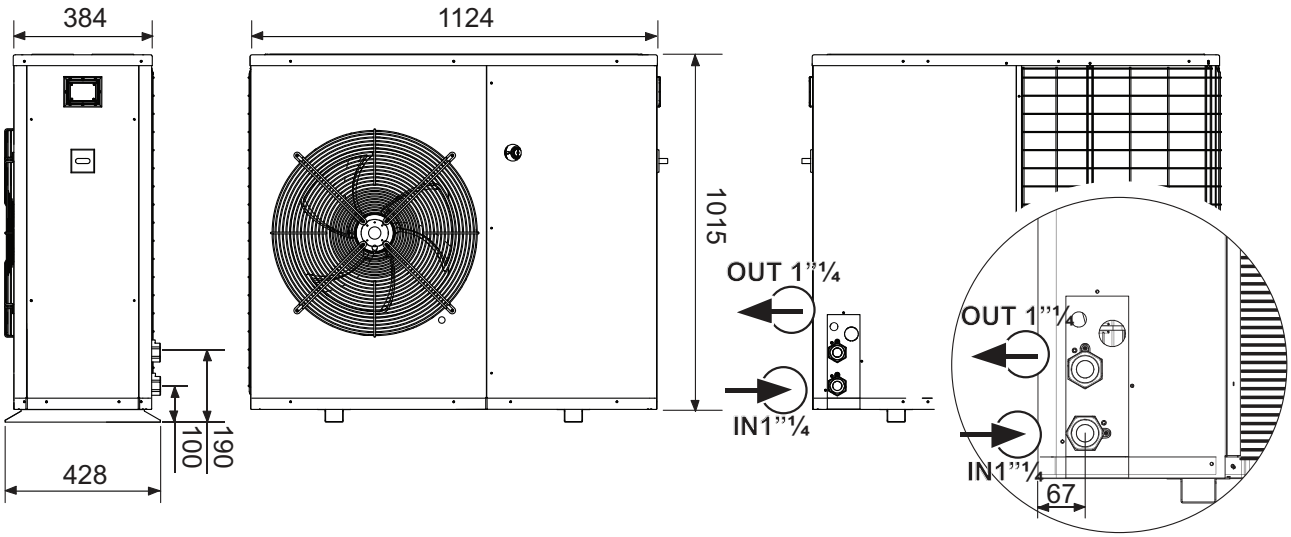


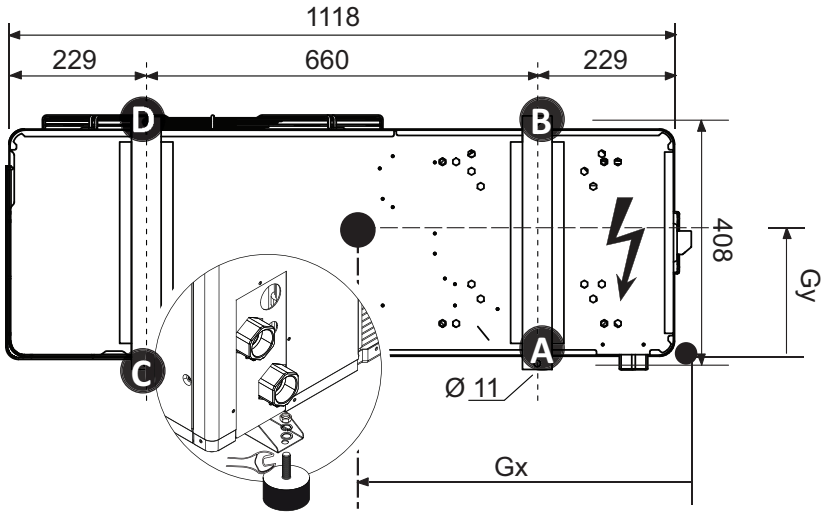
Mod.	A	B	C	D
VT9	40	30	23	M8

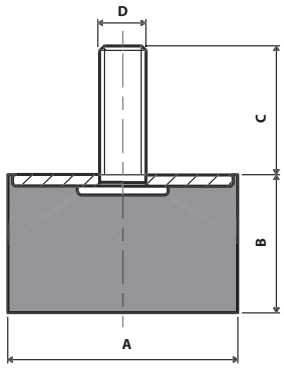
21.6. ECL 030 ÷ 040 version °A|HA



ECL	MOD.	VERS.	WEIGHTS	C. OF G.		A	B	C	D	KIT
				Gy	Gx	%	%	%	%	VT
030	°/H	A	103	180	327	39%	32%	16%	13%	9
040	°/H	A	103	180	327	39%	32%	16%	13%	9

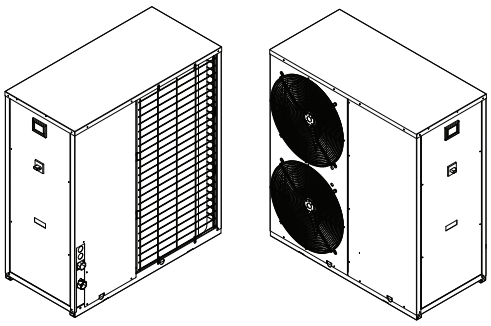




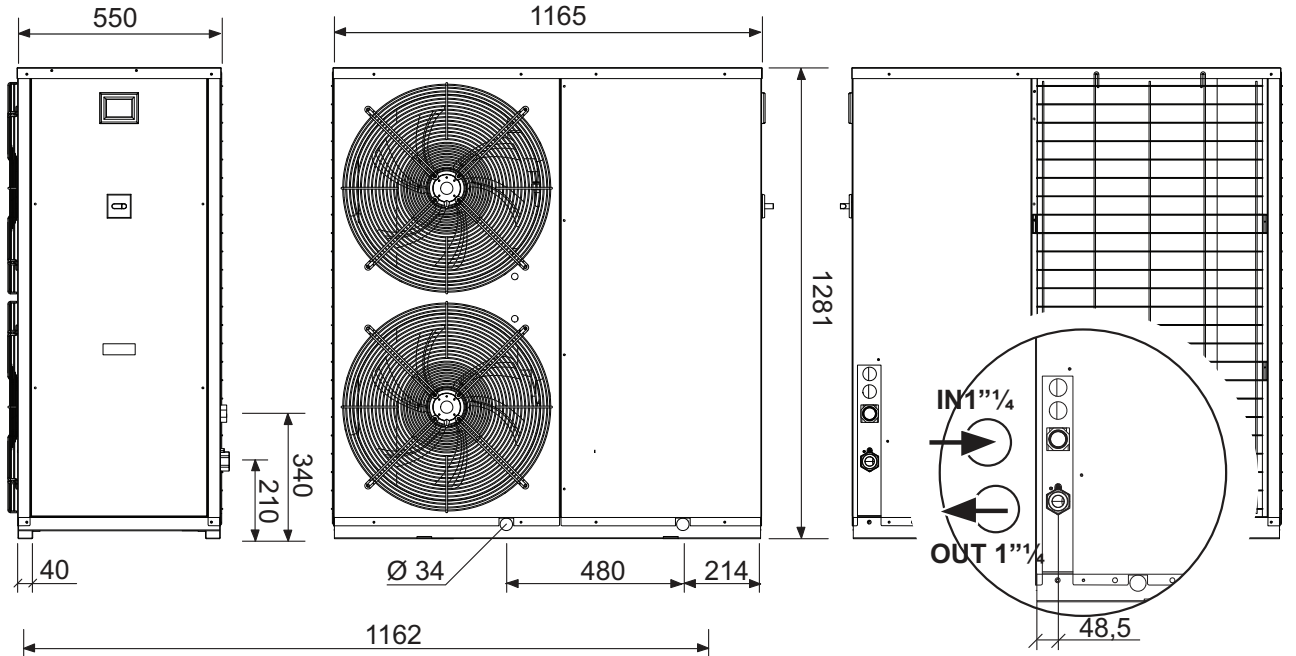


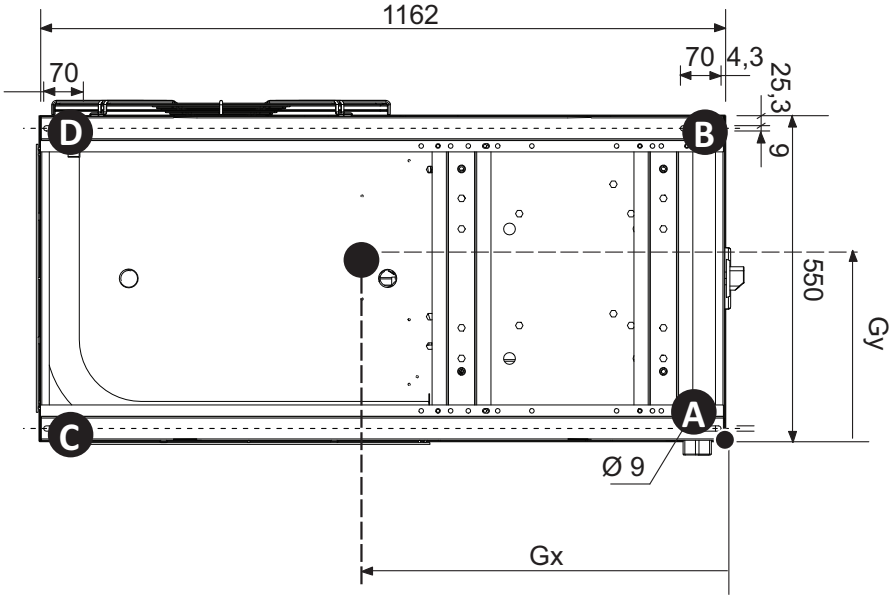
Mod.	A	B	C	D
VT9	40	30	23	M8

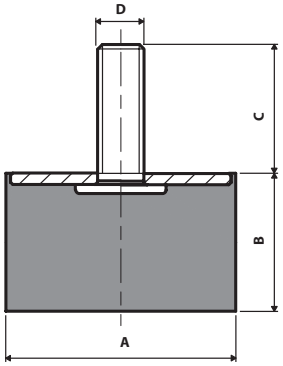
21.7. ECL 050 ÷ 090 version °A|°Q |HA |HQ



ECL	MOD.	VERS.	WEIGHTS	C. OF G.		A	B	C	D	KIT
				Gy	Gx	%	%	%	%	VT
50	°/H	A	147	212	436	32,2%	31,3%	18,5%	18,0%	15
70	°/H	A	147	212	436	32,2%	31,3%	18,5%	18,0%	15
80	°/H	A	147	212	436	32,2%	31,3%	18,5%	18,0%	15
90	°/H	A	183	216	444	31,1%	31,3%	18,8%	18,9%	15

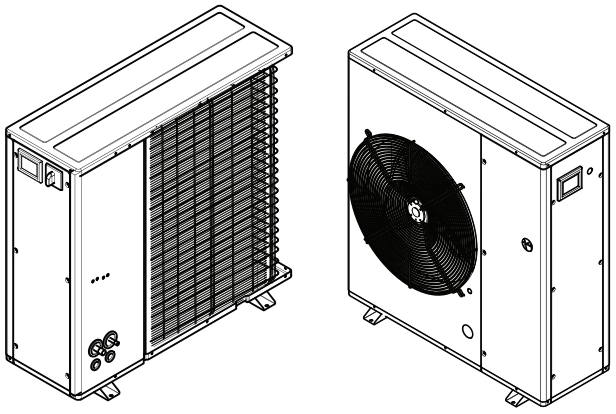




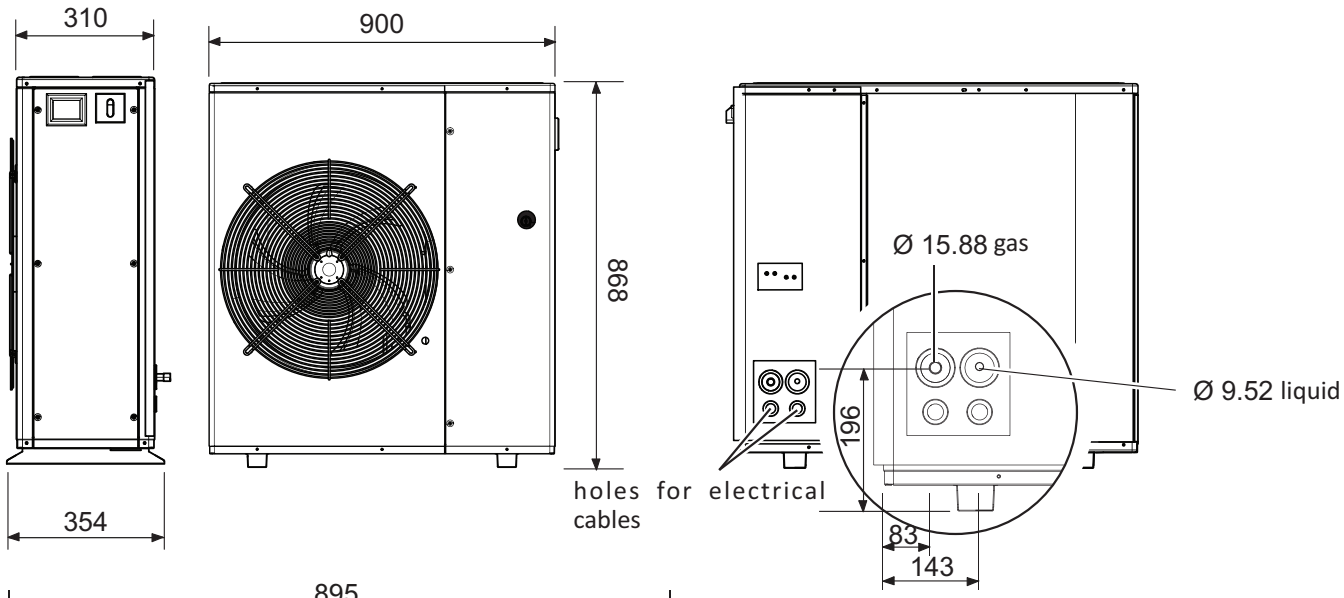


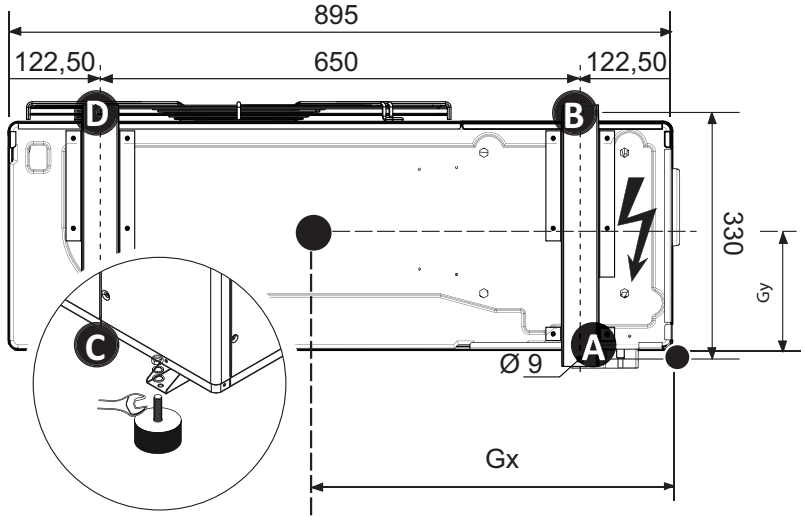
Mod.	A	B	C	D
VT15	50	30	28,5	M10

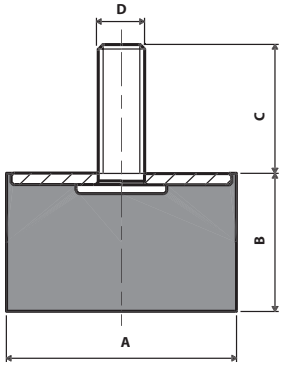
21.8. ECL 020 ÷ 025 version C



WARNING
For the weight distribution refer to versions "° | H"

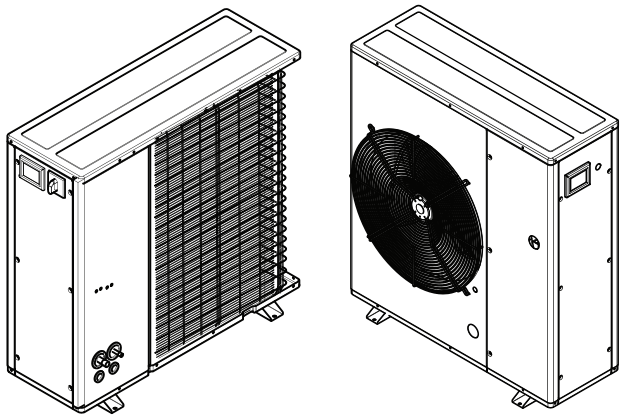




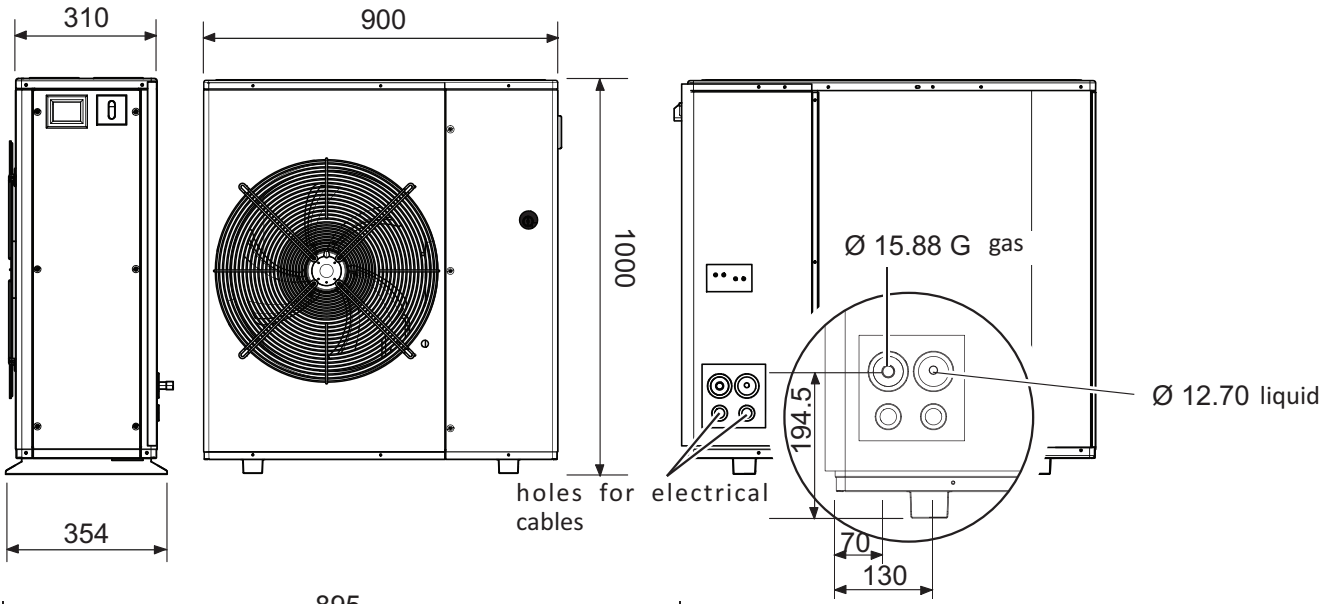


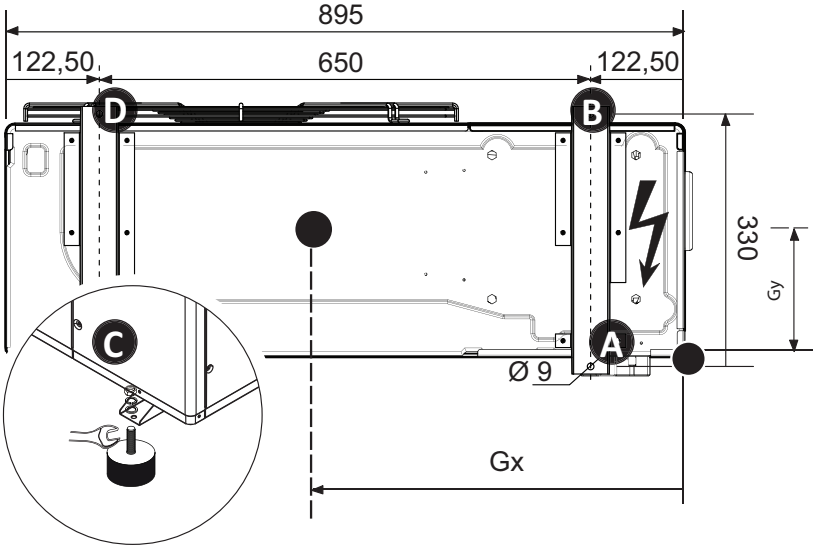
Mod.	A	B	C	D
VT9	40	30	23	M8

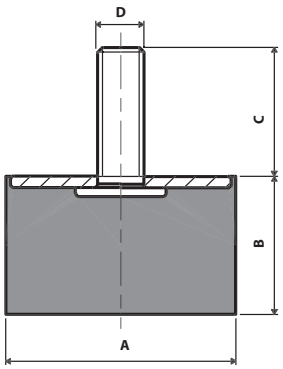
21.9. ECL 030 ÷ 040 version C



WARNING
For the weight distribution refer to versions "° | H"

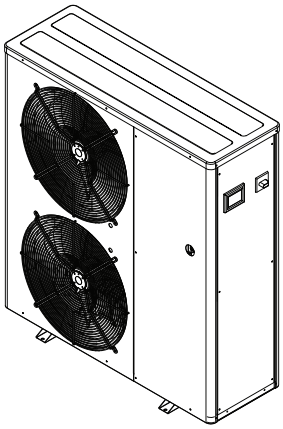


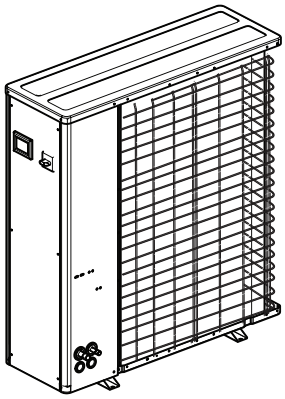




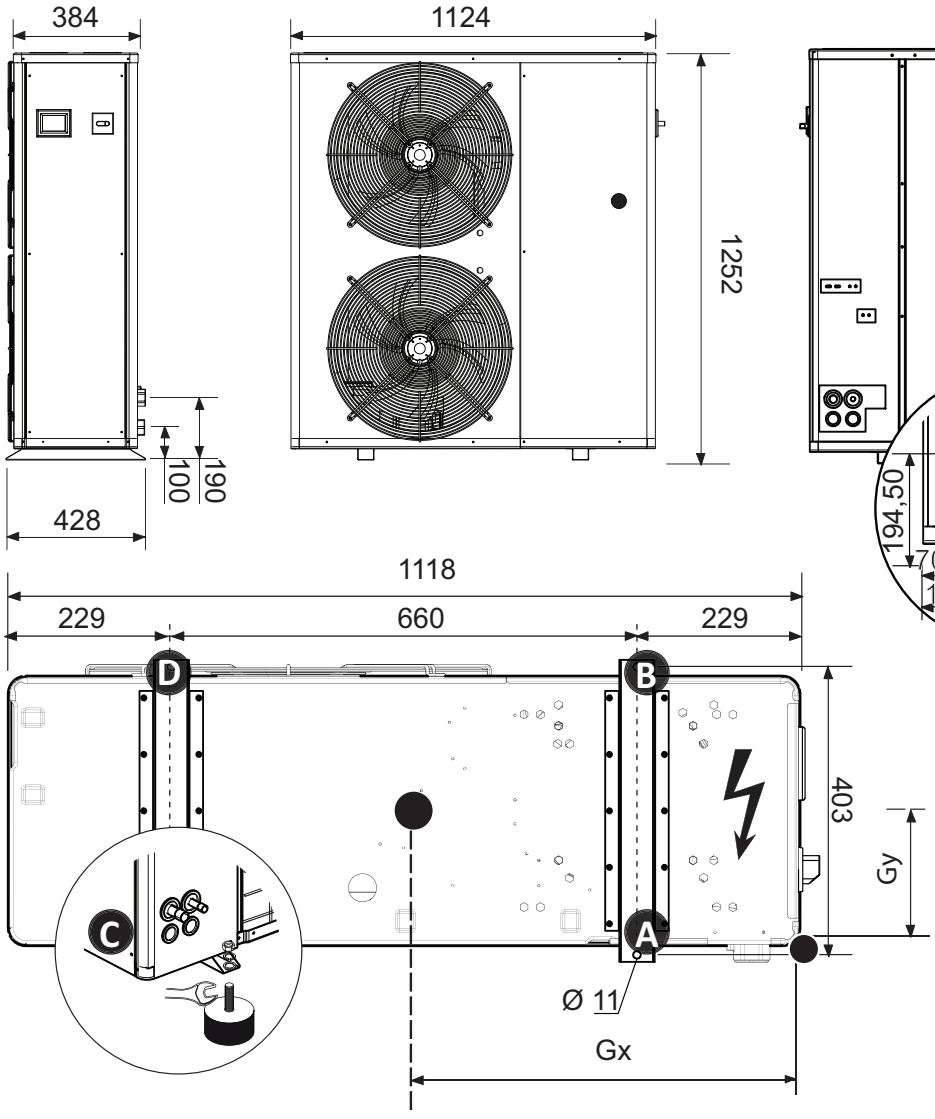
Mod.	A	B	C	D
VT9	40	30	23	M8

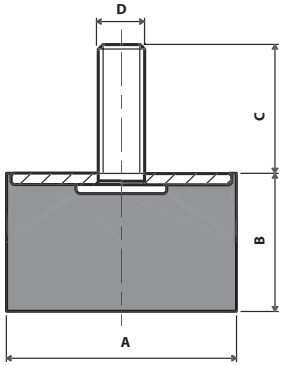
21.10. ECL 050 ÷ 090 version C





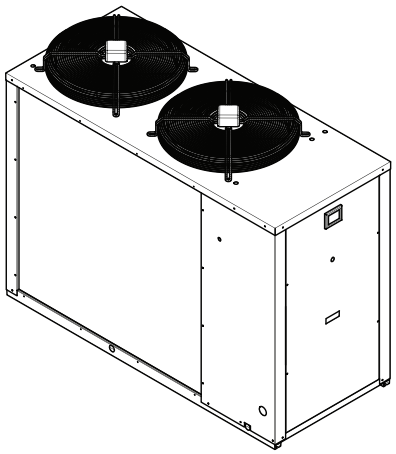
WARNING
For the weight distribution refer to versions "° | H"



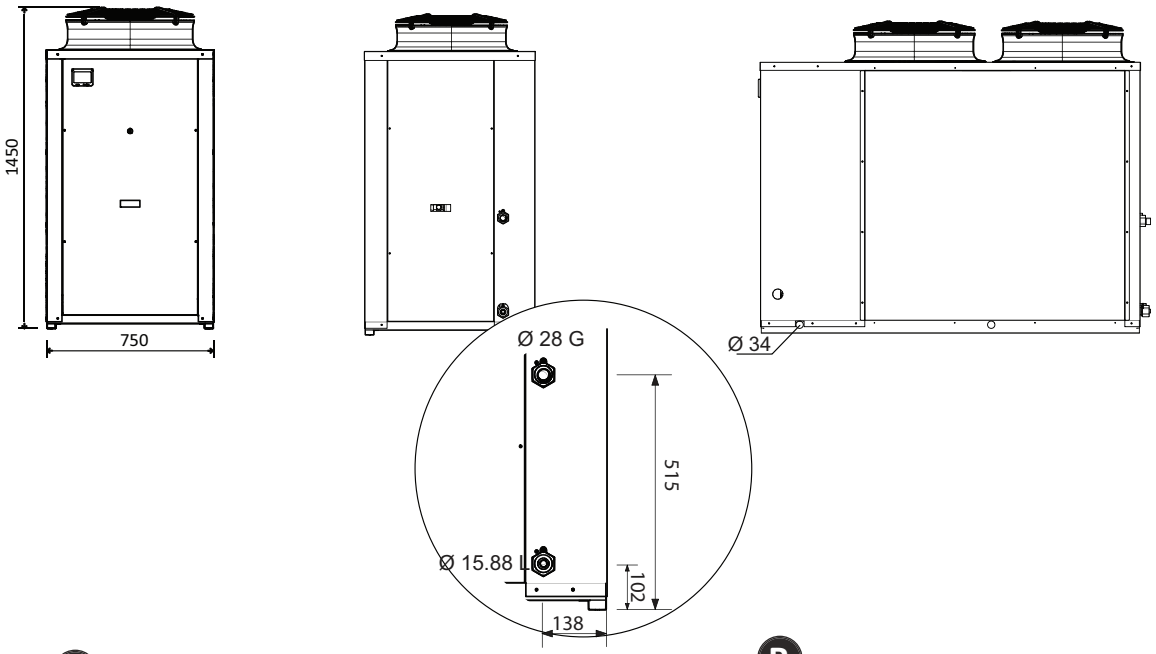


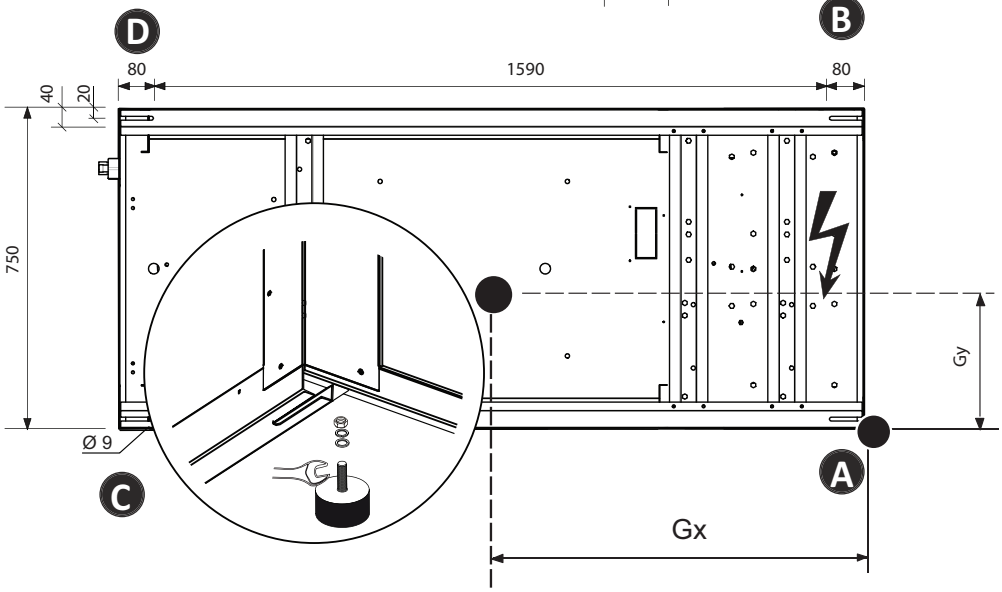
Mod.	A	B	C	D
VT9	40	30	23	M8

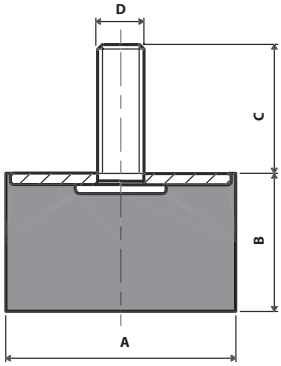
21.11. ECL 102 ÷ 202 version C



WARNING
For the weight distribution refer to versions "° | H"

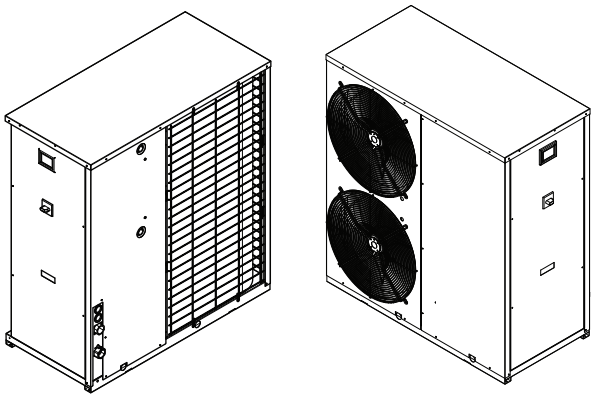


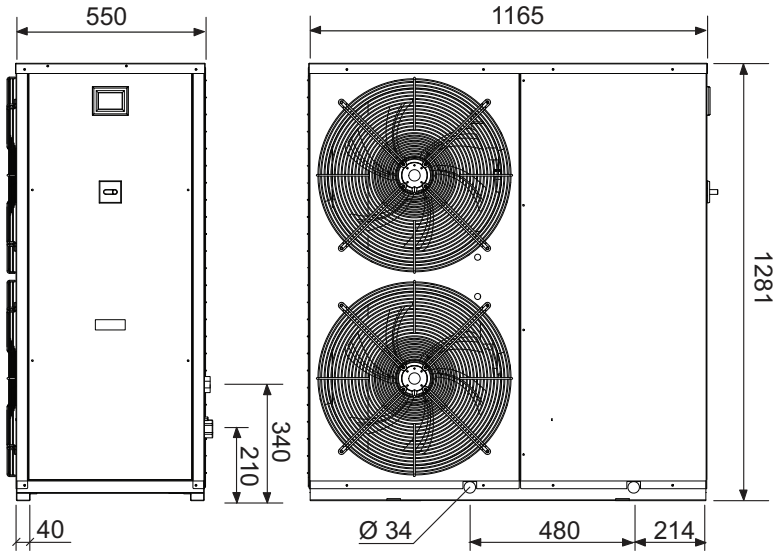


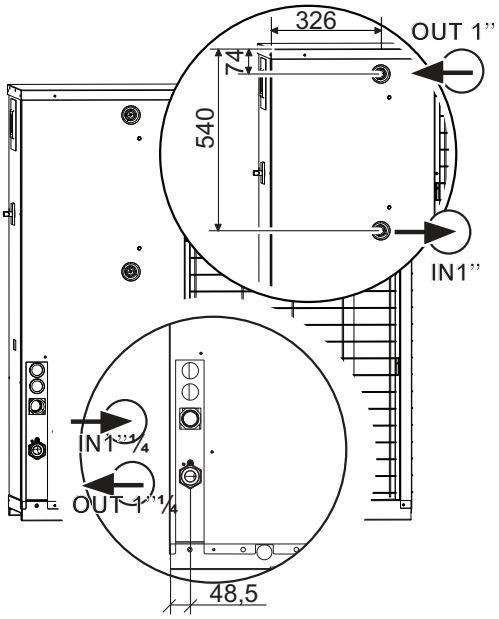


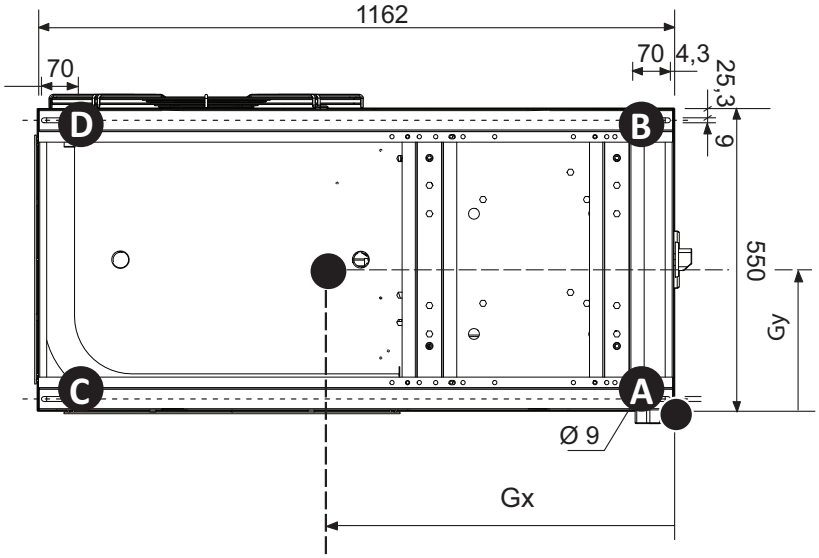
Mod.	A	B	C	D
VT15	50	30	28,5	M10

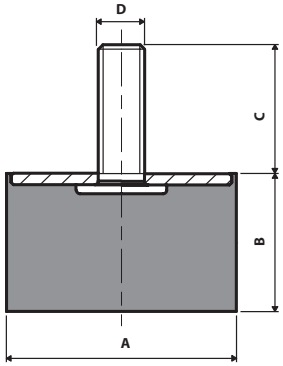
21.12. ECL 050 ÷ 090 version D|DA / HD|HDA





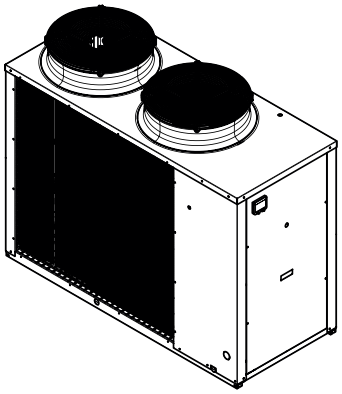


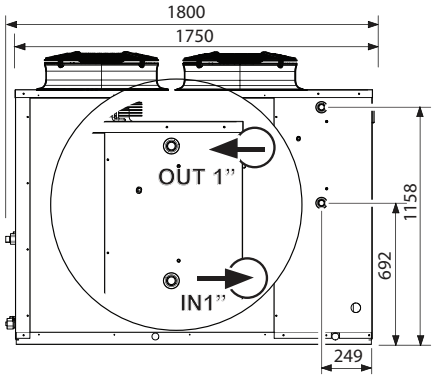




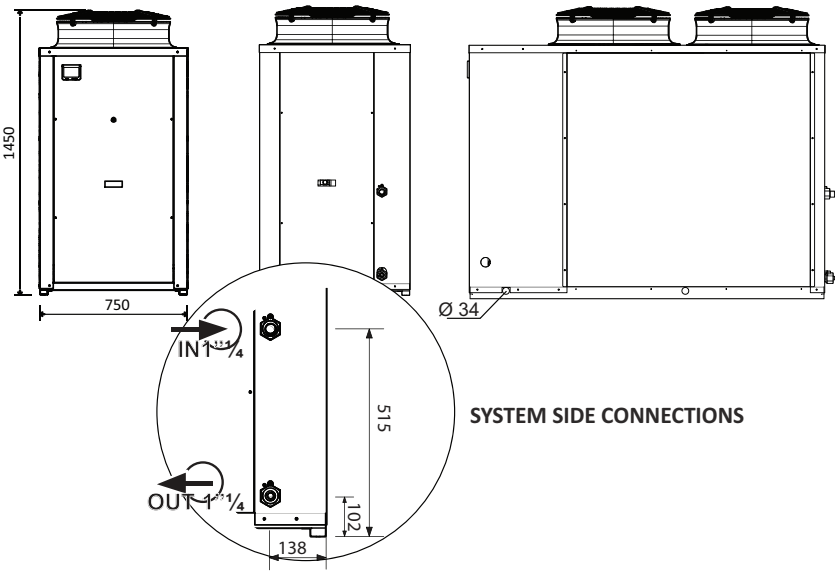
Mod.		A	B	C	D
VT9	D|HD	40	30	23	M8
VT15	DA|HDA	50	30	28,5	M10

21.13. ECL 102 ÷ 202 version D|DA / HD|HDA

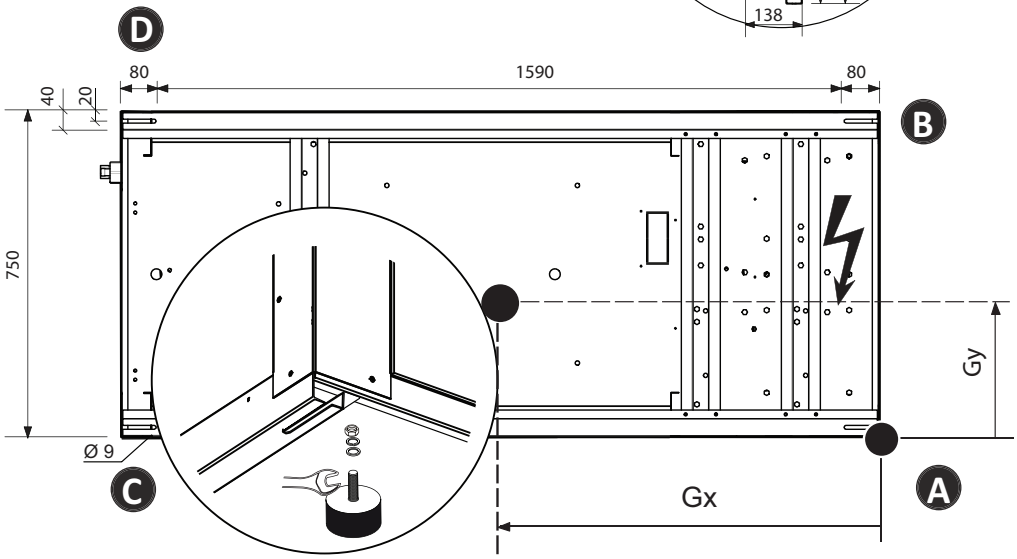


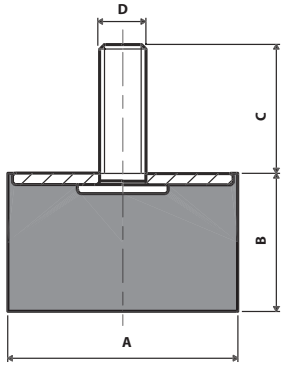


DESUPERHEATER CONNECTIONS



SYSTEM SIDE CONNECTIONS





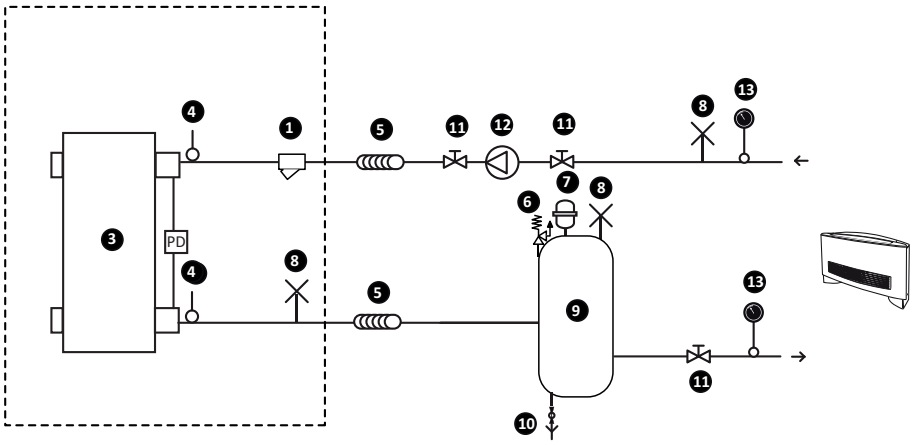
Mod.	A	B	C	D
VT15	50	30	28,5	M10

22. TYPICAL HYDRAULIC CIRCUITS

22.1. INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL "°" | "H" (standard)

HYDRAULIC COMPONENTS ECL

HYDRAULIC COMPONENTS RECOMMENDED EXTERNAL TO UNIT



	COMPONENTS PROVIDED AS STANDARD
1	Water filter
2	Differential pressure switch
3	Plate heat exchanger
4	Water temperature sensor (IN/OUT)
8	Air vent

	COMPONENTS NOT PROVIDED AND RESPONSIBILITY OF THE INSTALLER
5	Anti-vibration joints
6	Safety valve
7	Expansion tank
9	System buffer tank
10	Drain valve
11	Isolating valve
12	Pump
13	Gauge

WARNING
The selection and installation of components external to the ECL °|H unit are the responsibility of the installer and must be carried out in accordance with good working practices and applicable standards of the country of destination.

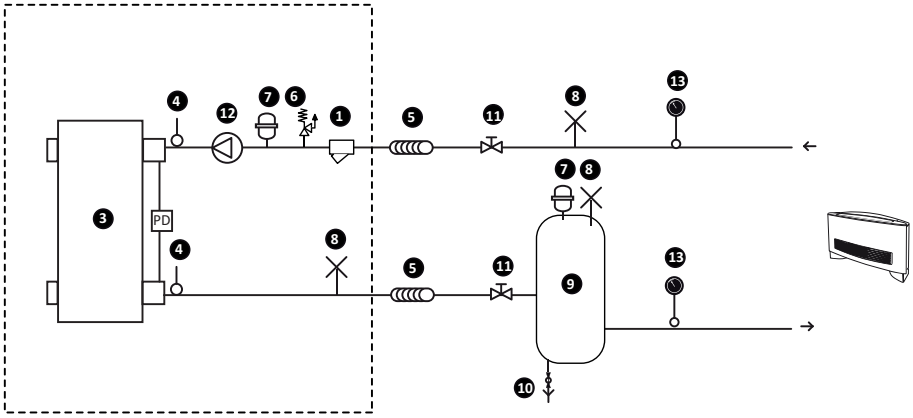
WARNING
The hydraulic piping to the unit must be adequately sized for the required flow rate. The water flow rate through the heat exchanger must always be constant.

WARNING
Carefully clean the system prior to connection to the unit. This cleaning eliminates welding slag, dirt, rust or any other impurities from the piping. These impurities may otherwise be deposited within the unit and cause a malfunction The connecting piping must be adequately supported so as not to impose any weight onto the unit.

22.2. INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL "°P|°N" / "HP|HN"

HYDRAULIC COMPONENTS ECL

HYDRAULIC COMPONENTS RECOMMENDED EXTERNAL TO UNIT



	COMPONENTS PROVIDED AS STANDARD
1	Water filter
2	Differential pressure switch
3	Plate heat exchanger
4	Water temperature sensor (IN/OUT)
6	Safety valve
7	Expansion tank
8	Air vent
12	Pump

	COMPONENTS NOT PROVIDED AND RESPONSIBILITY OF THE INSTALLER
5	Anti-vibration joints
7	Additional expansion tank (if necessary)
9	System buffer tank
10	Drain valve
11	Isolating valve
13	Gauge

WARNING
The selection and installation of components external to the ECL°P|N /ECLHP|HN unit are the responsibility of the installer and must be carried out in accordance with good working practices and applicable standards of the country of destination.

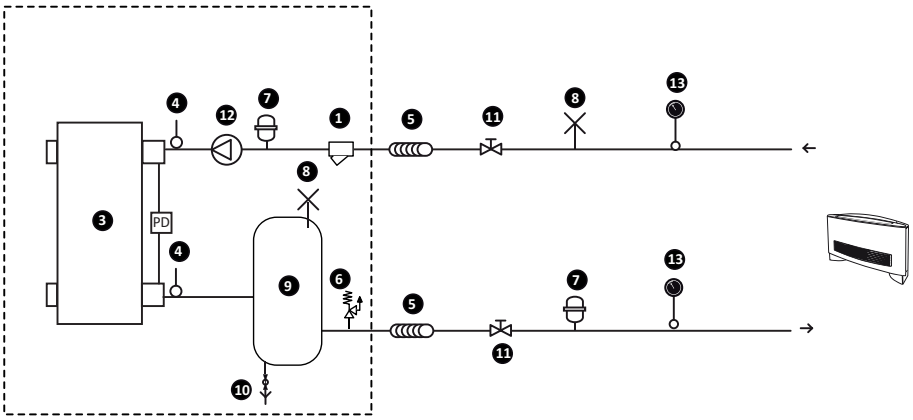
WARNING
The hydraulic piping to the unit must be adequately sized for the required flow rate. The water flow rate through the heat exchanger must always be constant.

WARNING
Carefully clean the system prior to connection to the unit. This cleaning eliminates welding slag, dirt, rust or any other impurities from the piping. These impurities may otherwise be deposited within the unit and cause a malfunction The connecting piping must be adequately supported so as not to impose any weight onto the unit.

22.3. INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL "°A|°Q" / "HA|HQ"

HYDRAULIC COMPONENTS ECL

HYDRAULIC COMPONENTS RECOMMENDED EXTERNAL TO UNIT



	COMPONENTS PROVIDED AS STANDARD ECL STANDARD
1	Water filter
2	Differential pressure switch / Flow switch **(ECL°A|HA 020...040)**
3	Plate heat exchanger
4	Water temperature sensor (IN/OUT)
6	Safety valve
7	Expansion tank
8	Air vent
9	System buffer tank
12	Pump

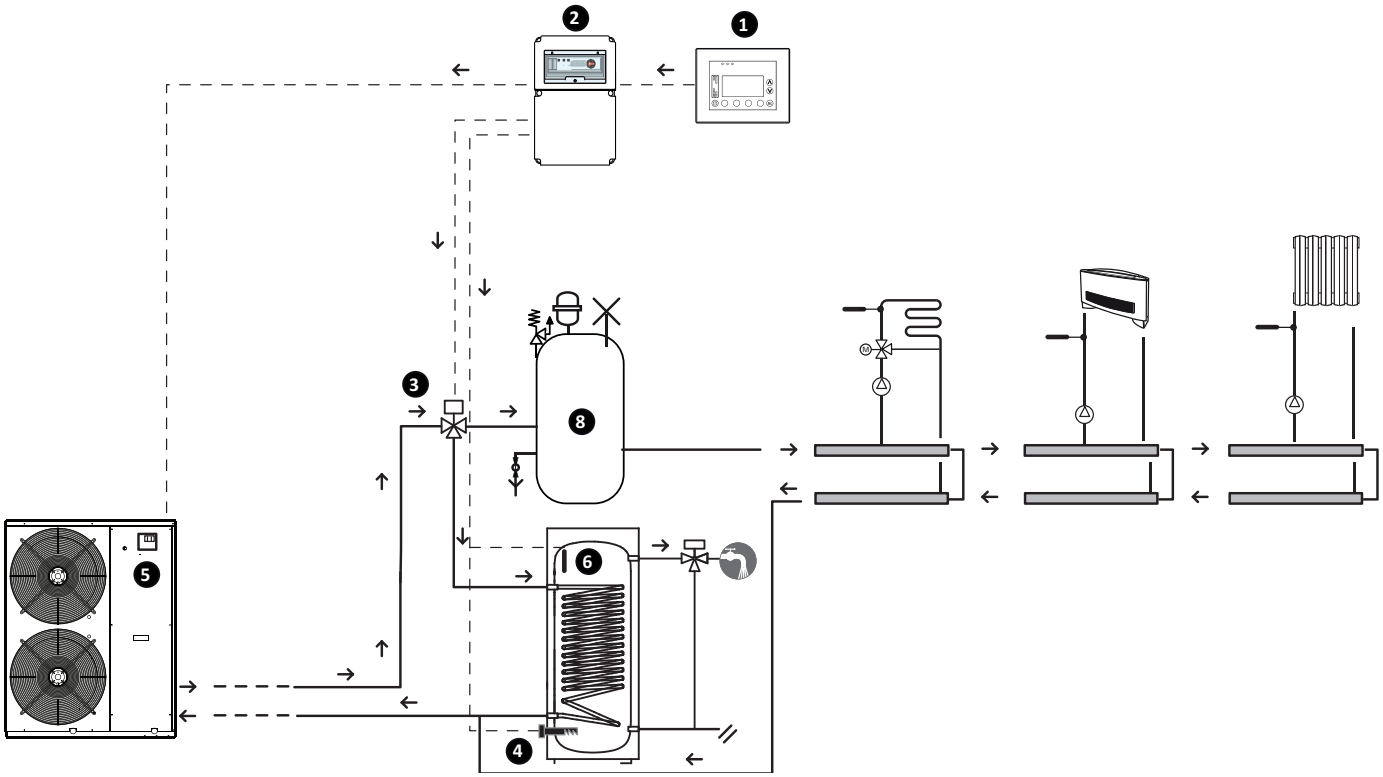
	COMPONENTS NOT PROVIDED AND RESPONSIBILITY OF THE INSTALLER
5	Anti-vibration joints
7	Additional expansion tank (if necessary)
10	Drain valve
11	Isolating valve
13	Gauge

WARNING
The selection and installation of components external to the ECL°A|Q /ECLHA|HQ unit are the responsibility of the installer and must be carried out in accordance with good working practices and applicable standards of the country of destination.

WARNING
The hydraulic piping to the unit must be adequately sized for the required flow rate. The water flow rate through the heat exchanger must always be constant.

WARNING
Carefully clean the system prior to connection to the unit. This cleaning eliminates welding slag, dirt, rust or any other impurities from the piping. These impurities may otherwise be deposited within the unit and cause a malfunction The connecting piping must be adequately supported so as not to impose any weight onto the unit.

22.4. SYSTEM EXAMPLE FOR DHW PRODUCTION WITH ECL50H° WITH ACCESSORY VMF-ACS



	ECL050H°
	VMF SYSTEM for the CONTROL AND PRODUCTIONS OF DHW **(ACCESSORIES)** [9]
1	E5 (white or black)
2	VMF-ACS3KTN | 6KTN |8KTN Control of: - 3 way valve - Sensor DHW storage tank - Immersion heater DHW storage tank (for integration and anti-legionella cycle)
3	3 way valve (not supplied)
4	Immersion heater DHW storage tank (not supplied) (for integration and anti-legionella cycle)
5	Interface board RS485 **(ACCESSORY MODU-485A)** [10]
6	DHW storage tank (not supplied)
8	System buffer tank (not supplied)

9 For further information refer to the specific VMF system documentation available on the website:
www.AIREDALE.com

10 Accessory required for the unit to communicate with the VMF system

WARNING
Confirm the hydraulic integrity of the joints.

WARNING
It is recommended to repeat this procedure after the unit has operated for a few hours and to periodically check the system pressure. Charging to be done with unit off (pump OFF).

22.5. SYSTEM CHARGING

Before commencing the charging procedure position the main isolator of the unit in the OFF position.

1. Ensure that the system drain valve is closed
2. Open all the system air vents and of the terminal units
3. Open the system isolating valves
4. Start filling slowly opening the system water charging valve external to the unit
5. When water exits the terminal units air vents close them and continue charging until the required system operating pressure is reached.

22.6. SYSTEM DRAINING

1. Before commencing draining the draining procedure position the main isolator of the unit in the OFF position
2. Ensure the system water charging valve is closed
3. Open the system drain valve external to the unit and all the system air vents and of the terminal units.

23. ELECTRICAL CONNECTIONS

The ECL units are fully factory wired and only require connection to the power supply network, downstream of an isolator, in accordance with the applicable wiring standards of the country of installation.
It is recommended to check the following items:

1. The electrical network is capable of meeting the electrical input data shown in the table below.
2. The unit is only powered up on completion of any hydraulic and electrical works.
3. Comply with the indicated phasing and earth requirements.
4. The power supply cable must have the appropriate protection against short circuits, residual current and earth leakage with suitable isolation from other devices.
5. The tolerance on the power supply voltage is ±10% of the nominal voltage rating of the unit (for three phase units a maximum imbalance of 3% between phases is permitted). If these values are not met please contact the power supply company.
6. For the electrical connections use double insulated cables in accordance with applicable wiring standards.

MANDATORY REQUIREMENTS

1. A magneto-thermal circuit breaker conforming to IEC-EN standards (contact aperture minimum 3 mm) is required, with adequate protection in accordance with the data provided in the following table, to be installed as close as possible to the unit.
2. An effective earth connection is required. The manufacturer cannot be held responsible for any damages caused by lack of, or inadequate, earthing of the unit.
3. For three phase units check the correct cable phasing.

The cable cross sections shown in the following cable are the recommended values based on a maximum 50 m cable length.

All electrical works must be carried out by PERSONNEL WITH THE APPROPRIATE LEGAL QUALIFICATIONS, trained and aware of the risks relating to such works.
The design of the cabling and related components must be carried out by PERSONNEL WITH APPROPRIATE QUALIFICATIONS TO DESIGN ELECTRICAL INSTALLATIONS, following international and national standards of the location the unit is installed, in accordance with current legal requirements.

For installation details refer to the electrical wiring schematics supplied with the unit. The electrical wiring schematic together with the manuals must be conserved with care and MADE AVAILABLE FOR FUTURE REFERENCE.

The weatherproof seals of the equipment must be checked before making electrical connections and the unit most only be powered on completion of all electrical and hydraulic works.

For longer cable lengths or different types of cable installations, the DESIGNER is responsible for correctly sizing the isolator, circuit breaker, earthing protection and cable sizes, based on:

- Length
- Type of cable
- Electrical input of the unit, distance and operating ambients.

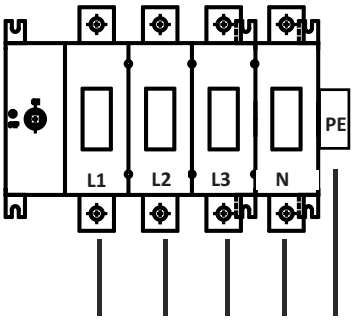
WARNING
Using the water piping to earth the unit is not permitted.

WARNING
Verify that all terminals are tight on power carrying conductors before first start-up and 30 days after putting into service. Afterwards check twice yearly.
Loose terminals can result in overheating of cables and components..

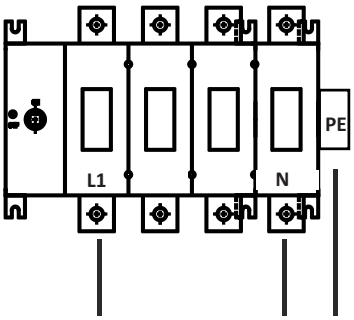
24. ELECTRICAL DATA

ECL° | H	Power supply	Version	Compressors [n°]	Fans [n°]	TOTAL INPUT		RECOMMENDED CABLE CROSS SECTION						
					L.R.A.	F.L.A.	SEZ. A				SEZ. B	EARTH	IL
					[A]	[A]	phases [n°]	cables per phase [n°]	Cross section [mm²]	Total cables [n°]	[mm²]	[mm²]	[A]
020	230V/1/50Hz	°	1	1	59,5	16,5	1	1	4	2	0,5	4	25
		P	1	1	26,5	17,5	1	1	4	2	0,5	4	25
025	230V/1/50Hz	°	1	1	62,5	16,5	1	1	4	2	0,5	4	25
		P	1	1	63,5	17,5	1	1	4	2	0,5	4	25
030	230V/1/50Hz	°	1	1	83,7	19,7	1	1	6	2	0,5	6	25
		P	1	1	84,7	20,7	1	1	6	2	0,5	6	25
040	230V/1/50Hz	°	1	1	98,7	23,7	1	1	6	2	0,5	6	32
		P	1	1	99,7	24,7	1	1	6	2	0,5	6	32
020	400V/3/N/50Hz	°	1	1	26,5	6,0	3+N	1	2,5	4	0,5	2,5	16
		P	1	1	27,5	7,0	3+N	1	2,5	4	0,5	2,5	16
025	400V/3/N/50Hz	°	1	1	32,5	6,0	3+N	1	2,5	4	0,5	2,5	16
		P	1	1	33,5	7,0	3+N	1	2,5	4	0,5	2,5	16
030	400V/3/N/50Hz	°	1	1	35,7	6,7	3+N	1	2,5	4	0,5	2,5	16
		P	1	1	36,7	7,7	3+N	1	2,5	4	0,5	2,5	16
040	400V/3/N/50Hz	°	1	1	48,7	8,7	3+N	1	2,5	4	0,5	2,5	16
		P	1	1	49,7	9,7	3+N	1	2,5	4	0,5	2,5	16
050	400V/3/N/50Hz	°	1	2	65,3	11,3	3+N	1	4	4	0,5	4	16
		P	1	2	67,3	13,3	3+N	1	4	4	0,5	4	16
		N|Q	1	2	68,0	14,0	3+N	1	4	4	0,5	4	16
070	400V/3/N/50Hz	°	1	2	75,3	13,5	3+N	1	4	4	0,5	4	16
		P	1	2	77,3	15,5	3+N	1	4	4	0,5	4	16
		N|Q	1	2	78,0	16,2	3+N	1	4	4	0,5	4	16
080	400V/3/N/50Hz	°	1	2	102,3	16,3	3+N	1	6	4	0,5	6	25
		P	1	2	104,3	18,3	3+N	1	6	4	0,5	6	25
		N|Q	1	2	105,0	19,0	3+N	1	6	4	0,5	6	25
090	400V/3/N/50Hz	°	1	2	96,3	17,3	3+N	1	6	4	0,5	6	25
		P	1	2	98,3	19,3	3+N	1	6	4	0,5	6	25
		N|Q	1	2	99,0	20,0	3+N	1	6	4	0,5	6	25
100	400V/3/N/50Hz	°	2	2	76,0	22,0	3+N	1	10	4	0,5	10	25
		P	2	2	77,4	23,4	3+N	1	10	4	0,5	10	25
		N|Q	2	2	78,8	24,8	3+N	1	10	4	0,5	10	25
150	400V/3/N/50Hz	°	2	2	87,0	26,0	3+N	1	16	4	0,5	16	45
		P	2	2	89,8	28,8	3+N	1	16	4	0,5	16	45
		N|Q	2	2	90,5	29,5	3+N	1	16	4	0,5	16	45
200	400V/3/N/50Hz	°	2	2	117,0	34,0	3+N	1	16	4	0,5	16	45
		P	2	2	119,8	36,8	3+N	1	16	4	0,5	16	45
		N|Q	2	2	120,5	37,5	3+N	1	16	4	0,5	16	45

400V/3/N/50Hz



230/1/50Hz



LEGEND

F.L.I.:	Maximum power input
F.L.A.:	Maximum current input
L.R.A.:	Starting current
Sez A:	Power supply connection
3+N:	3 phase + Neutral
Sez B:	Control and safeties connection
EARTH:	Earth connection to the unit
IL:	Main isolator

WARNING
CHECKS AND FIRST START-UP
It is reminded that for units of this series, if requested by the AIREDALE client or the legal owner and only on ITALIAN territory, free start-up is provided by the regional AIREDALE technical assistance service. The start-up must be previously agreed based on the intended time of completion of installation. Before the start-up all the works (electrical and hydraulic connections, filling and venting of air in the system) must be completed.

25. ELECTRICAL POWER SUPPLY CONNECTIONS

1. Before making the electrical connections ensure that the isolator is open.
2. Open the front control panel.
3. Use the holes provided in the lower part of the cabinet for the electrical power supply and for other external wiring connections.
4. Enter cables into the control panel only through the apertures provided.
5. Avoid direct contact with un-insulated copper tubes and compressors.
6. Identify the terminals for electrical connection with reference to the wiring diagram provided loose with the unit.
7. Take the power cable into the control panel and connect to terminals U-N and PE with respect to (U) phase, (N) neutral, (PE) earth in the case of single phase units (230V/50Hz),
8. U-V-W for phases, N for neutral and PE for earth in the case of three phase units (400V/3/N/50Hz).
9. Replace the inspection panels.
10. Ensure that all protection removed for the electrical connection are replaced before powering the unit.
11. Place the main isolator (external to the unit) to “ON”.

26. CHECKS AND FIRST START-UP

WARNING
Before carrying out the following checks ensure the unit is disconnected from the power supply. Ensure that the main isolator is in the OFF position and locked in that position with appropriate warning label attached. Before starting the procedures check for the absence of voltage with a voltmeter or phase checker.

26.1. PREPARING FOR FIRST START-UP

It is reminded that for units of this series, if requested by the AIREDALE client or the legal owner and only on ITALIAN territory, free start-up is provided by the regional AIREDALE technical assistance service. The start-up must be previously agreed based on the intended time of completion of installation. Before the start-up all the works (electrical and hydraulic connections, filling and venting of air in the system) must be completed.

26.2. START-UP

26.2.1. PRELIMINARY CHECKS BEFORE POWERING UP

Check:
1. All safety precautions have been followed.
2. The unit has been appropriately fixed to the support base.
3. Minimum clearance spaces have been observed.
4. Power supply cables are correctly sized and capable of supporting the electrical requirements of the unit (see section on electrical data) and that the unit is correctly earthed.
5. All electrical connections are correctly terminated and tightened.

26.2.2. CHECKS TO BE DONE WHEN POWERED UP

1. Apply power to the unit by turning the main isolator to the ON position. The display will power up after several seconds after applying power, check that the operating status is on OFF (OFF BY KEYB on the lower part of the display).
2. Check with a tester that the power supply voltages on the phases U-V-W are 400V ±10%, check that the phase imbalance is not greater than 3%.
3. Check that the connections made by the installer comply with the documentation.
4. Check that the compressor crankcase heater(s) are operating by measuring the increase of oil sump temperature. The heater(s) must be in operation for at least 12 hours before starting the compressor, and in all cases the sump oil temperature must be 10-15 K above ambient temperature.

HYDRAULIC CIRCUIT

1. Check that all hydraulic connections have been correctly installed, that the instructions on the labels have been followed, and that a mechanical filter has been installed on the inlet to the evaporator. (Mandatory component otherwise the warranty will be voided).
2. Confirm that the pump(s) are operating and that the flow rate is sufficient to make the contact on the flow switch.
3. Check the water flow rate by measuring the differential pressure across the evaporator inlet and outlet and calculating the flow from the evaporator pressure drop diagram provided in the documentation.
4. Check the correct functioning of any flow switch installed; close the isolating valve on the evaporator outlet and observe the result on the unit display panel; open the valve and reset the flow trip alarm.

26.3. FIRST START-UP

After having rigorously followed the above checks it is possible to start the unit:
1. Close the electrical panel.
2. Turn the main isolator to ON.
3. Press the key ON ⏻ for 3 seconds to start the unit.
   Pressing the key ON ⏻ displays the water temperature and the operating mode of the unit. Check the operating setpoint parameters and reset any alarms present . After a few minutes the unit will start.

26.3.1. CHECKS WITH THE UNIT RUNNING

REFRIGERANT CIRCUIT
CHECK:
- That the compressor input current of the compressors is less than that indicated in the table of electrical data.
- That in three phase models the compressor noise is not abnormal, indicating a reverse rotation. In this case reverse one of the phases.
- That the voltage values are within the determined limits and that the phase imbalance (three phase power) is less than 3%.
- Presence of any refrigerant leaks, in particular from connections to gauges, pressure transducers and pressostats. (Vibrations during transportation may have loosened connections).
- Superheat
  Compare the compressor suction temperature with a contact temperature sensor reading with the temperature of the low pressure gauge (saturated suction temperature corresponding to the evaporating pressure). The difference between these two temperatures is the superheat value. The optimal values are between 4 and 8 K.
- Discharge temperature
  If the values of sub-cooling and superheat are normal the temperature measured in the discharge line from the compressor must be 30/40 K above the condensing temperature.

SAFETY AND CONTROL DEVICES
CHECK:
- The manual high pressure pressostat, which stops the compressor and generates and alarm when the discharge pressure exceeds the preset value. The correct operation is checked by closing the refrigerant isolating valve to the heat exchanger (in cooling mode) and keeping a check on the high pressure gauge, verify the operation corresponds to the rated value. Warning: in the event the pressostat does not operate at the rated value immediately stop the compressor and investigate the cause. Reset is manual but can only be done when the pressure drops below the differential setting. (For the values of the trip and differential setting refer to the technical manual).

- Anti-freeze protection
  The electronic control of the anti-freeze protection is from the water temperature sensor leaving the evaporator prevents freezing of water when the temperature is too low. The operation of the anti-freeze protection can be checked by increasing the setpoint value until it is above the temperature of leaving water and checking the water temperature with a high precision sensor. Confirm that the unit stops and generates the responding alarm. After this check reset the anti-freeze setpoint to the original value.

26.4. CHANGE OF SEASON

26.5. CHANGE OF SEASON FROM UNIT CIRCUIT BOARD

Access the **USER SET** menu with the key and confirm the password 000 pressing key . Using the arrow key ▲▼ display the parameter **STA** index 0 of the menu and select pressing the key . Using the arrow keys ▲▼ select the value for either: **VALUE 0** cooling mode operation, or, **VALUE 1** heating mode operation. Confirm the selection pressing key and exit the menu with the key .

26.6. CHANGE OF SEASON FROM PR3 REMOTE PANEL (ACCESSORY)

If the PR3 remote panel (accessory) is installed it must be enabled after making the electrical connections.

26.6.1. REMOTE PANEL ENABLING

Access the **INSTALLER SET** menu with the key and insert the menu access password: **password installer 030.** Using the arrow keys ▲▼ display the parameter **PAN** index 9 of the menu and select pressing the key . Using the arrow keys ▲▼ select from the desired values of:
VALUE 1:
- **SEASON CHANGE** from the unit circuit board
- **ON/OFF CONTROL** from the PR3

VALUE 2:
- **SEASON CHANGE** controlled from the PR3
- **ON/OFF CONTROL** from the unit

VALUE 3:
- **SEASON CHANGE** controlled from the PR3
- **ON/OFF CONTROL** from the PR3

Confirm the selection pressing key and exit the menu with the key

Once the PR3 remote panel is enabled the change of season selection can be made directly from the switch **(fig.1)**. The unit will automatically switch on and off with the selected operating mode.

For further information refer to the USER manual.

(fig.1)

27. OPERATING CHARACTERISTICS

27.1. COOLING SETPOINT

(Factory default) = 7°C, Δt = 5 K.

27.2. HEATING SETPOINT

(Factory default) = 45°C, Δt = 5 K.

In the event of a momentary power interruption the selected operating mode will be retained in memory.

27.3. COMPRESSOR DELAY TIMERS

To avoid excessive compressor starts two functions are provided:

- Minimum time from last stop 60 seconds in cooling mode.
- Minimum time from last start 300 seconds in heating mode.

27.4. CIRCULATING PUMPS

The wiring schematic provides outputs to control the circulating pumps. The system side pump starts immediately and after 30 seconds of operation, when the water flow is stabilised, the pressure differential/ flow switch control function is enabled. If no alarms are present the unit will start.

27.5. ANTI-FREEZE ALARM

The alarm [11] is always active even in standby mode.

To prevent damage to the plate heat exchanger by freezing of the water within the unit is stopped and an alarm raised if the water temperature drops below the minimum anti-freeze setpoint of 3°C. The unit can only re-start after a manual reset and if the anti-freeze sensor reads a water temperature above 4°C [12]. With the unit in off mode and with a water temperature below 4°C the factory standard fitted electric heaters on the heat exchanger are turned on, and turned off when the water temperature exceeds 5°C. The water pump always remains active.

27.6. WATER FLOW ALARM

The unit has a low water flow rate alarm using a factory fitted differential pressure switch or flow switch. This safety activates after the first 30 seconds of pump operation if the water flow rate is not sufficient. The operation of this alarm stops the compressors and the pump.

WARNING

[11] The anti-freeze setpoint can only be adjusted by an authorised service centre and only after verifying that the hydraulic circuit has the correct % of anti-freeze solution.

[12] If this alarm occurs immediately call the authorised technical service assistance.

WARNING

FOR 230V/1/50Hz UNITS:

The unit is provided with a compressor soft starter. This device contains capacitors that could overheat through repeated quick starts. If power supply is removed wait at least 3 minutes before powering up.

WARNING
For 230V/1/50Hz units with soft-start, if power is removed for reasons of fault or maintenance, it is required to wait 5 minutes before re-applying power to the unit to ensure proper operation.

WARNING
We recommend a service log book is provided for the unit (responsibility of the user) to keep records of any works on the unit, which will aid maintenance and repair works. Note in the service log book date, type of works (routine maintenance, inspection or repair), describing the event and the measures taken.

WARNING
It is **FORBIDDEN** to charge with refrigerant circuit with a refrigerant type different to that indicated. Using a different refrigerant can cause serious damage to the unit.

28. ROUTINE MAINTENANCE

It is forbidden to carry out any cleaning operation before isolating from the power supply [1].
Confirm no voltage is present before commencing works.
Periodic maintenance is a fundamental requirement to ensure efficient unit operation both in terms of operation and energy efficiency.

The fundamental required annual checks are:

28.1. HYDRAULIC CIRCUIT

CHECK:
1. Water circuit is filled.
2. Water filter is clean.
3. Operation of the differential pressure or flow switch.
4. Absence of air in the system (vent).
5. Water flow rate is always constant through the evaporator.
6. Condition of the hydraulic piping insulation.
7. The percentage of anti-freeze liquid, as may be required.

28.2. ELECTRIC CIRCUIT

CHECK:
1. Operation of safeties.
2. Power supply voltage.
3. Electrical power input.
4. Tightness of connections and terminals.
5. Operation of the compressor crankcase heater.

28.3. REFRIGERANT CIRCUIT

CHECK:
1. State of compressors.
2. Efficiency of the plate heat exchanger.
3. Operating pressures.
4. Leaks to confirm the correct operating refrigerant charge.
5. Operation of the high and low pressure pressostats
6. Efficient operation of the filter drier.

28.4. MECHANICAL CHECKS

CHECK:
1. **Tightness of screws,** of compressors and electrical panel and external panelling of the unit. Poor fixings cause noise and abnormal vibrations.
2. The state of the unit structure.
   Treat any parts showing signs of corrosion with the appropriate paints to reduce or eliminate rust.

29. SPECIAL MAINTENANCE

The ECL units are factory charged with R410A and tested. In normal operation they therefore do not require any intervention from the technical assistance service in relation to the refrigerant charge. Over time some small leaks can appear, resulting in refrigerant discharges of the circuit and causing a malfunction of the unit. In this case the leaks have to be found and repaired and the unit recharged in accordance, and as required, under current legislation and good working practices.

30. DISPOSAL

Ensure that the disposal of the unit is carried out in accordance with the current legal requirements.

31. PROCEDURE FOR SELECTION OF SYSTEM TYPE

Several parameters of the MODU CONTROL board have to be set, based on the type of system the unit is installed.
These changes of parameters are summarised in the table below to permit the installer to make the appropriate selections of the unit's electronic circuit board.

31.1. HOW TO MODIFY A USER MENU PARAMETER

To access the **USER** setting press the key and confirm the password 000 pressing the key . The display will show the parameters of the **USER** index as three identifying characters; the index remains displayed for a second and then is replaced by the value of the parameter it relates to.
To move to the following parameter use the arrow keys . To modify a parameter press the key , modify the value using the arrow keys and confirm the modification pressing the key . To exit the menu press the key .

31.2. HOW TO MODIFY AN INSTALLER MENU PARAMETER

To enter and modify the **INSTALLER** menu follow the same procedure as the USER menu above.

Password INSTALLER menu: 030

QUESTION	ANSWER	WHAT TO DO
(1) What type of terminals are installed in the heating circuit?	• The unit is a cooling only model	• Go to question 2
	• Radiant panels	• Enter in parameter **StC** (index 3 menu USER) with the value of 35 °C
	• Fan coil units or low temperature radiators	• Enter in parameter **StC** (index 3 menu USER) with the value of 45 °C (default value)
	• Other applications	• Enter in parameter **StC** (index 3 menu USER) with the value of 55 °C
(2) Is the remote control accessory panel installed (PR3)?	• Not installed	• Go to question 3
	• Installed	• Enter in parameter **PAN** (index 9 menu INSTALLER) with the appropriate value: **Value (1):** • Season selection controlled from the unit circuit board • ON/OFF control from the PR3 **Value (2):** • Season selection controlled from the PR3 • ON/OFF control from the unit circuit board **Value (3):** • Season selection controlled from the PR3 • ON/OFF control from the PR3
(3) Is domestic hot water production present?	• Not present	• Go to question 5
	• Present	• Enter in parameter **ASA** (menu INSTALLER) with the value (1)
(4) In the domestic hot water circuit is a three way diverting valve present?	• Not present	• Go to question 5
	• Present	• Enter in parameter **AAS** (index C menu INSTALLER) with the appropriate value (in seconds): this parameter shows the reversing time for the three way diverting valve in the circuit for the production of domestic hot water
(5) Is an ambient thermostat present?	• Not present	• No function
	• Present	• This parameter enables a digital contact **ID** (shown on the electrical schematic with the reference **TRA**) onto which to connect an ambient thermostat with which to disable the compressors and electric heaters. Enter in parameter **trA (index D menu INSTALLER)**, with the appropriate value selecting from: **1. Value (1 or 2): ENABLED** **2. Value (0 or 3): DISABLED** **3. It is reminded that the OPEN state of the contact represents:** • stops compressors and heaters if the parameter value is set to 1 • stops compressors, pump and heaters if the parameter value is set to 2 • pump alarm (as in the previous software version), if the parameter value is set to 3

WARNING
For more information refer to the **USER manual** provided with the unit and available on the website **www.AIREDALE.com**

Head Office
Airedale International Air Conditioning Ltd
Leeds Road
Rawdon
Leeds LS19 6JY

Tel: +44 (0) 113 2391000
Fax:+44 (0) 113 2507219

E-mail enquiries@airedale.com
Web www.airedale.com