

EcoChill
Chiller
R410A
52kW - 200kW



Installation and Maintenance Manual



FM00542

EMS52086

Customer Services

Warranty, Commissioning & Maintenance

As standard, Airedale guarantees all non consumable parts only for a period of 12 months, variations tailored to suit product and application are also available; please contact Airedale for full terms and details.

To further protect your investment in Airedale products, Airedale can provide full commissioning services, comprehensive maintenance packages and service cover 24 hours a day, 365 days a year (UK mainland).

For a free quotation contact Airedale or your local Sales Engineer.

All Airedale products are designed in accordance with EU Directives regarding prevention of build up of water, associated with the risk of contaminants such as legionella.

For effective prevention of such risk it is necessary that the equipment is maintained in accordance with Airedale recommendations.

ChillerGuard

In addition to commissioning, a 24 hour, 7 days a week on-call service is available throughout the year to UK mainland sites. This service will enable customers to contact a duty engineer outside normal working hours and receive assistance over the telephone. The duty engineer can, if necessary, attend site, usually within 24 hours or less.

Full details will be forwarded on acceptance of the maintenance agreement.

CAUTION ▲	Warranty cover is not a substitute for maintenance. Warranty cover is conditional to maintenance being carried out in accordance with the recommendations provided during the warranty period. Failure to have the maintenance procedures carried out will invalidate the warranty and any liabilities by Airedale International Air Conditioning Ltd.
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Spares

A spares list for 1, 3 and 5 years will be supplied with every unit and is also available from our Spares department on request.

Training

As well as our comprehensive range of products, Airedale offers a modular range of Refrigeration and Air Conditioning Training courses, for further information please contact Airedale.

Customer Services

For further assistance, please e-mail: connect@airedale.com or telephone:

UK Sales Enquiries	+ 44 (0) 113 239 1000	connect@airedale.com
International Enquiries	+ 44 (0) 113 239 1000	connect@airedale.com
Spares Hot Line	+ 44 (0) 113 238 7878	spares@airedale.com
Airedale Service	+ 44 (0) 113 239 1000	service@airedale.com
Technical Support	+ 44 (0) 113 239 1000	tech.support@airedale.com
Training Enquiries	+ 44 (0) 113 239 1000	training@airedale.com

For information, visit us at our web site: www.airedale.com

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INDEX

DECLARATION OF CONFORMITY	5	VARIABLE FLOW RATE SYSTEMS ON THE PRIMARY CIRCUIT WITH HYDRONIC KITS W1-W2-W3-W4.....	48
GENERAL WARNINGS	8	INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL W1-W3 (WITH PUMP + STORAGE TANK + VARIABLE SPEED INVERTER)	50
RECEPTION	10	INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL W2-W4 (WITH DOUBLE PUMP + STORAGE TANK + VARIABLE SPEED INVERTER)	51
STORAGE	12	ELECTRICAL CONNECTIONS	52
DIMENSIONS (mm)	13	ELECTRIC POWER CONNECTION TO THE ELECTRICAL MAINS	54
HYDRAULIC CONNECTIONS	18	CONNECTING THE AUXILIARY CONTROL BOARD	55
REFRIGERANT CONNECTIONS.....	22	COMMISSIONING - WARNINGS.....	56
COOLING LINES	24	MAINTENANCE	57
WEIGHT DISTRIBUTION.....	25	MAINTENANCE - LIST OF THE RECOMMENDED PERIODIC INTERVENTIONS.....	60
CENTRE OF GRAVITY AND ANTI-VIBRATION POSITIONS.....	27		
VERSIONS °/L	27		
VERSIONS A/E.....	30		
VERSIONS U/N.....	33		
VERSIONS °/L (MOTOCONDENSING UNITS).....	36		
VERSIONS A/E (MOTOCONDENSING UNITS)	36		
VERSIONS U/N (MOTOCONDENSING UNITS)	37		
MINIMUM TECHNICAL SPACES	39		
HYDRAULIC CONNECTIONS.....	41		
INSTALLATION - HYDRAULIC DIAGRAMS AND WATER FEATURES.....	42		
INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL 00 (STANDARD)	42		
INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL P1-P3 (WITH PUMP).....	43		
INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL P2-P4 (WITH DOUBLE PUMP)	44		
INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL 01-03-05-07 (WITH PUMP + STORAGE TANK)	45		
INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL 02-04-06-08 (WITH DOUBLE PUMP + STORAGE TANK).....	46		
INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL 09 (DOUBLE LOOP).....	47		

DECLARATION OF CONFORMITY



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DICHIARAZIONE DI CONFORMITÀ CE / EC DECLARATION OF CONFORMITY / DECLARATION DE CONFORMITE CE KONFORMITÄTSEKTLÄRUNG EG / DECLARACIÓN DE CONFORMIDAD CE

ECL
0282-0754

MODEL*	
SERIAL NUMBER	
DATE	

Noi, firmatari della presente, dichiariamo sotto la nostra esclusiva responsabilità che l'insieme in oggetto così definito:
We, the undersigned, hereby declare under our own responsibility that the assembly in question, defined as follows:
Nous, Signataires du présent acte, déclarons sous notre responsabilité exclusive que le groupe cité à l'objet défini de la façon suivante:
Die Unterzeichner erklären unter eigener Verantwortung, dass die oben genannte Maschineneinheit, bestehend aus:
Nosotros, los abajo firmantes, declaramos bajo nuestra exclusiva responsabilidad, que el conjunto en cuestión, denominado:

Nome / Name / Nom / Name / Nombre
Tipo / Type / Type / Typ / Tipo
Modello / Model / Modèle / Model / Modelo

ECL
Air/water chillers. Outdoor installation

A cui questa dichiarazione si riferisce è conforme a tutte le disposizioni pertinenti delle seguenti direttive:
To which this declaration refers, complies with all the provisions related to the following directives:
Auquel cette déclaration se réfère, est conforme à toutes les dispositions relatives des directives suivantes:
Das Gerät, auf welches sich diese Erklärung bezieht, entspricht allen Verordnungen im Zusammenhang mit den folgenden Richtlinien:
A la que esta declaración se refiere, es conforme con todas las disposiciones pertinentes de las siguientes directivas:

Direttiva Macchine: 2006/42/CE
Direttiva Compatibilità Elettromagnetica EMCD: 2014/30/UE
Direttiva PED in materia di attrezzature a pressione: 2014/68/UE
Direttiva RoHS sulla restrizione dell'uso di determinate sostanze pericolose nelle AEE: 2011/65/UE
Direttiva ErP per la progettazione ecocompatibile: 2009/125/CE

L'oggetto della dichiarazione di cui sopra è conforme alle pertinenti normative di armonizzazione dell'Unione:
The above-mentioned declaration complies with the harmonised European standards:
L'objet de la déclaration reportée ci-dessus est conforme aux normes d'harmonisation relatives de l'Union:
Der Gegenstand der genannten Erklärung entspricht den diesbezüglichen harmonisierten Normen der europäischen Gemeinschaft:
El objeto de la declaración de arriba es conforme con las normativas pertinentes de armonización de la Unión:

CEI EN 60204-1: 2018
UNI EN ISO 12100: 2010

CEI EN 61000-6-1: 2007
CEI EN 61000-6-3: 2007

UNI EN 378-2: 2017
UNI EN 12735-1: 2016

La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante.
La persona autorizzata a costituire il fascicolo tecnico è Luca Martin.
L'unità è conforme ai dati di progetto riportati nel fascicolo tecnico al paragrafo Definizione dell'Insieme, è in accordo con la direttiva 2014/68/UE e soddisfa la procedura di Garanzia Totale di qualità (modulo H) con certificato n. 06/270-QT3664 Rev.14 emesso dall'organismo notificato n. 1131 CEC via Pisacane 46 Legnano (MI) - Italy.
Dichiaro inoltre che, al momento dell'immissione sul mercato Europeo di tale apparecchiatura precaricata da parte di Aermec S.p.A (che importa o produce nell'Unione), gli idrofluorocarburi, in essa contenuti, sono considerati nel sistema di quote dell'Unione di cui al Capo IV del regolamento UE n.517/2014 in quanto sono stati immessi sul mercato da un produttore o importatore di idrofluorocarburi cui si applica l'articolo 15 del regolamento UE n.517/2014.

Bevilacqua (VR)

Commercial Director
Luigi Zucchi

This declaration of conformity has been released under the exclusive responsibility of the manufacturer.

The person authorised to compile the technical file is Luca Martin.

The unit complies with the project data reported in the technical file in the Definition of the Assembly paragraph, it is in agreement with Directive 2014/68/EU and satisfies the Full quality assurance procedure (form H) with certificate no. 06/270-QT3664 Rev. 14 issued by the notified body no. 1131 CEC via Pisacane 46 Legnano (MI) - Italy.

We also declare that, when such equipment preloaded by Aermec SpA (which imports or produces into the Union) is placed on the European market, the hydrofluorocarbons contained therein are considered in the Union quota system referred to in Chapter IV of UE Regulation no.517/2014 as they have been placed on the market by a producer or importer of hydrofluorocarbons to which Article 15 of UE Regulation no.517/2014.

La déclaration de conformité présente est délivrée sous la responsabilité exclusive du fabricant.

La personne autorisée à constituer le dossier technique est Luca Martin.

L'unité est conforme aux données du projet figurant dans le dossier technique dans le paragraphe Définition de l'assemblage, est conforme à la directive 2014/68/UE, et respecte la procédure de l'assurance complète de la qualité (module H) par le certificat n. 06/270-QT3664 Rév. 14 émis par l'organisme notifié n. 1131 CEC via Pisacane 46 Legnano (MI) - Italie.

Nous déclarons également que, lors de la mise sur le marché européen de cet équipement préchargé par Aermec SpA (qui importe ou produit dans l'Union), les hydrofluorocarbures qu'il contient sont pris en compte dans le système de quotas de l'Union visé à Le chapitre IV du règlement (UE) n.517/2014 car ils ont été mis sur le marché par un producteur ou un importateur d'hydrofluorocarbures auxquels l'article 15 du règlement (UE) n.517/2014.

Diese Konformitätserklärung wurde unter der ausschließlichen Verantwortung des Herstellers ausgestellt.

Die bevollmächtigt, die technischen Unterlagen zusammenzustellen ist Luca Martin.

Die Einheit entspricht den Projektdaten, die in der technischen Datei im Abschnitt Definition der Baugruppe angegeben sind, entspricht der Richtlinie 2014/68/EU und erfüllt das Produkt die Anforderungen des Verfahrens der umfassenden Qualitätssicherung (Modul H), Zertifikat n. 06/270-QT3664 Rev. 14, ausgestellt durch benannte Stelle n. 1131 CEC Via Pisacane 46, Legnano (MI) - Italy.

Wir erklären außerdem, dass beim Inverkehrbringen dieser von Aermec SpA (die in der Union importiert oder produziert) vorinstallierten Ausrüstung in Europa die darin enthaltenen Fluorwasserstoffe in dem in genannten Unionsquotensystem berücksichtigt werden Kapitel IV der Verordnung (EU) n.517/2014, da sie von einem Hersteller oder Importeur von Fluorkohlenwasserstoffen in Verkehr gebracht wurden, für die Artikel 15 der Verordnung (EU) n.517/2014.

Esta declaración de conformidad se ha otorgado bajo la responsabilidad exclusiva del fabricante.

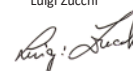
La persona facultada para elaborar el expediente técnico es Luca Martin.

La unidad cumple con los datos del proyecto reportados en el archivo técnico en el párrafo Definición de la Asamblea, está conforme a la directiva 2014/68/UE y cumple con el procedimiento de el pleno aseguramiento de la calidad (módulo H) con certificado n. 06/270-QT3664 Rev. 14 emitido por el organismo autorizado n. 1131 CEC via Pisacane 46 Legnano (MI) - Italia.

Il presente documento è parte integrante del dossier tecnico e deve essere conservato insieme ad esso.

Bevilacqua (VR)

Commercial Director
Luigi Zucchi



GENERAL WARNINGS

This product is a complex machine. Things and persons may be exposed to risks during installation, operation, maintenance or repair, caused by certain conditions or components, such as for example, but not only, refrigerant, oils, moving mechanical parts pressure, heat sources, electricity.

This products and its documentation, including this manual, are intended for persons in possession of appropriate training to enable them to operate correctly and safely. Before performing any operation on this equipment, it is essential for the operating personnel to have read and understood all manuals and any other material of reference. They must also know and observe the standards applicable to the activities to be performed.

ATTENTION

Any intervention on the unit must be performed by authorised and qualified experienced technicians, in accordance with current regulations.

The unit shows the following risks:

IMPORTANT GENERAL INSTRUCTIONS

- ***Risk of electric discharges.***
- ***Risk of injuries due to rotating parts.***
- ***Risk of injuries due to sharp edges and heavy weights.***
- ***Risk of injuries due to high pressure gas.***
- ***Risk of injuries due to high or low temperatures of components.***
- ***Chemical risk***
- ***Substances inside the water;***
- ***In the event of the refrigerant catching fire, hazardous gases may be generated.***

It is vital that all work on the unit is performed in compliance with the local standards. All work on the system must be performed to perfection

PRECAUTIONS AGAINST RESIDUAL RISKS

INSTRUCTIONS

- Install the unit according to the requirements herein
- **Personnel that come into contact with the machine must be competent in the use of this refrigerant and respect regulations currently in force. Assess the procedures Airedale requires and local fire prevention regulations to prevent inconsistencies in our requirements and regulations currently in force.**
- Regularly perform all maintenance operations provided for in this manual
- Wear personal protective equipment (**gloves, eye protection, helmet, ...**) appropriate to the operations to be performed; do not wear clothes or accessories that may get caught or be sucked by the air flows; gather and tie your hair up before entering the unit
- The machine must be transported in compliance with current regulations, taking into account the features of the fluids inside and their characterisation described in the safety data sheet
- An inadequate transport may damage the machine, also generating refrigerant leaks. Before commissioning, check for leaks and make any necessary repairs.
- The installation must comply with the requirements of EN378-3 and the local current regulations. In particular, indoor installation must ensure adequate ventilation and provide refrigerant detectors when necessary.
- The machine must not be installed in environments with risk of explosion but in a suitable place. In particular, if intended for indoor use, it cannot be installed outdoors
- The machines must be installed in structures protected from lightning as provided by the applicable laws and technical standards
- The overall fire risk assessment at the place of installation (i.e. fire load calculation) is the responsibility of the user.
- Keep fire extinguishers near the machine suitable for putting out fires on electrical equipment and, for lubricant oil of the compressor and the refrigerant as provided by the relative safety data sheets (for example a CO₂ fire extinguisher)
- It is not permitted to walk or place other bodies on the machines
- Make the plant engineering connections to the unit according to the instructions in this manual
- It is mandatory to install a water filter on the evaporator, penalty invalidation of the warranty
- Do not bend or hit pipes containing under pressure fluids
- Do not exceed the maximum allowable pressure (PS) of the unit's water circuit shown on the serial number plate
- Before removing elements along the under pressure water circuits, shut-off the pipe section involved and gradually drain the fluid until its pressure and that of the atmosphere are balanced.
- The unit contains under pressure refrigerant gas: no operation must be performed on under pressure equipment except during maintenance that must be carried out by competent and authorised personnel
- Perform brazing or welding only on empty pipes and clear of any lubricating oil residues; do not near flames or other heat sources to the pipes containing refrigerant fluid
- Do not work with naked flames near the unit
- In order to avoid an environmental risk, make sure that any fluid leaks are recovered in suitable devices in compliance with local regulations.
- Do not use your hands to control any refrigerant leaks
- An accidental release of refrigerant may cause risk of suffocation due to a lack of oxygen: install the machine in a well ventilated environment in accordance with EN 378-3 and local regulations currently in force. Those who come into contact with the machine must be equipped with a leak detector that is calibrated and validated to reveal any used refrigerant leaks.
- The unit is fitted out with overpressure relief devices (safety valves): in the event that these devices start, the refrigerant gas is released at high temperature and high velocity.
Prevent the gas flow from harming people or things; if necessary, channel the leak according to the EN 378-3 standard and local regulations currently in force, paying particular attention to channel fluids that pertain to safety groups other than A1 toward open and secure spaces.

- Install the unit at a distance enough from the exhaust wells, to ensure that the possible loss of gas may reach and pollute the aquifer
- Keep all lubricants in properly marked containers do not keep flammable liquids near the plant
- Do not remove the protections from mobile elements while the unit is running
- Do not use cables with inadequate section or flying connections, not even for limited periods or emergencies
- Check the unit is properly earthed before starting it
- Before opening the electrical panel, disconnect the unit from the mains by means of the external isolator
- In case of units with shunt capacitors, wait 3 minutes from when power supply was disconnected from the unit before accessing inside the electrical panel
- If the unit is equipped with integrated inverter compressors, disconnect the power supply and wait at least 15 minutes before accessing for maintenance: the internal components remain live for this time, generating the risk of electrocution
- The safety devices must be maintained efficient and periodically checked as prescribed by current regulations
- In case a piece is disassembled, make sure it is correctly reassembled before restarting the unit
- Even with the unit off, prevent the fluid in contact with the heat exchangers exceed the temperature limits indicated in the documentation and freeze.
- Do not send the heat exchangers fluids other than water or its mixtures with ethylene glycol/propylene in a maximum concentration of 30%
- The machine must only be employed for the use for which it was made; any other use can be dangerous and void the warranty
- The machine and the pipes have very hot and very cold surfaces that lead to risk of burns
- Before opening a machine panel, ascertain whether it is or not firmly connected to it by hinges
- Louvers of the heat exchangers, edges of the components and metal panels can generate cuts
- The installation must ensure that the temperature of the fluid entering the unit is maintained stable and within the provided limits; therefore, pay attention to the adjustment of any external thermal exchange and control devices (drycooler, evaporating towers, area valves, ...), to the adequate dimensioning of the mass of fluid circulating in the plant (in particular when plant areas are excluded) and to install systems for the recirculation of the necessary fluid flow rate so as to maintain the machine temperatures within the allowed limits (e.g. during the start-up phase).
- The material used for the machine protective packaging must always be kept out of the reach of children as it is a source of danger
- In units with compressors in parallel, do not disable the individual compressors for long periods.
- This is an appliance not accessible to the general public.

PREVENTIONS

- Make sure that the protections of mobile elements are correctly in place before restarting the unit
- Fans, motors and belt drives may be in motion: always wait for them to stop and take appropriate precautions to prevent their activation before accessing them

RECEPTION

TRANSPORT AND HANDLING

The unit must be handled by qualified personnel. Carefully follow the lifting instructions on the labels placed on the unit.
The unit must be lifted with extreme care to prevent knocks to the frame, panels, electrical panel, etc..

NOTE: Plastic elements can be used to protect the units against damage during transport. The machine is also wrapped in packaging. We recommend keeping this protection during all transport and lifting operations and not remove the plastic elements until commissioning.

If the unit has anti-vibration supports, they must be installed on the unit before final positioning.

Inspection upon receipt

Perform the following check upon receipt of the product.

- Check that the exterior has not been damaged in any way.
- Check that the lifting and transport devices are appropriate to the type of equipment and compliant with the transport and handling instructions attached to this manual.
- Check that the accessories required for on-site installation have been delivered and are operational.
- If the unit is provided pre-loaded with refrigerant, make sure there have been no leaks.
- Check that the equipment supplied corresponds to the order and delivery note

Product identification

The Airedale products can be identified by the **packaging label** bearing the identification data of the product and by the **technical plate** bearing the performance and technical data of your unit.

If the product is damaged, send a registered letter with the details of the problem to the shipping company within 48 working hours from delivery.

LIFTING

Before lifting the unit, place protections between the belts (or ropes and chains) and the framework to prevent damage to the structure.

CAUTION: ALWAYS USE ALL THE UNIT LIFTING POINTS PROVIDED

- Follow all safety regulations and standards
- Wear safety glasses, work gloves and safety shoes
- Pay the utmost attention to heavy and bulky equipment during lifting and handling, and when placing it on the ground.
- All panels must be tightly fixed before moving the unit
- Before lifting, check the specific weight on the technical plate.
- Use all, and only, the lifting points indicated;
- Use ropes in compliance with Standards and of equal length;
- Use a spacer in accordance with the sling (not included) see drawing
- Handle the unit with care and without sudden movements
- Do not stand under the unit during lifting

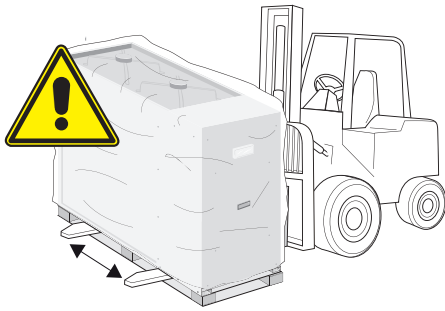
Attention: the units cannot be stacked

		AERMEC SPA via Roma, 996 37040 Bevilacqua (VR) - ITALIA Made in Italy			
Mod:			comm.		Prod. date
50 Hz		Serial no			IP
CALDO HEAT CHAUD HEIZUNG	Pt = kW Pe = kW In = A	FREDDO COLD FROID KÜHLUNG	Pf = kW Pe = kW In = A		
Imax = A		Is = A		GWP =	
PS (HP/ LP) bar				Kg	t CO ₂ eq
TS (HP/ LP) °C	Min.	C1			
	Max.	C2			
		C3			
		C4			
Contains fluorinated greenhouse gases					

		S.N. xxxxxxx-xxx by AERMEC via Roma 996 37040 - Bevilacqua (VR) - ITALIA Made in Italy			
MODELLO					
XXXXXXX					
VERSIONE / COMMESSA					
VERS. XX					
MATRICOLA / LOTTO					
					
YYMMLPPPPPPXXXX <					
kg . XX				PESO LORDO - GROSS WEIGHT POIDS BRUT - BRUTTOGEWICHT	
ACCESSORI E/O TRASFORMAZIONI					
CLIENTE					
AIREDALE INTERN.AIR CONDITIONIG					

HANDLING

ECL 0282-0302-0332-0352-0502-0552-
0602-0652-0682-0604-0654 (°-L-A-E-U-N)
ECL 0702-0752-0704-0754 (°-L-A-E)



ATTENTION

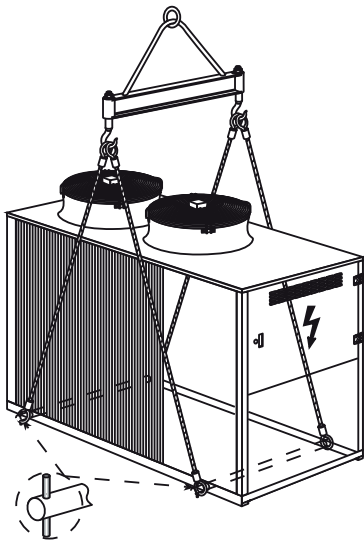
The unit comes fixed on a pallet.
Use forklifts for handling

Apart from sizes

0702 U-N, 0752 U-N, 0704 U-N, 0754 U-N

LIFTING

ECL 0282-0302-0332-0352-0502-0552-
0602-0652-0682-0604-0654 (°-L-A-E-U-N)
ECL 0702-0752-0704-0754 (°-L-A-E)



ATTENTION:

Diameter of holes $\varnothing$ 65

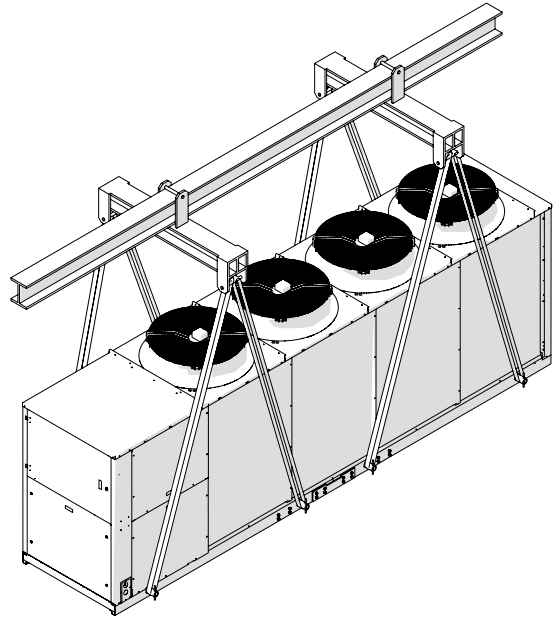


ATTENTION

Lifting rods NOT supplied.

HANDLING AND LIFTING

ECL 0702, 0752, 0704, 0754 (U-N)



ATTENTION:

Diameter of holes $\varnothing$ 65

ATTENTION:

**ONLY SIZES 0702 U-N,
0752 U-N, 0704 U-N, 0754 U-N
are supplied with poles which must be
used to lift and move them.**

STORAGE

It may happen that, after receipt, the units are not to be immediately installed and are kept in storage. In case of medium-long term storage, we recommend applying the following procedures:

- Make sure there is no water inside the hydraulic systems.
- Do not remove the protections from the heat exchanger.
- Do not remove the plastic protective films.
- Make sure that the electrical panels are closed.
- Before using the equipment, store all items provided in a dry and clean place so that they can be used in the future. We recommend storing

the unit in a dry and sheltered place (especially for units intended for indoors).

NOTE The maximum storage temperature of the units depends on the type of refrigerant contained, see table. Beyond this limit, there is a risk of refrigerant leaking through the safety valves.

Maximum storage temperature			
Refrigerant	Type	Class	Max. Temp. (°C)
R134a	HFC	A1	<50°C
R410A	HFC	A1	<50°C
R1234ze	HFO	A2L	<50°C
R513A	HFO	A1	<50°C

PLACEMENT AND INSTALLATION REQUIREMENTS

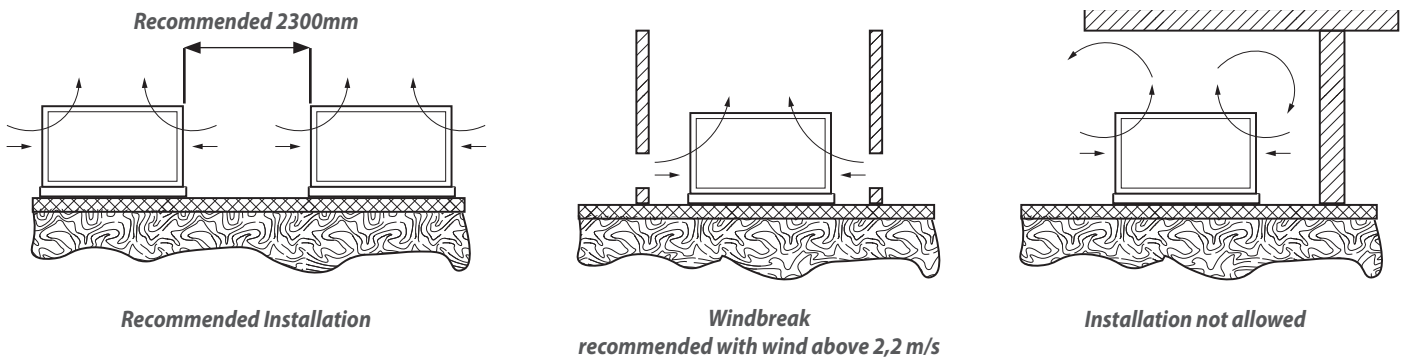
For unit installation it is important to perform the following preliminary preparation tasks:

- When installing, make sure that the atmospheric or environmental agents do not affect and corrode the cooling circuit components, causing the refrigerant to leak in the environment and, if so, make the appropriate adjustments.
- The air-cooled units with fans are designed for outdoor installation. Contact Airedale before making any type of installation.
- The water-cooled units are designed for indoor installation. Contact Airedale before making any type of installation.
- For the positioning of the air-cooled units for outdoor use, choose a place that is not exposed to excessive wind (install windbreaks if the wind speed exceeds 2.2 m/s).
- The soil under the unit must be flat, smooth and sufficiently strong to withstand the weight of the unit with a full refrigerant load, as well as the occasional presence of the normal maintenance equipment.
- In locations exposed to frost, if the unit is installed on soil, the support base must rest on concrete columns with a depth greater than the normal depth of frost of the soil. It is always advisable to build a support base separate from the main building to avoid the transmission of vibrations.
- If the machine is installed in a place potentially subject to snow accumulation or ice formations in the base, it is recommended to install the unit with at least 300 mm above the ground.
- For normal applications, the rigidity of the unit and the positioning of point loads allow for an installation that minimises vibrations. In the case of installations requiring particularly low vibration levels, **you can use the anti-vibration supports**.

ATTENTION: The use of anti-vibration supports **MUST** be combined with the installation in the unit water piping of flexible couplings. The anti-vibration supports must be fixed to the unit **BEFORE** it is earthed. Airedale is not responsible for the choice of capacity of the anti-vibration supports.

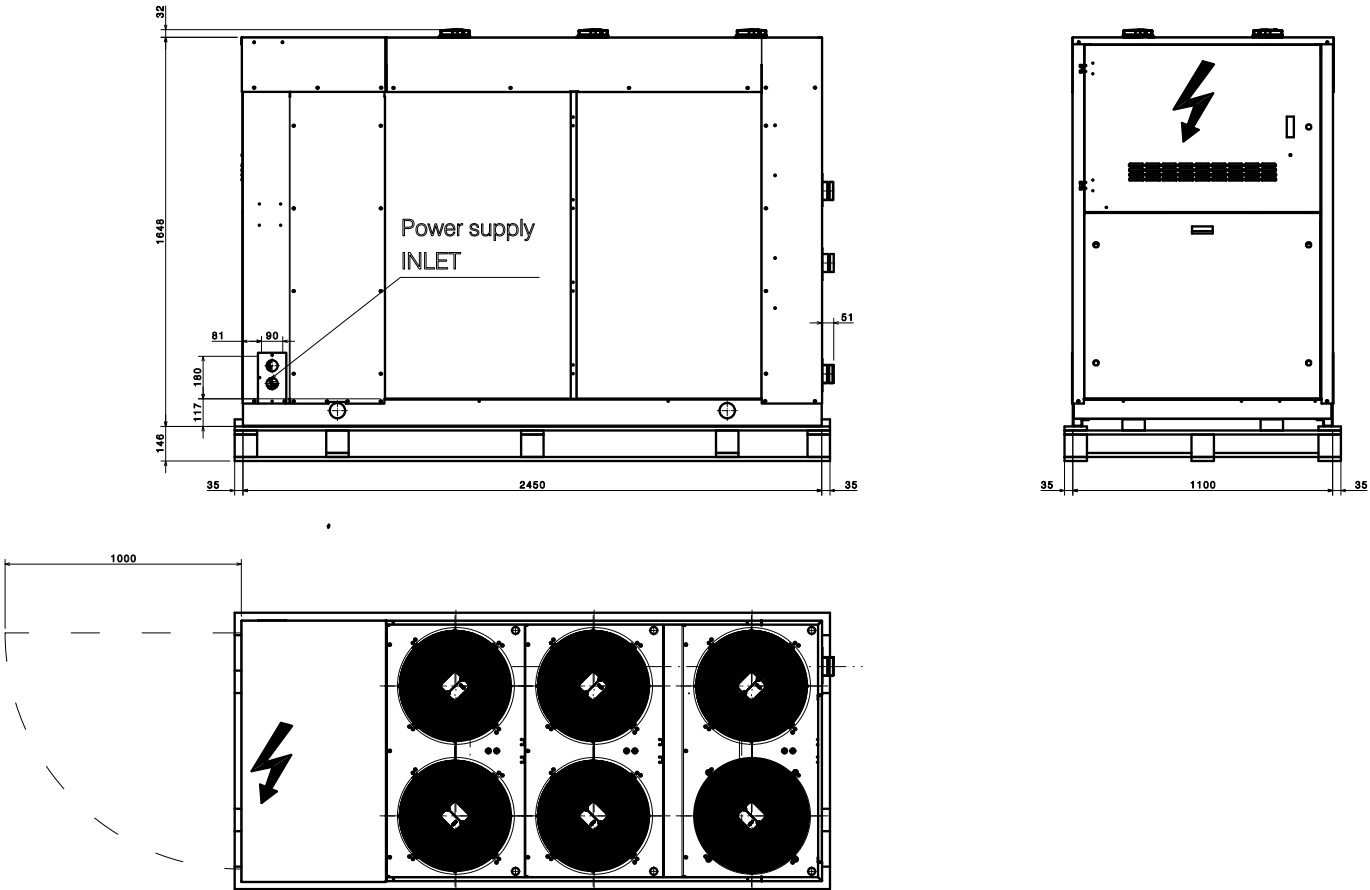
- The unit must be fixed to the anti-vibration supports and these firmly fixed to the concrete base, see chapter weight distribution and minimum technical spaces
- Check that the contact surfaces of the anti-vibration supports are levelled to the base. If necessary, use spacers or level the base but, in any case, make sure that the anti-vibration supports rest flat on the base surface.
- It is essential that the units are installed leaving sufficient space around them to allow easy access to the components for maintenance and repair purposes. Only for air-cooled devices: if the air output by the condensers encounters any obstacle, it tends to return to the fans. This leads to an increase in the temperature of the air used to cool the condensers. The obstructions at the air outlet also negatively impact the distribution of the air over the entire surface of the condenser's thermal exchange. Both of these conditions, which reduce the thermal exchange capacity of the coils, cause an increase in the condensation pressure. This leads to a loss of power and an increase in the compressor absorption.
- Only for air-cooled chillers: to prevent the air flow from inverting due to dominating winds, the units must not be completely covered by a high and continuous windbreak. If it is not possible to avoid this configuration, an air exhaust duct can be installed at the same height of the surrounding shield, upon written approval of an Airedale representative.

ATTENTION: It is important that the units are installed flat. The improper installation of the unit invalidates the warranty.

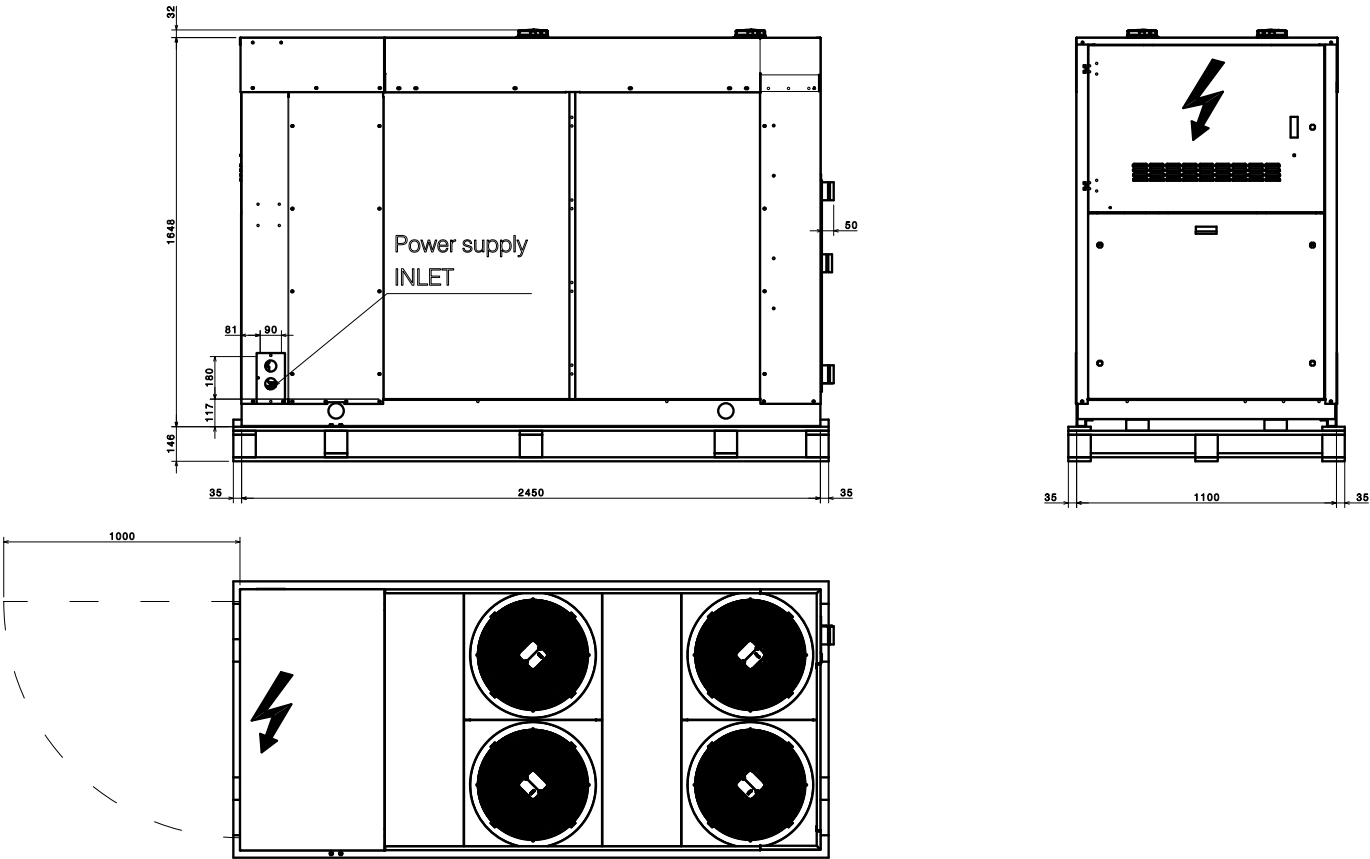


DIMENSIONS (mm)

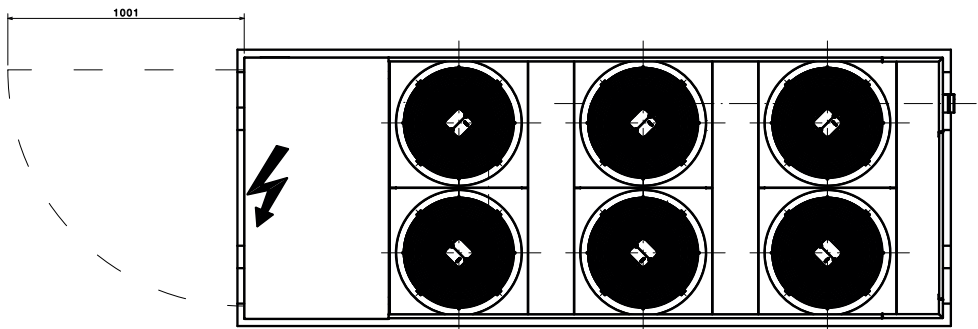
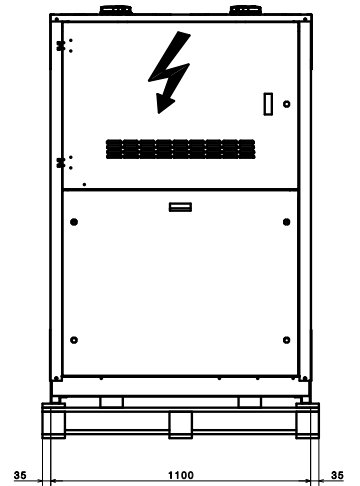
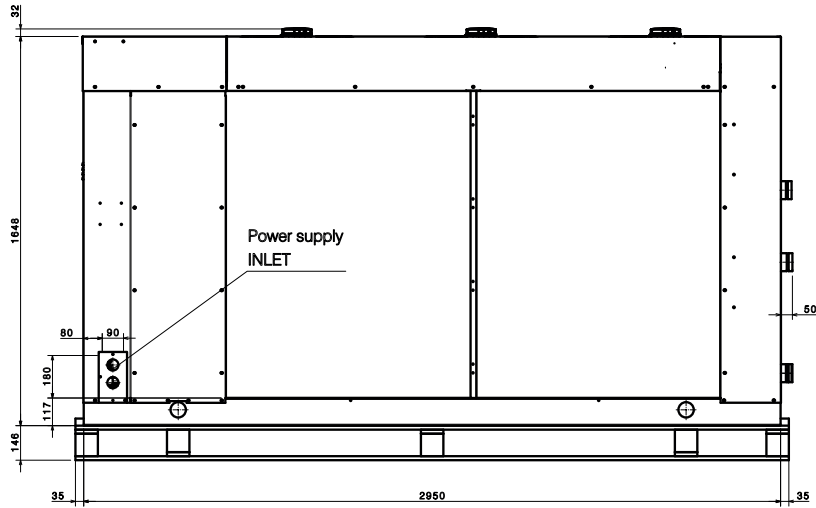
0282[E]_0302[L]



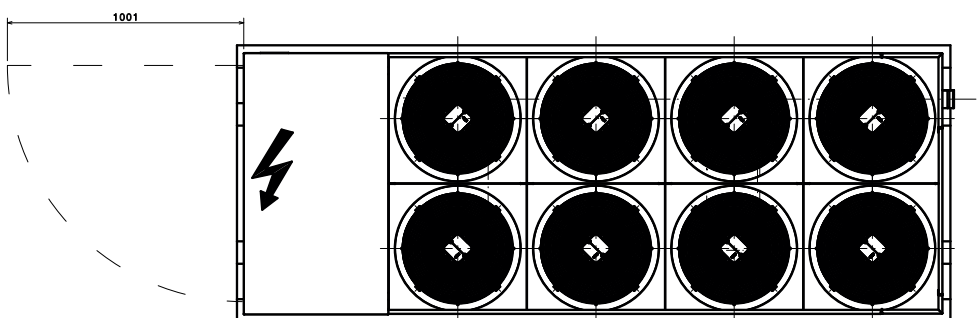
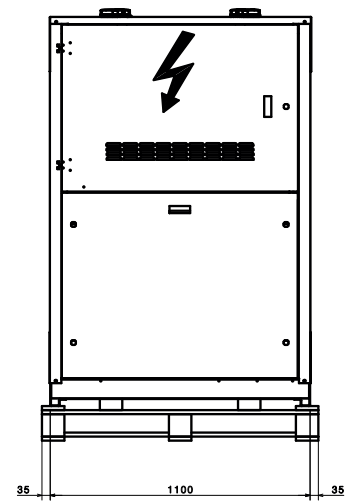
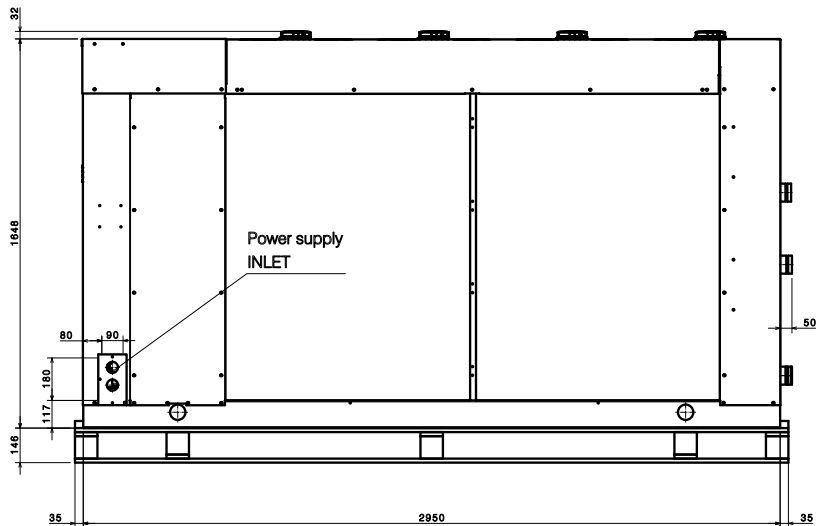
0282[L]



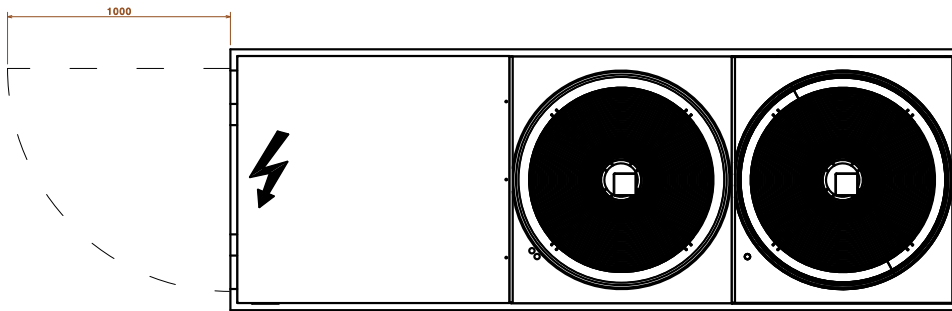
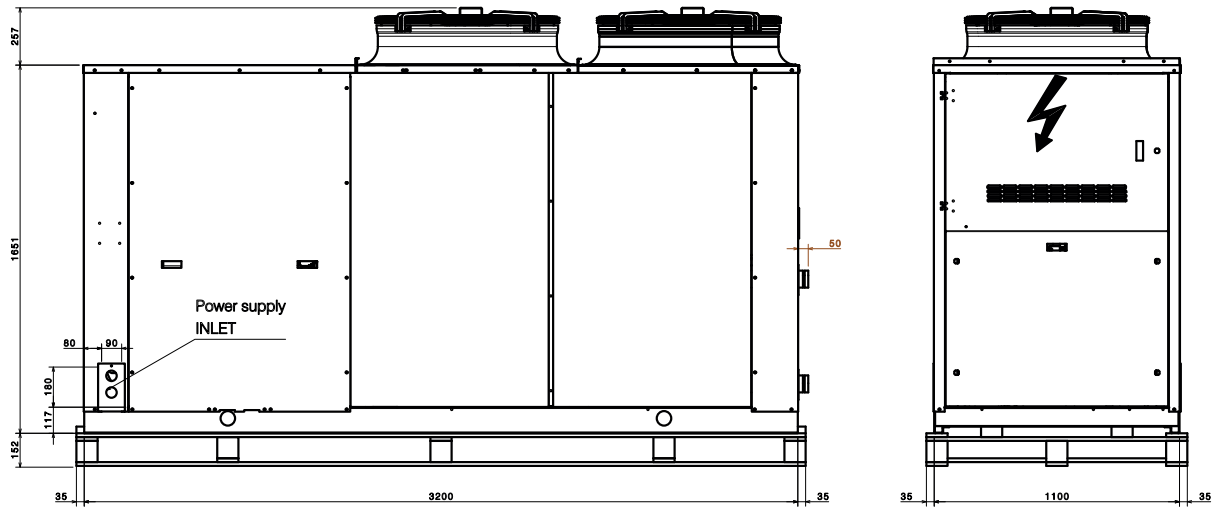
0282[N]_0302[E]_0332[L]



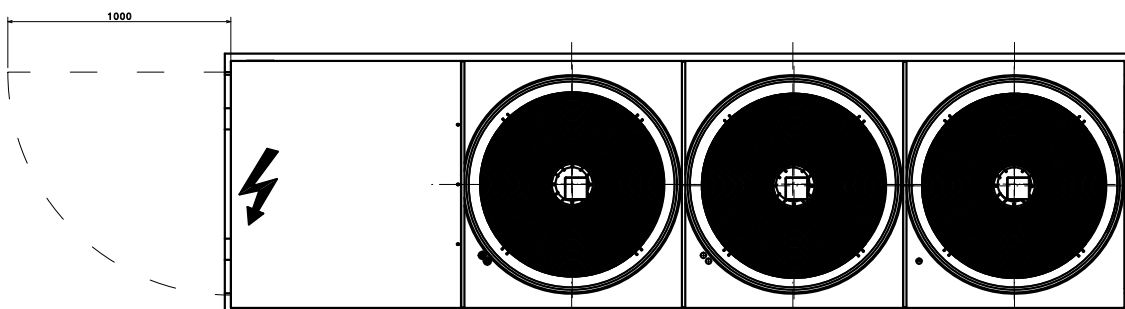
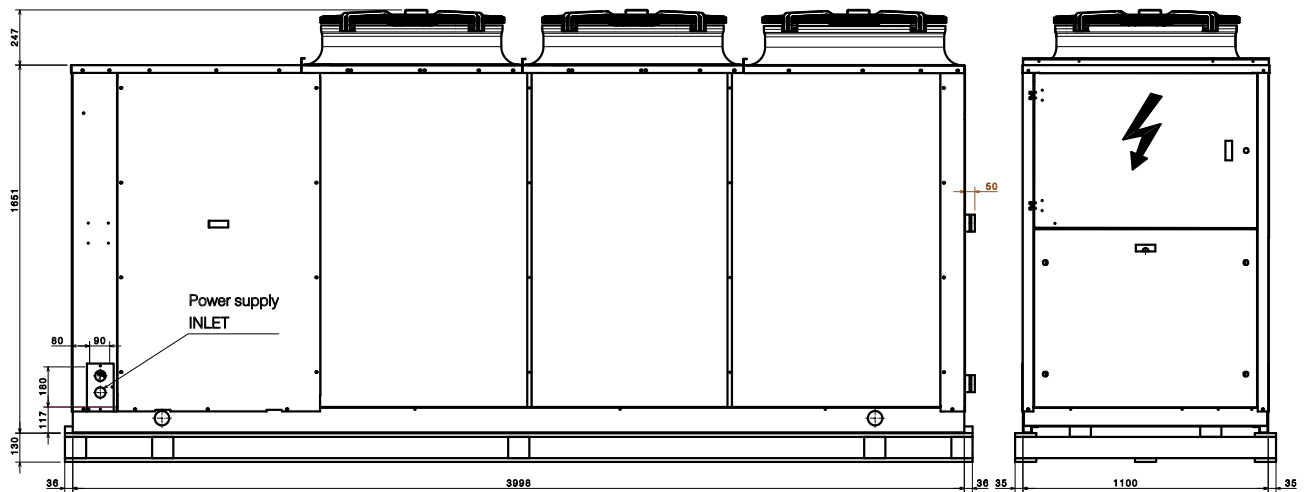
0302[N]_0332[E-N]_0352[L-E]



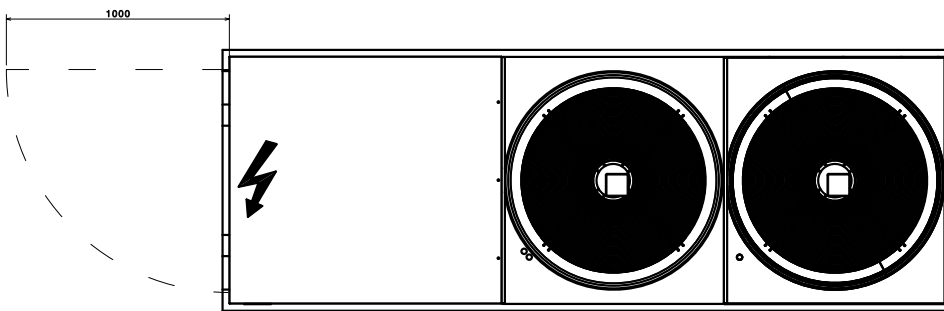
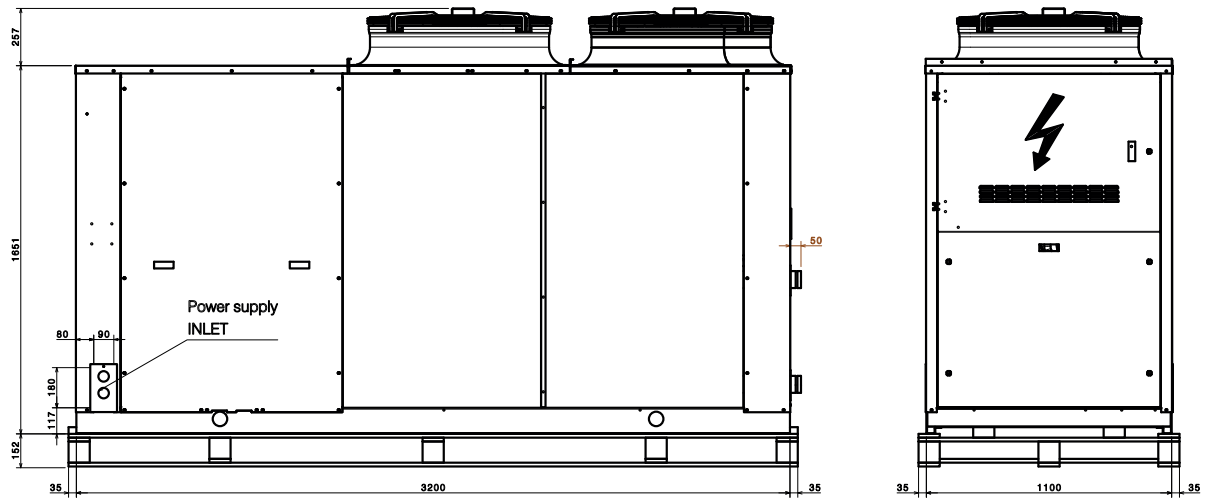
0352[N]_0502[°-L-A-E-U-N]_0552[°-L-A-E-U-N]_0602[°-L-A-E]_0652[°-L-A-E]



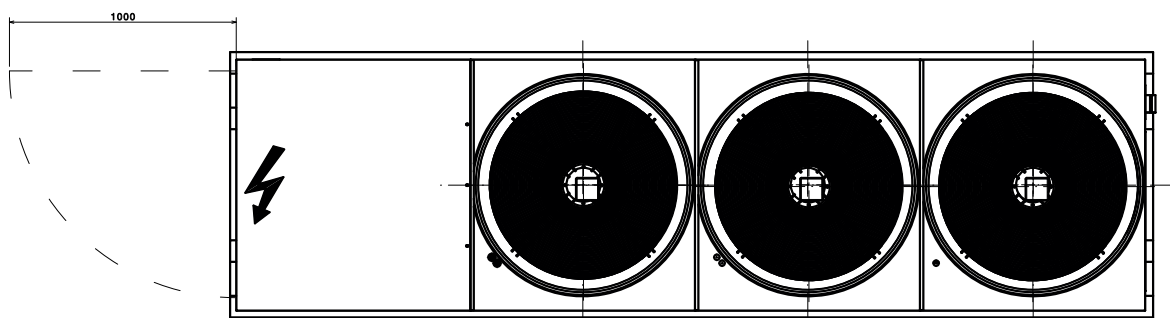
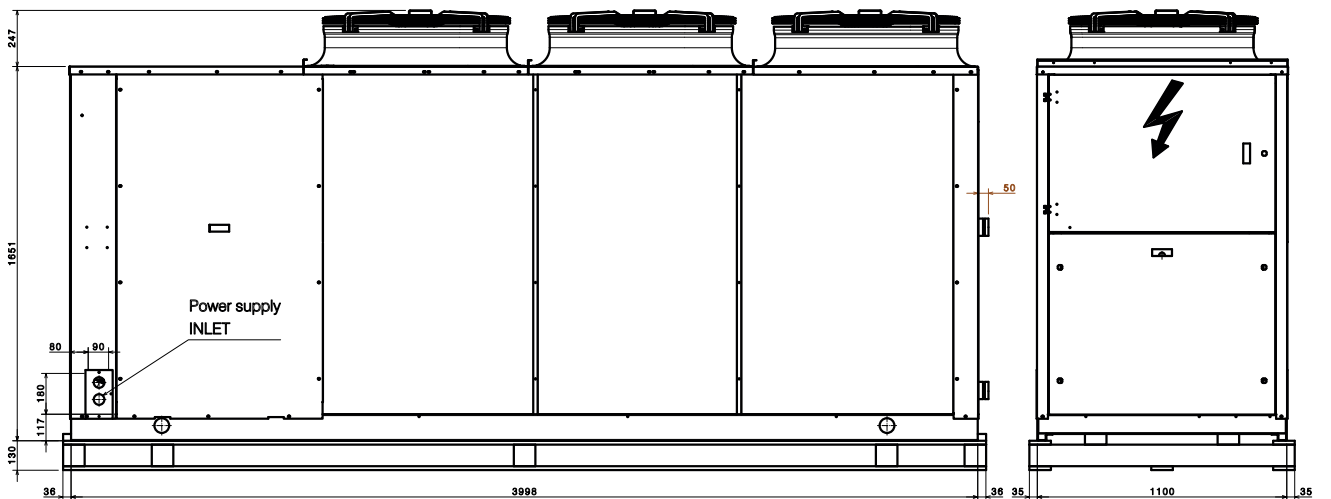
0602[U-N]_0652[U-N]_0682[°-L-A-E-U-N]_0702[°-L-A-E]_0752[°-L-A-E]



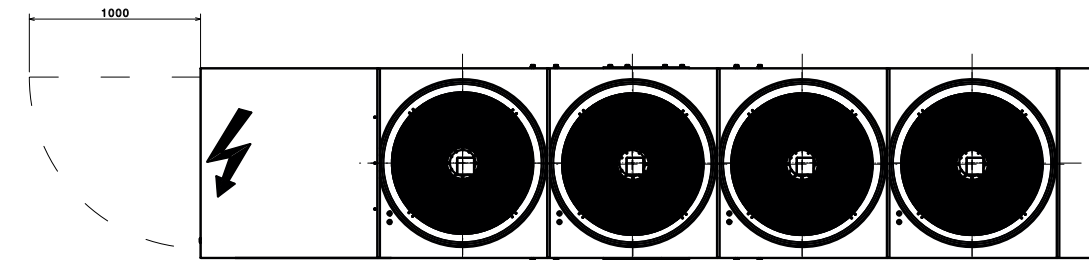
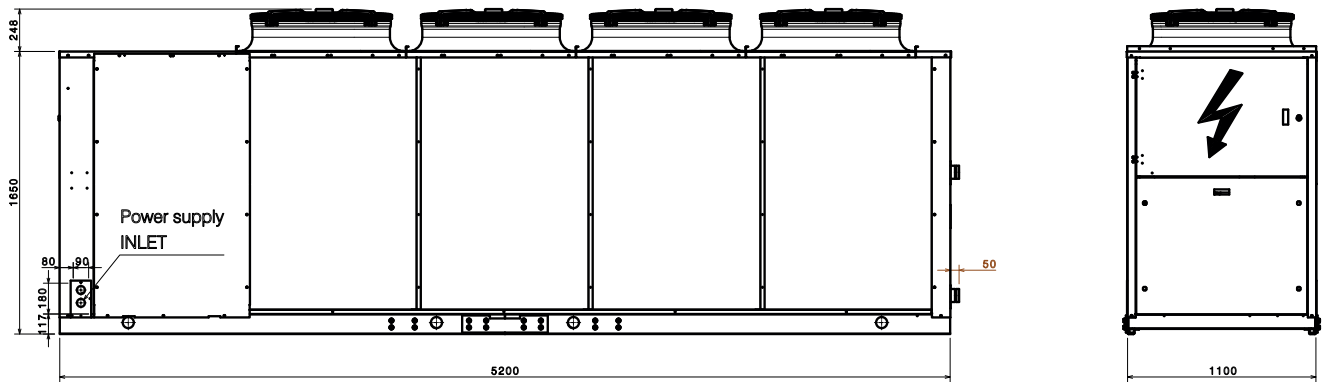
0604[°-L-A-E]_0654[°-L]



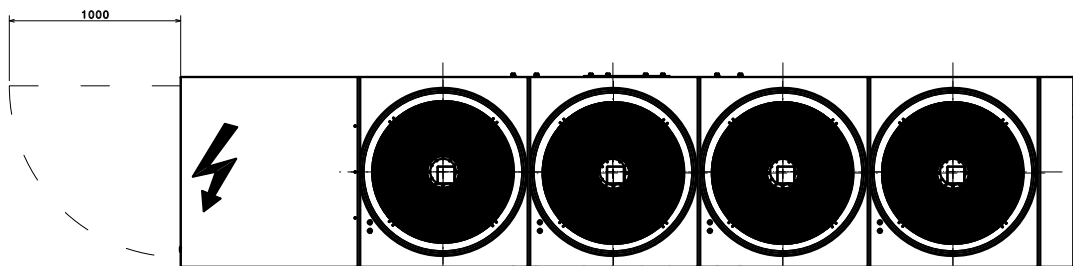
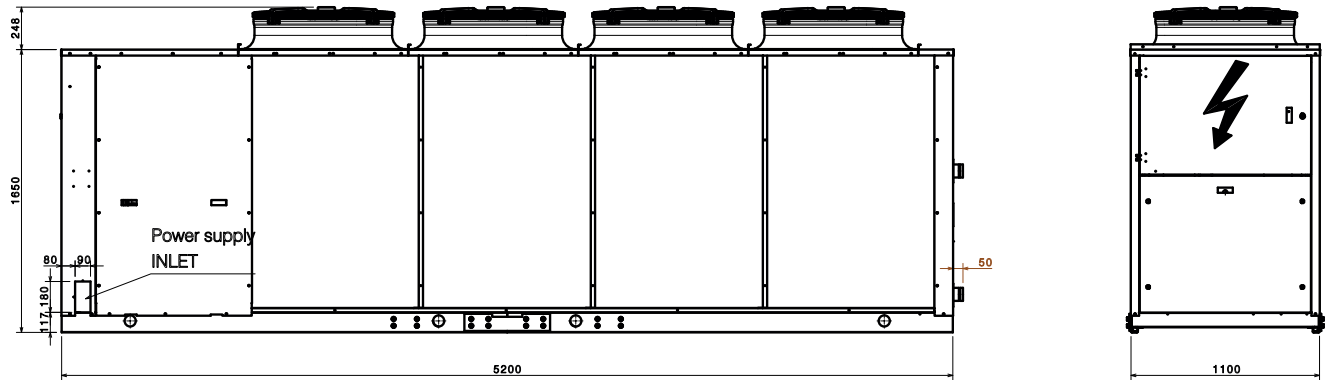
0604[U-N]_0654[A-E-U-N]_0704[°-L-A-E]_0754[°-L-A-E]



0702[U-N]_0752[U-N]

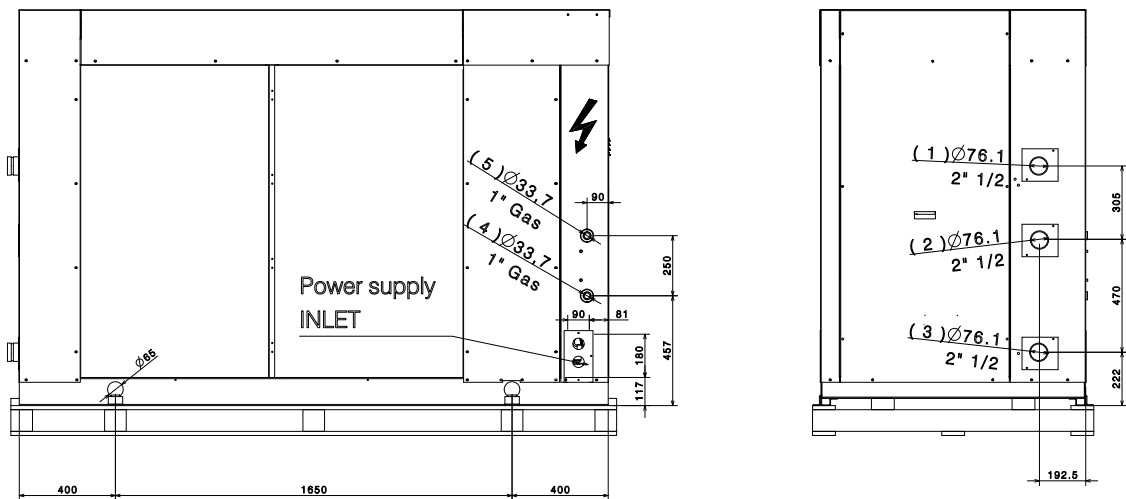


0704[U-N]_0754[U-N]



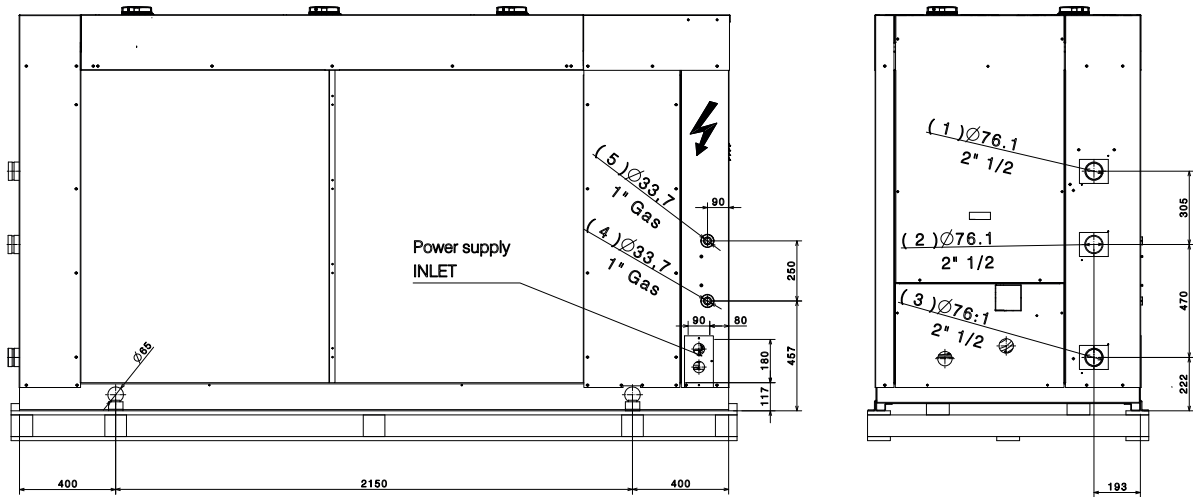
HYDRAULIC CONNECTIONS

0282[L]_ 0302[L]



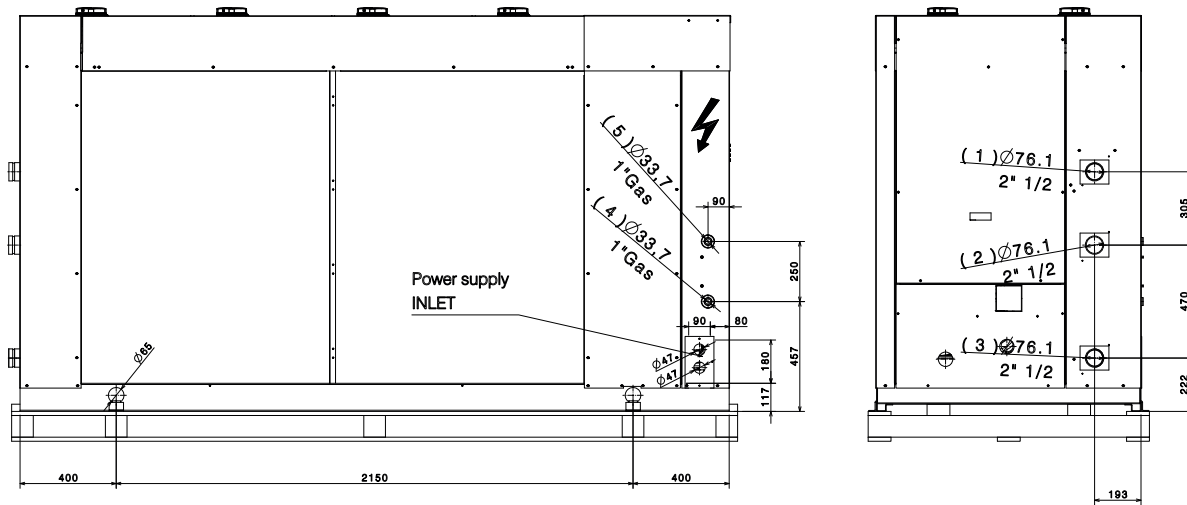
KEY		
(1)	IN 01-09 / P1-P4 / I1-I4 / K1-K4 / W1-W4	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(2)	IN 00	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(3)	OUT	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(4)	IN DESUPERHEATER	1" Gas - DN25 - 33,7 mm
(5)	OUT DESUPERHEATER	1" Gas - DN25 - 33,7 mm

0282[N]_ 0302[E]_ 0332[L]



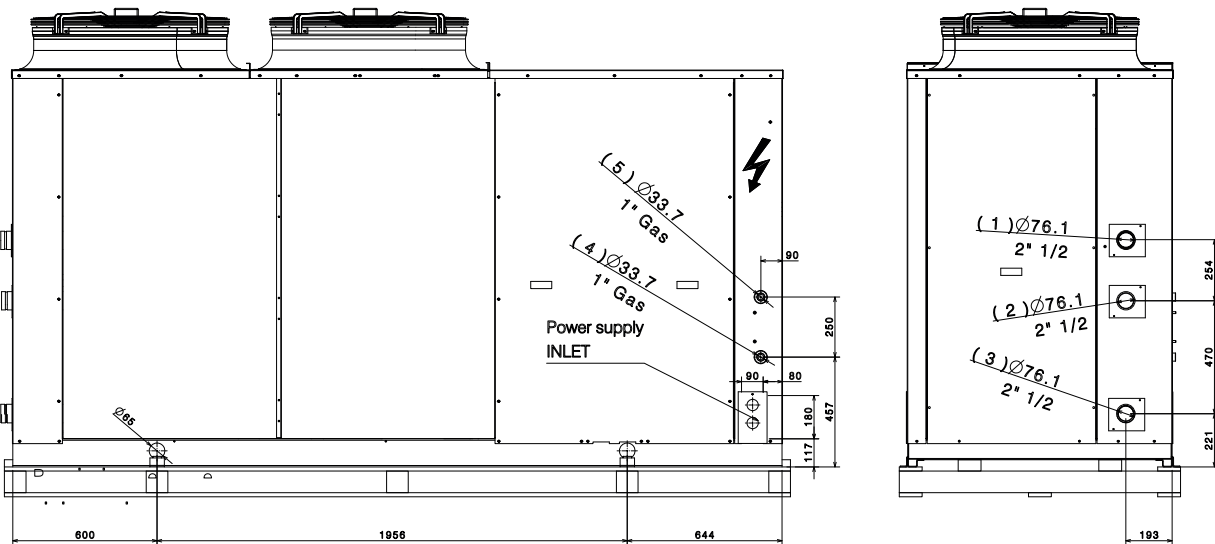
KEY		
(1)	IN 01-09 / P1-P4 / I1-I4 / K1-K4 / W1-W4	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(2)	IN 00	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(3)	OUT	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(4)	IN DESUPERHEATER	1" Gas - DN25 - 33,7 mm
(5)	OUT DESUPERHEATER	1" Gas - DN25 - 33,7 mm

0302[N]_ 0332[E-N]_ 0352[L-E]



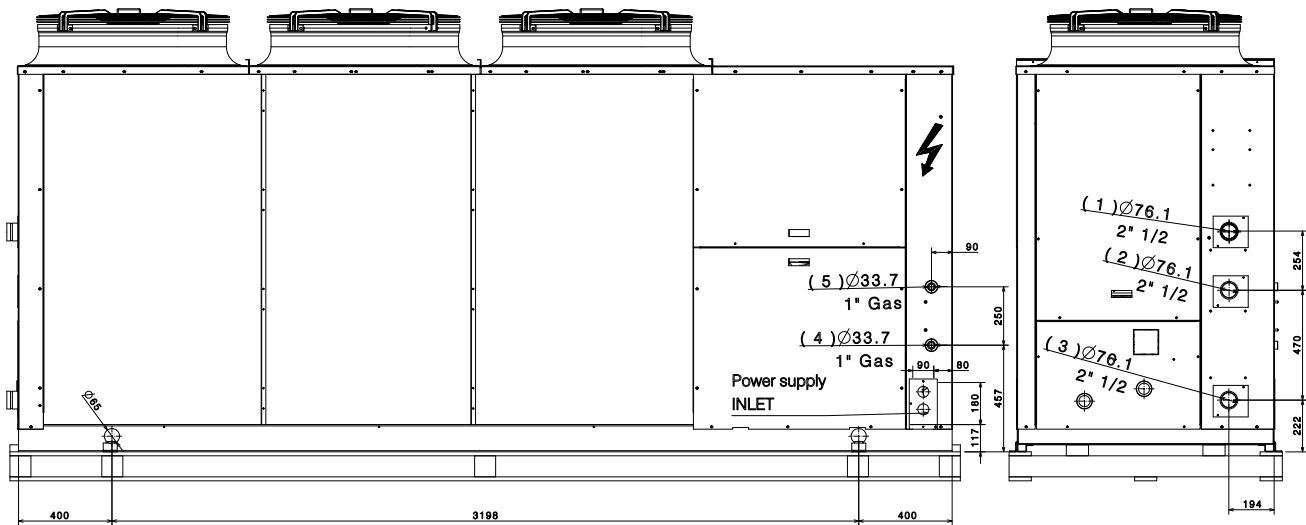
KEY		
(1)	IN 01-09 / P1-P4 / I1-I4 / K1-K4 / W1-W4	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(2)	IN 00	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(3)	OUT	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(4)	IN DESUPERHEATER	1" Gas - DN25 - 33,7 mm
(5)	OUT DESUPERHEATER	1" Gas - DN25 - 33,7 mm

0352[U-N]_ 0502[°-L-A-E-U-N]_ 0552[°-L-A-E-U-N]_ 0602[°-L-A-E]_ 0652[°-L-A-E]



KEY		
(1)	IN 01-09 / P1-P4 / I1-I4 / K1-K4 / W1-W4	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(2)	IN 00	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(3)	OUT	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(4)	IN DESUPERHEATER	1" Gas - DN25 - 33,7 mm
(5)	OUT DESUPERHEATER	1" Gas - DN25 - 33,7 mm

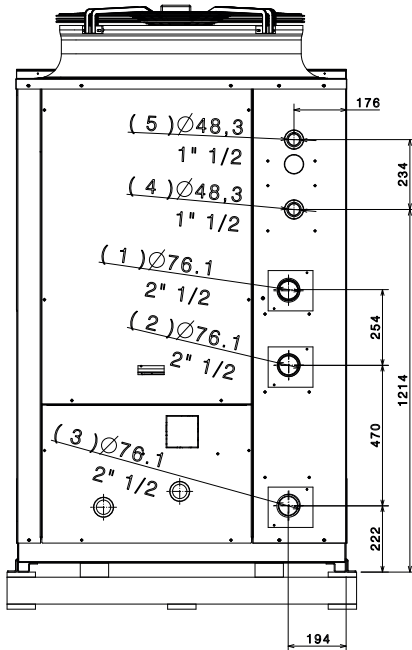
0602[U-N]_0652[U-N]



KEY

(1)	IN 01-09 / P1-P4 / I1-I4 / K1-K4 / W1-W4	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(2)	IN 00	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(3)	OUT	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(4)	IN DESUPERHEATER	1" Gas - DN25 - 33,7 mm
(5)	OUT DESUPERHEATER	1" Gas - DN25 - 33,7 mm

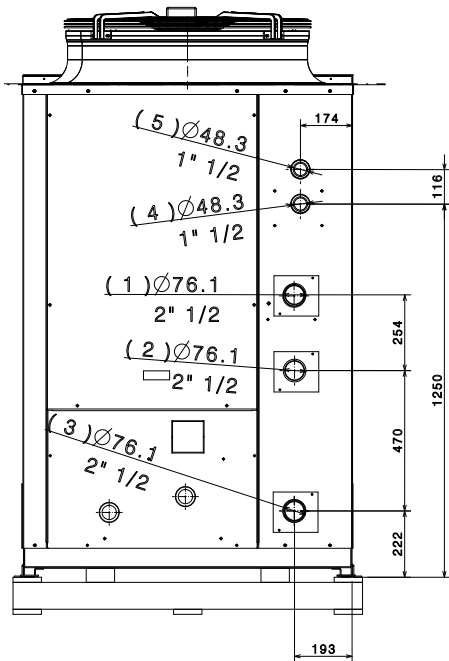
0682[°-L-A-E-U-N]_0702[°-L-A-E-U-N]_0752[°-L-A-E-U-N]



KEY

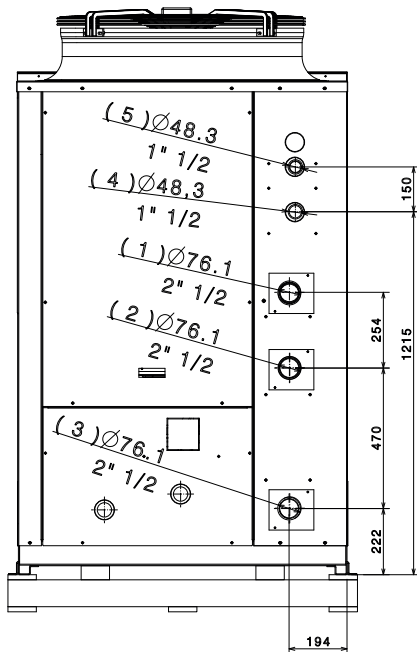
(1)	IN 01-09 / P1-P4 / I1-I4 / K1-K4 / W1-W4	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(2)	IN 00	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(3)	OUT	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(4)	IN DESUPERHEATER	Hydraulic connections with grooved joints 1"1/2 - DN40 - 48,3 mm
(5)	OUT DESUPERHEATER	Hydraulic connections with grooved joints 1"1/2 - DN40 - 48,3 mm

0604[°-L-A-E]_0654[°-L]



KEY		
(1)	IN 01-09 / P1-P4 / I1-I4 / K1-K4 / W1-W4	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(2)	IN 00	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(3)	OUT	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(4)	IN DESUPERHEATER	Hydraulic connections with grooved joints 1"1/2 - DN40 - 48,3 mm
(5)	OUT DESUPERHEATER	Hydraulic connections with grooved joints 1"1/2 - DN40 - 48,3 mm

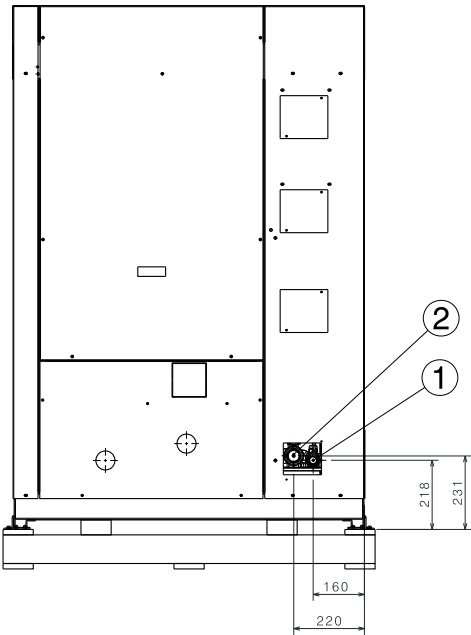
0604[U-N]_0654[A-E-U-N]_0704[°-L-A-E-U-N]_0754[°-L-A-E-U-N]



KEY		
(1)	IN 01-09 / P1-P4 / I1-I4 / K1-K4 / W1-W4	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(2)	IN 00	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(3)	OUT	Hydraulic connections with grooved joints 2"1/2 - DN65 - 76,1 mm
(4)	IN DESUPERHEATER	Hydraulic connections with grooved joints 1"1/2 - DN40 - 48,3 mm
(5)	OUT DESUPERHEATER	Hydraulic connections with grooved joints 1"1/2 - DN40 - 48,3 mm

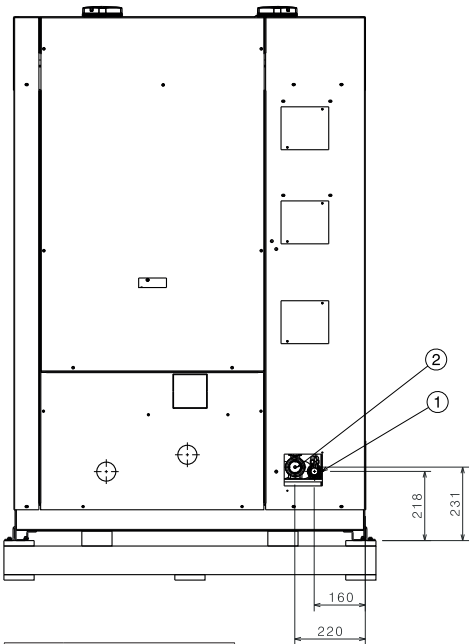
REFRIGERANT CONNECTIONS

0282 C [N]_0302 C [E]_0332 C [L]



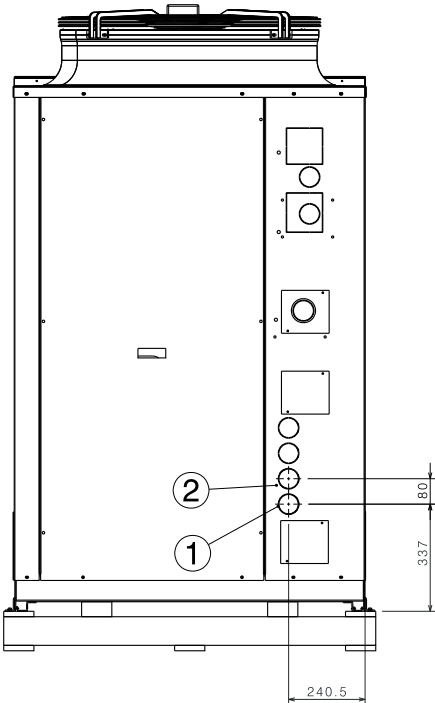
KEY	
1	Liquid line
2	Discharge line

0302 C [N]_0332 C [E-N]_0352 C [L-E]



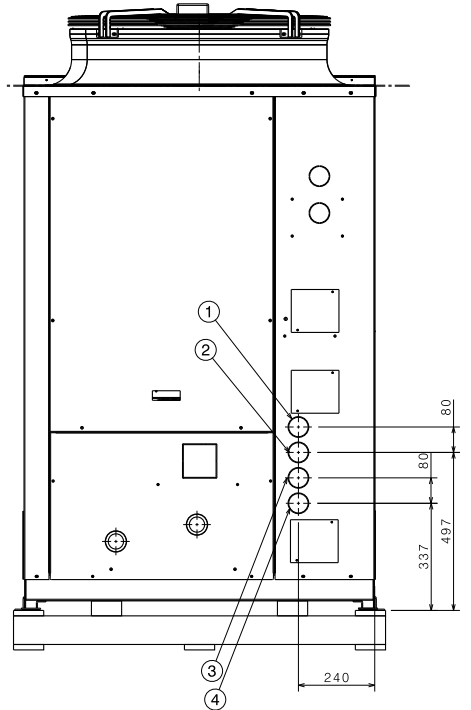
KEY	
1	Liquid line
2	Discharge line

0352 C [N]_0502 C [°-L-A-E-U-N]_0552 C [°-L-A-E-U-N]
0602 C [°-L-A-E]_0652 C [°-L-A-E]



KEY	
1	Liquid line
2	Discharge line

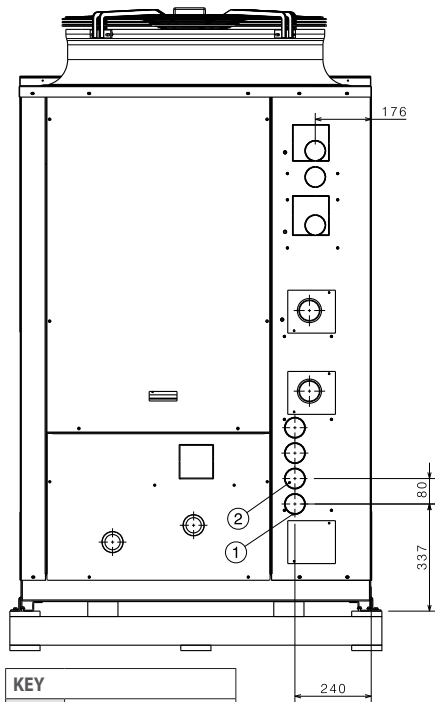
0604 C [°-L-A-E]_0654 C [°-L]



KEY		
1	Liquid line	C1
2	Discharge line	C1
3	Liquid line	C2
4	Discharge line	C2

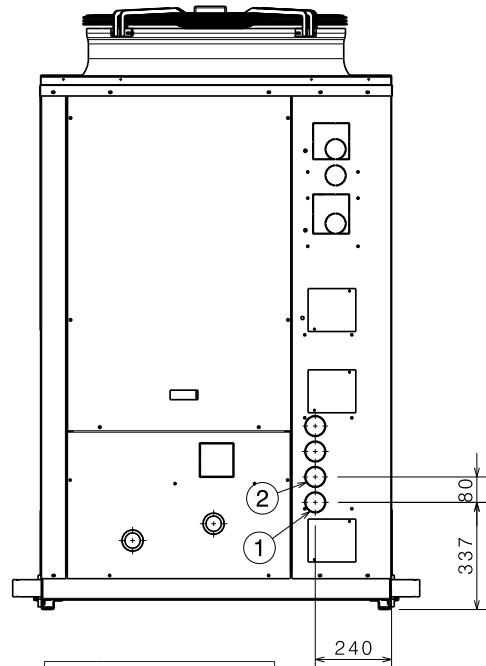
NOTE: For diameter of refrigerant connections refer to the following table (“COOLING LINES” chapter)

0602 C [U-N]_ 0652 C [U-N]_ 0682 C [°-L-A-E-U-N]
0702 C [°-L-A-E]_ 0752 C [°-L-A-E]



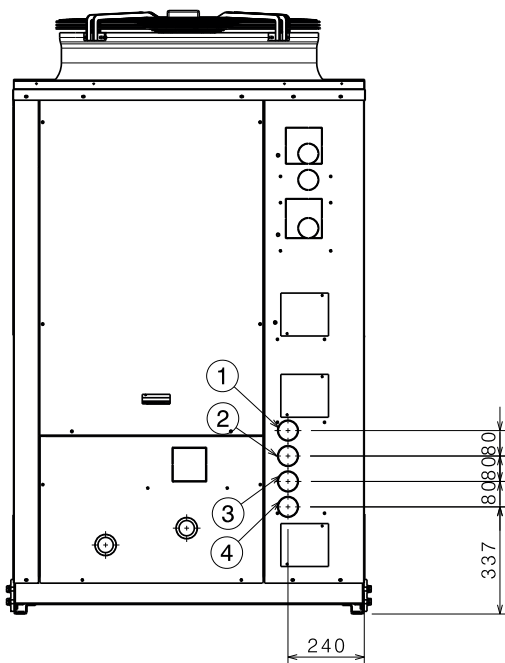
KEY	
1	Liquid line
2	Discharge line

0702 C [U-N]_ 0752 C [U-N]



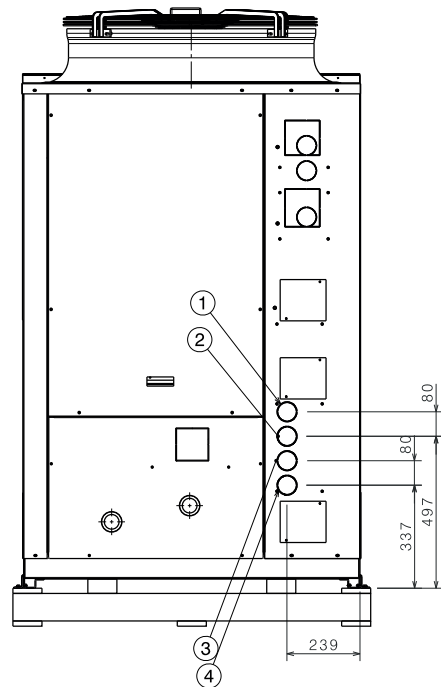
KEY	
1	Liquid line
2	Discharge line

0704 C [U-N]_ 0754 C [U-N]



KEY		
1	Liquid line	C1
2	Discharge line	C1
3	Liquid line	C2
4	Discharge line	C2

0704 C [°-L-A-E]_ 0754 C [°-L-A-E]



KEY		
1	Liquid line	C1
2	Discharge line	C1
3	Liquid line	C2
4	Discharge line	C2

For diameter of refrigerant connections refer to the following table ("COOLING LINES" chapter)

COOLING LINES

By "line length" we mean the distance between the units, measured on the liquid line.

KEY:

C1 = Cooling circuit 1

C2 = Cooling circuit 2

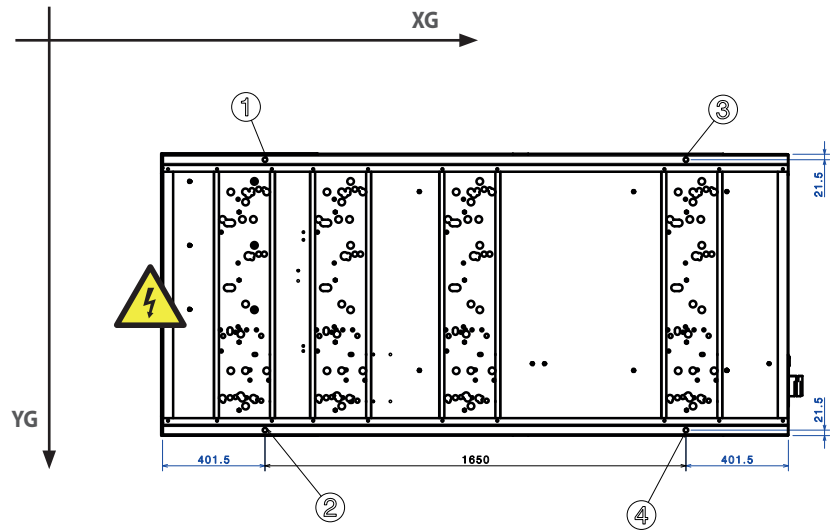
COOLING LINES							
Model	Line length [m]	Ø Suction line [mm]		Ø liquid line [mm]		Refrigerant R410A per metre of line [g/m]	Refrigerant R410A per metre of line [g/m]
		C1	C2	C1	C2	C1	C2
ECL 0282 C	0-10	35	-	22	-	318	-
	10-20	35	-	22	-	318	-
	20-30	35	-	22	-	318	-
ECL 0302 C	0-10	35	-	22	-	318	-
	10-20	35	-	22	-	318	-
	20-30	42	-	22	-	331	-
ECL 0332 C	0-10	35	-	22	-	318	-
	10-20	42	-	22	-	331	-
	20-30	42	-	22	-	331	-
ECL 0352 C	0-10	42	-	28	-	532	-
	10-20	42	-	28	-	532	-
	20-30	42	-	28	-	532	-
ECL 0502 C	0-10	42	-	28	-	532	-
	10-20	42	-	28	-	532	-
	20-30	42	-	28	-	532	-
ECL 0552 C	0-10	42	-	28	-	532	-
	10-20	42	-	28	-	532	-
	20-30	54	-	28	-	558	-
ECL 0602 C	0-10	42	-	28	-	532	-
	10-20	42	-	28	-	532	-
	20-30	54	-	28	-	558	-
ECL 0652 C	0-10	42	-	28	-	532	-
	10-20	54	-	28	-	558	-
	20-30	54	-	28	-	558	-
ECL 0682 C	0-10	54	-	35	-	811	-
	10-20	54	-	35	-	811	-
	20-30	54	-	35	-	811	-
ECL 0702 C	0-10	54	-	35	-	811	-
	10-20	54	-	35	-	811	-
	20-30	54	-	35	-	811	-
ECL 0752 C	0-10	54	-	35	-	811	-
	10-20	54	-	35	-	811	-
	20-30	54	-	35	-	811	-
ECL 0604 C	0-10	35	35	22	22	318	318
	10-20	35	35	22	22	318	318
	20-30	42	42	22	22	331	331
ECL 0654 C	0-10	35	35	22	22	318	318
	10-20	42	42	22	22	331	331
	20-30	42	42	22	22	331	331
ECL 0704 C	0-10	42	42	28	28	532	532
	10-20	42	42	28	28	532	532
	20-30	42	42	28	28	532	532
ECL 0754 C	0-10	42	42	28	28	532	532
	10-20	42	42	28	28	532	532
	20-30	42	42	28	28	532	532

External air 35°C; Evaporating temperature 4°C

WEIGHT DISTRIBUTION

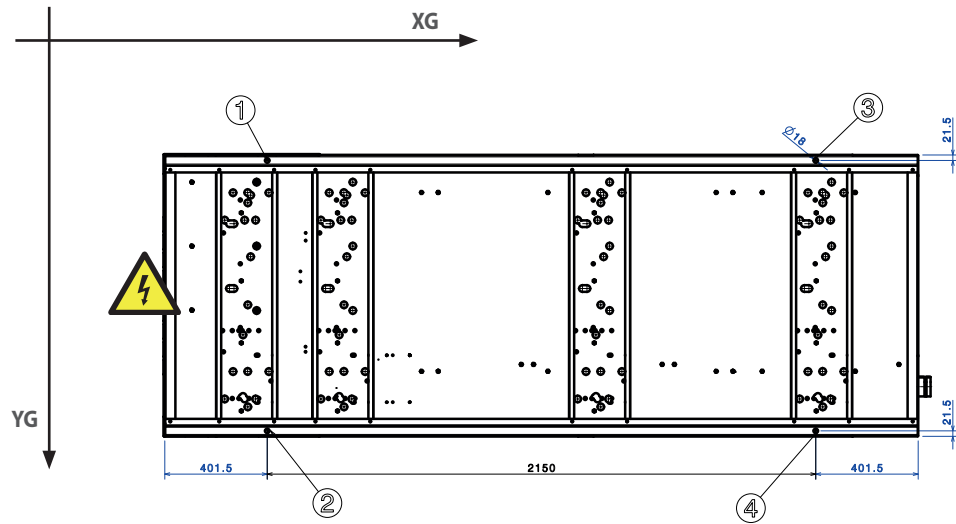
LAYOUT 1

bottom view



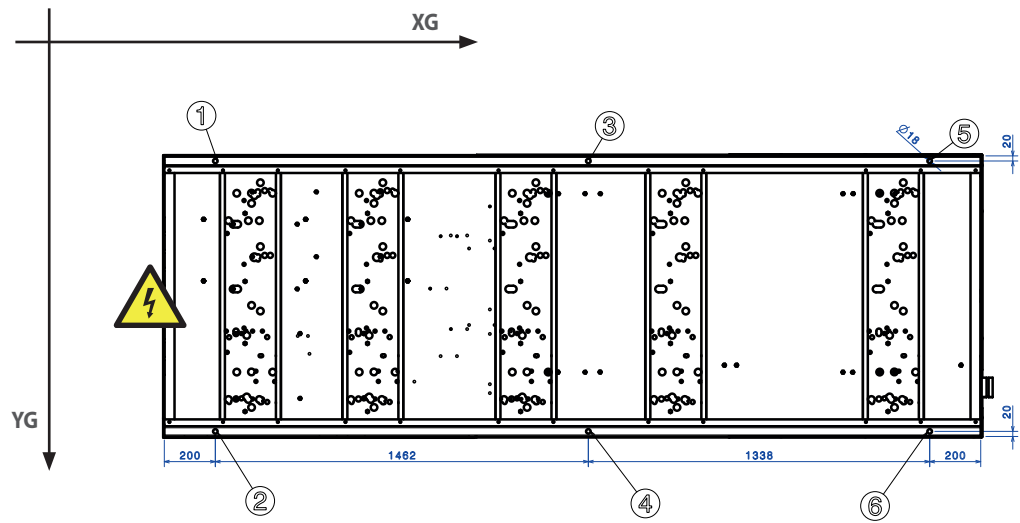
LAYOUT 2

bottom view



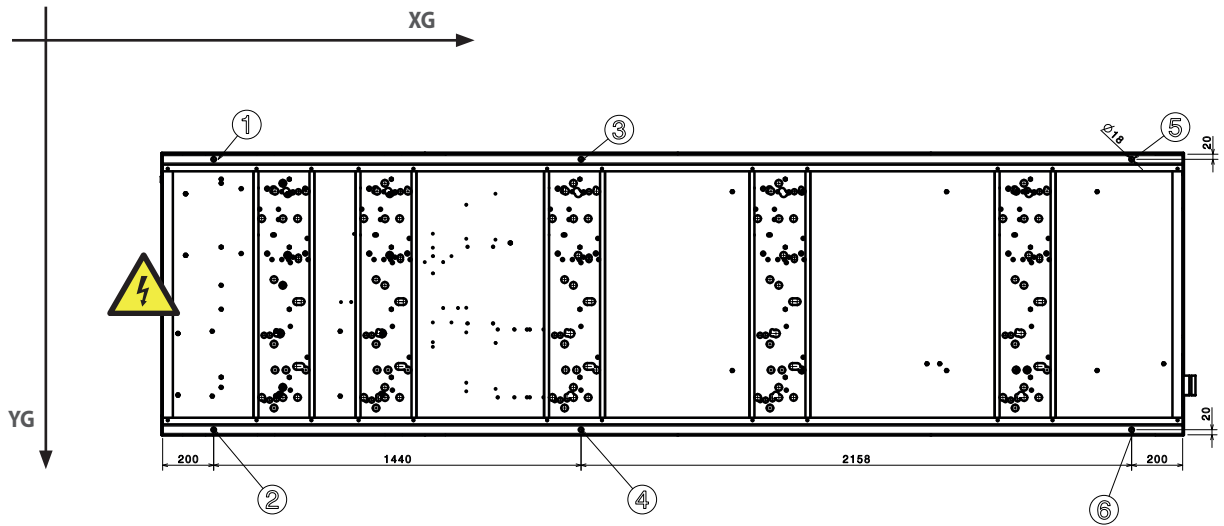
LAYOUT 3

bottom view



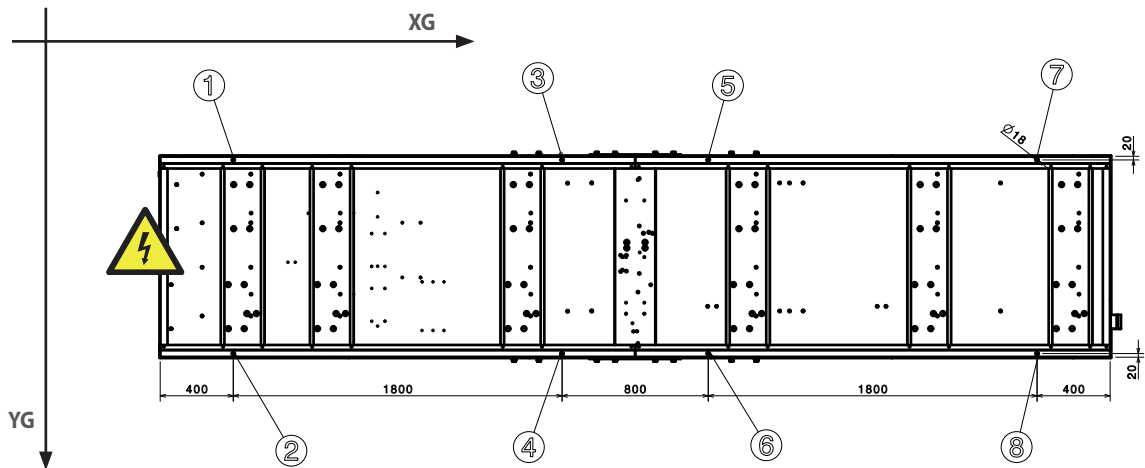
LAYOUT 4

bottom view



LAYOUT 5

bottom view



CENTRE OF GRAVITY AND ANTI-VIBRATION POSITIONS

VERSIONS °/L

Size ECL	Version	Hydronic kit	Weight	Layout *	Weight	Centre of mass		Percentage distribution of weights on supports								VT
						X	Y	1	2	3	4	5	6	7	8	
						Kg	mm	%	%	%	%	%	%	%	%	
0282	L	00	Empty weight + package	Layout 1	810	1079	569	28,4%	30,4%	19,9%	21,3%	-	-	-	-	-
0282	L	P1, P3	Empty weight + package	Layout 1	851	1150	528	28,4%	26,2%	23,7%	21,8%	-	-	-	-	-
0282	L	P2, P4	Empty weight + package	Layout 1	899	1195	526	27,0%	24,8%	25,1%	23,0%	-	-	-	-	-
0282	L	01, 03, 05, 07	Empty weight + package	Layout 1	875	1108	527	29,8%	27,4%	22,3%	20,5%	-	-	-	-	-
0282	L	02, 04, 06, 08	Empty weight + package	Layout 1	913	1128	526	29,2%	26,7%	23,0%	21,1%	-	-	-	-	-
0282	L	00	Operation weight	Layout 1	789	1103	559	28,2%	29,2%	20,9%	21,6%	-	-	-	-	VT 17
0282	L	P1, P3	Operation weight	Layout 1	830	1174	517	28,1%	25,0%	24,9%	22,1%	-	-	-	-	VT 17
0282	L	P2, P4	Operation weight	Layout 1	889	1229	516	26,4%	23,4%	26,7%	23,6%	-	-	-	-	VT 17
0282	L	01, 03, 05, 07	Operation weight	Layout 1	1133	1150	513	29,1%	25,4%	24,3%	21,2%	-	-	-	-	VT 13
0282	L	02, 04, 06, 08	Operation weight	Layout 1	1179	1165	512	28,7%	25,0%	24,8%	21,6%	-	-	-	-	VT 13
0302	L	00	Empty weight + package	Layout 1	828	1081	566	28,5%	30,2%	20,0%	21,2%	-	-	-	-	-
0302	L	P1, P3	Empty weight + package	Layout 1	869	1150	526	28,5%	26,1%	23,7%	21,7%	-	-	-	-	-
0302	L	P2, P4	Empty weight + package	Layout 1	917	1194	525	27,1%	24,7%	25,2%	23,0%	-	-	-	-	-
0302	L	01, 03, 05, 07	Empty weight + package	Layout 1	893	1109	525	29,8%	27,2%	22,4%	20,5%	-	-	-	-	-
0302	L	02, 04, 06, 08	Empty weight + package	Layout 1	931	1129	524	29,2%	26,6%	23,1%	21,1%	-	-	-	-	-
0302	L	00	Operation weight	Layout 1	807	1104	557	28,3%	29,0%	21,1%	21,6%	-	-	-	-	VT 17
0302	L	P1, P3	Operation weight	Layout 1	848	1174	516	28,2%	24,9%	24,9%	22,0%	-	-	-	-	VT 17
0302	L	P2, P4	Operation weight	Layout 1	907	1227	515	26,5%	23,3%	26,7%	23,5%	-	-	-	-	VT 17
0302	L	01, 03, 05, 07	Operation weight	Layout 1	1151	1150	512	29,2%	25,4%	24,3%	21,1%	-	-	-	-	VT 13
0302	L	02, 04, 06, 08	Operation weight	Layout 1	1197	1165	511	28,7%	24,9%	24,8%	21,6%	-	-	-	-	VT 13
0332	L	00	Empty weight + package	Layout 2	894	1285	568	28,4%	30,4%	19,9%	21,3%	-	-	-	-	-
0332	L	P1, P3	Empty weight + package	Layout 2	935	1319	529	29,7%	27,5%	22,2%	20,6%	-	-	-	-	-
0332	L	P2, P4	Empty weight + package	Layout 2	983	1353	528	29,0%	26,7%	23,0%	21,3%	-	-	-	-	-
0332	L	01, 03, 05, 07	Empty weight + package	Layout 2	958	1274	528	30,8%	28,5%	21,1%	19,5%	-	-	-	-	-
0332	L	02, 04, 06, 08	Empty weight + package	Layout 2	996	1287	527	30,6%	28,2%	21,5%	19,8%	-	-	-	-	-
0332	L	00	Operation weight	Layout 2	876	1301	557	28,7%	29,4%	20,7%	21,2%	-	-	-	-	VT 17
0332	L	P1, P3	Operation weight	Layout 2	917	1336	517	29,9%	26,6%	23,1%	20,5%	-	-	-	-	VT 17
0332	L	P2, P4	Operation weight	Layout 2	977	1376	516	29,0%	25,6%	24,1%	21,3%	-	-	-	-	VT 17
0332	L	01, 03, 05, 07	Operation weight	Layout 2	1218	1270	513	31,8%	27,8%	21,6%	18,9%	-	-	-	-	VT 13
0332	L	02, 04, 06, 08	Operation weight	Layout 2	1264	1280	512	31,6%	27,5%	21,9%	19,1%	-	-	-	-	VT 13
0352	L	00	Empty weight + package	Layout 2	907	1291	568	28,3%	30,2%	20,1%	21,4%	-	-	-	-	-
0352	L	P1, P3	Empty weight + package	Layout 2	948	1325	529	29,6%	27,4%	22,3%	20,7%	-	-	-	-	-
0352	L	P2, P4	Empty weight + package	Layout 2	996	1358	528	28,8%	26,6%	23,2%	21,4%	-	-	-	-	-
0352	L	01, 03, 05, 07	Empty weight + package	Layout 2	970	1281	529	30,7%	28,4%	21,3%	19,7%	-	-	-	-	-
0352	L	02, 04, 06, 08	Empty weight + package	Layout 2	1008	1293	528	30,4%	28,0%	21,6%	19,9%	-	-	-	-	-
0352	L	00	Operation weight	Layout 2	889	1308	556	28,6%	29,2%	20,9%	21,4%	-	-	-	-	VT 17
0352	L	P1, P3	Operation weight	Layout 2	930	1342	518	29,8%	26,5%	23,2%	20,6%	-	-	-	-	VT 17
0352	L	P2, P4	Operation weight	Layout 2	990	1381	517	28,8%	25,5%	24,2%	21,4%	-	-	-	-	VT 17
0352	L	01, 03, 05, 07	Operation weight	Layout 2	1231	1275	513	31,6%	27,7%	21,7%	19,0%	-	-	-	-	VT 13
0352	L	02, 04, 06, 08	Operation weight	Layout 2	1277	1284	513	31,4%	27,4%	22,0%	19,2%	-	-	-	-	VT 13
0502	°/L	00	Empty weight + package	Layout 3	993	1513	562	27,2%	28,4%	-	-	21,7%	22,7%	-	-	-
0502	°/L	P1, P3	Empty weight + package	Layout 3	1034	1582	529	27,0%	25,0%	-	-	24,9%	23,1%	-	-	-
0502	°/L	P2, P4	Empty weight + package	Layout 3	1074	1620	528	26,1%	24,0%	-	-	25,9%	23,9%	-	-	-
0502	°/L	01, 03, 05, 07	Empty weight + package	Layout 3	1067	1554	528	27,8%	25,7%	-	-	24,2%	22,3%	-	-	-
0502	°/L	02, 04, 06, 08	Empty weight + package	Layout 3	1105	1576	527	27,3%	25,1%	-	-	24,8%	22,8%	-	-	-
0502	°/L	00	Operation weight	Layout 3	984	1555	546	20,8%	20,5%	12,8%	12,6%	16,8%	16,6%	-	-	VT 11
0502	°/L	P1, P3	Operation weight	Layout 3	1025	1623	513	21,4%	18,7%	10,9%	9,5%	21,0%	18,4%	-	-	VT 11
0502	°/L	P2, P4	Operation weight	Layout 3	1073	1667	513	20,5%	17,9%	10,4%	9,1%	22,5%	19,6%	-	-	VT 11
0502	°/L	01, 03, 05, 07	Operation weight	Layout 3	1436	1668	509	13,8%	11,9%	24,7%	21,3%	15,3%	13,2%	-	-	VT 11
0502	°/L	02, 04, 06, 08	Operation weight	Layout 3	1482	1683	509	13,2%	11,4%	25,0%	21,5%	15,5%	13,4%	-	-	VT 11
0552	°/L	00	Empty weight + package	Layout 3	1018	1485	558	28,1%	28,9%	-	-	21,2%	21,8%	-	-	-
0552	°/L	P1, P3	Empty weight + package	Layout 3	1059	1554	526	27,9%	25,6%	-	-	24,3%	22,2%	-	-	-
0552	°/L	P2, P4	Empty weight + package	Layout 3	1099	1592	525	27,0%	24,6%	-	-	25,3%	23,1%	-	-	-
0552	°/L	01, 03, 05, 07	Empty weight + package	Layout 3	1092	1527	525	28,7%	26,2%	-	-	23,6%	21,5%	-	-	-
0552	°/L	02, 04, 06, 08	Empty weight + package	Layout 3	1130	1550	524	28,1%	25,6%	-	-	24,2%	22,1%	-	-	-

Size ECL	Version	Hydronic kit	Weight	Layout *	Centre of mass	Percentage distribution of weights on supports										VT
						X	Y	1	2	3	4	5	6	7	8	
					Kg	mm	mm	%	%	%	%	%	%	%	%	
0552	°/L	00	Operation weight	Layout 3	1009	1526	542	22,1%	21,5%	12,0%	11,6%	16,7%	16,2%	-	-	VT 11
0552	°/L	P1, P3	Operation weight	Layout 3	1050	1594	510	22,8%	19,7%	10,1%	8,7%	20,8%	18,0%	-	-	VT 11
0552	°/L	P2, P4	Operation weight	Layout 3	1098	1638	510	21,8%	18,8%	9,6%	8,3%	22,2%	19,2%	-	-	VT 11
0552	°/L	01, 03, 05, 07	Operation weight	Layout 3	1461	1645	507	14,8%	12,7%	23,9%	20,5%	15,1%	13,0%	-	-	VT 11
0552	°/L	02, 04, 06, 08	Operation weight	Layout 3	1507	1661	507	14,3%	12,2%	24,2%	20,7%	15,4%	13,2%	-	-	VT 11
0602	°/L	00	Empty weight + package	Layout 3	1075	1507	560	27,5%	28,4%	-	-	21,7%	22,4%	-	-	-
0602	°/L	P1, P3	Empty weight + package	Layout 3	1116	1571	529	27,3%	25,3%	-	-	24,6%	22,8%	-	-	-
0602	°/L	P2, P4	Empty weight + package	Layout 3	1156	1606	528	26,4%	24,4%	-	-	25,6%	23,6%	-	-	-
0602	°/L	01, 03, 05, 07	Empty weight + package	Layout 3	1150	1545	528	28,1%	25,9%	-	-	24,0%	22,1%	-	-	-
0602	°/L	02, 04, 06, 08	Empty weight + package	Layout 3	1188	1566	527	27,5%	25,3%	-	-	24,5%	22,6%	-	-	-
0602	°/L	00	Operation weight	Layout 3	1074	1549	541	20,9%	20,3%	13,2%	12,8%	16,6%	16,1%	-	-	VT 11
0602	°/L	P1, P3	Operation weight	Layout 3	1115	1612	511	21,5%	18,7%	11,5%	10,0%	20,5%	17,8%	-	-	VT 11
0602	°/L	P2, P4	Operation weight	Layout 3	1163	1653	511	20,7%	17,9%	11,0%	9,6%	21,9%	19,0%	-	-	VT 11
0602	°/L	01, 03, 05, 07	Operation weight	Layout 3	1526	1657	508	14,3%	12,3%	24,3%	20,9%	15,2%	13,0%	-	-	VT 11
0602	°/L	02, 04, 06, 08	Operation weight	Layout 3	1572	1671	508	13,7%	11,8%	24,6%	21,1%	15,4%	13,2%	-	-	VT 11
0652	°/L	00	Empty weight + package	Layout 3	1075	1507	560	27,5%	28,4%	-	-	21,7%	22,4%	-	-	-
0652	°/L	P1, P3	Empty weight + package	Layout 3	1116	1571	529	27,3%	25,3%	-	-	24,6%	22,8%	-	-	-
0652	°/L	P2, P4	Empty weight + package	Layout 3	1156	1606	528	26,4%	24,4%	-	-	25,6%	23,6%	-	-	-
0652	°/L	01, 03, 05, 07	Empty weight + package	Layout 3	1150	1545	528	28,1%	25,9%	-	-	23,9%	22,1%	-	-	-
0652	°/L	02, 04, 06, 08	Empty weight + package	Layout 3	1188	1566	527	27,5%	25,3%	-	-	24,5%	22,6%	-	-	-
0652	°/L	00	Operation weight	Layout 3	1074	1549	541	20,9%	20,3%	13,2%	12,8%	16,6%	16,1%	-	-	VT 11
0652	°/L	P1, P3	Operation weight	Layout 3	1115	1612	511	21,5%	18,7%	11,5%	10,0%	20,5%	17,8%	-	-	VT 11
0652	°/L	P2, P4	Operation weight	Layout 3	1163	1653	511	20,7%	17,9%	11,0%	9,6%	21,9%	19,0%	-	-	VT 11
0652	°/L	01, 03, 05, 07	Operation weight	Layout 3	1526	1657	508	14,3%	12,3%	24,3%	20,9%	15,2%	13,0%	-	-	VT 11
0652	°/L	02, 04, 06, 08	Operation weight	Layout 3	1572	1671	508	13,7%	11,8%	24,6%	21,1%	15,4%	13,2%	-	-	VT 11
0682	°/L	00	Empty weight + package	Layout 4	1267	1686	560	29,4%	30,4%	-	-	19,7%	20,5%	-	-	-
0682	°/L	P1, P3	Empty weight + package	Layout 4	1347	1811	531	28,9%	27,0%	-	-	22,8%	21,3%	-	-	-
0682	°/L	P2, P4	Empty weight + package	Layout 4	1426	1888	529	27,8%	25,7%	-	-	24,1%	22,4%	-	-	-
0682	°/L	01, 03, 05, 07	Empty weight + package	Layout 4	1379	1784	530	29,4%	27,4%	-	-	22,4%	20,9%	-	-	-
0682	°/L	02, 04, 06, 08	Empty weight + package	Layout 4	1456	1838	529	28,6%	26,5%	-	-	23,3%	21,6%	-	-	-
0682	°/L	00	Operation weight	Layout 4	1270	1734	541	15,4%	14,9%	23,2%	22,5%	12,2%	11,8%	-	-	VT 22
0682	°/L	P1, P3	Operation weight	Layout 4	1350	1856	514	15,2%	13,3%	22,6%	19,8%	15,5%	13,6%	-	-	VT 22
0682	°/L	P2, P4	Operation weight	Layout 4	1437	1937	513	14,0%	12,2%	22,4%	19,6%	17,0%	14,8%	-	-	VT 22
0682	°/L	01, 03, 05, 07	Operation weight	Layout 4	1758	1965	511	9,0%	7,8%	30,0%	26,0%	14,6%	12,6%	-	-	VT 22
0682	°/L	02, 04, 06, 08	Operation weight	Layout 4	1843	2002	510	8,2%	7,1%	30,4%	26,3%	15,1%	13,0%	-	-	VT 22
0702	°/L	00	Empty weight + package	Layout 4	1427	1641	569	29,5%	31,7%	-	-	18,7%	20,1%	-	-	-
0702	°/L	P1, P3	Empty weight + package	Layout 4	1507	1755	543	29,2%	28,5%	-	-	21,4%	20,9%	-	-	-
0702	°/L	P2, P4	Empty weight + package	Layout 4	1586	1827	541	28,2%	27,3%	-	-	22,7%	21,9%	-	-	-
0702	°/L	01, 03, 05, 07	Empty weight + package	Layout 4	1539	1732	542	29,6%	28,8%	-	-	21,1%	20,5%	-	-	-
0702	°/L	02, 04, 06, 08	Empty weight + package	Layout 4	1616	1783	540	28,9%	27,9%	-	-	22,0%	21,2%	-	-	-
0702	°/L	00	Operation weight	Layout 4	1430	1683	553	16,3%	16,5%	22,1%	22,3%	11,4%	11,5%	-	-	VT 22
0702	°/L	P1, P3	Operation weight	Layout 4	1510	1795	528	16,1%	14,9%	21,6%	19,9%	14,3%	13,2%	-	-	VT 22
0702	°/L	P2, P4	Operation weight	Layout 4	1597	1872	526	15,0%	13,8%	21,5%	19,7%	15,7%	14,4%	-	-	VT 22
0702	°/L	01, 03, 05, 07	Operation weight	Layout 4	1919	1908	522	10,4%	9,3%	28,5%	25,7%	13,7%	12,4%	-	-	VT 22
0702	°/L	02, 04, 06, 08	Operation weight	Layout 4	2004	1945	521	9,6%	8,6%	28,9%	26,0%	14,2%	12,8%	-	-	VT 22
0752	°/L	00	Empty weight + package	Layout 4	1440	1630	567	29,8%	31,7%	-	-	18,6%	19,8%	-	-	-
0752	°/L	P1, P3	Empty weight + package	Layout 4	1520	1744	541	29,5%	28,5%	-	-	21,3%	20,7%	-	-	-
0752	°/L	P2, P4	Empty weight + package	Layout 4	1599	1816	539	28,4%	27,3%	-	-	22,6%	21,7%	-	-	-
0752	°/L	01, 03, 05, 07	Empty weight + package	Layout 4	1552	1721	540	29,9%	28,8%	-	-	21,0%	20,3%	-	-	-
0752	°/L	02, 04, 06, 08	Empty weight + package	Layout 4	1629	1772	539	29,2%	28,0%	-	-	21,9%	21,0%	-	-	-
0752	°/L	00	Operation weight	Layout 4	1443	1672	551	16,6%	16,7%	21,9%	22,0%	11,3%	11,4%	-	-	VT 22
0752	°/L	P1, P3	Operation weight	Layout 4	1523	1784	526	16,5%	15,1%	21,5%	19,7%	14,2%	13,1%	-	-	VT 22
0752	°/L	P2, P4	Operation weight	Layout 4	1610	1860	525	15,3%	14,0%	21,4%	19,5%	15,6%	14,2%	-	-	VT 22
0752	°/L	01, 03, 05, 07	Operation weight	Layout 4	1932	1898	521	10,7%	9,6%	28,3%	25,5%	13,7%	12,3%	-	-	VT 22
0752	°/L	02, 04, 06, 08	Operation weight	Layout 4	2017	1935	520	9,9%	8,8%	28,7%	25,7%	14,2%	12,7%	-	-	VT 22

Size ECL	Version	Hydronic kit	Weight	Layout*	Weight	Centre of mass		Percentage distribution of weights on supports								VT
						X	Y	1	2	3	4	5	6	7	8	
					Kg	mm	mm	%	%	%	%	%	%	%	%	
0604	°/L	00	Empty weight + package	Layout 3	1160	1435	577	28,3%	31,2%	-	-	19,2%	21,2%	-	-	-
0604	°/L	P1, P3	Empty weight + package	Layout 3	1201	1497	548	28,3%	28,1%	-	-	21,9%	21,7%	-	-	-
0604	°/L	P2, P4	Empty weight + package	Layout 3	1241	1533	546	27,5%	27,1%	-	-	22,9%	22,6%	-	-	-
0604	°/L	01, 03, 05, 07	Empty weight + package	Layout 3	1235	1475	547	28,9%	28,6%	-	-	21,4%	21,1%	-	-	-
0604	°/L	02, 04, 06, 08	Empty weight + package	Layout 3	1273	1497	545	28,5%	28,0%	-	-	22,0%	21,6%	-	-	-
0604	°/L	00	Operation weight	Layout 3	1155	1472	562	23,0%	24,0%	10,8%	11,2%	15,1%	15,8%	-	-	VT 11
0604	°/L	P1, P3	Operation weight	Layout 3	1196	1534	533	23,7%	22,3%	9,2%	8,7%	18,7%	17,5%	-	-	VT 11
0604	°/L	P2, P4	Operation weight	Layout 3	1244	1575	532	22,8%	21,3%	8,9%	8,3%	20,0%	18,7%	-	-	VT 11
0604	°/L	01, 03, 05, 07	Operation weight	Layout 3	1607	1596	524	16,5%	15,0%	21,6%	19,7%	14,2%	12,9%	-	-	VT 11
0604	°/L	02, 04, 06, 08	Operation weight	Layout 3	1653	1612	524	15,9%	14,5%	22,0%	20,0%	14,5%	13,2%	-	-	VT 11
0654	°/L	00	Empty weight + package	Layout 3	1210	1442	577	28,2%	31,1%	-	-	19,4%	21,4%	-	-	-
0654	°/L	P1, P3	Empty weight + package	Layout 3	1251	1501	549	28,1%	28,1%	-	-	21,9%	21,9%	-	-	-
0654	°/L	P2, P4	Empty weight + package	Layout 3	1291	1535	548	27,3%	27,1%	-	-	22,9%	22,7%	-	-	-
0654	°/L	01, 03, 05, 07	Empty weight + package	Layout 3	1285	1480	548	28,8%	28,5%	-	-	21,4%	21,3%	-	-	-
0654	°/L	02, 04, 06, 08	Empty weight + package	Layout 3	1323	1500	546	28,3%	27,9%	-	-	22,0%	21,7%	-	-	-
0654	°/L	00	Operation weight	Layout 3	1212	1481	559	22,6%	23,3%	11,6%	12,0%	15,0%	15,5%	-	-	VT 11
0654	°/L	P1, P3	Operation weight	Layout 3	1253	1539	532	23,2%	21,7%	10,1%	9,5%	18,4%	17,2%	-	-	VT 11
0654	°/L	P2, P4	Operation weight	Layout 3	1301	1578	531	22,3%	20,8%	9,7%	9,1%	19,6%	18,3%	-	-	VT 11
0654	°/L	01, 03, 05, 07	Operation weight	Layout 3	1664	1598	524	16,3%	14,8%	21,9%	19,9%	14,1%	12,9%	-	-	VT 11
0654	°/L	02, 04, 06, 08	Operation weight	Layout 3	1710	1613	524	15,8%	14,3%	22,2%	20,2%	14,4%	13,1%	-	-	VT 11
0704	°/L	00	Empty weight + package	Layout 4	1331	1754	568	27,9%	29,8%	-	-	20,5%	21,8%	-	-	-
0704	°/L	P1, P3	Empty weight + package	Layout 4	1411	1871	540	27,5%	26,5%	-	-	23,4%	22,6%	-	-	-
0704	°/L	P2, P4	Empty weight + package	Layout 4	1490	1941	538	26,5%	25,3%	-	-	24,6%	23,5%	-	-	-
0704	°/L	01, 03, 05, 07	Empty weight + package	Layout 4	1443	1844	539	28,0%	26,9%	-	-	23,0%	22,1%	-	-	-
0704	°/L	02, 04, 06, 08	Empty weight + package	Layout 4	1520	1892	537	27,3%	26,1%	-	-	23,9%	22,8%	-	-	-
0704	°/L	00	Operation weight	Layout 4	1330	1797	552	12,7%	12,8%	25,1%	25,2%	12,1%	12,1%	-	-	VT 22
0704	°/L	P1, P3	Operation weight	Layout 4	1410	1912	525	12,6%	11,5%	24,5%	22,3%	15,2%	13,9%	-	-	VT 22
0704	°/L	P2, P4	Operation weight	Layout 4	1497	1987	523	11,6%	10,5%	24,2%	21,9%	16,6%	15,1%	-	-	VT 22
0704	°/L	01, 03, 05, 07	Operation weight	Layout 4	1818	2005	519	7,3%	6,5%	31,1%	27,8%	14,4%	12,9%	-	-	VT 22
0704	°/L	02, 04, 06, 08	Operation weight	Layout 4	1903	2039	518	6,6%	5,8%	31,4%	28,0%	14,9%	13,3%	-	-	VT 22
0754	°/L	00	Empty weight + package	Layout 4	1392	1699	566	28,8%	30,6%	-	-	19,7%	20,9%	-	-	-
0754	°/L	P1, P3	Empty weight + package	Layout 4	1472	1814	540	28,4%	27,4%	-	-	22,5%	21,7%	-	-	-
0754	°/L	P2, P4	Empty weight + package	Layout 4	1551	1885	538	27,4%	26,2%	-	-	23,7%	22,7%	-	-	-
0754	°/L	01, 03, 05, 07	Empty weight + package	Layout 4	1504	1789	539	28,9%	27,7%	-	-	22,2%	21,3%	-	-	-
0754	°/L	02, 04, 06, 08	Empty weight + package	Layout 4	1581	1839	537	28,2%	26,9%	-	-	23,0%	21,9%	-	-	-
0754	°/L	00	Operation weight	Layout 4	1403	1747	547	14,1%	14,0%	24,5%	24,2%	11,7%	11,5%	-	-	VT 22
0754	°/L	P1, P3	Operation weight	Layout 4	1483	1858	521	14,0%	12,6%	23,9%	21,5%	14,7%	13,3%	-	-	VT 22
0754	°/L	P2, P4	Operation weight	Layout 4	1570	1933	520	13,0%	11,6%	23,7%	21,2%	16,1%	14,4%	-	-	VT 22
0754	°/L	01, 03, 05, 07	Operation weight	Layout 4	1891	1959	517	8,5%	7,6%	30,4%	27,0%	14,0%	12,4%	-	-	VT 22
0754	°/L	02, 04, 06, 08	Operation weight	Layout 4	1976	1994	516	7,8%	6,9%	30,8%	27,2%	14,5%	12,8%	-	-	VT 22

* For specific measurements of every layout please refer to the "Weight distribution" chapter.

CENTRE OF GRAVITY AND ANTI-VIBRATION POSITIONS

VERSIONS A/E

Size ECL	Version	Hydronic kit	Weight	Layout *	Weight	Centre of mass		Percentage distribution of weights on supports								VT
						X	Y	1	2	3	4	5	6	7	8	
					Kg	mm	mm	%	%	%	%	%	%	%	%	
0282	E	00	Empty weight + package	Layout 1	828	1084	570	28,2%	30,3%	20,0%	21,5%	-	-	-	-	-
0282	E	P1, P3	Empty weight + package	Layout 1	869	1153	530	28,2%	26,2%	23,7%	22,0%	-	-	-	-	-
0282	E	P2, P4	Empty weight + package	Layout 1	917	1197	528	26,9%	24,8%	25,1%	23,2%	-	-	-	-	-
0282	E	01, 03, 05, 07	Empty weight + package	Layout 1	893	1112	529	29,5%	27,3%	22,4%	20,7%	-	-	-	-	-
0282	E	02, 04, 06, 08	Empty weight + package	Layout 1	931	1132	528	28,9%	26,7%	23,1%	21,3%	-	-	-	-	-
0282	E	00	Operation weight	Layout 1	812	1109	558	28,1%	28,9%	21,2%	21,8%	-	-	-	-	VT 17
0282	E	P1, P3	Operation weight	Layout 1	853	1178	517	28,0%	24,8%	25,0%	22,2%	-	-	-	-	VT 17
0282	E	P2, P4	Operation weight	Layout 1	912	1231	516	26,3%	23,3%	26,7%	23,6%	-	-	-	-	VT 17
0282	E	01, 03, 05, 07	Operation weight	Layout 1	1156	1153	513	29,0%	25,3%	24,4%	21,3%	-	-	-	-	VT 13
0282	E	02, 04, 06, 08	Operation weight	Layout 1	1202	1168	512	28,5%	24,9%	24,9%	21,7%	-	-	-	-	VT 13
0302	E	00	Empty weight + package	Layout 2	889	1290	568	28,3%	30,3%	20,0%	21,4%	-	-	-	-	-
0302	E	P1, P3	Empty weight + package	Layout 2	930	1325	529	29,6%	27,4%	22,3%	20,7%	-	-	-	-	-
0302	E	P2, P4	Empty weight + package	Layout 2	978	1358	528	28,8%	26,6%	23,2%	21,4%	-	-	-	-	-
0302	E	01, 03, 05, 07	Empty weight + package	Layout 2	953	1280	528	30,7%	28,4%	21,3%	19,7%	-	-	-	-	-
0302	E	02, 04, 06, 08	Empty weight + package	Layout 2	991	1292	527	30,5%	28,1%	21,6%	19,9%	-	-	-	-	-
0302	E	00	Operation weight	Layout 2	871	1307	557	28,6%	29,3%	20,8%	21,3%	-	-	-	-	VT 17
0302	E	P1, P3	Operation weight	Layout 2	912	1341	517	29,8%	26,4%	23,2%	20,6%	-	-	-	-	VT 17
0302	E	P2, P4	Operation weight	Layout 2	972	1382	516	28,8%	25,5%	24,2%	21,4%	-	-	-	-	VT 17
0302	E	01, 03, 05, 07	Operation weight	Layout 2	1213	1274	513	31,7%	27,7%	21,7%	18,9%	-	-	-	-	VT 13
0302	E	02, 04, 06, 08	Operation weight	Layout 2	1259	1284	512	31,5%	27,4%	22,0%	19,1%	-	-	-	-	VT 13
0332	E	00	Empty weight + package	Layout 2	912	1289	570	28,3%	30,4%	19,9%	21,4%	-	-	-	-	-
0332	E	P1, P3	Empty weight + package	Layout 2	953	1323	531	29,5%	27,6%	22,2%	20,7%	-	-	-	-	-
0332	E	P2, P4	Empty weight + package	Layout 2	1001	1355	530	28,8%	26,8%	23,0%	21,4%	-	-	-	-	-
0332	E	01, 03, 05, 07	Empty weight + package	Layout 2	976	1278	530	30,6%	28,5%	21,2%	19,7%	-	-	-	-	-
0332	E	02, 04, 06, 08	Empty weight + package	Layout 2	1014	1290	529	30,4%	28,2%	21,5%	19,9%	-	-	-	-	-
0332	E	00	Operation weight	Layout 2	899	1307	555	28,6%	29,2%	20,9%	21,3%	-	-	-	-	VT 17
0332	E	P1, P3	Operation weight	Layout 2	940	1340	517	29,8%	26,4%	23,2%	20,6%	-	-	-	-	VT 17
0332	E	P2, P4	Operation weight	Layout 2	1000	1380	516	28,9%	25,5%	24,2%	21,4%	-	-	-	-	VT 17
0332	E	01, 03, 05, 07	Operation weight	Layout 2	1241	1274	513	31,7%	27,7%	21,7%	19,0%	-	-	-	-	VT 13
0332	E	02, 04, 06, 08	Operation weight	Layout 2	1287	1284	513	31,4%	27,4%	22,0%	19,2%	-	-	-	-	VT 13
0352	E	00	Empty weight + package	Layout 2	962	1301	570	28,0%	30,1%	20,2%	21,7%	-	-	-	-	-
0352	E	P1, P3	Empty weight + package	Layout 2	1003	1332	533	29,2%	27,5%	22,3%	21,0%	-	-	-	-	-
0352	E	P2, P4	Empty weight + package	Layout 2	1051	1363	532	28,5%	26,7%	23,1%	21,7%	-	-	-	-	-
0352	E	01, 03, 05, 07	Empty weight + package	Layout 2	1026	1290	533	30,2%	28,4%	21,3%	20,0%	-	-	-	-	-
0352	E	02, 04, 06, 08	Empty weight + package	Layout 2	1064	1301	532	30,0%	28,1%	21,7%	20,2%	-	-	-	-	-
0352	E	00	Operation weight	Layout 2	949	1318	557	28,3%	29,0%	21,1%	21,6%	-	-	-	-	VT 17
0352	E	P1, P3	Operation weight	Layout 2	990	1349	520	29,4%	26,4%	23,3%	20,9%	-	-	-	-	VT 17
0352	E	P2, P4	Operation weight	Layout 2	1050	1386	519	28,6%	25,5%	24,2%	21,6%	-	-	-	-	VT 17
0352	E	01, 03, 05, 07	Operation weight	Layout 2	1291	1284	515	31,3%	27,6%	21,8%	19,3%	-	-	-	-	VT 13
0352	E	02, 04, 06, 08	Operation weight	Layout 2	1337	1293	515	31,1%	27,4%	22,1%	19,4%	-	-	-	-	VT 13
0502	A/E	00	Empty weight + package	Layout 3	1046	1535	563	26,6%	27,9%	-	-	22,2%	23,3%	-	-	-
0502	A/E	P1, P3	Empty weight + package	Layout 3	1087	1600	532	26,4%	24,7%	-	-	25,3%	23,6%	-	-	-
0502	A/E	P2, P4	Empty weight + package	Layout 3	1127	1635	531	25,5%	23,8%	-	-	26,2%	24,4%	-	-	-
0502	A/E	01, 03, 05, 07	Empty weight + package	Layout 3	1121	1573	531	27,2%	25,3%	-	-	24,6%	22,9%	-	-	-
0502	A/E	02, 04, 06, 08	Empty weight + package	Layout 3	1159	1593	530	26,7%	24,8%	-	-	25,2%	23,4%	-	-	-
0502	A/E	00	Operation weight	Layout 3	1045	1579	545	19,6%	19,2%	14,1%	13,8%	16,8%	16,5%	-	-	VT 11
0502	A/E	P1, P3	Operation weight	Layout 3	1086	1642	514	20,2%	17,7%	12,3%	10,8%	20,8%	18,2%	-	-	VT 11
0502	A/E	P2, P4	Operation weight	Layout 3	1134	1683	513	19,4%	16,9%	11,8%	10,3%	22,2%	19,4%	-	-	VT 11
0502	A/E	01, 03, 05, 07	Operation weight	Layout 3	1497	1680	510	13,2%	11,4%	25,1%	21,7%	15,3%	13,2%	-	-	VT 11
0502	A/E	02, 04, 06, 08	Operation weight	Layout 3	1543	1694	510	12,7%	10,9%	25,4%	21,9%	15,6%	13,4%	-	-	VT 11
0552	A/E	00	Empty weight + package	Layout 3	1072	1508	559	27,4%	28,4%	-	-	21,7%	22,5%	-	-	-
0552	A/E	P1, P3	Empty weight + package	Layout 3	1113	1573	528	27,3%	25,2%	-	-	24,7%	22,8%	-	-	-
0552	A/E	P2, P4	Empty weight + package	Layout 3	1153	1608	527	26,4%	24,3%	-	-	25,7%	23,6%	-	-	-
0552	A/E	01, 03, 05, 07	Empty weight + package	Layout 3	1146	1547	527	28,0%	25,8%	-	-	24,0%	22,1%	-	-	-
0552	A/E	02, 04, 06, 08	Empty weight + package	Layout 3	1184	1567	527	27,5%	25,3%	-	-	24,6%	22,6%	-	-	-

Size ECL	Version	Hydronic kit	Weight	Layout*	Weight Kg	Centre of mass		Percentage distribution of weights on supports								VT
						X	Y	1	2	3	4	5	6	7	8	
						mm	mm	%	%	%	%	%	%	%	%	
0552	A/E	00	Operation weight	Layout 3	1070	1551	541	20,9%	20,2%	13,3%	12,8%	16,7%	16,1%	-	-	VT 11
0552	A/E	P1, P3	Operation weight	Layout 3	1111	1614	511	21,5%	18,6%	11,5%	10,0%	20,6%	17,8%	-	-	VT 11
0552	A/E	P2, P4	Operation weight	Layout 3	1159	1655	510	20,6%	17,8%	11,0%	9,6%	22,0%	19,0%	-	-	VT 11
0552	A/E	01, 03, 05, 07	Operation weight	Layout 3	1522	1658	508	14,2%	12,2%	24,4%	20,9%	15,2%	13,0%	-	-	VT 11
0552	A/E	02, 04, 06, 08	Operation weight	Layout 3	1568	1673	508	13,7%	11,7%	24,7%	21,2%	15,5%	13,3%	-	-	VT 11
0602	A/E	00	Empty weight + package	Layout 3	1116	1517	561	27,1%	28,2%	-	-	21,9%	22,8%	-	-	-
0602	A/E	P1, P3	Empty weight + package	Layout 3	1157	1579	532	27,0%	25,2%	-	-	24,7%	23,1%	-	-	-
0602	A/E	P2, P4	Empty weight + package	Layout 3	1197	1613	531	26,1%	24,3%	-	-	25,6%	23,9%	-	-	-
0602	A/E	01, 03, 05, 07	Empty weight + package	Layout 3	1190	1553	531	27,7%	25,8%	-	-	24,1%	22,4%	-	-	-
0602	A/E	02, 04, 06, 08	Empty weight + package	Layout 3	1228	1573	530	27,2%	25,3%	-	-	24,6%	22,9%	-	-	-
0602	A/E	00	Operation weight	Layout 3	1121	1561	541	20,3%	19,6%	14,1%	13,6%	16,5%	16,0%	-	-	VT 11
0602	A/E	P1, P3	Operation weight	Layout 3	1162	1621	512	20,8%	18,1%	12,4%	10,8%	20,3%	17,6%	-	-	VT 11
0602	A/E	P2, P4	Operation weight	Layout 3	1210	1660	511	20,0%	17,4%	11,9%	10,4%	21,6%	18,8%	-	-	VT 11
0602	A/E	01, 03, 05, 07	Operation weight	Layout 3	1573	1662	509	14,0%	12,0%	24,6%	21,2%	15,2%	13,0%	-	-	VT 11
0602	A/E	02, 04, 06, 08	Operation weight	Layout 3	1619	1676	509	13,5%	11,6%	24,9%	21,4%	15,4%	13,2%	-	-	VT 11
0652	A/E	00	Empty weight + package	Layout 3	1116	1517	561	27,1%	28,2%	-	-	21,9%	22,8%	-	-	-
0652	A/E	P1, P3	Empty weight + package	Layout 3	1157	1579	532	27,0%	25,2%	-	-	24,7%	23,1%	-	-	-
0652	A/E	P2, P4	Empty weight + package	Layout 3	1197	1613	531	26,1%	24,3%	-	-	25,6%	23,9%	-	-	-
0652	A/E	01, 03, 05, 07	Empty weight + package	Layout 3	1190	1553	531	27,7%	25,8%	-	-	24,1%	22,4%	-	-	-
0652	A/E	02, 04, 06, 08	Empty weight + package	Layout 3	1228	1573	530	27,2%	25,3%	-	-	24,6%	22,9%	-	-	-
0652	A/E	00	Operation weight	Layout 3	1121	1561	541	20,3%	19,6%	14,1%	13,6%	16,5%	16,0%	-	-	VT 11
0652	A/E	P1, P3	Operation weight	Layout 3	1162	1621	512	20,8%	18,1%	12,4%	10,8%	20,3%	17,6%	-	-	VT 11
0652	A/E	P2, P4	Operation weight	Layout 3	1210	1660	511	20,0%	17,4%	11,9%	10,4%	21,6%	18,8%	-	-	VT 11
0652	A/E	01, 03, 05, 07	Operation weight	Layout 3	1573	1662	509	14,0%	12,0%	24,6%	21,2%	15,2%	13,0%	-	-	VT 11
0652	A/E	02, 04, 06, 08	Operation weight	Layout 3	1619	1676	509	13,5%	11,6%	24,9%	21,4%	15,4%	13,2%	-	-	VT 11
0682	A/E	00	Empty weight + package	Layout 4	1347	1722	561	28,7%	29,9%	-	-	20,2%	21,1%	-	-	-
0682	A/E	P1, P3	Empty weight + package	Layout 4	1427	1838	534	28,3%	26,7%	-	-	23,1%	21,8%	-	-	-
0682	A/E	P2, P4	Empty weight + package	Layout 4	1506	1909	532	27,3%	25,6%	-	-	24,3%	22,8%	-	-	-
0682	A/E	01, 03, 05, 07	Empty weight + package	Layout 4	1459	1812	533	28,8%	27,1%	-	-	22,7%	21,4%	-	-	-
0682	A/E	02, 04, 06, 08	Empty weight + package	Layout 4	1536	1861	532	28,1%	26,3%	-	-	23,6%	22,1%	-	-	-
0682	A/E	00	Operation weight	Layout 4	1361	1773	540	14,1%	13,6%	24,5%	23,6%	12,3%	11,9%	-	-	VT 22
0682	A/E	P1, P3	Operation weight	Layout 4	1441	1885	514	13,9%	12,2%	23,9%	21,0%	15,4%	13,6%	-	-	VT 22
0682	A/E	P2, P4	Operation weight	Layout 4	1528	1959	513	12,8%	11,2%	23,7%	20,7%	16,8%	14,7%	-	-	VT 22
0682	A/E	01, 03, 05, 07	Operation weight	Layout 4	1849	1982	511	8,3%	7,2%	30,7%	26,6%	14,6%	12,7%	-	-	VT 22
0682	A/E	02, 04, 06, 08	Operation weight	Layout 4	1934	2017	511	7,5%	6,5%	31,0%	26,8%	15,1%	13,1%	-	-	VT 22
0702	A/E	00	Empty weight + package	Layout 4	1507	1675	570	29,0%	31,2%	-	-	19,2%	20,7%	-	-	-
0702	A/E	P1, P3	Empty weight + package	Layout 4	1587	1782	545	28,7%	28,2%	-	-	21,8%	21,4%	-	-	-
0702	A/E	P2, P4	Empty weight + package	Layout 4	1666	1849	543	27,7%	27,0%	-	-	22,9%	22,4%	-	-	-
0702	A/E	01, 03, 05, 07	Empty weight + package	Layout 4	1619	1759	544	29,1%	28,5%	-	-	21,5%	21,0%	-	-	-
0702	A/E	02, 04, 06, 08	Empty weight + package	Layout 4	1696	1807	542	28,4%	27,6%	-	-	22,3%	21,7%	-	-	-
0702	A/E	00	Operation weight	Layout 4	1520	1721	551	15,0%	15,1%	23,3%	23,4%	11,6%	11,6%	-	-	VT 22
0702	A/E	P1, P3	Operation weight	Layout 4	1600	1824	527	14,9%	13,7%	22,8%	21,0%	14,3%	13,2%	-	-	VT 22
0702	A/E	P2, P4	Operation weight	Layout 4	1687	1895	526	13,9%	12,8%	22,7%	20,8%	15,6%	14,3%	-	-	VT 22
0702	A/E	01, 03, 05, 07	Operation weight	Layout 4	2008	1926	522	9,6%	8,7%	29,2%	26,3%	13,8%	12,4%	-	-	VT 22
0702	A/E	02, 04, 06, 08	Operation weight	Layout 4	2093	1960	521	8,9%	8,0%	29,5%	26,5%	14,2%	12,8%	-	-	VT 22
0752	A/E	00	Empty weight + package	Layout 4	1531	1662	570	29,2%	31,4%	-	-	19,0%	20,4%	-	-	-
0752	A/E	P1, P3	Empty weight + package	Layout 4	1611	1768	545	28,9%	28,4%	-	-	21,6%	21,2%	-	-	-
0752	A/E	P2, P4	Empty weight + package	Layout 4	1690	1835	543	27,9%	27,2%	-	-	22,7%	22,1%	-	-	-
0752	A/E	01, 03, 05, 07	Empty weight + package	Layout 4	1643	1746	544	29,3%	28,7%	-	-	21,2%	20,8%	-	-	-
0752	A/E	02, 04, 06, 08	Empty weight + package	Layout 4	1720	1793	542	28,6%	27,8%	-	-	22,1%	21,5%	-	-	-
0752	A/E	00	Operation weight	Layout 4	1555	1712	548	15,2%	15,1%	23,5%	23,3%	11,5%	11,4%	-	-	VT 22
0752	A/E	P1, P3	Operation weight	Layout 4	1635	1814	524	15,1%	13,8%	23,0%	21,0%	14,2%	12,9%	-	-	VT 22
0752	A/E	P2, P4	Operation weight	Layout 4	1722	1884	523	14,1%	12,8%	22,8%	20,7%	15,5%	14,0%	-	-	VT 22
0752	A/E	01, 03, 05, 07	Operation weight	Layout 4	2043	1916	520	9,9%	8,8%	29,2%	26,2%	13,7%	12,2%	-	-	VT 22
0752	A/E	02, 04, 06, 08	Operation weight	Layout 4	2128	1950	519	9,1%	8,2%	29,6%	26,4%	14,1%	12,6%	-	-	VT 22

Size ECL	Version	Hydronic kit	Weight	Layout*	Weight Kg	Centre of mass		Percentage distribution of weights on supports								VT
						X	Y	1	2	3	4	5	6	7	8	
						mm	mm	%	%	%	%	%	%	%	%	
0604	A/E	00	Empty weight + package	Layout 3	1200	1447	577	28,0%	30,9%	-	-	19,5%	21,6%	-	-	-
0604	A/E	P1, P3	Empty weight + package	Layout 3	1241	1507	549	28,0%	27,9%	-	-	22,1%	22,0%	-	-	-
0604	A/E	P2, P4	Empty weight + package	Layout 3	1281	1541	548	27,2%	27,0%	-	-	23,0%	22,8%	-	-	-
0604	A/E	01, 03, 05, 07	Empty weight + package	Layout 3	1275	1485	548	28,6%	28,4%	-	-	21,6%	21,4%	-	-	-
0604	A/E	02, 04, 06, 08	Empty weight + package	Layout 3	1313	1506	547	28,1%	27,8%	-	-	22,2%	21,9%	-	-	-
0604	A/E	00	Operation weight	Layout 3	1202	1487	560	22,4%	23,2%	11,6%	12,0%	15,1%	15,7%	-	-	VT 11
0604	A/E	P1, P3	Operation weight	Layout 3	1243	1545	532	23,0%	21,5%	10,1%	9,5%	18,5%	17,4%	-	-	VT 11
0604	A/E	P2, P4	Operation weight	Layout 3	1291	1584	531	22,2%	20,7%	9,8%	9,1%	19,8%	18,5%	-	-	VT 11
0604	A/E	01, 03, 05, 07	Operation weight	Layout 3	1654	1603	524	16,1%	14,7%	22,0%	20,0%	14,2%	13,0%	-	-	VT 11
0604	A/E	02, 04, 06, 08	Operation weight	Layout 3	1700	1618	523	15,6%	14,2%	22,3%	20,3%	14,5%	13,1%	-	-	VT 11
0654	A/E	00	Empty weight + package	Layout 4	1325	1757	568	27,9%	29,7%	-	-	20,5%	21,9%	-	-	-
0654	A/E	P1, P3	Empty weight + package	Layout 4	1366	1836	541	28,0%	27,1%	-	-	22,8%	22,1%	-	-	-
0654	A/E	P2, P4	Empty weight + package	Layout 4	1406	1875	540	27,5%	26,5%	-	-	23,5%	22,6%	-	-	-
0654	A/E	01, 03, 05, 07	Empty weight + package	Layout 4	1398	1820	540	28,3%	27,3%	-	-	22,6%	21,8%	-	-	-
0654	A/E	02, 04, 06, 08	Empty weight + package	Layout 4	1436	1846	539	28,0%	26,9%	-	-	23,0%	22,1%	-	-	-
0654	A/E	00	Operation weight	Layout 4	1325	1800	552	12,7%	12,8%	25,1%	25,2%	12,1%	12,2%	-	-	VT 22
0654	A/E	P1, P3	Operation weight	Layout 4	1366	1878	525	13,0%	11,9%	24,6%	22,5%	14,6%	13,3%	-	-	VT 22
0654	A/E	P2, P4	Operation weight	Layout 4	1414	1923	524	12,4%	11,3%	24,4%	22,3%	15,4%	14,1%	-	-	VT 22
0654	A/E	01, 03, 05, 07	Operation weight	Layout 4	1774	1990	519	7,5%	6,7%	31,0%	27,8%	14,2%	12,7%	-	-	VT 22
0654	A/E	02, 04, 06, 08	Operation weight	Layout 4	1820	2009	519	7,1%	6,4%	31,2%	27,9%	14,5%	12,9%	-	-	VT 22
0704	A/E	00	Empty weight + package	Layout 4	1410	1784	566	27,5%	29,2%	-	-	21,0%	22,3%	-	-	-
0704	A/E	P1, P3	Empty weight + package	Layout 4	1490	1893	540	27,2%	26,2%	-	-	23,7%	22,9%	-	-	-
0704	A/E	P2, P4	Empty weight + package	Layout 4	1569	1958	538	26,2%	25,1%	-	-	24,9%	23,8%	-	-	-
0704	A/E	01, 03, 05, 07	Empty weight + package	Layout 4	1522	1867	539	27,6%	26,6%	-	-	23,4%	22,5%	-	-	-
0704	A/E	02, 04, 06, 08	Empty weight + package	Layout 4	1599	1911	537	27,0%	25,8%	-	-	24,2%	23,1%	-	-	-
0704	A/E	00	Operation weight	Layout 4	1421	1830	547	11,7%	11,6%	26,3%	26,0%	12,3%	12,1%	-	-	VT 22
0704	A/E	P1, P3	Operation weight	Layout 4	1501	1936	522	11,6%	10,5%	25,7%	23,2%	15,3%	13,8%	-	-	VT 22
0704	A/E	P2, P4	Operation weight	Layout 4	1588	2005	521	10,7%	9,6%	25,4%	22,8%	16,6%	14,9%	-	-	VT 22
0704	A/E	01, 03, 05, 07	Operation weight	Layout 4	1909	2019	517	6,7%	5,9%	31,8%	28,3%	14,5%	12,9%	-	-	VT 22
0704	A/E	02, 04, 06, 08	Operation weight	Layout 4	1994	2051	517	6,0%	5,3%	32,1%	28,4%	14,9%	13,2%	-	-	VT 22
0754	A/E	00	Empty weight + package	Layout 4	1471	1731	565	28,4%	30,0%	-	-	20,2%	21,4%	-	-	-
0754	A/E	P1, P3	Empty weight + package	Layout 4	1551	1839	540	28,0%	27,0%	-	-	22,9%	22,1%	-	-	-
0754	A/E	P2, P4	Empty weight + package	Layout 4	1630	1905	538	27,1%	25,9%	-	-	24,0%	23,0%	-	-	-
0754	A/E	01, 03, 05, 07	Empty weight + package	Layout 4	1582	1815	539	28,4%	27,3%	-	-	22,5%	21,7%	-	-	-
0754	A/E	02, 04, 06, 08	Empty weight + package	Layout 4	1659	1860	537	27,8%	26,6%	-	-	23,3%	22,3%	-	-	-
0754	A/E	00	Operation weight	Layout 4	1490	1781	544	13,1%	12,8%	25,6%	25,0%	11,9%	11,6%	-	-	VT 22
0754	A/E	P1, P3	Operation weight	Layout 4	1570	1884	520	12,9%	11,6%	25,0%	22,4%	14,8%	13,2%	-	-	VT 22
0754	A/E	P2, P4	Operation weight	Layout 4	1657	1954	519	12,0%	10,7%	24,8%	22,1%	16,1%	14,3%	-	-	VT 22
0754	A/E	01, 03, 05, 07	Operation weight	Layout 4	1979	1975	516	7,9%	7,0%	31,1%	27,4%	14,1%	12,4%	-	-	VT 22
0754	A/E	02, 04, 06, 08	Operation weight	Layout 4	2064	2008	515	7,2%	6,4%	31,4%	27,6%	14,6%	12,8%	-	-	VT 22

* For specific measurements of every layout please refer to the "Weight distribution" chapter.

CENTRE OF GRAVITY AND ANTI-VIBRATION POSITIONS

VERSIONS U/N

Size ECL	Version	Hydronic kit	Weight	Layout *	Weight	Centre of mass		Percentage distribution of weights on supports								VT
						X	Y	1	2	3	4	5	6	7	8	
					Kg	mm	mm	%	%	%	%	%	%	%	%	
0282	N	00	Empty weight + package	Layout 2	884	1296	570	28,1%	30,2%	20,1%	21,6%	-	-	-	-	-
0282	N	P1, P3	Empty weight + package	Layout 2	925	1330	531	29,3%	27,4%	22,4%	20,9%	-	-	-	-	-
0282	N	P2, P4	Empty weight + package	Layout 2	973	1364	529	28,6%	26,6%	23,3%	21,6%	-	-	-	-	-
0282	N	01, 03, 05, 07	Empty weight + package	Layout 2	948	1285	530	30,5%	28,4%	21,3%	19,8%	-	-	-	-	-
0282	N	02, 04, 06, 08	Empty weight + package	Layout 2	986	1297	529	30,3%	28,0%	21,7%	20,1%	-	-	-	-	-
0282	N	00	Operation weight	Layout 2	866	1313	559	28,3%	29,2%	20,9%	21,6%	-	-	-	-	VT 17
0282	N	P1, P3	Operation weight	Layout 2	907	1347	519	29,6%	26,4%	23,3%	20,8%	-	-	-	-	VT 17
0282	N	P2, P4	Operation weight	Layout 2	967	1388	518	28,6%	25,4%	24,3%	21,6%	-	-	-	-	VT 17
0282	N	01, 03, 05, 07	Operation weight	Layout 2	1208	1278	514	31,5%	27,7%	21,8%	19,1%	-	-	-	-	VT 13
0282	N	02, 04, 06, 08	Operation weight	Layout 2	1254	1288	514	31,3%	27,4%	22,0%	19,3%	-	-	-	-	VT 13
0302	N	00	Empty weight + package	Layout 2	907	1294	570	28,1%	30,2%	20,1%	21,5%	-	-	-	-	-
0302	N	P1, P3	Empty weight + package	Layout 2	948	1328	531	29,4%	27,4%	22,3%	20,8%	-	-	-	-	-
0302	N	P2, P4	Empty weight + package	Layout 2	996	1361	530	28,7%	26,6%	23,2%	21,5%	-	-	-	-	-
0302	N	01, 03, 05, 07	Empty weight + package	Layout 2	971	1284	530	30,5%	28,4%	21,3%	19,8%	-	-	-	-	-
0302	N	02, 04, 06, 08	Empty weight + package	Layout 2	1009	1296	529	30,3%	28,1%	21,6%	20,0%	-	-	-	-	-
0302	N	00	Operation weight	Layout 2	894	1313	556	28,5%	29,1%	21,0%	21,4%	-	-	-	-	VT 17
0302	N	P1, P3	Operation weight	Layout 2	935	1346	517	29,7%	26,3%	23,3%	20,7%	-	-	-	-	VT 17
0302	N	P2, P4	Operation weight	Layout 2	995	1385	516	28,8%	25,4%	24,3%	21,5%	-	-	-	-	VT 17
0302	N	01, 03, 05, 07	Operation weight	Layout 2	1236	1279	513	31,6%	27,6%	21,8%	19,1%	-	-	-	-	VT 13
0302	N	02, 04, 06, 08	Operation weight	Layout 2	1282	1288	512	31,4%	27,3%	22,1%	19,2%	-	-	-	-	VT 13
0332	N	00	Empty weight + package	Layout 2	957	1305	569	28,0%	29,9%	20,3%	21,8%	-	-	-	-	-
0332	N	P1, P3	Empty weight + package	Layout 2	998	1337	532	29,1%	27,3%	22,5%	21,1%	-	-	-	-	-
0332	N	P2, P4	Empty weight + package	Layout 2	1046	1367	531	28,5%	26,5%	23,3%	21,7%	-	-	-	-	-
0332	N	01, 03, 05, 07	Empty weight + package	Layout 2	1021	1294	531	30,2%	28,2%	21,5%	20,1%	-	-	-	-	-
0332	N	02, 04, 06, 08	Empty weight + package	Layout 2	1059	1305	530	30,0%	27,9%	21,8%	20,3%	-	-	-	-	-
0332	N	00	Operation weight	Layout 2	944	1323	555	28,3%	28,8%	21,3%	21,7%	-	-	-	-	VT 17
0332	N	P1, P3	Operation weight	Layout 2	985	1354	519	29,4%	26,2%	23,4%	20,9%	-	-	-	-	VT 17
0332	N	P2, P4	Operation weight	Layout 2	1045	1391	518	28,5%	25,4%	24,4%	21,7%	-	-	-	-	VT 17
0332	N	01, 03, 05, 07	Operation weight	Layout 2	1286	1287	514	31,3%	27,5%	22,0%	19,3%	-	-	-	-	VT 13
0332	N	02, 04, 06, 08	Operation weight	Layout 2	1332	1296	514	31,1%	27,2%	22,2%	19,5%	-	-	-	-	VT 13
0352	U/N	00	Empty weight + package	Layout 3	1020	1554	568	25,9%	27,6%	-	-	22,5%	24,0%	-	-	-
0352	U/N	P1, P3	Empty weight + package	Layout 3	1061	1620	535	25,7%	24,4%	-	-	25,6%	24,3%	-	-	-
0352	U/N	P2, P4	Empty weight + package	Layout 3	1101	1655	534	24,9%	23,4%	-	-	26,6%	25,1%	-	-	-
0352	U/N	01, 03, 05, 07	Empty weight + package	Layout 3	1095	1591	534	26,5%	25,0%	-	-	24,9%	23,5%	-	-	-
0352	U/N	02, 04, 06, 08	Empty weight + package	Layout 3	1133	1611	533	26,1%	24,5%	-	-	25,5%	24,0%	-	-	-
0352	U/N	00	Operation weight	Layout 3	1019	1599	548	18,9%	18,8%	14,1%	14,0%	17,2%	17,1%	-	-	VT 11
0352	U/N	P1, P3	Operation weight	Layout 3	1060	1663	516	19,5%	17,3%	12,3%	10,9%	21,2%	18,8%	-	-	VT 11
0352	U/N	P2, P4	Operation weight	Layout 3	1108	1704	516	18,7%	16,5%	11,8%	10,4%	22,7%	20,0%	-	-	VT 11
0352	U/N	01, 03, 05, 07	Operation weight	Layout 3	1471	1695	512	12,6%	11,0%	25,3%	22,0%	15,6%	13,5%	-	-	VT 11
0352	U/N	02, 04, 06, 08	Operation weight	Layout 3	1517	1709	512	12,1%	10,5%	25,6%	22,2%	15,8%	13,7%	-	-	VT 11
0502	U/N	00	Empty weight + package	Layout 3	1076	1549	563	26,2%	27,5%	-	-	22,6%	23,7%	-	-	-
0502	U/N	P1, P3	Empty weight + package	Layout 3	1117	1612	532	26,1%	24,4%	-	-	25,5%	23,9%	-	-	-
0502	U/N	P2, P4	Empty weight + package	Layout 3	1157	1646	531	25,2%	23,6%	-	-	26,5%	24,7%	-	-	-
0502	U/N	01, 03, 05, 07	Empty weight + package	Layout 3	1151	1585	531	26,8%	25,1%	-	-	24,9%	23,2%	-	-	-
0502	U/N	02, 04, 06, 08	Empty weight + package	Layout 3	1189	1604	530	26,4%	24,5%	-	-	25,4%	23,7%	-	-	-
0502	U/N	00	Operation weight	Layout 3	1075	1592	545	19,0%	18,7%	14,6%	14,3%	16,9%	16,6%	-	-	VT 11
0502	U/N	P1, P3	Operation weight	Layout 3	1116	1653	515	19,6%	17,2%	12,9%	11,3%	20,8%	18,2%	-	-	VT 11
0502	U/N	P2, P4	Operation weight	Layout 3	1164	1692	514	18,8%	16,5%	12,3%	10,8%	22,1%	19,4%	-	-	VT 11
0502	U/N	01, 03, 05, 07	Operation weight	Layout 3	1527	1687	511	12,9%	11,2%	25,3%	21,9%	15,4%	13,3%	-	-	VT 11
0502	U/N	02, 04, 06, 08	Operation weight	Layout 3	1573	1700	510	12,4%	10,7%	25,6%	22,1%	15,6%	13,5%	-	-	VT 11
0552	U/N	00	Empty weight + package	Layout 3	1109	1521	560	27,1%	28,1%	-	-	22,0%	22,8%	-	-	-
0552	U/N	P1, P3	Empty weight + package	Layout 3	1150	1583	531	26,9%	25,1%	-	-	24,8%	23,1%	-	-	-
0552	U/N	P2, P4	Empty weight + package	Layout 3	1190	1617	530	26,1%	24,2%	-	-	25,8%	23,9%	-	-	-
0552	U/N	01, 03, 05, 07	Empty weight + package	Layout 3	1183	1557	530	27,6%	25,7%	-	-	24,2%	22,5%	-	-	-
0552	U/N	02, 04, 06, 08	Empty weight + package	Layout 3	1221	1577	529	27,2%	25,1%	-	-	24,8%	22,9%	-	-	-

Size ECL	Version	Hydronic kit	Weight	Layout*	Weight	Centre of mass		Percentage distribution of weights on supports								VT
						X	Y	1	2	3	4	5	6	7	8	
						Kg	mm	%	%	%	%	%	%	%	%	
0552	U/N	00	Operation weight	Layout 3	1114	1565	540	20,2%	19,4%	14,1%	13,6%	16,6%	16,0%	-	-	VT 11
0552	U/N	P1, P3	Operation weight	Layout 3	1155	1625	511	20,7%	18,0%	12,5%	10,8%	20,4%	17,7%	-	-	VT 11
0552	U/N	P2, P4	Operation weight	Layout 3	1203	1664	510	19,9%	17,2%	12,0%	10,4%	21,7%	18,8%	-	-	VT 11
0552	U/N	01, 03, 05, 07	Operation weight	Layout 3	1566	1666	508	13,9%	11,9%	24,7%	21,2%	15,2%	13,1%	-	-	VT 11
0552	U/N	02, 04, 06, 08	Operation weight	Layout 3	1612	1679	508	13,4%	11,4%	25,0%	21,4%	15,5%	13,3%	-	-	VT 11
0602	U/N	00	Empty weight + package	Layout 4	1232	1835	578	26,2%	29,0%	-	-	21,3%	23,6%	-	-	-
0602	U/N	P1, P3	Empty weight + package	Layout 4	1273	1916	548	26,4%	26,2%	-	-	23,8%	23,6%	-	-	-
0602	U/N	P2, P4	Empty weight + package	Layout 4	1313	1955	547	25,8%	25,6%	-	-	24,4%	24,2%	-	-	-
0602	U/N	01, 03, 05, 07	Empty weight + package	Layout 4	1304	1897	547	26,7%	26,5%	-	-	23,5%	23,3%	-	-	-
0602	U/N	02, 04, 06, 08	Empty weight + package	Layout 4	1342	1923	546	26,4%	26,0%	-	-	24,0%	23,6%	-	-	-
0602	U/N	00	Operation weight	Layout 4	1234	1884	559	10,8%	11,1%	25,5%	26,3%	13,0%	13,4%	-	-	VT 22
0602	U/N	P1, P3	Operation weight	Layout 4	1275	1963	530	11,1%	10,4%	25,1%	23,3%	15,6%	14,5%	-	-	VT 22
0602	U/N	P2, P4	Operation weight	Layout 4	1323	2008	529	10,6%	9,8%	24,9%	23,1%	16,4%	15,2%	-	-	VT 22
0602	U/N	01, 03, 05, 07	Operation weight	Layout 4	1684	2060	523	5,8%	5,3%	31,7%	28,7%	14,9%	13,5%	-	-	VT 22
0602	U/N	02, 04, 06, 08	Operation weight	Layout 4	1730	2079	522	5,4%	4,9%	31,9%	28,8%	15,2%	13,7%	-	-	VT 22
0652	U/N	00	Empty weight + package	Layout 4	1243	1831	579	26,2%	29,1%	-	-	21,2%	23,5%	-	-	-
0652	U/N	P1, P3	Empty weight + package	Layout 4	1284	1911	550	26,4%	26,4%	-	-	23,6%	23,6%	-	-	-
0652	U/N	P2, P4	Empty weight + package	Layout 4	1324	1950	549	25,8%	25,7%	-	-	24,3%	24,2%	-	-	-
0652	U/N	01, 03, 05, 07	Empty weight + package	Layout 4	1316	1892	549	26,7%	26,6%	-	-	23,3%	23,3%	-	-	-
0652	U/N	02, 04, 06, 08	Empty weight + package	Layout 4	1354	1917	548	26,4%	26,2%	-	-	23,8%	23,6%	-	-	-
0652	U/N	00	Operation weight	Layout 4	1256	1884	556	10,7%	10,9%	25,9%	26,5%	12,9%	13,2%	-	-	VT 22
0652	U/N	P1, P3	Operation weight	Layout 4	1297	1962	528	11,0%	10,2%	25,5%	23,5%	15,5%	14,3%	-	-	VT 22
0652	U/N	P2, P4	Operation weight	Layout 4	1345	2006	527	10,5%	9,6%	25,3%	23,3%	16,3%	15,1%	-	-	VT 22
0652	U/N	01, 03, 05, 07	Operation weight	Layout 4	1705	2058	522	5,8%	5,2%	31,9%	28,8%	14,9%	13,4%	-	-	VT 22
0652	U/N	02, 04, 06, 08	Operation weight	Layout 4	1751	2076	521	5,4%	4,9%	32,1%	28,9%	15,1%	13,6%	-	-	VT 22
0682	U/N	00	Empty weight + package	Layout 4	1426	1754	562	28,2%	29,5%	-	-	20,7%	21,6%	-	-	-
0682	U/N	P1, P3	Empty weight + package	Layout 4	1506	1862	537	27,8%	26,5%	-	-	23,4%	22,3%	-	-	-
0682	U/N	P2, P4	Empty weight + package	Layout 4	1585	1928	535	26,8%	25,4%	-	-	24,5%	23,2%	-	-	-
0682	U/N	01, 03, 05, 07	Empty weight + package	Layout 4	1538	1836	536	28,3%	26,8%	-	-	23,0%	21,9%	-	-	-
0682	U/N	02, 04, 06, 08	Empty weight + package	Layout 4	1615	1882	534	27,6%	26,1%	-	-	23,8%	22,5%	-	-	-
0682	U/N	00	Operation weight	Layout 4	1450	1806	539	12,9%	12,4%	25,6%	24,6%	12,5%	12,0%	-	-	VT 22
0682	U/N	P1, P3	Operation weight	Layout 4	1530	1910	515	12,7%	11,2%	25,1%	22,0%	15,4%	13,5%	-	-	VT 22
0682	U/N	P2, P4	Operation weight	Layout 4	1617	1979	514	11,8%	10,4%	24,8%	21,7%	16,7%	14,6%	-	-	VT 22
0682	U/N	01, 03, 05, 07	Operation weight	Layout 4	1938	1997	512	7,6%	6,6%	31,3%	27,2%	14,6%	12,7%	-	-	VT 22
0682	U/N	02, 04, 06, 08	Operation weight	Layout 4	2023	2030	511	6,9%	6,0%	31,6%	27,4%	15,0%	13,1%	-	-	VT 22
0702	U/N	00	Empty weight + package	Layout 5	1647	2132	564	18,2%	19,2%	6,3%	6,6%	19,5%	18,6%	5,6%	5,9%	-
0702	U/N	P1, P3	Empty weight + package	Layout 5	1727	2173	540	18,2%	17,5%	6,1%	5,9%	20,3%	21,0%	5,6%	5,4%	-
0702	U/N	P2, P4	Empty weight + package	Layout 5	1806	2218	538	17,5%	16,7%	5,5%	5,2%	21,7%	22,7%	5,5%	5,2%	-
0702	U/N	01, 03, 05, 07	Empty weight + package	Layout 5	1757	2143	539	17,8%	17,1%	8,5%	8,1%	18,9%	19,6%	5,1%	4,9%	-
0702	U/N	02, 04, 06, 08	Empty weight + package	Layout 5	1834	2171	537	17,0%	16,3%	8,7%	8,3%	19,6%	20,5%	4,9%	4,7%	-
0702	U/N	00	Operation weight	Layout 5	1672	2171	543	17,5%	17,1%	8,3%	8,1%	20,0%	20,5%	4,3%	4,2%	VT 23
0702	U/N	P1, P3	Operation weight	Layout 5	1752	2210	520	17,4%	15,6%	8,5%	7,6%	20,3%	22,6%	4,2%	3,8%	VT 23
0702	U/N	P2, P4	Operation weight	Layout 5	1839	2257	519	16,6%	14,8%	8,1%	7,2%	21,6%	24,1%	4,0%	3,6%	VT 23
0702	U/N	01, 03, 05, 07	Operation weight	Layout 5	2157	2228	517	13,5%	11,9%	15,0%	13,3%	19,3%	21,8%	2,7%	2,4%	VT 23
0702	U/N	02, 04, 06, 08	Operation weight	Layout 5	2242	2249	516	12,9%	11,4%	15,3%	13,5%	19,8%	22,4%	2,5%	2,2%	VT 23
0752	U/N	00	Empty weight + package	Layout 5	1660	2119	561	18,5%	19,3%	6,3%	6,6%	19,3%	18,5%	5,6%	5,9%	-
0752	U/N	P1, P3	Empty weight + package	Layout 5	1740	2161	537	18,5%	17,7%	6,1%	5,8%	20,0%	21,0%	5,6%	5,3%	-
0752	U/N	P2, P4	Empty weight + package	Layout 5	1819	2206	536	17,8%	16,9%	5,5%	5,2%	21,5%	22,6%	5,4%	5,2%	-
0752	U/N	01, 03, 05, 07	Empty weight + package	Layout 5	1769	2131	537	18,1%	17,2%	8,4%	8,1%	18,6%	19,6%	5,1%	4,9%	-
0752	U/N	02, 04, 06, 08	Empty weight + package	Layout 5	1846	2159	535	17,3%	16,4%	8,6%	8,2%	19,4%	20,5%	4,9%	4,6%	-
0752	U/N	00	Operation weight	Layout 5	1685	2158	541	17,8%	17,3%	8,3%	8,0%	19,7%	20,4%	4,3%	4,2%	VT 23
0752	U/N	P1, P3	Operation weight	Layout 5	1765	2198	518	17,7%	15,8%	8,5%	7,5%	20,1%	22,6%	4,2%	3,7%	VT 23
0752	U/N	P2, P4	Operation weight	Layout 5	1852	2245	518	16,9%	15,0%	8,1%	7,2%	21,3%	24,0%	4,0%	3,5%	VT 23
0752	U/N	01, 03, 05, 07	Operation weight	Layout 5	2170	2218	515	13,8%	12,1%	15,0%	13,2%	19,1%	21,7%	2,7%	2,4%	VT 23
0752	U/N	02, 04, 06, 08	Operation weight	Layout 5	2255	2239	514	13,2%	11,6%	15,2%	13,4%	19,6%	22,4%	2,5%	2,2%	VT 23

Size ECL	Version	Hydronic kit	Weight	Layout*	Weight	Centre of mass		Percentage distribution of weights on supports								VT
						X	Y	1	2	3	4	5	6	7	8	
						Kg	mm	%	%	%	%	%	%	%	%	
0604	U/N	00	Empty weight + package	Layout 4	1327	1760	568	27,8%	29,7%	-	-	20,6%	21,9%	-	-	-
0604	U/N	P1, P3	Empty weight + package	Layout 4	1368	1839	541	28,0%	27,1%	-	-	22,9%	22,1%	-	-	-
0604	U/N	P2, P4	Empty weight + package	Layout 4	1408	1878	540	27,4%	26,4%	-	-	23,5%	22,7%	-	-	-
0604	U/N	01, 03, 05, 07	Empty weight + package	Layout 4	1400	1823	540	28,3%	27,3%	-	-	22,6%	21,8%	-	-	-
0604	U/N	02, 04, 06, 08	Empty weight + package	Layout 4	1438	1849	539	27,9%	26,8%	-	-	23,1%	22,2%	-	-	-
0604	U/N	00	Operation weight	Layout 4	1337	1809	547	12,4%	12,3%	25,6%	25,4%	12,2%	12,1%	-	-	VT 22
0604	U/N	P1, P3	Operation weight	Layout 4	1378	1886	521	12,8%	11,5%	25,1%	22,6%	14,7%	13,2%	-	-	VT 22
0604	U/N	P2, P4	Operation weight	Layout 4	1426	1931	521	12,2%	11,0%	25,0%	22,4%	15,5%	14,0%	-	-	VT 22
0604	U/N	01, 03, 05, 07	Operation weight	Layout 4	1786	1995	516	7,3%	6,5%	31,4%	27,8%	14,3%	12,6%	-	-	VT 22
0604	U/N	02, 04, 06, 08	Operation weight	Layout 4	1832	2014	516	6,9%	6,1%	31,6%	27,9%	14,5%	12,8%	-	-	VT 22
0654	U/N	00	Empty weight + package	Layout 4	1415	1783	566	27,6%	29,2%	-	-	21,0%	22,2%	-	-	-
0654	U/N	P1, P3	Empty weight + package	Layout 4	1456	1856	541	27,7%	26,8%	-	-	23,1%	22,4%	-	-	-
0654	U/N	P2, P4	Empty weight + package	Layout 4	1496	1892	540	27,2%	26,2%	-	-	23,7%	22,9%	-	-	-
0654	U/N	01, 03, 05, 07	Empty weight + package	Layout 4	1488	1841	540	28,0%	27,0%	-	-	22,9%	22,1%	-	-	-
0654	U/N	02, 04, 06, 08	Empty weight + package	Layout 4	1526	1865	539	27,6%	26,6%	-	-	23,3%	22,4%	-	-	-
0654	U/N	00	Operation weight	Layout 4	1435	1833	544	11,6%	11,3%	26,7%	26,1%	12,3%	12,0%	-	-	VT 22
0654	U/N	P1, P3	Operation weight	Layout 4	1476	1905	520	11,9%	10,6%	26,2%	23,5%	14,6%	13,1%	-	-	VT 22
0654	U/N	P2, P4	Operation weight	Layout 4	1524	1945	519	11,4%	10,2%	26,0%	23,3%	15,4%	13,8%	-	-	VT 22
0654	U/N	01, 03, 05, 07	Operation weight	Layout 4	1884	2004	515	6,9%	6,1%	32,0%	28,2%	14,2%	12,6%	-	-	VT 22
0654	U/N	02, 04, 06, 08	Operation weight	Layout 4	1930	2022	515	6,5%	5,8%	32,1%	28,3%	14,5%	12,8%	-	-	VT 22
0704	U/N	00	Empty weight + package	Layout 5	1549	2254	567	15,5%	16,5%	8,4%	8,9%	19,7%	18,5%	6,1%	6,4%	-
0704	U/N	P1, P3	Empty weight + package	Layout 5	1629	2293	541	15,5%	15,0%	8,1%	7,9%	20,5%	21,2%	6,0%	5,8%	-
0704	U/N	P2, P4	Empty weight + package	Layout 5	1708	2335	539	14,9%	14,3%	7,3%	7,1%	22,0%	22,9%	5,9%	5,7%	-
0704	U/N	01, 03, 05, 07	Empty weight + package	Layout 5	1659	2259	540	15,1%	14,6%	10,6%	10,2%	19,0%	19,7%	5,6%	5,4%	-
0704	U/N	02, 04, 06, 08	Empty weight + package	Layout 5	1736	2283	539	14,4%	13,9%	10,7%	10,2%	19,8%	20,6%	5,3%	5,1%	-
0704	U/N	00	Operation weight	Layout 5	1571	2292	546	14,6%	14,4%	10,3%	10,1%	20,4%	20,7%	4,7%	4,7%	VT 23
0704	U/N	P1, P3	Operation weight	Layout 5	1651	2329	522	14,5%	13,1%	10,4%	9,4%	20,8%	23,0%	4,6%	4,2%	VT 23
0704	U/N	P2, P4	Operation weight	Layout 5	1738	2373	521	13,8%	12,4%	9,9%	8,9%	22,1%	24,6%	4,4%	3,9%	VT 23
0704	U/N	01, 03, 05, 07	Operation weight	Layout 5	2056	2324	518	11,0%	9,8%	16,9%	15,0%	19,6%	22,1%	3,0%	2,6%	VT 23
0704	U/N	02, 04, 06, 08	Operation weight	Layout 5	2141	2342	517	10,5%	9,3%	17,1%	15,1%	20,1%	22,7%	2,7%	2,4%	VT 23
0754	U/N	00	Empty weight + package	Layout 5	1607	2191	566	16,6%	17,6%	8,4%	8,9%	18,7%	17,6%	5,9%	6,3%	-
0754	U/N	P1, P3	Empty weight + package	Layout 5	1687	2232	541	16,6%	16,1%	8,2%	7,9%	19,5%	20,2%	5,9%	5,7%	-
0754	U/N	P2, P4	Empty weight + package	Layout 5	1766	2275	539	15,9%	15,3%	7,4%	7,1%	21,1%	21,9%	5,8%	5,5%	-
0754	U/N	01, 03, 05, 07	Empty weight + package	Layout 5	1716	2200	540	16,2%	15,6%	10,5%	10,1%	18,1%	18,7%	5,4%	5,3%	-
0754	U/N	02, 04, 06, 08	Empty weight + package	Layout 5	1793	2226	538	15,5%	14,9%	10,6%	10,2%	18,9%	19,7%	5,2%	5,0%	-
0754	U/N	00	Operation weight	Layout 5	1635	2232	544	15,8%	15,4%	10,2%	10,0%	19,5%	20,0%	4,7%	4,5%	VT 23
0754	U/N	P1, P3	Operation weight	Layout 5	1715	2271	520	15,6%	14,0%	10,3%	9,3%	19,9%	22,2%	4,5%	4,1%	VT 23
0754	U/N	P2, P4	Operation weight	Layout 5	1802	2316	519	14,9%	13,3%	9,8%	8,8%	21,2%	23,7%	4,3%	3,9%	VT 23
0754	U/N	01, 03, 05, 07	Operation weight	Layout 5	2120	2278	517	12,0%	10,6%	16,7%	14,7%	19,0%	21,4%	2,9%	2,6%	VT 23
0754	U/N	02, 04, 06, 08	Operation weight	Layout 5	2205	2297	516	11,5%	10,1%	16,8%	14,8%	19,5%	22,1%	2,7%	2,4%	VT 23

* For specific measurements of every layout please refer to the "Weight distribution" chapter.

CENTRE OF GRAVITY AND ANTI-VIBRATION POSITIONS

VERSIONS °/L (MOTOCONDENSING UNITS)

Size ECL	Version	Model	Weight	Layout *	Weight	Centre of mass		Percentage distribution of weights on supports								VT
						X	Y	1	2	3	4	5	6	7	8	
					Kg	mm	mm	%	%	%	%	%	%	%	%	
0282	°/L	C	Empty weight + package	Layout 1	718	1015	526	32,8%	30,0%	0,0%	0,0%	0,0%	0,0%	19,5%	17,8%	-
0282	°/L	C	Operation weight	Layout 1	659	996	523	33,5%	30,4%	0,0%	0,0%	0,0%	0,0%	18,9%	17,2%	VT 17
0302	°/L	C	Empty weight + package	Layout 1	736	1019	524	32,7%	29,8%	0,0%	0,0%	0,0%	0,0%	19,6%	17,9%	-
0302	°/L	C	Operation weight	Layout 1	677	1001	522	33,4%	30,2%	0,0%	0,0%	0,0%	0,0%	19,1%	17,3%	VT 17
0332	°/L	C	Empty weight + package	Layout 2	793	1225	526	32,2%	29,4%	0,0%	0,0%	0,0%	0,0%	20,0%	18,3%	-
0332	°/L	C	Operation weight	Layout 2	730	1204	524	32,8%	29,8%	0,0%	0,0%	0,0%	\	19,6%	17,8%	VT 17
0352	°/L	C	Empty weight + package	Layout 2	806	1234	526	31,9%	29,3%	0,0%	0,0%	0,0%	0,0%	20,2%	18,5%	-
0352	°/L	C	Operation weight	Layout 2	743	1213	524	32,6%	29,6%	0,0%	0,0%	0,0%	0,0%	19,8%	18,0%	VT 17
0502	°/L	C	Empty weight + package	Layout 3	877	1446	524	30,9%	28,1%	0,0%	0,0%	0,0%	0,0%	21,5%	19,5%	-
0502	°/L	C	Operation weight	Layout 3	812	1433	522	26,2%	23,7%	10,7%	9,7%	0,0%	0,0%	15,6%	14,1%	VT 11
0552	°/L	C	Empty weight + package	Layout 3	902	1416	520	31,9%	28,6%	0,0%	0,0%	0,0%	0,0%	20,8%	18,7%	-
0552	°/L	C	Operation weight	Layout 3	837	1402	518	27,8%	24,7%	9,7%	8,6%	0,0%	0,0%	15,5%	13,8%	VT 11
0602	°/L	C	Empty weight + package	Layout 3	953	1446	522	31,0%	28,0%	0,0%	0,0%	0,0%	0,0%	21,5%	19,5%	-
0602	°/L	C	Operation weight	Layout 3	888	1434	520	26,1%	23,5%	11,0%	9,8%	0,0%	0,0%	15,6%	14,0%	VT 11
0652	°/L	C	Empty weight + package	Layout 3	953	1446	522	31,0%	28,0%	0,0%	0,0%	0,0%	0,0%	21,5%	19,5%	-
0652	°/L	C	Operation weight	Layout 3	888	1434	520	26,1%	23,5%	11,0%	9,8%	0,0%	0,0%	15,6%	14,0%	VT 11
0682	°/L	C	Empty weight + package	Layout 4	1132	1622	525	32,3%	29,5%	0,0%	0,0%	0,0%	0,0%	19,9%	18,2%	-
0682	°/L	C	Operation weight	Layout 4	1060	1596	524	19,9%	18,1%	21,1%	19,2%	0,0%	0,0%	11,4%	10,4%	VT 22
0702	°/L	C	Empty weight + package	Layout 4	1292	1580	540	32,1%	31,0%	0,0%	0,0%	0,0%	0,0%	18,8%	18,1%	-
0702	°/L	C	Operation weight	Layout 4	1220	1555	540	20,2%	19,5%	20,1%	19,4%	0,0%	0,0%	10,6%	10,2%	VT 22
0752	°/L	C	Empty weight + package	Layout 4	1305	1569	538	32,4%	31,1%	0,0%	0,0%	0,0%	0,0%	18,7%	17,9%	-
0752	°/L	C	Operation weight	Layout 4	1233	1543	537	20,6%	19,7%	20,0%	19,1%	0,0%	0,0%	10,5%	10,1%	VT 22
0604	°/L	C	Empty weight + package	Layout 3	1041	1370	546	31,7%	31,2%	0,0%	0,0%	0,0%	0,0%	18,7%	18,4%	-
0604	°/L	C	Operation weight	Layout 3	976	1355	545	28,0%	27,6%	8,5%	8,3%	0,0%	0,0%	13,9%	13,7%	VT 11
0654	°/L	C	Empty weight + package	Layout 3	1084	1381	546	31,4%	30,9%	0,0%	0,0%	0,0%	0,0%	19,0%	18,7%	-
0654	°/L	C	Operation weight	Layout 3	1019	1367	545	27,4%	26,9%	9,2%	9,0%	0,0%	0,0%	13,9%	13,6%	VT 11
0704	°/L	C	Empty weight + package	Layout 4	1199	1702	546	29,9%	29,4%	0,0%	0,0%	0,0%	0,0%	20,5%	20,2%	-
0704	°/L	C	Operation weight	Layout 4	1127	1683	546	15,9%	15,7%	23,3%	22,9%	0,0%	0,0%	11,2%	11,0%	VT 22
0754	°/L	C	Empty weight + package	Layout 4	1250	1648	546	30,8%	30,3%	0,0%	0,0%	0,0%	0,0%	19,7%	19,3%	-
0754	°/L	C	Operation weight	Layout 4	1178	1626	545	17,5%	17,3%	22,1%	21,8%	0,0%	0,0%	10,7%	10,6%	VT 22

VERSIONS A/E (MOTOCONDENSING UNITS)

Size ECL	Version	Model	Weight	Layout *	Weight	Centre of mass		Percentage distribution of weights on supports								VT
						X	Y	1	2	3	4	5	6	7	8	
					Kg	mm	mm	%	%	%	%	%	%	%	%	
0282	A/E	C	Empty weight + package	Layout 1	731	1024	526	32,4%	29,7%	0,0%	0,0%	0,0%	0,0%	19,7%	18,1%	-
0282	A/E	C	Operation weight	Layout 1	672	1006	524	33,1%	30,1%	0,0%	0,0%	0,0%	0,0%	19,2%	17,5%	VT 17
0302	A/E	C	Empty weight + package	Layout 2	788	1231	526	32,0%	29,3%	0,0%	0,0%	0,0%	0,0%	20,2%	18,5%	-
0302	A/E	C	Operation weight	Layout 2	725	1210	523	32,7%	29,7%	0,0%	0,0%	0,0%	0,0%	19,7%	17,9%	VT 17
0332	A/E	C	Empty weight + package	Layout 2	806	1234	526	31,9%	29,3%	0,0%	0,0%	0,0%	0,0%	20,2%	18,5%	-
0332	A/E	C	Operation weight	Layout 2	743	1213	524	32,6%	29,6%	0,0%	0,0%	0,0%	0,0%	19,8%	18,0%	VT 17
0352	A/E	C	Empty weight + package	Layout 2	856	1250	529	31,4%	29,1%	0,0%	0,0%	0,0%	0,0%	20,5%	19,0%	-
0352	A/E	C	Operation weight	Layout 2	793	1232	527	31,9%	29,4%	0,0%	0,0%	0,0%	0,0%	20,2%	18,6%	VT 17
0502	A/E	C	Empty weight + package	Layout 3	924	1476	525	30,0%	27,4%	0,0%	0,0%	0,0%	0,0%	22,2%	20,3%	-
0502	A/E	C	Operation weight	Layout 3	859	1467	524	24,6%	22,4%	12,0%	10,9%	0,0%	0,0%	15,8%	14,4%	VT 11
0552	A/E	C	Empty weight + package	Layout 3	949	1447	522	31,0%	27,9%	0,0%	0,0%	0,0%	0,0%	21,6%	19,5%	-
0552	A/E	C	Operation weight	Layout 3	884	1436	520	26,1%	23,4%	11,0%	9,8%	0,0%	0,0%	15,6%	14,0%	VT 11
0602	A/E	C	Empty weight + package	Layout 3	986	1462	524	30,5%	27,7%	0,0%	0,0%	0,0%	0,0%	21,9%	19,9%	-
0602	A/E	C	Operation weight	Layout 3	921	1452	522	25,2%	22,8%	11,7%	10,5%	0,0%	0,0%	15,6%	14,1%	VT 11
0652	A/E	C	Empty weight + package	Layout 3	986	1462	524	30,5%	27,7%	0,0%	0,0%	0,0%	0,0%	21,9%	19,9%	-
0652	A/E	C	Operation weight	Layout 3	921	1452	522	25,2%	22,8%	11,7%	10,5%	0,0%	0,0%	15,6%	14,1%	VT 11
0682	A/E	C	Empty weight + package	Layout 4	1201	1669	527	31,4%	28,9%	0,0%	0,0%	0,0%	0,0%	20,7%	19,0%	-
0682	A/E	C	Operation weight	Layout 4	1129	1648	525	18,1%	16,6%	22,4%	20,5%	0,0%	0,0%	11,7%	10,7%	VT 22
0702	A/E	C	Empty weight + package	Layout 4	1361	1624	541	31,4%	30,4%	0,0%	0,0%	0,0%	0,0%	19,4%	18,8%	-
0702	A/E	C	Operation weight	Layout 4	1289	1603	540	18,7%	18,1%	21,3%	20,5%	0,0%	0,0%	10,9%	10,5%	VT 22
0752	A/E	C	Empty weight + package	Layout 4	1375	1613	539	31,7%	30,4%	0,0%	0,0%	0,0%	0,0%	19,3%	18,6%	-
0752	A/E	C	Operation weight	Layout 4	1302	1591	538	19,1%	18,3%	21,1%	20,2%	0,0%	0,0%	10,8%	10,4%	VT 22
0604	A/E	C	Empty weight + package	Layout 3	1074	1387	546	31,2%	30,8%	0,0%	0,0%	0,0%	0,0%	19,1%	18,8%	-
0604	A/E	C	Operation weight	Layout 3	1009	1373	545	27,2%	26,8%	9,2%	9,0%	0,0%	0,0%	14,0%	13,8%	VT 11
0654	A/E	C	Empty weight + package	Layout 4	1194	1705	546	29,8%	29,4%	0,0%	0,0%	0,0%	0,0%	20,5%	20,2%	-
0654	A/E	C	Operation weight	Layout 4	1122	1686	546	15,9%	15,6%	23,3%	23,0%	0,0%	0,0%	11,2%	11,0%	VT 22
0704	A/E	C	Empty weight + package	Layout 4	1268	1742	546	29,2%	28,8%	0,0%	0,0%	0,0%	0,0%	21,1%	20,8%	-
0704	A/E	C	Operation weight	Layout 4	1196	1727	546	14,6%	14,4%	24,3%	24,0%	0,0%	0,0%	11,5%	11,3%	VT 22
0754	A/E	C	Empty weight + package	Layout 4	1319	1690	546	30,1%	29,6%	0,0%	0,0%	0,0%	0,0%	20,3%	20,0%	-
0754	A/E	C	Operation weight	Layout 4	1246	1672	546	16,2%	15,9%	23,2%	22,8%	0,0%	0,0%	11,0%	10,9%	VT 22

VERSIONS U/N (MOTOCONDENSING UNITS)

Size ECL	Version	Model	Weight	Layout *	Weight	Centre of mass		Percentage distribution of weights on supports								VT
						X	Y	1	2	3	4	5	6	7	8	
					Kg	mm	mm	%	%	%	%	%	%	%	%	
0282	U/N	C	a vuoto + imballo	Layout 2	783	1237	528	31,8%	29,3%	0,0%	0,0%	0,0%	0,0%	20,3%	18,7%	-
0282	U/N	C	in funzionamento	Layout 2	720	1217	526	32,4%	29,6%	0,0%	0,0%	0,0%	0,0%	19,8%	18,1%	VT 17
0302	U/N	C	a vuoto + imballo	Layout 2	801	1240	526	31,8%	29,1%	0,0%	0,0%	0,0%	0,0%	20,4%	18,7%	-
0302	U/N	C	in funzionamento	Layout 2	738	1220	524	32,4%	29,5%	0,0%	0,0%	0,0%	0,0%	20,0%	18,2%	VT 17
0332	U/N	C	a vuoto + imballo	Layout 2	852	1255	527	31,4%	28,9%	0,0%	0,0%	0,0%	0,0%	20,7%	19,1%	-
0332	U/N	C	in funzionamento	Layout 2	788	1238	525	31,9%	29,2%	0,0%	0,0%	0,0%	0,0%	20,3%	18,6%	VT 17
0352	U/N	C	a vuoto + imballo	Layout 3	898	1496	529	29,3%	27,2%	0,0%	0,0%	0,0%	0,0%	22,6%	21,0%	-
0352	U/N	C	in funzionamento	Layout 3	833	1488	528	23,9%	22,0%	11,9%	11,0%	0,0%	0,0%	16,2%	15,0%	VT 11
0502	U/N	C	a vuoto + imballo	Layout 3	954	1494	526	29,5%	27,1%	0,0%	0,0%	0,0%	0,0%	22,7%	20,8%	-
0502	U/N	C	in funzionamento	Layout 3	888	1486	524	23,7%	21,6%	12,7%	11,5%	0,0%	0,0%	15,9%	14,5%	VT 11
0552	U/N	C	a vuoto + imballo	Layout 3	979	1465	523	30,5%	27,6%	0,0%	0,0%	0,0%	0,0%	22,0%	19,9%	-
0552	U/N	C	in funzionamento	Layout 3	914	1456	521	25,2%	22,6%	11,7%	10,5%	0,0%	0,0%	15,8%	14,2%	VT 11
0602	U/N	C	a vuoto + imballo	Layout 4	1096	1787	544	28,6%	28,0%	0,0%	0,0%	0,0%	0,0%	21,9%	21,4%	-
0602	U/N	C	in funzionamento	Layout 4	1024	1772	544	14,2%	13,9%	24,0%	23,5%	0,0%	0,0%	12,4%	12,1%	VT 22
0652	U/N	C	a vuoto + imballo	Layout 4	1097	1787	544	28,6%	28,0%	0,0%	0,0%	0,0%	0,0%	21,9%	21,4%	-
0652	U/N	C	in funzionamento	Layout 4	1025	1772	544	14,2%	13,9%	24,0%	23,5%	0,0%	0,0%	12,4%	12,1%	VT 22
0682	U/N	C	a vuoto + imballo	Layout 4	1270	1712	528	30,7%	28,3%	0,0%	0,0%	0,0%	0,0%	21,3%	19,7%	-
0682	U/N	C	in funzionamento	Layout 4	1198	1694	527	16,6%	15,3%	23,5%	21,6%	0,0%	0,0%	12,0%	11,0%	VT 22
0702	U/N	C	a vuoto + imballo	Layout 5	1483	2086	533	20,6%	19,3%	6,1%	5,8%	17,5%	18,6%	6,3%	5,9%	-
0702	U/N	C	in funzionamento	Layout 5	1408	2058	532	20,5%	19,2%	8,1%	7,6%	16,8%	17,9%	5,1%	4,8%	VT 23
0752	U/N	C	a vuoto + imballo	Layout 5	1496	2072	531	20,9%	19,5%	6,1%	5,7%	17,3%	18,5%	6,2%	5,8%	-
0752	U/N	C	in funzionamento	Layout 5	1421	2044	530	20,8%	19,4%	8,1%	7,5%	16,6%	17,9%	5,1%	4,7%	VT 23
0604	U/N	C	a vuoto + imballo	Layout 4	1184	1713	546	29,7%	29,3%	0,0%	0,0%	0,0%	0,0%	20,7%	20,4%	-
0604	U/N	C	in funzionamento	Layout 4	1112	1694	546	15,7%	15,5%	23,4%	23,0%	0,0%	0,0%	11,3%	11,1%	VT 22
0654	U/N	C	a vuoto + imballo	Layout 4	1263	1745	546	29,2%	28,8%	0,0%	0,0%	0,0%	0,0%	21,2%	20,9%	-
0654	U/N	C	in funzionamento	Layout 4	1191	1730	546	14,5%	14,3%	24,4%	24,0%	0,0%	0,0%	11,5%	11,3%	VT 22
0704	U/N	C	a vuoto + imballo	Layout 5	1390	2221	547	17,1%	16,9%	8,5%	8,4%	17,8%	18,0%	6,7%	6,6%	-
0704	U/N	C	in funzionamento	Layout 5	1314	2199	547	16,7%	16,5%	10,4%	10,3%	17,5%	17,7%	5,5%	5,5%	VT 23
0754	U/N	C	a vuoto + imballo	Layout 5	1441	2157	547	18,3%	18,0%	8,3%	8,2%	17,0%	17,2%	6,5%	6,4%	-
0754	U/N	C	in funzionamento	Layout 5	1365	2132	547	18,0%	17,7%	10,1%	10,0%	16,6%	16,8%	5,4%	5,3%	VT 23

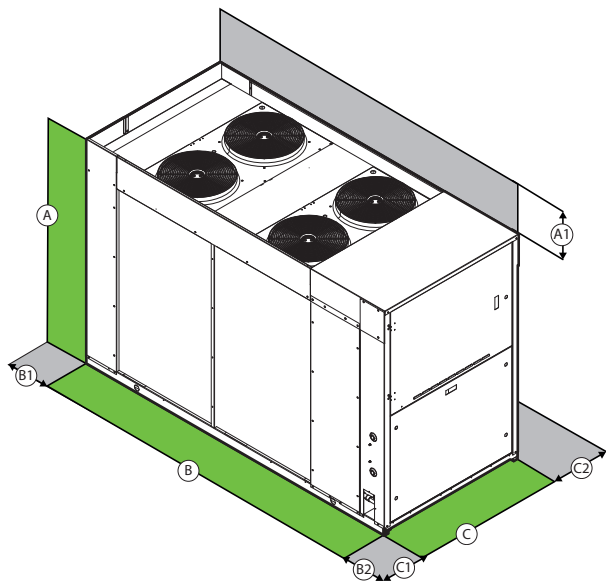
* For specific measurements of every layout please refer to the "Weight distribution" chapter.

Size ECL		vers	0282	0302	0332	0352	0502	0552	0602	0652	0682	0702	0752	0604	0654	0704	0754
WEIGHT OPTION "D" (empty weight)	°	kg	-	-	-	-	24	24	24	24	62	62	62	57	57	59	59
	L	kg	23	23	23	23	24	24	24	24	62	62	62	57	57	59	59
	A	kg	-	-	-	-	24	24	24	24	62	62	62	57	59	59	59
	E	kg	23	23	23	23	24	24	24	24	62	62	62	57	59	59	59
	U	kg	-	-	-	24	24	24	62	62	62	76	76	59	59	72	72
	N	kg	23	23	23	24	24	24	62	62	62	76	76	59	59	72	72
Desuperheater water contents	°	kg	-	-	-	-	1	1	1	1	12	12	12	10	10	11	11
	L	kg	1	1	1	1	1	1	1	1	12	12	12	10	10	11	11
	A	kg	-	-	-	-	1	1	1	1	12	12	12	10	11	11	11
	E	kg	1	1	1	1	1	1	1	1	12	12	12	10	11	11	11
	U	kg	-	-	-	1	1	1	12	12	12	19	19	11	11	18	18
	N	kg	1	1	1	1	1	1	12	12	12	19	19	11	11	18	18
WEIGHT OPTION "D" (operation weight)	°	kg	-	-	-	-	25	25	25	25	74	74	74	67	67	70	70
	L	kg	24	24	24	24	25	25	25	25	74	74	74	67	67	70	70
	A	kg	-	-	-	-	25	25	25	25	74	74	74	67	70	70	70
	E	kg	24	24	24	24	25	25	25	25	74	74	74	67	70	70	70
	U	kg	-	-	-	25	25	25	74	74	74	94	94	70	70	90	90
	N	kg	24	24	24	25	25	25	74	74	74	94	94	70	70	90	90
WEIGHT OPTION "T" (empty weight)	°	kg	-	-	-	-	155	155	162	162	175	175	175	184	187	203	203
	L	kg	132	132	141	141	155	155	162	162	175	175	175	184	187	203	203
	A	kg	-	-	-	-	162	162	169	169	186	186	196	184	193	203	203
	E	kg	137	141	146	146	162	162	169	169	186	186	196	184	193	203	203
	U	kg	-	-	-	162	162	169	175	186	196	203	203	189	193	210	210
	N	kg	141	146	146	162	162	169	175	186	196	203	203	189	193	210	210
Total recovery water contents	°	kg	-	-	-	-	27	27	29	29	35	35	35	36	38	42	46
	L	kg	23	23	28	28	27	27	29	29	35	35	35	36	38	42	46
	A	kg	-	-	-	-	29	29	31	31	38	38	40	38	42	46	49
	E	kg	25	28	30	30	29	29	31	31	38	38	40	38	42	46	49
	U	kg	-	-	-	29	29	31	35	38	40	45	45	46	49	55	57
	N	kg	28	30	30	29	29	31	35	38	40	45	45	46	49	55	57
WEIGHT OPTION "T" (operation weight)	°	kg	-	-	-	-	183	183	192	192	210	210	210	219	225	245	249
	L	kg	155	155	169	169	183	183	192	192	210	210	210	219	225	245	249
	A	kg	-	-	-	-	192	192	200	200	223	223	236	222	235	249	253
	E	kg	162	169	175	175	192	192	200	200	223	223	236	222	235	249	253
	U	kg	-	-	-	192	192	200	210	223	236	249	249	235	242	265	267
	N	kg	169	175	175	192	192	200	210	223	236	249	249	235	242	265	267
WEIGHT OPTION "R" or "S"	°	kg	-	-	-	-	231	231	328	328	310	453	453	328	389	453	453
	L	kg	169	169	214	214	231	231	328	328	310	453	453	328	389	453	453
	A	kg	-	-	-	-	328	328	389	389	453	597	597	389	453	597	597
	E	kg	169	214	214	310	328	328	389	389	453	597	597	389	453	597	597
	U	kg	-	-	-	328	389	389	453	453	597	326	326	453	597	326	326
	N	kg	214	214	310	328	389	389	453	453	597	326	326	453	597	326	326
WEIGHT HYDRONIC KIT WITH INVERTER																	
I1 compared with P1	kg	6	6	6	6	6	6	6	6	6	6	11	6	6	6	11	
I2 compared with P2	kg	11	11	11	11	11	11	11	11	11	11	11	21	11	11	11	21
I3 compared with P3	kg	6	6	6	6	6	6	6	6	6	11	11	11	6	6	11	11
I4 compared with P4	kg	11	11	11	11	11	11	11	11	11	21	21	11	11	11	21	21
K1 compared with 01	kg	6	6	6	6	6	6	6	6	6	6	11	6	6	6	11	
K2 compared with 02	kg	11	11	11	11	11	11	11	11	11	11	11	21	11	11	11	21
K3 compared with 03	kg	6	6	6	6	6	6	6	6	6	11	11	11	6	6	11	11
K4 compared with 04	kg	11	11	11	11	11	11	11	11	11	21	21	21	11	11	21	21
W1 compared with 01	kg	29	29	29	29	29	29	29	29	29	29	29	34	29	29	29	34
W2 compared with 02	kg	35	35	35	35	35	35	35	35	35	35	35	44	35	35	35	44
W3 compared with 03	kg	29	29	29	29	29	29	29	29	29	34	34	34	29	29	34	34
W4 compared with 04	kg	35	35	35	35	35	35	35	35	35	44	44	44	35	35	44	44

For all the other configurations, contact the company

MINIMUM TECHNICAL SPACES

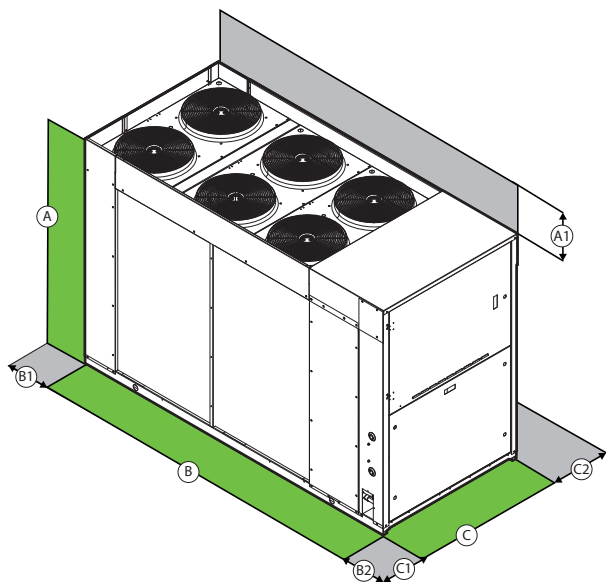
ECL 0282 (L)



Minimum technical spaces

ECL		
A1	mm	3000
B1	mm	800
B2	mm	1100
C1	mm	800
C2	mm	800

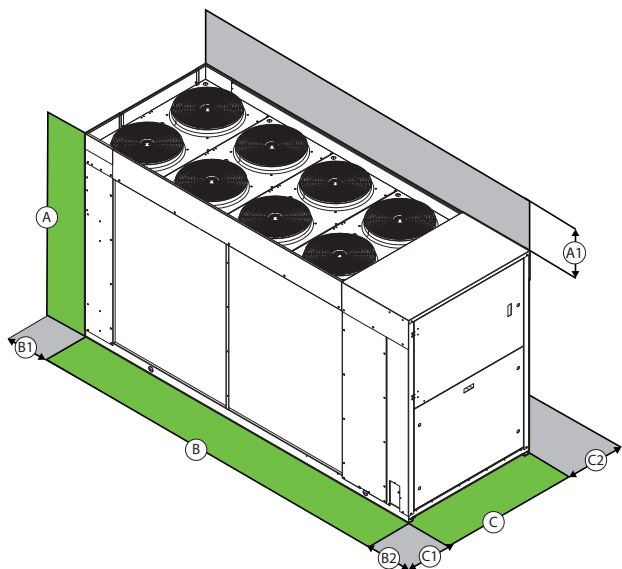
ECL 0282 (E-N)
ECL 0302 (L-E)
ECL 0332 (L)



Minimum technical spaces

ECL		
A1	mm	3000
B1	mm	800
B2	mm	1100
C1	mm	800
C2	mm	800

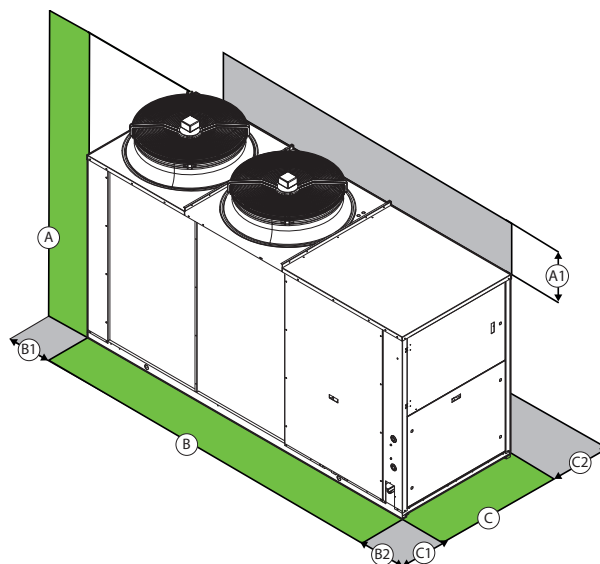
ECL 0302 (N)
ECL 0332 (E-N)
ECL 0352 (L-E)



Minimum technical spaces

ECL		
A1	mm	3000
B1	mm	800
B2	mm	1100
C1	mm	800
C2	mm	800

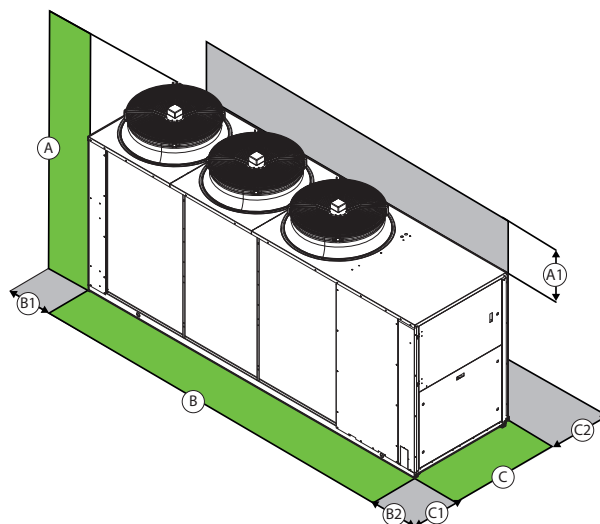
ECL 0352 (U-N)
 ECL 0502 (°-L-A-E-U-N)
 ECL 0552 (°-L-A-E-U-N)
 ECL 0602 (°-L-A-E)
 ECL 0652 (°-L-A-E)
 ECL 0604 (°-L-A-E)
 ECL 0654 (°-L)



Minimum technical spaces

ECL		
A1	mm	3000
B1	mm	800
B2	mm	1100
C1	mm	800
C2	mm	800

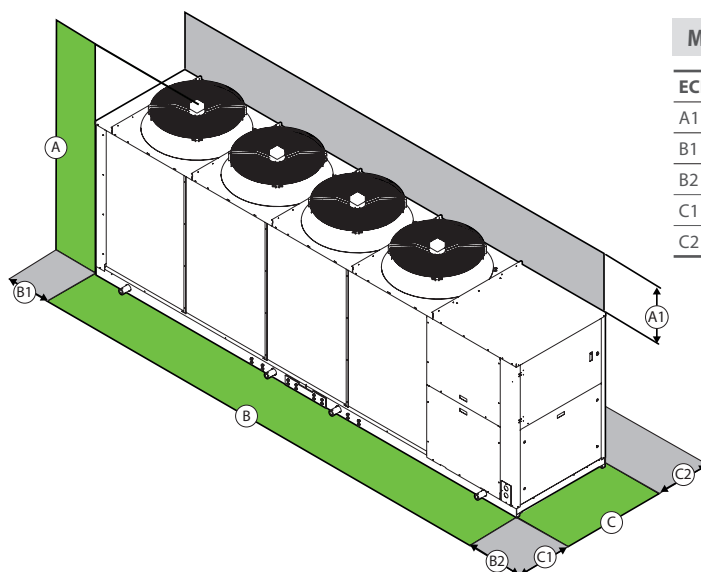
ECL 0602 (U-N)
 ECL 0652 (U-N)
 ECL 0682 (°-L-A-E-U-N)
 ECL 0702 (°-L-A-E)
 ECL 0752 (°-L-A-E)
 ECL 0604 (U-N)
 ECL 0654 (A-E-U-N)
 ECL 0704 (°-L-A-E)
 ECL 0754 (°-L-A-E)



Minimum technical spaces

ECL		
A1	mm	3000
B1	mm	800
B2	mm	1100
C1	mm	800
C2	mm	800

ECL 0702 (U-N)
 ECL 0752 (U-N)
 ECL 0704 (U-N)
 ECL 0754 (U-N)



Minimum technical spaces

ECL		
A1	mm	3000
B1	mm	800
B2	mm	1100
C1	mm	800
C2	mm	800

HYDRAULIC CONNECTIONS

The units may be available with or without integrated hydronic kit, in any case:

ATTENTION *The choice and installation of components external to the unit is up to the installer, who must operate according to the rules of good technical design and in compliance with the regulations in force in the country of destination.*

ATTENTION *The hydraulic connection pipes to the unit must be suitably dimensioned for the effective water flow rate requested by the system when running. The water flow rate to the heat exchanger must always be constant*

ATTENTION *Wash the system thoroughly before connecting the unit. This cleaning will eliminate any residues such as welding drips, scale, rust, or other impurities from the piping. These substances can also deposit inside and cause unit malfunctions. The connection piping must be adequately supported so that its weight does not rest on the appliance*

CONNECTIONS

Before starting the system, check that the hydraulic circuits are connected to the current exchangers (or, that the evaporator in the air/water units or evaporator and condenser in the water water units or the intake and flow fittings have not been reversed). The water circulation pump must preferably be installed upstream so that the evaporator/condenser is subject to a positive pressure. The water inlet and outlet connections are indicated in the dimension tables in this manual, or available on www.Airedale.com

It is important to follow the recommendations (not complete) below:

- The water pipes must not transmit radial or axial forces or vibrations to the exchangers (use flexible hoses to reduce the transmitted vibrations)
- It is necessary to install manual or automatic vent valves in the highest points of the circuit; and also provide discharge fittings in the lowest points to allow emptying the entire circuit
- To maintain the pressure in the circuits, you must install an expansion tank and a safety valve
- Respect the water inlet and outlet connections shown on the unit
- Install manometer on the water inlet and outlet fittings.
- Install stop valve near the water inlet and outlet fittings.
- After performing a leak test, insulate the pipes to reduce heat loss and prevent the formation of condensation
- If the external water pipes are in an area where it is likely that the environment temperature drops below 0°C, insulate the pipes and provide an electric heater. As an option, you can also protect the pipes inside the unit.
- Check the continuity of the earthing.

ATTENTION *You must install the water filter supplied, in the hydraulic circuit upstream of the heat exchanger. FAILURE TO DO THIS INVALIDATES THE WARRANTY.*

ATTENTION *The charge or discharge of the heat exchange fluids must be made during installation by qualified technicians using the fittings provided on the hydraulic circuit. Never use the unit heat exchangers to top-up the heat exchanger fluid.*

DISCHARGING SYSTEM

In the event the system is stopped during winter, the water in the heat exchanger can freeze damaging the heat exchanger irreversibly. To prevent danger of freezing, three solutions are possible:

1. Full water discharge from the unit.
2. Using the resistances. In this case the resistances must always be supplied with electrical power for the entire period of possible freezing (machine in stand-by).
3. Operation with glycol/water fluid, with a percentage of glycol based on the minimum outdoor temperature expected.

ANTI-FREEZE PROTECTION

ATTENTION: *the addition of glycol is the only effective protection against freezing; the glycol/water solution must be sufficiently concentrated to ensure proper protection and prevent ice forming at minimum temperature provided for a given installation. Take the necessary precautions if using non-passivated anti-freeze solutions (monoethylene glycol or monopropylene glycol). Corrosion phenomena may occur with these anti-freeze solutions in contact with oxygen.*

However, always refer to the glycol supplier documentation to check its recommended concentration.



Do not fill up the hydraulic system by glycol near the suction of the pump. High concentration of glycol could stuck the pump. Do not use the pump to mix water and glycol.

INSTALLATION - HYDRAULIC DIAGRAMS AND WATER FEATURES

INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL 00 (STANDARD)

COMPONENTS PROVIDED AS STANDARD

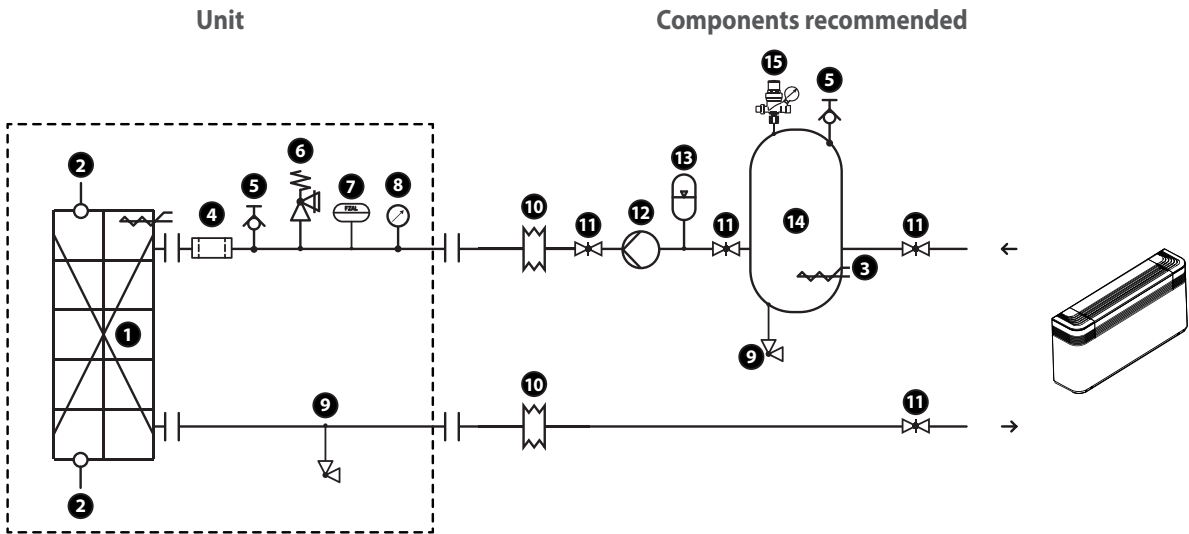
- 1 Plate heat exchanger
- 2 Water temperature sensors
- 3 Antifreeze electric heater (standard in the heat exchanger)
- 4 Water filter
- 5 Air vent valve
- 6 Safety valve
- 7 Flow switch
- 8 Pressure gauges
- 9 Drain valve

HYDRAULIC COMPONENTS RECOMMENDED EXTERNAL TO UNIT
(RESPONSIBILITY OF THE INSTALLER)

- 3 Antifreeze electric heater
- 5 Air vent valve
- 9 Drain valve
- 10 Anti-vibration joints
- 11 Cut-off valve
- 12 Pump
- 13 Expansion Tank
- 14 System buffer tank (installation recommended whenever the system water content is less than that indicated in technical manual)
- 15 Automatic Filling Valve

WATER FEATURES

System: Chiller with plate heat exchanger	
PH	7.5-9
Electric conductivity	10-500µS/cm
Total hardness	4.5-8.5°dH
Temperature	< 65°C
Oxygen content	< 0.1 ppm
Max. glycol amount	50%
Phosphates (PO4)	< 2ppm
Manganese (Mn)	< 0.05 ppm
Iron (Fe)	< 0.3 ppm
Alkalinity (HCO3)	70 - 300 ppm
Chloride ions (Cl-)	< 50 ppm
Sulphate ions (SO4)	< 50 ppm
Sulphide ion (S)	none
Ammonium ions (NH4)	none
Silica (SiO2)	< 30ppm



INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL P1-P3 (WITH PUMP)

COMPONENTS PROVIDED AS STANDARD

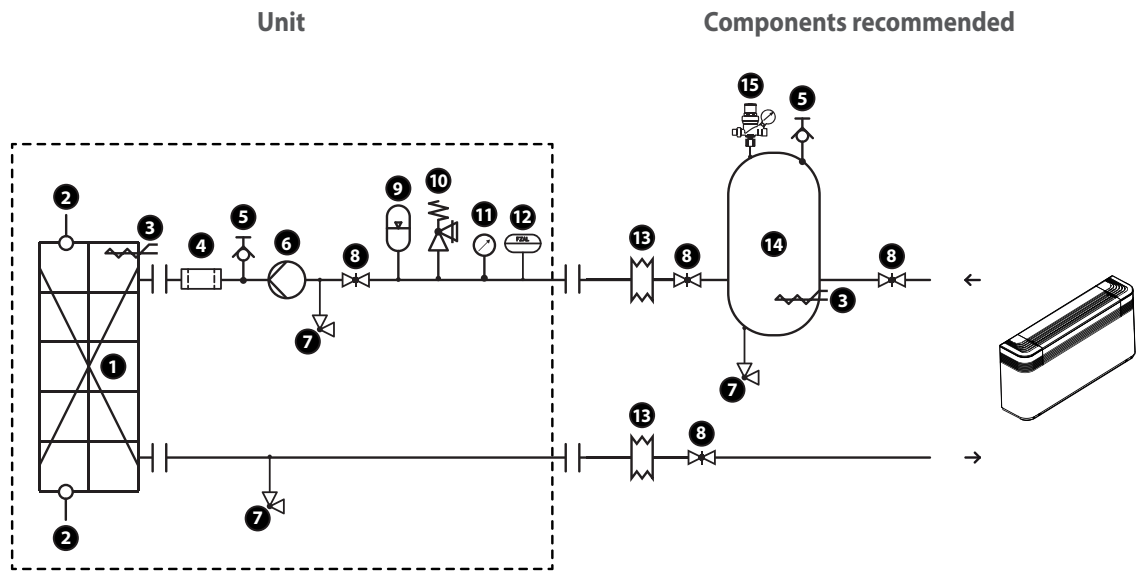
- 1 Plate heat exchanger
- 2 Water temperature sensors
- 3 Antifreeze electric heater (standard in the heat exchanger)
- 4 Water filter
- 5 Air vent valve
- 6 Pump
- 7 Drain valve
- 8 Cut-off valve
- 9 Expansion Tank
- 10 Safety valve
- 11 Pressure gauges
- 12 Flow switch

HYDRAULIC COMPONENTS RECOMMENDED EXTERNAL TO UNIT
(RESPONSIBILITY OF THE INSTALLER)

- 3 Antifreeze electric heater
- 5 Air vent valve
- 7 Drain valve
- 8 Cut-off valve
- 13 Anti-vibration joints
- 14 System buffer tank (installation recommended whenever the system water content is less than that indicated in technical manual)
- 15 Automatic Filling Valve

WATER FEATURES

System: Chiller with plate heat exchanger	
PH	7.5-9
Electric conductivity	10-500µS/cm
Total hardness	4.5-8.5°dH
Temperature	< 65°C
Oxygen content	< 0.1 ppm
Max. glycol amount	50%
Phosphates (PO4)	< 2ppm
Manganese (Mn)	< 0.05 ppm
Iron (Fe)	< 0.3 ppm
Alkalinity (HCO3)	70 - 300 ppm
Chloride ions (Cl-)	< 50 ppm
Sulphate ions (SO4)	< 50 ppm
Sulphide ion (S)	none
Ammonium ions (NH4)	none
Silica (SiO2)	< 30ppm



INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL P2-P4 (WITH DOUBLE PUMP)

COMPONENTS PROVIDED AS STANDARD

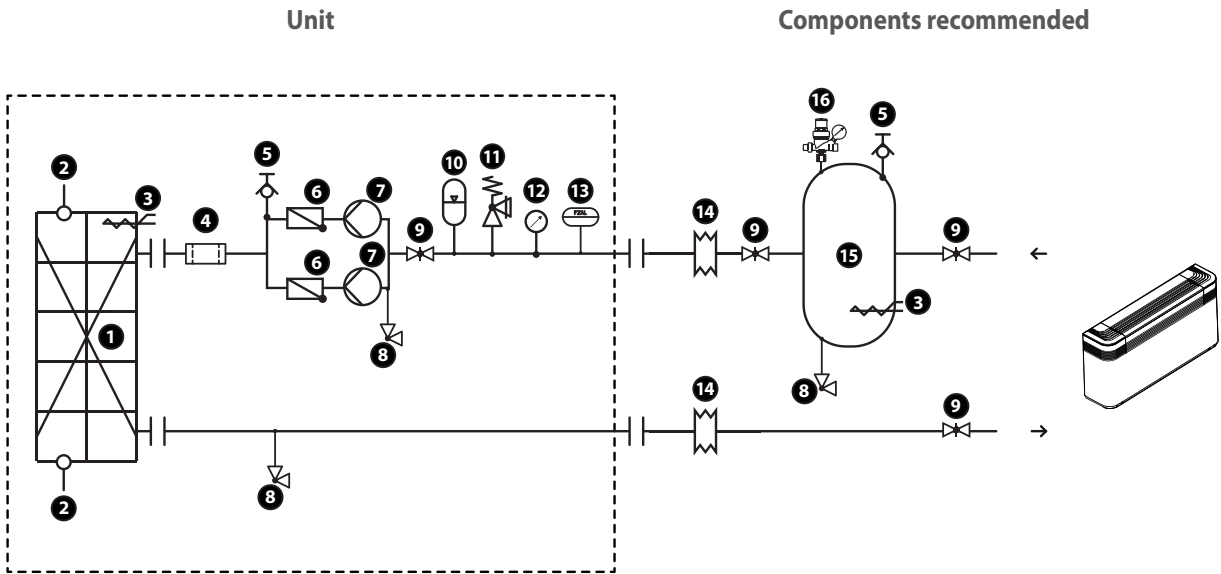
- 1 Plate heat exchanger
- 2 Water temperature sensors
- 3 Antifreeze electric heater (standard in the heat exchanger)
- 4 Water filter
- 5 Air vent valve
- 6 One way valve
- 7 Pump
- 8 Drain valve
- 9 Cut-off valve
- 10 Expansion Tank
- 11 Safety valve
- 12 Pressure gauges
- 13 Flow switch

HYDRAULIC COMPONENTS RECOMMENDED EXTERNAL TO UNIT
(RESPONSIBILITY OF THE INSTALLER)

- 3 Antifreeze electric heater
- 5 Air vent valve
- 8 Drain valve
- 9 Cut-off valve
- 14 Anti-vibration joints
- 15 System buffer tank (installation recommended whenever the system water content is less than that indicated in technical manual)
- 16 Automatic Filling Valve

WATER FEATURES

System: Chiller with plate heat exchanger	
PH	7.5-9
Electric conductivity	10-500µS/cm
Total hardness	4.5-8.5°dH
Temperature	< 65°C
Oxygen content	< 0.1 ppm
Max. glycol amount	50%
Phosphates (PO4)	< 2ppm
Manganese (Mn)	< 0.05 ppm
Iron (Fe)	< 0.3 ppm
Alkalinity (HCO3)	70 - 300 ppm
Chloride ions (Cl-)	< 50 ppm
Sulphate ions (SO4)	< 50 ppm
Sulphide ion (S)	none
Ammonium ions (NH4)	none
Silica (SiO2)	< 30ppm



INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL 01-03-05-07 (WITH PUMP + STORAGE TANK) (*)

COMPONENTS PROVIDED AS STANDARD

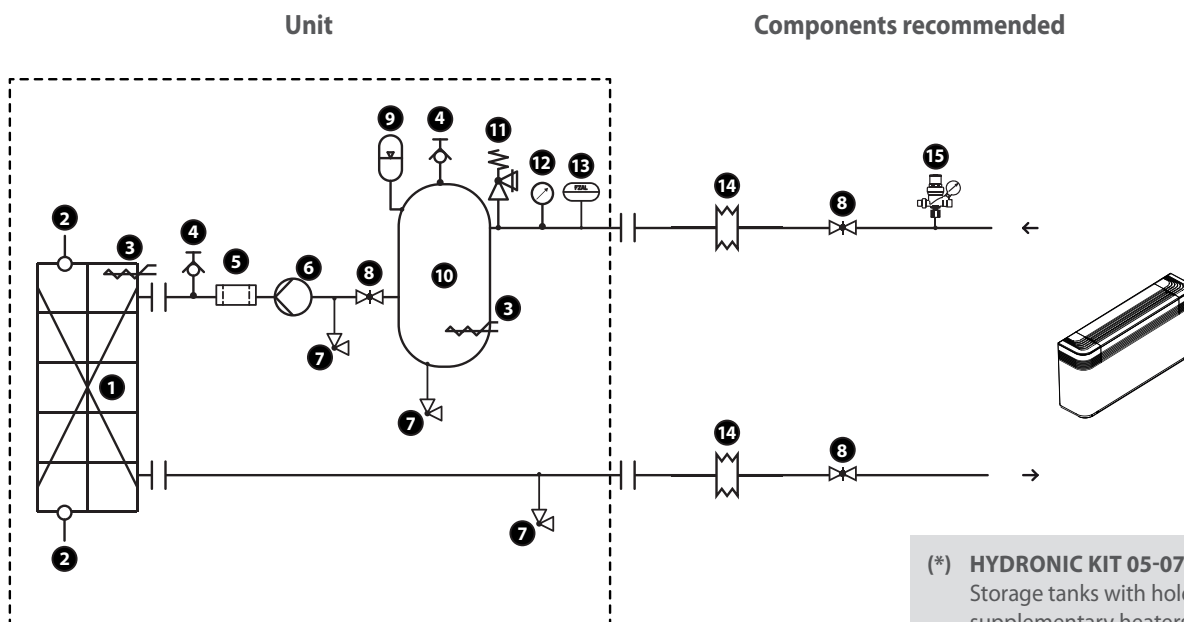
- 1 Plate heat exchanger
- 2 Water temperature sensors
- 3 Antifreeze electric heater (standard in the heat exchanger and storage tank)
- 4 Air vent valve
- 5 Water filter
- 6 Pump
- 7 Drain valve
- 8 Cut-off valve
- 9 Expansion Tank
- 10 System buffer tank
- 11 Safety valve
- 12 Pressure gauges
- 13 Flow switch

HYDRAULIC COMPONENTS RECOMMENDED EXTERNAL TO UNIT (RESPONSIBILITY OF THE INSTALLER)

- 14 Anti-vibration joints
- 15 Automatic Filling Valve
- 8 Cut-off valve

WATER FEATURES

System: Chiller with plate heat exchanger	
PH	7.5-9
Electric conductivity	10-500µS/cm
Total hardness	4.5-8.5°dH
Temperature	< 65°C
Oxygen content	< 0.1 ppm
Max. glycol amount	50%
Phosphates (PO4)	< 2ppm
Manganese (Mn)	< 0.05 ppm
Iron (Fe)	< 0.3 ppm
Alkalinity (HCO3)	70 - 300 ppm
Chloride ions (Cl-)	< 50 ppm
Sulphate ions (SO4)	< 50 ppm
Sulphide ion (S)	none
Ammonium ions (NH4)	none
Silica (SiO2)	< 30ppm



(*) **HYDRONIC KIT 05-07:**
Storage tanks with holes for supplementary heaters (**not provided**) are sent from the factory with plastic protection caps. Before loading the system, if the installation of one or all resistances is not expected, all plastic caps must be replaced with the special caps, commonly commercially available.

INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL 02-04-06-08 (WITH DOUBLE PUMP + STORAGE TANK) (*)

COMPONENTS PROVIDED AS STANDARD

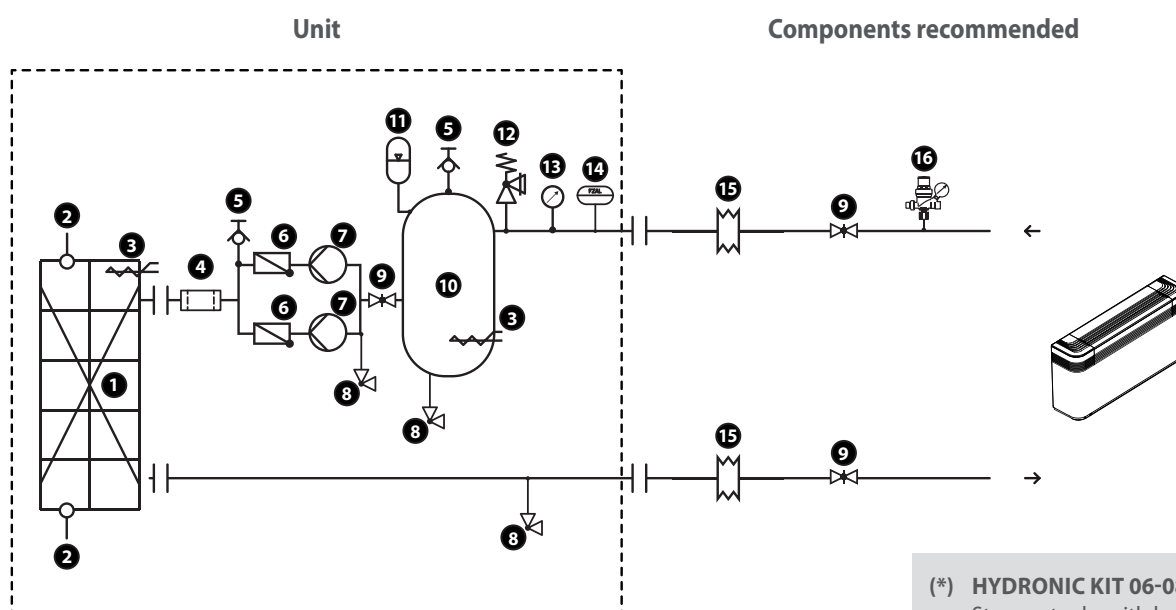
- 1 Plate heat exchanger
- 2 Water temperature sensors
- 3 Antifreeze electric heater (standard in the heat exchanger and storage tank)
- 4 Water filter
- 5 Air vent valve
- 6 One way valve
- 7 Pump
- 8 Drain valve
- 9 Cut-off valve
- 10 System buffer tank
- 11 Expansion Tank
- 12 Safety valve
- 13 Pressure gauges
- 14 Flow switch

HYDRAULIC COMPONENTS RECOMMENDED EXTERNAL TO UNIT (RESPONSIBILITY OF THE INSTALLER)

- 9 Cut-off valve
- 15 Anti-vibration joints
- 16 Automatic Filling Valve

WATER FEATURES

System: Chiller with plate heat exchanger	
PH	7.5-9
Electric conductivity	10-500µS/cm
Total hardness	4.5-8.5°dH
Temperature	< 65°C
Oxygen content	< 0.1 ppm
Max. glycol amount	50%
Phosphates (PO4)	< 2ppm
Manganese (Mn)	< 0.05 ppm
Iron (Fe)	< 0.3 ppm
Alkalinity (HCO3)	70 - 300 ppm
Chloride ions (Cl-)	< 50 ppm
Sulphate ions (SO4)	< 50 ppm
Sulphide ion (S)	none
Ammonium ions (NH4)	none
Silica (SiO2)	< 30ppm



(*) **HYDRONIC KIT 06-08:**
Storage tanks with holes for supplementary heaters (**not provided**) are sent from the factory with plastic protection caps. Before loading the system, if the installation of one or all resistances is not expected, all plastic caps must be replaced with the special caps, commonly commercially available.

INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ECL 09 (DOUBLE LOOP)

COMPONENTS PROVIDED AS STANDARD

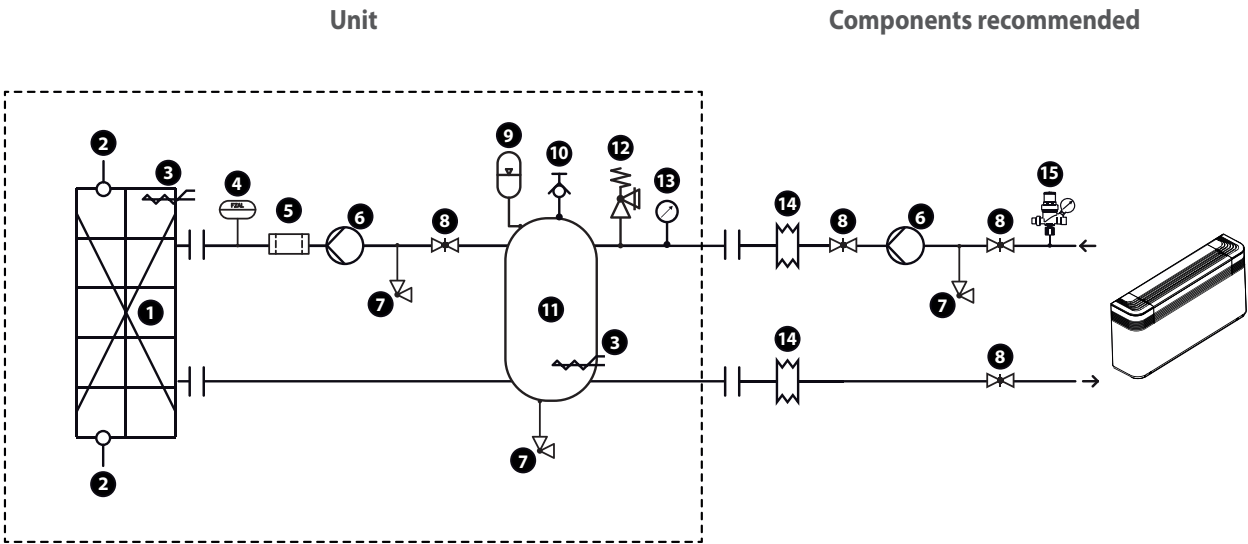
- 1 Plate heat exchanger
- 2 Water temperature sensors
- 3 Antifreeze electric heater (standard in the heat exchanger and storage tank)
- 4 Flow switch
- 5 Water filter
- 6 Pump
- 7 Drain valve
- 8 Cut-off valve
- 9 Expansion Tank
- 10 Air vent valve
- 11 System buffer tank
- 12 Safety valve
- 13 Pressure gauges

**HYDRAULIC COMPONENTS RECOMMENDED EXTERNAL TO UNIT
(RESPONSIBILITY OF THE INSTALLER)**

- 6 Pump
- 7 Drain valve
- 8 Cut-off valve
- 14 Anti-vibration joints
- 15 Automatic Filling Valve

WATER FEATURES

System: Chiller with plate heat exchanger	
PH	7.5-9
Electric conductivity	10-500µS/cm
Total hardness	4.5-8.5°dH
Temperature	< 65°C
Oxygen content	< 0.1 ppm
Max. glycol amount	50%
Phosphates (PO4)	< 2ppm
Manganese (Mn)	< 0.05 ppm
Iron (Fe)	< 0.3 ppm
Alkalinity (HCO3)	70 - 300 ppm
Chloride ions (Cl-)	< 50 ppm
Sulphate ions (SO4)	< 50 ppm
Sulphide ion (S)	none
Ammonium ions (NH4)	none
Silica (SiO2)	< 30ppm



VARIABLE FLOW RATE SYSTEMS ON THE PRIMARY CIRCUIT WITH HYDRONIC KITS W1-W2-W3-W4

Configurations W1-W2-W3-W4 are designed for single-ring systems with a variable flow rate.

BENEFITS

This type of system produces:

- a simplified hydraulic circuit
- lower electricity consumption for pumping

WHAT THEY INVOLVE

These options include as standard: (fig.1)

- Pumping units with high or low head, with the pumps driven by an inverter
- Differential pressure transducer and absolute pressure transducers: pressure sensors for ensure flow rate modulation based on the pressure difference measured between two precise points indicated on the hydraulic diagram
- Bypass branch with a motorised valve to ensure the minimum flow rate required by the heat exchanger in all operating conditions

HOW THEY WORK

The system that this solution is applied to must have a certain number of terminals with 2-way valves (On-Off or Modulating) that vary the flow rate during adjusted operation.

During the system design phase, make sure there are an adequate number of terminals with 3-way valves (not subject to flow rate variation on the supply), to guarantee the minimum flow rate on the circuit compatible with the machine limits.

The system automatically modulates the number of pump rotations - and therefore the water flow rate - on the basis of the pressure difference measured on the unit (and resulting from the opening or closure of the 2-way valves).

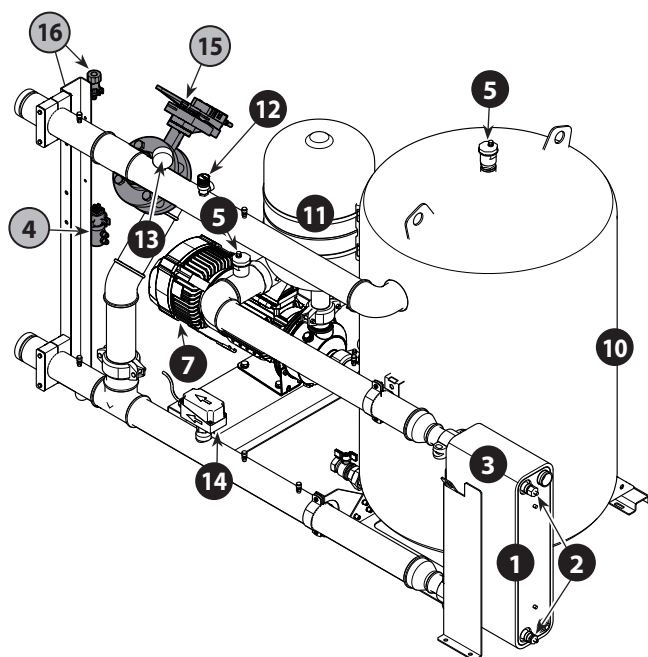
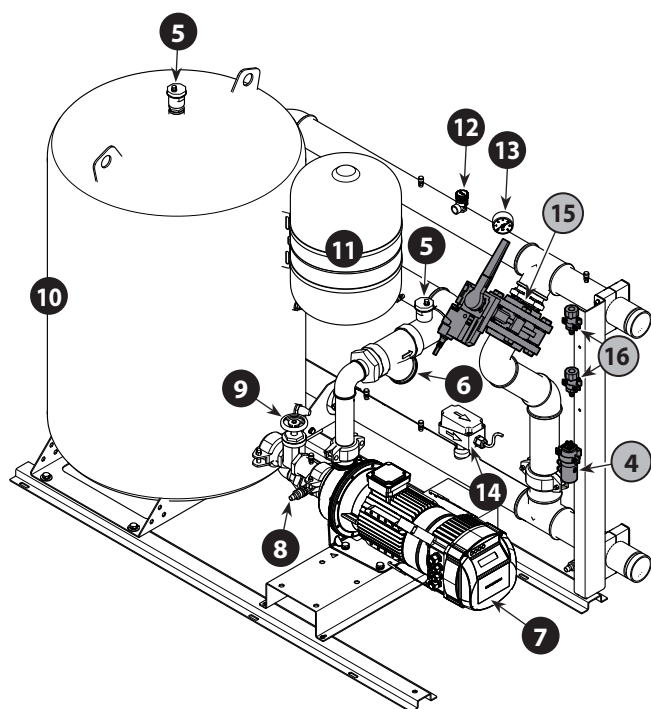
IT is essential to guarantee terminal regulation systems that, during modulation, envisage an overall flow rate variation less than 10% per minute of the current flow rate. (fig.2)

The required differential pressure set-point shall be settled by changing the inverter parameters (Parameter P02, MENU 825). The factory setting default setpoint is 1 bar.

Be sure to respect the minimum water content (refer to the "System water content" chapter).

Hydraulic circuit configuration W3

fig. 1



COMPONENTS PROVIDED AS STANDARD

- 1 Plate heat exchanger
- 2 Water temperature sensors
- 3 Antifreeze electric heater (standard in the heat exchanger and storage tank)
- 4 Differential pressure transducer
- 5 Air vent valve
- 6 Water filter
- 7 Pump
- 8 Drain valve
- 9 Cut-off valve
- 10 System buffer tank
- 11 Expansion Tank
- 12 Safety valve
- 13 Pressure gauges
- 14 Flow switch
- 15 Motorized by-pass valve
- 16 Pressure transducer



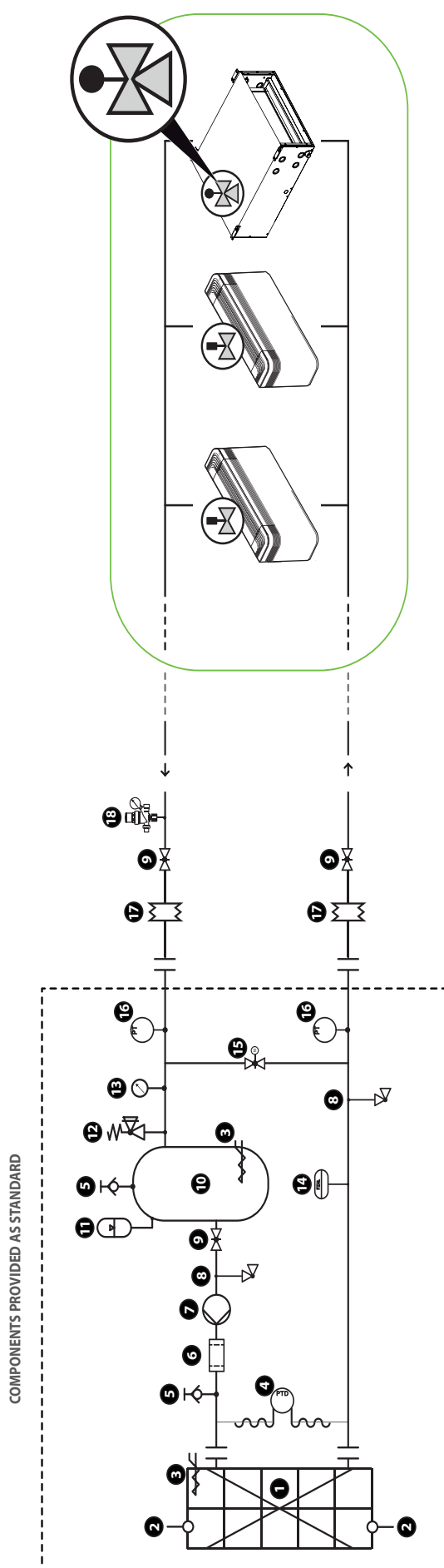
The differential pressure transducer (4) is located on the rear of the unit, near the two absolute pressure transducers (16), so it can be accessed for maintenance. The differential pressure transducer (4) is the starting point for the capillaries that are then connected to the evaporator inlet and outlet, as indicated in the hydraulic diagrams on the following pages.

System side heat exchanger	vers	0282	0302	0332	0352	0502	0552	0602	0652	0682	0702	0752	0604	0654	0704	0754	
Min. flow rate	°	l/h	-	-	-	-	8470	9222	10847	11635	13751	15403	16850	10810	12141	14693	16654
	L	l/h	4867	5545	6361	7367	8291	9004	10557	11296	13435	15005	16343	10469	11615	14322	16127
	A	l/h	-	-	-	-	8944	9882	11202	12058	14449	16086	17868	11172	12934	15215	17105
	E	l/h	5214	5887	6629	7686	8637	9510	10665	11403	13890	15324	16859	10526	12470	14475	16153
	U	l/h	-	-	-	7973	8992	10086	11373	12638	14766	16473	18038	11871	13163	15533	17457
	N	l/h	5230	5942	6624	7722	8676	9673	11075	12240	14162	15928	17305	11489	12667	15015	16793
Max. flow rate	°	l/h	-	-	-	-	24201	26348	30992	33242	39289	44008	48143	30885	34689	41979	47584
	L	l/h	13906	15843	18175	21049	23690	25725	30163	32275	38386	42871	46693	29910	33185	40921	46078
	A	l/h	-	-	-	-	25555	28234	32005	34451	41282	45959	51051	31920	36953	43472	48871
	E	l/h	14898	16820	18940	21960	24679	27171	30470	32581	39685	43783	48170	30074	35627	41357	46152
	U	l/h	-	-	-	22779	25691	28817	32493	36107	42189	47065	51537	33916	37610	44381	49878
	N	l/h	14943	16978	18927	22063	24789	27639	31642	34973	40464	45509	49444	32826	36191	42901	47979
Permitted system flow rate variation (options W1-W2-W3-W4)		Less than 10% per minute of the current flow rate *															

* Example

fig. 2





COMPONENTS PROVIDED AS STANDARD

- 1 Plate heat exchanger
- 2 Water temperature sensors
- 3 Antifreeze electric heater (standard in the heat exchanger and storage tank)

- | | |
|----|-------------------------|
| 5 | Air vent valve |
| 6 | Water filter |
| 7 | Pump |
| 8 | Drain valve |
| 9 | Cut-off valve |
| 10 | System buffer tank |
| 11 | Expansion Tank |
| 12 | Safety valve |
| 13 | Pressure gauges |
| 14 | Flow switch |
| 15 | Motorized by-pass valve |
| 16 | Pressure transducer |

**HYDRAULIC COMPONENTS RECOMMENDED EXTERNAL TO UNIT
(RESPONSIBILITY OF THE INSTALLER)**

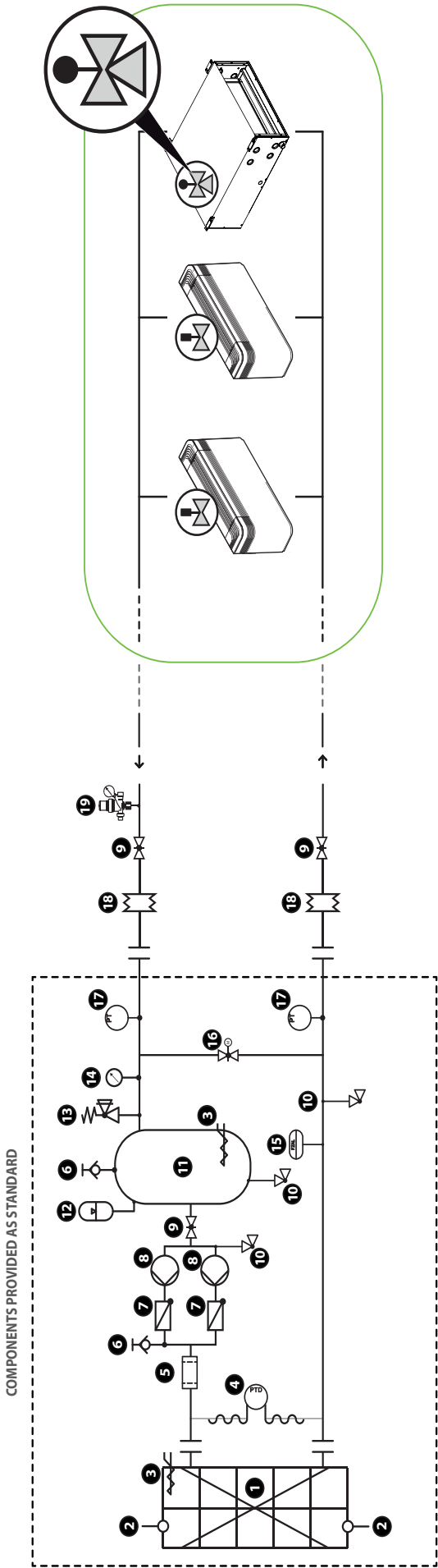
- 17** Anti-vibration joints
- 18** Automatic Filling Valve
- 9** Cut-off valve



WARNING!
Make sure the system
has an adequate number
of terminals with 3-way
valves, to guarantee at
least the minimum water
flow rate.



Do not fill up the hydraulic system by glycol near the suction of the pump. High concentration of glycol could stuck the pump. Do not use the pump to mix water and glycol



COMPONENTS PROVIDED AS STANDARD

- 1 Plate heat exchanger
- 2 Water temperature sensors
- 3 Antifreeze electric heater (standard in the heat exchanger and storage tank)
- 4 Differential pressure transducer
- 5 Water filter
- 6 Air vent valve
- 7 One way valve
- 8 Pump
- 9 Cut-off valve
- 10 Drain valve
- 11 System buffer tank
- 12 Expansion Tank
- 13 Safety valve
- 14 Pressure gauges
- 15 Flow switch
- 16 Motorized by-pass valve
- 17 Pressure transducer

HYDRAULIC COMPONENTS RECOMMENDED EXTERNAL TO UNIT
(RESPONSIBILITY OF THE INSTALLER)

- 18 Anti-vibration joints
- 19 Automatic Filling Valve
- 9 Cut-off valve

WARNING!
Make sure the system has an adequate number of terminals with 3-way valves, to guarantee at least the minimum water flow rate.

Do not fill up the hydraulic system by glycol near the suction of the pump. High concentration of glycol could stuck the pump. Do not use the pump to mix water and glycol

ELECTRICAL CONNECTIONS

The units are completely wired at the factory and only require connection to the electric power supply mains, downstream from a unit switch, according to that envisioned by the Standards in force on this subject in the country of installation.

It is also advised to check that:

- The electrical mains features are suitable for the absorption values indicated in the electrical data table, also taking into consideration any other machines functioning at the same time.
- The unit is only powered when installation has been completed (hydraulic and electric).
- Respect the connection indications of the phase, and earth wires.
- The power supply line must have a relevant protection mounted upstream against short circuits and dispersions to earth, which isolates the system with respect to other utilities.
- The voltage must be within a tolerance of $\pm 10\%$ of the nominal power supply voltage of the machine (for unbalanced three-phase unit max 3% between the phases). Whenever these parameters are not respected, contact the electric energy public body.
- For electric connections, use the cables with double isolation according to the Standards in force on this subject in the different countries.

it is mandatory:

- The use of an omnipolar magnet circuit breaker switch, in compliance with the current Standards (contact opening at least 3 mm), with suitable cut-off power and differential protection on the basis of the electric data table shown below, installed as near as possible to the appliance.
- To make an effective earth connection. The manufacturer cannot be considered responsible for any damage caused by the lack of or ineffective appliance earth connection.
- For units with three-phase power supply, check the correct connection of the phases.

ATTENTION

- **All the electrical operations must be carried out by personnel in possession of the necessary qualifications by law, suitably trained and informed on the risks related to these operations.**
- **The characteristics of the electrical lines and of the related components must be determined by staff qualified to design electrical systems, in compliance with the international and national regulations of the place of installation of the unit and in compliance with the regulations in force at the moment of installation**
- **For the installation requirements refer only to the wiring diagram supplied with the unit. - The wiring diagram along with the manuals must be kept in good condition and always available for any future servicing on the unit.**
- **It is mandatory to verify that the machine is watertight before making the electrical connections and it must only be powered up after the hydraulic and electrical works have been completed.**
- **If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard**

ELECTRICAL DATA

The cable section shown in the table are recommended for maximum lengths of 50m. For longer lengths or different cable laying, it is up to the PLANNER to calculate the appropriate line switch, the power supply line as well as the connection to the earth wire and connection cables depending on:

- The length
- The type of cable
- The absorption of the unit and the physical location, and the ambient temperature.

TOTAL INPUT

Size ECL	Ver.	0282	0302	0332	0352	0502	0552	0602	0652	0682	0702	0752	0604	0654	0704	0754	
Version 00 data																	
Maximum current (F.L.A.)	°	A	-	-	-	-	72,2	77,1	86,0	94,9	112,7	127,3	144,0	98,2	111,3	131,4	141,2
	L	A	41,5	49,2	55,8	65,3	72,2	77,1	86,0	94,9	112,7	127,3	144,0	98,2	111,3	131,4	141,2
	A	A	-	-	-	-	72,2	77,1	86,0	94,9	112,7	127,3	144,0	98,2	114,5	131,4	141,2
	E	A	42,6	49,2	56,9	65,3	72,2	77,1	86,0	94,9	112,7	127,3	144,0	98,2	114,5	131,4	141,2
	U	A	-	-	-	67,3	72,2	77,1	89,2	98,1	112,7	130,5	147,2	101,3	114,5	134,6	144,4
	N	A	42,6	50,3	56,9	67,3	72,2	77,1	89,2	98,1	112,7	130,5	147,2	101,3	114,5	134,6	144,4
Peak current (L.R.A.)	°	A	-	-	-	-	277,6	282,5	329,2	338,1	363,8	378,4	476,4	211,9	225,1	274,9	346,6
	L	A	146,9	163,0	169,5	208,9	277,6	282,5	329,2	338,1	363,8	378,4	476,4	211,9	225,1	274,9	346,6
	A	A	-	-	-	-	277,6	282,5	329,2	338,1	363,8	378,4	476,4	211,9	228,3	274,9	346,6
	E	A	148,0	163,0	170,6	208,9	277,6	282,5	329,2	338,1	363,8	378,4	476,4	211,9	228,3	274,9	346,6
	U	A	-	-	-	210,8	277,6	282,5	332,4	341,3	363,8	381,6	479,6	215,1	228,3	278,1	349,8
	N	A	148,0	164,1	170,6	210,8	277,6	282,5	332,4	341,3	363,8	381,6	479,6	215,1	228,3	278,1	349,8

F.L.A. Maximum current

L.R.A. Peak current

The hydronic kit P2-P4-02-04-06-08-12-14-K2-K4 have two twin pumps including 1-up and 1 spare

Size ECL			0282	0302	0332	0352	0502	0552	0602	0652	0682	0702	0752	0604	0654	0704	0754
Single Hydronic kits' data																	
Low head P1-P2-01-02-05-06-11-12-K1-K2	Max. power	kW	1,40	1,40	1,40	1,40	1,40	1,40	1,91	1,91	3,43	3,43	4,29	1,91	1,91	3,43	4,29
	Max. current	A	2,51	2,51	2,51	2,51	2,51	2,51	3,41	3,41	6,33	6,33	7,62	3,41	3,41	6,33	7,62
High head P3-P4-03-04-07-08-13-14-K3-K4	Max. power	kW	2,56	2,56	2,56	2,56	2,56	2,56	3,40	3,40	5,93	5,93	5,93	3,40	3,40	5,93	5,93
	Max. current	A	4,53	4,53	4,53	4,53	4,53	4,53	5,86	5,86	10,50	10,50	10,50	5,86	5,86	10,50	10,50

ELECTRICAL DATA UNIT WITH AND WITHOUT HYDRONIC KIT

Size ECL	Power supply	Compressors	Fans	RECOMMENDED CABLE CROSS SECTION							
				Power cables					Control and safeties connection	Earth	IL
				Phases	Cables per phases	Cross section	Neutral section	Total cables	Cross section	Cross section	
		(n°)	(n°)	(n°)	(n°)	(mm²)	(mm²)	(n°)	(mm²)	(mm²)	(A)
0282	400V-3+N-50Hz	2	6	3+N	1	25	16	4	1,5	16	100
0302		2	8	3+N	1	25	16	4	1,5	16	100
0332		2	8	3+N	1	25	16	4	1,5	16	100
0352		2	8	3+N	1	35	16	4	1,5	16	100
0502		2	2	3+N	1	35	16	4	1,5	16	125
0552		2	2	3+N	1	35	16	4	1,5	16	125
0602		2	3	3+N	1	50	25	4	1,5	25	125
0652		2	3	3+N	1	50	25	4	1,5	25	125
0682		2	3	3+N	1	70	35	4	1,5	35	160
0702		2	4	3+N	1	70	35	4	1,5	35	200
0752		2	4	3+N	1	70	35	4	1,5	35	200
0604		4	3	3+N	1	50	25	4	1,5	25	160
0654		4	3	3+N	1	50	25	4	1,5	25	160
0704		4	4	3+N	1	70	35	4	1,5	35	200
0754		4	4	3+N	1	70	35	4	1,5	35	200

Earth Earth connection to the unit

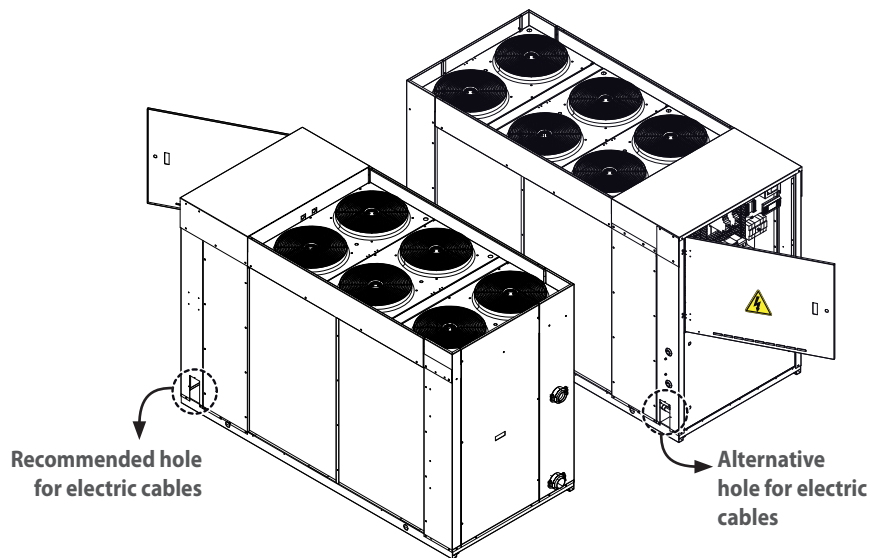
3+N: 3 phase + neutral

IL Master switch

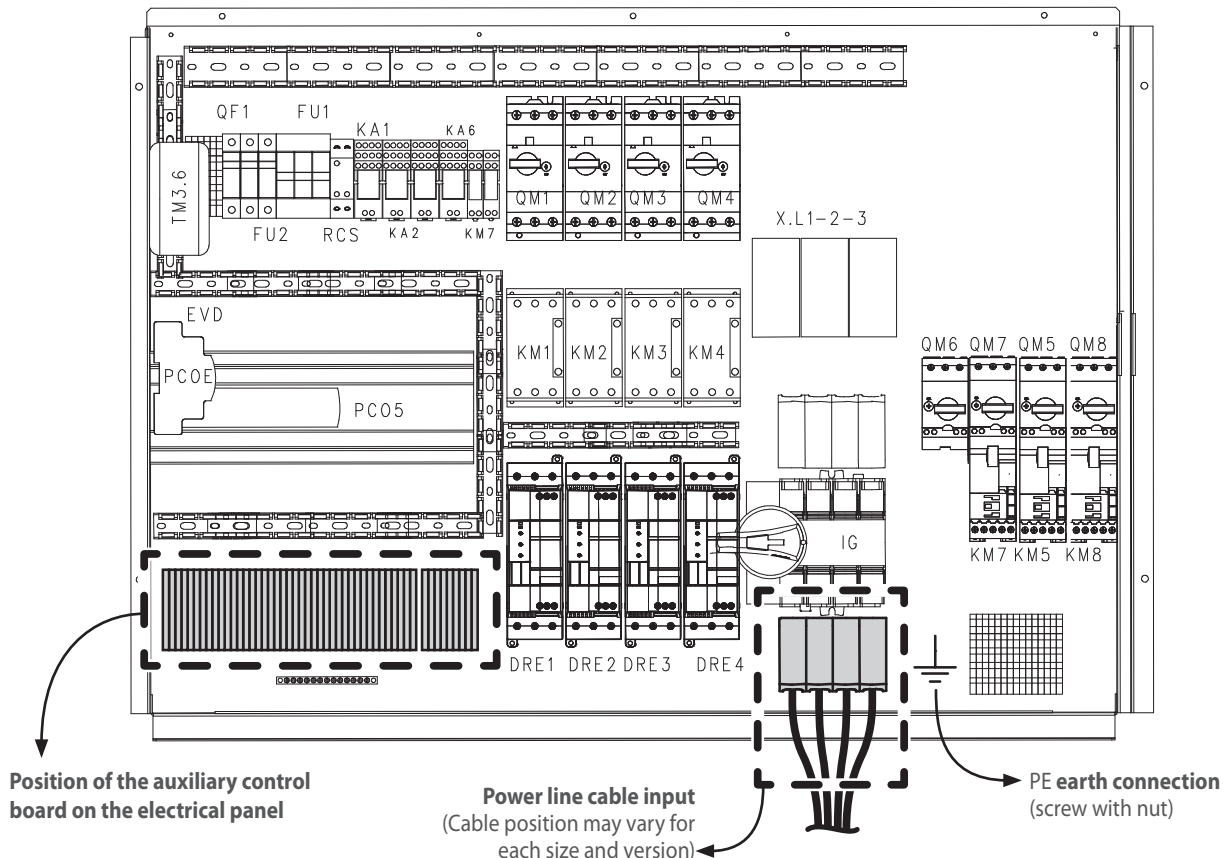
ELECTRIC POWER CONNECTION TO THE ELECTRICAL MAINS

- Open the external covering panels (if present)
- Make sure that the switch is at "OFF" before opening the electric control board for the connection of the unit to the power supply.
- Use the plates/holes to pass the main electric power supply cable and the cables of the other external connections under the responsibility of the installer.
- It is prohibited to access positions not specifically envisioned in this manual with electric cables.
- Avoid direct contact with non-insulated copper piping and with the compressor.
- Identify the clamps for the electric connection and always refer exclusively to the wiring diagram supplied with the unit.
- Remove any protections from the cable fixing points..
- For the functional connection of the unit, take the power supply cable to the electric control board inside the unit and connect it to clamps. L1-L2-L3, N (if present), and PE respecting the polarities L1-L2-L3 and N as phases, and PE as grounding
- Ensure that all protections removed for the electric connection have been restored before powering the unit electrically.
- Close all the opened panels.
- Turn the switch at "ON" position.
- Position the system master switch (outside the appliance) at "ON".

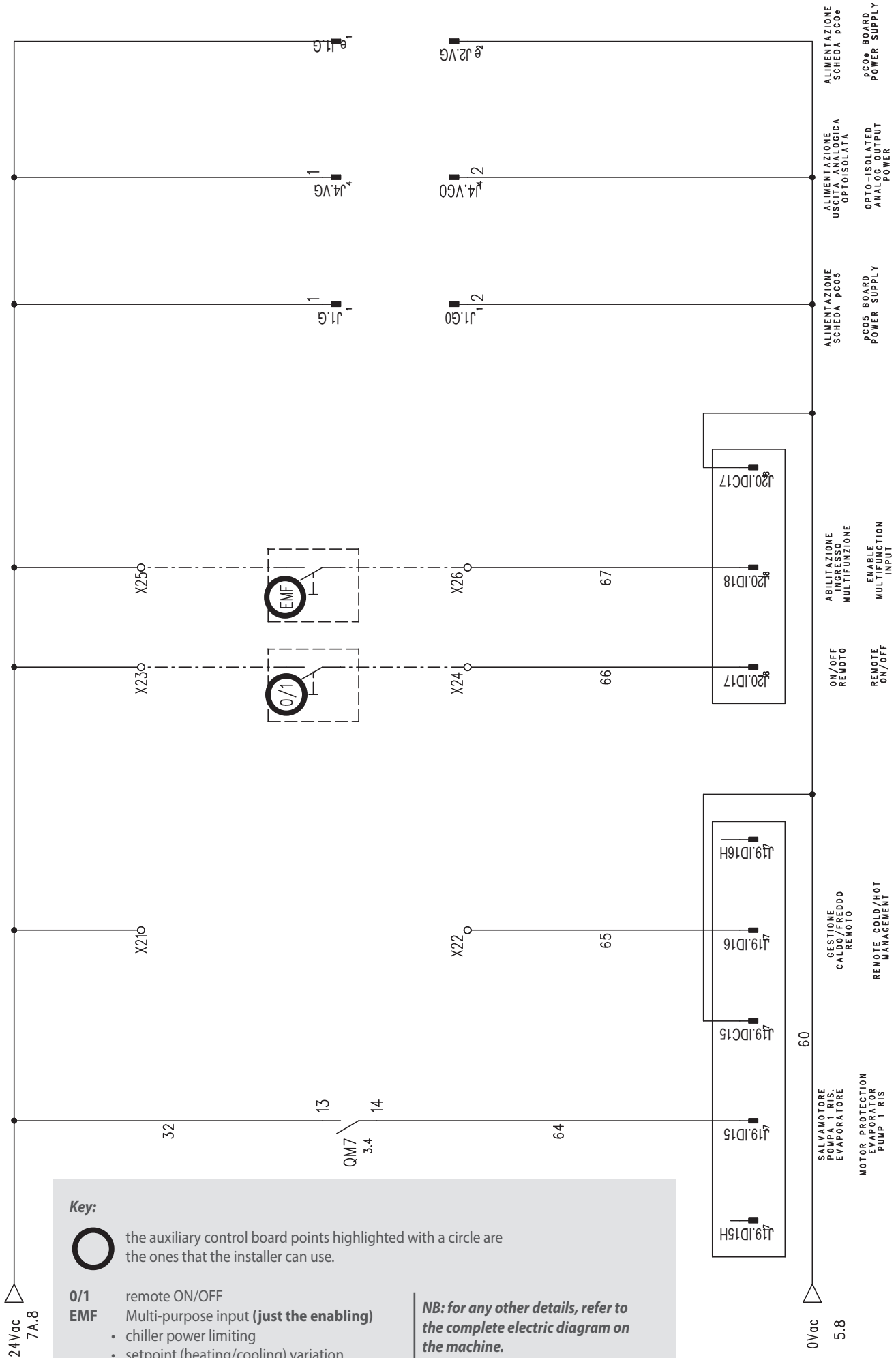
For auxiliary connection please refer to the wiring diagrams supplied with the unit,



Example layout of ECL model with 4 compressors



CONNECTING THE AUXILIARY CONTROL BOARD



COMMISSIONING - WARNINGS

START-UP

OPERATIONS TO BE PERFORMED WITH NO VOLTAGE PRESENT

ATTENTION

the unit is not working:

Check:

- All safety conditions have been respected
- The unit is correctly fixed to the support surface
- The minimum technical spaces have been respected
- That the main power supply cables have appropriate cross-section, which can support the total consumption of the unit. (see electric data sections) and that the unit has been duly connected to the ground.
- That all the electrical connections have been made correctly and all the terminals adequately tightened.
- Check for refrigerant gas leaks, especially near the pressure points of pressure gauges, pressure transducers and pressure switches. (vibrations during transport may have loosened the connections).

OPERATIONS TO BE PERFORMED WITH THE UNIT LIVE

ATTENTION

the unit is still not working:

- Supply power to the unit by turning the master switch to the ON position.
- Use a tester to verify that the value of the power supply voltage to the phases is equal to $400V \pm 10\%$; also verify that the unbalance between phases is no greater than 3%.
- Check that the connections made by the installer are in compliance with the documentation.
- Verify that the resistor of the compressor sump is working by measuring the increase in temperature of the oil pan. The resistance/s must function for at least 12 hours before start-up of the compressor and in any event, the temperature of the oil pan must be 10-15°C higher than room temperature.

HYDRAULIC CIRCUIT CONTROLS

- Check that all hydraulic connections are made correctly, that the plate indications are complied with and that a mechanical filter has been installed in each inlet heat exchanger. **(Mandatory component for warranty to be valid).**
- Make sure that the circulation pump/s is operating and that the water flow rate is sufficient to close the contact of the flow switch, if installed.
- Check the water flow rate, measuring the pressure difference between inlet and outlet of the evaporator and calculate the flow rate using the evaporator pressure drop tables present in this manual.
- Check the correct functioning of the flow meters if installed. Closing the cut-off valve at the output of the heat exchanger; the unit control panel must show the block. Finally re-open the valve and rearm the block

COMMISSIONING

- Once all the aforementioned checks have been carried out, the unit can be commissioned
- Close the door of the electrical panel.
- Set the unit main switch to ON, the unit will start after a few minutes

OPERATIONS TO BE PERFORMED WITH MACHINE ON

ATTENTION

the unit is working:

Check:

- That the compressor input current is lower than the maximum indicated in the electrical data table.
- Before starting the unit, check that the compressor rotates in the correct direction through a three-phase protection. The spiral compressors compress in one direction of rotation only. Therefore, it is essential for the phase of the three-phase spiral compressors to be correctly connected (the correct direction of rotation can be controlled when the pressure on the intake side decreases and that on the flow side increases with the compressor in operation). If the connection is incorrect, the direction of rotation is reversed: this causes a loud noise and the reduction of current consumption. In this case, the protection system inside the compressor activated turning off the unit. To solve the problem, disconnect and swap the wires between two of the phases, then connect the three-phases again.
- That the voltage value lies within the pre-fixed limits and that unbalance between the three phases (three-phase power supply) is not above 3%.

If having to take measurements and perform checks that require the machine to run, you must:

- make sure that any remote control systems are disconnected; however, keep in mind that the PLC on the machine controls its functions and can enable and disable the components creating hazardous situations (e.g. power and rotate the fans and their mechanical drive systems).
- Operate with the electrical board open the shortest time possible
- Close the electrical board as soon as the single measurement or control is performed

ATTENTION

The anti-freeze set temperature can only be varied by an authorised after-sales centre and only after having checked that there is a suitable % of anti-freeze solution in the water circuit.

Whenever this alarm intervenes, call the nearest authorised after-sales service immediately

- Control of the water flow rate alarm, the unit provides for the management of a flow rate alarm controlled by a differential pressure switch or flow switch if provided. This type of safety device intervenes after the first 30 seconds of pump functioning, if the water flow rate is not sufficient. The intervention stops the compressor and the pump itself.

MAINTENANCE

ATTENTION

Any cleaning, inspection, control, routine and extraordinary maintenance must be performed by experienced, authorised personnel and qualified to perform the above tasks. These tasks must be performed with the machine off and not powered to perfection as prescribed by M.D. 37/2008.

During the execution of

- Risks of electric discharges;
- Risk of injuries due to the presence of rotating parts;
- Risk of injuries due to the presence of sharp edges and heavy weights;
- Risks of injuries due to the presence of components containing high pressure gas;
- Risks of injuries due to high or low temperature components.
- Noise-related risks of the machine functioning (refer to what is declared in the user manual);
- Risks related to the presence of harmful substances in hydronic circuits.

These tasks must be performed using the appropriate personal protective equipment, see figure below

Maintenance operations are essential to maintain the refrigerant unit efficient, from a purely functional point of view and with regard to energy and safety.

In the absence of specific regulations regarding HFO refrigerants, the manufacturer prescribes the application of and compliance with that indicated in the:

- Regulation (EC) No.842/2006- art.3 concerning the "leakage containment"
- Regulation (EC) No.1516/2007 concerning the "standard leakage checking requirements" and related national laws implementing the above European regulations.

ATTENTION

For the unit, the user must provide a system booklet which he must ensure, or its designee authorised to service the machine, will contain all required records in order to have a historical documentation of the unit functioning. The absence of records in the booklet may count as evidence of lack of maintenance..

PRECAUTIONS TO BE OBSERVED DURING MAINTENANCE

ATTENTION

Maintenance operations can only be performed by authorised technicians

PRECAUTIONS AGAINST RESIDUAL RISKS

MECHANICAL RISKS

- Before opening a machine panel, ascertain whether it is or not firmly connected to it by hinges;
- In case a piece is disassembled, make sure it is correctly reassembled before restarting the unit;
- Louvers of the heat exchangers, edges of the components and panels, screws can generate cuts;
- Do not remove the protections from mobile elements while the unit is running;
- Make sure that the protections of mobile elements are correctly in

place before restarting the unit;

- It is not permitted to walk or place other bodies on the machine;
- Fans, motors and belt drives may be in motion, always wait for them to stop and take appropriate precautions to prevent their activation before accessing them;
- Isolate the unit from the mains by means of the external isolator provided for the insertion of padlocks (up to 3) for blocking in "open" position.
- Place a sign reading "Do not turn on - maintenance in progress" on the open isolator
- Equip yourself with the appropriate personal protective equipment (helmet, insulated gloves, protective goggles, accident-prevention shoes, etc.)
- Equip yourself with tools in good condition and make sure to have fully understood the instructions before using them
- For outdoor units, do not perform interventions in dangerous weather conditions such as rain, snow, fog, etc.
- The cooling circuit contains under pressure refrigerant gas: any operation must be performed by competent personnel in possession of the authorisations and qualifications required by current laws

ATTENTION

it is forbidden to LOAD the cooling circuit with a refrigerant gas different from that indicated. Using different refrigerant gas can severely damage the unit

- never keep the cooling circuit open, because the oil absorbs humidity and degrades
- during venting protect yourself against any leakage of fluids at dangerous temperatures and/or pressures
- always use appropriate equipment (extractor, antistatic bracelet, etc.) when replacing electronic boards
- if replacing a motor, compressor, evaporator, condensing coils or any other heavy element, make sure that the lifting devices are compatible with the weight to be handled
- in air units with independent compressor compartment, do not access the fan compartment without having first disconnected the machine through the isolator on the board and having placed a sign reading "Do not turn on - maintenance in progress"
- contact the company if changes must be made to the refrigerant, hydraulic or electric diagram of the unit, as well as its control logic

PREVENTION OF CHEMICAL / FIRE / ENVIRONMENTAL RISKS

- Any intervention on the machine must be performed with "NO SMOKING";
- Never disperse the fluid contained in the cooling circuit in the environment
- The water circuit may contain harmful substances. Prevent the contents coming into contact with skin, eyes and clothing. Use the prescribed personal protective equipment. (chemical risk);
- If there is a need to perform a braze-welding, so with the use of special torch with naked flame, the same flame must only be activated if in the absence of freon gas in the environment and on the cooling circuit pipes. Inside piping must be "washed" and contain nitrogen type inert gas. The presence of flame and freon gas decomposes the same, forming lethal and carcinogenic compounds.
- Hot works require the availability of a Carbon Dioxide (CO₂) fire extinguisher. DO NOT USE WATER, leachates could be hazardous for the discharges; if using water, provide a containment tank.

PREVENTION AGAINST RESIDUAL RISKS DUE TO PRESSURE OR HIGH/LOW TEMPERATURE

- The unit contains under pressure gas: no operation must be performed on under pressure equipment except during maintenance that must be carried out by competent and authorised personnel;
- Perform brazing or welding only on empty pipes and clear of any lubricating oil residues; do not near flames or other heat sources to the pipes containing under pressure fluids;
- Do not work with naked flames near the unit;
- Do not bend or hit pipes containing under pressure fluids;
- The unit is equipped with overpressure release devices (safety valve): if these devices intervene, the refrigerant gas is released at high temperature and speed;
- The machine and the pipes have very hot or very cold surfaces that lead to risk of burns by contact;
- Do not use your hands to control any refrigerant leaks;
- Before removing elements along the under pressure hydronic circuits, shut-off the pipe section involved and gradually drain the fluid until its pressure and that of the atmosphere are balanced.

PREVENTION AGAINST RESIDUAL ELECTRICAL RISKS

- Before opening the electrical panel, disconnect the unit from the mains by means of the external isolator;
- If the unit has power factor correction condensers, wait the time indicated on the machine plate from when the power supply was disconnected from the unit before accessing inside the electrical panel;
- If the unit is equipped with integrated inverter type compressors, disconnect the power supply and wait at least 15 minutes before accessing for maintenance: the internal components remain live for this time, generating the risk of electrocution.
- If the power supply cable is damaged, it must be replaced by the manufacturer, After Sales Service or by another similarly qualified person, to avoid dangerous situations.

CLEANING THE MACHINE

The machine must be turned off and electrically disconnected when being cleaned.

INSPECTION AND CONTROL

The machine must be turned off and electrically disconnected during its inspection and leak check.

ROUTINE AND EXTRAORDINARY MAINTENANCE

The machine must be turned off and electrically disconnected during its maintenance (with possible replacement of components). In particular:

- Before any intervention, isolate the unit from the mains by means of the external isolator provided for the insertion of padlocks (up to 3) for blocking in "open" position;
- Place a sign reading "Do not turn on – maintenance in progress" on the open isolator;
- Equip yourself with tools in good condition and make sure to have fully understood the instructions before using them;
- Equip yourself with the appropriate personal protective equipment as indicated in paragraph 1 of this report;
- For outdoor units, do not perform interventions in dangerous weather conditions such as rain, snow, fog, thunderstorms, etc;
- The cooling circuit components must be replaced after draining the refrigerant gas contained in the circuit;

- During venting protect yourself against any leakage of fluids at dangerous temperatures and/or pressures;
- Always use appropriate equipment (extractor, antistatic bracelet etc) when replacing electronic boards;
- If replacing a motor, compressor, evaporator, condensing coil or any other heavy element, make sure that the lifting devices are compatible with the weight to be handled;
- In air units with independent compressor compartment, do not access the fan compartment without having first disconnected the machine through the isolator on the board and having placed a sign reading "Do not turn on – maintenance in progress";
- Always and only use original spare parts purchased directly from Airedale or from official dealers. Contact Airedale should it be necessary to move the unit one year after its positioning on-site or it must be dismantled;
- It is not permitted to change the refrigerant, hydraulic or electric layout of the unit, or its control logic unless expressly authorised by Airedale;
- The machine must be loaded with the refrigerant in the feature label and in the required quantity;
- Make sure to have removed all tools, electrical cables or other loose object and having perfectly connected the machine to the system before closing it and starting it;
- The inspections and measurements necessary to establish the correct functioning of the machine to be run with the machine in operation, must be performed with the machine closed (framework fixed on the machine), reading the measurements collected by the control board and viewable in the control panel of the same. In the case of machines with cooling circuit compartment open, stand in front of the control panel of the electrical panel remaining distant and not exposed to the under pressure parts of the cooling circuit
- If replacing a fuse or a circuit breaker, details relating the type and ratings of fuses or circuit breakers are visible in the mark inside the electrical panel.

ATTENTION

When having to take measurements with the machine on and the electrical panel and cooling circuit open, be careful since the machine is live, the cooling circuit contains high pressure gas, the pipes may be hot or cold, some parts may be in motion.

Any absorption measurements of the compressors, compressor casings, pumps and fans as well as the power supply measurements, must be taken as follows:

- With machine off, access its panel;
- Connect the measuring instruments such as current clamps (to measure the current) and multimeters (to measure the voltage). These instruments must be fitted with appropriate terminals/clamps that allow to remotely control the measurement;
- Access the machine and read the measurements made by the instruments, keeping AWAY from live electrical parts;
- As soon as the measurements are taken, turn off the machine, remove the instruments and close the electrical panel.

The measurements of the compressor inlet and outlet temperature and pressure to determine the overheating and subcooling of the machine, must be carried out as follows:

- With machine off, access its cooling circuit;
- Connect the necessary instruments,
 - Pressure gauges connected through appropriate extensions to the compressor inlet and outlet pressure plugs;
 - Thermometers connected to thermocouple probes that are fixed to the compressor inlet and outlet pipes. Avoid using metratats that require the operator to near the machine cooling circuit;
- Access the machines **and acquire the measurements, keeping AWAY from the under pressure parts of the cooling circuit;**
- As soon as the measurements are taken, turn off the machine, remove the instruments and close the cooling circuit compartment.

The high/low pressure switch, where present must be tested with the machine “closed”, reading the high pressure circuit pressure on the machine control panel.

In case of machines with the cooling circuit compartment not closed by framework, the high/low pressure switch must be tested by standing in front of the machine panel where the control panel is located, remaining distant and not exposed to the under pressure parts of the cooling circuit.

The thermostatic valve must be calibrated with the machine off.



Warning;
Hot surface



Warning;
Electricity



Warning;



Warning;
Flammable material



Warning;
Sharp element



Warning;
Biological hazard



Wear head
protection



Wear protective
gloves



Wear eye protection



Wear ear protection



Wear safety
footwear

MAINTENANCE - LIST OF THE RECOMMENDED PERIODIC INTERVENTIONS

RECOMMENDED PERIODIC MAINTENANCE INTERVENTIONS					
DESCRIPTION	FREQUENCY				
	3/4 months	6 months	12 months	24 months	functioning hours
GENERAL INTERVENTIONS					
Check of any refrigerant leaks (this must be done respecting the deadlines recommended by the current European regulations)	•				
Check of the unit power supply voltage	•				
Check of the compressors' power supply voltage	•				
Check of the fan power supply voltage if present	•				
Check of the solenoid valves	•				
Functioning and calibration check of the pressure switches, if and where present	•				
Replacement of the safety valve				•	
Check and reading of the pressure/temperature probes	•				
Check and possible replacement of the dehydrating filters			•		
Check of compressors contactors	•				
Check of fans contactors, where present			•		
Exchanger coils cleaning (preferably from the inside to the outside)		•			
Check and cleaning of shell and tube heat exchangers if necessary where present (1)			•		
Check of electric resistances of the heat exchangers		•			
Check for rust and corrosion in components, paying particular attention to under pressure containers. In this case replace them of intervene with specific products			•		
General cleaning of the unit			•		
Bleed the hydraulic circuit and the heat exchangers, the simultaneous presence of air and water reduces yield and can benefit the arising of rust					
INTERVENTIONS TO COOLING CIRCUIT Functioning at full load					
Overheating temperature measurement		•			
Subcooling temperature measurement		•			
Exhaust gas temperature measurement		•			
Fans absorption measurement		•			
Compressors absorption measurement		•			
COMPRESSOR CHECKS					
Check oil level	•				
Check oil acidity			•		
Check the proper functioning of the casing resistance		•			
Check oil level sensor, if any		•			
CHECKS ON HYDRAULIC CIRCUIT					
Pumps absorption measurement		•			
Check the pump rotor gasket	•				
Check the flexible joints	•				
Check the seal of the shell and tube heat exchanger heads, where present		•			
Check the proper functioning and calibration of the flow switch, where present	•				
Check the proper functioning of the differential pressure switch, where present	•				
Check the concentration of glycol solution, if provided	3 months*				
Cleaning the water filter	•				

* To replace the glycol, refer to the documentation provided by the supplier.

The frequency of the operations described herein is a guideline one and they may vary depending on how the unit is used and the type of system where it is installed. However, if the unit is installed in harsh environments, we recommend reducing the time of intervention

1 we do not recommend swabbing as it can ruin the inner lining of the pipes, we recommend using appropriate chemicals

MAINTENANCE - LIST OF THE RECOMMENDED PERIODIC INTERVENTIONS

RECOMMENDED PERIODIC MAINTENANCE INTERVENTIONS TO UNITS WITH CENTRIFUGAL COMPRESSORS			
DESCRIPTION	FREQUENCY		
	6 months	12 months	other
GENERAL CHECKS			
Check that the compressor is not damaged	•		
Check that there are no excessive vibrations induced by other operating components	•		
CHECKS ON ELECTRICAL PARTS			
Check the power supply voltage	•		
Check the proper fastening of the compressor power supply cables		•	
Check the good condition of the electrical cables	•		
Check that the electric current value (A) is that specified in the technical plate	•		
Check the voltage value (A) on the storage tank capacitors	•		
Replace the storage tank condensers			every 5 years
Check the correct functioning of the safety system (alarms)		•	
CHECKS ON ELECTRONIC PARTS			
Check that all communication cables between the compressor and its components are firmly fastened	•		
Check that all electronic devices are firmly in their seat	•		
Visually check that the electronic boards are have no burns or are damaged		•	
Check that the reading of the pressure/temperature sensors is correct			
CHECKS ON THE COOLING CIRCUIT PARTS			
Check the proper functioning of the thermostatic valve		•	
Check the charge of refrigerant gas (1)	•		
Check the proper functioning of the solenoid valves	•		

DECOMMISSIONING AND DISPOSAL OF THE MACHINE COMPONENTS

ATTENTION

The unit contains greenhouse effect fluoride gases covered by the Kyoto Protocol. The law prohibits its dispersion in the environment and requires its recovery and delivery to the dealer or collection centre.

When components are removed to be replaced or when the entire unit reaches the end of its life and it must be removed from the installation, in order to minimise the environmental impact, respect the following disposal requirements:

- The refrigerant gas must be fully recovered in special containers and brought to collection centres by specialised personnel having the necessary qualification;
- The lubricating oil in the compressors and cooling circuit must be recovered and brought to collection centres;
- The structure, electric and electronic equipment and components must be separated according to their type and construction material and brought to collection centres;
- If the water circuit contains mixtures with anti-freeze, the content must be collected and brought to collection centres;
- Observe the current national laws

After Sales Warranty

All Airedale products or parts (non consumable) supplied for installation within the UK mainland and commissioned by an Airedale engineer, carry a full Parts & Labour warranty for a period of 12 months from the date of commissioning or 18 months from the date of despatch, whichever is the sooner.

Parts or Equipment supplied by Airedale for installation within the UK or for Export that are properly commissioned in accordance with Airedale standards and specification, not commissioned by an Airedale engineer; carry a 12 month warranty on non consumable Parts only from the date of commissioning or 18 months from the date of despatch, whichever is the sooner.

Parts or equipment installed or commissioned not to acceptable Airedale standards or specification invalidate all warranty.

Warranty is only valid in the event that

In the period between delivery and commissioning the equipment:

- is properly protected & serviced as per the Airedale installation & maintenance manual provided
- where applicable the glycol content is maintained to the correct level.

In the event of a problem being reported and once warranty is confirmed* as valid under the given installation and operating conditions, the Company will provide the appropriate warranty coverage (as detailed above) attributable to the rectification of any affected Airedale equipment supplied (excluding costs for any specialist access or lifting equipment that must be ordered by the customer).

*Once warranty is confirmed, maintenance must be continued to validate the warranty period.

Any spare part supplied by Airedale under warranty shall be warranted for the unexpired period of the warranty or 3 months from delivery, whichever period is the longer. To be read in conjunction with the Airedale Conditions of Sale - Warranty and Warranty Procedure, available upon request.

Procedure

When a component part fails, a replacement part should be obtained through our Spares department. If the part is considered to be under warranty, the following details are required to process this requirement. Full description of part required, including Airedale's part number, if known. The original equipment serial number. An appropriate purchase order number.

A spares order will be raised under our warranty system and the replacement part will be despatched, usually within 24 hours should they be in stock. When replaced, the faulty part must be returned to Airedale with a suitably completed and securely attached "Faulty Component Return" (FCR) tag. FCR tags are available from Airedale and supplied with each Warranty order.

On receipt of the faulty part, suitably tagged, Airedale will pass to its Warranty department, where it will be fully inspected and tested in order to identify the reason for failure, identifying at the same time whether warranty is justified or not.

On completion of the investigation of the returned part, a full "Report on Goods Returned" will be issued. On occasion the release of this complete report may be delayed as component manufacturers become involved in the investigation. When warranty is allowed, a credit against the Warranty invoice will be raised. Should warranty be refused the Warranty invoice becomes payable on normal terms.

Exclusions

Warranty may be refused for the following reasons.

- Misapplication of product or component
- Incorrect site installation
- Incomplete commissioning documentation
- Inadequate site installation
- Inadequate site maintenance
- Damage caused by mishandling
- Replaced part being returned damaged without explanation
- Unnecessary delays incurred in return of defective component

Returns analysis

All faulty components returned under warranty are analysed on a monthly basis as a means of verifying component and product reliability as well as supplier performance. It is important that all component failures are reported correctly.



This marking indicates that this product should not be disposed with other household wastes throughout the EU.
To prevent possible harm to the environment or human health from uncontrolled disposal of Waste Electrical and Electronic Equipment (WEEE), please return the device using appropriate collection systems, or contact the retailer where the product was purchased.
Please contact your local authority for further details.
Illegal dumping of the product by the user entails the application of administrative sanctions provided by law.



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