

Installation and maintenance manual
Manuel d'installation et de maintenance
Installations- und Wartungshandbuch
Manuale di installazione e di manutenzione
Manual de instalación y de mantenimiento



CX 25

FS 25

SXW 25

WCX 25

Version à EAU
WATER Cooled
Wasserkühlung
Versione ad ACQUA
Versión de AGUA
Uitvoering met WATER

English

Français

Deutsch

Italiano

Español



Centrales Autonomes de Climatisation / Formule VERTICALES
Packaged Air Conditioners / FREE STANDING

Zentralklimageräte / SCHRANKMODELL

Centrali Autonome di Climatizzazione / Formula VERTICALI

Centrales Autónomas de Climatización / Fórmula VERTICALES

Autonome airconditioning installaties / VERTICALE eenheden

IOM X 04-N-2GB

Part number / Code / Teil Nummer / Codice / Código : **3990530GB**

Supersedes / Annule et remplace / Annulliert und ersetzt /

Annulla e sostituisce / Anula y sustituye : **IOM X 04-N-1GB**



INSTALLATION INSTRUCTION

NOTICE D'INSTALLATION

INSTALLATIONSHANDBUCH

ISTRUZIONI INSTALLAZIONE

INSTRUCCIONES DE INSTALACIÓN

English

Français

Deutsch

Italiano

Español

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POWER SUPPLY MUST BE SWITCHED OFF BEFORE STARTING WORK IN THE ELECTRIC CONTROL BOX

GENERAL RECOMMENDATIONS

Please read the following safety precautions very carefully before installing the unit.

SAFETY DIRECTIONS

Follow the safety rules in forces when you are working on your appliance.

The installation, commissioning and maintenance of these units should be performed by qualified personnel having a good knowledge of standards and local regulations, as well as experience of this type of equipment.

The unit should be handled using lifting and handling equipment appropriate to the unit's size and weight.

Any wiring produced on site must comply with the corresponding national electrical regulations.

Make sure that the power supply and its frequency are adapted to the required electric current of operation, taking into account specific conditions of the location and the current required for any other appliance connected to the same circuit.

The unit must be EARTHED to avoid any risks caused by insulation defects.

It is forbidden to start any work on the electrical components if water or high humidity is present on the installation site.

WARNING

Cutoff power supply before starting to work on the appliance.

When making the hydraulic connections, ensure that no impurities are introduced into the pipe work.

The manufacturer declines any responsibility and the warranty becomes void if these instructions are not respected.

If you meet a problem, please call the Technical Department of your area.

If possible, assemble the compulsory or optional accessories before placing the appliance on its final location. (see instructions provided with each accessory).

In order to become fully familiar with the appliance, we suggest to read also our Technical Instructions.

-The informations contained in these Instructions are subject to modification without advance notice.

EQUIPMENT SAFETY DATA

Safety Data	R407C
Toxicity	Low
In contact with skin	Liquid splashes or sprays may cause freeze burns. Unlikely to be hazardous by skin absorption. However, R407C may be slightly irritant and, if liquid, it has a strong degreasing effect. Flush contaminated skin areas with running water. If it comes into contact with wet fabrics, the liquid refrigerant will cause them to freeze and adhere to the skin. Carefully remove the contaminated clothing since it might adhere to the skin and cause freeze burns. Apply to a doctor if the affected skin areas should be reddened or irritated.
In contact with eyes	Vapours have no effect. Liquid splashes or sprays may cause freeze burns. In these cases rinse your eyes with running water or with a solution for eye lavages for at least 10 minutes. Immediately apply to a doctor.
Ingestion	Very unlikely to occur. If this should be the case, it may cause freeze burns. Never induce vomiting. Keep the patient awake. Make it rinse its mouth with running water and make it drink about 1/4 of a litre. Immediately apply to a doctor.
Inhalation	R407C: High concentration levels of its vapours in the air can produce an anaesthetic effect, including the loss of consciousness. Particularly severe exposures may cause heart arrhythmia and sometimes prove to be also fatal. At high concentrations there is a danger of asphyxia due to a reduced oxygen content in the atmosphere. In these cases take the patient to the open air, in a cool place and keep it at rest. Administer oxygen, if required. Apply artificial respiration if breathing has ceased or if it has become irregular. In case of heart failure immediately apply cardiac massage. Immediately apply to a doctor.
Further Medical Advice	A symptomatic and supportive therapy is generally suitable. A heart sensitisation has been observed in some cases, as a result of exposures to particularly high concentrations. In the presence of catecholamines (such as for example adrenaline) in the blood flow, it has increased the irregularity of the cardiac rhythm and then caused the heart failure.
Long-term exposure	R407C: A lifetime study which has been conducted on the effects inhalation may have on rats at 50,000 ppm has shown the onset of benign tumours of the testicle. These remarks suggest that there is no danger for human beings if they are exposed to concentrations below the occupational limits or equal to them.
Occupational exposure limits	R407C: Recommended limits: 1,000 ppm v/v 8 hours TWA.
Stability	R407C: Not specified.
Conditions to avoid	Use in the presence of exposed flames, red heat surfaces and high humidity levels.
Hazardous reactions	Possibility of violent reactions with sodium, potassium, barium and other alkaline substances. Incompatible materials: magnesium and all the alloys containing over 2% of magnesium.
Hazardous decomposition products	R407 C: Halogen acids deriving from thermal decomposition and hydrolysis.
General precautions	Avoid the inhalation of high concentrations of vapours. The concentration in the atmosphere shall be kept at the minimum value and anyway below the occupational limits. Since vapours are heavier than air and they tend to stagnate and to build up in closed areas, any opening for ventilation shall be made at the lowest level.
Breathing protection	In case of doubt about the actual concentration, wear breathing apparatus. It should be self-contained and approved by the bodies for safety protection.
Storage Preservation	Refrigerant containers shall be stored in a cool place, away from fire risk, direct sunlight and all heat sources, such as radiators. The maximum temperature shall never exceed 45°C in the storage place.
Protection clothes	Wear boots, safety gloves and glasses or masks for facial protection.
Behaviour in case of leaks or escapes	Never forget to wear protection clothes and breathing apparatus. Isolate the source of the leakage, provided that this operation may be performed in safety conditions. Any small quantity of refrigerant which may have escaped in its liquid state may evaporate provided that the room is well ventilated. In case of a large leakage, ventilate the room immediately. Stop the leakage with sand, earth or any suitable absorbing material. Prevent the liquid refrigerant from flowing into drains, sewers, foundations or absorbing wells since its vapours may create an asphyxiating atmosphere.
Disposal	The best procedure involves recovery and recycle. If this is not possible, the refrigerant shall be given to a plant which is well equipped to destroy and neutralise any acid and toxic by-product which may derive from its disposal.
Combustibility features	R407C: Non flammable in the atmosphere.
Containers	If they are exposed to the fire, they shall be constantly cooled down by water sprays. Containers may explode if they are overheated.
Behaviour in case of fire	In case of fire wear protection clothes and self-contained breathing apparatus.

INSPECTION AND STORAGE

At the time of receiving the equipment carefully cross check all the elements against the shipping documents in order to ensure that all the crates and boxes have been received. Inspect all the units for any visible or hidden damage.

In the event of shipping damage, write precise details of the damage on the shipper's delivery note and send immediately a registered letter to the shipper within 48 hours, clearly stating the damage caused. Forward a copy of this letter to the manufacturer or their representative.

Never store or transport the unit upside down. It must be stored indoors, completely protected from rain, snow etc. The unit must not be damaged by changes in the weather (high and low temperatures). Excessively high temperatures (above 60 °C) can harm certain plastic materials and cause permanent damage. Moreover, the performance of certain electrical or electronic components can be impaired.

WARRANTY

The appliances are delivered fully assembled, factory tested and ready to operate.

Any modification to the units without the manufacturer's prior approval, shall automatically render the warranty null and void.

The following conditions must be respected in order to maintain the validity of the warranty:

- Commissioning shall be performed by specialised technicians from technical services approved by the manufacturer.
- Maintenance shall be performed by technicians trained for this purpose.
- Only Original Equipment spare parts shall be used.
- All the operations listed in the present manual shall be performed within the prescribed SCHEDULE.



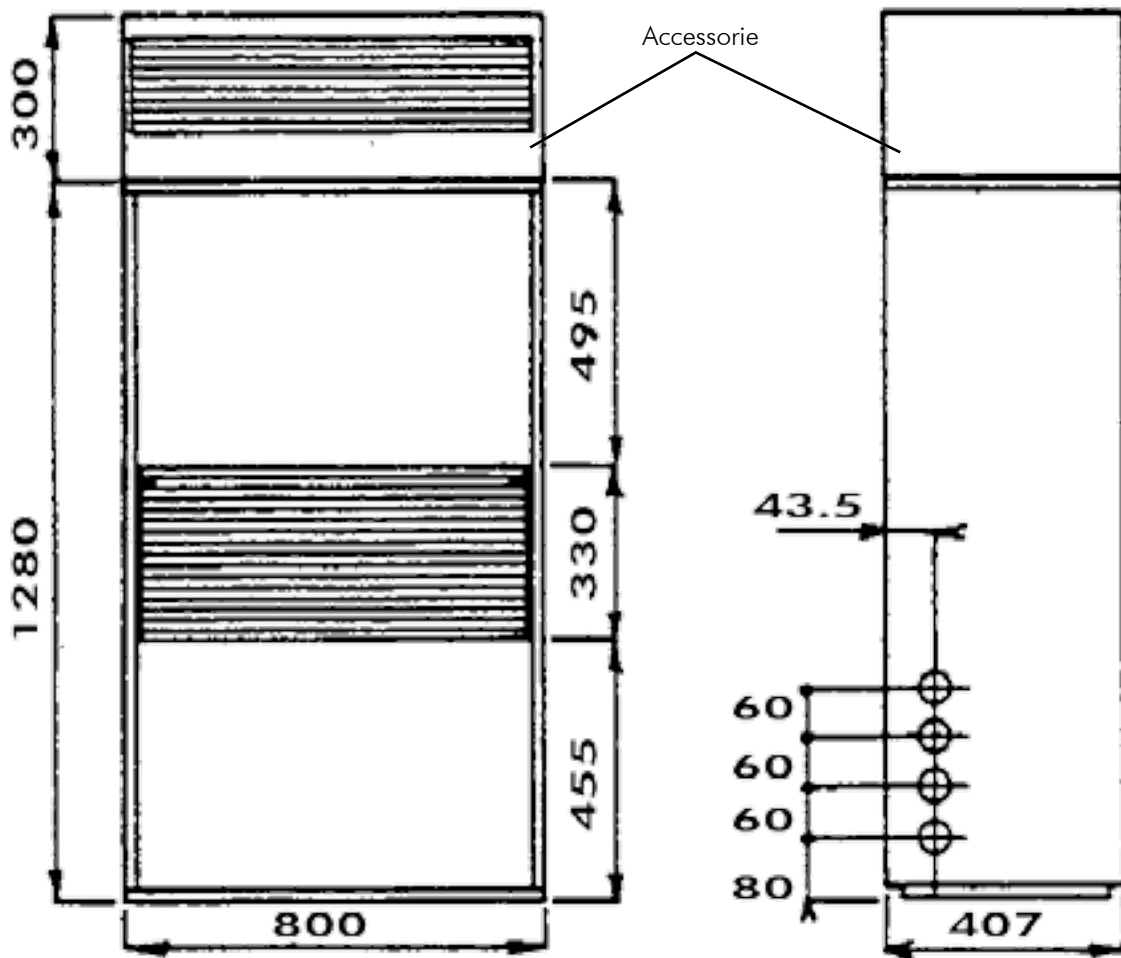
THE WARRANTY SHALL BE NULL AND VOID IN THE EVENT OF NON-COMPLIANCE WITH ANY OF THE ABOVE CONDITIONS.

CONTENTS OF PACKAGE

CX 25 - FS 25 - SXW 25 - WCX 25

- 1 indoor unit
- 1 wiring diagram
- 1 diagram key
- 1 set of grommets

DIMENSIONS



136 kg

TECHNICAL SPECIFICATIONS

POWER SUPPLY

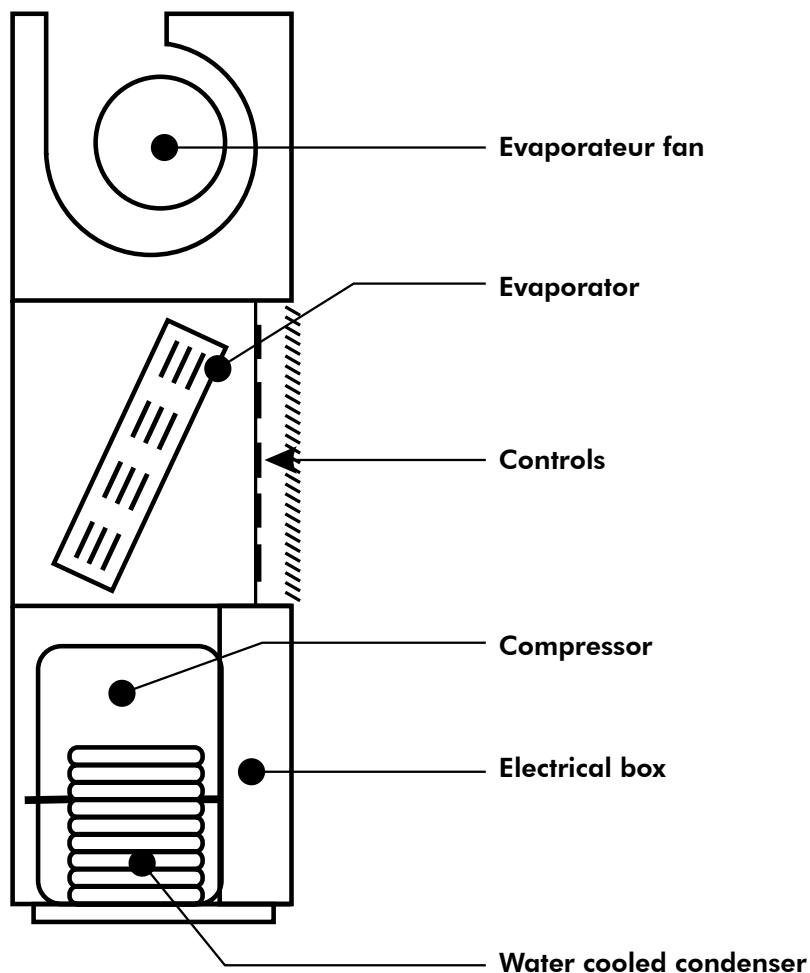
Power supply		~230 V - 50 Hz	3N ~400 V - 50 Hz
• Cooling + Ventilation			
Nominal intensity	A	11.8	5.28
Maximum intensity	A	20	6.38
Fuse rating aM	A	20	8
Motor fuse ratingASE / VDE	A	20	10
Cable size	mm ²	3 G 2.5	5 G 1.5
• Electrical heating + Ventilation			
Nominal intensity	A	26	9.6
Maximum intensity	A	31	11.61
Motor fuse ratingaM	A	32	12
Motor fuse ratingASE / VDE	A <td 35	16	
Cable size	mm ²	3 G 4	5 G 1.5

IMPORTANT

These values are given for information only. They should be checked and adjusted according to prevailing standards. They depend on the mode of installation and the type of wires selected.

DESCRIPTION

Connections can be made on the LH side, and the RH side



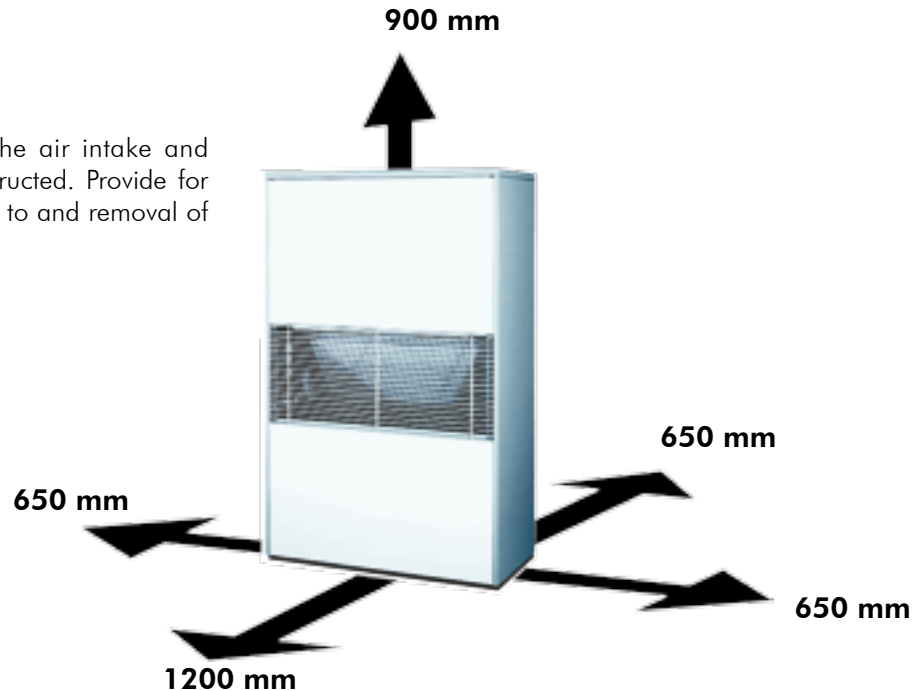
INSTALLATION



The unit is not designed to withstand weights or stresses from adjacent equipment, pipe work or constructions. Any foreign weight or stress on the unit structure could lead to a malfunction or a collapse with dangerous consequences for personnel and property. In such an event, the warranty shall be null and void.

CLEARANCE

Free air circulation around the air intake and discharge vents must not obstructed. Provide for the necessary space for access to and removal of the front panels.



RESPECT MINIMUM CLEARANCES SPECIFIED AROUND THE UNIT.

UNIT LOCATION



The unit base shall be arranged as indicated in the manual. There could be a risk of personal injury or damage to property in the event of the unit being incorrectly supported.

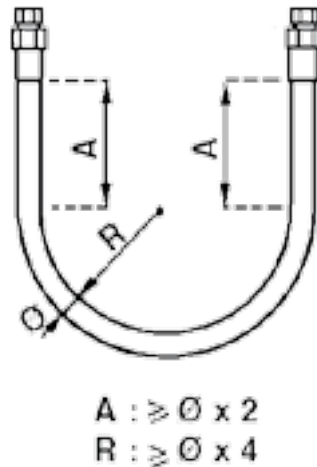
The unit must be installed on a firm level foundation, of adequate strength to support its full operating weight.

1. It must be high enough to permit good drainage of condensates with siphon
2. The unit must be pitched slightly towards condensate drain outlet to provide positive drainage of condensates.
3. Keep duct connections to a minimum to reduce duct losses.
4. When locating unit give consideration to, and locate unit as remote as possible minimise noise.
5. All electrical and ductwork connections to the unit must be made via flexible connections to prevent transmission of vibration.
6. In addition to the service clearances noted on the dimension sheet it is essential that provision is made for adequate and safe service access.

HYDRAULIC CONNECTIONS

CONDENSER WATER INLET AND OUTLET

The connections for inlet (supply) and outlet of the water of the condenser must be made with flexible tubes equipped on their end with a female nut $\varnothing 15 \times 21$. R mini: 100mm.



ATTENTION:

When connecting the flexible hoses (water inlet and outlet) ensure that they do not touch the compressor and that they are connected according to their correct marking.

CONDENSATE EVACUATION

Condensed water evacuation is provided by a $\varnothing 15 \times 20$ flexible plastic pipe attached to one of the two condensate recovery tray drain fittings.

If necessary, adapt the drain in accordance with the side chosen. In this event, block the obsolete drain hole with the plug supplied, mounted on one of the fittings.

ELECTRICAL CONNECTIONS

The electrical connections are made on the supply terminals housed in the electrical box located on the left, behind the lower front panel.

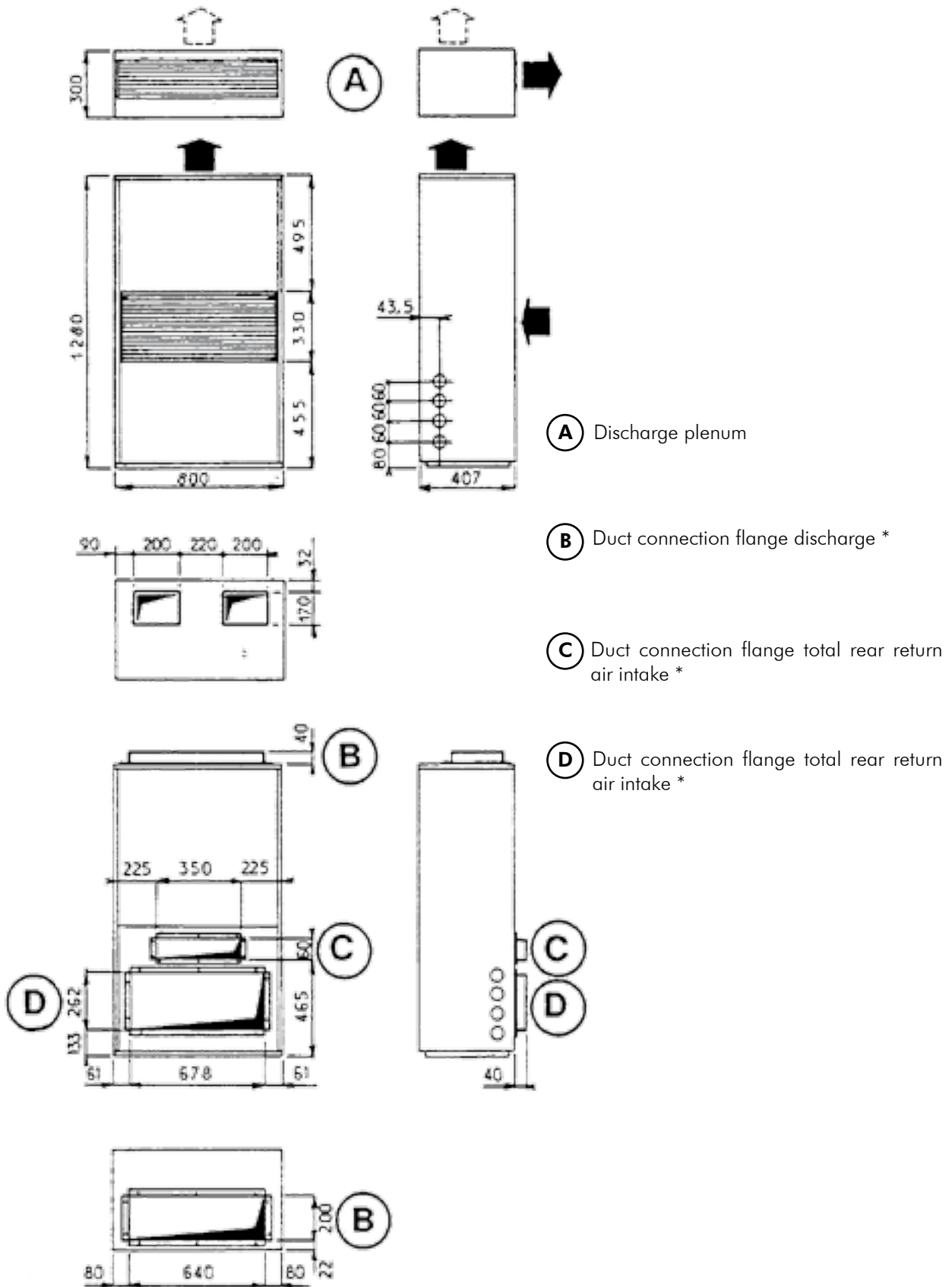
Follow the instructions listed on the wiring diagrams supplied with the appliance.

The average power consumption of the various elements (compressor, fan, electric heating, etc...) is listed in the Technical Manual.

Select the power supply cable dimensions in accordance with current standards.

If fitted, the sump heating resistance (option) must have a separate power supply in order to provide compressor heating before starting (Refer to Operating Manual).

AIR DISCHARGE AND INTAKE



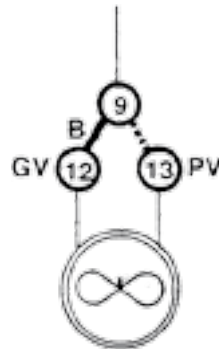
* (B-C-D) Accessories not supplied, to be produced by the installer.

TREATED AIR VENTILATION

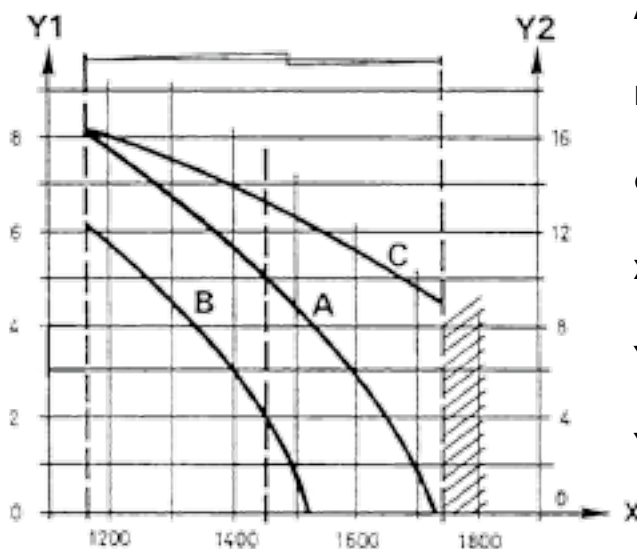
ADJUSTEMENT OF AIR FLOW

The appliance is equipped with a dual speed fan motor (factory set on High speed – Curve A) providing for operation on high pressure drop duct systems. Air flow and pressure drop adjustment, within the tolerance limits (Refer to curves) must be carried out in the duct network by fitting diaphragms.

When operating with a plenum or a short duct system (Curve B), it is possible to reduce the ventilation speed. To do this, disconnect shunt B from terminal 12 and connect it to terminal 13.



AIR FLOW RANGE



A : "Fan high"

B : "Fan low"

C : "High speed"

X : Air flow (m³/h)

Y1 : Available pressure for "Low" and "High fan" (daPa)

Y2 : Available pressure for "High speed" (daPa)

ACCESSORIES average drop pressure	daPa
Built-in electrical heating	0.2
Plenum	1
Filtering box	1

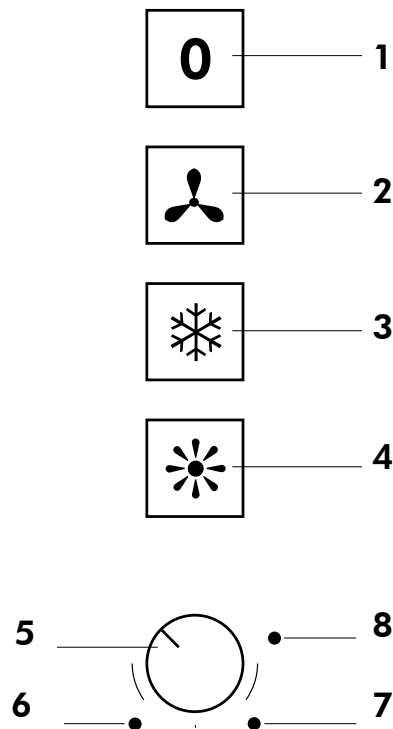
OPERATION

Sump heating resistance: this resistance provides compressor sump heating before starting, in a cold environment.

It must be switched on:

- 2 hours before the appliance is switched on, at 10° C ambient temperature.
- 4 hours before the appliance is switched on, at 0° C ambient temperature.

Control devices: the control buttons are grouped together on a board, located on the left of the appliance, behind the front intake grille, and secured by two locks.



1. OFF main switch (touch)
2. VENTILATION operation (touch)
3. COOLING operation (push in)
4. HEATING operation (push in)
5. Automatic regulation thermostat controlling COOLING or HEATING*
6. Hotter ambient temperature : turn the knob to the left
7. Colder ambient temperature: turn the knob to the right
8. Approximate temperature mark: 22° C

*Automatic regulation: Push in the COOLING and HEATING buttons simultaneously.

RESTARTING

After switching off the main OFF button OR after power supply interruption.

Press the VENTILATION operation button (The appliance will restart on the previous settings)

PROTECTION AND SAFETY DEVICES

ELECTRICAL

1. Fuses on the single phase circuit
2. Thermal protection on the compressor contactor
3. Thermal protection on the fan motor

REFRIGERATION

1. High and Low pressure safety switch with manual reset*
2. Compressor starting protection heating resistance (option)

FIRE

1. Thermal protection with manual reset
*on the incorporated heating resistance (option)
2. g)Flameproof air filter

FREEZING

1. Water condenser freezing protection purge plug.
2. In the case of total rear air intake, the aspirated air passes through the appliance. The installer must provide, if necessary, condenser water anti-freeze protection.
3. The fan motor internal safety device and the heating thermal protection device shut down ventilation and the control circuit driven by the ventilation. They are reset by pressing the VENTILATION on button.
4. The safety pressure switches and the external compressor safety device shut down the COOLING, without shutting down ventilation. They are reset by pressing the pressure switches or the compressor thermal relay manual reset buttons.

Comment

When a safety device is activated it indicates an operating anomaly and requires in-depth investigation. In fact, it can be caused by an electrical anomaly (voltage drop), by low compressor output (water output, water temperature...), by treated air intake conditions (abnormal output, exceptional temperature) and could require remedial action.

remove the front air intake grille for access to the safety resets.

MAINTENANCE

AIR FILTER

To maintain good appliance performance, it is recommended to regularly check the air filter in relation to local dust conditions. Shake it or vacuum clean it; The air filter should only be removed for cleaning when the appliance is stopped.

FILTER ACCESS

After removing the air intake grille, held in place by locks. The filter is held in place against the evaporator.

Treated air fan motor: greased for life.



EC Compliance declaration

Under our own responsibility, we declare that the product designated in this manual comply with the provisions of the EEC directives listed hereafter and with the national legislation into which these directives have been transposed.

Déclaration CE de conformité

Nous déclarons sous notre responsabilité que les produits désignés dans la présente notice sont conformes aux dispositions des directives CEE énoncées ci- après et aux législations nationales les transposant.

EG-Konformitätserklärung

Wir erklären in eigener Verantwortung, das die in der vorliegenden Beschreibung angegebenen Produkte den Bestimmungen der nachstehend erwähnten EG-Richtlinien und den nationalen Gesetzesvorschriften entsprechen, in denen diese Richtlinien umgesetzt sind.

Dichiarazione CE di conformità

Dichiariamo, assumendone la responsabilità, che i prodotti descritti nel presente manuale sono conformi alle disposizioni delle direttive CEE di cui sott e alle lagislazionni nazionali che li recepiscono

Declaración CE de conformidad

Declaramos, bajo nuestra responsabilidad, que los productos designados en este manual son conformes a las disposiciones de las directivas CEE enunciadas a continuación, así como a las legislaciones nacionales que las contemplan.

CX 25
FS 25
SXW 25
WCX 25

MACHINERY DIRECTIVE 2006 / 42 / EEC
LOW VOLTAGE DIRECTIVE (DBT) 2006 / 95 / EEC
ELECTROMAGNETIC COMPATIBILITY DIRECTIVE 2004 / 108 / EEC
PRESSURISE EQUIPMENT DIRECTIVE (DESP) 97 / 23 / EEC
SUB-MODULE A CATEGORY I

DIRECTIVE MACHINES 2006 / 42 / C.E.E.
DIRECTIVE BASSE TENSION (DBT) 2006 / 95 / C.E.E.
DIRECTIVE COMPATIBILITE ELECTROMAGNETIQUE 2004 / 108 / C.E.E
DIRECTIVE DES EQUIPEMENTS SOUS PRESSION (DESP) 97 / 23 C.E.E.
SOUS-MODULE A CATEGORIE I

RICHTLINIE MASCHINEN 2006 / 42 / EG
RICHTLINIE NIEDERSPANNUNG (DBT) 2006 / 95 / EG
RICHTLINIE ELEKTROMAGNETISCHE VERTRÄGLICHKEIT 2004 / 108 / EG
RICHTLINIE FÜR AUSTRÜSTUNGEN UNTER DRUCK (DESP) 97 / 23 / EG
UNTER MODUL A, KATEGORIE I

DIRETTIVA MACHINE 2006 / 42 / CEE
DIRETTIVA BASSA TENSIONE (DBT) 2006 / 95 / CEE
DIRETTIVA COMPATIBILITA ELETTRONAGNATICA 2004 / 108 / CEE
DIRETTIVA DEGLI IMPIANTI SOTTO PRESSIONE (DESP) 97 / 23 / CEE
SOTTOMODULO A, CATEGORIA I

DIRETTIVA MAQUIAS 2006 / 42 / CEE
DIRETTIVA BAJA TENSION (DBT) 2006 / 95 / CEE
DIRETTIVA COMPATIBILIDAD ELECTROMAGNETICA 2004 / 108 / CEE
DIRETTIVA DE LOS EQUIPOS A PRESION (DESP) 97 / 23 / CEE
BAJA MODULO A, CATEGORIA I

And that the following paragraphs of the harmonised standards have been applied.
Et que les paragraphes suivants les normes harmonisées ont été appliqués.
Und dass die folgenden Paragraphen der vereinheitlichten Normen Angewandt wurden.
E che sono stati applicati i seguenti paragrafi delle norme armonizzate.
Y que se han aplicado los siguientes apartados de las normas armonizadas.

EN 378
EN 60 335-1
EN 61 000-3-12

EN 61 000-6-1
EN 60 335-2-40

EN 61 000-6-3
EN 61 000-3-11


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