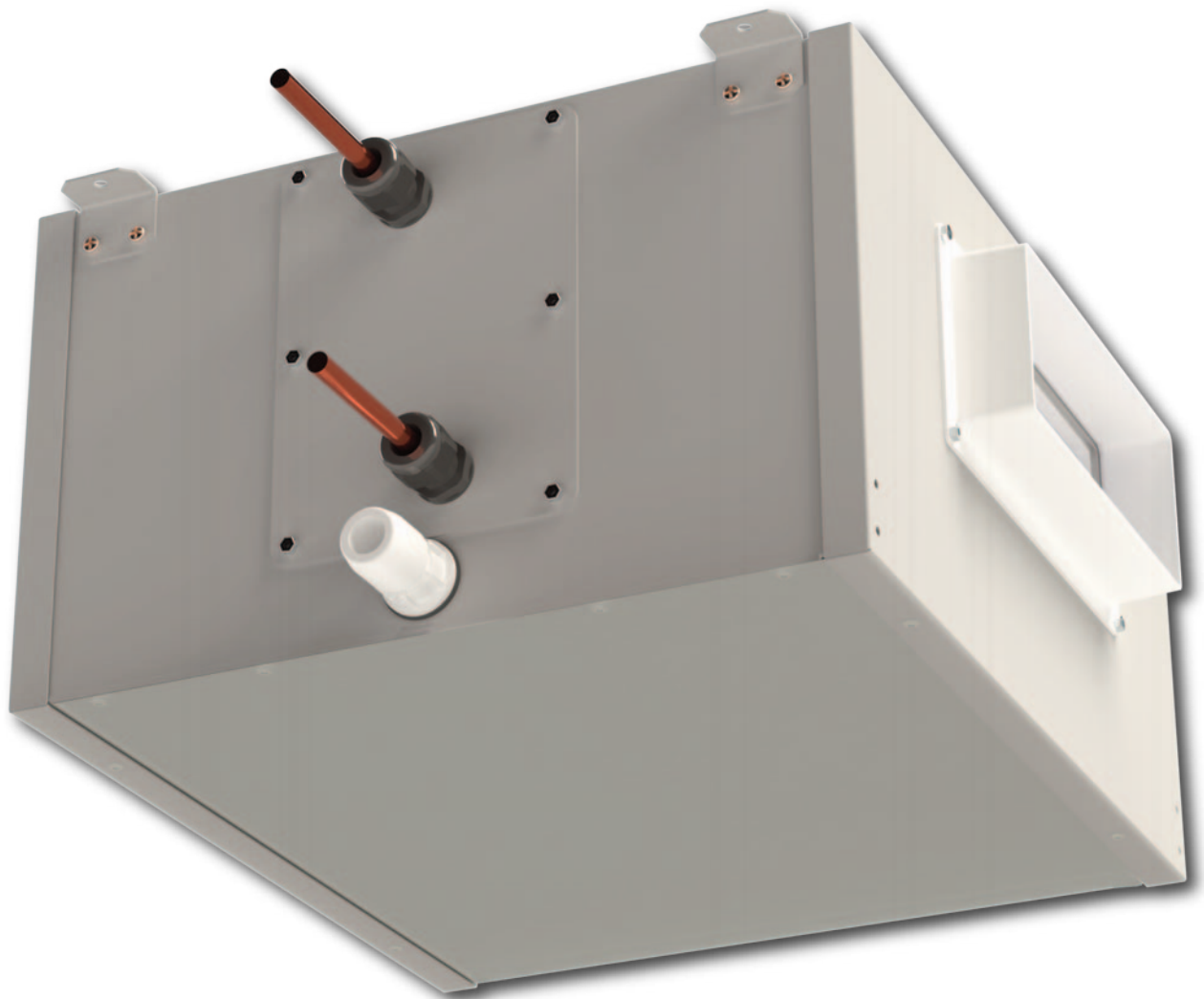


"Cool-Aire"



**In-line Cooling/Heating Unit
for residential and commercial use**

Installation, Operating and Maintenance Instructions



“COOL-AIRE” - IN LINE COOLING/HEATING UNIT FOR USE WITH 220MM X 90MM DUCT - INSTALLATION AND OPERATING INSTRUCTIONS

This product MUST be installed by a professional technician

It is important to read this Instruction Manual carefully before installing or using the product. Following these instructions will ensure that your cooling/heating unit is installed, commissioned and used properly and continues to operate effectively. Vectaire will not be held responsible and will not accept liability for any damage caused to persons or property through failure to follow the guidance provided in this manual. It should always be available with the product for easy reference.



ATTENTION : This symbol indicates that care must be taken in installing this product in order to avoid (potentially lethal) injury both to installer and user. This instruction MUST be followed for installation.

1. Do not use this product for any purpose other than that for which it was designed and as shown in this leaflet.
2. Remove all packaging and check that your cooling/heating unit has not been damaged in transit. If in doubt, contact your supplier.
3. Do not leave packaging within the reach of children or unskilled people. Dispose of hazardous waste (polystyrene, plastic, polypropylene, etc.) responsibly.
4. If the product is dropped or badly knocked, contact your supplier, dealer or manufacturer to ensure that it is operating properly.
5. Using any electrical equipment requires compliance with basic safety rules:
 - the product must not come into contact with liquid of any sort
 - the product must not be operated by children or other unskilled people
6. Before carrying out any maintenance or cleaning operation, any electrical accessories connected to the cooling/heating unit must be switched off and disconnected from the main power supply.
7. If a fault, malfunction or anomaly of any type occurs, the product should be made inoperative and any electrical accessories connected to the cooling unit must be switched off and disconnected from the main power supply and qualified personnel contacted immediately. Always request original spare parts to carry out any repairs.
8. If the cooling/heating unit needs to be removed, the product should be made inoperative and any electrical accessories connected to it must be switched off and disconnected from the main power supply.
9. The unit should be installed in a safe location as far away as possible from children and/or unskilled people.
10. The electricity system to which any electrical accessory is connected must comply with the current standards.
11. **In order to comply with Construction (Design & Management) Regulations, sufficient access for safe maintenance or removal following installation, MUST be provided for this product.**



WARNING : This symbol indicates that care must be taken to avoid damaging your product when following these instructions

1. This product is professionally manufactured and complies with current standards.
2. This product must not be used in an ambient temperature greater than 40 °C (104 °F).
3. Do not leave the product exposed to the weather (rain, sun, snow, etc.).
4. Possible product applications are indicated in this leaflet.
5. Do not place the unit or any part of it in water or liquids, except as indicated in the cleaning and maintenance section.
6. When cleaning or performing routine maintenance, check the condition of the appliance.
7. To avoid the risk of fire, do not use the product in the presence of inflammable substances or vapours such as alcohol, insecticides, gasoline, etc.
8. The air or fumes being extracted must be clean and free from greasy particles, soot, chemical and corrosive agents, flammable or explosive mixtures.
9. The device must be installed by professionally qualified personnel.



10. Any electrical accessories used with the cooling/heating unit must be connected to the electricity supply by means of a triple-pole switch with a minimum contact opening distance greater than 3 mm.
11. To ensure optimum operation, do not block the air intake and exit vents.
12. If integrated with a Vectaire MVHR and the room being ventilated contains a fuel burning appliance, the installer must ensure that air replacement is adequate both for the fan and the fuel burning appliance. Care must be taken to avoid back flow of gases into the area where the product is installed.
13. Any ducting used must be free from blockages.
14. Where ducting is installed in an unheated space, all of the ducts should be insulated.
15. Ensure ducting downstream of the cooling/heating unit is appropriately affixed and thermally insulated to prevent air leakage and condensation forming.
16. If using an MVHR it must not be exhausted into a duct which is already used for any other purpose (see Approved Document F1 2006 for guidance).
17. For optional operation, there should be an adequate recirculation of air in the area where it is fitted. Consult Building Regulations for correct procedure.

OPERATION

1. The **Cool-Aire** is an in-line unit for fitting into a ceiling void - minimum 250mm height. It is complete with brackets for ceiling mounting. It can also be supported from the base by drop rods or a plinth.
In order to comply with Construction (Design & Management) Regulations, sufficient access for safe maintenance (recommended on an annual basis), or removal following installation, MUST be provided for this product. See dimensions.
2. It uses an existing chilled water circuit within the property to cool an air flow by up to 13°C at 40 l/s. **Or** it can use an existing hot water circuit within the property to heat an air flow by up to 26°C at 40 l/s. Maximum water temperature must not exceed 55°C. Temperatures higher than this could damage the unit. When in heating mode ensure there is a suitable airflow over the coil to avoid hot spots and damage to the system.
3. Universal handing allows the air to be passed in either direction over the coil through the 220mm x 90mm spigots at either end. Right hand flow is standard - there is a drop in efficiency using left hand flow.
4. Optional control packs allow either for integrating with a Vectaire MVHR for autonomous cooling/heating, or as a stand alone unit.
5. If one of the spigots is not connected to ducting, a safety grille **MUST** be fitted to that spigot, so that it is impossible for any internal part to be touched.
6. Option Cool-Aire 2 for connection to MVHRs with LCD screen includes a 1/2" threaded 2-port valve. Through direct integration to a Vectaire MVHR, the coil is controlled via monitoring the temperature of the fresh air coming into the property as well as the temperature of the extracted air from the dwelling. If cooling or heating is required the MVHR automatically opens the 2-port valve to begin cooling/heating the supply air
7. Option Cool-Aire 3 for connection to MVHRs with LCD screen includes a 1/2" threaded 3-port valve. Through direct integration to a Vectaire MVHR, the coil is controlled via monitoring the temperature of the fresh air coming into the property as well as the temperature of the extracted air from the dwelling. If cooling or heating is required the MVHR automatically opens the 3-port valve to begin cooling/heating the supply air

INSTALLATION

THIS PRODUCT MUST BE INSTALLED BY A QUALIFIED TECHNICIAN

The unit is comprised of a coil housed inside an EPS moulding with a galvanised shell on the outside. The unit comes pre-assembled ready for plinth mounting by a competent installer. If the unit is to be installed from the top, then the optional mounting brackets included in the box will need to be attached to the unit using the screws supplied.

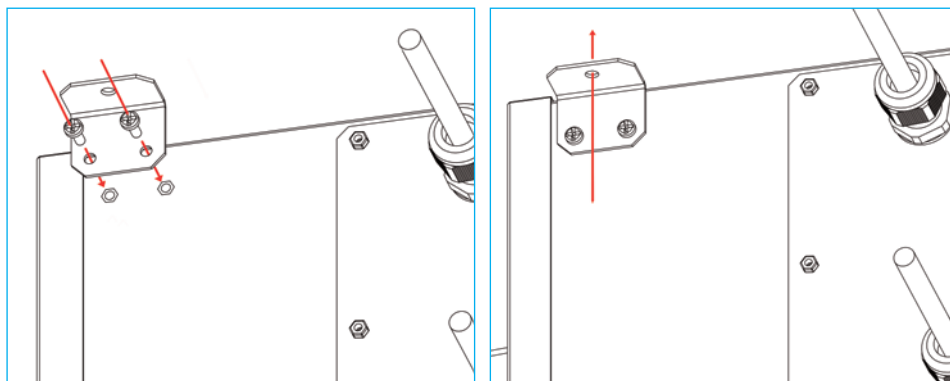
Recommended parameters - Using values outside of these ranges could result in damage to the unit or the surroundings.

- Water Temperature in Range: . . . 4°C - 55°C
- Maximum Glycol Limit: 25%
- Maximum Airflow: 120l/s
- Water flow Range: 0.05 - 0.15l/s
- Maximum water Pressure: 25bar

The unit must be installed horizontally or angled towards the condensate drain by up to 5°. If the unit is angled away from the condensate drain then the product will not drain as intended and could result in damage to the unit or the surroundings.

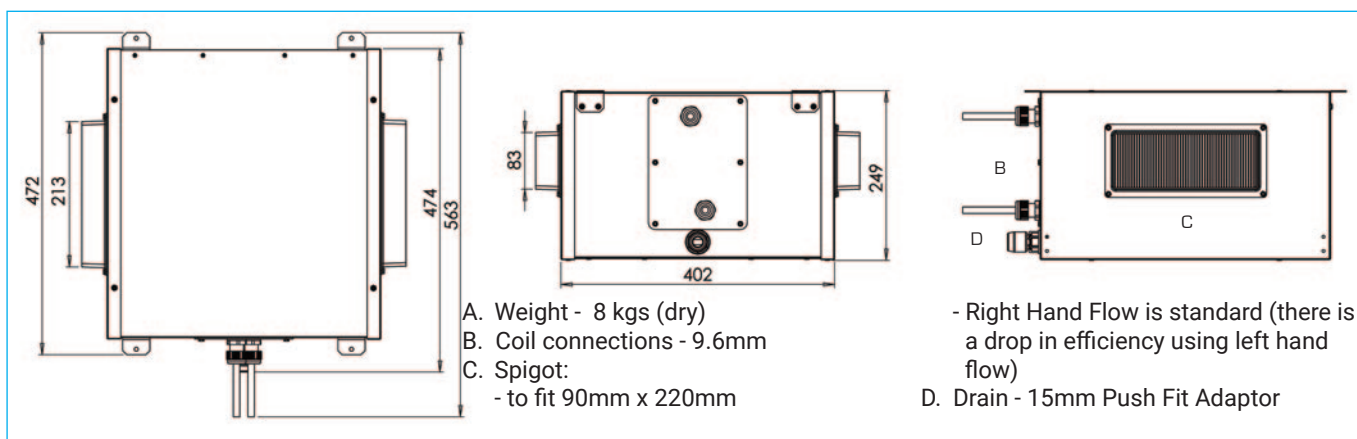
A 15mm push fit pipe must be used to drain away the condensate. Ensure it is pushed fully into to attached connector and a trap is used.

All bare pipes and valves must be lagged as condensate will be produced on any left open to the atmosphere. When fitting a valve ensure excess pipe is cut off before installing the valve as the weight of the valve could bend the pipe. Where necessary, supporting the pipe may be required.



The 4 included mounting brackets should be screwed to the nutserts on the unit casing (using the 8 screws supplied). When installing using the mounting brackets, ensure that all four mounting brackets are used to attach the unit to a suitable fixing point.

DIMENSIONS - mm



CLEANING AND MAINTENANCE

1. Before carrying out any maintenance or cleaning operations all accessories **MUST** be disconnected from the mains electrical supply.
2. CLEANING AND MAINTENANCE SHOULD BE CARRIED OUT BY A QUALIFIED PERSON
3. To remove the coil, remove the 6 x M4 nuts and slide the coil and plate off the studs and out of the unit simultaneously. Clean the coil where appropriate and re-install the coil with the 6 x M4 nuts to hold the plate in place.

