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Operating Instructions
Kingston, Cambridge, Richmond, Henley & V range
R1270

Thank you for purchasing a Verco refrigerated cabinet, please take time to read these operating instructions to ensure that you obtain many years of efficient use from your new cabinet.

It is most important that these operating instructions should be retained for future reference. Should the cabinet be sold or moved to another location, always ensure that this manual is taken with it to enable new users to acquaint themselves with the instructions and relevant warnings.

Warnings

It is dangerous to alter the specifications or attempt to modify this product in any way.

A qualified or competent person should carry out any electrical work required to install this cabinet.

This cabinet contains a hydrocarbon-based refrigerant. Hydrocarbons are natural refrigerants, energy efficient, do not deplete the ozone layer and have minimal effect on global warming. They are flammable, similar to domestic and bottled gas. The refrigerant is contained within the hermetically sealed refrigeration system. The refrigeration system can only be serviced or repaired by a by a refrigeration engineer qualified in the safe handling of hydrocarbon (CARE) refrigerants and only fitted with parts approved by Verco.
The refrigerant is blended with a stench agent to make a leak apparent. If a refrigerant leak is suspected, ventilate the vicinity of the cabinet by opening doors / windows to allow the refrigerant to dissipate. Do not switch on or off any electrical appliances. Extinguish any naked flames. Call your qualified service engineer.

Do not overload the cabinet with food products, allow products to overhang the shelf fronts or block air supply and return grilles.

This cabinet is heavy, special care should always be taken when moving it. Some models are connected by pipe work and cannot be moved without a qualified engineer.

All protective packaging, securing tapes and pallet wood must be removed before start up.

The cabinet has a hermetically sealed refrigeration system, for reliability and long life. Should a fault develop within the system and access is necessary a competent refrigeration engineer who has the necessary equipment to handle refrigerants in accordance with current legislation and safe practices should only carry it out.

It is important that the ground on which the cabinet is to stand will carry the cabinet weight when loaded and that the electrical supply is sufficient to cope with its total electrical requirements.

Installation

The cabinet will normally be delivered and installed by an experienced delivery team who, provided circumstances allow, will remove all packaging and securing materials, carry out levelling and alignment with matching appliances and run/test the cabinet.

The cabinet must be located away from draughts and direct sunlight.

Shelving will be fitted to the standard Verco layout; alterations to angles and position can be made by the user, dependant on type and size of product to be displayed. Best temperature performance and lowest power consumption is achieved with shelves in the horizontal position, evenly spaced.

Do not allow product on display to overhang the shelf or display deck front edge. The cold air return grille at the lower front of the cabinet must be kept clear of product. The acrylic risers at the front and rear of the cold air return grille must be retained.

Ensure that a 100mm gap remains behind the cabinet, for air circulation.

We suggest that after installation the cabinets be run for a period of forty-eight hours before merchandising.

Getting to Know Your Cabinet

Temperature control on all Verco cabinets is taken care of by a factory set electronic indicator/controller. A display located on the upper front of the cabinet provides an indication of temperature and alarm conditions. In addition to temperature this device controls the self-defrosting system.

When the cabinet leaves the factory it will be pre-set to provide the required temperature range.

As the refrigeration system cycles it will be quite normal to see display readings vary as the controller monitors air temperatures.

In addition to an indication of cabinet temperature in the event of an ‘alarm’ condition the display will alternate between temperature and the relevant alarm code.

HA	high temperature.
LA	low temperature.
P1	thermostat probe failure.
P2	evaporator probe failure
P3 or P4	condenser probe failure (when fitted)
ENG	high system temperature alarm (when fitted)

Product temperature and the air temperature shown on the indicator/controller, although similar, are not always the same. It is recommended that regular product temperature checks be made and records kept in accordance with the requirements and recommendations of your local Environmental Health Officer.

Temperature adjustment is not normally necessary. Should the product be changed for another requiring a different temperature range the new control settings can be downloaded via a ‘hot key’ by a qualified refrigeration engineer. Cabinets supplied with the optional temperature display with buttons may be adjusted by a qualified refrigeration engineer by using the buttons on the display.

The defrost cycle will start and stop automatically. The control system ensures that it does not run for longer than necessary, to save power consumption and protect product temperature. The water produced by the defrost cycle of integral cabinets is drained to a tray at the rear base of the cabinet and is re-evaporated by heat from the condensing unit. Drainage for remote cabinets or S.E.S. models will have been fitted at the installation stage.

Air circulation within the cabinet is fan assisted.

The performance of the cabinet relies on the correct air circulation within the cabinet being maintained at all times. Should the airflow be restricted or interrupted severe frost build up can occur resulting in deterioration of the displayed produce.

We suggest that the user regularly checks that: -

The air outlets and inlets are not obstructed.
Products do not overhang shelf fronts.

Lighting is provided by fluorescent lamps, colour designation 'Cool White' are used as standard.

Multideck chill cabinets - a small rocker switch is located adjacent to the lights to enabling the lamps to be turned on and off as necessary.

Glass door cabinets – light switch is incorporated into the temperature display

Looking After The Cabinet.

Cleaning the interior and exterior will not only enhance the cabinet's good looks but will ensure the durability of the finish is maintained.

The frequency of cleaning will be entirely dependant on the type of use and the cabinet location.

The cabinet should be switched off while cleaning is carried out. To enable the interior to be cleaned thoroughly the product should be removed before switching off.

Both the interior and exterior should be cleaned with a lukewarm solution of an odourless, non-abrasive mild cleaner, then rinsed and dried thoroughly. Do not pour water into the interior of the cabinet as it will be directed to and overflow the defrost evaporative tray.

Looking After the Refrigeration System.
(Only applicable to integral cabinets)

The refrigeration system is factory sealed and during its normal life should not require maintenance. In addition all the fan motors used to provide air circulation have bearings that no not need additional lubrication.

Cleaning of the condenser however is vital to ensure that the cabinet performs to specification, running costs are kept to a minimum and the life of the compressor is maximised.

The condenser is the means by which the heat removed from within the cabinet is transferred to the air outside and it is recommended that it is cleaned on a weekly basis, and can easily be carried out by the user.

During condenser cleaning the cabinet should be turned off.

The condenser is located behind the panel at the lower front of the cabinet. This panel is located on hooks and may be removed by lifting and pulling foreword each end in turn. The condenser is the finned object that looks similar to a car radiator, there may be I or 2 of them fitted depending on model. It is best cleaned with a bristle brush or vacuum cleaner to remove accumulated fluff from the front face. Care should be taken when carrying out this operation as the fins are easily bent which would restrict airflow and impair efficiency.

In addition to regular cleaning of the condenser we recommend a 6 month maintenance inspection / service by an engineer qualified in the safe handling of CARE refrigerants. This maintenance should include a visual inspection of the refrigeration system and electrical housings, condenser clean and condensate tray clean for cabinets with evaporative condensate clearance tray.

Technical Information – for Refrigeration Engineers

Do not attempt to access or service the cabinet unless you are qualified in the safe handling of CARE refrigerants.

Condensing unit(s) and control panel are located in the base of the cabinet. To access – chill cabinets, remove lower front panel by lifting and pulling forward. The condenser baffle is secured by two half-turn fasteners. On glass door cabinets the lower front panel is removed by pulling foreward.

Suction and liquid Schraeder connections are provided on the condensing unit.

Control panel has sufficient cable to allow it to be pulled forward for access without moving condensing unit.

The condensing unit tray is mounted on slides to enable it to be pulled forward for access following removal of two location screws.

Kingston - Evaporator is mounted in the rear duct.
Cambridge – Evaporator is located below display deck.
Glass door cabinets – Evaporator(s) are located above ceiling panel.

The cabinet is equipped with a Dixell XW62K controller with additional features commissioned by Verco.

The control settings will have been preset at factory for the temperature range specified. If the temperature range requires adjustment the controller may be reprogrammed with a 'hot key' available from Verco. Note that 'Hot keys' used for programming the earlier Dixell Wing controller will not function with the later XW62K.

If the cabinet is equipped with the optional temperature display with buttons cabinet temperature, defrost settings may be adjusted via the buttons on the display.

Display – Located in canopy – normally provides an indication of mean cabinet temperature. In an alarm condition the temperature and alarm will be shown alternating with temperature.

Alarm codes	P1	Air off evaporator probe failure.
	P2	Evaporator probe failure
	P3	Condenser 1 probe failure (where fitted)
	P4	Condenser 2 probe failure (where fitted)
	HA	High temperature
	LA	Low temperature
	ENG	High compressor temperature (where fitted)

When fitted temperature probes monitor the compressor(s) discharge temperature and will de-energise the relevant compressor in the event of excessive temperature. The ENG alarm is indicated for 30 minutes irrespective of the duration of the alarm condition. The compressor will restart following temperature returning to normal and elapsing of the anti short cycling delay.

Temperature control

Compressor is cycled depending on the mean cabinet temperature which is a calculation based on air off evaporator temperature.
Differential is preset.
Kingston & Cambridge - In the event of adverse ambient conditions or a fault in the refrigeration system that would otherwise result in continuous operation, the controller will override normal temperature control and initiate an 'off cycle' to prevent excessive accumulation of frost before the next defrost.

Defrost

Kingston & Cambridge - Initiated on time, terminated on evaporator probe temperature. Probe is located between fins at the top of the rear-mounted evaporator.

Richmond, Henley & V range - Initiated on time, terminated on evaporator probe temperature. Probe is located between fins at the top of the ceiling-mounted evaporator.

Controller adjustment by optional buttons on temperature display.

Press up & down arrows together to lock / unlock the display.

With the display unlocked

To see min temp – press down arrow – Lo message displayed plus minimum temperature recorded.

To see max temp – press up arrow – Hi message displayed plus max temperature recorded.

To reset min or max temperature recorded press either the set button for 3 sec while max or min temp is displayed. To confirm operation the rSt starts blinking and normal temperature is displayed.

To see set point – push and immediately release set key. Set point will be displayed.

To change set point – push set key for 3 sec – set point will be displayed – use up / down arrows to adjust.

Kingston & Cambridge - Take care when adjusting down set point.
Set point of –1C is the lowest recommended. Display will normally fluctuate between –1C & +1C. If the system is not able to cycle due to system fault or adverse conditions controller will override normal temperature control.
Set point 0C is suitable for general chill products such as dairy, ready meals etc.
Set point +2C F&V
Set point +4C Chilled drinks.

To access defrost settings & probe readings – press set & down arrows for 3sec then use up and down arrows to scroll through parameters.
Press set to select a parameter to adjust.
Use up and down arrows to adjust
Press set to store adjustment

Defrost termination temp - dtE
Interval between defrost - Idf
Probe 1 – P1
Probe 2 – P2 Evaporator probe
Probe 3 – P3 Compressor 1 discharge temp
Probe 4 – P4 Compressor 2 discharge temp if applicable.

To down load parameters from ‘hot key’ with case isolated open electrics panel and insert hot key into multipin socket on controller. Replace and secure lid of electrics panel. Turn on at isolator – display will briefly show dn followed by end to indicate successful download.
Turn off at isolator remove lid of electrics box and remove ‘hot key’ Replace & secure electrics box lid.