

# Hyper Warwick R290 + Icecore 10 R290

## Installation Manual

Original instructions

English version – EN



### Appliance types covered:

Model	Type
01-3000-xx	Hyper Warwick R290 Integral
01-3001-xx	Hyper Warwick R290 Water Cooled
11-1000-xx	Icecore 10 Integral (Cold Carbonated)
11-1001-xx	Icecore 10 Water Cooled (Cold Carbonated)

PART No. PI57767  
REVISION: No. 10  
ISSUE DATE: 13/10/2017

## **Dear Customer**

**Please read the User Guide and Installation Manual carefully before operating this unit.**

Please keep the User Guide and Installation Manual safe and with the unit.

Examine the equipment immediately after supply for transport damage. Contact your equipment supplier and/or carrier if necessary. Damage, which arises by inappropriate treatment or operation, is not subject to guarantee / warranty.

Equipment manufactured or supplied by Welbilt (Halesowen) Ltd complies with the current legislation and standards of the EU and represents the current standard of technology. Safety during operation may only be assured by following the instructions in this guide.

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<b>Section 1 - Warnings</b>	<b>4-7</b>
<b>Section 2 - General description and function of the unit</b>	<b>8-9</b>
<b>Section 3 - Installation &amp; Commissioning</b>	<b>10-23</b>
<b>Section 4 - Maintenance and cleaning</b>	<b>24-27</b>
<b>Section 5 - Spare parts lists</b>	<b>28-32</b>
<b>Section 6 - Wiring schematic</b>	<b>33-37</b>
<b>Section 7 - Technical Specifications</b>	<b>38-40</b>
<b>Section 8 - Declaration of conformity</b>	<b>44</b>

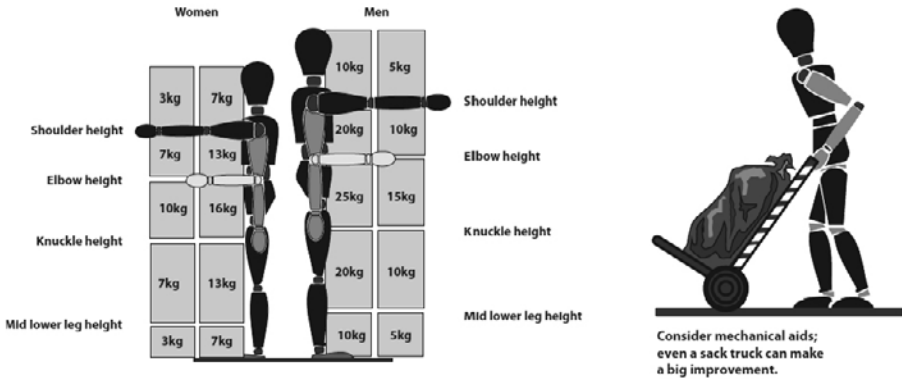
## Section 1 – Warnings

**WARNING:** THIS APPLIANCE CAN BE USED BY CHILDREN AGED FROM 8 YEARS AND ABOVE AND PERSONS WITH REDUCED PHYSICAL, SENSORY OR MENTAL CAPABILITIES OR LACK OF EXPERIENCE AND KNOWLEDGE IF THEY HAVE BEEN GIVEN SUPERVISION OR INSTRUCTION CONCERNING USE OF THE APPLIANCE IN A SAFE WAY AND UNDERSTAND THE HAZARDS INVOLVED. CHILDREN SHALL NOT PLAY WITH THE APPLIANCE. CLEANING AND USER MAINTENANCE SHALL NOT BE MADE BY CHILDREN WITHOUT SUPERVISION.

**WARNING:** THERE ARE NO END USER SERVICEABLE PARTS. ANY FAULT OR PROBLEM WITH THE EQUIPMENT MUST ONLY BE RECTIFIED BY A QUALIFIED SERVICE ENGINEER.

**WARNING:** ALTHOUGH EVERY CARE IS TAKEN DURING MANUFACTURE, DAMAGE TO THE METALWORK DURING TRANSPORT, INSTALLATION AND GENERAL USE MAY OCCUR. THIS MAY RESULT IN SHARP OR JAGGED EDGES. AVOID CONTACT WITH METAL EDGES OR OTHER POTENTIAL HAZARDS.

**WARNING:** PLEASE REFER TO MANUAL HANDLING GUIDELINES WHEN LIFTING THIS EQUIPMENT.



THESE UNITS WEIGH UP TO 87 KG'S WHEN FILLED WITH WATER (DEPENDING ON MODEL TYPE).

THE UNIT SHOULD BE DRAINED OF WATER BEFORE LIFTING USING A MINIMUM OF TWO PERSONS OR BY MEANS OF MECHANICAL LIFTING EQUIPMENT.

BEFORE LIFTING OR MOVING THIS EQUIPMENT IT IS RECOMMENDED THAT ALL PERSONS PERFORMING THESE TASKS SHOULD RECEIVE RELEVANT TRAINING IN SAFE HANDLING.

ALL PERSONS LIFTING OR MOVING THIS EQUIPMENT MUST BE WEARING THE CORRECT PERSONAL PROTECTIVE EQUIPMENT.

TO PREVENT PERSONAL INJURY WHERE PRACTICAL, TRANSPORTING OF THE UNIT OVER EXTENDED DISTANCES SHOULD BE DONE USING A MECHANICAL AID.

ALWAYS TRANSPORT THE UNIT IN THE CORRECT UPRIGHT POSITION, NEVER ON ITS SIDE OR TOP.

- WARNING:** IT IS UNSAFE TO LIFT OR ATTEMPT TO MOVE THE APPLIANCE DURING CLEANING OR AT ANY OTHER TIME WHEN THE UNIT IS OPERATING.
- WARNING:** ONLY USE EQUIPMENT FOR ITS INTENDED USE AS DESCRIBED IN THE INSTALLATION MANUAL. THERE ARE NO OTHER RECOMMENDED USES FOR THIS EQUIPMENT. UNINTENDED USE OF THE EQUIPMENT WILL INVALIDATE YOUR WARRANTY.
- WARNING:** MANITOWOC BEVERAGE SYSTEMS HAS DONE A COMPLETE QUALITY AND FUNCTION CHECK ON EACH UNIT. NEVERTHELESS, LEAKAGES ON WATER LINES DURING OPERATION CAN NOT BE EXCLUDED TOTALLY. REGULARLY INSPECT THE EQUIPMENT FOR SIGNS OF LEAKAGE.
- WARNING:** DO NOT DAMAGE THE REFRIGERANT CIRCUIT.
- WARNING:** KEEP ALL VENTILATION OPENENINGS IN THE APPLIANCE CLEAR OF OBSTRUCTION.
- WARNING:** DO NOT USE MECHANICAL DEVICES OR OTHER MEANS TO ACCELERATE THE DEFROSTING PROCESS, OTHER THAN THOSE RECOMMENDED BY THE MANUFACTURER.
- WARNING:** THE EVAPORATION TEMPERATURE IN THE REFRIGERATION CIRCUIT CAN TYPICALLY BE -10°C. WITHOUT TAKING PREVENTATIVE STEPS THIS CAN BE A POTENTIAL SOURCE OF INJURY.
- WARNING:** THE COMPRESSOR, CONDENSER, HIGH PRESSURE REFRIGERATION TUBES AND MOTORS WILL BECOME HOT DURING OPERATION. CONTACT WITH THESE PARTS DURING OPERATION SHOULD BE AVOIDED.
- WARNING:** SOME COMPONENTS WILL ROTATE FOR A SHORT PERIOD AFTER THE POWER TO THE UNIT HAS BEEN SWITCHED OFF. THESE COMPONENTS SHOULD BE AVOIDED UNTIL STATIONARY.

**APPLICABLE TO R290 UNITS ONLY**



## Warning

**THIS EQUIPMENT IS CHARGED WITH R290 REFRIGERANT (PROPANE).**

**ONLY QUALIFIED SERVICE ENGINEERS HOLDING A VALID HANDLING CERTIFICATE FOR CARE 40 (PROPANE) CAN WORK ON THE REFRIGERATION SYSTEM OF THIS EQUIPMENT. PLEASE READ THE INFORMATION BELOW BEFORE ANY WORK IS CARRIED OUT.**

Refrigeration R290 (Care 40, Propane)

Note: Only engineers who have been trained in the safe handling and use of hydrocarbon refrigerants should work on this system.

- Work on this system in a well ventilated area or outside.
- Use a local leak detector to indicate if there is hydrocarbon in the air around the system (place it at a low level as HCs are heavier than air)
- Ensure there are no sources of ignition (flames or sparking electrical components) within 3m (10 feet) of your work area.
- If replacing components use like for like replacements.
- Take great care when brazing to ensure all HC has been removed from the system.



Use refrigerant grade propane (R290 or Care 40)

**WARNING:** DO NOT DISPOSE OF THE UNIT WITHOUT FIRST REMOVING ALL R290 REFRIGERANT. THIS PROCESS CAN ONLY BE PERFORMED BY AN ENGINEER QUALIFIED TO HANDLE HYDROCARBON REFRIGERANTS.

**WARNING:** ALL UNITS ARE FITTED WITH A STANDARD EURO PLUG TO IEC83:1985 OR A UK PLUG. BEFORE COMMENCING ANY CLEANING ISOLATE THE UNIT BY:

1. SWITCH OFF THE SOCKET THAT THE PLUG IS INSTALLED INTO.
2. REMOVE THE PLUG FROM THE SOCKET.

**WARNING:** ALL INSTALLATIONS MUST BE CHECKED THAT THEY MEET LOCAL ELECTRICAL REGULATIONS AND NATIONAL CODES BEFORE THE APPLIANCE IS TURNED ON.

**WARNING:** IF THE MAINS LEAD FITTED TO THIS EQUIPMENT IS IN ANY WAY DAMAGED IT MUST BE REPLACED. THIS WORK SHOULD ONLY BE PERFORMED BY WELBILT (HALESOWEN) LIMITED, OUR SERVICE AGENT OR A QUALIFIED ELECTRICAL ENGINEER.. THE MAINS LEAD CONNECTION IS A 'Y' TYPE.

**WARNING:** THIS EQUIPMENT MUST BE EARTHED.


**WARNING:** SOME VERSIONS OF THE ICECORE 10 COLD CARBONATED UNIT ARE FITTED WITH AN INTERNAL 3 PIN MAINS SOCKET. THIS IS ONLY TO BE USED AS A SOCKET FOR THE DOUBLE INSULATED TELEMETRY POWER SUPPLY MODULE THAT SUPPLIES POWER TO THE TELEMETRY KIT THAT MAY BE FITTED TO

THE UNIT. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE TO POWER ANY OTHER MAINS EQUIPMENT. **(REFER TO IMAGE ON PAGE 9)**


**WARNING:** THE CARBONATOR IS AN INTEGRAL PART OF THE UNIT AND IT SHOULD BE NOTED THAT THE CARBONATION PROCESS INVOLVES THE USE OF HIGH PRESSURE AND POTENTIALLY NOXIOUS GAS. AS SUCH DUE CARE MUST BE TAKEN WHEN USING THE EQUIPMENT.

**WARNING:** CARBON DIOXIDE LEAKS ARE POTENTIALLY FATAL IF CONCENTRATIONS RISE TO A DANGEROUS LEVEL. IN VIEW OF THIS THE INSTALLATION SHOULD BE REGULARLY CHECKED FOR INTEGRITY AND THE GENERAL AREA OF INSTALLATION PROPERLY VENTILATED AT ALL TIMES. IT IS RECOMMENDED THAT A CO2 LEAK DETECTOR IS FITTED IN THE VICINITY OF THE EQUIPMENT.

### CO2 CYLINDER SAFETY INFORMATION



**DANGEROUS**

**WARNING** 

- 1. ALWAYS**  
connect the CO<sub>2</sub> or gas cylinder to a REDUCING VALVE.
- 2. NEVER**  
try to connect cylinder directly to product container.
- 3. NEVER**  
interconnect soft drinks, CO<sub>2</sub> or gas cylinder equipment with other equipment.
- 4. ALWAYS**  
secure cylinder upright whilst in use.
- 5. ALWAYS**  
keep cylinder away from heat.
- 6. NEVER**  
drop or throw cylinders.
- 7. NEVER**  
try to unscrew fittings from containers.
- 8. ALWAYS**  
ventilate area after CO<sub>2</sub> leakage.

This information should be displayed in a position adjacent to the CO<sub>2</sub> supply cylinder at all times.

**WARNING:** IN ORDER TO COMPLY WITH UK WATER REGULATIONS A WRAS APPROVED DOUBLE NON RETURN VALVE MUST BE INSTALLED ON THE INCOMING MAINS WATER SUPPLY BEFORE THE APPLIANCE IN THE SYSTEM. FOR INSTALLATION OF EQUIPMENT ACROSS EUROPE A CLASS 3 PROTECTIVE DEVICE AS DEFINED BY EN1 717, APPROVED FOR THE COUNTRY OF INSTALLATION MUST BE INSTALLED ON THE INCOMING MAINS WATER SUPPLY BEFORE THE APPLIANCE IN THE SYSTEM.

**WARNING:** DO NOT DISPOSE OF THIS EQUIPMENT AS UNSORTED MUNICIPAL WASTE, CONTACT YOUR DISTRIBUTOR OR SERVICE AGENT FOR THE COLLECTION AND SAFE DISPOSAL OF THIS EQUIPMENT. WELBILT (HALESOWEN) LTD. IS A REGISTERED MEMBER OF A WEEE.

## Section 2 – General description and function of the unit

The Icecore 10 family of remote coolers have been designed to carbonate, recirculate and chill mains potable water and chill soft drinks syrup. This equipment is designed to be installed in cellars, ventilated storerooms and areas generally away from the point of dispense. It is to be installed in the system between the bulk storage facility and the Dispense Head with the product(s) passing through the cooling coils of the unit. There are NO other recommended uses for this equipment.

This equipment should be used only in accordance with the instructions; it should not be used for any other purpose.

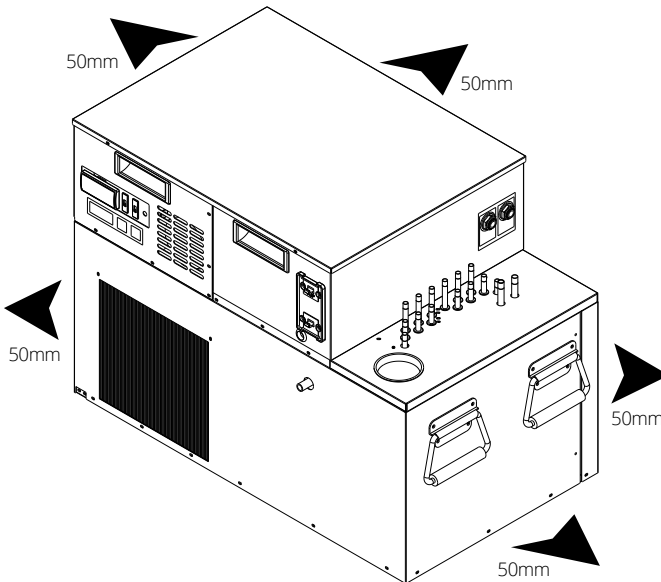
The equipment is not intended for use with alcoholic beverages, fruit juice or milk based beverages.

Do not operate the equipment in a wet environment.

Any spillage must be wiped dry immediately.

The unit should not be installed in small enclosed spaces such as cupboards or pantries, where fresh air flow is restricted. Always install in a well ventilated area. The unit requires 50mm minimum clearance all around and to be open at front. (Ref to Diagram A) Welbilt do not recommend installing the equipment in close proximity to other heat rejecting equipment as this may reduce performance.

**Diagram A**



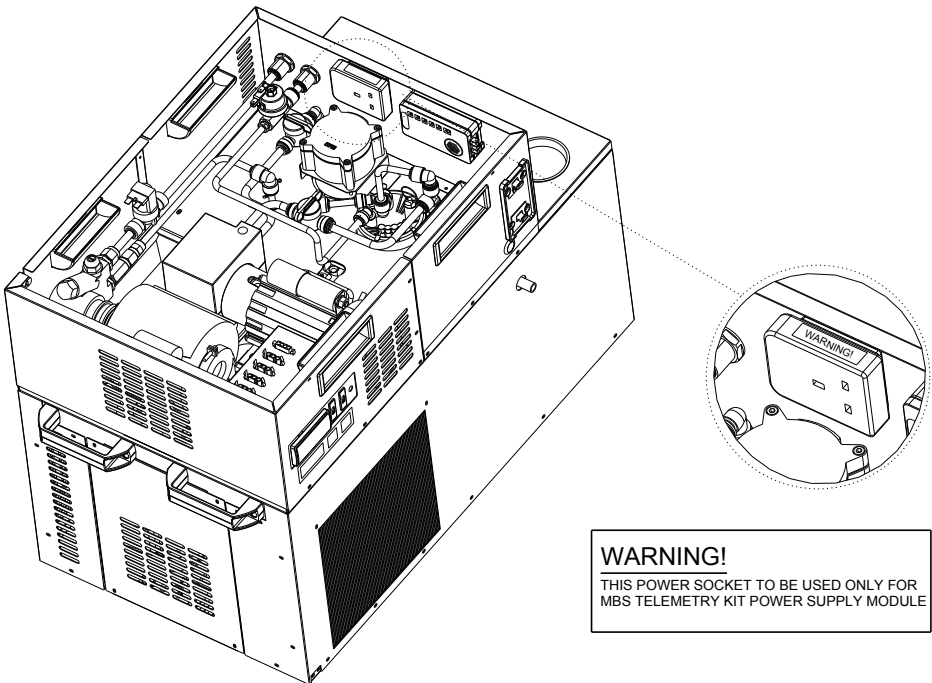
Keep the unit free from excessive heat and cold. Minimum and maximum ambient temperatures are:

Minimum: 12°C

Maximum: 32°C

Misuse or use of the equipment for any other purpose than those identified above will invalidate any warranty, and may constitute a danger to yourself and others.

This cooler has been subjected to a number of thorough quality checks before leaving the factory. However, to ensure this cooler can meet the demands it has been designed for it must be installed and maintained in accordance with the manufacturer's guidelines. These can be found in this booklet, which must remain with the unit at all times.



### Section 3 – Installation & Commissioning

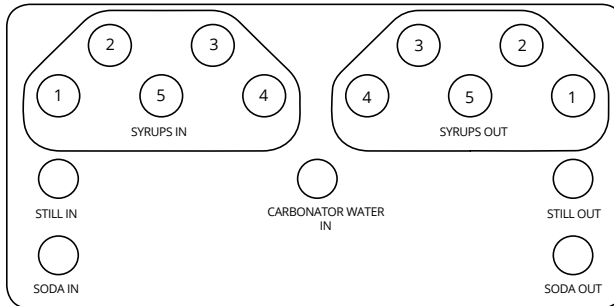
Unpack the unit from its transportation packing and visually check for any signs of damage. The unit should be fitted with a correctly fused and wired 13 amp plug fitted with a 10 amp fuse or alternatively a standard Euro Plug to IEC83: 1975.

For both Ambient and Cold Carbonated appliances in the U.K. a WRAS approved double none return valve must be fitted as part of the installation on the incoming mains water connection (for other markets, a none return valve complying with local water regulations must be fitted) and the installation should only use food grade tubing to interconnect appliances within the system.

Place the unit in a well ventilated, convenient location in the cellar or room where it is to be sited, as close to the point of dispense as possible, within 2m of an electrical socket and without obstructions to the condenser (at the front of the unit) or side and rear panel ventilation slots. Always site the equipment on a dry Horizontal surface of sufficient size to support the unit without it overhanging. When siting the unit, ensure that there is sufficient space to work around the unit for installation and cleaning. A minimum clearance of 50mm to either side and rear of the unit is recommended.

Unit	Icecore 10 Ambient Carbonated	Icecore 10 Cold Carbonated
Height / mm	445mm	535mm
Width / mm	762mm (inc. handles)	770mm (inc. handles)
Depth / mm	440mm (INT) 490 (W\C)	440mm (INT) 490 (W\C)
Weight	52.5Kg's (Dry)	62 Kg's (Dry)

## AMBIENT CARBONATED UNITS – CONNECTING THE UNIT TO THE WATER, CO<sub>2</sub>, PYTHON AND COMMISSIONING.



### CONNECTION NOTES

SYRUP COILS 1-5: 5/16" PLAIN RINGED ENDS

SODA STILL & CARBONATOR WATER LINES 3/8" PLAIN RINGED ENDS

01-3001-01 WATER COOLED NOTE:

HEAT DUMP FLOW AND RETURN FITTINGS 15MM (SUPPLIED WITH UNIT)

1. If the unit is a water cooled version, the glycol module and heat dump must be installed and connected as detailed in the Glycol module and heat dump installation guidelines before commissioning the complete system.
2. Install the Ambi Carb unit as per the Ambient Carbonator instruction manual. Then connect the carbonated water feed from ambient carbonator to the tube at the front of the unit labelled CARB WATER IN. It is recommended that the maximum/ minimum CARBONATED WATER pressure to the unit is 80/75 psi.
3. Remove the filler cap from the lid and red end stop from overflow tube. Using a funnel, fill the water bath with fresh clean, cold water, preferably below 20°C until water just trickles from the overflow. (approx. 25 litres) Fit the red end stop to the overflow pushing home to achieve a seal. Alternatively plumb the overflow to a permanent drain. Replace the filler cap in the lid. Any excess water will now be routed to an internal overflow and will be evaporated off by the refrigeration system via the internal boil off tray.
4. If required, dose the water with the provided biocide control agent in accordance with the instructions supplied on the bottle, taking note of health and safety instructions.
5. Connect the syrup inlet lines to the syrup coils labelled SYRUPS IN 1-5.
6. Connect the Soda recirc flow and return lines within the python to the connections labelled SODA IN and SODA OUT ensuring these connections are insulated with suitable armaflex.

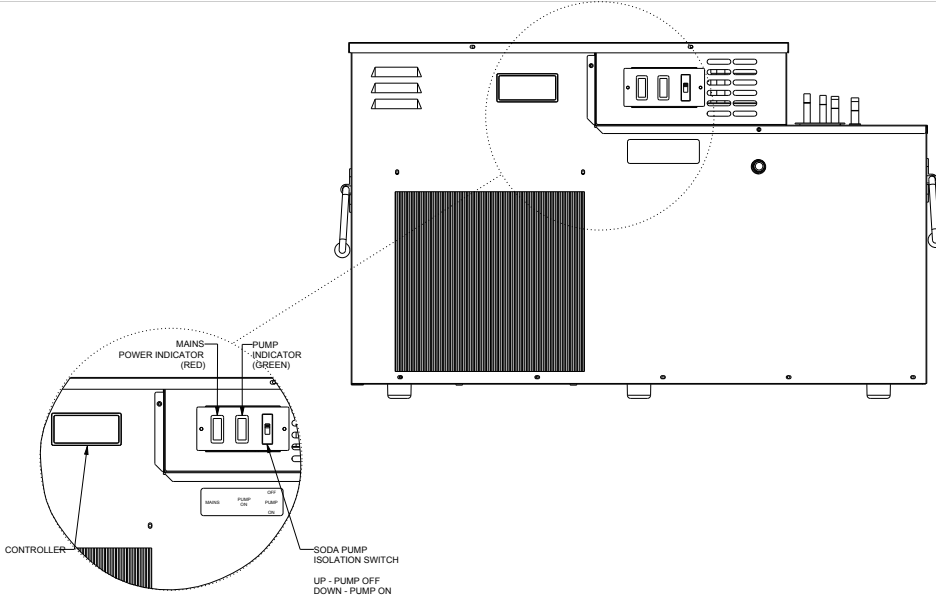
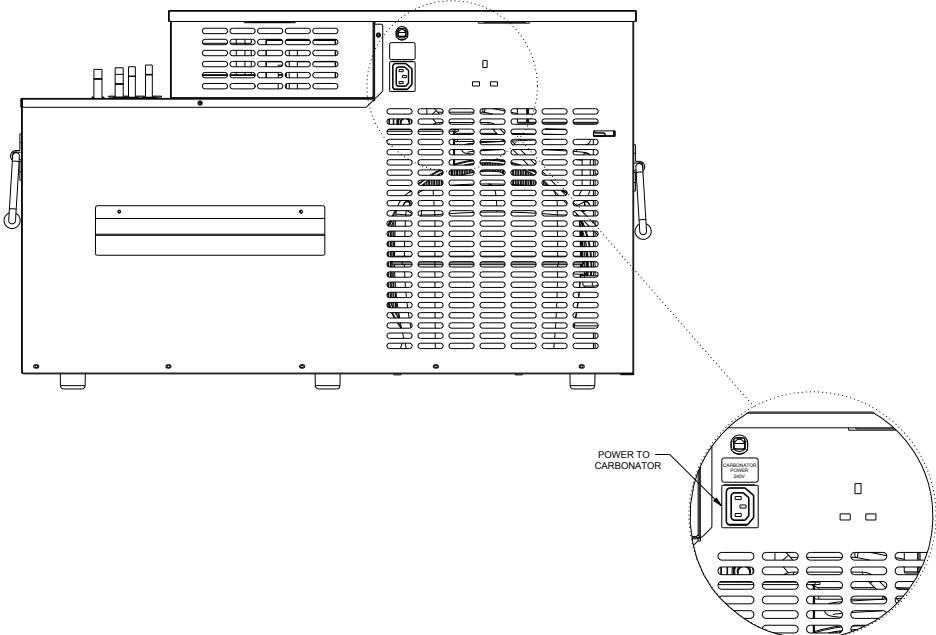
7. If required, connect a mains water supply to the STILL IN connection and the STILL OUTLET connection to the appropriate line within the python. Ensure the outlet line to the python is insulated.
8. Connect the syrup lines within the python to the connections labelled SYRUPS OUT 1-5 ensuring these connections are insulated with suitable armaflex.
9. Connect the other end of the python to the dispense head.

*Note:*

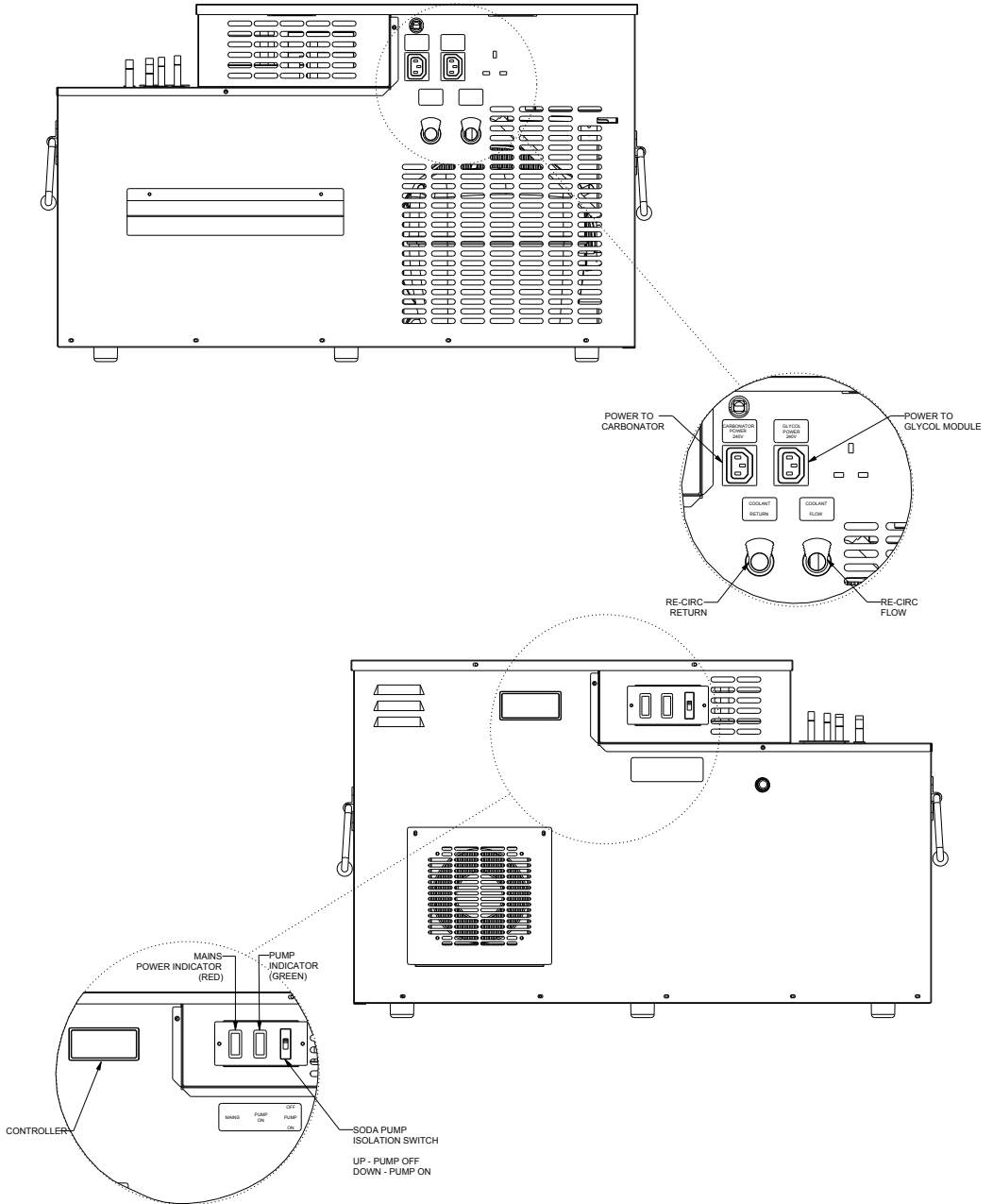
*Ensure the recirculation run is not excessive, and the python is routed away from external heat sources. The maximum lift for the recirculation pump is 6m. The maximum recommended run is 12 metres. Any unused syrup coils should remain capped both for personal protection and to prevent the ingress of debris.*

10. When all connections have been made, turn on the CO<sub>2</sub> supply to the ambient carbonator and allow the system to fill with CO<sub>2</sub>. Lift the relief valve on the top of the carbonator bowl in the Ambi-Carb to remove any trapped air. Ensure there are no leaks from any of the joints.
11. Operate the dispense valves to expel any air from the Python ensuring there are no leaks from any of the connections. Rectify if any are found before proceeding.
12. Ensure the soda pump switch is in the off position.
13. Turn on the water supply to the ambient carbonator and switch the unit on allowing it to fill until it cuts out. Again check for leaks.
14. Plug the Icecore 10 unit into the mains supply and switch on. There is an approximate 1 minute delay from switching the cooler on until the compressor starts.  
*Note: If the unit is a water cooled version, ensure the glycol lines prime correctly and that the glycol module is topped up to the correct level.  
(Refer to HEAT DUMP – GENERAL GUIDELINES & GLYCOL MODULE INSTALLATION GUIDELINES ON PAGES 19-20)*
15. Open the dispense valves and bleed the gas pockets from the system until the python is full of carbonated water.
16. Switch the soda recirc pump on and allow the system to make its ice bank and chill the python down.  
If the fridge unit is to be operated during the installation (i.e. To begin building the ice bank) isolate the soda recirc pump by turning the switch to the off position.
17. Connect the syrup supply and bleed syrup through to the dispense head(s) Brix the system when down to temperature.

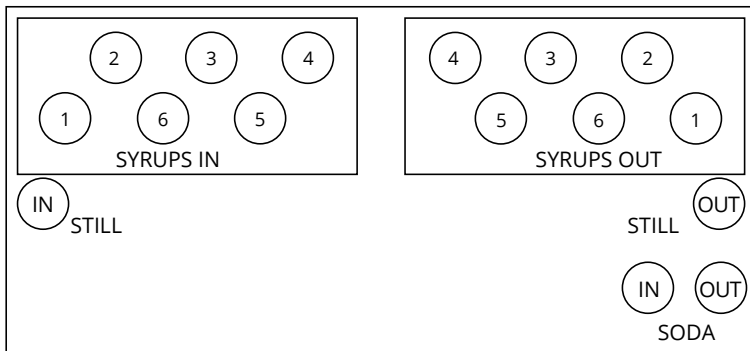
# AMBIENT CARBONATED INTEGRAL APPLIANCE CONTROL POSITIONS



# AMBIENT CARBONATED WATER COOLED APPLIANCE CONTROL POSITIONS



## COLD CARBONATED UNITS – CONNECTING THE UNIT TO THE WATER, CO2 AND PYTHON AND COMMISSIONING



1. If the unit is a water cooled version, the glycol module and heat dump must be installed and connected as detailed in the Glycol module and heat dump installation guidelines before commissioning the complete system.
2. Remove the filler cap from the lid and red end stop from overflow tube. Using a funnel, fill the water bath with fresh clean, cold water, preferably below 20°C until water just trickles from the overflow. (approx. 25 litres) Fit the red end stop to the overflow pushing home to achieve a seal. Replace the black filler cap in the lid. Any excess water will now be routed to an internal overflow and will be evaporated off by the refrigeration system via the internal boil off tray.
3. If required, dose the water with the provided biocide control agent in accordance with the instructions supplied on the bottle, taking note of health and safety instructions.
4. Connect the mains water supply to the 3/8" John Guest Bulkhead connection on the right hand side of the unit labelled WATER IN. The mains water supply should be regulated to a maximum of 50psi and a minimum of 20 PSI pressure is recommended.
5. Connect the Co2 supply to the 3/8" John Gust bulkhead fitting on the right hand side of the unit labelled CO2 IN.
6. Connect the syrup inlet lines to the syrup coils labelled SYRUPS IN 1-6.
7. Connect the Soda recirc flow and return lines within the python to the connections labelled SODA IN and SODA OUT ensuring these connections are insulated with suitable armaflex.

8. If required, connect a mains water supply to the STILL IN connection and the STILL OUTLET connection to the appropriate line within the python. Ensure the outlet line to the python is insulated.
9. Connect the syrup lines within the python to the connections labelled SYRUPS OUT 1-6 ensuring these connections are insulated with suitable armaflex.
10. Connect the other end of the python to the dispense head.

*Note:*

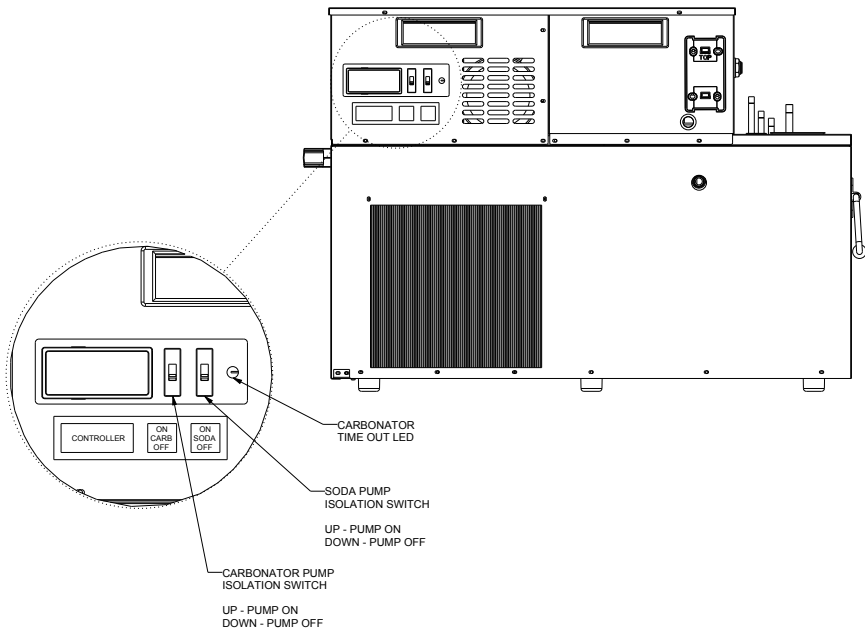
*Ensure the recirculation run is not excessive, and the python is routed away from external heat sources. The maximum lift for the recirculation pump is 6m. The maximum recommended run is 12 metres.*

*Any unused syrup coils should remain capped both for personal protection and to prevent the ingress of debris.*

11. When all connections have been made, turn on the CO2 supply to the unit and allow the system to fill with CO2. Lift the relief valve on the top of the carbonator bowl in the unit to remove any trapped air. Ensure there are no leaks from any of the joints.
12. Operate the dispense valves to expel any air from the Python ensuring there are no leaks from any of the connections. Rectify if any are found before proceeding.
13. Ensure the soda pump switch is in the OFF position and the carb pump switch is in the OFF position.
14. Turn on the water supply to the unit again checking for leaks.
15. Plug the Icecore 10 unit into the mains supply and switch the unit on on. There is an approximate 1 minute delay from switching the cooler on until the compressor starts.  
*Note: If the unit is a water cooled version, ensure the glycol lines prime correctly and that the glycol module is topped up to the correct level.  
(Refer to HEAT DUMP – GENERAL GUIDELINES & GLYCOL MODULE INSTALLATION GUIDELINES ON PAGES 19-21)*
16. Switch the carbonator pump on via the switch ensuring that the carbonator bowl fills and the pump cuts out automatically.
17. Operate the dispense valves to bleed any gas pockets from the python and to ensure the flow and return lines are filled with carbonated water.

18. Switch the soda recirc pump on and allow the system to make its ice bank and chill the python down. If the fridge unit is to be operated during the installation (i.e. To begin building the ice bank) isolate the soda recirc pump by turning the switch to the off position.
19. Connect the syrup supply and bleed syrup through to the dispense head(s) Brix the system when down to temperature.

## COLD CARBONATED INTEGRAL & WATER COOLED APPLIANCE CONTROL POSITIONS



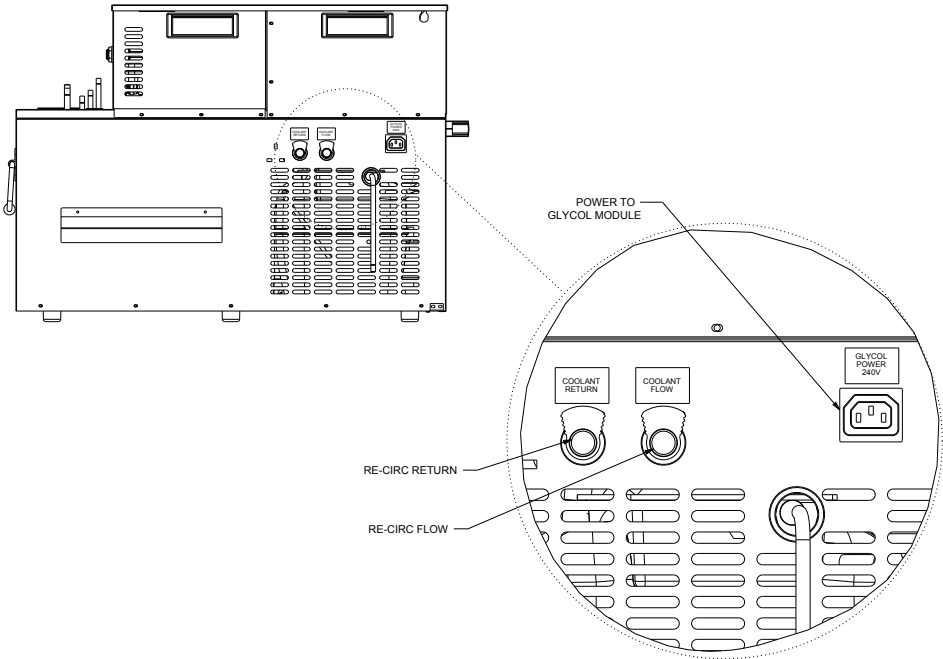
## BI-LEVEL CARBONATOR CONTROLLER TIME OUT SAFETY FEATURE

The carbonator has a time out feature that will shut the carbonator pump and the soda recirculation pump off if the bowl does not fill in 3 minutes. This is to protect both pumps in the event of the water starvation.

If the time out feature operates, the small LED on the front panel will flash and the carbonator pump and soda recirculation pump will shut off.

To reset, ensure the water supply has been restored, turn off the power to the unit for 5 seconds and then switch back on. If the bowl still fails to fill, then the fault must be investigated and rectified before the unit can be operated.

## COLD CARBONATED WATER COOLED APPLIANCE CONTROL POSITIONS



## HEAT DUMP INSTALLATION - GENERAL GUIDELINES

1. It is important that the heat dump is sited correctly to enable it to work efficiently. The guidelines below should be adhered to wherever possible.
2. Ensure the unit is sited on an outside wall (preferably not south facing) in the correct orientation out of direct sunlight.
3. Ensure there are no other heat sources, ie a condensing unit or another heat dump, in the immediate vicinity where hot air may be recirculating.
4. Use the recommended tubing (15mm O\A, 10mm I\A special EVA) to connect the base unit to the heat dump. Do not use braided tube as this is not compatible with glycol and is also prone to kinking when warm.
5. Do not exceed the recommended distance and lift (40 meters from the base unit to the heat dump and 9 meters of lift)

6. The heat dump must be connected using a minimum of 1.5mm<sup>2</sup> two core cable. If a smaller cable is used, a voltage drop will occur which will cause the fan to run at a lower speed.
7. If the unit is to be installed in a building or room, ensure there is adequate ventilation within the room to enable the heat to be dissipated effectively. Temperatures within the room should not exceed 40°C.
8. Do not kink the flow and return tubes which would restrict the coolant flow.
9. Do not insulate the flow and return lines.
10. The flow and return lines must not be strapped together as heat transfer between the two will affect the system performance.
11. Ensure that the heat exchanger matrix of the heat dump is kept clean and free from obstruction. It is recommended that it should be cleaned with a soft brush at regular intervals.

Please refer to the Heat Dump manual (Part No PI015362) for additional information.

### **GLYCOL MODULE INSTALLATION (WATER COOLED UNITS ONLY) - GENERAL GUIDELINES**

1. Site the glycol pump module within 2 meters of the base unit and use the bracket supplied to secure the module to a wall.
2. Connect the glycol modules power supply to the 230V power socket on the base unit. (DO NOT SWITCH ON YET)
3. Using the correct glycol tubing (15mm OAD, 10mm ID special EVA) connect the COOLANT FLOW from the glycol module to COOLANT RETURN on the base unit.
4. Again using the correct tubing, connect the COOLANT FLOW from the base unit to the FLOW on the heat dump. Connect the RETURN on the heat dump to the COOLANT RETURN on the base module to complete the circuit.
5. Connect the 1.5mm<sup>2</sup> twin wire from the heat dump to the 24V outlet socket on the glycol module using the two pin plug supplied or to the screw terminal connectors (or spring loaded connectors on the glycol module. (Dependent on model) it does not matter which way the wires are connected as they are not polarised.

6. Ensure the coolant lines are correctly installed and free from kinks.
7. Fill the glycol module reservoir tank with a quantity of Monopropylene glycol coolant mixed 30% glycol to 70% water, ensuring a quantity remains for topping the system up when priming. Once primed ensure the reservoir is topped up to its maximum level.  
 A 30% glycol / 70% clean water mix will protect the system down to  $-13^{\circ}\text{C}$ .  
 The amount of glycol required for the system - add 2.5 pints (1.4 Litres) for the glycol tank to the length of pipe work as shown in the following tables:

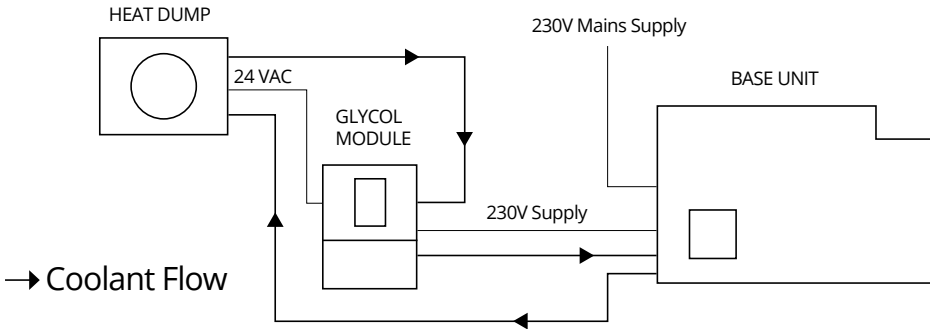
Feet	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
Pints	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0

Meters	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48
Litres	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.3	3.6	3.9	4.2	4.5	4.8

*\* based on the use of the correctly specified tube with an internal bore of 10mm*

8. Once primed, the refrigeration system can be operated.
9. When the refrigeration system operates, the pump in the glycol module will start together with the heat dump fan.
10. Ensure the system has no air locks and that the coolant is recirculating freely to the header tank.

## WATER COOLED UNIT EQUIPMENT SELECTION SCHEMATIC



## ELECTRONIC CONTROL SETTINGS AND ADJUSTMENT INSTRUCTIONS DFX SERIES 1E CONTROLLER AND PROBE:

The controller is electronic, and is supplied with a temperature probe. The Cut-Out and Cut-In temperatures are factory set at Welbilt (Halesowen) Ltd, and should not require any adjustment.

They are as follows:

**Cut-Out: -2.0°C**

**Cut-In: +0.5°C**

However, the controller has a built-in feature that allows each individual account operating profile to be set-up to optimise power usage. This feature conserves energy by powering down the cooler overnight, during the account closed period. There is a 7-day timer in the software, with factory default settings which shut the cooler down at 11:00pm and re-start the cooler at 11:00am. For accounts where this profile is inappropriate, the timer must be set-up to suit the individual account, in order to maximise energy savings. Please refer to the Dfx Series 1e Instruction Manual sent with the unit for guidance on setting up this feature.

Adjustment Guide:

*Note: The Cut-Out (1.) and Differential Temperature (2.) are factory set at Welbilt (Halesowen) Ltd. Any adjustment to these settings may affect the performance, energy-saving characteristic and ice weight of the unit. It is not recommended that either of these parameters is adjusted without consultation with Welbilt (Halesowen) Ltd Engineering Department.*

### 1. To adjust the Cut-Out Temperature:

- A. Carefully remove the lens from the front of the controller.
- B. Press and hold the button. Release after 2 seconds.
- C. The display will change from 'Current Temperature' to 'Current Set-Point'.
- D. Adjust the temperature up or down using the (+) or (-) button.
- E. To store the new set-point, press the button.
- F. The display will then show the differential temperature'. If no differential adjustment is necessary, replace the lens. The unit will revert to the 'Current Temperature' after 30 seconds.

### 2. To adjust the Differential (Cut-In) Temperature:

- A. Follow steps (a) and (b) above.
- B. The display will change from 'Current Temperature' to 'Current Set-Point'.
- C. Press and hold the button again. Release after 2 seconds.
- D. The display will change from 'Current Set-Point' to 'Current Differential'.
- E. Adjust the temperature up or down using the (+) or (-) button.
- F. To store the new set-point, press the button.

Example: If the Cut-Out Temperature is set at  $-2.0^{\circ}\text{C}$ , the Differential Temperature must be set to  $2.5^{\circ}\text{C}$  to cause the unit to cut-in at  $0.5^{\circ}\text{C}$ .

### 3. To adjust the opening and closing hours:

Note: This feature allows up to 2 opening and closing sessions per day. The Manitowoc default setting assumes a single 13-hour operating profile per day, with a 10-hour shutdown period at night. However, instructions are included on how to set-up a second dispense period per day, if required.

Opening and closing hours set-up, beginning Sunday:

- A. Carefully remove the lens from the front of the controller.
- B. Press and hold the button. Release after 2 seconds.
- C. The display will change from Current Temperature to Current Set-point.
- D. Continue to scroll through the menu, by pressing the button for 2 seconds, then releasing, until the display shows "HOUR".
- E. Press and release the button to enter the Opening/Closing hours mode.
- F. The display begins with Sunday (displayed as sun). Note: the first 3 letters of each day is displayed digitally by LEDs, and is not particularly easy to decipher for some of the days.
- G. To adjust the trading hours for Sunday, in 10 minute increments, follow this procedure....

- H. Press and release the button again. A small LED flashes in the top left-hand corner of the display. This is the Opening Time.
- I. Adjust the time up or down by using the (+) or (-) buttons.
- J. When the desired time is displayed, press and release the button again.
- K. The top left LED is extinguished, and a small LED flashes in the bottom left-hand corner of the display. This is the Closing Time.
- L. Adjust the time up or down by using the (+) or (-) buttons.
- M. When the desired time is displayed, press and release the button again.
- N. The bottom left LED is extinguished, and a small LED flashes in the top right-hand corner of the display. This is the Second Opening Time for Sunday. See below for Opening/Closing options....

Single opening/closing profile per day:

- O. If no Second Opening Time is required, press and release the (+) button until the time scrolls past 24:00, and the next increment displayed is "OFF".
- P. Press and release the button twice to save the settings and move on to the next day (Monday).

Two opening and closing profiles per day:

- Q. If a Second Opening Time and Closing Time are required on the same day, this action should follow stage (n) above....
- R. Adjust the Second Opening Time, using the (+) or (-) buttons.
- S. When the desired time is displayed, press and release the button again.
- T. The top right LED is extinguished and a small LED flashes in the bottom right-hand corner of the display. This is the Second Closing Time.
- U. Adjust the time by using the (+) or (-) buttons.
- V. When the desired time is displayed, press and release the button again.
- W. The display will now show Monday (displayed as 'rnon').

Rest of the week...

- X. Use the same procedure to adjust Opening and Closing hours for each day.
- Y. When the necessary adjustments have been made for all 7 days, press and release the button. The display will show Python Refresh Mode (displayed as pytn). Ignore this mode.
- Z. Carefully replace the lens. The display will revert back to Current Temperature within 30 seconds.

No other adjustments should be necessary. Please contact Welbilt (Halesowen) Ltd before changing any other parameters, as they may impact on energy savings, performance and ice build.

## Section 4 – Maintenance and cleaning

- Service & Maintenance of the equipment should only be carried out by Welbilt (Halesowen) Limited. trained, competent, technicians, abiding by all the relevant statutory regulations and industry recommendations.
- Before removing the panels from the equipment the mains supply must be disconnected, either by removal of the plug from the wall socket, or in the case of hard wired equipment, switched off at the isolator. In both cases the equipment must be locked off to prevent the equipment inadvertently being powered up.
- Live testing must be avoided wherever possible, in most cases components can be tested with a multi-meter or insulation tester. Where live testing becomes necessary, all possible precautions to prevent injury to the maintenance technician and other people within the vicinity must be taken.
- In the event of the unit freezing up, disconnect the unit from the mains power supply and leave the unit to defrost until all the ice in the water bath has disappeared. Check the plumbing on the unit for leaks, (in the event of a leak call your service provider). If the unit has no leaks, reconnect the power to the unit and leave for 2 hours to rebuild the ice bank. Check for normal operation of the unit. In the event that the unit freezes up a second time or fails to operate as normal you **MUST** notify your service provider of a fault with the system.

### WARNING:

- Persons performing cleaning/ sanitizing operations **MUST** be competent and fully trained in safe methods of use of cleaning/sanitising agents and their applications.
- Personal protective equipment should always be used.
- Flush sanitising solution from the unit thoroughly. Residual cleaning fluids or chemicals left in the system could create a health hazard.
- Do not use a water jet or steam hose to clean the appliance at any time.
- Regarding the cleaning and sanitising procedures please refer to national/EU regulations.
- The appliance must be thoroughly sanitised upon installation and before commissioning.
- For reasons of hygiene it is necessary that the system be flushed thoroughly after extended periods without use.

### METHOD OF POWER ISOLATION

1. Switch off the unit at the plug socket.
2. Remove the plug from the socket.

**Cleaning:**

For the UK please follow the procedure below:

**BASIC INSPECTION CHECKS BY THE END USER***WEEKLY:*

There is no end user training required on this appliance other than understanding the weekly basic checks for safe unit operation. It is not recommended that the end user makes any adjustments or carries out any maintenance other than:

1. Visually check the condition of the mains lead and plug.
2. Visually check the unit and its pipework for evidence of leaks.
3. Visually check the water bath level, if low consult your service agent.
4. Visually check the glycol tank level (water cooled units only), if below the minimum level mark notify your service agent.

*MONTHLY:*

1. Isolate the appliance from the mains power supply when maintaining the equipment by turning the unit off at the socket and removing the plug.
2. Remove any extraneous debris from the unit or its casing using a vacuum cleaner or brush.
3. Reconnect the appliance to the mains power supply.

*TWICE ANNUALLY:*

1. Isolate the unit from the mains electricity supply.
2. Clean and sanitize the product lines following the syrup suppliers\service providers instructions. Welbilt recommend sanitisation of the potable water circuit every 6 months when chlorine is not added to the municipal mains potable water supply. Cleaning with an off the shelf proprietary agent should have a 30 minute soak time minimum.

*ANNUALLY:*

1. Have the appliance service by a factory approved trained technician.
2. Dose the water bath with a bacterial growth inhibitor such as Aquacid, as per the growth inhibitor manufacturer's instructions.

## RECOMMENDED LINE CLEANING METHOD

Clean and sanitize the cooling coils and product lines at a minimum of every six months using a proprietary cleanser/sanitizer of the Alkaline Hypochlorite type, in accordance with the manufacturer's recommendations. Welbilt recommends the use of "Pipeline" cleaner, which changes colour according to the condition of the product lines. It is available from beer and soft drinks wholesalers, or direct from:

Chemisphere UK Ltd,  
143-149 Bath Road,  
Kettering,  
Northants  
NN16 8NE.

### Cleaning instructions for syrup line cleaner:

1. Draw clean water through the syrup coils until all traces of product have disappeared.
2. Mix the line cleaner with clean water, in the ratio specified in the instructions [typically 1 capful per 4.5 litres (gallon)]. The solution will be purple in colour.

#### **Note:**

*Use the appropriate personal protective equipment, to avoid splash burns or damage to eyes from splashes.*

3. Connect the line cleaning solution to the lines to be cleaned.
4. Draw the line cleaning solution through the dispense tap. If the lines are particularly contaminated with yeast or bacterial growth, the run-off will be green/grey/ black.
5. Close the tap and leave for 10 minutes.
6. Repeat stages 4 and 5 twice, or until the run-off is purple in colour.
7. The purple colour denotes lines which are clean and free from contamination.
8. Disconnect the line cleaning solution and draw fresh water through the system. Dispense some water into a glass or other clear vessel and check that there is no purple colour remaining. If necessary, draw more clean water through the system until the run-off is clear.
9. The lines are now clean, safe and ready for reconnection to the product. Reconnect the syrup in the storage/cellar area and pull soda through to the tap.

In the event of Freezing Up occurring, the following action is recommended:

1. Isolate the unit from Mains Electricity Supply.
2. Identify the fault and rectify.
3. Isolate Product Supply from unit and depressurise the system.
4. Apply gentle warmth to the general area of the unit and its Pipe work.
5. Check for obvious leaks.
6. Turn product supply on / re-pressurise the system whilst continually watching for leaks.
7. Reconnect Mains Electricity supply

Observe the unit running for a short period watching out for Leaks, strange noises or any other form of malfunction, if no problems are observed then normal operation of the unit may be resumed.

### **DISMANTLING / DECOMMISSIONING PROCEDURE**

1. Isolate the unit and or the ambient carbonator from the mains electrical supply. (Depending on if it is an ambient carbonated unit or a cold carbonated unit)
2. Turn off the water supply to the ambient carbonator leaving the CO2 pressure on.
3. Ensure the area is well ventilated before purging the system
4. Drain the system down using the CO2 pressure to empty the carbonator bowl, soda recirculation lines and syrup lines.

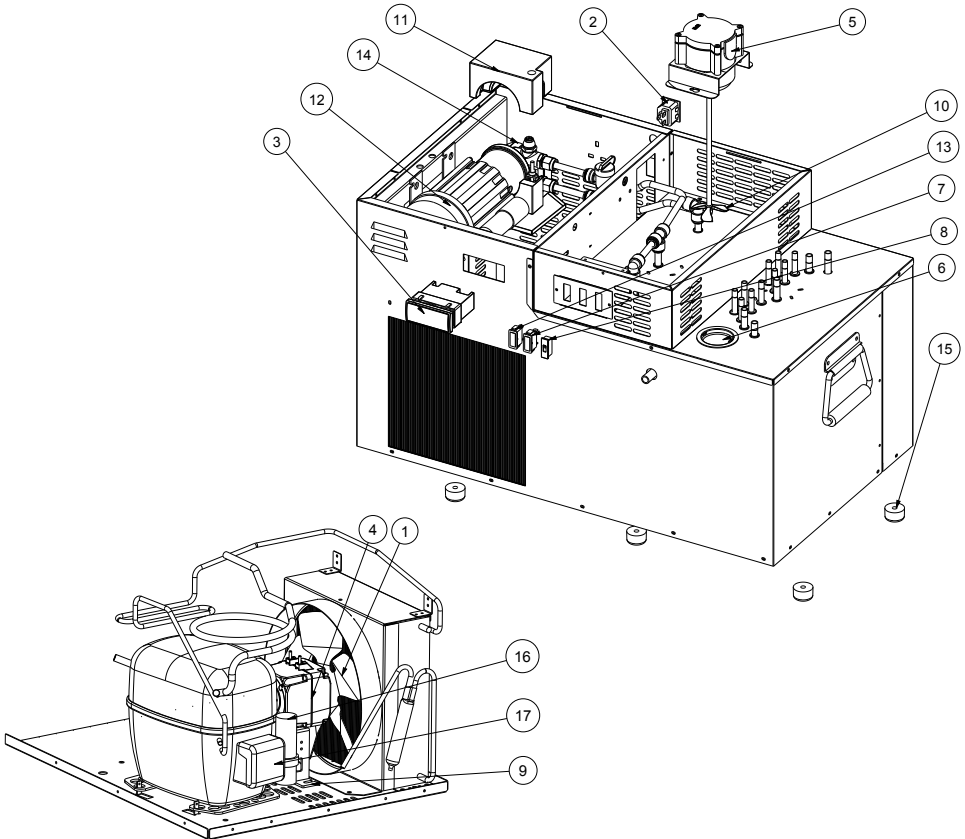
#### **Note:**

*Using a bag in box adaptor, it is recommended that the syrup lines should be flushed with water prior to draining to remove all traces of syrup.*

5. Turn off the CO2 supply at the bottle and de-pressurise the system (including syrup pump CO2 supply) by opening the dispense valves and by lifting the relief valve on the ambient carbonator.
6. Disconnect the unit from the mains water supply, python product lines and the ambient carbonator if applicable.
7. Siphon or pump out the water from the bath.

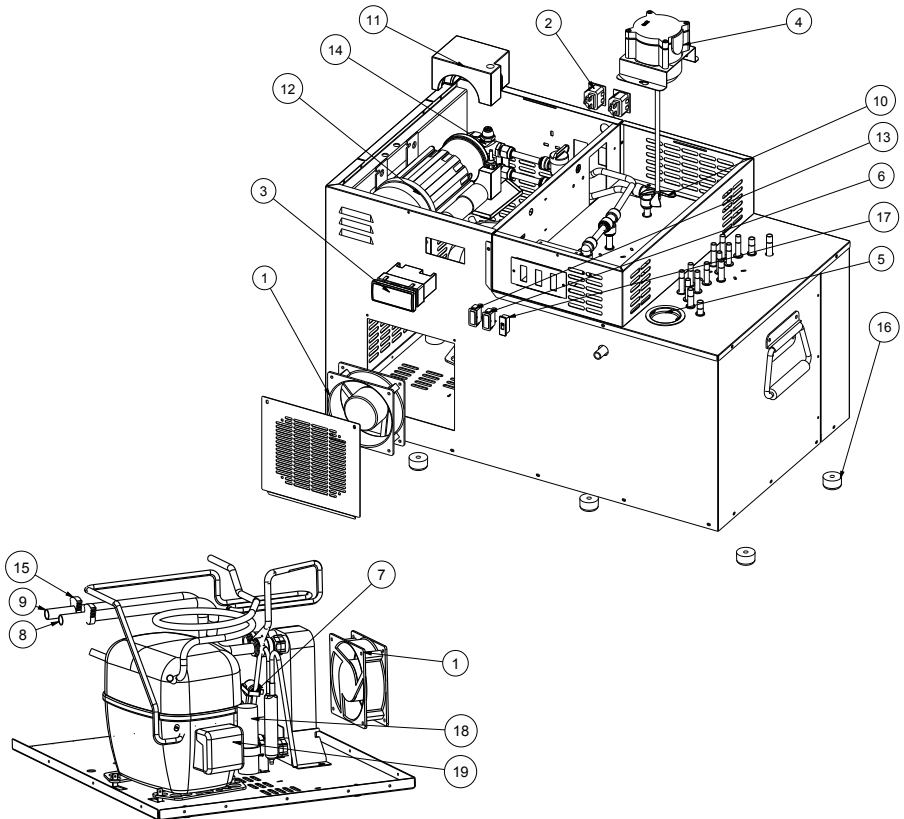
**IMPORTANT:** FAILURE TO REMOVE ALL COOLANT FROM THE UNIT COULD RESULT IN SUBSTANTIAL AMOUNTS OF COOLANT BEING RELEASED, WHICH MAY BE DETRIMENTAL TO THE UNIT AND/OR ITS SURROUNDINGS. EXCESS COOLANT WILL ALSO INCREASE THE MAXIMUM WEIGHT OF THE UNIT IF IT IS NOT REMOVED.

**Section 5 – Spare parts list**  
**01-3000-xx Hyper Warwick Integral**



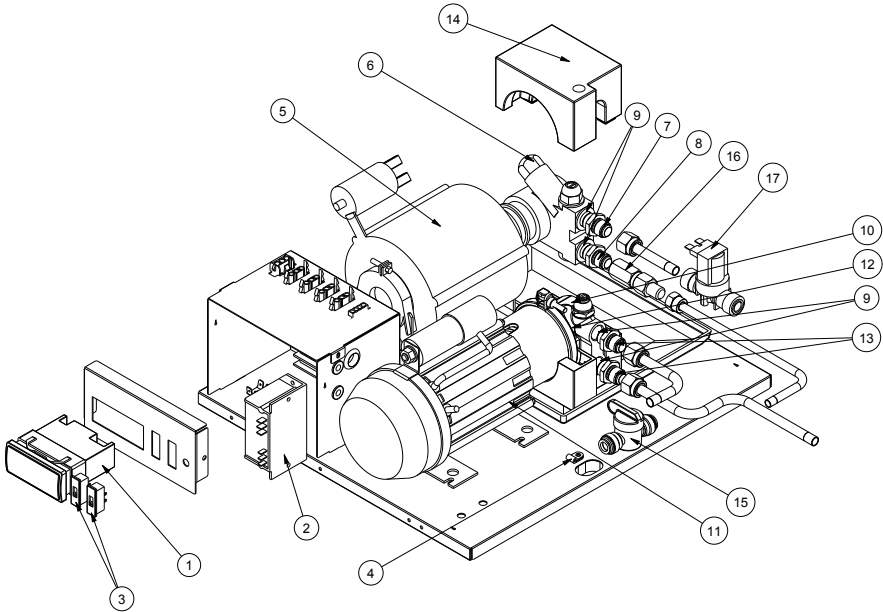
REF	PART No.	DESCRIPTION	QTY
1	PI57433	Fan Motor Blade 9" Aluminium (Sucker)	1
2	PI43513	Clip-In Shuttered Socket	1
3	PI56613	DFX1E CW Short Probe	1
4	SA57798	Condenser Motor Assembly	1
5	SA57810	Elco Agitator Motor Assembly (With Agitator Blade)	1
6	OP73718	Filler Plug	1
7	OP71737-01	Green Neon Indicator	1
8	PI56363	Slide Switch	1
9	MM57765	Icecore 15 Fan Motor Bracket - 9"	1
10	PI48538	M5 X 6Mm Three Blade Agitator	1
11	PI57901	Mag Drive Soda Pump Insulation	1
12	MO57785	Mag Drive Soda Recirc Motor	1
13	OP73711	Neon Indicator Red	1
14	SA57727	Pump Spares Kit Hyper Warwick R290	1
15	SG-73-0027	Rubber Foot 30Dia X 18 H	6
16	<a href="#">OP74326</a>	Capacitor (Secop Ref 117U5017)	1
17	PI015427	Start Relay (Secop Ref 117U7019)	1
18	PM57936	Hyper Warwick R290 Packing (NOT SHOWN)	1

## 01-3001-xx Hyper Warwick Water Cooled

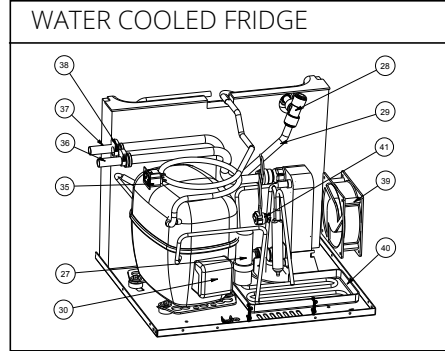
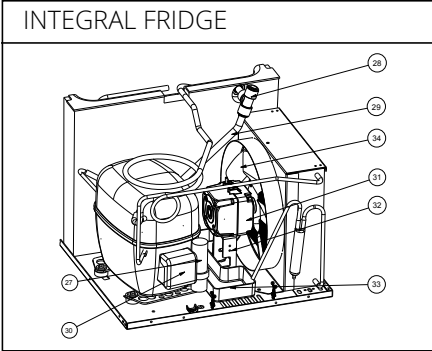
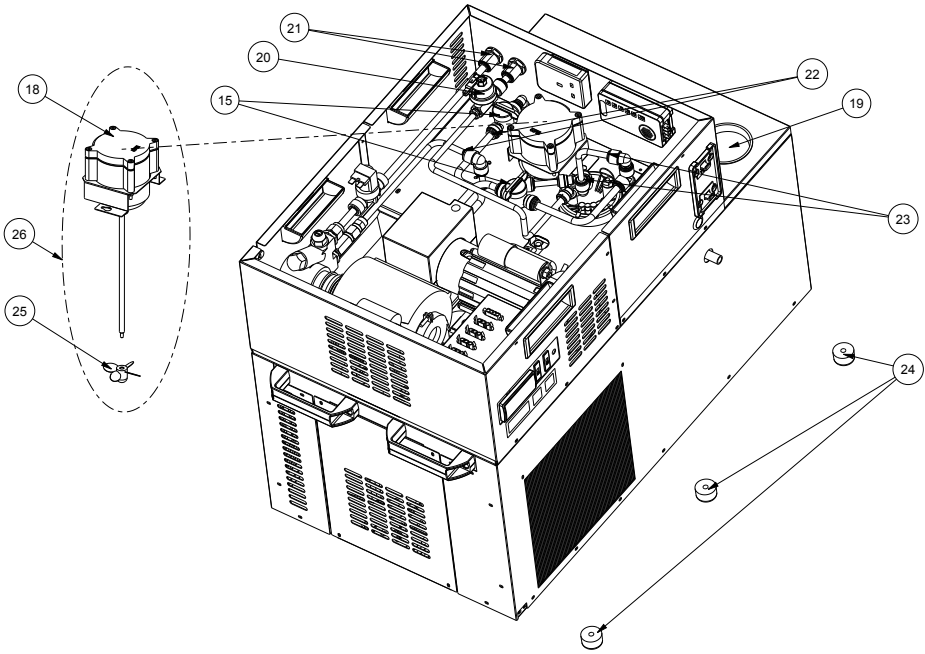


REF	PART No.	DESCRIPTION	QTY
1	MO46686	4" Box Fan	1
2	PI43513	Clip-In Shuttered Socket	2
3	PI56613	DFX1E CW Short Probe	1
4	SA57810	Elco Agitator Motor Assembly (With Agitator Blade)	1
5	OP73718	Filler Plug	1
6	OP71737-01	Green Neon Indicator	1
7	PI42589	Thermal Switch	1
8	PI57649	Hyper Warwick Heat Exchanger Flow Tube	1
9	PI57650	Hyper Warwick Heat Exchanger Return Tube	1
10	PI48538	M5 X 6Mm Three Blade Agitator	1
11	PI57901	Mag Drive Soda Pump Insulation	1
12	MO57785	Mag Drive Soda Recirc Motor	1
13	OP73711	Neon Indicator Red	1
14	SA57727	Pump Spares Kit Hyper Warwick R290	1
15	PI53547	Size F Herbi Clip	2
16	SG-73-0027	Rubber Foot 30Dia X 18 H	6
17	PI56363	Slide Switch	1
18	<a href="#">OP74326</a>	Capacitor (Secop Ref 117U5017)	1
19	PI015427	Start Relay (Secop Ref 117U7019)	1
20	PM57936	Hyper Warwick R290 Packing (NOT SHOWN)	1

**11-1000-xx Icecore 10 Integral (Cold Carbonated)**  
**11-1001-xx Icecore 10 Water Cooled (Cold Carbonated)**



ICECORE 10 (COLD CARBONATED)			
REF	PART No.	DESCRIPTION	QTY
1	PI56613	DFX1E CW SHORT PROBE	1
2	PI56242	BI-LEVEL CARBONATOR CONTROL	1
3	PI56363	SLIDER SWITCH	2
4	PI015558	P-CLIP FOR SECURING PROBE CABLE	1
5	MO014715	CARBONATOR PUMP MOTOR (230v - RPM 180W)	1
6	PU70172-00	CARBONATOR PUMP-HEAD (Brass 100 Gal/hr)	1
7	SG-33-0167-30	CARBONATOR PUMP-HEAD "INLET" FITTING	1
8	SG-42-0120	CARBONATOR PUMP-HEAD "OUTLET" FITTING	1
9	SG-74-0021-13	O-RING for CARB & SODA RECIRC FITTINGS	4
10	PU57208	MAG DRIVE PUMP	1
11	MO57785	MAG DRIVE SODA Re-CIRC PUMP MOTOR	1
12	SA57727	MAG DRIVE PUMP SPARES KIT	1
13	SG-33-0167-30	MAG DRIVE PUMP FLOW AND RETURN FITTING	2
14	PI57901	MAG DRIVE PUMP INSULATION	1
15	<a href="#">PI43762</a>	JOHN GUEST 3/8 SHUT OFF VALVE	2
16	SG-42-0857-100	DOUBLE NON-RETURN VALVE	1
17	PI47525	SOLENOID VALVE - JG ENDS	1
18	MO57312	AGITATOR MOTOR ASSEMBLY	1
19	PI47155	BATH FILLER PLUG	1
20	SG-83-0868	CO2 LOW PRESSURE SWITCH	1
21	OP73838	JOHN GUEST 3/8 BULKHEAD FITTINGS	2
22	<a href="#">OP73914</a>	JOHN GUEST 3/8 LOCKING CLIP	10
23	PI49186	JOHN GUEST 5/16 LOCKING CLIP	13
24	SG-73-0027	RUBBER FOOT	6
25	SG-85-0256	AGITATOR PROPELLER BLADE	1
26	SA015644	AGIT MOTOR ASSEMBLY WITH PROP BLADE AND BRACKET	1
N/A	PI016101	IC10 PACKAGING	1

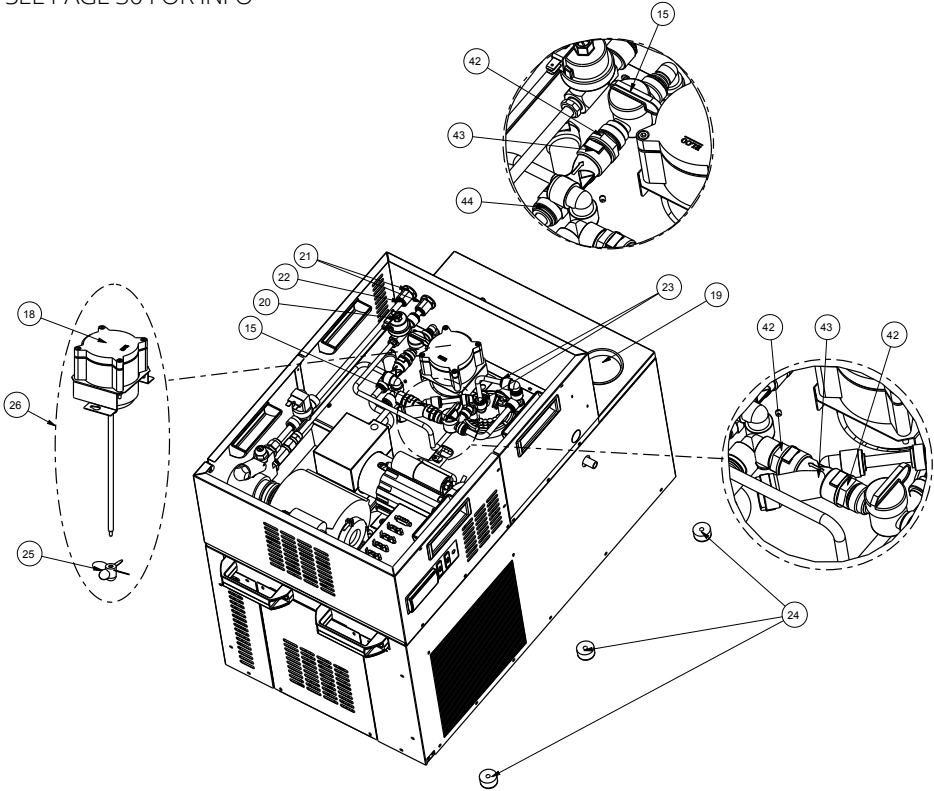


IC10 INTEGRAL FRIDGE SPARES (11-1000-xx)				
REF	PART No.	DESCRIPTION		QTY
27	OP74326	CAPACITOR (SECOP REF 117U5017)		1
28	OP72923	JOHN GUEST 1/2" EQUAL TEE		1
29	TA015941	IC10 BATH TO BOIL OFF TRAY TUBE		1
30	PI015427	START RELAY (SECOP REF 117U7019)		1
31	SA57798	CONDENSER MOTOR ASSEMBLY		1
32	MM57765	IC15 FAN MOTOR BRACKET 9"		1
33	PI015933	IC10 INTEGRAL BOIL OFF TRAY		1
34	PI57433	FAN MOTOR BLADE 9" ALUMINIUM		1

IC10 INTEGRAL FRIDGE SPARES (11-1000-xx)				
REF	PART No.	DESCRIPTION		QTY
27	OP74326	CAPACITOR (SECOP REF 117U5017)		1
28	OP72923	JOHN GUEST 1/2" EQUAL TEE		1
29	TA015941	IC10 BATH TO BOIL OFF TRAY TUBE		1
30	PI015427	START RELAY (SECOP REF 117U7019)		1
35	PI43513	CLIP IN SHUTTERED SOCKET		1
36	PI57649	HEAT EXCHANGER FLOW TUBE		1
37	PI57650	HEAT EXCHANGER RETURN TUBE		1
38	PI53547	SIZE F TUBE CLIP		2
39	MO46686	4" BOX FAN		1
40	PI015956	IC10 WC BOIL OFF TRAY		1
41	PI42589	THERMAL SWITCH		1

**11-1000-xx Icecore 10 Integral (Cold Carbonated)**  
**11-1001-xx Icecore 10 Water Cooled (Cold Carbonated)**

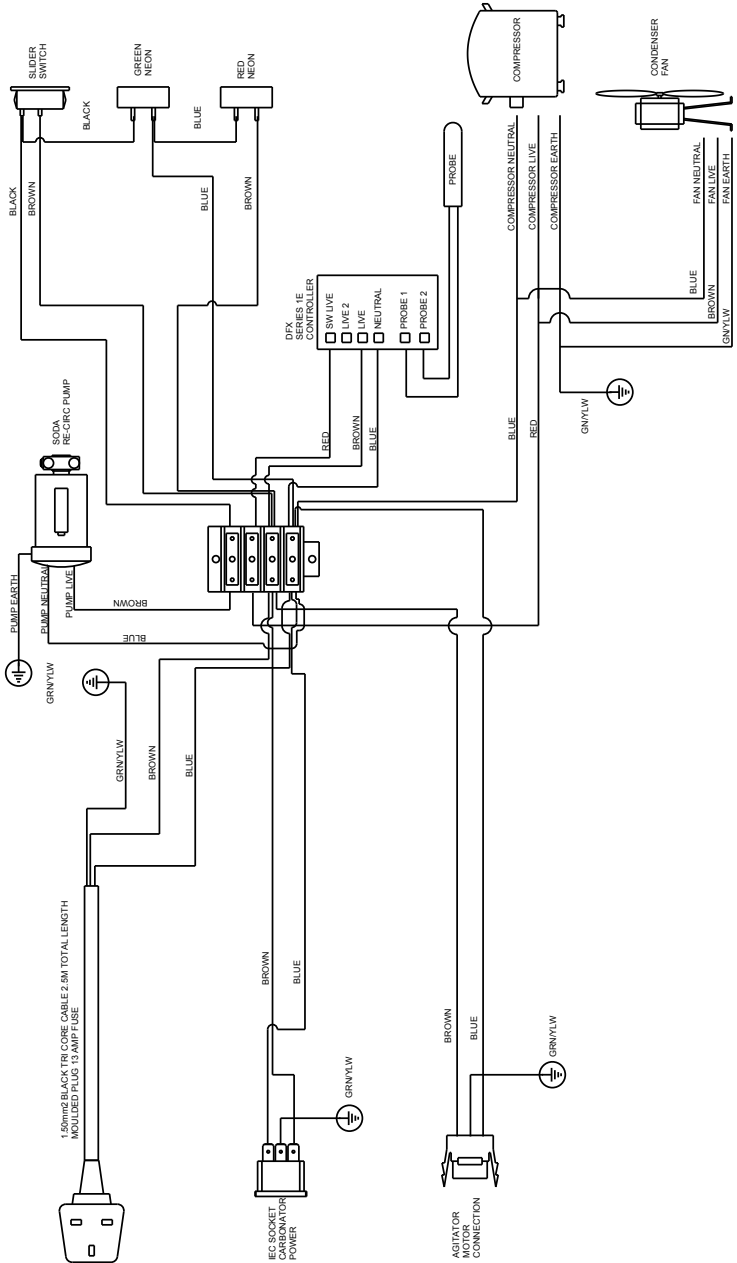
SEE PAGE 30 FOR INFO



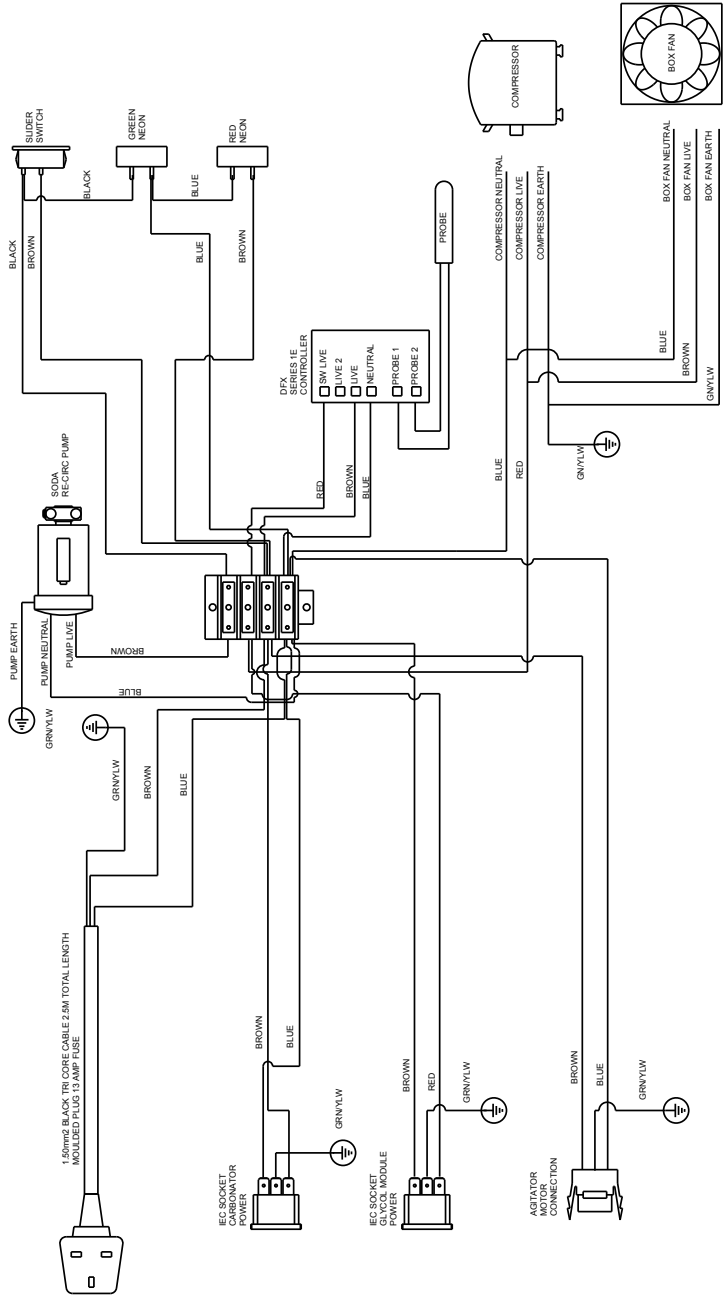
ICECORE 10 (COLD CARBONATED)			
REF	PART No.	DESCRIPTION	QTY
15	<a href="#">PI43762</a>	JOHN GUEST 3/8 SHUT OFF VALVE	2
18	MO57312	AGITATOR MOTOR ASSEMBLY	1
19	PI47155	BATH FILLER PLUG	1
20	SG-83-0868	CO2 LOW PRESSURE SWITCH	1
21	OP73838	JOHN GUEST 3/8 BULKHEAD FITTINGS	2
22	<a href="#">OP73914</a>	JOHN GUEST 3/8 LOCKING CLIP	10
23	PI49186	JOHN GUEST 5/16 LOCKING CLIP	13
24	SG-73-0027	RUBBER FOOT	6
25	SG-85-0256	AGITATOR PROPELLER BLADE	1
26	SA015644	AGIT MOTOR ASSEMBLY WITH PROP BLADE AND BRACKET	1
42	OP73483	JOHN GUEST STEM ADAPTOR 3/8" TO 3/8" BSP	2
43	OP74301	PLASTIC Y SHAPED STRAINER	2
44	PI016254	JOHN GUEST 3/8" STRAIGHT ADAPTOR	1
N/A	PI016101	IC10 PACKAGING	1

# Section 6 – Wiring Schematic

## 01-3000-xx Hyper Warwick Integral

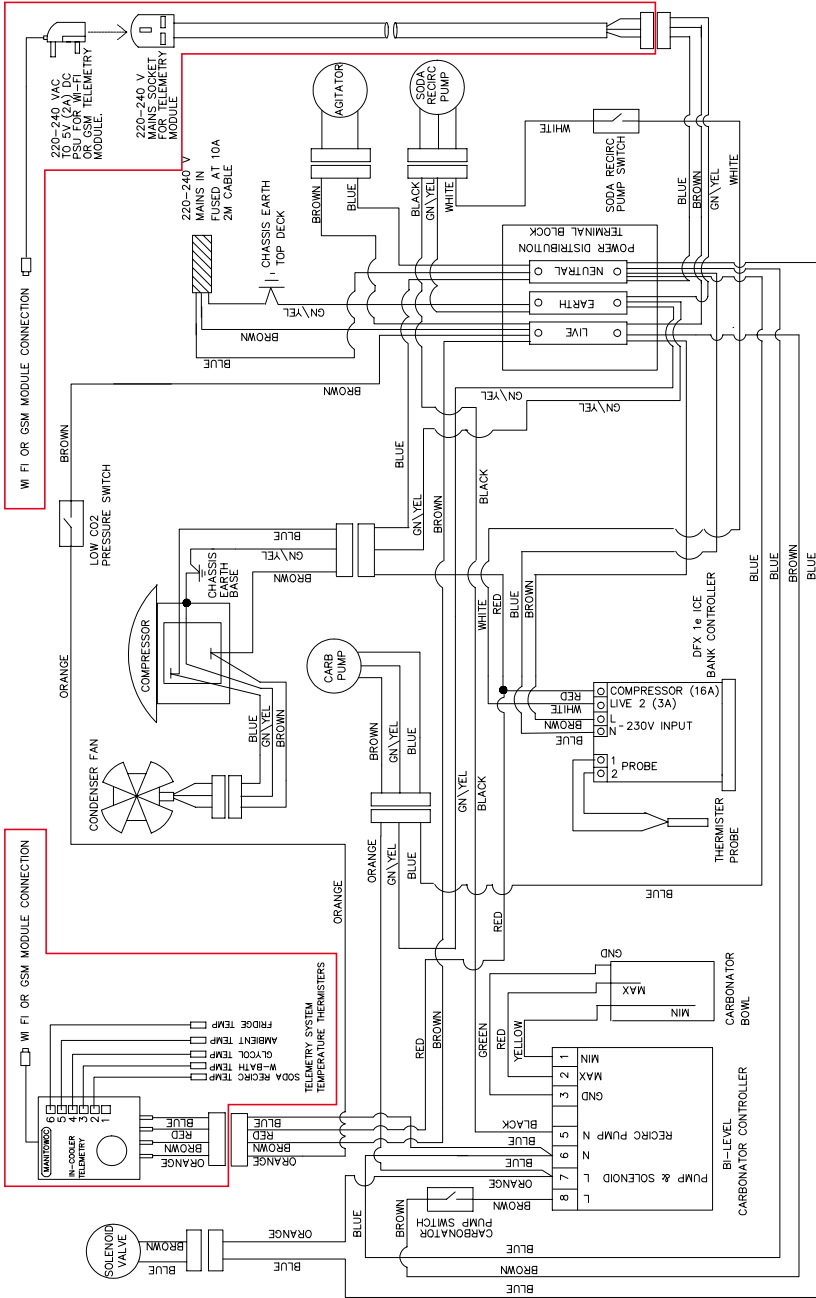


01-3001-xx Hyper Warwick Water Cooled



# 11-1000-xx Icecore 10 Integral (Cold Carbonated) Wiring Schematic

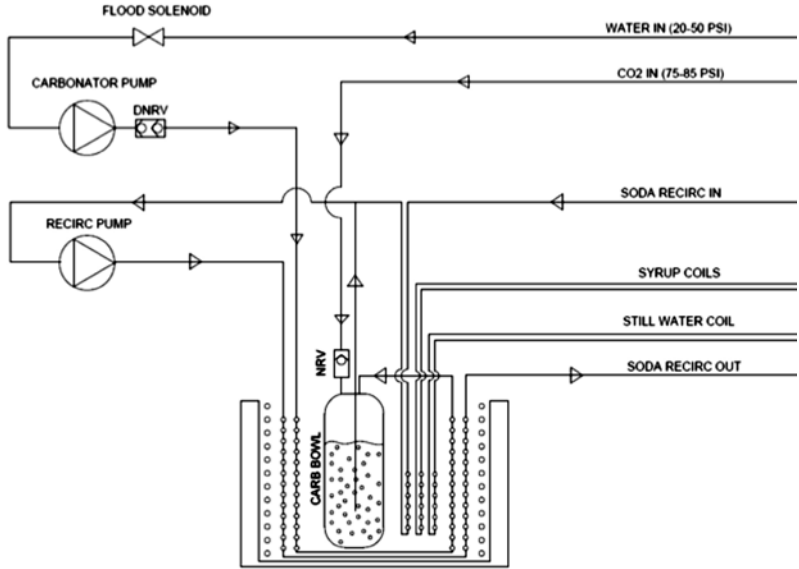
Note: Highlighted items installed on telemetry enabled units only



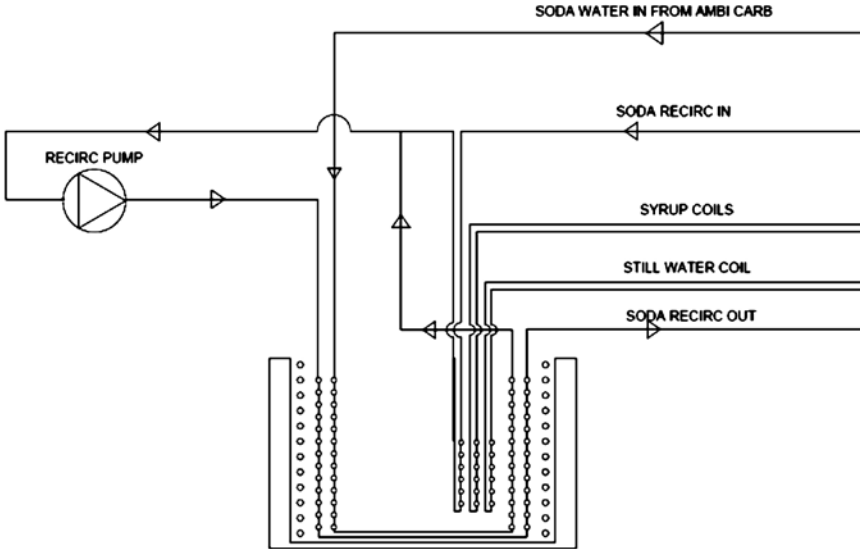
DECAL PART No - PI 015516



**Iceore 10 Cold Carb Schematic Layout:**

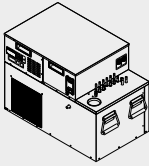


**Hyper Warwick Schematic Layout:**



## Section 7 – Technical Specification

### Specifications

01-3000-XX / 01-3001-XX		HYPER WARWICK INTEGRAL (01-3000-01) AMBIENT CARB	HYPER WARWICK WATER-COOLED (01-3001-01) AMBIENT CARB
Physical Data			
	Height	445 mm	445 mm
	Width	762mm (inc. handles)	762mm (inc. handles)
	Depth	440 mm	440 mm
	Operating Weight	77.5 kgs	77.5 kgs
	Max Noise dB(A)	70 dBA	70 dBA
	Climatic Class	3 kgs	3 kgs
Electrical			
	Mains Voltage	220-240 VAC, 50 Hz	220-240 VAC, 50 Hz
	Run Current	5.1 Amps	5.2 Amps
	Fuse Rating	10 Amps	10 Amps
Refrigeration			
	Compressor Size	12cc	12cc
	Duty @ -10°C Evaporation	846 Watts	846 Watts
	Refrigerant	R290 (GWP 3 CO2e 0.42Kg)	R290 (GWP 3 CO2e 0.42Kg)
	Charge	140 grams	140 grams
Controls			
	Ice Bank Control	DFX 1e Electric Control	DFX 1e Electric Control
	Panel Switches	1 slide switch for soda pump	1 slide switch for soda pump
System protection			
	Compressor	Klixon	Klixon
	Carbonator Pump	Thermal Fuse	Thermal Fuse
	Recirc Pump	Thermal Fuse	Thermal Fuse
Coils			
	Syrup coils	5 x 1.5m 5/16" OD, 316 Stainless steel	
	Soda coil	11m 3/8" OD, 316 Stainless steel	
	Pre-chill coil	8m 3/8" OD, 316 Stainless steel	
	Re-chill coil	4m 3/8" OD, 316 Stainless steel	
	Still water coil	4.7m 3/8" OD, 316 Stainless steel	

## Specifications

11-1000-xx / 11-1001-xx

ICECORE 10  
COLD CARB (11-1000-xx)  
INTEGRALICECORE 10  
COLD CARB (11-1001-xx)  
WATER COOLED

Physical Data			
	Height	535 mm	535 mm
	Width	762mm (inc. handles)	762mm (inc. handles)
	Depth	440 mm	440 mm
	Operating Weight	87 kgs	87 kgs
	Max Noise dB(A)	70 dBA	70 dBA
	Climatic Class	3	3
Electrical			
	Mains Voltage	220-240 VAC, 50 Hz	220-240 VAC, 50 Hz
	Run Current	5.5 Amps	7.25 Amps
	Fuse Rating	10 Amps	10 Amps
Refrigeration			
	Compressor Size	12cc	12cc
	Duty @ 24°C Ambient	720 Watts	720 Watts
	Refrigerant	R290 (GWP 3 CO2e 0.42Kg)	R290 (GWP 3 CO2e 0.42Kg)
	Charge	140 grams	100 grams
Controls			
	Ice Bank Control	DFX 1e Electric Control	DFX 1e Electric Control
	Panel Switches	1 slide switch for soda pump 1 slide switch for carb pump	1 slide switch for soda pump 1 slide switch for carb pump
System protection			
	Compressor	Klixon	Klixon
	Carbonator Pump	Thermal Fuse	Thermal Fuse
	Recirc Pump	Thermal Fuse	Thermal Fuse
Coils			
	Syrup coils	6 x 1.2m 5/16" OD, 316 Stainless steel	
	Soda coil	11m 3/8" OD, 316 Stainless steel	
	Pre-chill coil	8m 3/8" OD, 316 Stainless steel	
	Re-chill coil	4m 3/8" OD, 316 Stainless steel	
	Still water coil	4.2m 3/8" OD, 316 Stainless steel	

**Climate class ISO 23953-2:2005(E)**

TEST ROOM CLIMATE CLASS	DRY BULB TEMPERATURE °C	RELATIVE HUMIDITY %	DEW POINT °C	WATER VAPOUR MASS IN DRY AIR g/kg
0	20	50	9.3	7.3
1	18	80	12.6	9.1
2	22	65	15.2	10.8
3	25	60	16.7	12
4	30	55	20	14.8
5	27	70	21.1	15.8
6	40	40	23.9	18.8
7	35	75	30	27.3
8	23.9	55	14.3	10.2

NOTE The water vapour mass in dry air is one of the main points influencing the performance and the energy consumption of the cabinets.







## Section 8 – Declaration of conformity



EC Declaration of Conformity In accordance with the EC Guidelines

- Regulation (EC) No 765/2008 + Decision No 768/2008/EC + Regulation (EC) No 1221/2009 – New Legislative Framework Directives
- 2001/95/EC – General Product Safety Directive
- 2006/42/EC - Machinery Directive
- 2014/68/EU – Pressure Equipment Directive
- 2014/30/EU - EMC Directive
- 2011/65/EU - RoHS Directive
- 2002/96/EC – WEEE Directive
- 1935/2004/EC - Food Safety Regulation
- 10/2011/EU - Plastic Materials in Contact with Food Regulation
- 2023/2006/EC - Good Manufacturing Practice for Articles in Contact with Food Regulation
- 1907/2006/EC – REACH Regulation
- 517/2014/EU – F GAS Regulation
- 1005/2009/ EC – Ozone depleting substances Regulation

Marking of the equipment:

- **01-3000-xx**      **Hyper Warwick R290 INT**
- **01-3001-xx**      **Hyper Warwick R290 WC**
- **11-1000-xx**      **Icecore 10 Cold Carb R290 INT**
- **11-1001-xx**      **Icecore 10 Cold Carb R290 WC**

The above named appliances have been developed, built and manufactured in agreement with above listed EC Guidelines in sole responsibility of the company MANITOWOC BEVERAGE SYSTEMS LTD

The following coordinated standards have been applied:

- EN 378-1:2008 + A2:2012
- EN 378-2:2008 + A1:2009
- EN1186-1:2002
- EN1186-3:2002
- EN1186-9:2002
- EN 55014-1:2006 + A1:2009 + A2:2011
- EN 1672-2-2005+A1-2009
- EN 55014-2:1997 + A1:2001 + A2:2008
- EN 60335-1:2012
- EN 60335-2-89:2010
- EN 61000-3-2:2014
- EN 61000-3-3: 2013
- EN 62233:2008
- Italian Ministerial Decree 21.3.1973 + further ammendments
- BFR XXI commodities based on Natural and Synthetic rubber
- BS6920-1:2014

A complete technical documentation is available. A quality safety system according to ISO 9001 is installed in the business.

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