

cCool 7, 9, 11, 15, 37 Cooler Carbonators



USER, INSTALLATION & MAINTENANCE MANUAL

PRODUCT CODE

CCOOL 7-02-01XX-XX
CCOOL 9-02-02 XX-XX
CCOOL 11-02-03 XX-XX
CCOOL 15-02-04 XX-XX
CCOOL 37-02-05 XX-XX

MANUAL PART No. P156910

MANUAL REVISION: Rev 1

DATE: 24/10/11

EC Declaration of Conformity

EC Guideline Electro Magnetic Compatibility 2004/108/EC
Machinery Directive 2006/42/EC has been fulfilled.

The safety targets regarding the Low Voltage Directive 2006/95/EC according to the following co-ordinated standards have been applied:

BSEN 60335-1:2002 +A14:2010 – Refrigeration, Household Safety
BSEN 60335-2-89:2003 – Refrigeration, Motors and Pumps

Household and Similar Electrical Appliances – Safety (particular requirements for commercial refrigerating appliances with an incorporated or remote refrigerant condensing unit or compressor)

BSEN61000-6-3:2001 Electromagnetic emissions compatibility (EMC) - Generic standards.

BSEN61000-6-1:2001 Radiated and Immunity compatibility (EMC) – Generic standards.



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continuing product improvements may necessitate change of specification without notice.

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Dear Customer!

Please read these operating instructions carefully!
Examine the equipment immediately after supply for transport damage. Contact the manufacturer and/or carrier if necessary. Damage, which arises by inappropriate treatment or operation, is not subject to guarantee.
Manitowoc constantly develop the products further according to their policies. Manitowoc reserve therefore the right, to modify and to improve the products described in this documentation without previous announcement.

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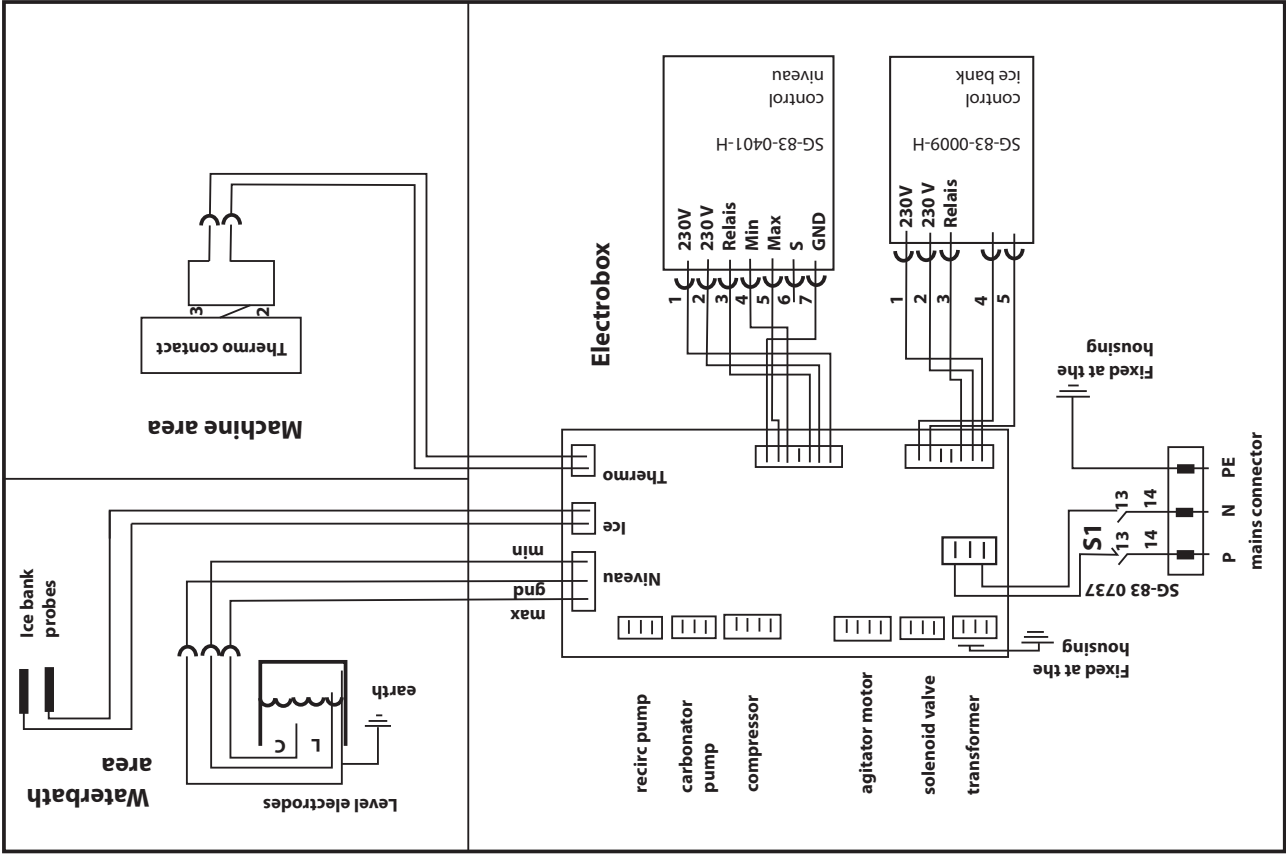
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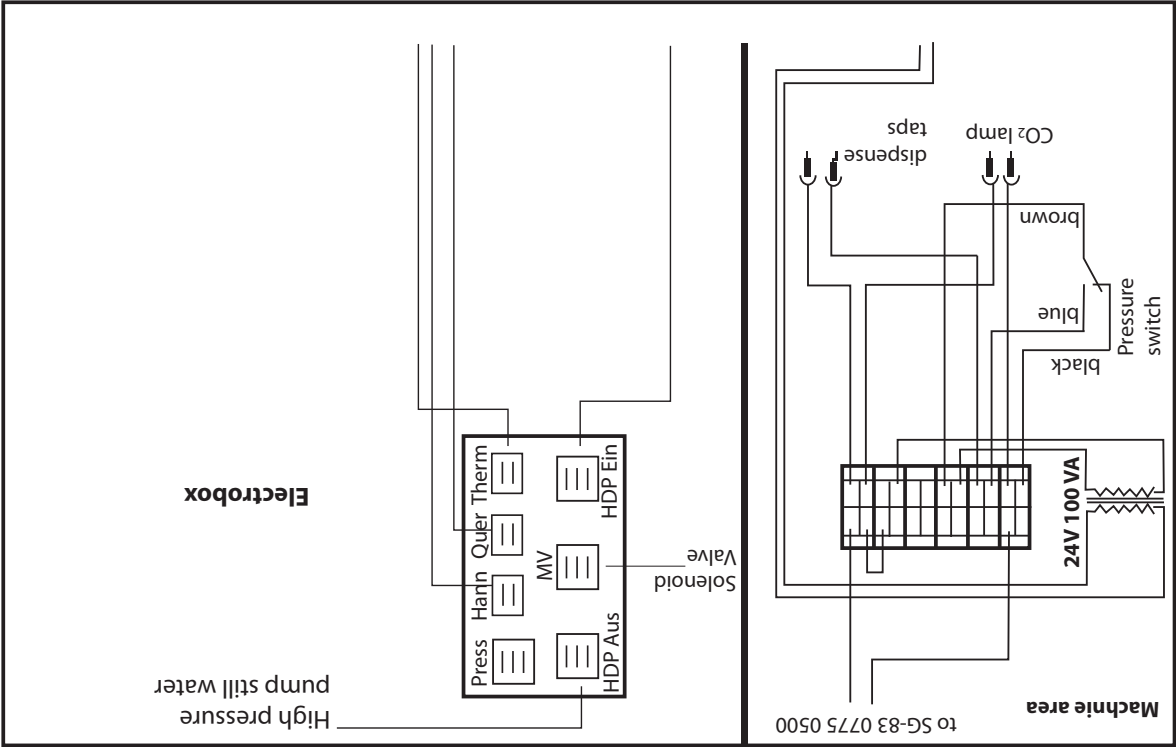
cCool is a brand of Manitowoc.

All Other brand names specified in this documentation refer to the appropriate companies or their products. Manitowoc are not the owner of those brand names.

Please read the operating instructions carefully before operating this unit

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Warning

SAFETY INSTRUCTIONS

THE UNITS COMPLY WITH THE CURRENT STANDARDS AND REGULATIONS OF THE EU AND REPRESENT THE CURRENT STANDARD OF TECHNOLOGY.

SAFETY DURING INSTALLATION, OPERATION AND DECOMMISSIONING CAN ONLY BE ENSURED BY FOLLOWING THE INSTRUCTIONS IN THIS USER MANUAL.

ANY WORK OR MAINTENANCE MUST BE CONDUCTED IN ACCORDANCE WITH THE FOLLOWING SAFETY INSTRUCTIONS.

TECHNICAL CHANGES TO SAFETY OR ELECTRICAL DEVICES OR THE MAINS LEAD ARE STRICTLY FORBIDDEN. INSTALLATION, MAINTENANCE AND REPAIR ON THIS EQUIPMENT MUST BE CARRIED OUT BY SUITABLY TRAINED PERSONNEL.

ONLY USE GENUINE SPARE PARTS.

NON-COMPLIANCE WITH THESE INSTRUCTIONS MAY RESULT IN SERIOUS INJURY OR DEATH.

MANITOWOC AND ITS LEGAL ENTITIES ENSURE NO LIABILITY FOR DAMAGE CAUSED BY THE USE OF NON GENUINE SPARE PARTS OR BY IMPROPER TREATMENT OF THE EQUIPMENT.

Warning

WAYS THE EQUIPMENT SHOULD BE USED

THE UNITS ARE INTENDED FOR USE AS A COOLING AND RECIRCULATION UNIT FOR SYRUPS AND CARBONATED WATER TO PROVIDE THE CORRECT CONDITIONING FOR SERVING DRAUGHT SOFT DRINKS AND AS SUCH SHOULD ONLY BE USED FOR THAT PURPOSE. THERE ARE NO OTHER RECOMMENDED USES FOR THIS EQUIPMENT.

Warning

SYSTEM PRESSURE

THE CARBONATOR IS AN INTEGRAL PART OF THE UNIT AND IT SHOULD BE NOTED THAT THE CARBONATION PROCESS INVOLVES THE USE OF HIGH PRESSURES AND POTENTIALLY NOXIOUS GAS AND AS SUCH DUE CARE SHOULD BE TAKEN WHEN HANDLING, INSTALLING AND MAINTAINING THE EQUIPMENT WITH PARTICULAR REGARD TO THESE HAZARDS.

**Warning**

CARBON DIOXIDE
CARBON DIOXIDE LEAKS ARE POTENTIALLY FATAL IF CONCENTRATIONS RISE TO DANGEROUS LEVELS. IN VIEW OF THIS, THE INSTALLATION SHOULD BE REGULARLY CHECKED FOR INTEGRITY AND THE GENERAL AREA OF INSTALLATION PROPERLY VENTILATED AT ALL TIMES.

**Warning**

WARNING: THIS EQUIPMENT MUST BE EARTHED
THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

Green and YellowEarth
Blue.....Neutral
Brown.....Live

As the Colours of the Wires in the Mains Lead of this Appliance may not correspond with the Coloured Markings identifying the Terminals in the Plug to be fitted, proceed as follows:

- a)**

The wire which is coloured Green and Yellow MUST be connected to the terminal in the Plug that is marked with the letter, E™ or by the earth symbol coloured Green or Green and Yellow.
- b)**

The wire which is coloured Blue MUST be connected to the Terminal in the Plug that is marked with the letter, N™ or coloured Black.
- c)**

The wire which is coloured Brown MUST be connected to the Terminal in the Plug that is marked with the letter, L™ or coloured Red.
- All mains voltage components are hazardous. Any electrical work must be carried out by a qualified competent person.

**Warning**

POWER ISOLATION METHOD
ALL UNITS ARE FITTED WITH A SINGLE PHASE 3 PIN 13 AMP PLUG. THE CCOOL 7, 9 AND 11 ARE FITTED WITH A 10 AMP FUSE, THE CCOOL 15 AND 37 WITH A 13 AMP FUSE. ALTERNATIVELY, A STANDARD EURO PLUG TO IEC83:1975.

BEFORE COMMENCING ANY WORK/MAINTENANCE -

A)

SWITCH OFF THE SOCKET THAT THE PLUG IS INSTALLED IN TO.

B)

REMOVE THE PLUG FROM THE SOCKET.

C)

A HEAT DUMP IS INCLUDED WITH ALL WATER COOLED UNITS. THE CONNECTING PLUG SHOULD BE REMOVED FROM THE GLYCOL MODULE.

**Warning**

CARBON DIOXIDE

1. ALWAYS

Connect the CO₂ or gas cylinder to a REDUCING VALVE.

2. NEVER

Try to connect cylinder directly to product container.

3. NEVER

Interconnect soft drinks, CO₂ 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.

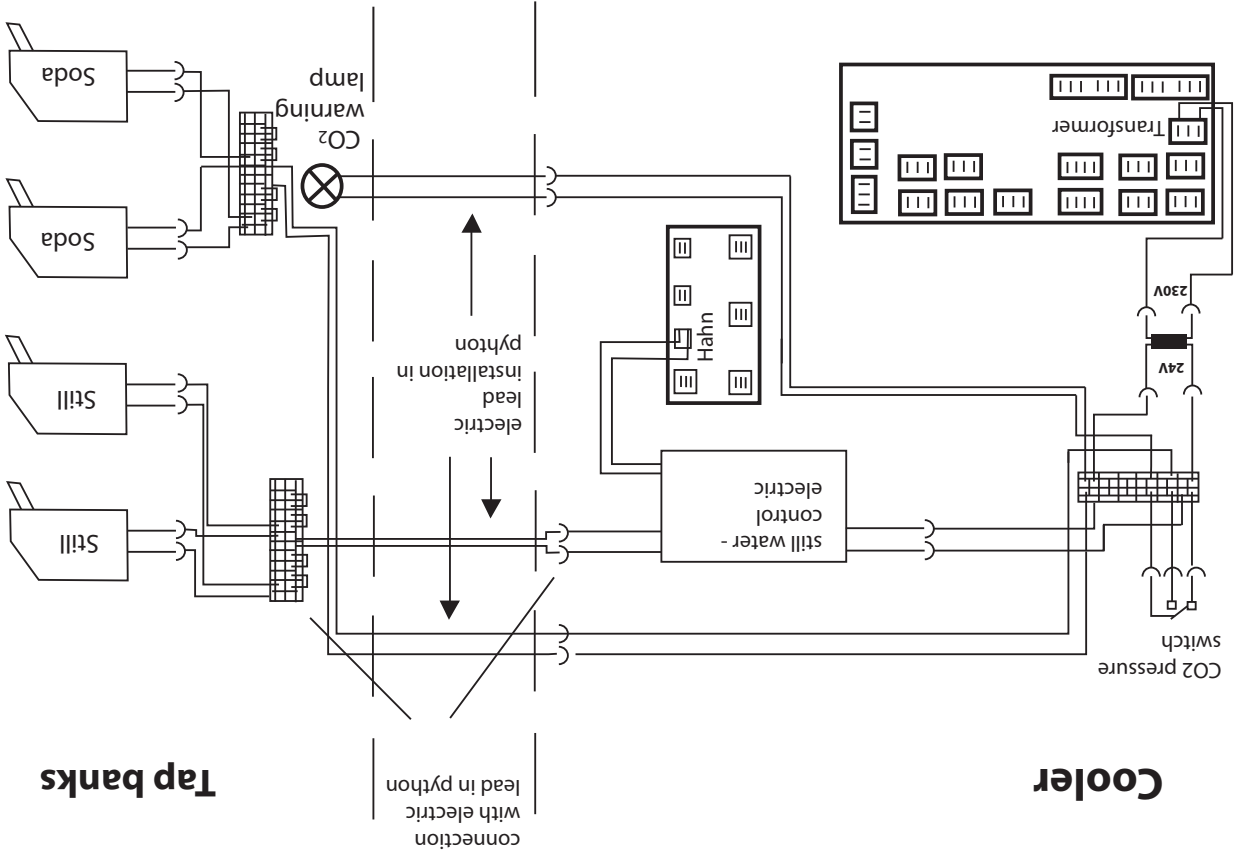
7. NEVER

Try to unscrew fittings from containers.

8. ALWAYS

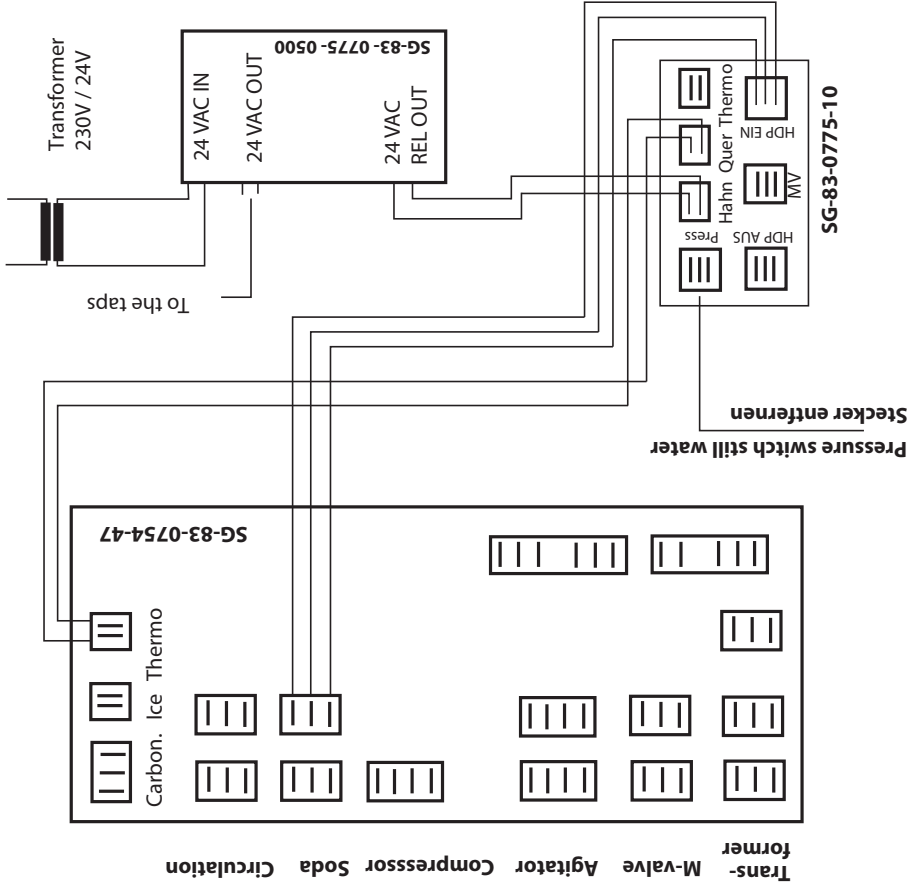
Ventilate area after CO₂ leakage.

This information should be displayed in a position adjacent to the CO₂ supply cylinder at all times.



7. ELECTRIC CIRCUITS

(connection between adapter board SG-83-0754-47, still water board SG-83-0775-10 and still water board SG-83-0775-0500)



Connection of the still water boards when using the "CO₂ empty" warning device

Warning
ROTATING PARTS
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.

Warning
HEAT
THE COMPRESSOR, CONDENSER, HIGH PRESSURE REFRIGERATION TUBES AND MOTORS WILL BECOME HOT DURING OPERATION. PLEASE AVOID ANY CONTACT TO THESE PARTS DURING AND AFTER OPERATION UNTIL THEY HAVE COOLED DOWN.

Warning
SHARP EDGES
MANITOWOC TRY TO AVOID ANY SHARP EDGES. BASED ON THE METHODS OF PRODUCTION AND THE MATERIAL USED THIS CAN NOT ALWAYS BE GUARANTEED. THEREFORE HANDLE THE UNIT WITH CARE TO AVOID POSSIBLE CUTS.

Warning
DANGER BY LOW TEMPERATURES
THE EVAPORATION TEMPERATURE IN THE HERMETIC CIRCUIT CAN ACHIEVE EASILY -10°C. WITHOUT TAKING PREVENTIVE STEPS THIS CAN BE A POTENTIAL SOURCE OF ACCIDENTS WHILST CLEANING OR MAINTENANCE OF PARTS AT SUCH TEMPERATURES.

Warning
THIS EQUIPMENT CAN CONTRIBUTE TO AN INCREASE IN THE AMBIENT TEMPERATURE.

IMPORTANT
PUMP PRESSURE TO THE CARBONATOR BOWL CAN REACH 13.6 BAR (200PSI).

Warning
THIS APPLIANCE IS NOT INTENDED FOR USE BY PERSONS (INCLUDING CHILDREN) WITH REDUCED PHYSICAL, SENSORY OR MENTAL CAPABILITIES, OR LACK OF EXPERIENCE AND KNOWLEDGE, UNLESS THEY HAVE BEEN GIVEN SUPERVISION OR INSTRUCTION CONCERNING USE OF THE APPLIANCE BY A PERSON RESPONSIBLE FOR THEIR SAFETY. CHILDREN SHOULD BE SUPERVISED TO ENSURE THAT THEY DO NOT PLAY WITH THE APPLIANCE.

CORRECT SAFE HANDLING

cCool 7,9, 11 & 15

The weight of these units is such that other than moving it across flat ground (which is facilitated by integral castors / wheels option) or lifting to a relatively safe height of 12" utilising two people, a mechanical lifting device should be used.

cCool 37

The weights of this unit is such that other than moving it across flat ground (which is facilitated by integral castors / wheels) a mechanical lifting device should be used.

UNIT WEIGHTS

cCool 7	Integral	48 kg (Dry)
cCool 7	Water Cooled	46 kg (Dry)
cCool 9	Integral	75 kg (Dry)
cCool 9	Water Cooled	73 kg (Dry)
cCool 11	Integral	79 kg (Dry)
cCool 11	Water Cooled	77 kg (Dry)
cCool 15	Integral	92 kg (Dry)
cCool 15	Water Cooled	90 kg (Dry)
cCool 37	Integral	145 kg (Dry)
cCool 37	Water cooled	145 kg (Dry)
GLYCOL MODULE		13 kg (Dry)
HEAT DUMP		9 kg (Dry)



Warning

ONLY LIFT THIS EQUIPMENT IN IT'S DRY STATE

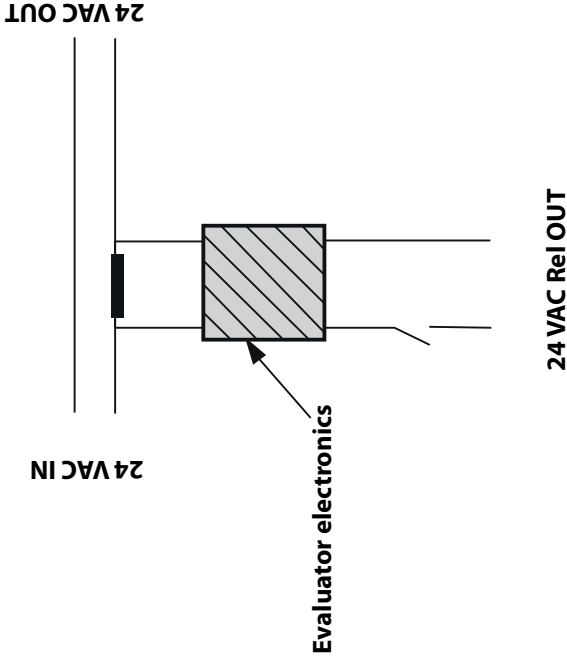
6. OPERATING PRINCIPLE (SG-83-0775-0500)

Warning

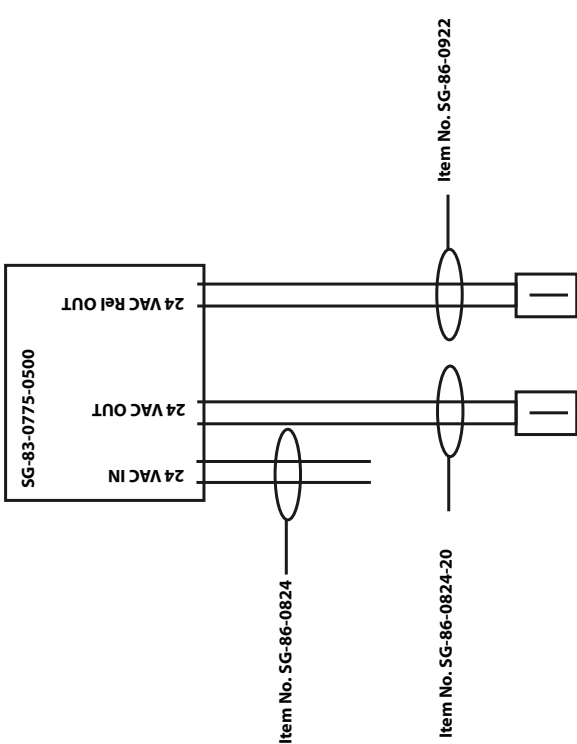
ADJUSTMENT / MAINTENANCE REQUIREMENTS

IT IS NOT RECOMMENDED THAT THE END USER MAKES ANY ADJUSTMENTS OR CARRIES OUT ANY MAINTENANCE OTHER THAN: CHECK THE MAINS LEAD AND PLUG VISUALLY FOR CONDITION.
CHECK THE UNIT AND ITS PIPEWORK FOR EVIDENCE OF LEAKS VISUALLY, INCLUDING THE HEAT DUMP.
CHECK THAT THE CONDENSER GRILL AND VENTS ARE NOT CHOKED OR OBSCURED, INCLUDING THE HEAT DUMP.
IF THERE IS ANY SPILLAGE OF LIQUID ONTO THE UNIT, ISOLATE THE POWER SUPPLY BEFORE CLEANING UP. MAKE ANY NECESSARY ADJUSTMENTS AS RECOMMENDED BY THE SYRUP SUPPLIER.

NOTE: THERE ARE NO USER SERVICEABLE PARTS



5. DRAWING WITH SPARE PARTS LIST



Spare parts list

No.	Designation	Item No.
1	Still water board for electrical actuation	SG-83 0775 0500
2	Supply voltage lead for STWE	SG-86-0824
3	Supply voltage lead for taps	SG-86-0824-20
4	Connection lead to still water control (controlled by reduction in pressure (SG-83-0775-10)	SG-86-0922

METHODS OF CLEANING

NOTE:

Persons performing Cleansing/Sanitizing operations MUST be competent and fully trained in safe methods of use of Cleansing/Sanitizing Agents and their applications.

Personal protective equipment should always be used.

Do not use a water or steam hose to clean the unit whilst still installed.

It is important that all the vents and grills are kept clear (including condenser grills where applicable) otherwise cooling performance decreases and the system overheats.

RECOMMENDED LINE CLEANING METHOD

IMPORTANT: Persons performing Cleansing /Sanitizing operations MUST be competent and fully trained in safe methods of use of Cleansing / Sanitizing Agents and their applications.

IMPORTANT: Personal Protective Equipment Should Always Be Used.

IMPORTANT: Do Not Use A Water Or Steam Hose To Clean The Unit Whilst Still Installed.

Clean and sanitize the cooling coils and product lines using a proprietary cleanser/sanitizer of the Alkaline Hypochlorite type, in accordance with the manufacturer’s recommendations. MBS recommends the use of “Pipeline” beer line 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.**

See above for detailed cleaning instructions

Cleaning instructions for “Pipeline” beer line cleaner:

1. Draw clean water through the system until it all traces of product have disappeared.
2. Mix the beer 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 keg in the storage/cellar area and pull Product through to the tap.

ANNUALLY:

By a competent service / maintenance engineer. Isolate unit from mains electricity supply. Remove any extraneous debris from the unit or its casing preferably using a vacuum cleaner or brush, including the heat dump. Check unit for electrical safety.

PREVENTION OF FREEZING / ACTION REQUIRED
IF FREEZING OCCURS

It is recommended that the unit is sited In such a way as not to expose it to temperatures likely to cause freezing i.e. below 0°C. If the unit is to be sited in an unheated area insulate all pipework and provide some form of emergency heating which should be controlled by a frost thermostat sited in close proximity to the unit.

It should be noted that heat dumps may require to be sited where freezing may occur which is why a 30% glycol \ water mixture is used as a coolant. Failure to adhere to this recommendation could result in damaging consequences. The concentration of the coolant should not be compromised, and in the event of spillage, the lost volume should be replenished with the correct mixture.

Note: A 30% glycol mixture is suitable for operation in temperatures as low as 12°C.
For operation in temperatures as low as -25°C, a 50% glycol mixture is required.

In the event of freezing up occurring the following action is recommended:

- 1. Isolate the unit from mains electricity supply.
- 2. Disconnect the heat dump power cable.
- 3. Isolate product supply from unit.
- 4. Vent pressure lines by opening dispense tap.
- 5. Isolate from heat dump (coolant lines) using service valve.

6. Apply gentle warmth to the general area of the unit and its pipework.

- 7. Check for obvious leaks.
- 8. Turn water supply on whilst continually watching for leaks.
- 9. Reconnect product supply.
- 10. Reconnect mains electricity supply and heat dump supply.
- 11. Observe 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.

4. FAULTS AND THEIR CORRECTION

Type of fault	Cause	correction
Carbonator pump motor fails to start when still water is drawn .	Electronics (STWE) fail to energise the motor	Check whether all electric leads from the STWE are properly connected.
		Check whether the lead for the carbonator motor is connected.
		Replace the electronics.

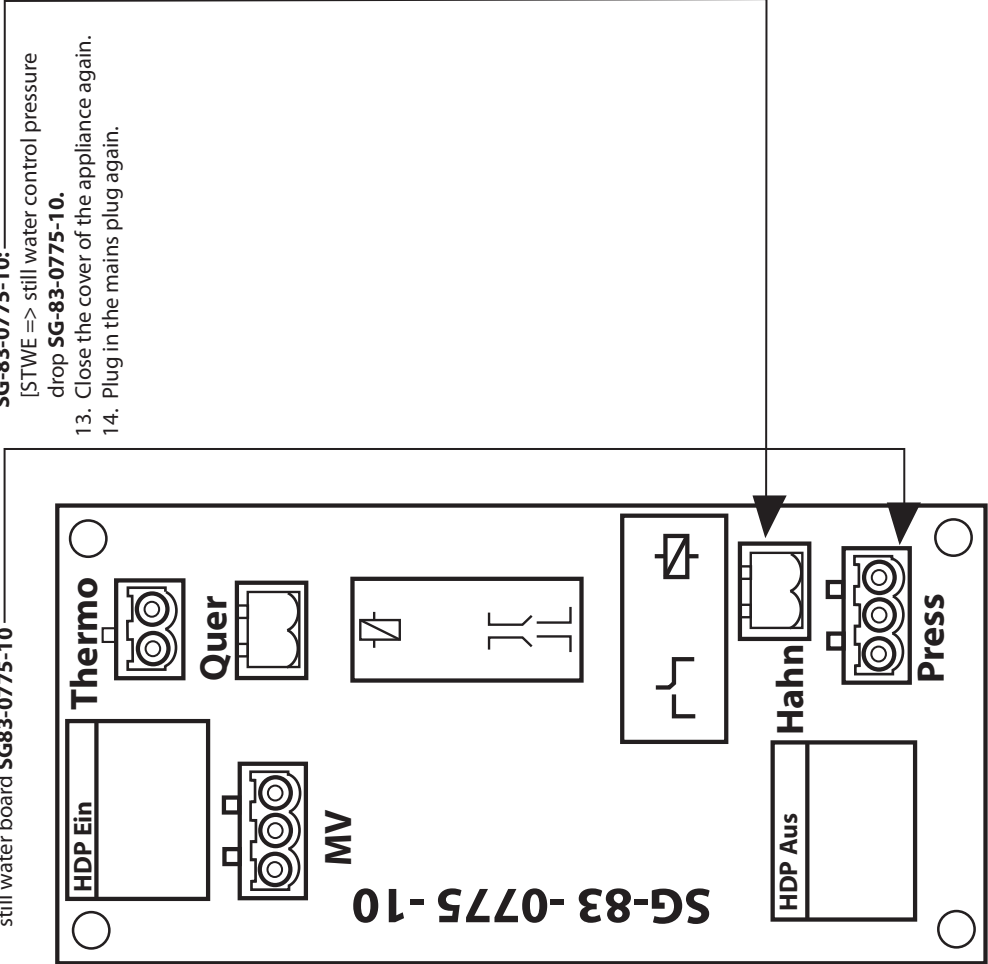
3. COMMISSIONING (RETROFITTING)

INPUTS:

Installation of the electronics must be undertaken by a properly qualified service technician.

- 8. Unplug the mains plug of the appliance in which the STWE is to be installed.
- 9. Open the cover of the cooler.
- 10. Remove the plug-in connection for the still water low-pressure, pressure switch from the still water board **SG83-0775-10**

- 11. Secure the still water board **SG-83-0775-0500** (STWE) in the appliance by means of screws.
- 12. Make the necessary electrical connections (**see item 7 of these instructions**):
Supply voltage lead for STWE:
[STWE => 24VAC]
Supply voltage lead for taps:
[STWE => connection lead for the taps in the python]
connection lead to still water control (controlled by reduction in pressure)
SG-83-0775-10:
[STWE => still water control pressure drop **SG-83-0775-10**.
13. Close the cover of the appliance again.
14. Plug in the mains plug again.



MAX. / MIN. AMBIENT TEMPERATURES

COOLER UNIT:

Minimum +5°C Maximum +40°C

HEAT DUMP UNIT:

Minimum -25°C Maximum +40°C

(with a 50% glycol mixture)

MAX. / MIN. WATER PRESSURES

Minimum 20 PSI (1.4 BAR)

Maximum 60 PSI (4.1 BAR)

MAX. / MIN. CO2 PRESSURES

Minimum 75 PSI (5.1 BAR)

Maximum 90 PSI (6.2 BAR)

DISMANTLING / DECOMMISSIONING PROCEDURE

1. Isolate the unit from mains electricity supply and the mains water supply.
2. Drain off all post mix products including the syrup and carbonated water (clean syrup lines as recommended by the syrup supplier).
3. Turn the CO2 off and disconnect all lines associated with the regulator, also vent pressure from lines by purging the product valves as required.
4. Disconnect all post mix pipework and remove dispense head equipment, including the python, and remove as recommended by the equipment owner.
5. Siphon or pump out water from the waterbath to a suitable drainage point.
6. Allow ice bank to melt (the careful use of hot water may be used to accelerate this process). Remove any remaining water from melting the ice.
7. Drain all the glycol \ water from water cooled units into a suitable container and dispose of it in accordance with the instructions given by the dispense equipment owner.

IMPORTANT:
FAILURE TO REMOVE ALL ICE / WATER COULD
RESULT IN SUBSTANTIAL AMOUNTS OF
WATER BEING RELEASED FROM THE UNIT
WHICH MAY BE DETRIMENTAL TO THE UNIT
AND/OR ITS SURROUNDINGS AND INCREASE
THE MAXIMUM WEIGHT OF THE UNIT.

Order Numbers

Still water boost facility (electric)	SG-83-0775-0500
Leads:	
Supply voltage for STWE	SG-86-0824
Supply voltage for valves	SG-86-0824-20
Connection lead to the still water control	SG-86-0922
	SG-83-0775-10

**1. FUNCTION OF THE STILL WATER
BOOST FACILITY**

The still water board SG-83-0775-10 already used by us has an added function. This is to detect the actuation of an external valve. If this is detected, a 24V AC current is applied to the still water board SG-83-0775-10 already used, which in turn switches on the still water pump and keeps it in operation until the valve is no longer being actuated.

The board with its own supply current of 24V AC also supplies external taps. Supply to the taps is assured via the leads laid in the insulated pipes (the "python") where for all still water valves to be controlled two leads are needed altogether. The cross-section of the lead laid in the python must be borne in mind here. If one of the external valves is operated, a current will flow via the board. This is measured, and as soon as it exceeds a value of 500 mA, an additional 24V AC will be switched to the still water board SG-83-0775-10. This voltage actuates the still water board SG-83-0775-10. The board is an additional module and is installed in the cooler.

The board is installed in a casing. It is possible to secure the casing by means of a screw.

 **Warning**

WHEN ASSEMBLING AND INSTALLING THE STILL WATER CONTROL, PLEASE OBSERVE THE SAFETY INSTRUCTIONS INCLUDED IN THE OPERATING INSTRUCTIONS FOR THE APPLIANCE

2. ELECTRICAL CONNECTIONS

INPUTS:

- 2 x contacts for input voltage 24 VAC (+10%, -30%).

OUTPUTS:

- 2 x contacts for supplying the external valves with 24 VAC max. 8 amps.
- 2 x contacts for supplying the relay (Finder 40.31) on the board SG-83-0755-10 (still water board).

SWITCHING THRESHOLDS:

- ON:** 500 mA +/- 25%
- OFF:** 400 mA +/- 25%

The still water boost facility for electrical actuation (STWE) is installed in the cooler. The installation instructions for the respective cooler must be observed.

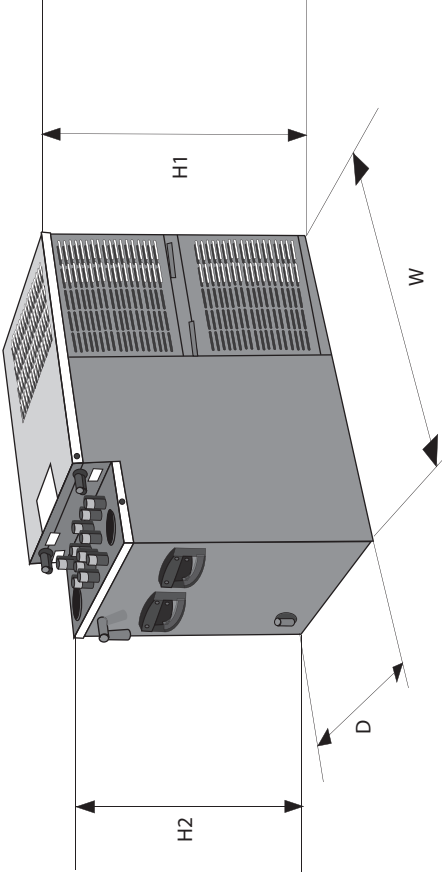
The maximum distance between the valve and **STWE:** a cable cross-section area of 0.75mm² : 15 metres at 24V AC.
with a cable cross-section area of 1.5mm² : 35 metres at 24V AC.

These distances are based on simultaneous operation of four valves, each taking 1.5 amps.

Technical Data

	cCool 7	cCool 9	cCool 11	cCool 15	cCool 37
Electr. Power	230V / 50Hz 230V / 60Hz	230V / 50Hz 230V / 60Hz	230V / 50Hz 230V / 60Hz	230V / 60Hz 230V / 50Hz	230V / 50Hz 230V / 60Hz
Input Power	1000W	1000W	1200W	1300W	1650W
Compressor	SC12 G 12cm ³ (3/8HP) Danfoss	SC12 G 12cm ³ (3/8HP) Danfoss	SC18 G 18cm ³ (2/3HP) Danfoss	SC 21 G 21cm ³ (4/5HP) Danfoss	CAJ4511 33cm ³ (1 1/3HP) L'Unite
Cooling capacity(1)	464W	464W	684W	793W	1252W
Refrigerant	R134a	R134a	R134a	R134a	R134a
Integral	200g	375g	375g	425g	1100g
W/cooled	N/A	275g	275g	275g	800g
Water Bath	17,5 litres	38 litres	51 litres	65 litres	114 litres
Ice-Bank Size	7 kg	13,2 kg	20 kg	25 kg	50 kg
Height H1	610mm	560mm	590mm	630mm	830mm
Height H2	400mm	480mm	510mm	550mm	670mm
Width W	525mm	700mm	750mm	865mm	1100mm
Depth D	355mm	430mm	460mm	535mm	625mm
Weight (dry)	48 kg	75 kg	79 kg	92 kg	145 kg
Heat Dump	9 kg (dry)				
Weight	13 kg (dry)				
Glycol Module	13 kg (dry)				
Weight					

(1) at evaporation temp. t 0 =-10°C , condensing temp. tc = 55°C and ambient temp. ta = 32°C



CONTENTS STILL WATER BOOST FACILITY

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INSTALLATION INSTRUCTIONS

cCOOL SODA CIRCUIT COOLER RANGE
INSTALLATION INSTRUCTIONS FOR
INTEGRAL & WATER COOLED UNITS

NOTE:

The unit should be installed and serviced by a suitably trained person.

NOTE:

Sealed plugs may be fitted to new units.

1. Unpack the unit from its transportation packing and visually check for any signs of damage.

2. Site the unit in a convenient location in the cellar or room on a level surface where it is to be located and make sure that a mains electricity supply is within 2 meters and in an area allowing free circulation of air. The unit should be fitted with a correctly fused and wired 13 amp plug fitted with the correct fuse as below or alternatively a standard Euro Plug to IEC83:1975.

Fuses for standard UK plug:

cCool 7 Integral & Water Cooled - 10 AMP FUSE
cCool 9 Integral & Water Cooled - 10 AMP FUSE
cCool 11 Integral & Water Cooled - 10 AMP FUSE
cCool 15 Integral & Water Cooled - 13 AMP FUSE
cCool 37 Integral & Water Cooled - 13 AMP FUSE

3. 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 INSTRUCTIONS on pages 14-23 in this manual before commissioning the complete system.

4. Connect the dispense head to the unit using suitable fittings and python, referring to the connection diagram on the lid of the cooler and those supplied with the dispense head.

5. Connect a mains water supply of 2.5 bar to 4 bar to the tube labelled 'WATER IN' (**do not turn on yet**).

6. Connect all products to the unit as labelled (do not connect to the syrup containers yet).

7. Connect CO₂ gas supply of 5 bar to 6.3 bar to the cooler using the tube labelled 'CO₂ IN' (**do not turn on yet**).

8. Fill the water bath with fresh clean COLD water until the overflow level is reached.

9. Connect the unit to the mains electricity supply (**do not turn on yet**).

10. Remove the top cover and turn on the CO₂ supply and vent the carbonator bowl using the relief valve located on the top of the bowl. Additionally, operate the dispense valve until the air in the python lines is purged.

11. Turn on the mains water supply.

12. Check for obvious leaks and rectify before proceeding any further.

13. Ensure that the soda recirculation pump and carbonator pump are switched off.

Note: If the unit is a version that only has a single power on switch, unplug the care pump and soda pump connections from the distribution board.



USER MANUAL INSTALLATION & SERVICE

Still water boost facility
(electrically activated)

STWE

14. Switch on the unit at the mains power supply and allow ice bank to build. Mains plug must be accessible.
15. If the unit is a water cooled version, ensure that the glycol lines prime correctly and that the glycol module is topped up to the correct level.
16. Switch/on reconnect the carbonator pump and allow the carb bowl to fill until the pump cuts out.
17. Prime the dispense head by operating the valves and ensure all pockets of CO₂ are removed from system.
18. Switch on/re-connect the soda pump.
19. Connect the syrup containers and operate dispense valves until syrup is dispensed.
20. Refit the top cover to the base unit.
21. The dispense head can now be brixed and the system will be ready to use.

HEAT DUMP AND GLYCOL MODULE INSTALLATION – WATER COOLED UNITS

HEAT DUMP - 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 non south facing) in the correct orientation out of direct sunlight.
3. Ensure there are no other heat sources, i.e. a condensing unit or another heat dump, in the immediate vicinity, where hot air may be re-circulating.
4. Use the recommended tubing (15mm O/D, 10mm I/D Special EVA) to connect the base unit to the heat dump. Do not use PVC braided tube, as this is not compatible with glycol and will degrade over a period of time.
5. Do not exceed the recommended distance and lift from the base unit to the heat dump of 9m lift, 40m run.
6. The heat dump must be connected using a minimum of 1.5mm two core cable. If a smaller cable is used, a voltage drop will occur which may cause the fan motor to run at a reduced speed.
7. If the unit is to be installed inside a building or room, ensure that 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 effect the system performance.
11. Ensure that the heat exchanger matrix of the heat dump is kept clean and free from obstructions. It is recommended that it should be cleaned with a soft brush at regular intervals.
12. To enable the heat dump to be mounted on a flat surface, a floor standing mounting kit is available as an option.
(Order part number 09-0203-01).

5. POWER SUPPLY

The still water board is operated with 230 volts mains supply. The mains power is supplied via the connection between the adapter board (connection "Temp") and the connection "Quer" on the still watercontrol.

THE THERMO-CONTACT MUST BE CONNECTED TO THE STILL WATER BOARD 56-83-0775-10.

The connection from the adapter board (connection "carbonator pump") and the still water control (connection "carbonator pump on") delivers the required voltage for supplying the carbonator bowl.

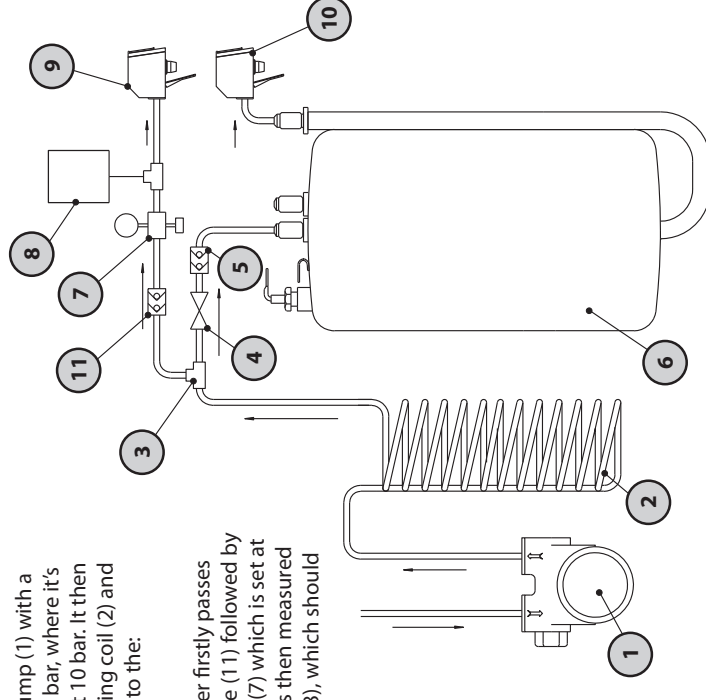
If the pressure switch (8) is requesting still water, (the still water valve is open and the pressure drops below 4 bar) then pump (1) will operate. If at the same time the carbonator level control calls for the carbonator bowl to be replenished, the solenoid valve (4) opens and water is diverted at the t-piece (3) to both the still water and the soda water side.

6. FLOW DIAGRAM

Mains water is entering pump (1) with a dynamic pressure of 2 to 2.5 bar, where it's pressure is boosted to about 10 bar. It then passes through the pre-chilling coil (2) and gets split at the t-piece (3) into the:

Still water side:

After the t-piece (3), the water firstly passes through the non-return valve (11) followed by the pressure reducing valve (7) which is set at 4.4 bar (dynamic). Pressure is then measured at the low-pressure switch (8), which should



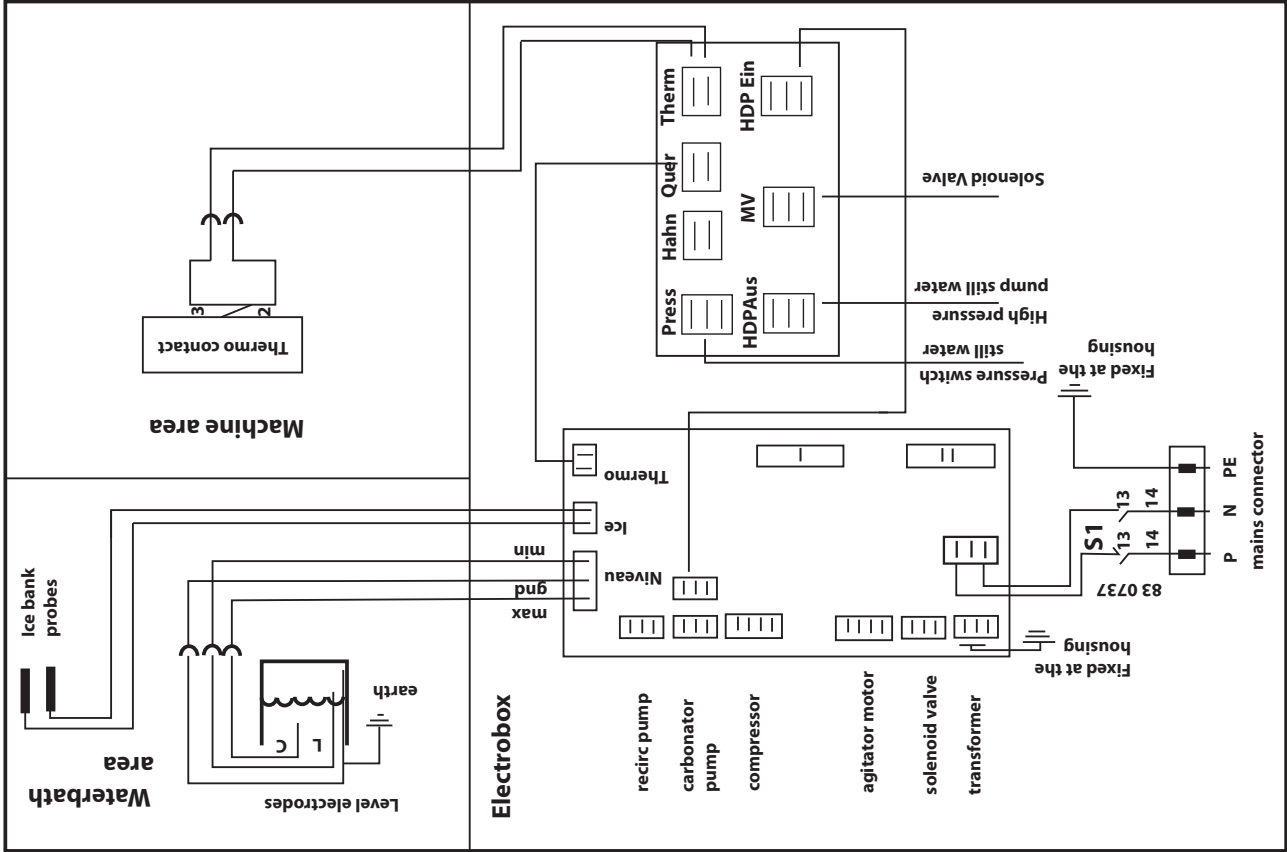
cut-in at a pressure of 4 bar (the pre-set cut-out point is 4.5 bar). Following this, still water flows to the post-mix valve (9).

Soda-water side:

After the t-piece (3), the water passes the solenoid valve (4), which is normally closed and should have an orifice of at least 2.5mm. It then flows through the double non-return valve (5) to the carbonator bowl (6), where the high pressure jet of water entering the carbonator bowl becomes saturated with CO₂. Following this, the soda water flows to the post-mix valve (10).

If the pressure switch (8) is requesting still water, (the still water valve is open and the pressure drops below 4 bar) then pump (1) will operate. If at the same time the carbonator level control calls for the carbonator bowl to be replenished, the solenoid valve (4) opens and water is diverted at the t-piece (3) to both the still water and the soda water side.

4. WIRING DIAGRAM



GLYCOL MODULE INSTALLATION INSTRUCTIONS

NOTE: The unit should be installed and serviced by a suitably trained person.

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. Alternatively, position the unit on a flat level surface.
2. Connect the glycol module's power supply to the 240V power outlet socket on the base unit.
(DO NOT SWITCH ON YET)

6. Finally, connect the 1.5mm twin wire coming from the heat dump to the 24V outlet socket on the glycol module using the two pin plug supplied with the glycol module. It does not matter which way the wires are connected as they are not polarised.

7. Ensure the lines are correct and secured neatly and free from kinks.

8. Fill the glycol module reservoir tank with a quantity of coolant mixed 30% glycol to 70% water, ensuring a quantity remains for topping up the system when priming.

NOTE: a 30% glycol mixture is suitable for operation in temperatures as low as -12°c. For operation in temperatures as low as -25°c, a 50% glycol mixture is required. In the event of freezing up occurring the following action is recommended:

9. On the base unit, locate the compressor switch and ensure that it is in the 'OFF' position. This will aid with priming of the cooling system.

Alternatively, if the unit only has a power on switch, unplug the compressor plug from the distribution board.

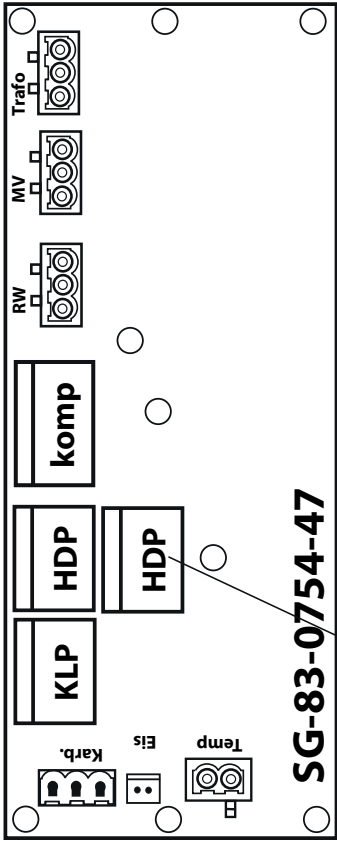
NOTE: Maximum Lift = 9m Maximum Run = 40m

DISTANCE FROM BASE UNIT TO HEAT DUMP	APPROX. VOLUME OF GLYCOL	APPROX. VOLUME OF WATER
5m	4.25 ltr	8.25 ltr
15m	4.50 ltr	9.00 ltr
20m	4.75 ltr	9.25 ltr
30m	5.00 ltr	10.00 ltr
40m	5.40 ltr	10.60 ltr

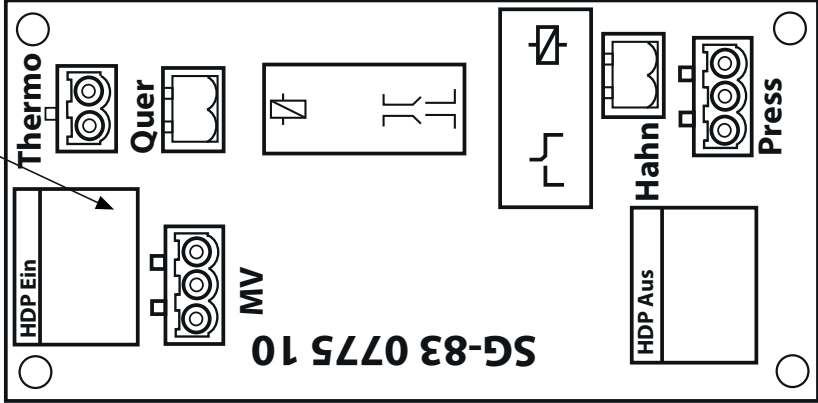
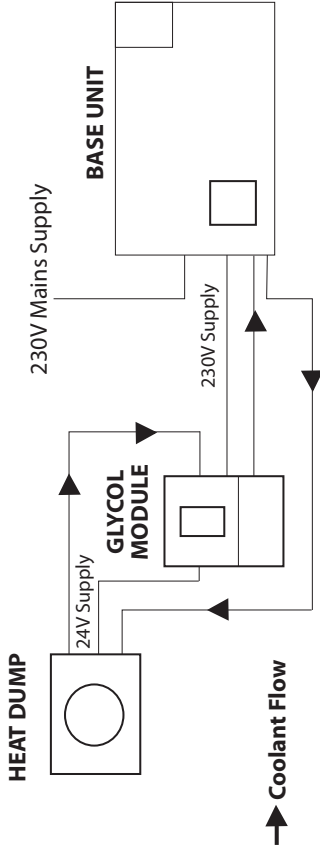
10. Refer back to the base unit installation instructions on page 12 and complete the installation up to point 14. Upon switching the unit on, the pump in the glycol module will start together with the heat dump fan, the refrigeration system is full, there are no air locks and that coolant is returning freely into the header tank. If the system trips out on the thermal switch whilst priming, this will have to cool before it automatically restarts.

11. Switch the compressor switch to 'ON' and re-connect the compressor plug and finish the installation up to point 21.

3. Connections (make the connection between adapter board SG-83-0754-47 and still water board SG-83-0775-10.



Water cooled unit - equipment connection schematic



- KLP :

HDP:

Komp:

RW:

MV:

Trafo:

Karb:

Eis:

Temp:
- Soda recirculation pump

Carbonator pump

Compressor

Agitator

Solenoid valve

Transformer supply 230 V

Carbonator bowl

Ice-bank sensor

Temperature sensor for Carbonator pump
- HDP Ein: Connection from HDP (adapter board)

HDP Aus:

Hahn:

Press:

Thermo:

Quer:
- Connection for carbonator pump

24 VAC connection from tap (or SG-83-0775-0500)

Connection, pressure switch for still water

Thermo-contact

Cross-link (Temp. / Quer)

2. FUNCTION OF THE CIRCUIT

Fundamentally, there are two possibilities:

Operation with one carbonator pump.

- Here, the carbonator pump supplies both the still water feed and the feed for carbonated drinks. The carbonator pump must be connected to the still water control.

Operation with two carbonator pumps

- Here, one carbonator pump supplies the still water feed and the feed for the carbonated drinks, the other exclusively the feed for the carbonated drinks. This means it is possible that only one carbonator pump is in operation at a time, when still water is being drawn. The carbonator pump which supplies both feeds must be connected to the still water PCB. The other carbonator pump is connected to the adapter board.

HEAT DUMP INSTALLATION INSTRUCTIONS

NOTE: The unit should be installed and serviced by a suitably trained person.

1. Unpack the unit from its transportation packaging and visually inspect for signs of damage.
2. Site the dump in a convenient location, preferably in a non-heat sensitive and shaded area on the outside of the building. If it cannot be installed outside, ensure that the area is free from other heat sources and is adequately ventilated to prevent heat build up from the hot exhaust air from the heat dump. In either situation the heat dump should be sited to allow free circulation of air. The maximum recommended height of the heat dump above the cooler is 9 meters.
3. Remove the wall mounting bracket from the assembly, (mounted on lift off hinges). Slacken the two fixing screws securing the cover/fan assembly to the condenser matrix, swing the cover open and lift off the assembly.
4. With reference to the above drawing drill the surface onto which the heat dump is to be fitted at the stated mounting hole centers ensuring that adequate clearance is allowed around the heat dump to allow future access for cleaning. The wall mounting bracket can be used as a guide for marking its hole centers. Ensure that the wall mounting bracket is mounted squarely to ensure level movement of the condenser matrix when fitted.

**Warning**

WAYS THE EQUIPMENT SHOULD BE USED
THIS UNIT IS INTENDED FOR USE IN CONJUNCTION WITH COOLING UNITS MANUFACTURED BY MANITOWOC. IT IS DESIGNED TO BE CONNECTED AT THE END OF THE WATER/GLYCOL RECIRCULATION LINES AS MEANS OF REMOVING HEAT FROM THE COOLING SYSTEM. THERE ARE NO OTHER RECOMMENDED USES FOR THIS UNIT.

**Warning**

ALL WATER COOLED UNITS ARE FITTED WITH AN AUTO RESET THERMAL SWITCH TO PROTECT THE COMPRESSOR. IF A FAULT OCCURS IT IS LIKELY TO BE ONE OF THE FOLLOWING.

1. LOW WATER/GLYCOL LEVEL.
2. COOLANT LEAK
3. BLOCKAGE WITHIN COOLING SYSTEM.
4. HEAT DUMP FAN FAILURE.
5. WATER PUMP FAILURE.
6. 24V TRANSFORMER FAILURE.
7. WIRING FAULT.

THE SYSTEM WILL RESET ITSELF, BUT IF THE FAULT PERSISTS, IT SHOULD BE RECTIFIED BEFORE FURTHER OPERATION.



WAYS THE EQUIPMENT SHOULD BE USED

THIS UNIT IS INTENDED FOR USE IN CONJUNCTION WITH COOLING UNITS MANUFACTURED BY MANITOWOC. IT IS DESIGNED TO BE CONNECTED AT THE END OF THE WATER/GLYCOL RECIRCULATION LINES AS MEANS OF REMOVING HEAT FROM THE COOLING SYSTEM. THERE ARE NO OTHER RECOMMENDED USES FOR THIS UNIT.

HEAT DUMP INSTALLATION INSTRUCTIONS

NOTE: The unit should be installed and serviced by a suitably trained person.

1. Unpack the unit from its transportation packaging and visually inspect for signs of damage.
2. Site the dump in a convenient location, preferably in a non-heat sensitive and shaded area on the outside of the building. If it cannot be installed outside, ensure that the area is free from other heat sources and is adequately ventilated to prevent heat build up from the hot exhaust air from the heat dump. In either situation the heat dump should be sited to allow free circulation of air. The maximum recommended height of the heat dump above the cooler is 9 meters.
3. Remove the wall mounting bracket from the assembly, (mounted on lift off hinges). Slacken the two fixing screws securing the cover/fan assembly to the condenser matrix, swing the cover open and lift off the assembly.
4. With reference to the above drawing drill the surface onto which the heat dump is to be fitted at the stated mounting hole centers ensuring that adequate clearance is allowed around the heat dump to allow future access for cleaning. The wall mounting bracket can be used as a guide for marking its hole centers. Ensure that the wall mounting bracket is mounted squarely to ensure level movement of the condenser matrix when fitted.

1. FUNCTION OF THE STILL WATER BOOST FACILITY

The still water boost facility is an add-on PCB and is used together with the adapter board **SG-83-0754-47** or **SG-83-0754-31**. Both boards are located in the electric control box.

When a drink is dispensed on the still water side, the water pressure falls at the monitoring pressure switch, causing it to switch. This starts the carbonator pump thus setting the required water pressure for dispensing the still drink. In this operating condition, filling of the carbonator bowl is prevented. When dispensing of the still drink is finished, pressure in the still water line increases again and the pressure switch will cut out the carbonator pump. If both still and carbonated drinks are dispensed simultaneously, both feeds are supplied from the carbonator pump.

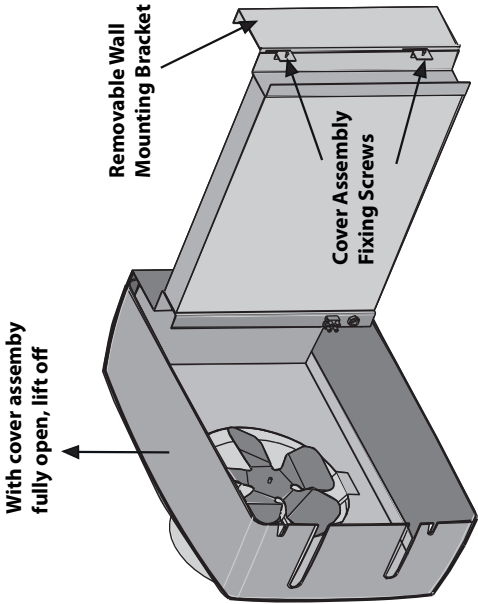
It is essential that the carbonator pump for supplying the still water feed is connected to the still water PCB, otherwise trouble-free operation cannot be guaranteed.



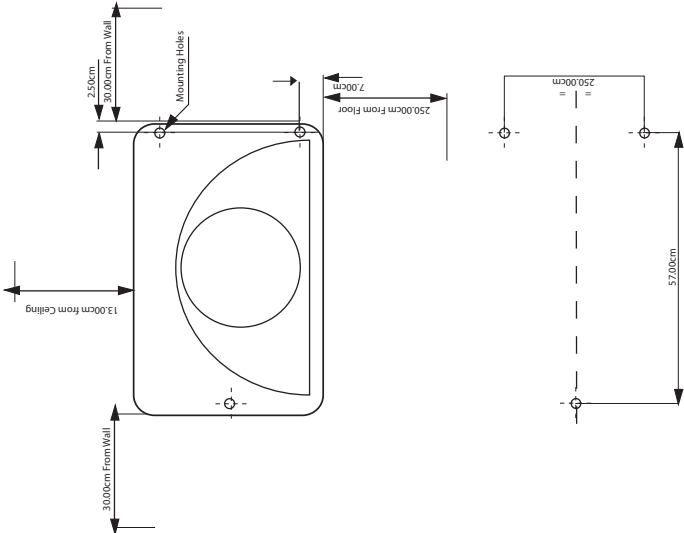
WHEN ASSEMBLING AND INSTALLING THE STILL WATER BOOST FACILITY, PLEASE OBSERVE THE SAFETY INSTRUCTIONS INCLUDED IN THE OPERATING INSTRUCTIONS FOR THE APPLIANCE.

CONTENTS STILL WATER BOOST FACILITY

SECTION 12	FOR QUALIFIED ENGINEERS ONLY	39-43
	User Manual Installation Still Water boost facility (activated by pressure drop)	39
	1. Function of still water boost facility	40
	2. Function of the circuit	41
	3. Connections	41
	4. Wiring Diagram	42
	5. Power Supply	43
	6. Flow chart	43

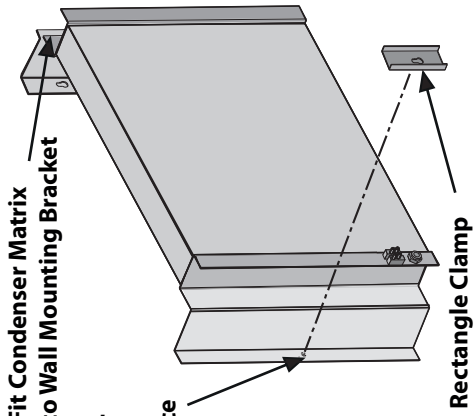


MINIMUM DISTANCES FOR MOUNTING THE HEAT DUMP FROM VERTICAL AND HORIZONTAL SURFACES



5. Either mark the position of the third mounting screw at the time of marking the wall mounting bracket position, or after fitting the wall mounting bracket hang the condenser matrix on, close against the mounting surface and mark the fixing position. The third fixing screw will pass through the hole in the condenser matrix. The retaining clamp is fitted over the screw which can then be tightened to retain the condenser matrix.
6. Connect the flow and return pipework from the glycol module and base unit to the fittings on the heat dump labeled "FLOW" and "RETURN". Secure the pipes to the mounting surface so that the weight of the pipes is not being carried on the heat dump fittings. Do not kink the pipework as this will restrict coolant flow. Do not insulate the pipework. (pipework mounted on an exterior surface may be insulated if it is felt that due to extreme conditions freezing may occur).

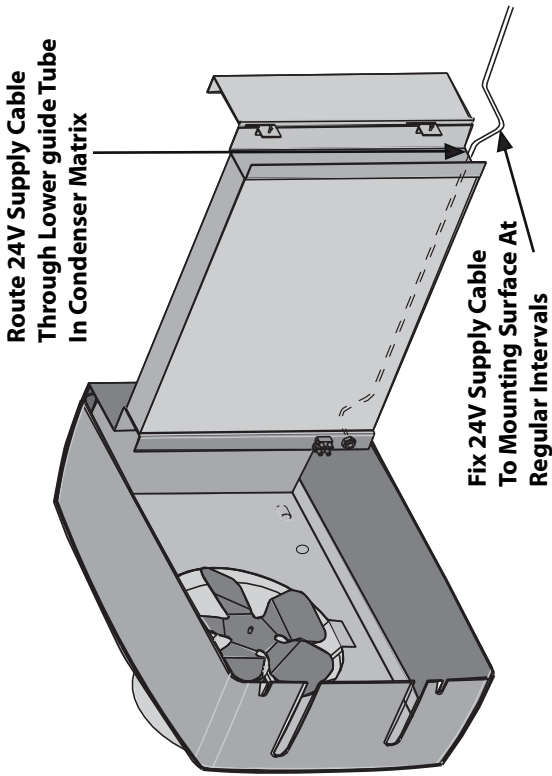
DRILLING POSITIONS FOR MOUNTING HOLES



Do not strap the flow and return pipes together as heat transfer between the two will effect the systems performance.

7. Route a twin core 24 volt supply cable (1.5mm csa) through the lower guide tube and then through the strain relief grommet positioned below the two way terminal block on the condenser matrix. The wires are not polarised and may be fitted either way round.

8. Ensure that the amount of cable entering through the main cover is not excessive and cannot become entangled in the fan blade. Tighten the strain relief grommet to support the cable. This should not be the only means of support for the cable, therefore fix back to the mounting surface at regular intervals along the cable length.

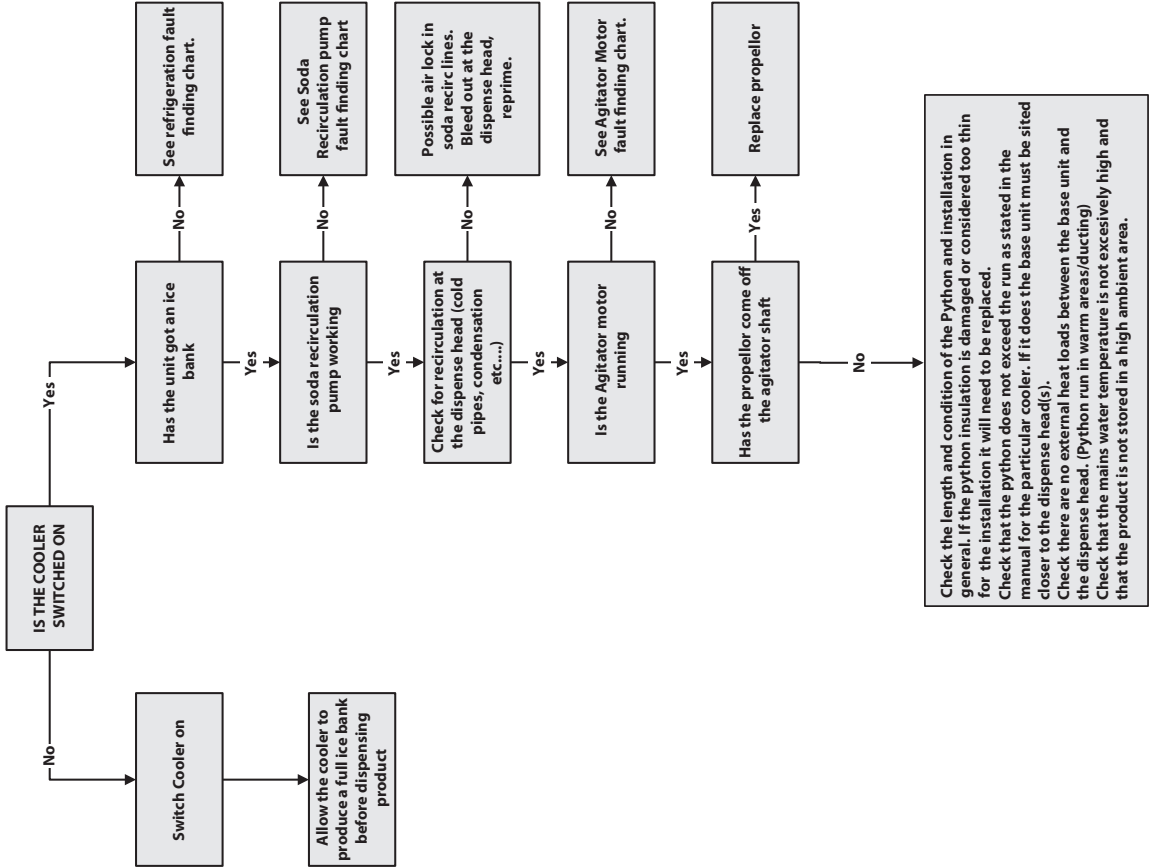


USER MANUAL INSTALLATION & SERVICE

Still water boost facility
(activated by pressure drop)

STWE

FAULT DIAGNOSIS FLOW CHART - PRODUCT TOO WARM



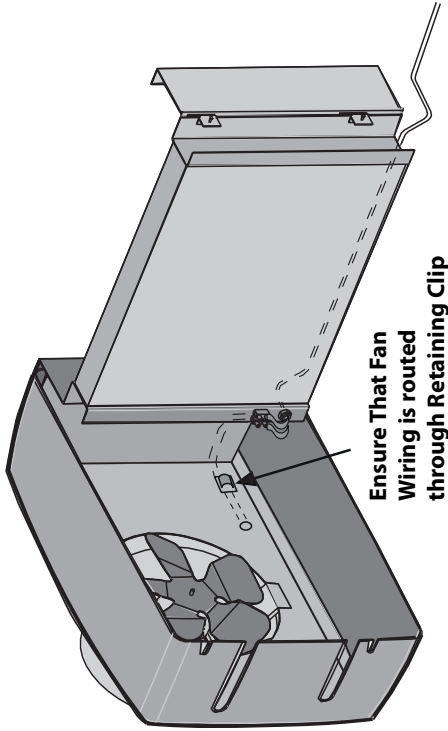
9. After the condenser matrix is fully fitted to the mounting surface, hang the cover/fan assembly onto its hinges.
With the cover/fan assembly open, connect the wires from the fan to the terminal block.

Note - Ensure that the wiring from the fan is routed through the plastic clip provided to prevent the possibility of the wires becoming entangled in the fan blade.

10. Connect the wiring and the Pipework to the cooler following the instructions supplied with the cooler.

Recommended - Pipework: 15mm OD x 10mm ID COBRACOL tubing.

Cable: 1.5 mm sq., 2 core white PVC covered (no earth) Insulation tubing: 3/8" or 1/2" ID.



POWER ISOLATION METHOD

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

CORRECT SAFE HANDLING

HANDLING OF THIS UNIT OFFERS NO SPECIFIC HAZARD. UNIT WEIGHT 9 KGS (20LBS.) DRY.

ADJUSTMENTS/MAINTENANCE REQUIREMENTS

IT IS NOT RECOMMENDED THAT THE END USER MAKES ANY ADJUSTMENTS OR CARRIES OUT ANY MAINTENANCE OTHER THAN :

- 1. Check the 24V Cable & Connections visually for condition.
- 2. Check the unit and its pipework for any evidence of leaks visually.

NOTE: THERE ARE NO USER SERVICEABLE PARTS.

Methods of cleaning

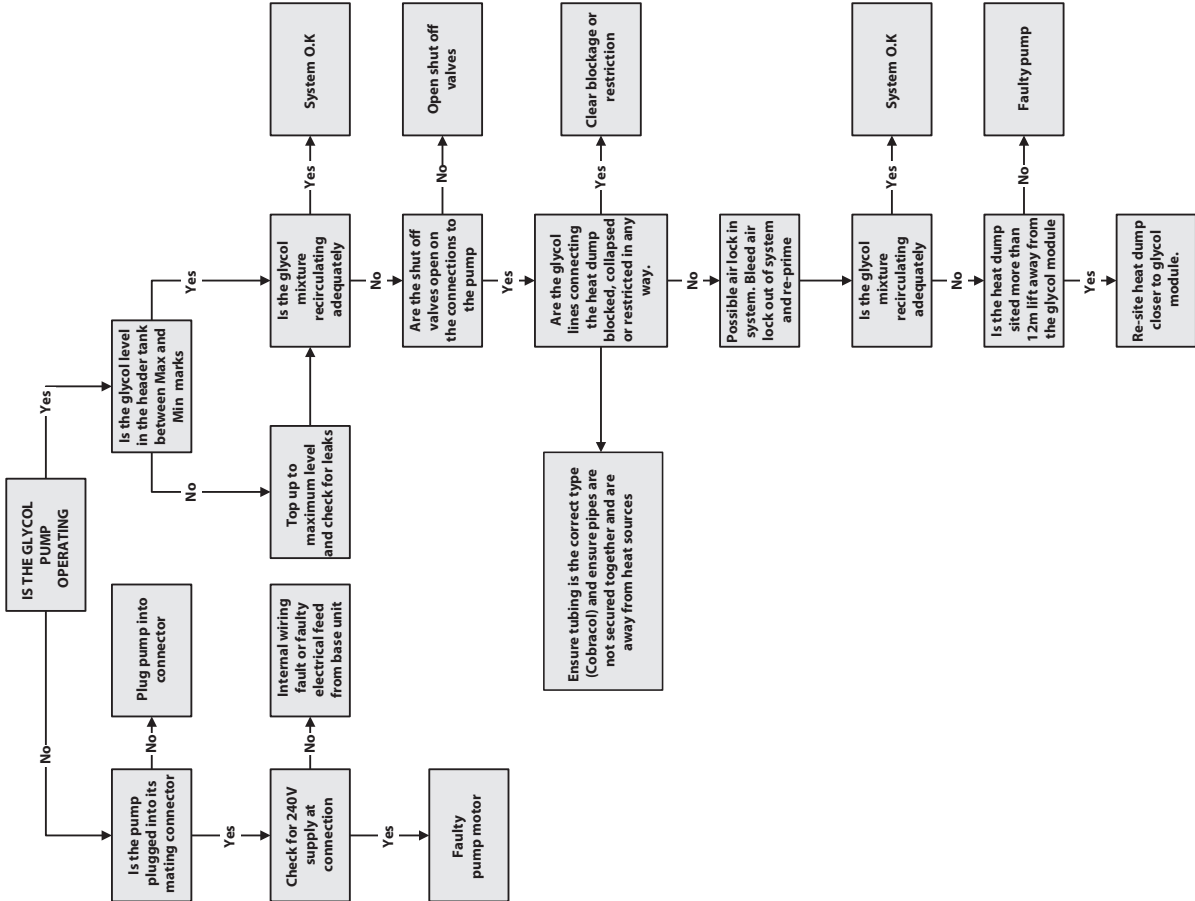
TWICE ANNUALLY: By a competent service \ maintenance engineer

- 1. Isolate the unit from the Base Cooler electricity supply.
- 2. Open the unit to access both sides of the condenser matrix and remove any extraneous debris from the unit or its casing preferably using a vacuum cleaner or brush.
- 3. Check unit for electrical safety. Do not use a water or steam hose to clean the unit whilst still installed.

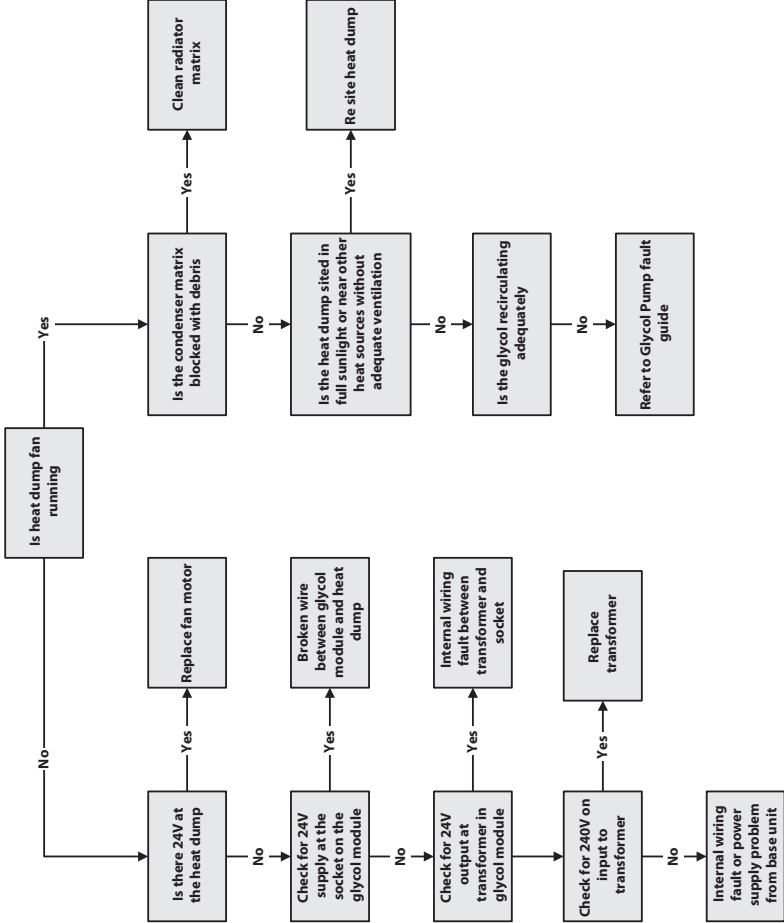
Do not use a water or stream hose to clean the unit whilst still installed.

It is important that all the vents and grills are kept clear (including condenser grills where applicable).

FAULT DIAGNOSIS FLOW CHART - GLYCOL MODULE (WATER COOLED UNITS)



FAULT DIAGNOSIS FLOW CHART - HEAT DUMP (WATER COOLED UNITS)



PREVENTION OF FREEZING / ACTION REQUIRED IF FREEZING OCCURS

It is recommended that all exterior Pipework to the unit is insulated to prevent freezing. In the event of freezing up occurring, the following action is recommended :

1. Isolate the unit from base coolers electricity supply.
2. Apply gentle warmth to the general area of the unit and its pipework, taking care not to scorch / burn the insulation tubing surrounding the pipes.
3. Check for obvious leaks.
4. Reconnect the base cooler mains electricity supply.
5. Observe the unit running for a short time watching out for leaks, strange noises or any form of malfunction. If no problems are observed, the normal operation of the unit may be resumed.

MAX. / MIN : ambient temperatures

Minimum -25°C.
(Dependant on glycol mix))
Maximum +40°C

DISMANTLING / DECOMMISSIONING PROCEDURE

1. Isolate the unit from the base cooler or glycol module electricity supply.
2. Disconnect the recirculating coolant inlet and outlet pipes.

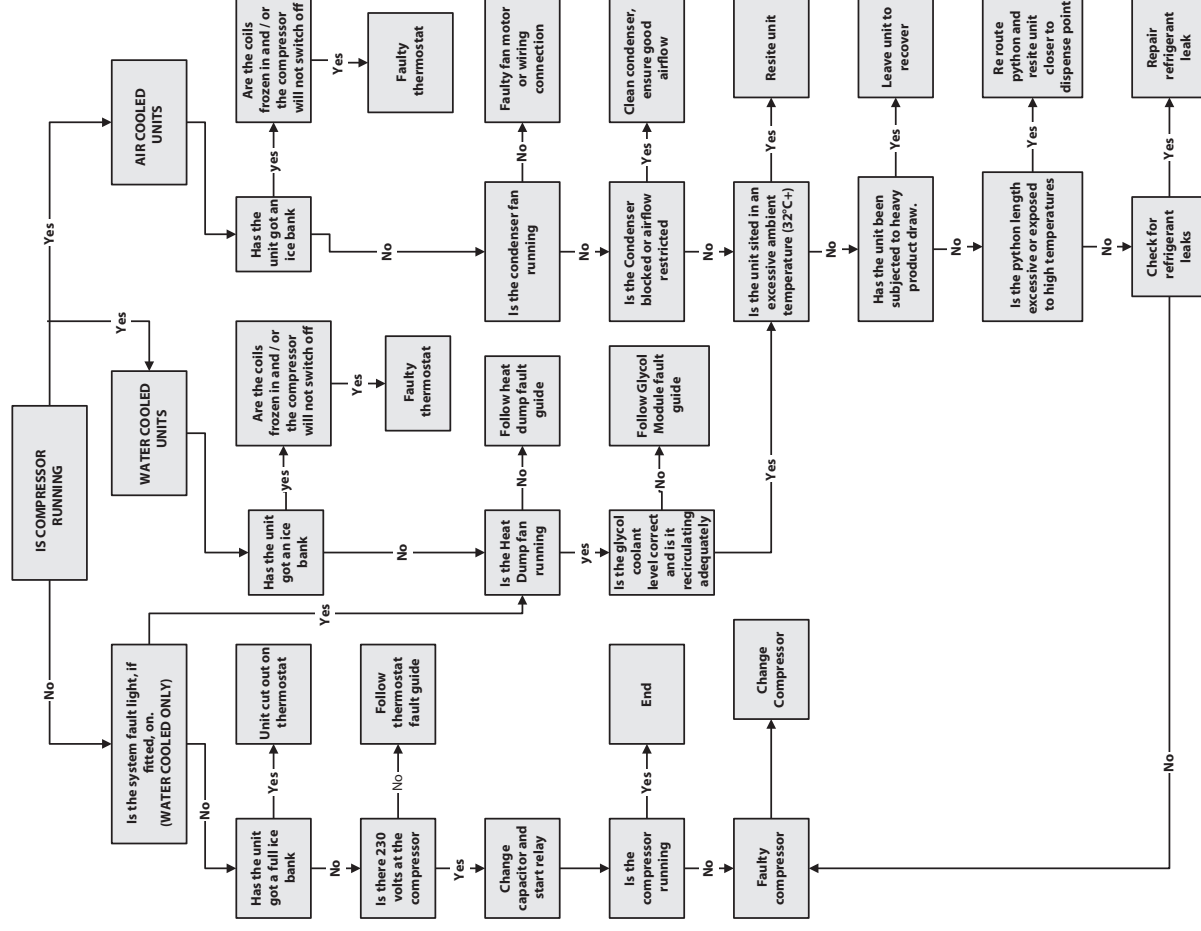


THIS UNIT CAN CONTRIBUTE TO THE AMBIENT TEMPERATURE.

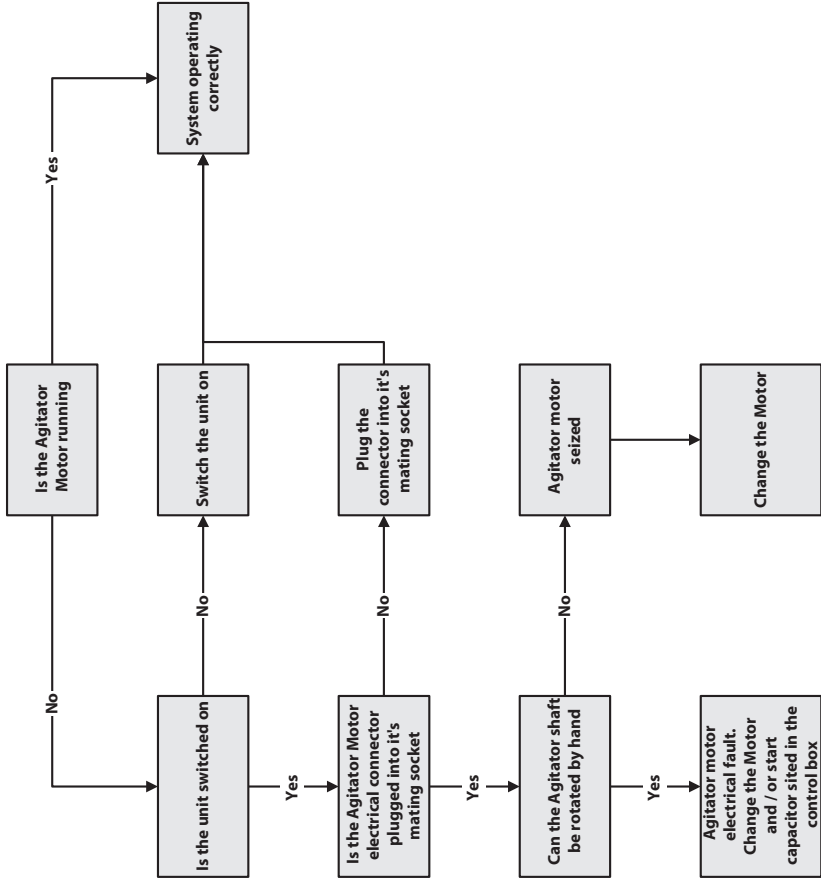


THIS UNIT IS UNSUITABLE FOR USE BY UNSUPERVISED CHILDREN, INFIRM OR AGED PERSONS.

FAULT DIAGNOSIS FLOW CHART - REFRIGERATION SYSTEM



FAULT DIAGNOSIS FLOW CHART - AGITATOR MOTOR

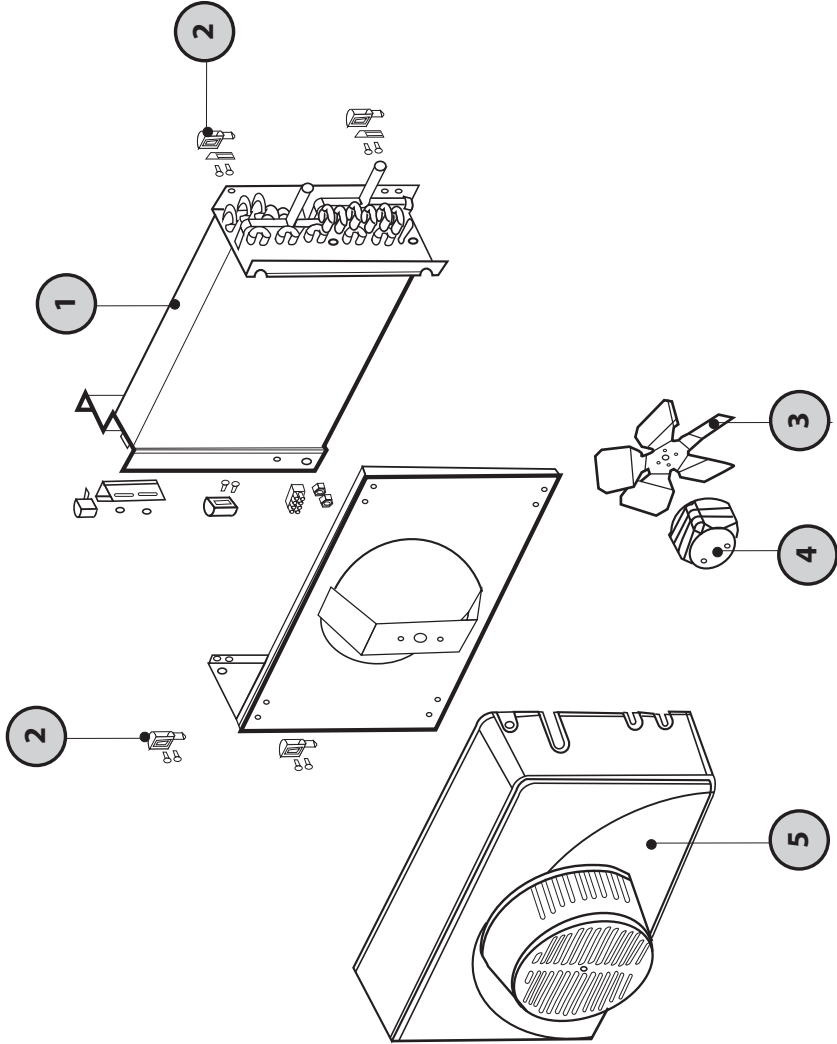


Pos.	description	cCool 7	cCool 9	cCool 11	cCool 15	cCool 37
1	motor for carbonator pump	SG-85-0223-40	MO46595	MO46595	MO46595	MO46595
2	motor for circulation pump	SG-85-0222-40	MO46595	MO46595	MO46595	MO46595
3	compressor	CM44820	CM44820	CM73433	CM73433	CM46450
4	fan motor (integral units only)		MO46782	MO46785	MO46785	SG-85-0260
	Box fan (not shown)	MO46686				
5	bracket for fan motor		SG-41-2136	SG-41-2137	SG-41-2137	SG-85-0262
6	fan blade		SG-85-0168	SG-85-0082	SG-85-0082	SG-85-0261
7	condenser	SG-81-0072	SG-81-0080	SG-81-0080	CN49700	CN73348
8	ice bank control	SG-83-0009-H	SG-83-0009-H	SG-83-0009-H	SG-83-0009-H	SG-83-0009-H
*9	level control	SG-83-0401-H	SG-83-0401-H	SG-83-0401-H	SG-83-0401-H	SG-83-0401-H
10	ice bank sensor	SG-41-1795-50	SG-41-1925-1	SG-41-1953-1	SG-41-1470-2	SG-41-2273
11	tube "water in"		on request			
12	double check valve water	SG-42-0857-100	SG-42-0857-100	SG-42-0857-100	SG-42-0857-100	SG-42-0857-100
13	elbow		on request			
14	cross piece	PI44879	PI44879	PI44879	PI44879	PI44879
15	threaded adaptor	SG-42-0120	SG-42-0120	SG-42-0120	SG-42-0120	SG-42-0120 at outlet SG-33-0167-30 at inlet
16	carbonator pump (1)	SG-42-0035-10	SG-42-0035-01	SG-42-0035-01	SG-42-0035-01	SG-42-0035-01
17	threaded adaptor	SG-33-0167-30	SG-33-0167-30	SG-33-0167-30	SG-33-0167-30	SG-33-0167-30
18	circulation pump	SG-42-0127	SG-42-0127-20	SG-42-0127-20	SG-42-0127-20	SG-42-0127-20
19	carbonator bowl	SG-42-0904-11	CB44407	CB44407	SG-42-0906-21	SG-42-0906-21
20	threaded connector		on request			
21	check valve CO ₂	SG-42-0955	SG-42-0955	SG-42-0955	SG-42-0955	SG-42-0955
22	tube "CO ₂ in"		on request			
23	tube cross piece - carbonator bowl		on request			
24	cross piece JOHN GUEST		on request			
25	agitator motor	SG-85-0264-10	SG-85-0264-10	SG-85-0264-10	SG-85-0264-10	SG-85-0264-10 (2 off)
26	tube circulation pump cross piece		on request			
27	tube prechill coil carbonator bowl		on request			
28	tube soda recirc pump housing		on request			

* : 83-0401-0001 if with carbonator pump time-out facility (1) in stainless steel on request
Electrical components for other voltages/ frequencies than 230 VAC/50 Hz on request

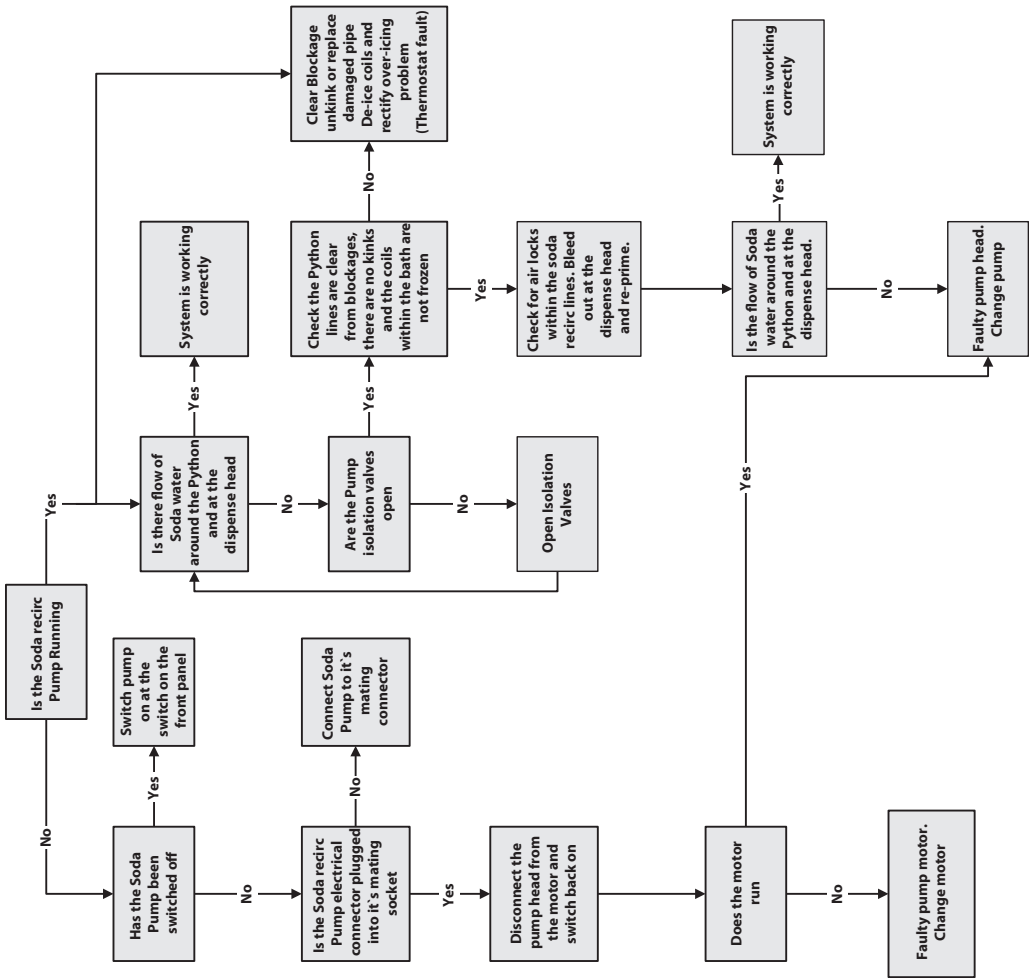
For water-cooled units and versions with still water boost			Only for water-cooled units
Not shown	PI51293	Plate heat exchanger	
Not shown	SG-82-1006	Thermostatic expansion valve	
Not shown	SG-82-0055	Penn valve	
Not shown	SG-82-0108	Dryer-accumulator	
Not shown	SG-83-0018	High pressure switch	Only for versions with still water boost
Not shown	SG-83-0775-10	PCB still water boost	
Not shown	SG-83-0775-0500	PCB still water boost (via electrical demand)	
Not shown	OP73971	Solenoid	
Not shown	SG-33-0462	Crosspiece for pressure switch	
Not shown	OP74246	Water pressure regulator	
Not shown	SG-83-0868	Low pressure switch	

EXPLODED DRAWING AND SPARE PARTS OF HEAT DUMP 09-0201-01



ITEM	PART No	DESCRIPTION
1	CN51290	3 PASS HEAT DUMP MATRIX
2	PI42728	IN-LINE HINGE
3	PI48354	10" SUCKER FAN BLADE
4	MO46688	25 WATT Q-MOTOR - EBM
5	PI45861	HEAT DUMP COWL VISION

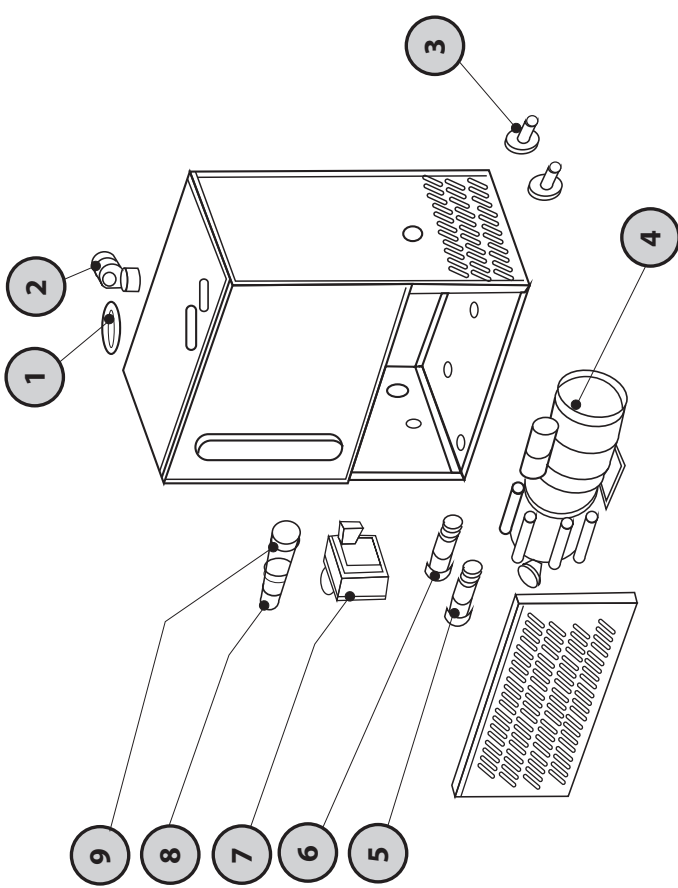
FAULT DIAGNOSIS FLOW CHART - SODA RECIRCULATION PUMP



FAULT ANALYSIS

Kind of malfunction	Reason	Solution
Beverages too warm	Cooler switched off or not connected to mains electricity	Switch cooler on or insert plug
	Control damaged	Change Control
	Compressor defective	Change compressor (only skilled persons)
	Refrigerant leakage	Find and repair leakage and refill circuit (only skilled persons)
	Waterbath empty	Fill waterbath with clean water until over flow level is reached
	Recirculation pump defective or switched off	Exchange recirc pump or switch it on
	Dispense rate too high	Either reduce dispense rate or install larger capacity machine
Beverage is foaming	Condenser dirty or blocked	Clean condenser or remove restriction/blockage
	Agitator motor not working or blade missing	Replace agitator or blade
	Dispense rate too high	Reduce dispense rate
	Syrup too old or saturated	Change syrup
Flat Drinks	Beverages too warm	Look at section "Beverages too warm"
	CO ₂ -cylinder empty	Change CO ₂ -cylinder
	Pressure regulator is shut off	Open valve
	Pressure regulator frozen due to dispense rate too high	Either split CO ₂ -feed to several cylinders or install a pressure regulator heater
Valve dispenses only gas	Mains water pressure higher than CO ₂ -pressure	Modify pressure settings
	Carbonator pump defective	Exchange pump
	Water valve shut off or carbonator not connected to mains water	Open valve or connect unit to mains water
	Level control defect	Exchange level control
	Soda circuit frozen	Melt ice bank, search for the reason and repair (see section "soda circuit frozen")
Soda circuit frozen	Ice bank control defect	Change ice bank control
	Agitator defect	Change agitator
Beverage is too sweet	Wrong brix adjustment at dispense valve	Modify brix adjustment

EXPLODED DRAWING AND SPARE PARTS OF GLYCOL MODULE



ITEM	PART No	DESCRIPTION
1	OP73718	FILLER PLUG
2	OP73363	15mm ELBOW
3	OP73630	BRASS TAIL
4	SA57021	3 STAGE MAG. DRIVE PUMP
5	OP73168	SHUT OFF VALVE
6	OP73326	CHECK VALVE
7	OP74396	TRANSFORMER
8	OP73829	SEALED PLUG - 2 WAY
9	OP73828	SEALED SOCKET - 2 WAY

HEIGHT = 435mm
WIDTH = 380mm
DEPTH = 220mm
DRY WEIGHT = 13kg
OPERATION WEIGHT = 25kg

WIRING DIAGRAM

