



Triton HC range



Manual Operation English

Legal notice

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Undercounter cooler

Model range

Triton 150 HC
Triton 350 HC
Triton 350v HC
Triton 700 HC

Version B

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| | | |
|-----------|--|-----------|
| 1 | Safety | 4 |
| 1.1 | Intended use | 4 |
| 1.2 | Improper use | 4 |
| 1.3 | Staff | 5 |
| 1.3.1 | Operator | 5 |
| 1.3.2 | User | 5 |
| 1.3.3 | Expert | 5 |
| 1.4 | Presentation of warning | 5 |
| 1.5 | Safety instructions | 5 |
| 1.5.1 | General safety information | 5 |
| 1.5.2 | Disclaimer of liability and warranties | 6 |
| 1.5.3 | Safety information to prevent personal injury and equipment damage | 6 |
| 2 | Transport and packaging | 7 |
| 2.1 | Storage | 8 |
| 3 | Disposal | 9 |
| 4 | Installation Requirements | 9 |
| 4.1 | Installation Sites | 9 |
| 4.2 | Electrical Connections | 9 |
| 5 | Installation | 9 |
| 5.1 | Water Connection | 10 |
| 5.2 | CO ₂ -Connection | 10 |
| 5.3 | Connecting Premix and Postmix Syrup | 10 |
| 5.4 | Connecting Soda Water and Still Water | 10 |
| 5.5 | Power Supply of the Electric Valves | 10 |
| 5.6 | Connection of Still Water Control | 11 |
| 6 | Putting into and out of Service | 11 |
| 6.1 | Putting into Service | 11 |
| 6.2 | Turning on the Unit | 11 |
| 6.3 | Daily Inspection | 12 |
| 6.4 | Putting out of Service | 12 |
| 7 | Cleaning and Disinfection Directions | 13 |
| 7.1 | Cleaning Directions | 13 |
| 7.2 | Cleaning and Disinfection Procedure before use | 13 |
| 8 | Problems and Troubleshooting | 18 |
| 9 | Technical Data | 19 |
| 10 | Illustration of the Triton | 20 |
| 10.1 | Connections at the Unit | 20 |
| 10.2 | Flow Chart | 21 |
| 10.3 | Circuit Diagram | 25 |
| 11 | Exploded View / Spare part list | 27 |
| 11.1 | Exploded View | 27 |
| 11.2 | Spare Part List | 30 |

1 Safety

1.1 Intended use

By using the unit as intended you will not only protect yourself, but also prevent damage occurring to the unit and its components!

The intended use of undercounter coolers from the Triton HC series (referred to as “unit” in the following) is to refrigerate and convey non-alcoholic beverages and their basic ingredients. CO₂ or electric pumps are used as conveying equipment for the brands.

The unit is only suitable for stationary installation in a closed room. Stationary installation is to be carried out by an expert in compliance with all of the specifications given in this manual.

The inlet temperature of the liquid must not exceed 32°C otherwise the pressure in the refrigeration cycle will rise above specification.

Minimum ambient temperature 10°C, maximum ambient temperature 32°C

The intended use means that you will carry out all activities with and on the unit to the specifications provided in this document.

This unit is only to be operated by those who meet the requirements set out in this document.

Work on the unit and its components not included in the activities described in this document may only be performed by experts, means authorized and skilled people.

Versions with an integrated RCBO (Residual Circuit Breaker with Overcurrent protection) and/or with the integrated telemetry system PROSA are only to be installed or operated with the manuals TD 2007000 (Manual User RCBO) and TD 2008000 (Manual GA+ISA Prosa)

1.2 Improper use

Improper use of the unit and unauthorized modifications to the unit and its components may cause personal injury and equipment damage for which Cornelius Deutschland GmbH shall assume no liability. Improper use of the unit is prohibited.

The following in particular is regarded as improper use:

- Mobile operation of unit
- Operation of unit in areas without supervision by skilled personnel.
- Operation of the unit in an area, where water jet is possible.
- Cleaning with a water jet
- Any handling as e.g., use or service, by children under the age of 8 years
- Any cleaning or service by children without supervision by a skilled, authorized adult.
- Use by persons (including children) with physical, sensory or mental disabilities or those with insufficient experience and knowledge, unless they are supervised by a person responsible for their safety, or this person has instructed them in the use of the unit.
- Use by those under the influence of medication, alcohol, drugs or other substances which impair their physical, sensory or mental abilities.
- The refrigeration of non-specified liquids and those above the maximum supply temperatures as this may cause unacceptably high pressures to build up in the refrigeration circuit.
- Operating the unit below the minimum and above the maximum ambient temperatures (minimum and maximum temperatures *see chapter 3.3, page 15*).
- Operating the unit with conveying media other than those defined in this document.
- Operating the unit in locations and ambient conditions which do not fully meet the requirements of this manual.
- Operation of the unit by untrained staff.

1.3 Staff

1.3.1 Operator

The operator is the natural or legal person who uses the unit or on whose behalf the unit is used. The operator must ensure that the unit is only used as intended, in observance of the safety instructions set out in this document.

The operator must ensure that all users read and understand the safety information. The operator is responsible for the planning and proper implementation of regular safety inspections and maintenance work.

With regard to operating the unit, Cornelius Deutschland GmbH recommends observing the national regulations of the country of use which govern the operation of drink-dispensing systems.

1.3.2 User

The operator specifies who will operate this unit. Cornelius recommends the following:

- If this unit is only to be operated by employees, they are to be instructed in its use, demonstrate their abilities to use it to the operator or their authorized representative, and be expressly charged with its use. This document is to be available to staff at all times.
- If this unit is openly accessible and set up so that untrained staff can use it, the operator is to provide instructions for use directly at the unit; these must be clearly understood by this group of people, therefore ensuring that the unit will be handled safely.

1.3.3 Expert

An expert in terms of this document refers to someone who has the relevant training, experience and information and knowledge of relevant standards, laws, regulations, accident prevention regulations, generally accepted safety-related regulations and operating conditions to be able to perform the required activities as well as recognize potential risks and avert them.

For assignments requiring expert knowledge, e.g. in electrical engineering, mechanics or fluid technology, only skilled workers with the right qualifications are to carry these out.

An expert must also have received technical training in the unit-specific special features of Cornelius products. The assigned tasks are always to be carried out in compliance with this manual.

1.4 Presentation of warning

The documents supplied with the unit provide warnings regarding any hazards that might exist.

1.5 Safety instructions

1.5.1 General safety information

Any work on the unit and its components which goes beyond the operation and servicing and maintenance that the operator is authorised for, may only be performed by experts (for a definition of experts, see chapter 1.3.3, page 5). Furthermore, it is crucial that when performing work on the unit all safety information is observed; this information is set out in the following sections. Some of the tasks may have additional safety information which highlights the specific hazards associated with such work.

Warning!



The flame symbol, shown below and on the unit, means the unit contains a flammable refrigerant, R290.



Warning!

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

Warning! Do not locate multiple portable socket outlets or portable power supplies at the front/rear or below the appliance.

- Access to the service area is restricted to persons having knowledge and practical experience of the appliance, in particular the safety and hygiene.
- The A-weighted emission sound pressure level is below 70 dB(A).
- Keep safety signs in good condition and replace missing or damaged items.
- Keep the system in proper working condition and do not allow unauthorized modifications.

1.5.2 Disclaimer of liability and warranties

If work is undertaken on the unit which is not described in this document, Cornelius Deutschland GmbH shall not assume any liability for any resulting hazards and damages. The same applies to described work which is partly or not fully performed in compliance with the regulations set out in this document.

Warning!



Risk of personal injury and equipment damage due to improperly executed work

Improperly executed work at the unit will cause dangers to persons and damage to the unit.

- Have all work at the unit carried out by Cornelius Deutschland GmbH or by a service partner.

Warning!



Risk of personal injury and equipment damage due to the use of non- approved spare parts and accessories

Using spare parts and accessories that are not recommended by the manufacturer may lead to personal injury and equipment damage.

- For your own safety and to protect your warranty, only use original spare parts.

1.5.3 Safety information to prevent personal injury and equipment damage

Please always observe the following safety information in order to prevent personal injury occurring:

Danger!



Risk of death from electric shock

If the supply cord is damaged, do not carry out any repair work on this.

It must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

Danger!



Risk of death from electric shock

Touching live electrical parts will result in a risk of electric shock!

- Do not carry out any work on the electrical system.

Warning!



Risk of burns when touching hot parts of the unit

Touching parts of the unit after it has been in continuous use over an extended period of time will result in a risk of burns.

- Take appropriate safeguard measures, such as by wearing heat- resistant protective gloves.

Danger!

Risk of poisoning and risk of explosion due to improper handling of CO₂ cylinders

Risk of death from CO₂!

- Observe all information on occupational safety for the safe operation of dispensing systems as applicable in the respective country of installation.

Danger!

Risk of personal injury and equipment damage due to improper operation

Risk of death from improper operation!

- Make sure that only users who are users as defined in the user section use the unit; see *chapter 1.3.2, page 5*.
- Children must be supervised to ensure that they do not play at or with the unit.

Danger!

Risk of personal injury and equipment damage due to leaking refrigerant

In accordance with DIN EN 378 standard, part 1, the refrigerant used with this unit, R290 (propane), is classified as safety group A3. It is not poisonous and not caustic or corrosive. However, it is combustible and highly flammable. As a result, a potentially explosive atmosphere may occur in the case of leaks.

The refrigerant is heavier than air and, consequently, accumulates at the bottom and may enter lower lying areas (e.g. sewage systems). At high concentrations, this may lead to a lack of oxygen, resulting in a risk of suffocation. Lower concentrations may have a narcotic effect. The refrigerant has a very slight, somewhat sweet smell.

Warning! Do not damage the refrigeration circuit.

- If you suspect any leaks, however small, shut down the unit, air the room well and inform your service partner.
- Do not allow direct contact with the skin of any leaking refrigerant.
- Fire, open flames and smoking are prohibited.
- If you begin to notice any smell, leave the room and alert the fire service

Notice!


In particular, safety standards are to be observed in their scope of validity (e.g. EN 60335-2-75).

2 Transport and packaging

Choose a suitable packaging when returning the unit itself or one of its components to Cornelius Deutschland GmbH, e.g. for repairs. In particular, make sure that the unit and any components are protected from shock/impact, moisture, dirt and electrostatic discharge (ESD). This will prevent transport damage to the unit and to the components, for which the manufacturer shall assume no liability.

Caution!
Component damage due to freezing liquids

Ambient temperatures that are below freezing will lead to the freezing of any water or cleaning agent residue remaining inside the unit. This will lead to damages of internal components. Before shipment, storage or relocation of the unit, the unit is to be cleaned and the cleaning solution is to be fully drained from the unit.

2.1 Storage

Avoid excessive temperature fluctuations as condensate may form, which in turn may cause damage to the unit or to the components.

The permissible storage temperature is -10 °C to +50 °C.

The acclimatization period is 6 hours.

Caution!

Damage due to improper storage

Dirt or moisture entering a unit, as well as certain weather conditions (e.g. condensate forming at the unit, sunlight) will cause damage to the unit and its components.

- Protect the unit and its components by storing the unit in a clean and dry place, and by ensuring stable
- ambient conditions.
- If possible, store the unit in its original packaging. Unpacked units must be covered with a dustproof cover.
- No condensate must form under the cover.

Caution!

Risk of electrostatic charge!

Improper handling or storage may result in electrostatic charges.

- If possible, store units and/or any electronic components in their original packaging.
- Keep units and/or electronic components away from charged objects, fields and insulators.
- Avoid electrostatic charges when removing packaging and/or handling electronic assemblies and components by working at an ESD protected workstation or work area.
- When working at the unit or its components wear a grounding (antistatic) wrist strap at the very least and wear antistatic gloves if necessary.

Caution!

Component damage due to material ageing

Material can age due to long storage periods, thereby affecting the material's properties (e.g. plastics and seals may become brittle). The properties of lubricants may change due to long storage periods.

- Check the assemblies and components for damage before each use/before installing them. Do not install assemblies or components that show visible signs of ageing.

Caution!

Component damage due to freezing liquids

Ambient temperatures that are below freezing will lead to the freezing of any water or cleaning agent residue remaining inside the unit. This will lead to damage to internal components.

Before shipment, storage or relocation of the unit, the unit is to be cleaned and the cleaning solution is to be fully drained from the unit.

3 Disposal

Disposal of the units must be carried out in compliance with the applicable local and/or national and international regulations. Units must not be disposed of with household waste.

If the unit contains fuels or lubricants in liquid, paste-like or gaseous form, such as oil, grease, cooling agents etc., such fuels or lubricants are to be collected using appropriate measures and disposed of in compliance with the applicable local and/or national and international regulations. Such fuels or lubricants must always be prevented from seeping into the ground, the sewage system and any bodies of water, and must always be prevented from entering the atmosphere.

4 Installation Requirements

4.1 Installation Sites

Comply with the valid national regulations for installation sites and electrical connections.

The unit is designed for indoor use only.

Ventilation of the installation sites must be appropriate for device output. Inadequate ventilation of the device will result in its overheating and being destroyed.

Always make certain that no intake or discharge vents are covered or blocked.

The appliance is to be located in an area protected from physical damage.

Warning! When positioning the appliance, ensure the supply cord is not trapped or damaged.

| | Triton 150 HC | Triton 350 HC | Triton700 HC |
|----------------------------------|----------------------|----------------------|---------------------|
| Heat output in Watt | 780 | 1330 | 2000W |
| Air flow in m ³ /hour | 290 | 390 | 450 |

4.2 Electrical Connections

A socket outlet with a grounding contact featuring a maximum protection of 16 amperes is required.

The line voltage must always be within following tolerances: 230 VAC +6%/-10% / 50 Hz

Power consumption in Watt

| Triton 150 HC | Triton 350 HC | Triton 350v HC | Triton 700 HC |
|----------------------|----------------------|-----------------------|----------------------|
| 950 | 1200 | 1200 | 1120 |

5 Installation

The device must be installed by a trained service technician.

Please take care, that the socket for the unit is always accessible.

There are no user serviceable items inside the equipment.

If the power supply cable to the unit is damaged, it has to be replaced by the manufacturer, the service partner or any other qualified person to avoid safety hazard.

Minimum clearance to walls and above is 0.3m, to allow an unimpeded supply of cool fresh air.

The appliance must be placed in a horizontal position, on a firm level surface. Max. angle of +/-2 ° is permitted.

Do not mount above electrical equipment or anything perishable by water, as water may drip from its overflow.

5.1 Water Connection

Connecting only to drinkable water. Tubing set not included.

Connect the device to a feed line with an inner diameter of 10 mm. We recommend using a water filter and a water pressure regulator for the water input. To permit flushing of the filter, a t-piece should be mounted downstream of the water pressure regulator. The water flow pressure must be minimum 0.2 MPa (2 bar) and a maximum 0.4 MPa (4 bar) (mount control pressure gauge on water pressure regulator).

A flow rate of 560 liters/hour is required. Due to the high flow rate, it may be necessary to install several water filters and water tubes in parallel.

5.2 CO₂-Connection

You will require minimum a stage-wire pressure regulator with 0.7 MPa (7 bar). Using tubing with an inner diameter of 4 mm, connect the pressure regulator to the carbonator. Set the CO₂-pressure to 0.35 – 0.45 MPa (3.5 to 4.5 bar). The unit include a CO₂-pressure switch to switch off the dispensing valves at a CO₂-pressure less than 0.3 MPa (3 bar).

Triton 700 FF require up to 560 liters water/hour. The units require also a high demand of CO₂ which is more than a CORNELIUS regulator with provide and it may cause freezing up. In this case a dry and clean product tank can be used as a buffer in the line from regulator to Triton.

5.3 Connecting Premix and Postmix Syrup

Connect one tube with an inner diameter of 6 mm to each device connection. Connect the tube end to the correct cooling coil inputs of the cooler circuit carbonator.

5.4 Connecting Soda Water and Still Water

Connect the soda water to the forward and backward fittings at the Triton. The inside diameter of the tubes should be 13 mm.

The still water has to be connected to the still water outlet of the Triton (not for HK versions). The flow pressure is adjusted to 0.32 MPa (3.2 bar). If necessary, it can be adapted to the local requirements.

5.5 Power Supply of the Electric Valves

The Triton standard version is equipped with a transformer with 24 Volts~ 100 VA for the electric power supply of the valves in the tower.

For the power supply of the valves these are connected to the connecting bus (X40 at the circuit diagram) at the Tritons inner panel according to the circuit diagram.

In the case of insufficient CO₂-pressure at the carbonator inlet, the power supply to the valves is switched off. In addition to this a lamp, indicating low pressure, can be connected to the connecting bus according to the circuit diagram.

For units with 3-pin level probes a complete emptying of the carbonator bowl is prevented by switching off the power supply of the valves in time. The power supply is switched on automatically after the carbonator bowl has been filled up again.

Caution: A short circuit in the power supply to the valves caused a transformer switch off or a damage of the level board.

5.6 Connection of Still Water Control

For still water, one switching cable (1 x 0.75 mm²) per still water tap must run from the soda circuit carbonator to the still water tap. The electronic control system is actuated via this cable. An additional cable from one of the still water valves is necessary.

Alternatively, there are some units which can be controlled by a pressure switch for the still water. It is recommended to adjust the still water flow pressure to 0.32 MPa (3.2 bar) and the switching point of the pressure switch to minimum 0.42 MPa (4.2 bar). If a different flow pressure is required the switching point of the pressure switch must be set 0.1 MPa (1 bar) above the flow pressure. Refer to the circuit diagram for the connection. The flow rate of the still water should be 170 ml in 4 to 5 seconds.

6 Putting into and out of Service

6.1 Putting into Service

Comply with the cleaning regulations defined by law before beginning each operation.

Clean the couplings on the container for beverage/syrup every time before you attach them. Connect coupling to container for beverage/syrup. Note: Grey = CO₂, black = beverage/syrup.

Open the cylinder valve on the CO₂-cylinder and the valve on the pressure regulator. Check the CO₂-pressure at the pressure regulator. It should be within the following standard values:

| | |
|--|-----------------------------------|
| Syrup: | 0.35 to 0.4 MPa (3.5 to 4.0 bar) |
| CO ₂ -carbonisation pressure: | 0.35 to 0.45 MPa (3.5 to 4.5 bar) |
| Light product: | 0.05 to 0.1 MPa (0.5 to 1.0 bar) |
| Drinking water: | 0.4 to 0.45 MPa (4.0 to 4.5 bar) |

Set the CO₂-pressure by turning the control screw at the regulator valve.
Clockwise to increase the pressure.
Counter-clockwise to reduce the pressure.

Afterwards check the CO₂-lines for leaks by closing the valve of bottle. The set pressure displayed at the pressure regulator should not drop. If it does, notify the service technician immediately. Do not forget to re-open the CO₂-valve after the check.

Open the water feed line and check the flow pressure in it (minimum value: 0.2 to 0.3 MPa (2.0 to 3.0 bar)). Set it at the control screw on the water pressure regulator (not contain in the supply schedule).

Check the beverage/syrup lines for leaks. Only a visual inspection is possible. If liquid is leaking, call a service technician.

6.2 Turning on the Unit

The water bath must be filled up to ca. 1 cm under the overflow with tap water. Refer to the technical data for the amount required. To prevent algae from forming in the water, add the disinfectant Molco (PN 14-9670-150). The 150 ml container of disinfectant is sufficient for 30 liters of water. Take care, that no water runs into the agitator motor. Reference: Use for this a suitable funnel and filler tube.

Once the water bath is filled with water, wait one minute before switching the unit on.

Insert the mains plug for the cooler into a socket outlet with a grounding contact.

When the unit is turned ON, the controller has a time delay till the refrigeration system operates of approximately 5 minutes.

Turning on the Unit, continued

Ice bank controlled units start working after the water bath fills with water and switch off automatically after the ice bank is built up. The control board of the unit has a time delay for switching on and off the cooling system, when it runs in ice bank mode. After the cooling system is switched on the running time is not less than 5 minutes. Switch off signals will be ignored during this time. After the cooling system is switched off the break time is not less than 3 minutes. Switch on signals will be ignored during this time. The break time of 3 minutes is valid for turning on the device and after a breakdown of the power supply.

This unit contains a 3-pin ice bank probe. Take care that the probe is always correctly adjusted. The agitator motor (in the Triton 150 simultaneously used for soda circuit) is a closed version.

Attention! Temperatures up to 80°C are normal.

The carbonator pump switches on automatically and fills the carbonator. The carbonator pump switches off when the water has reached its highest level in the carbonator container but after no more than 20 minutes. Long run periods are signs of leaks or too large extraction. It is then only possible to turn the pump back on by a power network reset (pulling out the mains plug briefly).

Release air from the carbonator container by pulling the safety valve for about 2 to 4 seconds.

If the unit is fitted with a water inlet pressure switch, the pump will not operate till water pressure is present.

At the Triton 350 & 700 the circulation pump has to be switch on manual by using the switch at the level control board. In the case off too low water pressure the circulation pump does not start. At the Triton 150 the Circulation pump starts running when the unit is connected to power.

Attention! Dry running of the circuit pump could cause damage.

Function of the 3-PIN probe

In the case the carbonator bowl is so emptied that the empty probe is out of water the electric dispensing valves in the tower is switched off or, at the Triton 700 FF, the second carbonator pump is switched on. That prevents CO₂ in the soda water circuit and trouble during dispensing soft drinks. The dispensing valves are switched on, or the second carbonator pump is switched off when the carbonator bowl is filled up to the maximum level.

Attention! The switching off of the dispensing valves works only by using the factory fitted transformer for power supply to the dispensing valves as shown in the circuit diagram and is not possible by Triton 700 FF.

End of Operation

It is imperative that the CO₂-cylinder and water line be turned off each time operation is ended!

6.3 Daily Inspection

Check whether carbon dioxide and water lines are open. Working with closed water feed lines results in draining of the python and the carbonator. The air must then be carefully bleed from the python by opening the soda water tap, as the circulation pump will not move the water otherwise.

Check the beverage/syrup lines for leaks. Only a visual inspection is possible. If liquid escapes, call a service technician.

Check the CO₂-lines for leaks by closing valve on the CO₂-cylinder. The inlet pressure indicated on the pressure regulator should not drop. If it does, call a service technician immediately. Do not forget to re-open the CO₂-cylinder valve afterwards.

6.4 Putting out of Service

Perform the following steps in case of longer standstill periods:

Close the CO₂-cylinder, the CO₂-stopcocks on pressure regulators and the water feed line.

Pull the mains plug out of socket outlet with a grounding contact.

Detach the couplings from beverage containers.

Have the system emptied and cleaned.

Only trained specialists are authorized to carry out this procedure.

7 Cleaning and Disinfection Directions

7.1 Cleaning Directions

Comply with the valid national regulations for cleaning bar equipment at the particular installation site.

Clean connection parts and tap fittings in advance whenever making connections or changing the type of beverage. Clean parts coming into contact with air and beverage (e.g. dispense nozzle), on a daily basis.

The condenser fins must be cleaned in regular intervals. These vary according to the amount of dirt in the air at the installation site (approximately every three months). This is best done with a brush and a vacuum cleaner.

The water level in the water bath must be checked regularly and the contents must be exchanged at least once annually. Algae formation can be reduced by adding disinfectant (order number 14-9670-150). For a 30 liters water-bath one disinfectant container is sufficient.

The unit is to be emptied and cleaned by trained person only based on the following recommendations:

| To be cleaned by trained specialists | CO ₂ -lines | Product-lines | Syrup-lines | Soda/Water-lines |
|--|------------------------|---------------|-------------|------------------|
| Before commissioning | | X | X | X |
| Before each change of type of beverage | | X | X | |
| Before and after a pause of more than 1 week | | X | X | |
| Every 2 weeks | | X | | |
| Every 3 months | | | X | X |
| Every 12 months | X | | | |

7.2 Cleaning and Disinfection Procedure before use

In order to achieve a proper hygienic performance of the dispense equipment, it is crucial to run the initial and recurring sanitization procedure (intervals according to DIN 6650-6) on all product and water lines of the system.

Attention!



Cleaning / sanitizing agents are harmful and may cause severe health injuries!

During the work with any agents make sure to always wear proper clothing (gloves, safety goggles, etc.). Special attention must be taken during the flushing of the agent at the dispense valves. It must be made sure, that no operator uses the dispense equipment during sanitation (e.g. use clear signs on the valves, etc)!

Take care of an adequate behaviour towards hygiene while working on the equipment (e.g. disinfecting hands prior to work, etc) in order to professionally deal with the matter. The unit should be cleaned / sanitized starting as close as possible from the mains water connection (wall outlet), to make sure that also the tubing is being treated.

Remark -> Water filters :

In case the system is equipped with a water filter, the filter cartridge needs to be removed before doing the cleaning / sanitization and replaced by a blind plug that allows bypassing the filter. Do not use any empty service filter cartridges to flush the sanitizing agent into the system, as this will not allow a proper and consistent level of sanitizing agent in the unit.

In addition, the high levels of agent passing through the dispenser when using such cartridges may damage components such as sealings, O-rings, etc. in the dispenser.

Remark -> Carbonator- / Circulation pumps

With units such as Triton, Apexx and Energize the carbonator- and soda circulation pumps must be turned off during the cleaning / sanitization process (otherwise foaming issues will occur).

Remark -> Stillwater lines inside the cooler

In case your equipment has still water lines, it must be made sure that these are also being cleaned / sanitized. In case your equipment currently does not use Stillwater, the line must be equipped with a stopcock to manually drain sanitizing agent from this tube.

In case the Stillwater line is in general not being used on the cooler, it is recommended to disconnect this line as close as possible from the water cycle and close the water line with a blind plug (this avoids areas within the circuit which might not be sufficiently flushed).

Remark -> Electrical post-mix valves, which cannot be manually operated

These type of taps must be operated electrically. When doing this, it needs to be considered that on some dispense equipment the 24V electrical power supply to the valves is cut, when the empty electrode in the carbonator bowl is reached. In that case the empty sensing must be bypassed, by e.g. short circuiting all connectors on the plug of the level probe connection.

Remark -> CO₂- or Water pressure sensors on the dispense equipment

Depending on the type of equipment you may have CO₂- or water pressure sensors installed, which will in case of low CO₂ or low water supply cut the 24V power supply to the valves.

In order to still be able to operate the system during the sanitization process, it is required to short circuit such sensors (make sure to put them back into operation after service).

Remark -> Post-mix valve blocks

It is recommended to clean / sanitize the valve blocks separately. Especially valve blocks with an integrated stop cock (e.g. Lancer block) need special care, as the gap in the stop cock allows bacteria to collect, which might not be sufficiently treated with the sanitizing agent.

In case the dispenser is out of operation (without cooling) for more than 10 days, it is necessary to run the cleaning- and sanitization procedure prior to putting the unit back into operation.

Should it be necessary, to open a once sanitized system again (e.g. to install a new water filter) all opened connections must be disinfected with a sanitization spray prior to reconnecting.

Scrapping or disposal of the unit

Scrapping or disposal of the unit must comply with local regulations.

The water bath insulation contains the blowing agent pentane, which escapes very slowly. When cutting or breaking this insulation the formation of a flammable pentane-air mixture has to be anticipated.

A.) Flushing-in of sanitization agent (e.g. P3 Ansep CIP from Ecolab)

1.) Syrup Lines

- 1.1)** The product lines filled with syrup must first be flushed with water. For this an external water distributor can be used to connect and flush several syrup lines simultaneously. The post-mix valves should be operated on the syrup side only for flushing.

Attention!



Gas driven syrup pumps must not see any positive pressures on the incoming side of the pump, as this may damage the pumps.

- 1.2)** Connect the water distributor to the CO₂-supply in order to drive the water out of the syrup lines. This Avoids, that the sanitizing agent is being diluted in the tubing. Afterwards close the CO₂-gas and depressurize the complete system again.
- 1.3)** Fill your cleaning tank with the cleaning / sanitizing agent according to the mixing ratios given by the manufacturer of the agent. (e.g. when using P3 from ECOLAB -> 50ml for 1 litre water = 5% solution) In order to achieve a proper mixing in the cleaning tank, it is recommended to first fill in the agent and then top-off with clean water.
- 1.4)** Connect the syrup lines to the cleaning tank and dispense cleaning / sanitization agent from every single dispense valve. Make sure that agent leaves from all installed taps.

2.) Water Lines

- 2.1)** Close the water- + the CO₂-supply to the unit and depressurize the system with the taps
- 2.2)** Disconnect the water supply to the unit and cut the power supply to the carbonator pump in order to avoid dry running of the pump (e.g. by pulling the plug of the pump).
- 2.3)** Connect the water line feeding the dispenser to CO₂-gas pressure and drain all water from the tubing of the system. This ensures that the sanitizing agent that is afterwards flushed into the dispenser is not being diluted e.g. in the carbonator bowl. Afterwards close the gas supply again and depressurize the system.
- 2.4)** Connect the cleaning tank to the water inlet of the dispenser and pressurize the tank with approx. 0.3 MPa (3 bars) pressure

Attention!



Remove any water filters before doing this!

- 2.5)** Pull the safety relieve valve on the carbonator bowl and carefully let some sanitizing agent leave the valve. This ensures, that the carbonator bowl is flooded completely with sanitizing agent all the way to the top.

Attention!



Avoid that excessive amounts (= >50ml) of agent is being introduced into the water bath, as this will carry the risk of corrosion of metal parts in the water bath. In case larger amounts were spilled, the water in the water bath needs to be replaced. The cooler works with a membrane / diaphragm pump. Please make sure the pump is in operation when the sanitizing agent is being flushed into the unit. This will ensure that all parts of the pump will come into contact with the sanitizing agent.

- 2.6) Flood the complete dispense system with the cleaning / sanitizing agent by operating the post-mix valves. Ensure that on all valves clearly visible agent is being drawn.

Effect- / working time for the cleaning / sanitizing agent is min. 20 minutes!!

In the meantime remove the dispense nozzles from the valves and sanitize them manually by putting them for 20 minutes into sanitizing agent. In case it is seen that the nozzles are heavily dirty, clean the nozzles mechanically by using a clean brush and sanitization agent.

B.) Flushing-out of sanitization agent

1.) Syrup Lines

- 1.1) Disconnect the cleaning tank and bring out any remaining sanitizing agent from the syrup lines by using CO₂-gas. Afterwards close the CO₂-supply and depressurize the system via the dispense valves.
- 1.2) Connect the water distributor and sufficiently flush clean water through the syrup lines (for this please open only the syrup side of the dispense valves).
In case a hygiene water filter is being used with the dispenser, it is recommended to use for this flushing the water coming from the hygiene filter.

Attention!



It must be ensured, that no cleaning / sanitizing agent remains in the dispense system after service (risk of health injuries)!
The prove that all agent residues have been removed must be tested with indicator or test papers (contact agent manufacturer) & must be documented

- 1.3) Connect the syrup containers again to the syrup lines and dispense syrup on the post-mix valves until a consistent flow of syrup occurs again.

2.) Water lines

- 2.1) Pressurize the water line to the cooler with CO₂-pressure and dispense all sanitizing agent from the valves. This makes it easier to flush out any remaining agent from the system.
- 2.2) Close the gas again and depressurize the unit via the dispense valves.
- 2.3) Install a new water filter cartridge and reconnect the unit via the filter to the mains water line again (refer to filter manufacturer guidelines in case the filter needs priming prior to use).

In case a hygiene filter is being used on the dispenser, it must be ensured that the new filter cartridge is inserted prior to flushing the system with water. This ensures that a just sanitized system is not being contaminated again by using poor quality mains water to flush out any remaining sanitizing agent. Spray the filter head and the connecting position of the filter cartridge with an adequate sanitizing spray to avoid any introduction of bacteria again.

- 2.4) Open the mains water supply. Pull the safety relieve valve on the carbonator bowl until only clean water leaves the valve, to ensure that there are no residues of sanitizing agent left in the head area of the carbonator bowl.
- 2.5) Open the CO₂-gas supply to the carbonator and reconnect the carbonator pump to the power supply.

- 2.6) Dispense sufficiently water from the post-mix valves to ensure that no sanitizing agent is left in the system

Depending on the unit type (Over counter dispenser / large soda circuit installation with long python runs, etc.) the amount of water that needs to be dispensed may vary.

Attention!



It must be ensured, that no cleaning / sanitizing agent remains in the dispense system after service (risk of health injuries)!

The prove that all agent residues have been removed must be tested with indicator or test papers (contact agent manufacturer) & must be documented

Dispense from each tap a few beverages to fully put the system back into operation again. The cleaning / sanitization procedure must be documented accordingly and the documentation must remain at the cooler (this may vary depending on local regulations).

8 Problems and Troubleshooting

Before looking for problems with the dispensing equipment, first check:

- Is the electricity to the device interrupted?
- Is the flow of water to the device interrupted?
- Are the beverage containers empty?
- Is the CO₂-cylinder empty?

| Type of problem | Cause | Remedy |
|--|--|--|
| Beverage too warm, Compressor running | Condenser dirty | Use brush to clean condenser louvers |
| | Too much beverage Being dispensed | Note out-put capacity |
| Beverage too warm, Compressor not running | Compressor defective Electric control defective | Call service technician Call service technician |
| Beverage foams at a tap | Syrup stored too long And enriched with CO ₂ | Connect container with fresh product |
| Beverage foams at all taps | CO ₂ -pressure too high | Set pressure |
| | All Syrup Enriched with CO ₂ | Connect container with fresh product |
| | All beverage too warm | Check storage temp See "Beverage too warm ..." |
| Tap just outputs concentrate | Carbonator pump is not running | Check if water feed line is open |
| | | Check water flow pressure of 0.2 MPa (2 bar) |
| | | Check whether the carbonator motor is running; if not, call service technician |
| CO ₂ -volume in the beverage to low | Air in carbonator Too much beverage being dispensed | Bleed air Watch output capacity |
| | CO ₂ -cylinder empty | Change CO ₂ -cylinder |
| | Globe valve on CO ₂ - cylinder closed | Open globe valve |
| | Valve on pressure regulator closed | Open valve |
| | CO ₂ -pressure too low | Adjust pressure |
| | Water temperature too high | Adjust to lower temperature |
| Too much or not enough syrup in beverage (only post-mix) | Regulator in tap is clamping | Call service technician |
| | Delivery pressure for syrup too low or too high | Adjust CO ₂ -pressure |

9 Technical Data

| | Triton 150 HC | Triton 350 HC | Triton 350V HC | Triton 700 HC |
|--|--------------------------|--------------------------|---------------------------|--------------------------|
| Output capacity at a dispense rate of 2 drinks per minute** | | | | |
| a 0,355l (32°C) | 110 | 186 (40°C) | 200 (40°C) | 376 |
| a 0,3l (32°C) | 130 | 370 | 400 | 450 |
| a 0,3l (24°C) | 250 | 460 | 500 | 630 |
| Weight of ice bank in kg | 9 | 18,6 | 20 | 28 |
| Ice bank performance in kcal | 720 | 1490 | 1600 | 2400 |
| Ice build up in minutes | 160 (32°C) | 320 (40°C) | 247 (40°C) | 320(32°C) |
| Supply voltage | 230V / 50Hz | 230V / 50Hz | 230V / 50Hz | 230V / 50Hz |
| Power consumption in watt | 950 (5,5A) | 1200 (6.0A) | 1200 (6.0A) | 1120 (6.8A) |
| Compressor output in watt* | 500 | 724 | 724 | 905 |
| Refrigerant | R290 | R290 | R290 | R290 |
| Carbonator pump output in liter/hour | 280 | 280 | 280 | 280(560 FF) |
| Circulation pump output in liter/hour | 120 | 320 | 320 | 320 |
| Number of cooling coils: | | | | |
| Syrup | 6 | 6 | 6 | 8 |
| Premix | 1 | 1 | 1 | 1 |
| Drinking water | 1 | 1 | 1 | 1 |
| Still water | 1 | 1 | 1 | 1 |
| Dimensions in mm: | | | | |
| Height | 635 | 605 | 793 | 640 |
| Width | 620 | 850 | 635 | 840 |
| Depth | 410 | 470 | 495 | 490 |
| Shipping weight in kg | 58 | 80 | 83 | 95 |

* at -10°C evaporator temperature

** with 10 m SC python

Cooling capacities and output capacity at 24°C ambient temperatures and water or syrup inlet temperatures of 24°C and beverage outlet temperatures of less than 5°C.

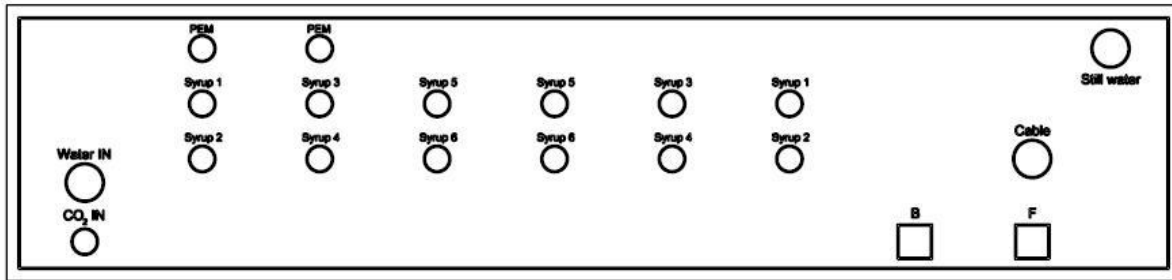
When Cornelius pythons are used, a cooling loss of 13 kcal/hour per meter length must be included in calculations.

We reserve the right to make modifications.

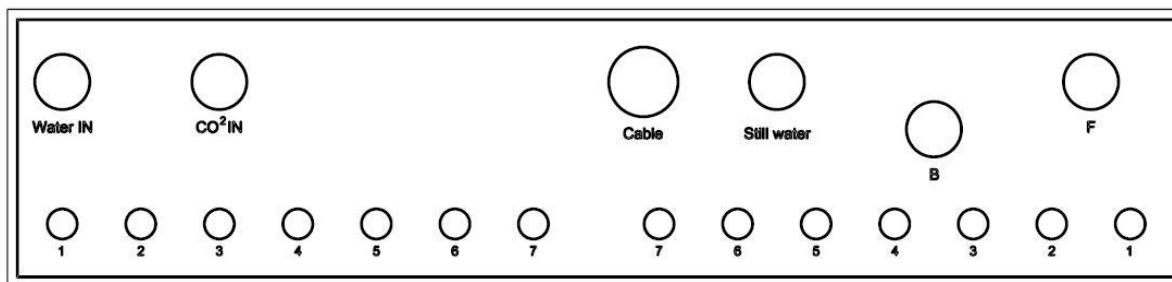
10 Illustration of the Triton

10.1 Connections at the Unit

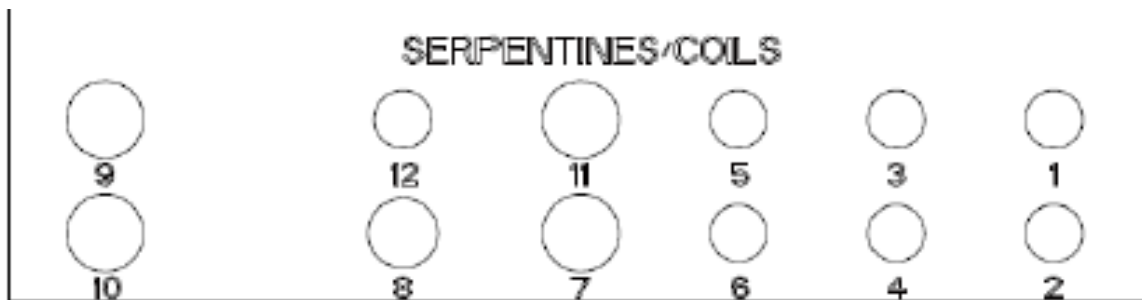
Triton 150 HC



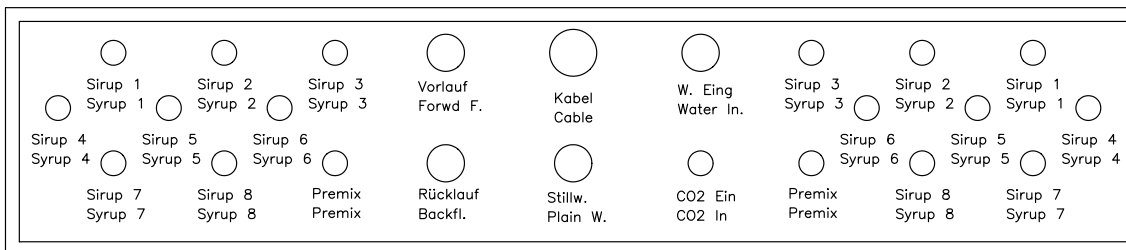
Triton 350 HC



Triton 350v HC

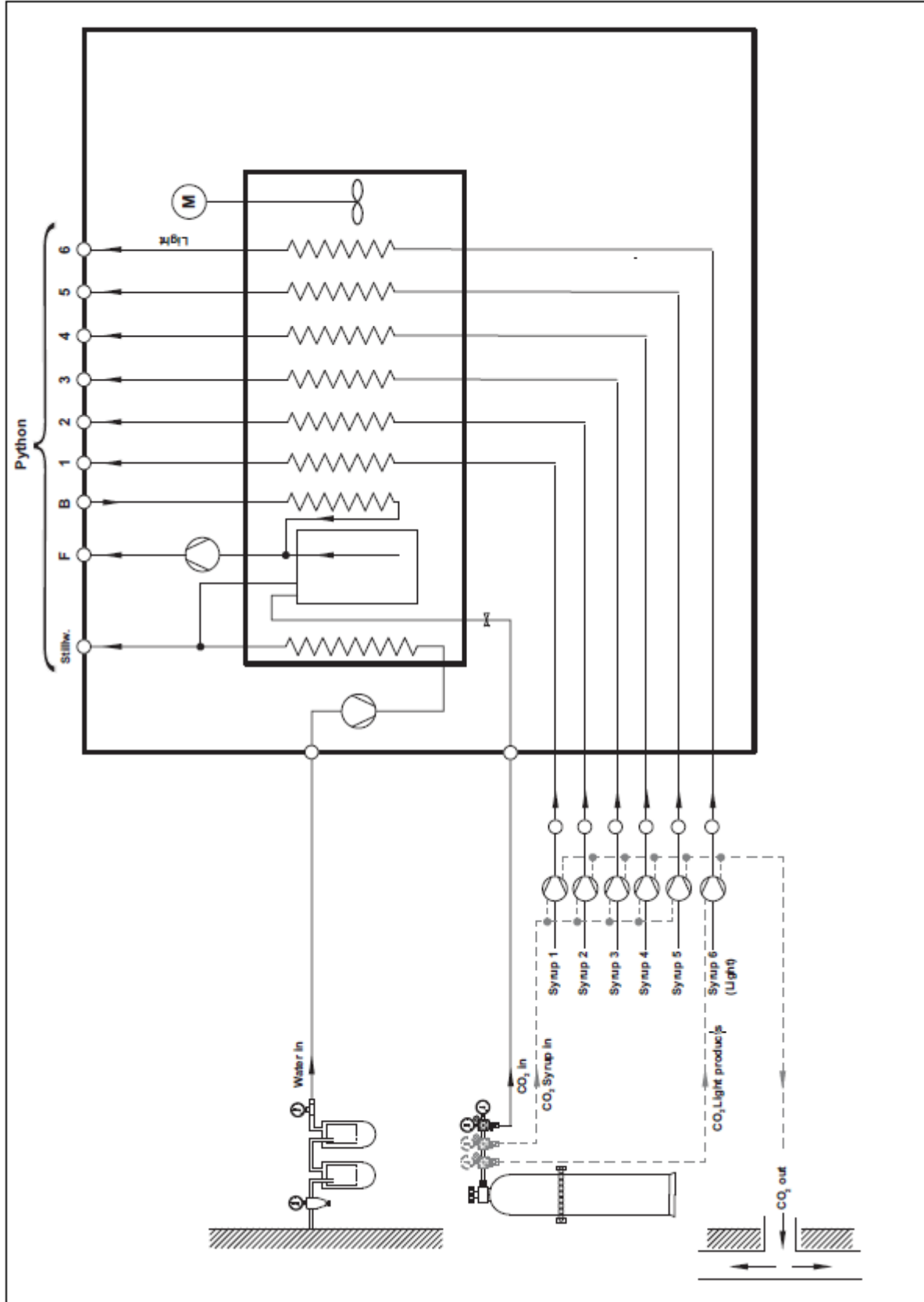


Triton 700 HC



10.2 Flow Chart

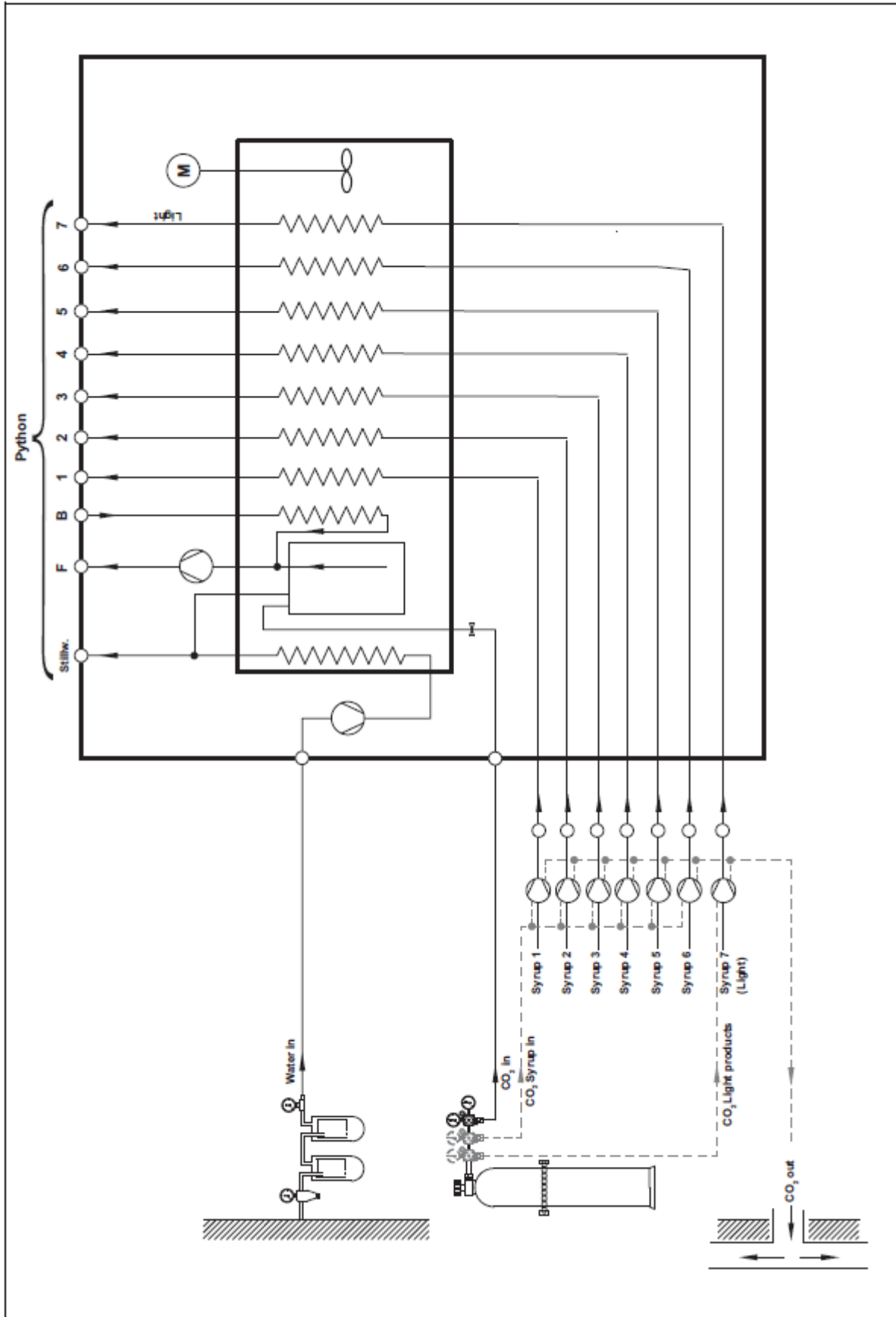
Flow Chart Triton 150 HC



B = Backward

F = Forward

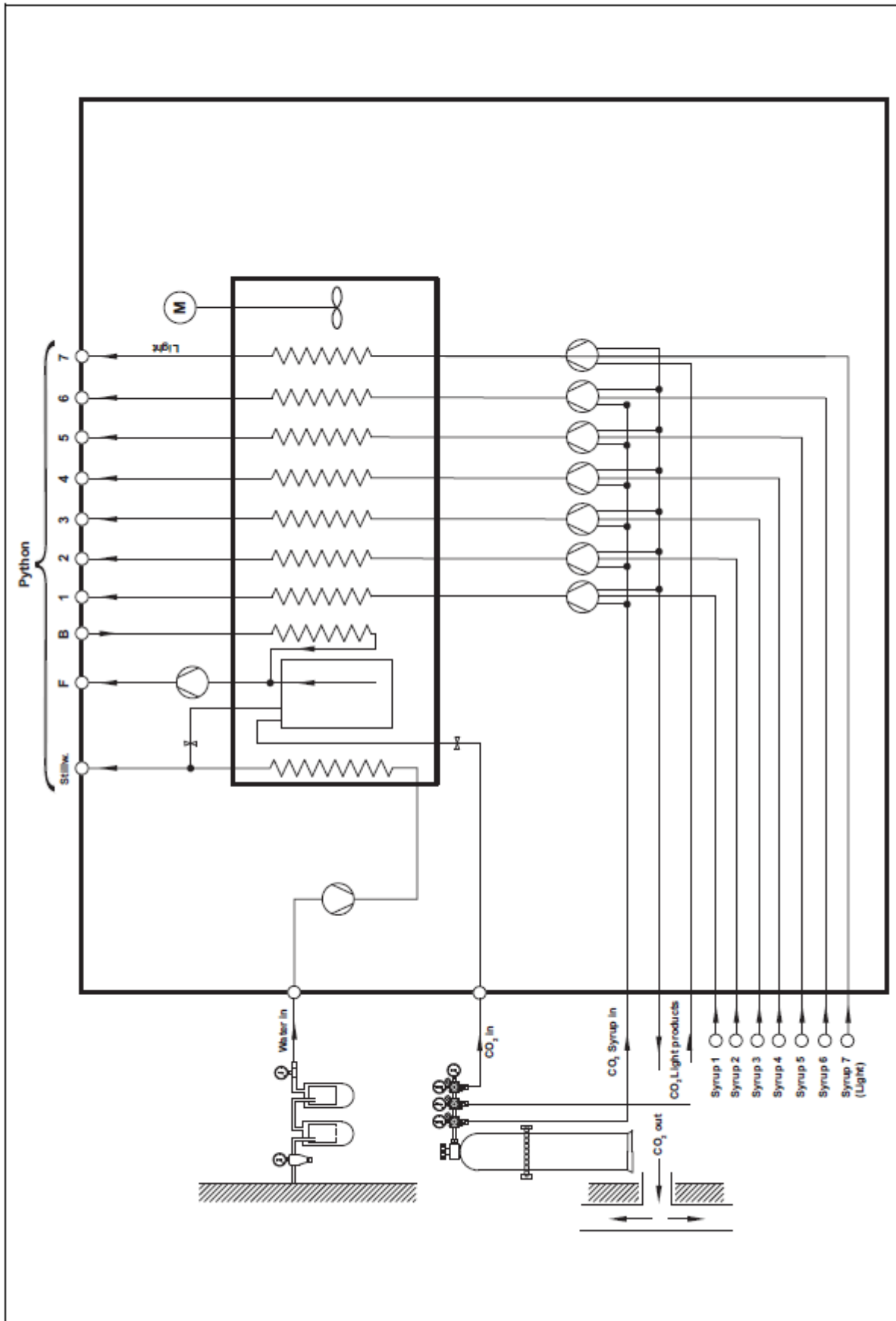
Flow Chart Triton 350 HC



B = Backward

F = Forward

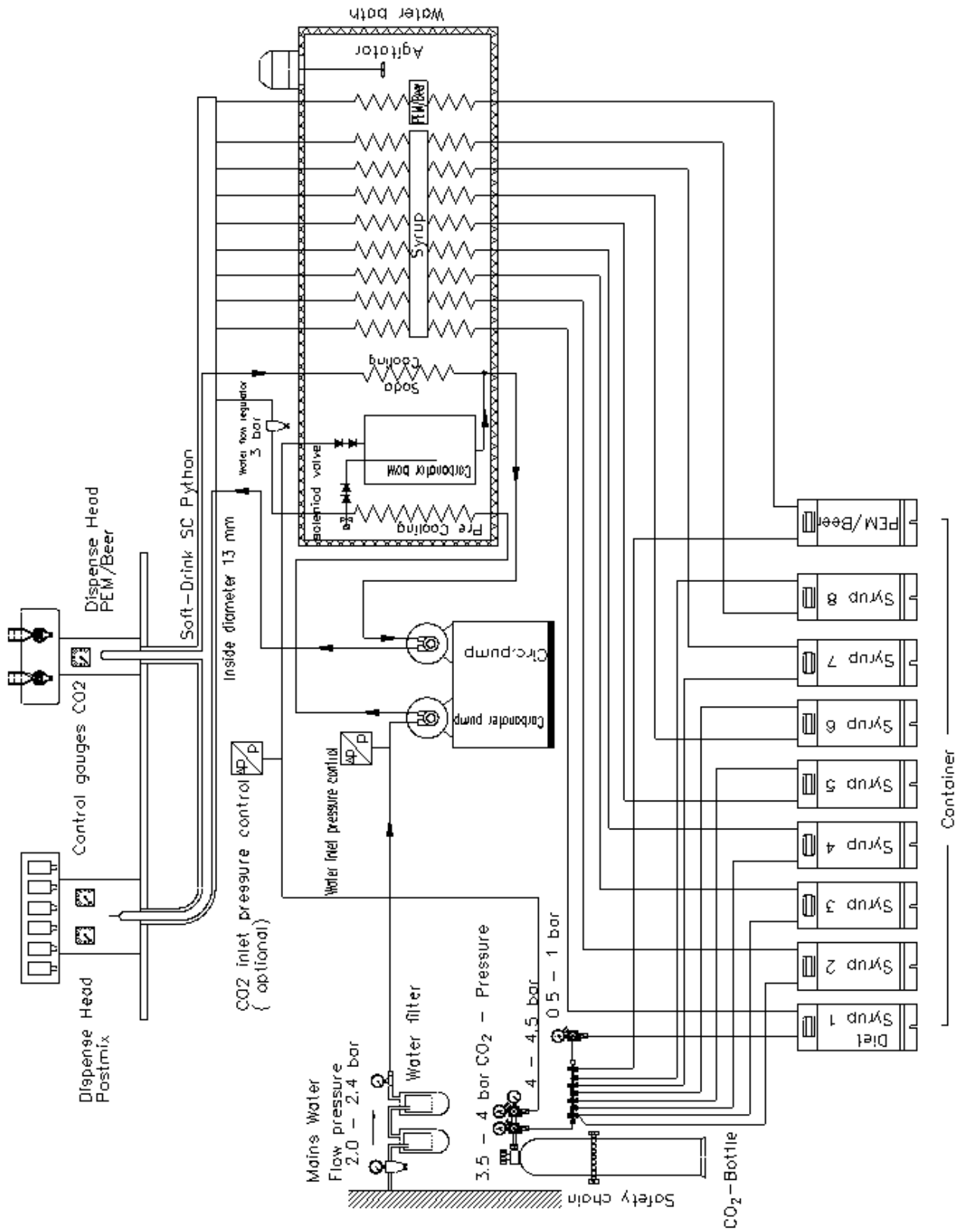
Flow Chart Triton 350v HC



B = Backward

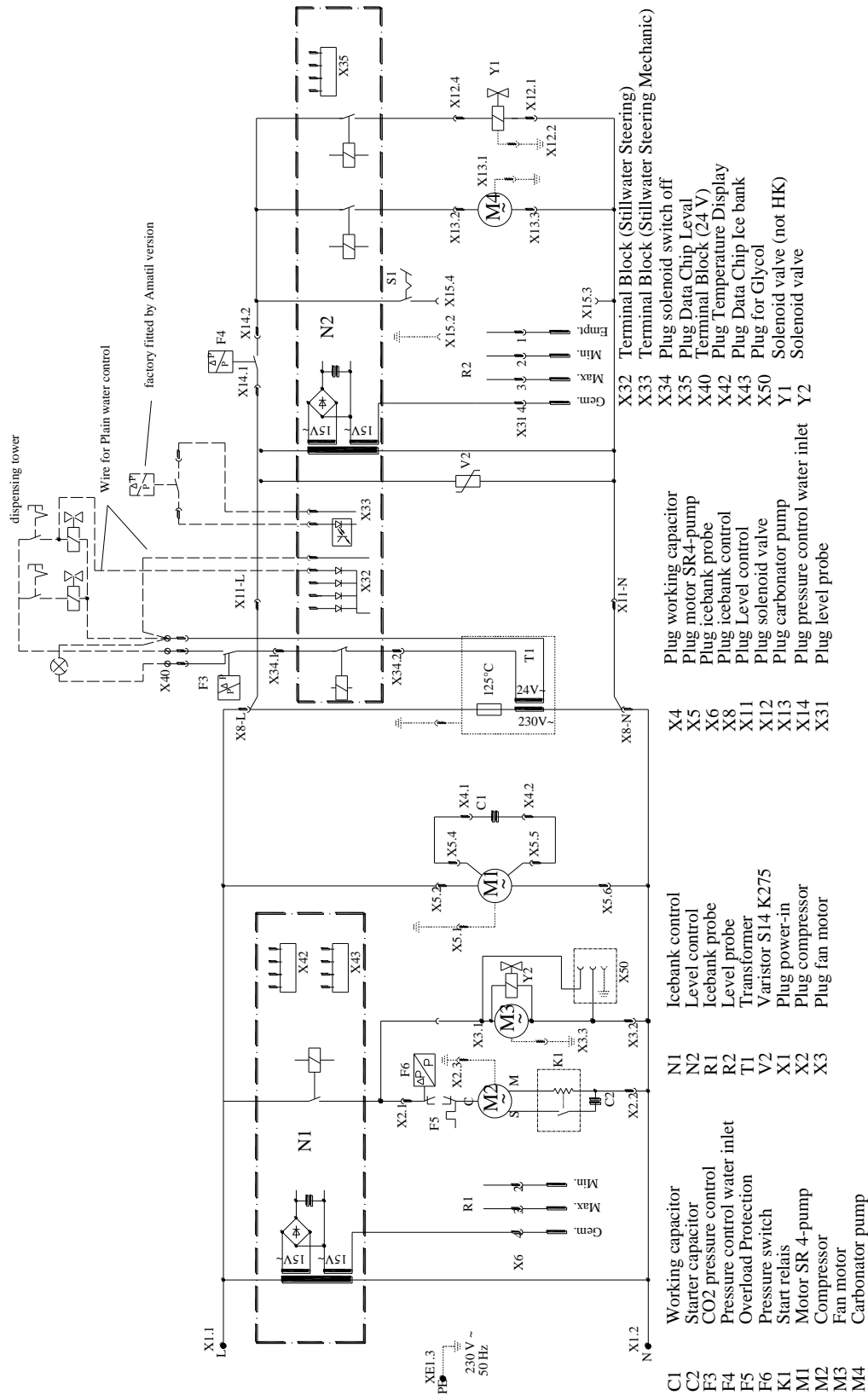
F = Forward

Flow Chart Triton 700



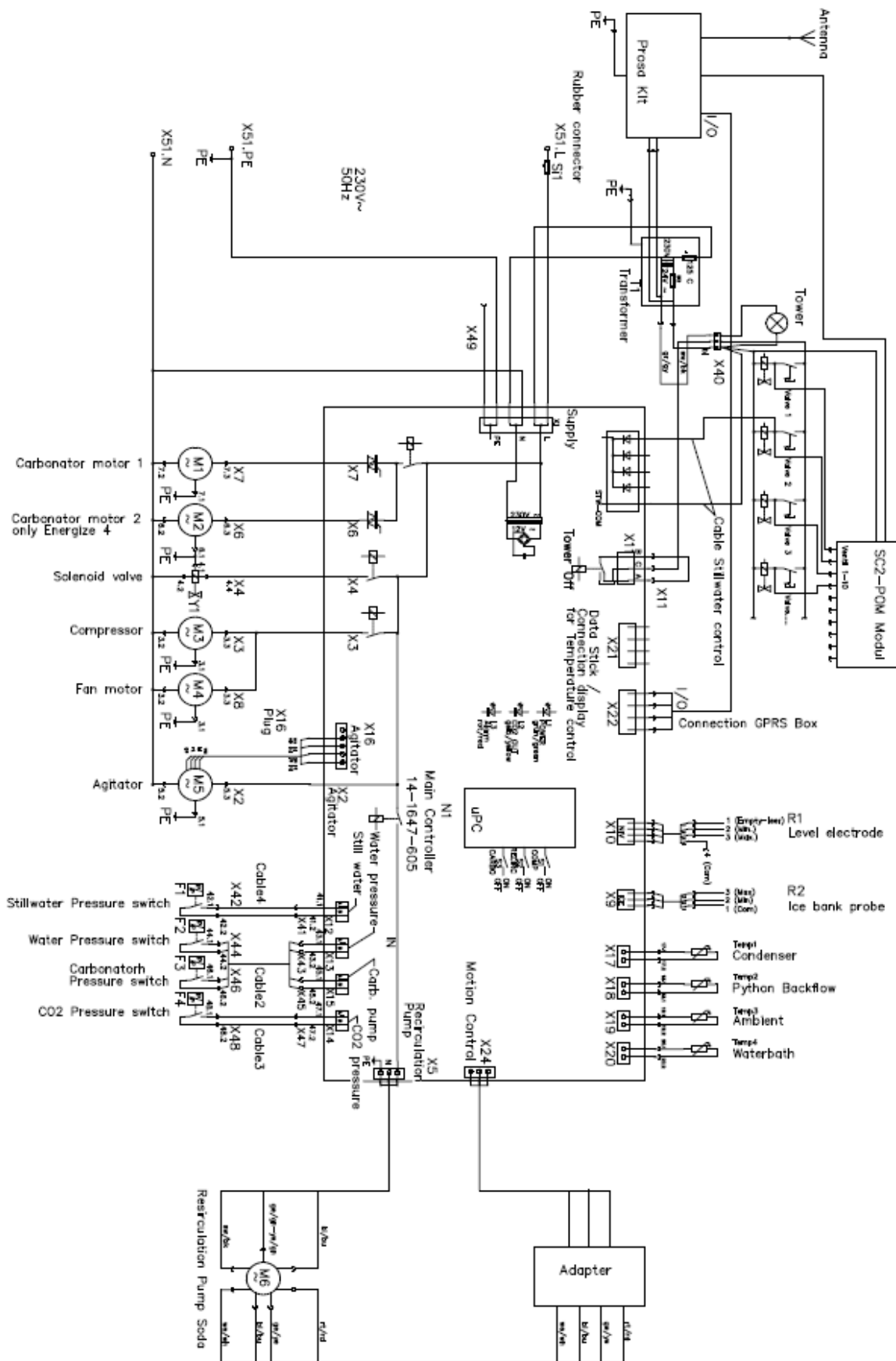
10.3 Circuit Diagram

Circuit Diagram Triton 150 HC



T1, F3, X40 not Amatil or Benelux
 F6, Y2 only watercond.
 X50 only glycol unit

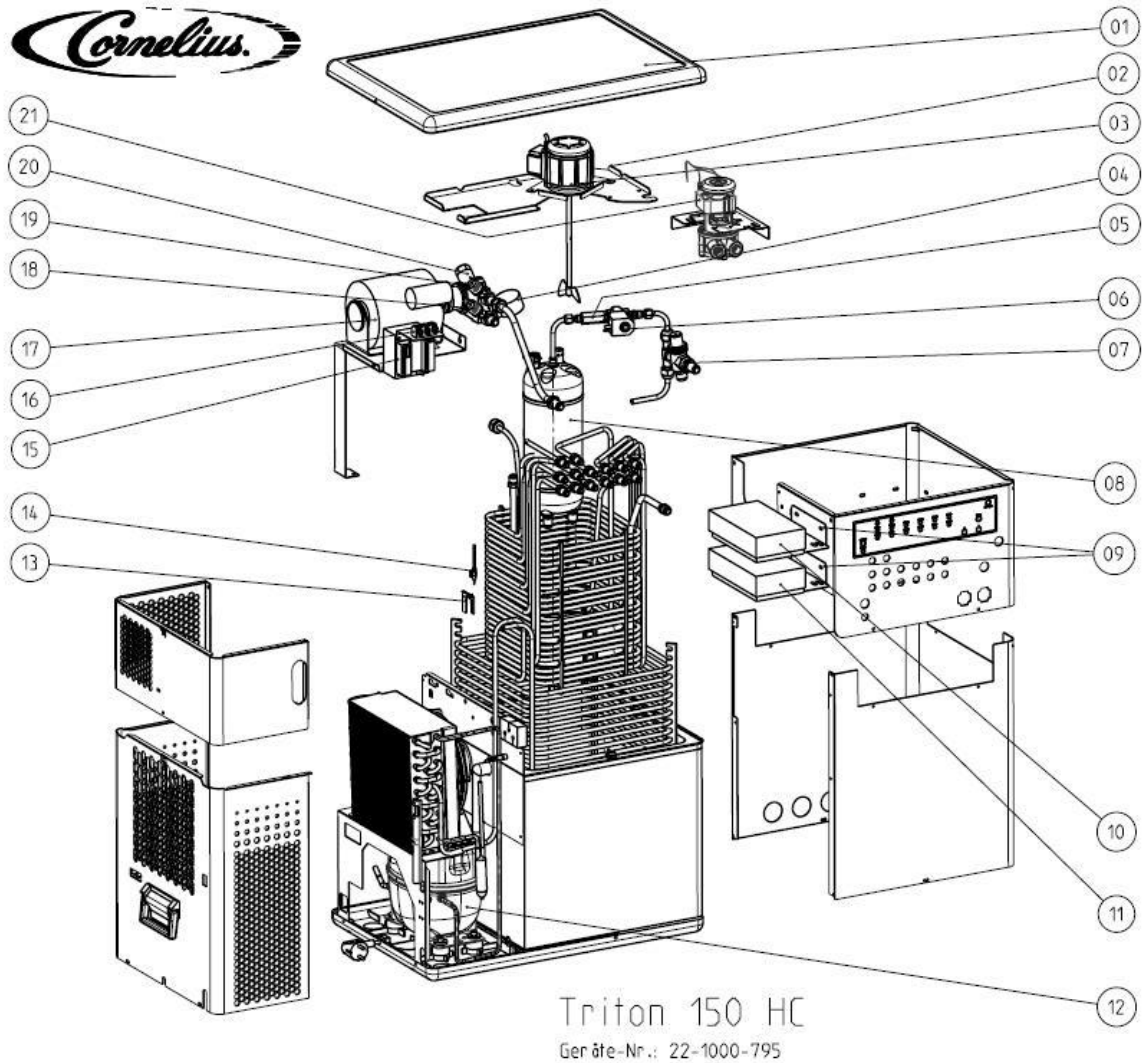
Circuit Diagram Triton 350 / 350v / 700 HC



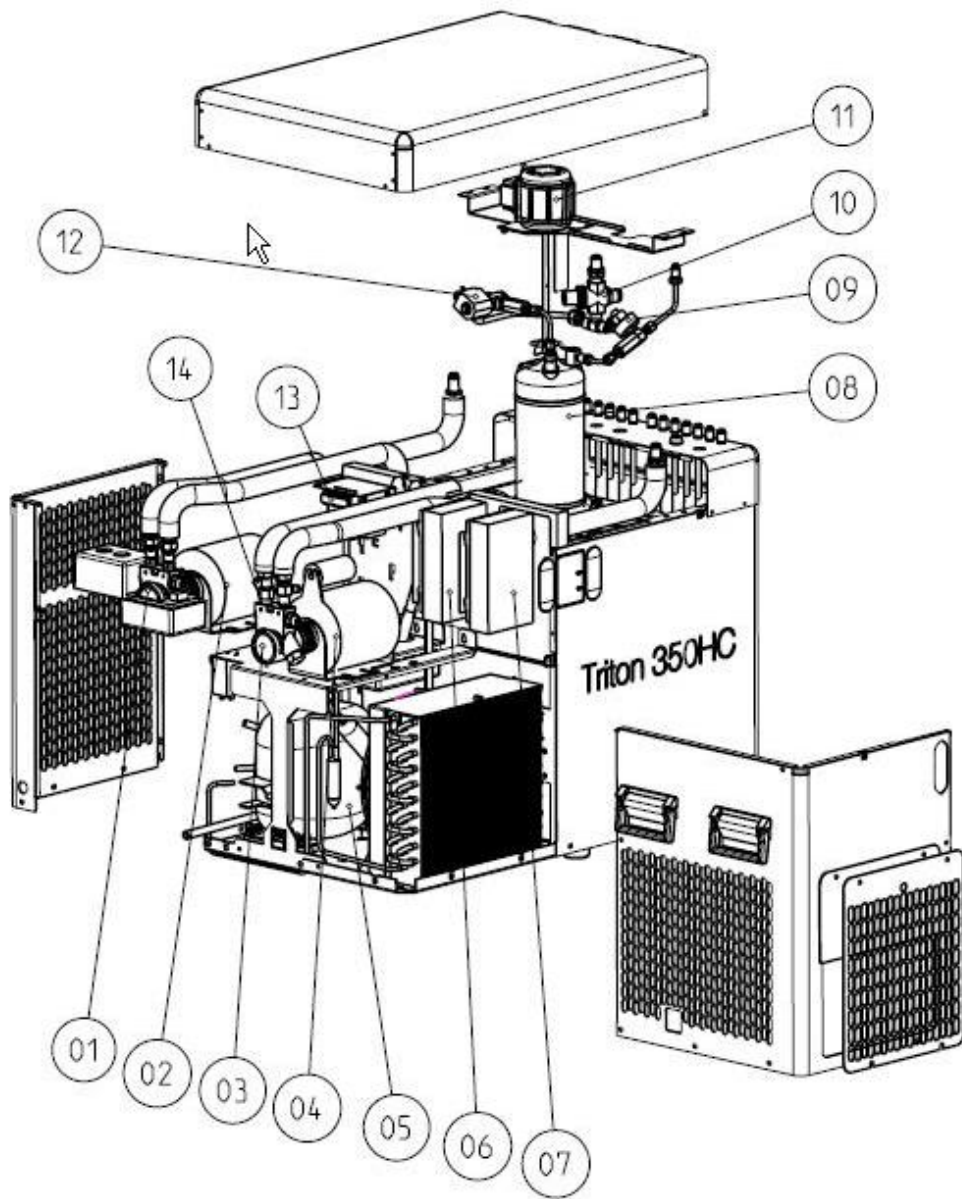
11 Exploded View / Spare part list

11.1 Exploded View

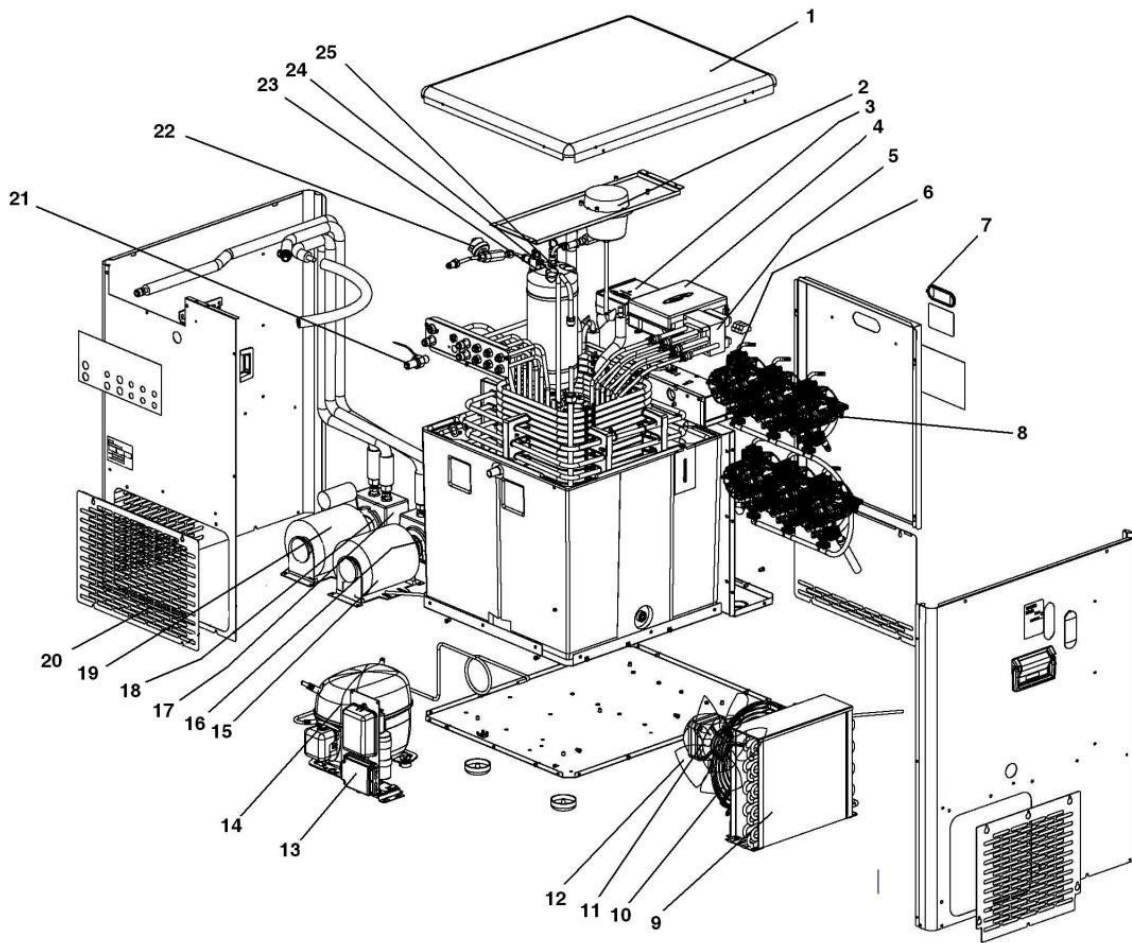
Exploded View Triton 150 HC



Exploded View Triton 350 HC



Exploded View Triton 350v HC



11.2 Spare Part List

Triton 150 HC

| Pos. | Part-No. | Description | Part-No. with option Prosa |
|------|------------|--------------------------------|--|
| 1 | 22011825 | Cover | |
| 2 | 22011615 | Traverse | |
| 3 | 440000105 | Agitator | |
| 4 | 142440100 | Gauge 0-25bar | |
| 5 | 220105624 | Double check valve water | |
| 6 | 440000672 | Solenoid | |
| 7 | 440000752 | Waterpressure regulator | |
| 8 | 220097540 | Carbonator bowl | |
| 9 | 220112306 | Bracket controller | N/A |
| 10 | 141647311 | Control Box level / Stillwater | 141647605B |
| 11 | 141647309 | Control Box temperature / ice | |
| 12 | 440005036 | Compressor | |
| 13 | 220110879 | Bracket icebank probe | |
| 14 | 220111550 | Assy ice bank probe | |
| 15 | 220046916 | Transformer | 141647545 |
| 16 | 148283003 | Plug screw border | 141647394 blue, 141647395 grey, 141647396 plate grey |
| 17 | 440000842B | Pump motor | |
| 18 | 220107391 | Pressure switch CO2 out | |
| 19 | 220107390 | Pressure switch H2O in | |
| 20 | 440000761 | Pump brass | |
| 21 | 060240149 | Totton recirc pump | |

Spare Part List Triton 350 HC

| | | | |
|----|------------|---------------------------------|------------|
| 1 | 440000771B | Water pump 100GPH VA | |
| 2 | 440000836B | Pump motor SC 190/80W | |
| 3 | 440000761 | Water pump 100 GPH MS | |
| 4 | 440000842B | Carbonator motor 400W-185W | |
| 5 | 440005045 | Compressor | |
| 6 | 141647309 | Control Box Temperature+Ice | 141647605B |
| 7 | 141647311 | Control Box Level + Stilwater | |
| 8 | 440000786 | Carbonator | |
| 9 | 149596020 | Pressure Switch CO ₂ | |
| 10 | 440000752 | Water Pressure Regulator G3/8" | |
| 11 | 440000105 | Agitator 50W, 200mm Shaft | |
| 12 | 440000672 | Solenoid Valve | |
| 13 | 220046916 | Transformer 100VA with Cable | |
| 14 | 142440100 | Low Pressure Gauge 0-25bar | |

Option Prosa

| | | |
|-----------|-----------|------------------------------|
| Not shown | 141647693 | Kit Hardware Prosa KISC2-POM |
|-----------|-----------|------------------------------|

Option RCBO for Triton 350

| | | |
|-----------|-----------|--------------------|
| Not shown | 220046714 | Harness RCBO |
| Not shown | 220116247 | Bracket RCBO |
| Not shown | 141647763 | Fuse 16A-30mA RCBO |

Spare Part List Triton 350v HC

| | | |
|-----------|------------|--|
| 1 | 060241726 | Lid assembly 3V |
| 2 | 440000105 | Agitator motor 50 Watt |
| Not shown | 143350000 | Propellor 60mm |
| 4 | 220111462 | Circuit Board Icebank/Level |
| 5 | 220107889 | Transformer 200VA |
| 6 | 220099108 | Beverage Gas Pump |
| 7 | 220105715 | Vision Panel - MC |
| 8 | 302200000 | Mounting Clip |
| 9 | 220101068 | Verflüssiger für 15cc Kompressor |
| 10 | 220101067 | Fan cowl for condenser |
| 11 | 440000006 | Fan Motor 230V/50Hz 7W EBM |
| 12 | 440000062 | Fan Blade Diameter 230mm Blow |
| 14 | 440005045 | Compressor Secop SC10MNX R290 |
| 15 | 440000836B | Recirculation motor 190W 80W 230V/50Hz60 |
| 16 | 440000771B | Pump recirculation SS 100 gallon (370l) |
| 17 | 148914000 | Procon Insulation for 100G pump |
| 18 | 440000761 | Pump carbonation brass 100 gallon (370l) |
| 19 | 440000842B | Carbonator motor 400W 185W 230V/50Hz |
| 20 | 060241731 | Grill Service |
| 22 | 890904815 | Pressure Switch Out 50/60 psi |
| 23 | 440000802 | Level Probe 3-Pin Assy |
| 24 | 440000786 | Carbonator Bowl 280mm |
| 25 | 000001116 | Relief valve convertible |
| Not shown | 220112027 | Bracket ice bank probe 3V |
| Not shown | 220046976 | Cable Ice bank probe |
| Not shown | 220111270 | Holder Ice Bank Probe |
| Not shown | 220106425 | Water Level Float - Energize |