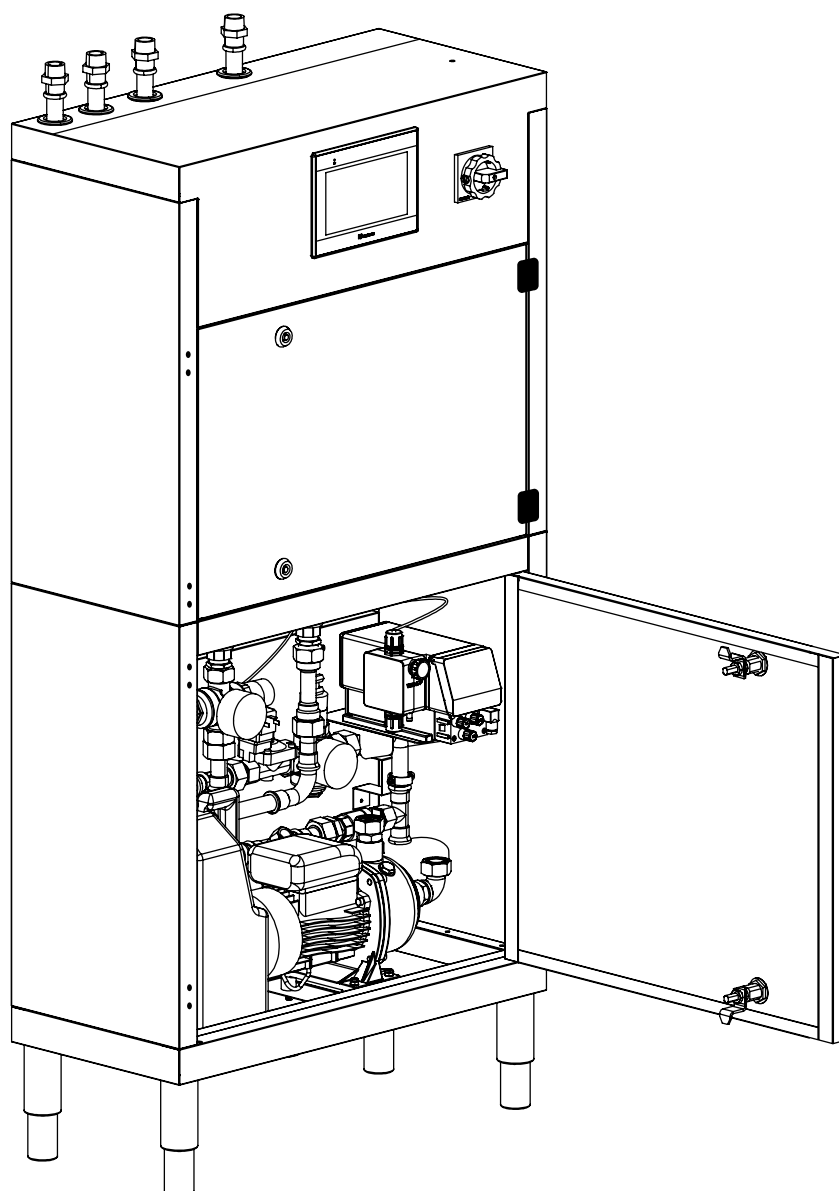


# CCW-C-MOD

Water Wash Control Cabinet with Cold Mist On Demand

## Installation, Commissioning and Maintenance





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# 1 User Quick Start

## 1.1 References, notices, cautions, warnings and dangers

### **Caution**

alerts you to the risk of material damage and tells you how to avoid the problem.

### **Reference**

indicates a reference to an existing guide or documentation.

### **Warning**

indicates a risk of material damage or personal injury.

### **Notice**

indicates important information that can help you make better use of your product.

### **Danger**

indicates a risk of material damage, personal injury, or even of deceased.

## 1.2 Manufacturer Information

### Halton FoodService France










Halton Foodservice SAS, Zone  
Technoparc Futura CS80102  
62402 Béthune Cedex, France










+33 (0)1.80.51.64.00

## 1.3 Tools and Hardware

### Tools

	Drilling Machine		Perforator		Riveting Tool
	Measuring tools		Grinder		Water level
	Screw driver		Lazer level		Chalk
	Clamp		Hammer		Nibbler
	Mitre saw				

### Hardware

	Concrete anchor		Plastic anchor		Nut
	Bolt		Rubber gasket		Nut/bolt
	Flat washer				

### Additional

	Unlock		Lock		Magnet
---	--------	---	------	---	--------



## 1.4 Dimensions and description of the CCW-C-MOD control cabinet

The control cabinet subject of this guide is used along with the Water Wash hoods combined with the Cold Mist technology. The hood models concerned can be combined with other technologies such as M.A.R.V.E.L. or the UV-C Capture Ray™ system.

The Hot Water Wash technology is used to automatically wash the filters.

The Cold Mist technology is used for heavy duty cooking appliances where UV-C lamps can't be used. It reduces the temperature of the exhaust air and removes sparks, grease vapours and grease particles released by the cooking appliances.

**CCW-C-MOD** is used along with Cold Mist on Demand CMW hoods only and handles both the Cold Mist and hot Washing cycles. They are equipped with an additional cold water circuit for the cold mist that is automatically switched on/off, depending on the cooking activity, using a solenoid valve installed on each hood section.

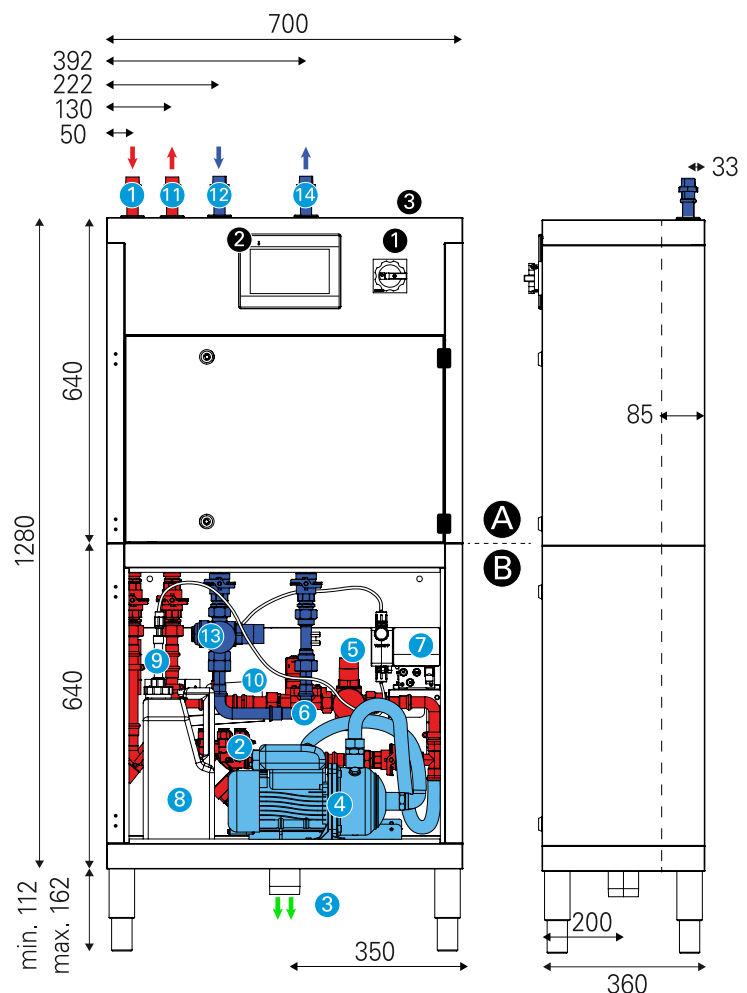
Control cabinet is equipped with an integrated or remote LCD touch screen. It provides an intuitive and efficient user interface. The control system has extended communication capabilities, including the Building Management System (BMS).

### A Controls and electrical unit:

- 1 Emergency switch off
- 2 User LCD touch screen (remote on option)
- 3 Electrical connections

### B Hydraulic unit:

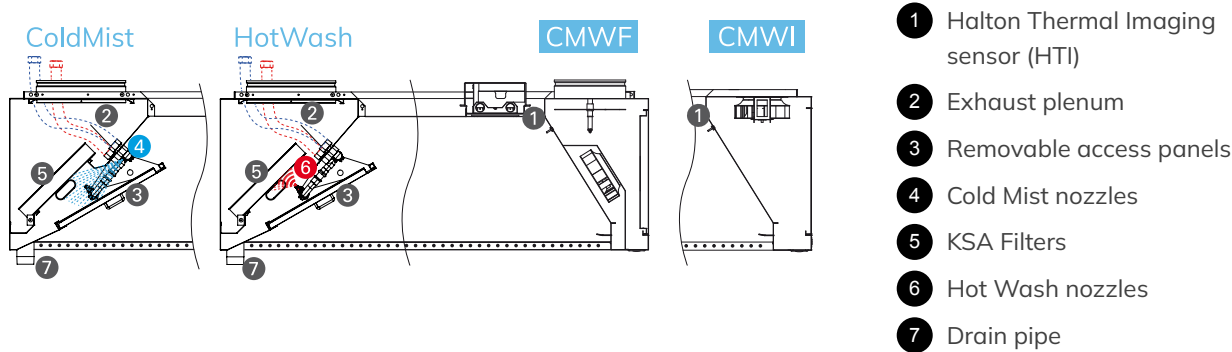
- 1 Hot water inlet - Male DN 20 - 3/4" connection nipple
- 2 Hot water backflow preventer
- 3 Backflow preventer water outlet Male DN 50 - 2" connection nipple
- 4 Booster Pump and support (optional)
- 5 Hot water pressure reducer
- 6 "Washing" solenoid valve
- 7 Detergent dosing pump
- 8 Detergent tank (Ecolab Topmatic Perfect)
- 9 Detergent level probe
- 10 Leak deflector
- 11 Hot water outlet - Male DN 20 - 3/4" connection nipple
- 12 Cold water inlet - Male DN 20 - 3/4" connection nipple
- 13 Cold water pressure reducer
- 14 Cold water outlet - Male DN20 - 3/4" connection nipple



# 1.5 Hoods with Cold Mist on Demand and Hot Water Wash

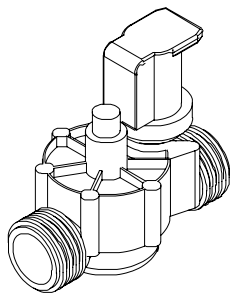
The Hot Water Wash principles are the same as described in the previous chapter. CMW hoods integrate one additional spray manifold for the Cold Mist curtain located immediately after the air inlet slot, in the bottom

of the exhaust plenum. The hot and cold spray manifolds are both managed by the MOD control cabinet.



## 1.6 Components description

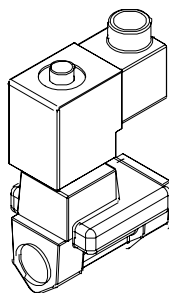
### 1.6.1 Hot Wash solenoid valve



Hot wash	
Seal material	NBR
Pressure Range	0.5 -10 bar
Voltage	24 VDC
Power	10W
Nominal diameter	DN20 - 3/4in
Temp. range	-30 / 120°C

Solenoid valves located above the exhaust plenum.

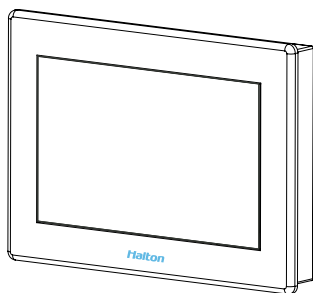
### 1.6.2 Cold Mist solenoid valve



Cold Mist	
Seal material	NBR
Pressure Range	0.2 -15 bar
Voltage	230 VAC (50/60 Hz)
Power	9W
Nominal diameter	DN20 - 3/4in
Temp. range	-20 / 90°C

Solenoid valves located above the exhaust plenum.

### 1.6.3 Halton TouchScreen as user interface



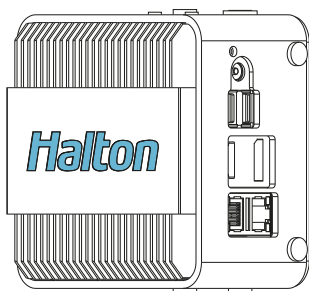
Halton Touch Screen is an advanced user interface which has extended capabilities in terms of display, functions, and communication. It is typically used when there's a request for advanced information about the system(s) operation or when several of the Halton Technologies listed below are combined with each other:

- UV-C Capture Ray™ technology;
- PolluStop emission control units;
- M.A.R.V.E.L. Demand Controlled Ventilation system;
- Cold Mist on Demand technology;
- KGS duct safety system;
- Water Wash technology.

#### Reference

See the User guide dedicated to the Halton TouchScreen

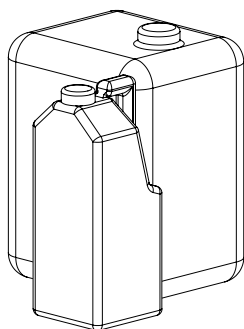
### 1.6.4 Halton Connect (Option)



Halton Connect IoT platform based on an integrated 4G/LAN gateway that feeds in real-time Halton Connect web Portal with advanced information about your systems.

Status, warnings and alarms, standard and custom data analytics, components lifetime, energy and water savings, forecasts and many other advanced information, all accessible anytime from anywhere, with a visual and intuitive dashboard!

### 1.6.5 Detergent



Control cabinets use detergent for the hot washing cycles. Halton tested several types of detergent to select the most efficient, considering the type of spraying nozzles, the respect of stainless steel and the presence of a significant amount of grease on the filters and/or exhaust plenums.

**Halton recommends the use of Ecolab Topmatic Perfect detergent.**

## 2 Installation

### 2.1 General

Warranties and liabilities apply to Installation, Commissioning and Maintenance (ICM) of the Products and/or Services covered by this guide.

- Halton warrants that Products and/or Services are provided in conformity with the project specifications and European standards prevailing at the time of production or servicing and are free from defects. This warranty stands for one (1) year after date of commissioning for Products and stands for a period duly specified in the contracts in case of services. Such warranties are solely limited to the repair or replacement of the defective Products or Services and do not apply to minor defects.
- These warranties are given in lieu of any statutory warranty being implied or expressed, or any warranty as regards the adequacy of Products or Services to the purpose for which the Client or its own customers are acquiring the same, or as to any implied or expressed representations made to the Client in the course of negotiations or performance of any order.
- Defects caused by the Client, their agents or representatives which are the result of any fault or wilful damage, negligence, improper warehousing or storage, improper use, alteration or modification of any Product or Service without prior approval of Halton, installation or assembly of Products, to the exception of works made by Halton's servants or agents, or defects due to normal wear and tear, are excluded from the terms of this warranty.
- When defects are found in Products or Services which are designed by third parties, incorporated to, added to or mixed with Halton's Products or Services in order to give a particular feature, technicality, functionality or treatment to the Client's products or to Halton's processes, Halton shall not be liable. Nor will Halton replace any defective Product as a consequence of using or handling the Products or Services in a manner or circumstances or for purposes other than those specified in any order.
- Also, Halton is not liable concerning any recommendations it may give as to the use of the Products or Services in respect of the infringement of patents or other Intellectual property rights held by third parties.

- In no case should Halton be liable for any indirect costs or losses under any circumstances. If found liable on direct losses by a judge or an arbitrator, Halton shall be liable only up to the maximum sum paid by the Client.

#### Notice

The product/service subject of this guide is intended for commercial kitchens or food industries. Any other scope is to be considered improper, unless confirmed to the contrary by one of Halton customer services.

#### Notice

It is the responsibility of the contractor to inform Halton about potential specific requirements or specific local codes. If questions or complications should arise during the service proceedings or the installation, commissioning or use of the product subject of this guide, that cannot be solved using the accompanying instructions, please contact one of our customer services or local representatives.

#### Notice

Whatever the product(s) installed or service carried out, it is the responsibility of the ordering party to check if there has been any modification of the kitchen layout and ductwork, or of the cooking appliances properties compared to the information transmitted to Halton during the project phase and used to design the system(s)/service(s).

#### Notice

It is the responsibility of the contractor to check the product(s) installation height, service access and other dimension limitations or recommendations, applicable to the cooking appliances and/or systems covered.

#### Notice

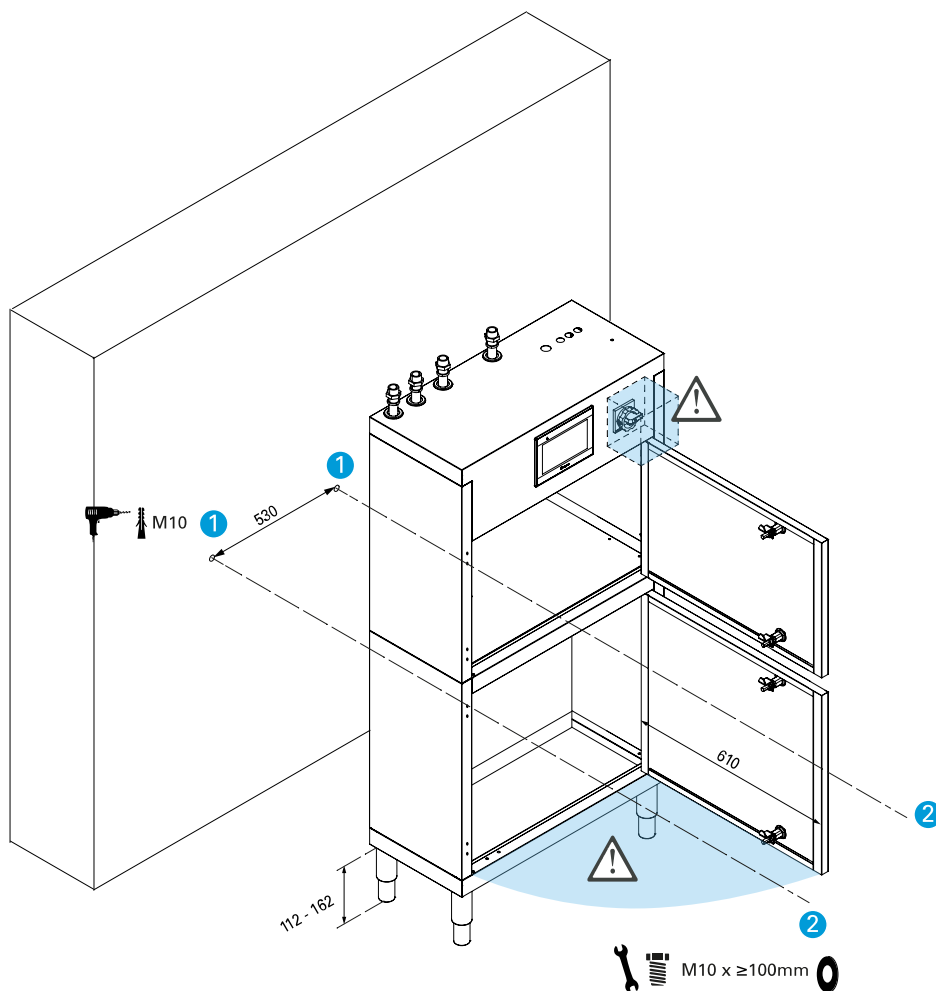
If this product is not installed/maintained directly by a Halton team, it has to be positioned, installed, wired, commissioned, used and maintained according to Halton recommendations, state-of-the-art and all applicable codes.

## 2.2 Installation of the Control cabinet

### 2.2.1 Fixing of the Water Wash control cabinet

#### ⚠ Environmental conditions

To prevent condensation inside the control cabinet, it shall be installed in a dry and tempered room. Special attention has also to be given to the insulation of the walls the cabinet is fixed on. It is not recommended to install it inside a dishwashing area.

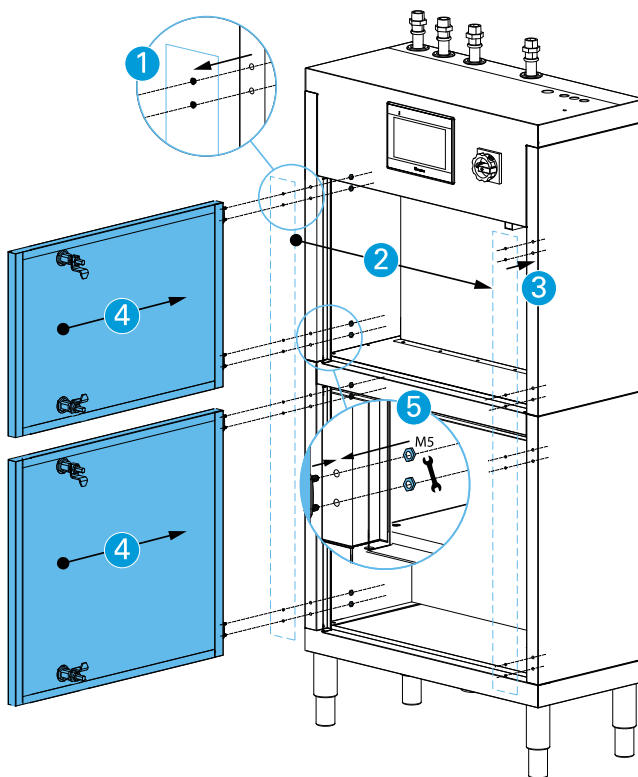
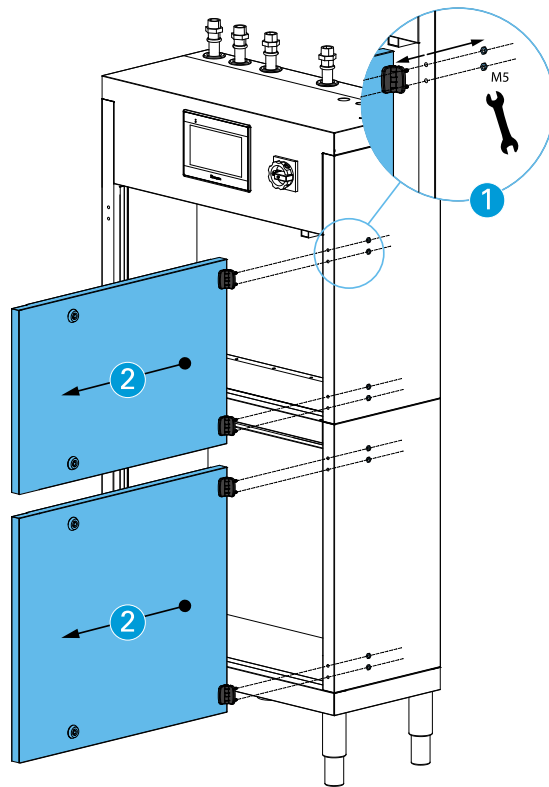


#### ⚠ Warning

HEAVY! Do not lift objects over 18kg alone. Use a lift or seek assistance.



## 2.2.2 Change the door opening direction



## 2.3 Preliminary Instructions

### Storage of the products before installation

The products must be stored away from bad weather, moisture, marine salt or abnormal temperature to avoid degrading the quality of the materials. Exposure to direct sun light is also inadvisable. It leads to an alteration of the protecting plastic films. They are then particularly difficult to remove.

### Unpacking of the products

Halton uses several types of packaging. Whatever the type, special care must be given to the unpacking. Without being limitative:

- When applicable, remove the external protective or heat-shrinkable film, taking care not to scratch the outer surfaces (use scissors or a blade if necessary).
- Remove cautiously the general protections made of wood or cardboard as well as specific protections such as cardboard angles.
- Unless contrary instruction in the installation chapter, products have to remain on their pallet till they are placed in their installation location. When protection films are used on non-visible sides, they have to be removed before installation. The films on the other protected surfaces have to be removed after installation and commissioning operations of the products are completed, just before the final handover. Packaging materials that can be recycled must be disposed off in conformity with current local safety regulations.

### Disassembly, storage and waste

#### **Caution**

The disassembly operations must be carried out by qualified personnel.

The specific requirements enforced by the legislation and local authorities of each country where the products have to be disassembled must be observed. Temporary storage of special waste is permitted, but only if the final purpose is the definitive disposal by treatment and/or final collection.

#### **Disposal of plastics**

Recycling or disposal of plastic waste must be carried out in accordance with the law or regulations of each country.

#### **Recycling of wood**

Recycling of wood waste must be carried out in accordance with the law or regulations of each country.

#### **Recycling of cardboard**

Recycling of cardboard waste must be carried out in accordance with the law or regulations of each country.

#### **Disposal of electronic and other components**

Any electronic and other components of Halton's products and systems should be assessed for the most suitable recycling route in accordance with WEEE provisions.

#### **Keep Environment Clean!**

## 2.4 Wiring and connections

### 2.4.1 Requirements

#### Notice

To wire and connect the Water Wash control cabinet, please refer to the operating diagrams which follow and/or project specific diagrams delivered by Halton's customer service.

#### Hot Water Characteristics (Wash)

Min temperature	45°C
Max temperature	55°C
Max hardness	8°DH (15°TH)
Cabinet capacity	30 l/mn max
Cabinet pressure loss	1,5 bar @ 30 l/mn
Water flow per nozzle:	
Water Wash hoods and ceilings	1,22 l/mn @ 3 bar
CMW hoods (Hot Wash + cold mist)	3,1 l/mn @ 1,4 bar

#### Cold Water Characteristics (Mist)

Temperature	18-20°C (ambient)
Max hardness	8°DH (15°TH)
Cabinet capacity	30 l/mn max
Cabinet pressure loss	2,5 bar @ 30 l/mn
Water flow per nozzle	0,25 l/mn @ 1,6 bar

#### Hydraulic distribution pipework

Material	CNS 1.4301
CCW water outlets	Male DN 20
CCW Water inlets	Male DN 20

#### Solenoid valves:

Acceptable pressure	10 bars
<b>Hotwash:</b>	
Control voltage	24 VDC by cabinet
<b>Cold Mist:</b>	
Control voltage	230 VAC by cabinet

#### Control cabinet power supply:

600W @ 230 VAC/50Hz



## 2.4.2 Principles of hydraulic connections

### 2.4.2.1 Water supply

#### Notice

Water inputs and outputs are marked directly on the control cabinet by following stickers:



Hot water input



Cold water input



Hot water output

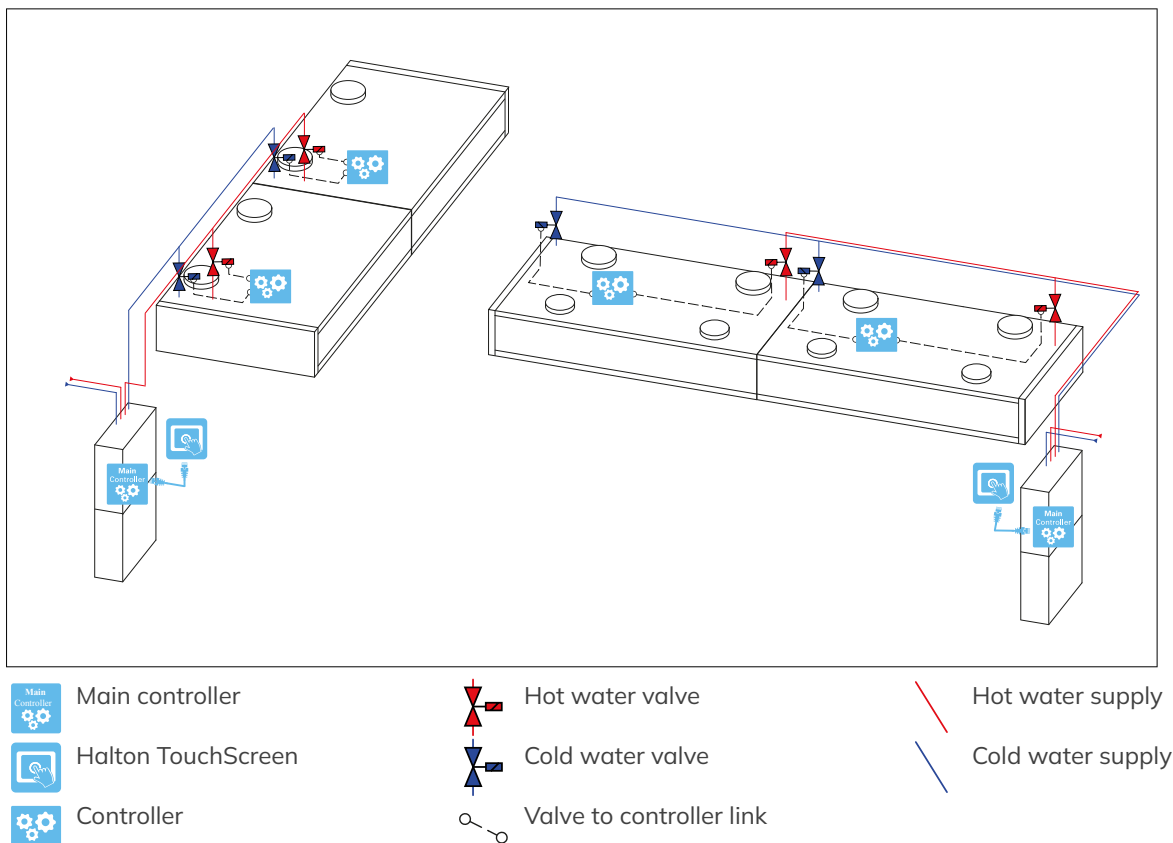


Cold water output

#### Caution

Hot Water!! Be careful and wear protective equipment when working on hot water circuits

### Hot Wash and Cold Mist



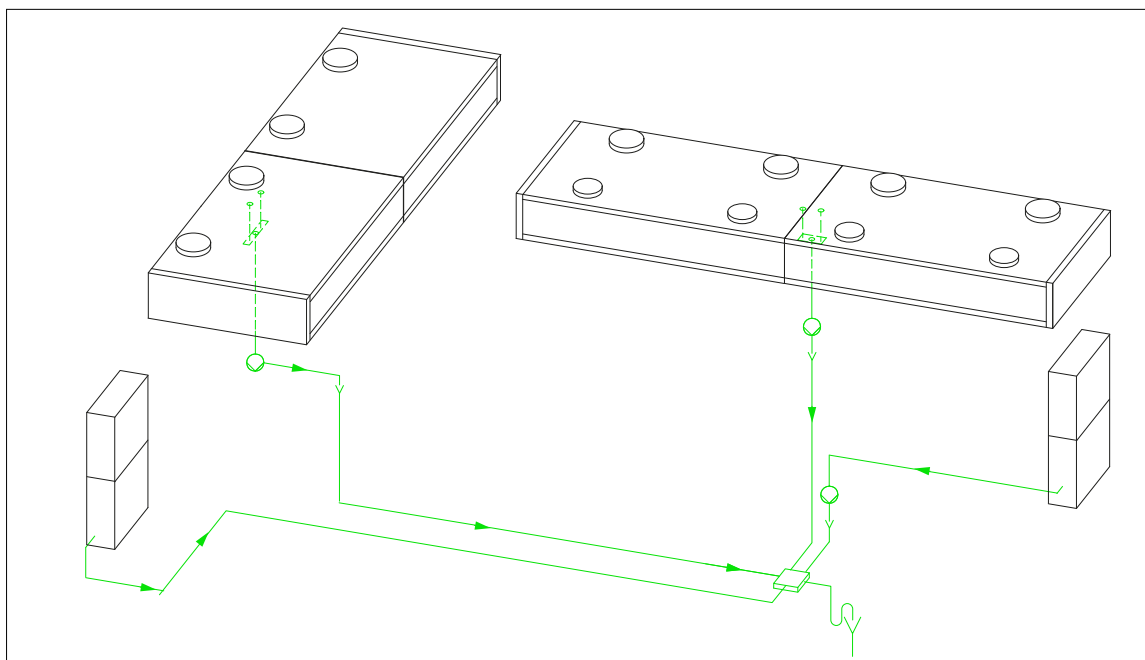
### 2.4.2.2 Wasted water




#### ⚠ Caution

Location of the hoods or ceiling waste water drain is defined before the manufacturing, it cant be changed afterward.

#### ℹ Notice

All pipes and plumbing material to be provided and installed by a third party



-  Sewage lift pump (optionnal)
-  Kitchen drainage system equipped a grease trap
-  Connection to the building's or city's waste water system

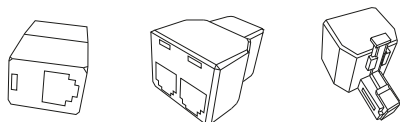
## 2.4.3 Wiring principles

### 2.4.3.1 Communication line controller

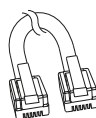
#### ⚠ Caution

A wrong type of cable or connector can irreversibly damage the controllers. It is highly recommended to check them before use.

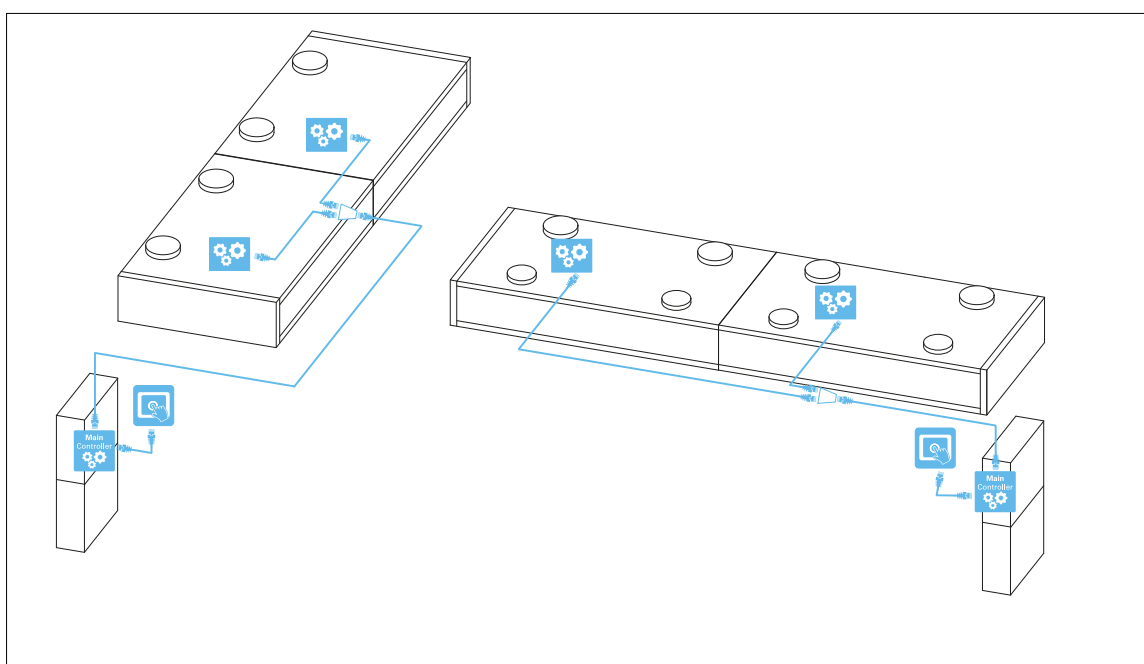
#### Communication connectors



#### Communication cables



- RJ12-6-4 with crossed connector type
- RS485 maximum length : 200m



Main controller



Halton TouchScreen



Communication cables



Splitter



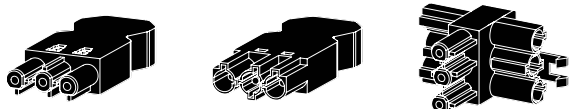
Controller

### 2.4.3.2 Power supply for the hoods/ceilings controllers

#### **Danger**

Work on electrical systems and equipment may only be carried out by authorised and trained, qualified electrical engineers.

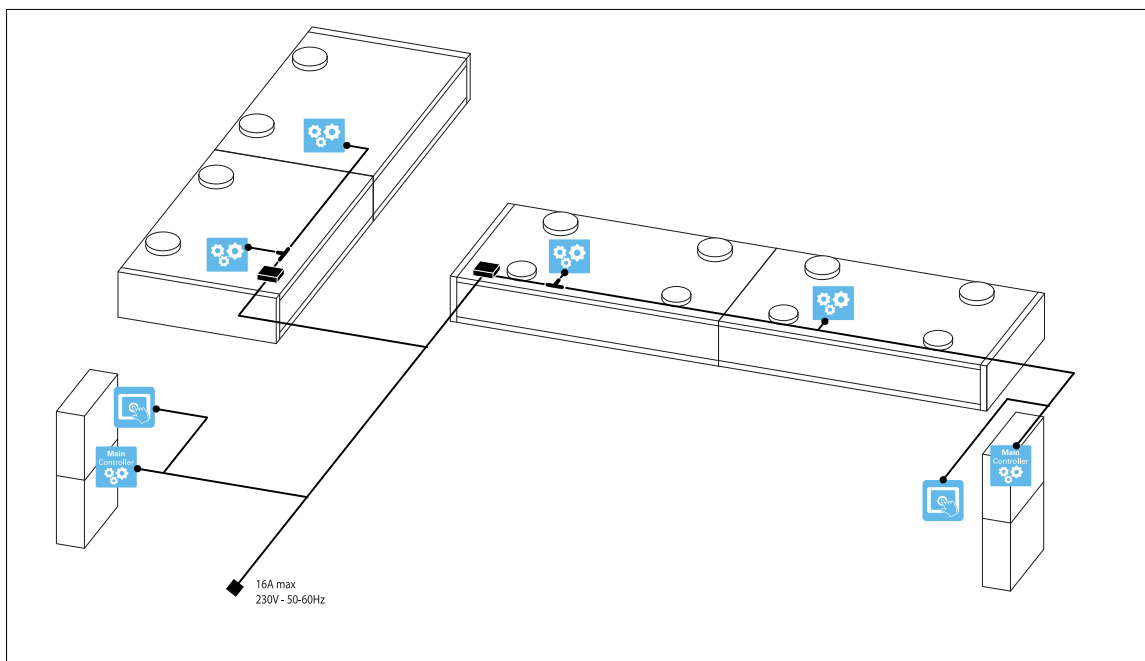
Ensure that the power supply has been turned off.



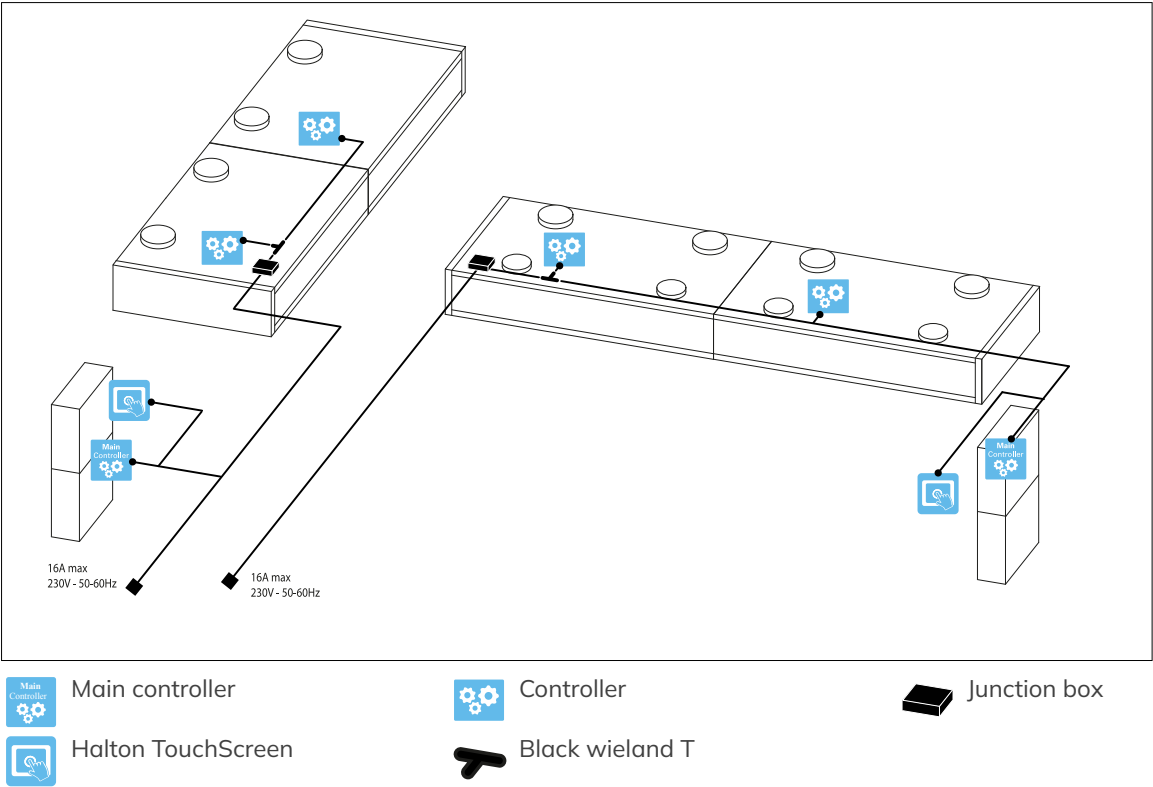
Each control system is linked to the power supply by means of black 'wieland' connectors and comes with female lead.

Maximum capacity : 16 A

#### Power supply - 1 line



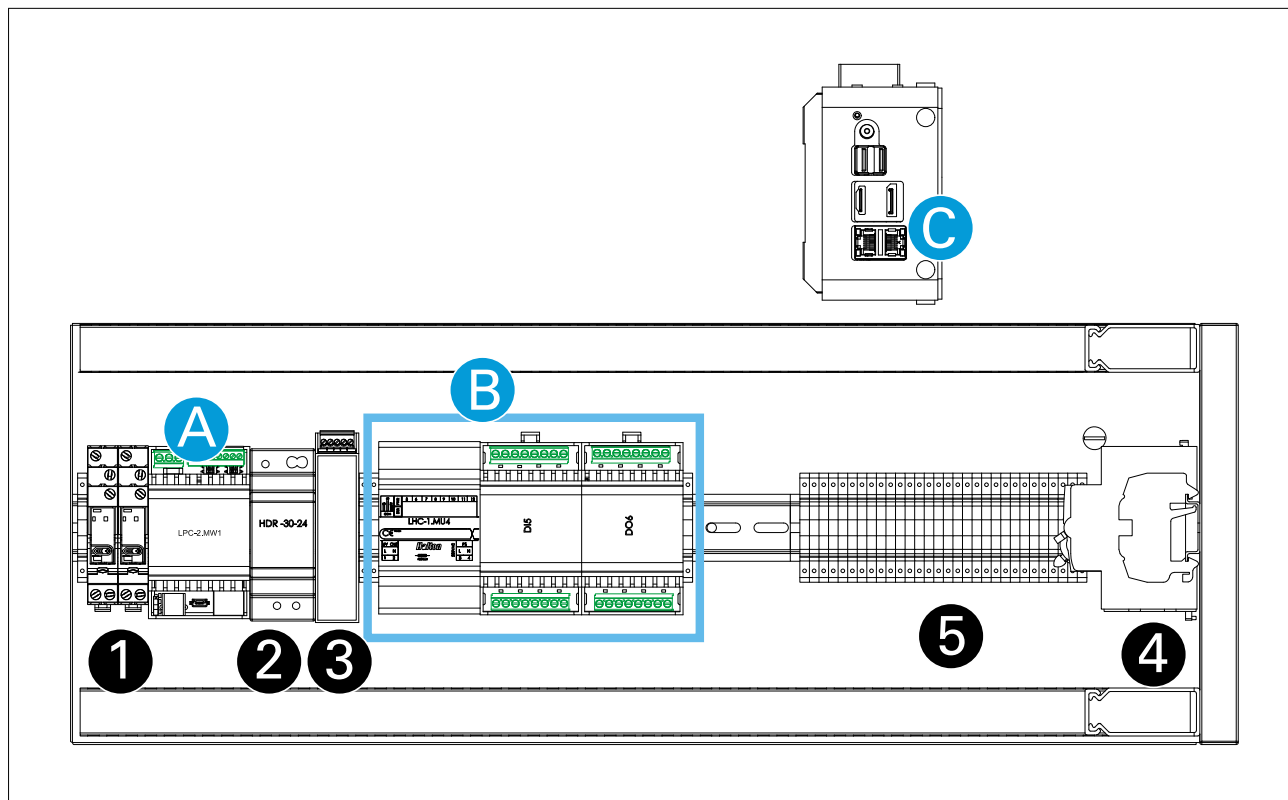
Power supply - 2 lines











### 2.4.3.3 Control Cabinet's electrical unit - Overview

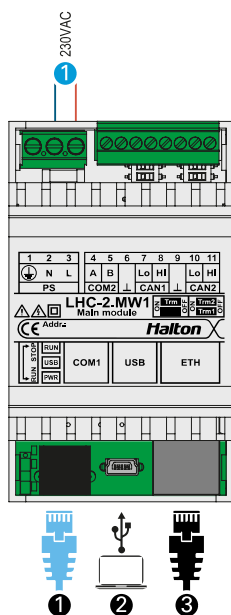
#### Notice

The CCW-C control cabinet range controls by default the wash/mist solenoid valves through the exhaust devices' communication network.



-  Main controller
  -  WaterWash digital I/O
  -  Halton Connect 4G/LAN gateway
  -  Relays for detergent and booster pumps
  -  24 VDC power supply
  -  LAN switch
  -  Circuit breakers (general, detergent pump, booster pump)
  -  Terminal blocks
- X1: Main power supply

### 2.4.3.4 Main controller



Connection to be done on site

**LHC-2.MW1** - Main Module

- 1 Power supply  
**PS L-N** 115/230VAC 50/60Hz  
 X1 1-2-PE

- 1 Communication - RS485  
**COM1** 0-5V

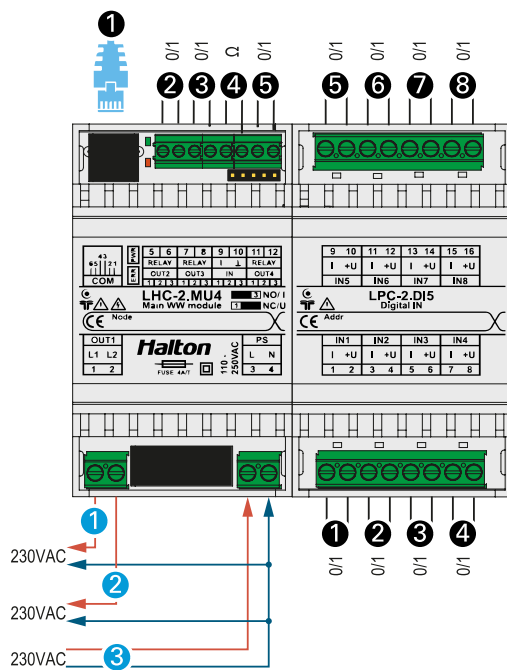
- 2 USB - Laptop  
**USB**

- 3 Ethernet  
**ETH**

#### Notice

When the Waterwash and Cold mist technologies are combined with other Halton technologies, the main controller can be completed with digital I/O modules. Refer to the ICMs specific to other technologies or specific wiring diagrams.

### 2.4.3.5 WaterWash digital I/O



#### LHC-2.MU4 - Main WW Module

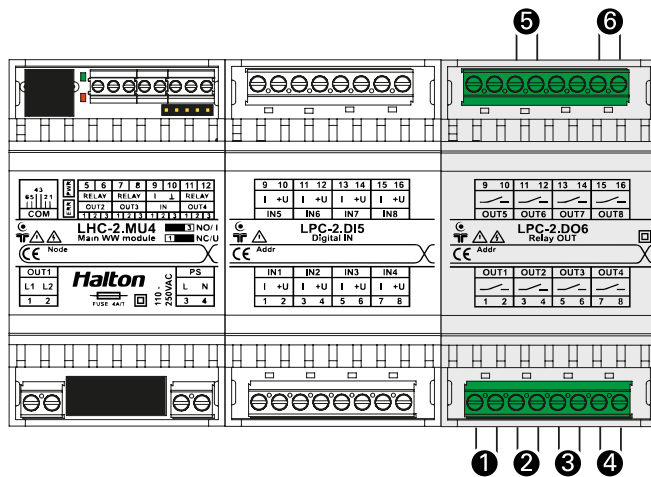
- |  |   |  |
|--|---|--|
| <p><b>1</b> Booster pump<br/>OUT1 L1 100-253VAC/4A out<br/>internal fuse protection 4A/T<br/>X0 7-8-PE</p> <p><b>2</b> Detergent pump<br/>OUT1 L2 100-253VAC/4A out<br/>internal fuse protection 4A/T<br/>X0 5-6-PE</p> <p><b>3</b> Power supply<br/>PS L-N 110-250VAC 50/60Hz<br/>X1 1-2-PE</p> | <p><b>1</b> Com</p> <p><b>2</b> Spare<br/>OUT2 5-6 110-253VAC 1A out<br/>Break contact(NO/NC) without<br/>internal fuse protection</p> <p><b>3</b> Water valve<br/>OUT3 7-8 110-253VAC 1A out<br/>Break contact(NO/NC) without<br/>internal fuse protection<br/>X0 11-12-PE</p> | <p><b>4</b> Water temperature<br/>IN 9-10 0-20mA 0-10V<br/>Analog Input Rin=250ohms<br/>Rin=10Kohms<br/>X0 13-14</p> <p><b>5</b> Exhaust Fan On signal - Wash<br/>request<br/>OUT4 11-12 110-253VAC 1A<br/>out<br/>Break contact(NO/NC) without<br/>internal fuse protection<br/>On module</p> |
|--|---|--|

#### LPC-2.DI5 - Digital In






- |   |   |  |
|---|---|--|
| <p><b>1</b> Fire Alarm Option<br/>IN1 1-2 24VDC - 10mA<br/>Bridge / On module</p> <p><b>2</b> Emergency Stop Option<br/>IN2 3-4 24VDC - 10mA<br/>Bridge / On module</p> <p><b>3</b> Detergent level Alarm<br/>IN3 5-6 24VDC - 10mA<br/>X0 15-16</p> | <p><b>4</b> Cold Water Pressure<br/>IN4 7-8 24VDC - 10mA<br/>On module</p> <p><b>5</b> Exhaust VFD feedback<br/>IN5 9-10 24VDC - 10mA<br/>Bridge</p> <p><b>6</b> Ext. Wash start<br/>IN6 11-12 24VDC - 10mA<br/>On module</p> | <p><b>7</b> Wash permit<br/>IN7 13-14 24VDC - 10mA<br/>On module</p> <p><b>8</b> Hot Water Pressure<br/>IN8 15-16 24VDC - 10mA<br/>On module</p> |
|---|---|--|



## Additional outputs



### LPC-2.D06 - Relay OUT

- |   |   |
|---|---|
| <p>1 Water Temperature Alarm<br/> <b>OUT1 1-2</b><br/>  On module</p> <p>2 Cold Water pressure Alarm<br/> <b>OUT2 3-4</b><br/>  On module</p> <p>3 Detergent level Alarm<br/> <b>OUT3 5-6</b><br/> X0 17-18</p> | <p>4 Hot Water pressure Alarm<br/> <b>OUT4 7-8</b><br/>  On module</p> <p>5 Fan request<br/> <b>OUT6 11-12</b><br/>  On module</p> <p>6 Common Alarm<br/> <b>OUT8 15-16</b><br/>  X0 19-20</p> |
|---|---|

## 3 Commissioning

### 3.1 Prerequisite for commissioning by Halton

#### Notice

It is highly recommended to entrust the commissioning of the product/technology subject of this guide to a Halton team or an authorized Halton partner, especially when combined with other Halton products or technologies.

The main steps of a commissioning generally consist of:

- Checking that the products/technologies installation matches all Halton's requirements and especially the wiring instructions.
- Implementing the settings required to adapt all Halton products, technologies and controls - depending on the configuration of the equipment - to their "environment".

Halton team scope of supply, as well as the prerequisites (what must be done or checked before starting the commissioning) are defined hereafter.

#### General prerequisite

- Check that the components of the products/ technologies and - if applicable - its controls are in a good condition after transportation, possible storage and installation. Check that the installation of every single component fully matches Halton requirements.
- Check that the installation of every single component fully matches Halton requirements.
- If the product/technology subject of this guide are combined with other Halton product(s) or technology(ies), all relating general and specific recommendations about their installation and wiring have to be fully completed and checked. These additional product(s)/technology(ies) have to be fully operational, whether Halton commissioning mission covers them or not.
- If some components are visibly broken or missing, they must be ordered and installed before commissioning. Ordering spares during the commissioning inevitably delays its implementation.

#### Electrical and network prerequisites

- All Halton electrical components should be connected to the power supply(ies) and they have to be operational. All mandatory electrical protection devices required by the European or local codes, and not installed by Halton, have to be also checked.
- The communication network between the control systems - if applicable - should be also fully built.

#### General AHUs and ductwork prerequisites

- When AHUs are not delivered by Halton, at least the fan(s) have to be fully operational.
- When AHUs are delivered by Halton, unless they are subject to another commissioning, all the other fluids required for the cooling and heating devices or the filtration - in addition to electricity - have to be available and the relating production systems operational.
- Ductwork has to be fully completed and access hatches have all to be checked and closed.

#### Hydraulic prerequisites

- If applicable, all water and drainage circuits, whether hot or cold, whether reserved for Halton AHUs or other Halton products/technologies, have to be fully completed and match Halton specifications as well as European or local standards. The flow, temperature and pressure regimes have also to fully match Halton specifications.

- If the product/technology subject of this guide are combined with other Halton products/technologies, the wirings and the communication network extension - if applicable - have to be completed according to Halton requirements.

### **During the commissioning**

- Halton team requires a permanent technical support from all the contractor(s) involved in the different parts of the installation.
- Halton commissioning team is not authorized to modify the connections (unless done by Halton). If some connections have to be modified or created (if they are missing), they will have to be modified or created by the appropriate contractor(s). If some communication features between Halton systems and the BMS are required, a technical representative of the BMS supplier should be also present.
- If the installation is not ready to be commissioned at the arrival of Halton commissioning team, Halton reserves the right to invoice for a return visit which could be needed.
- At the end of the commissioning process, training will be organised for the technical department of the building and/or the maintenance operator at the same time.

### **After the commissioning**

In the event of downtime, however long, some connections may be temporarily disabled for safety reasons. Before restarting the system, it may be necessary to check that all the equipment is operational and that no connections have been damaged during the downtime.

In case of downtime and unless contrary specification in the commissioning service description, any required control visit by a Halton team will be the subject of a specific quotation.

## 3.2 Commissioning phases

### **Warning**

Before starting the system, the operating and maintenance instructions must be read and understood. Not doing so may result in potentially dangerous operation. All operations shall be carried out by Halton or approved partner.

### **Warning**

Work on electrical systems and equipment must be carried out by authorised and trained electrical engineers.

### Phases

- A Pipework purge**  
After having checked that all prerequisites are met, the pipework has to be bled following the instructions which follow.
- B Detergent pump bleed**  
The detergent pump has also to be bled following the instructions which follow.
- C Setting of the detergent injection rate**  
Setting instructions detailed which follow.
- D Hot washing schedules**  
The washing schedules have to be set with the Touch Screen based on the instructions developed which follow.
- E General testing**  
Every washing cycle has to be tested before handover

### **Notice:**

Although our customer services can predetermine the settings of the control cabinets, they have systematically to be confirmed with real conditions tests. A second commissioning phase has to be organised if the cooking appliances are not operational or if real condition tests can't be carried out during the commissioning phase.

### **Notice:**

A second commissioning phase has to be organised if the cooking appliances are not operational or if real condition tests can't be carried out during the commissioning phase.

### 3.3 Fill the detergent tank

#### Reference

An alarm is displayed on the Halton TouchScreen when the detergent tank needs to be refilled

#### Reference

See the User guide dedicated to the Halton TouchScreen

#### Danger

Work on electrical systems and equipment may only be carried out by authorised and trained, qualified electrical engineers.

Ensure that the power supply has been turned off.



Halton selected Ecolab Topmatic Perfect detergent for its control cabinets. The detergent is classified as corrosive. The warnings in the appended Ecolab safety data sheet must be read carefully. Warranties will be rendered void if another detergent is used.

#### Warning

It is highly recommended to wear glasses and gloves while manipulating detergents

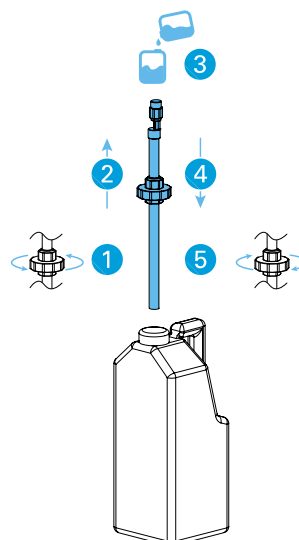
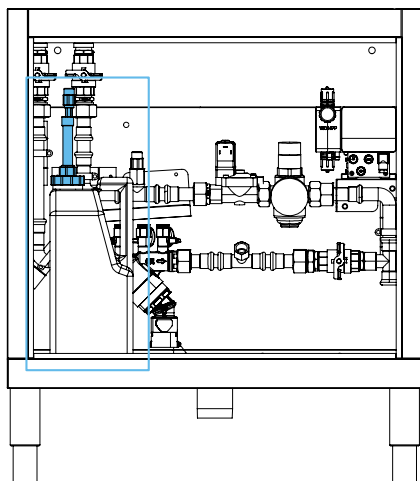
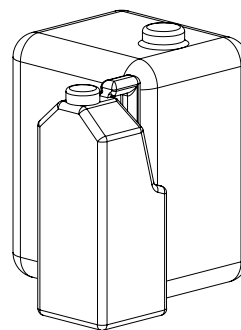


#### Notice

We strongly recommended to use and re-fill the detergent tank delivered together with the control cabinet. It is sized to fit the dedicated space in the control cabinet.

#### Warning

In case of contact with eyes, rinse thoroughly and contact medical services as soon as possible.



### 3.4 Pipework purge

#### **i Notice**

After installation, the pipework has to be purged of all solid particulate to prevent the spray nozzles from blocking.

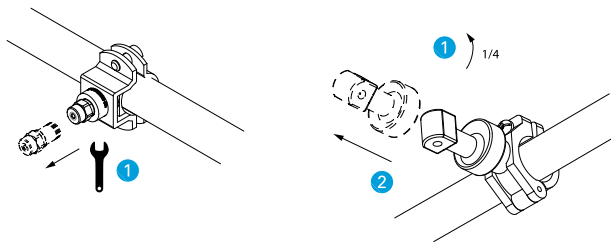
The spray manifolds are equipped with stainless steel nozzles that need to remain in place.

#### **i Notice**

The cold and hot water manifolds of every CMW hood are equipped with 2 drain plugs. They have both to be opened before starting the bleeding process.

#### Hot water circuit bleeding

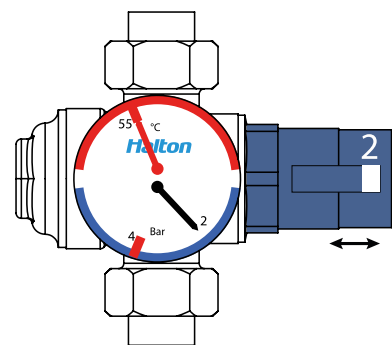
**A**



Remove the head of all nozzles. The nozzles' body has to be kept in place.

**B**

Reduce the hot water pressure to 2.0 bar by means of the pressure reducer inside the control cabinet. If the pressure is not reduced when the manifolds' drains are opened, the collecting channel(s) can run over due to high water flow.



**C**

FOR EVERY hot water solenoid valve, set to zero the “Washing time” and “Soaking time”. Set the rinsing time to 1 mn and start a manual washing cycle.

#### **Reference**

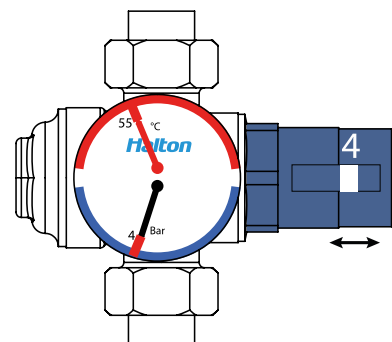
See the User guide dedicated to the Halton TouchScreen

**D**

Reinstall the head of all nozzles.

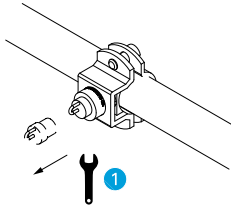
**E**

Set the hot water pressure reducer to get a minimum of 4 bar at the furthest nozzle (the more distant from the control cabinet).



## Cold water circuit bleeding

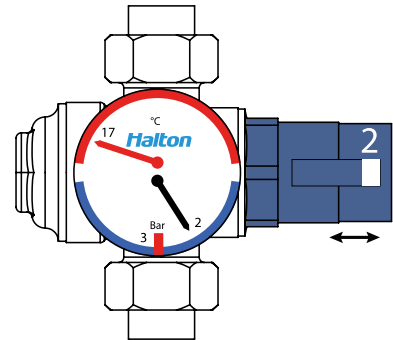
A



Remove the head of all nozzles. The body of all nozzles has to be kept in place.

B

Reduce the cold water pressure to 2.0 bar by means of the pressure reducer inside the control cabinet. If the pressure is not reduced when the manifolds' drains are opened, the collecting channel(s) can run over due to an abnormal water flow.



C

FOR EVERY hood section, set the "IR activity Deadband" of the corresponding hood to 10 mV and the "IR Status Timeout" to 30 sec. Place one hand in front of the Halton Thermal Imaging sensor till the solenoid valve opens.

### Reference

See the User guide dedicated to the Halton TouchScreen

D

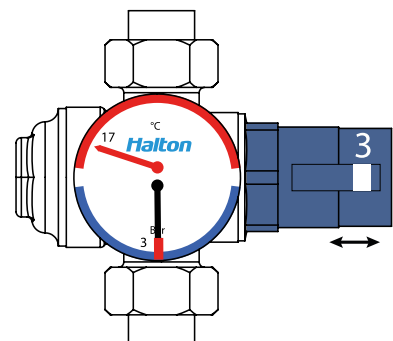
Reinstall the head of all nozzles.

E

Repeat for all Cold Mist hood sections.

F

Set the cold water pressure reducer back to 3 bars which is the nominal pressure value to be used.



## 3.5 Detergent pump bleed

### 3.5.1 Detergent pump bleed - Elados model

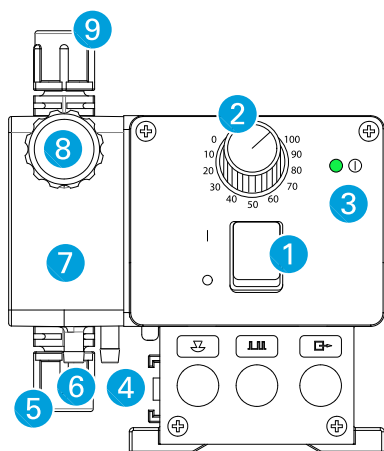


The dosing pump is installed directly inside the control cabinet. It adds a specific dose of detergent directly in the water circuit through a special injection valve. Once adjusted, the pump requires no action or external control.

#### Notice

The high dosing precision eliminates all risks of overdosing, thus reducing the environmental impact.

#### Bleeding of Halton's detergent dosing pump



- 1 On/Off switch
- 2 Injection rate setting knob
- 3 Green operation LED (ready for use)
- 4 Run off in case of diaphragm breakage
- 5 Detergent inlet
- 6 Detergent purge outlet (not connected)
- 7 Dosing head
- 8 Detergent purge knob (opens/closes the purge circuit)
- 9 Detergent outlet (to injection valve)

#### Bleeding procedure

##### Warning

Caution is required during bleeding to prevent any contact of the detergent with the skin that can cause irritation. Refer to the safety datasheet of the detergent.

- A Check the water inlet and outlet valves of the control cabinet are opened.
- B Switch on the dosing pump 1.
- C Set the detergent injection rate to 100% with the setting knob 2.
- D Open the detergent purge circuit by turning the knob 8 approximately 1 turn left. Leave it open.
- E Activate the detergent dosing by launching a manual washing cycle from the Touch Screen (see chapter hereafter). When the detergent exits the detergent purge outlet 6 without air bubbles, the washing cycle can be stopped.
- F Close the purge circuit by turning right the knob 8.
- G Set back the injection rate to the desired level 2.



### 3.5.2 Detergent pump bleed - Teknaevo

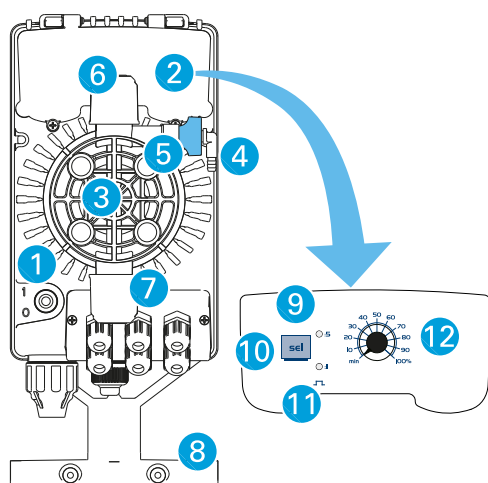


The electrical diaphragm dosing pump is installed directly inside the control cabinet. It adds a specific dose of detergent directly in the water circuit through a special injection valve. Once adjusted, the pump requires no action or external control.

#### **i Notice**

The high dosing precision eliminates all risks of overdosing, thus reducing the environmental impact.

#### Bleeding of Halton's detergent dosing pump



- 1 On/Off switch
- 2 Regulation area
- 3 Dosing Head
- 4 Priming valve
- 5 Primng valve knob
- 6 Delivery connector
- 7 Suction connector
- 8 Base support
- 9 Maximum speed (:5) and dosage impulse LED
- 10 Maximum frequency selector
- 11 Maximum frequency and dosage pulse LED
- 12 Dosing potentiometer (%)

#### Bleeding procedure

##### **⚠ Warning**

Caution is required during bleeding to prevent any contact of the detergent with the skin that can cause irritation. Refer to the safety datasheet of the detergent.

- A** Check the water inlet and outlet valves of the control cabinet are opened.
- B** Switch on the dosing pump 1.
- C** Set the detergent injection rate to 100% with the setting knob 12.
- D** Open the detergent purge circuit by turning the knob 5 approximately 1 turn left. Leave it open.
- E** Activate the detergent dosing by launching a manual washing cycle from the Touch Screen (see chapter hereafter). When the detergent exits the detergent purge outlet 4 without air bubbles, the washing cycle can be stopped.
- F** Close the purge circuit by turning right the knob 5.
- G** Set back the injection rate to the desired level 12.

## 3.6 Setting of the detergent injection rate

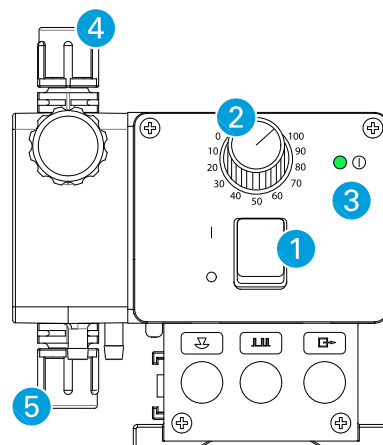
### Notice

The injection rate of the detergent can be set between 30% and 100% (dosage precision can't be guaranteed below 30%)

Maximum detergent flow rate is 7,2 l/h at 100%

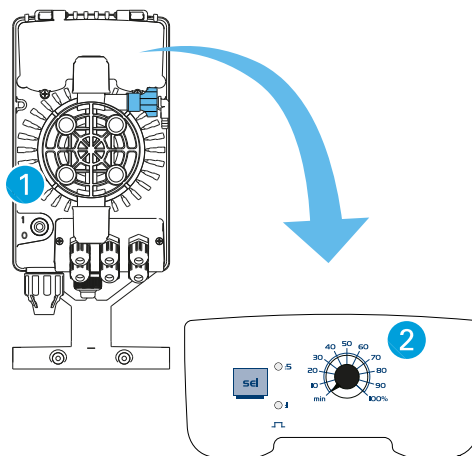
### Adjusting the injection rate - Elados

- A Open the detergent inlet and outlet ball valves **5** & **4**.
- B Check that the detergent ON/OFF switch **1** is ON.
- C Run the detergent pump by activating a manual washing cycle.
- D Set the desired metering capacity by turning the knob **2**.
- E Stop the manual washing cycle afterwards.
- F Close the detergent inlet and outlet ball valves **5** & **4**.



### Adjusting the injection rate - Teknaevo

- A Check that the detergent ON/OFF switch **1** is ON.
- B Run the detergent pump by activating a manual washing cycle.
- C Set the desired metering capacity by turning the knob **2**.
- D Stop the manual washing cycle afterwards.



## Injection rate

To determine the injection rate required, determine first the “most critical washing zone” (1 solenoid valve = 1 washing zone) i.e. having the heaviest cooking appliances or where the filters get dirty the fastest.

Evaluate cooking appliances' emission level with the table and use the corresponding injection rate given. This rate will be then used for all the washing zones.

### Notice

The final washing efficiency depends on the detergent injection rate but also on the duration of every washing cycle's step (washing, soaking, and rinsing).

Duration of the washing cycles:

### Reference

See the User guide dedicated to the Halton TouchScreen

Emission level	Cooking appliances	Injection rate	Washing cycles duration		
			Washing	Soaking	Rinsing
Economy	Small griddles, tilting kettles, ovens, ranges etc...	30%	15s	120s	60s
Normal	Fryers, tilting kettles, braising pans, big griddles, combi ovens, salamanders etc...	50%	30s	300s	60s
Heavy	Charbroilers, any wood stone charcoal appliance, tandoori ovens etc...	50-70%	60s	600s	120s



Halton selected Ecolab Topmatic Perfect detergent for its control cabinets. The detergent is classified as corrosive. The warnings in the appended Ecolab safety data sheet must be read carefully. Warranties will be rendered void if another detergent is used.

## 3.7 Settings of the Wash technology

### Reference

See the User guide dedicated to the Halton TouchScreen

## 4 Maintenance

### 4.1 Generalities about cleaning

#### Precautions to take with stainless steel and detergents

Stainless steel is not an indestructible material. There are numerous false ideas about it and a number of users know little of the precautions to take to keep it looking new.

One or several stainless steel-specific detergents or cleaning product have to be carefully selected with a specialist to prevent its corrosion or deterioration, depending on the cleaning methods used to clean all parts of Halton's hoods, ventilated ceilings or any other Halton product made of stainless steel.

The product used to wash these parts manually, in a dishwashing machine, with a steamer or a high pressure cleaner etc are indeed not necessary not the same and mustn't be switched. Before proceeding to a full cleaning, carry out a trial for every part with the recommended detergent and on a small surface.

#### Notice

It is the responsibility of the user to bring knowledge of this guide to all people likely to maintain Halton stainless steel based products.

#### Caution

Any warranty will be rendered void if an inappropriate detergent is used.

The selected detergents have to be also compatible with the cleaning of galvanised steel that can be used on hidden parts and combined with stainless steel.

#### Caution

**The products to never use or put in contact with stainless steel:**

Concentrated or hot bleach.

Concentrated or hot disinfectant products.

Hydrochloric acid (tile cleaners) even diluted and cold.

Metallic brushes or sponges.

#### Summary of the precautions:

- 1 Respect the recommended dosage.
- 2 Respect temperatures.
- 3 Respect contact time.
- 4 Rinse well.
- 5 Dry well.

#### Reference



A guide created by Arcelor Mittal contains good advice relating to stainless steel in the catering sector

### 4.2 Generalities

The CCW control cabinets are advanced products leading to maintenance savings in commercial kitchens. They require light but regular maintenance operations. Some of them have to be implemented by trained and authorized personnel.

#### Notice:

It is highly recommended to establish a maintenance contract to cover all maintenance needs. Please contact your nearest Halton unit.

## 4.3 Safe handling of detergent



Halton selected Ecolab Topmatic Perfect detergent for its control cabinets. The detergent is classified as corrosive. The warnings in the appended Ecolab safety data sheet must be read carefully. Warranties will be rendered void if another detergent is used.

## 4.4 Maintenance needs

### Daily:

- Check of the detergent tank level

### Every 3 months:

- Cleaning of the backflow preventer (see manufacturer instructions appended)
- Functional check of the backflow preventer (see manufacturer instructions appended)
- Cleaning of the detergent dosing pump (see manufacturer instructions appended)
- Cleaning of the pressure reducers and their filter (see manufacturer instructions appended);
- Check of the booster pump and its bypass
- Cleaning of external water filter (if applicable)
- Without more demanding local regulations, and depending on the cooking appliances use, the complete exhaust ductwork, including the fans, has to be cleaned at least once a year. This frequency can be reduced when hoods or ventilated ceilings are equipped with the Capture Ray<sup>TM</sup> technology (subject to local regulation or authorities requirements).

### **Caution**

Some maintenance operation must be combined with those of the other products installed

### **Reference:**

More information on dedicated hood or ventilated ceilings guides

## 4.5 Maintenance of drainage system

### Notice:

The maintenance of the sewage pipes must be ensured in order to guarantee the safety and health of the staff. As such, cleaning is one of the essential maintenance operations to be implemented.

### Notice:

Above charcoal appliances, extra precautions must be taken due to combustion residues which can generate deposits in the sewage pipes.

### Warning:

Scale, grease and organic matter contained in the waste water can lead to the formation of deposits in the drainage pipes that can lead to a reduction in their diameter and a risk of backflow.

### Warning:

The degradation of organic deposits in the drainage system releases toxic gazes responsible for serious nerve and respiratory damage at high doses. It also degrades Cast iron pipes, as well as seals. Cracks can then appear, leading to leak foul odors and even a risk of rupture.

### Notice:

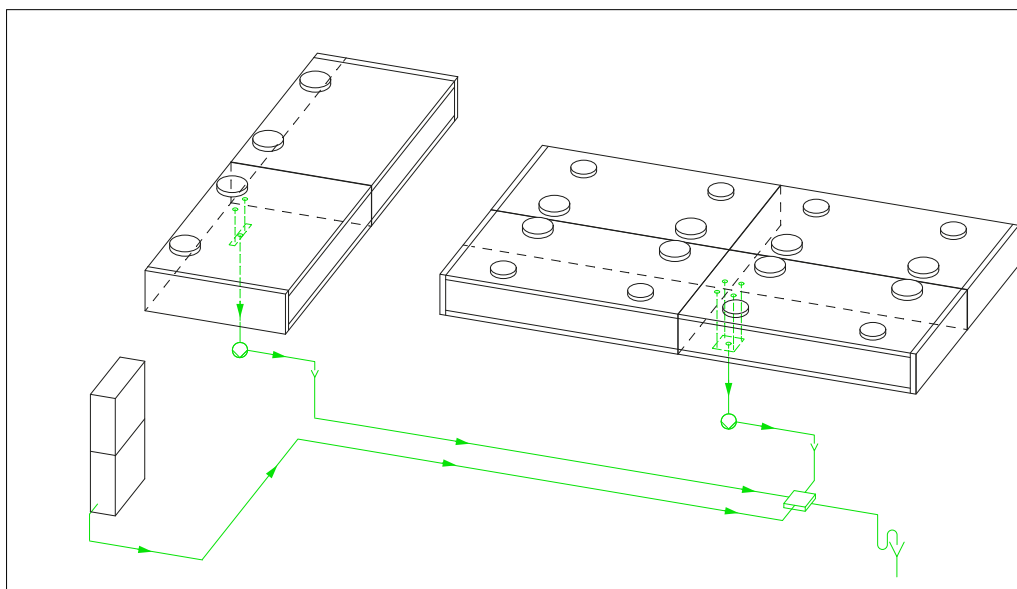
The sewage system must be inspected and cleaned on a regular basis. Cleaning should start from the hoods' or ceilings' drain to the final discharge point.

### Warning:

The kitchen drainage network must be inspected and cleaned according to the local regulation by an authorised service company.

### Warning:

Always wear protection glasses and gloves when manipulating cleaning products.



Sewage lift pump (optional)



Kitchen drainage system equipped a grease trap



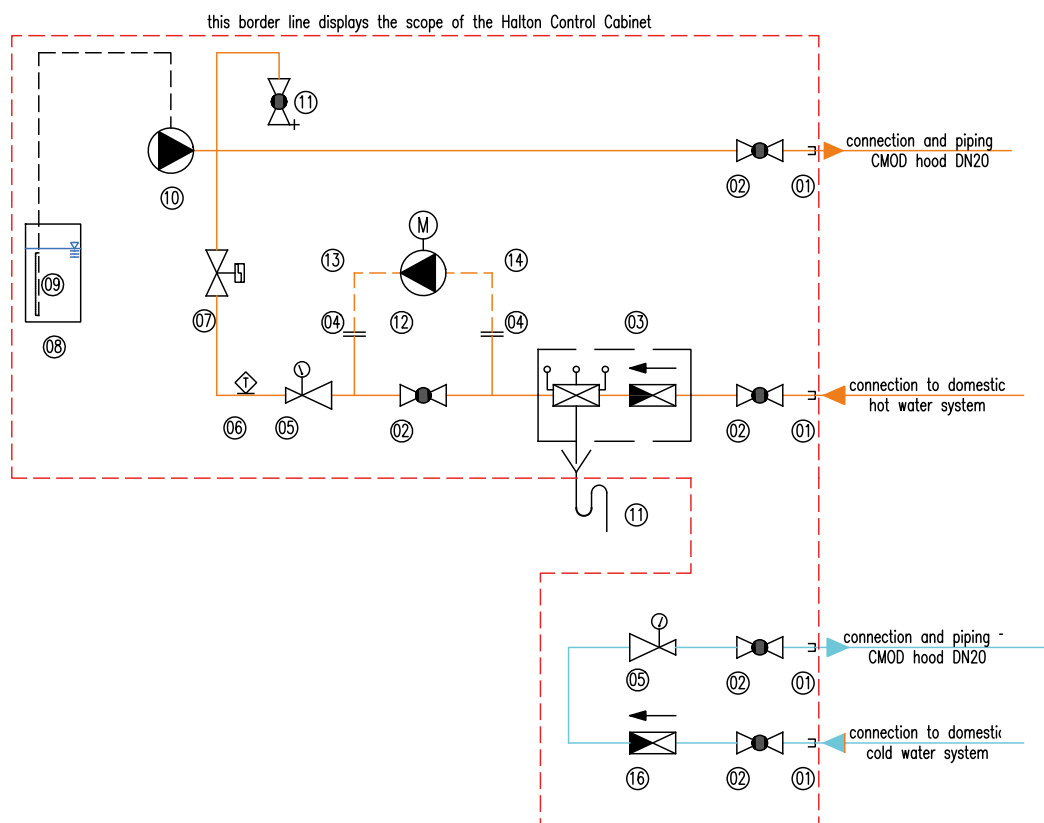
Connection to the building's or city's waste water system

## 5 Annexes

### 5.1 Hydraulic Diagrams

Overview of installed components

Group	Label	Dimension
01	Plastic plug - connection to domestic pipework	DN20 - 3/4"
02	Ball valve	DN20 - 3/4"
03	System separator	DN20 - 3/4"
04	Stainless steel plug	DN20 - 3/4"
05	Pressure reducer with pressure & temperature indicator	DN20 - 3/4"
06	Clamp-on temperature sensor	
07	Solenoid valve	DN20 - 3/4"
08	Detergent tank	
09	Suction lance with level switch	
10	Dosage pump for detergent	
11	Siphon DN50 ( 2" ) - ( not in scope of Halton )	
12	Booster pump ( optional )	
13	Flexible reinforced hose, length = 500mm	DN20 - 3/4"
14	CLEAN solenoid valve - 24V	DN20 - 3/4"
15	CMOD solenoid valve - 230V	DN20 - 3/4"
16	Check valve	DN20 - 3/4"
A	Flushing water connection DN20 - 3/4"	DN20 - 3/4"
B	Drain water connection DN50 - 2"	DN50 - 2"
	Piping for hot water in threaded stainless steel pipe DN20 ( 3/4" )	
	Piping for cold water in threaded stainless steel pipe DN20 ( 3/4" )	
	Piping for drain water in plastic KG plug-in pipe DN50 ( 2" )	



## 5.2 Elados EMP II

### 9 Maintenance

**CAUTION** Metering pumps may only be maintained by expert, authorised personnel.

**NOTE** Quarterly maintenance interval, shorter intervals if load is greater (e.g. constant running).

**The following inspections are recommended:**

- ✂ suction pipes and pressure pipes for leak-free connections
- ✂ suction valve and pressure valve (*chapter 9.1*) for dirt and tightness.
- ✂ discharge connection (*chapter 5, Fig. 5.1*) on the pump head (for diaphragm breakage).
- ✂ correct metering
- ✂ metering head screws (*chapter 9.2, Fig. 9.6, Pos. 2*) (stable seat, 3 - 4 Nm)

**NOTE** The life of the diaphragm depends on the: backpressure, operating temperature and metering medium. It is recommended to inspect the diaphragm more frequently in extreme operating conditions or if abrasive substances are metered.

#### 9.1 Replacing the suction / pressure valve and valve cartridges

- ✂ Disassemble the suction valve and pressure valve with a crescent wrench (SW 22).
- ✂ Assemble all the O-rings.
- ✂ Assemble the valve cartridges (only type V3014 and type V3025, see *chapter 9.1.1*, and *chapter 9.1.4*).
- ✂ Screw in the suction valve and pressure valve in the correct position (*chapter 9.1.1*, and *chapter 9.1.2*) (torque of 2-3 Nm)

Fig. 9.1

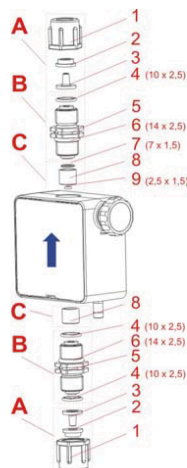


On the suction valves and pressure valves, the flow direction is marked with an engraved arrow.

When inserting it, always ensure that the valves are inserted according to the flow direction!

#### 9.1.1 Installation drawing 3 Ball-Valve (type V3014 and V3025)

Fig. 9.2

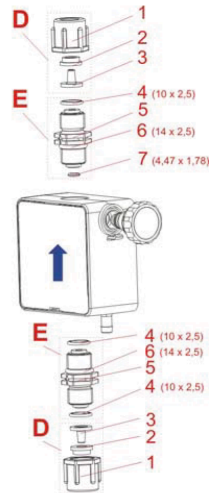


Pos.	Description
<b>A</b>	<b>CONNECTION SET</b>
	1 Union nut
	2 Clamping piece
<b>B</b>	3 Tapered part
	<b>SUCTION-/PRESSURE VALVE</b>
	4 O-Ring, Ø 10 x 2,5
<b>C</b>	5 Suction-/ Pressure valve
	6 O-Ring, Ø 14 x 2,5
	<b>VALVE CARTRIDGE V3</b>
	7 O-Ring, Ø 7 x 1,5
	8 Valve cartridges
	9 O-Ring, Ø 2,5 x 1,5



### 9.1.2 Installation drawing 2 Ball-Valve (type 00043 – 00112)

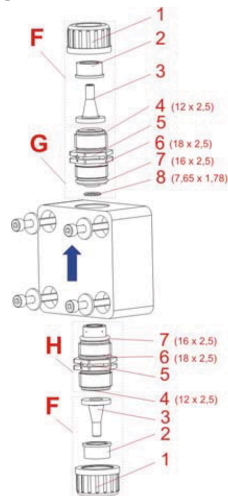
Fig. 9.3



Pos.	Description
<b>D</b>	<b>CONNECTION SET</b>
	1 Union nut
	2 Clamping piece
<b>E</b>	3 Tapered part
	<b>SUCTION-/PRESSURE VALVE</b>
	4 O-Ring, Ø 10 x 2,5
	5 Suction-/ Pressure valve
	6 O-Ring, Ø 14 x 2,5
	7 O-Ring, Ø 4,47 x 1,78

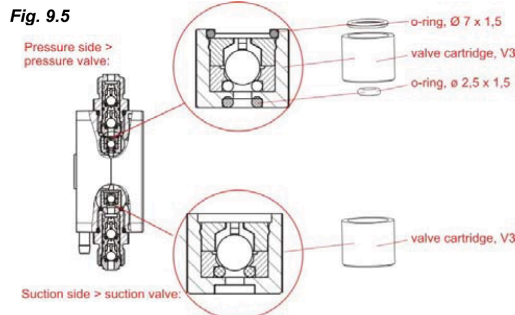
### 9.1.3 Installation drawing 2 Ball-Valve (type 00240)

Fig. 9.4



Pos.	Description
<b>F</b>	<b>CONNECTION SET</b>
	1 Union nut
	2 Clamping piece
<b>G</b>	3 Tapered part
	<b>PRESSURE VALVE</b>
	4 O-Ring, Ø 12 x 2,5
	5 Pressure valve
	6 O-Ring, Ø 18 x 2,5
<b>H</b>	7 O-Ring, Ø 16 x 2,5
	8 O-Ring, Ø 7,65 x 1,78
	<b>SUCTION VALVE</b>
	4 O-Ring, Ø 12 x 2,5
<b>F</b>	5 Suction valve
	6 O-Ring, Ø 18 x 2,5
	7 O-Ring, Ø 16 x 2,5

### 9.1.4 Changing the valve cartridges (only type V3014 and V3025)



When replacing the V3 valve cartridges, ensure that they are inserted in the correct position. (See Fig. 9.1).

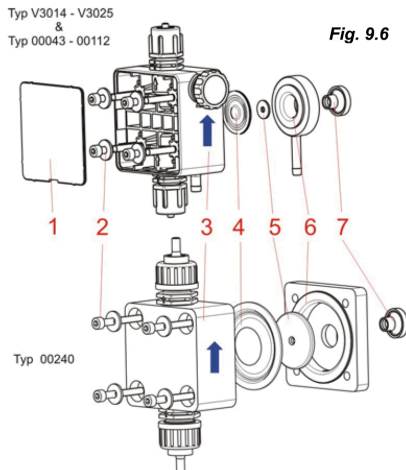
The upper valve cartridge consists of:

- Valve cartridge
- O-ring ø 7 x 1.5
- O-ring ø 2.5 x 1.5

The small O-ring (ø 2.5 x 1.5) must be inserted so that it points downwards (in the direction of the pump head).

The lower valve cartridge is inserted without O-rings. However, its location corresponds to the upper valve cartridge. Therefore, the groove must point in the direction of the pump head in which the large O-ring (ø 7 x 1.5) would fit.

## 9.2 Replacing the diaphragm and pump head



Pos.	Description
1	Cover plate
2	Metering head screws (4 x)
3	Pump head
4	Diaphragm
5	Supporting disk (not for 2.5 l/h)
6	Sandwich plate
7	Bellow

- ✘ Remove the cover plate (Pos. 1) on the metering head,
- ✘ Loosen the metering head screws (Pos. 2).
- ✘ Remove the pump head (Pos. 3).
- ✘ Unscrew the diaphragm (Pos. 4), sandwich plate (Pos. 6) and supporting disk (Pos. 5).
- ✘ Pull the bellows (Pos. 7) off the push rod.
- ✘ Insert the new bellows in the correct position (see illustration).

- ✘ Insert the sandwich plate in the correct position (see illustration).
- ✘ Slide the supporting disk in the correct position (curved side in the direction of the diaphragm) over the thread of the diaphragm.
- ✘ Insert the new diaphragm with the supporting disk.



**WARNING** Only screw in the diaphragm by hand. (Do not use a tool!)

- ✘ Turn the sandwich plate clockwise until the diaphragm breakage outlet points downwards
- ✘ Affix the pump head (observe the flow direction, see Fig. 9.6)
- ✘ Screw in the pump head screws by hand
- ✘ Tighten the pump head screws alternately on the right and left sides



**NOTE** Torque of the metering head screws = 3 - 4 Nm.




**WARNING** Check the torque of the metering head screws after 24 hours!

- ✘ Fit the cover plate to the pump head.

## 10 Operating faults

### 10.1 Trouble shooting

 **CAUTION** Prior to repair and maintenance work and metering of dangerous media, always rinse the metering head, relieve the pressure pipe and wear protective clothing (protective goggles, gloves and apron).

Electronics repairs must only be performed by trained electricians, following the safety regulations of the professional association VB G 4 and ZH 1/11!

 **CAUTION** When opening the covers or removing parts, except when this is possible without tools, voltage-carrying parts may be exposed. Connection points may also be under live voltages.

Before calibration, maintenance, repairs or replacement of parts, the device must be disconnected from all voltage sources if it is necessary to open up the device.

Fault	Possible cause	Rectification
Metering pump does not work, green LED not showing	Incorrect voltage	Check power supply
Pump does not suck up despite bleeding and max. stroke setting	deposits, adhesions or drying-out of the valves	rinse the metering head through the suction tube, if necessary remove and clean or replace the valves
Metering head is leaking, medium is escaping from leaking connection	Metering head is loose	Tighten metering head screw diagonally
	Diaphragm ruptured	Replace diaphragm
Level LED flashes	Low level warning	Stock up product
Level LED permanently on	Lack of chemicals	Top up storage tank
	Loose jumper plugs	Check that jumper plug is properly plugged in
Pump not working (red LED not indicating fault)	Metering lock in operation	Attach jumper plug to terminal II Cancel metering lock in accordance with wiring diagram ( <a href="#">chapter 12.3.4.2</a> )
	Connector not making contact at terminal II	Check connector contact at terminal II
Level LED flashes despite full container	Float is blocked	Release float
	Suction lance plug or bridge connector is loose or disconnected.	Tighten up plug, clean contacts Check if bridge connector is plugged in properly
	Suction lance cable defective	Exchange empty signal device
Metering pump does not work, even though ON-switch or yellow metering display (with E20) flashes	pressure-/suction valve is leaking	Clean and rinse valve
	Metering volume setting too low	Increase stroke volume setting
Error signal LED lights up (only E20)	Metering valve clogged	Clean and rinse valve
	Metering back-pressure too high	Check metering and return lines Once the cause of the fault has been removed, mains must be switched off or must be turned to "0" in order to acknowledge the error signal
Metering pump not working, no green LED display (version E 11 and E 20)	5 V output at cable bushing II overloaded	Limit load to 80 mA

### 10.2 Faults which must be fixed by customer service

Fault	Possible cause	Rectification
Error signal LED lights up	Metering system blocked	Internal fault
	Metering without request being made	Internal fault
Metering pump not working, no green LED display	Mains cable damaged	Replace mains cable

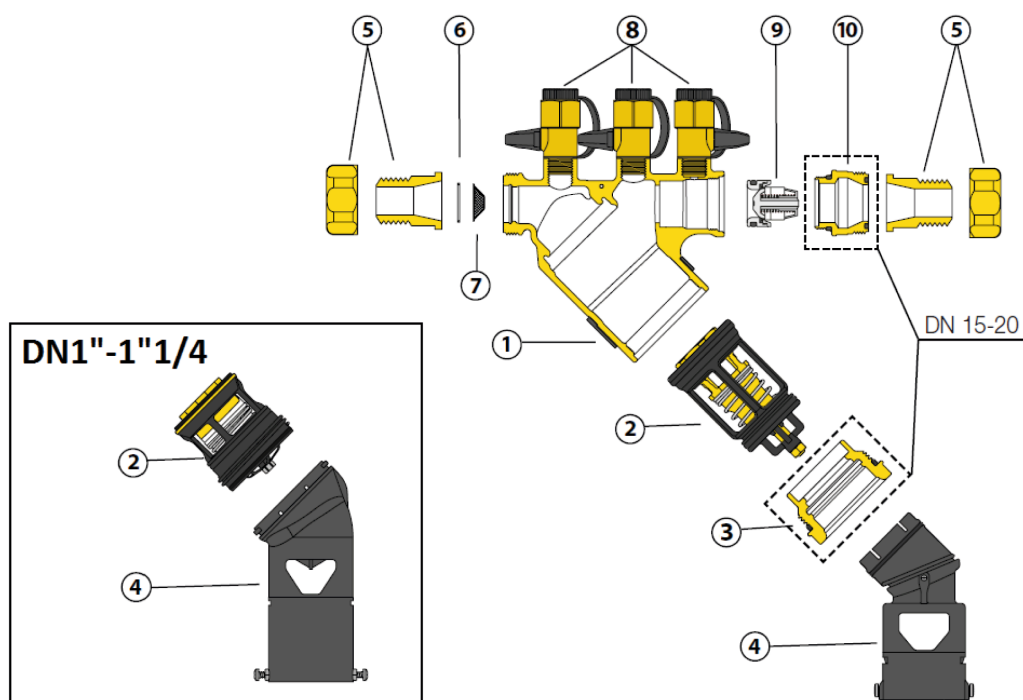
## 5.3 Sferaco Backflow Preventer



**REF. 955**

### BACKFLOW PREVENTER MALE TYPE BA 580 CONTROLABLE AND ADJUSTABLE REDUCED PRESSURE

#### MATERIALS :



Item	Designation	Materials
1	Body	Brass <b>CR</b> dezincification-resistant CB752S according to EN 1982
2	Cartridge DN1/2" and 3/4"	CW724R Ecobrass® + PPSG40 + POM13
2	Cartridge DN1" and 1"1/4	POM 25
2	Diaphragm (fixed on cartridge)	EPDM
3	Ring	Brass CW617N according to EN 12165
4	Evacuation support	PP
5	Fittings	CW724R Ecobrass® according to EN 12164 and EN 12168
6	Circlip	EN 10088-2 (AISI 304)
7	Strainer	EN 10088-2 (AISI 304)
8	Valves	Brass CW617N according to EN 12165
9	Check valve	POM + NBR + AISI 302
10	Check valve ring	CW724R Ecobrass® according to EN 12164 + EPDM gasket

Sferaco 90 rue du Ruisseau 38297 St Quentin Fallavier Tel: + 33 (0) 474.94.15.90 Fax: + 33 (0) 474.95.62.08 Internet: [www.sferaco.fr](http://www.sferaco.fr) E-mail: [sferaco@sferaco.fr](mailto:sferaco@sferaco.fr)

Date : 07/19

Page 5 sur 14

Rev.04

Information provided as an indication and subject to possible modification

## BACKFLOW PREVENTER MALE TYPE BA 580 CONTROLABLE AND ADJUSTABLE REDUCED PRESSURE

### Inspection and maintenance

The backflow preventer is a safety device and requires periodical inspection.

The first sign of poor functioning, generally caused by the presence of foreign bodies (sand or other impurities), is seen with a constant discharge from the discharge valve. This discharge is only a first alarm and does not mean in any way that the backflow preventer is not safe but the device and the strainer upstream from it requires dismantling and cleaning. A quick method of inspection (requires less than 15 minutes) is described in the table below.

N.B. If water is discharged from the discharge valve, a strong flow of water is recommended by turning on one or more taps since this is often sufficient to expel foreign bodies and return everything to normal.

### Control instrumentation (code 575000)



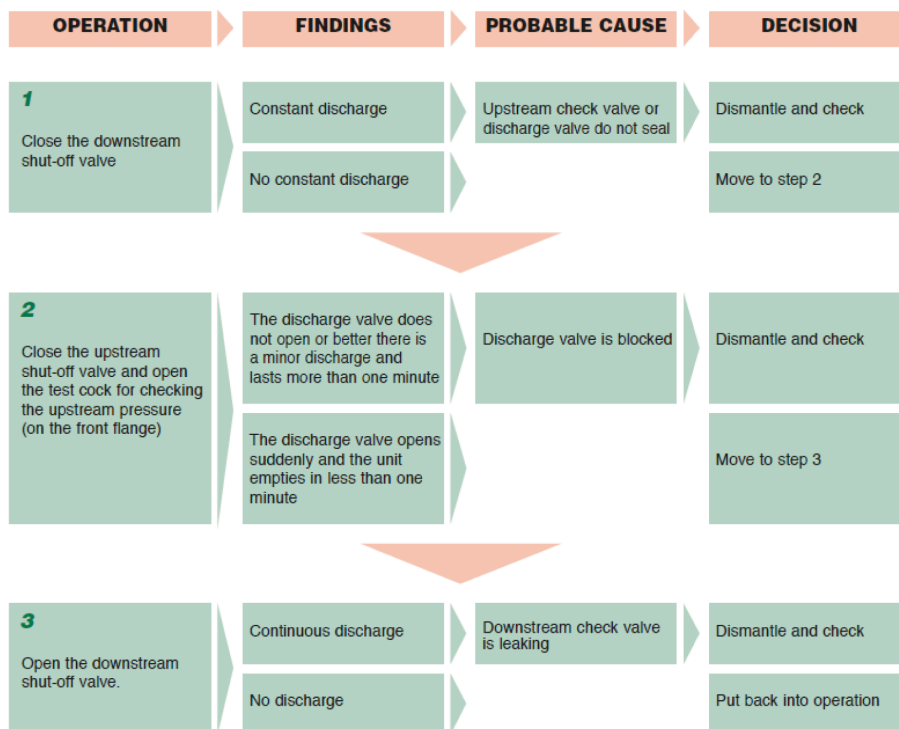
The periodical (annual) control instrumentation consists of the following:

- Upstream pressure gauge
- Downstream pressure gauge
- Differential pressure gauge

The flexible tubes and necessary connections are included as well as accessories useful for dismantling the unit. The instrumentation comes in its own case.

### QUICK INSPECTION METHOD

Check that the system is under pressure before each operation and watch the discharge valve located on the lower part of the device (use a mirror if necessary).



N.B. : During normal operation there should be no constant discharge.  
If there is a constant discharge dismantle and inspect the device.











Halton Foodservice  
Technoparc Futura  
62400 BETHUNE  
France

info.fr@halton.com  
www.halton.com

Projet / Project: CCW-C  
Responsable / Person in charge: M HOYEZ

Fabriquiant / Producer: Halton Foodservice

Automate SMARTEH : version LHC-2  
Tension d'alimentation / Rated voltage: 230 VAC  
Courant d'alimentation / Rated current: 16A  
Température ambiante / Ambient temperature: 25° C

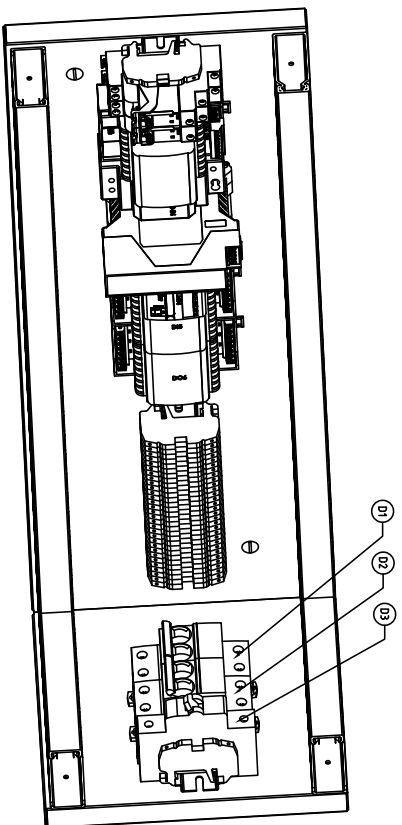
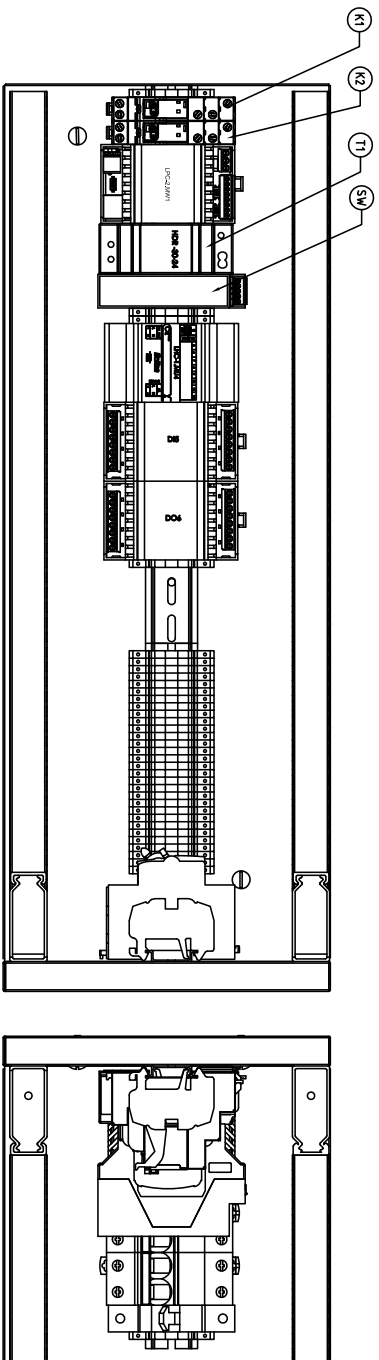
Color code and type of wire used inside cabinets			
Codes couleur et types de câble utilisés dans les coffrets			
Low voltage - Basse Tension - H05VVF 3G1,5²			
Phase +230V	brown/marron		1,5mm²
Neutral (N)	blue/bleu		
Ground (Terre)	green-yellow/vert-jaune		
Safety Extra Low voltage - Très Basse Tension Sécurité - H05VK 0,75²			
+ 24V DC	red/rouge		0,75mm²
0 V DC	black/noir		
Free voltage dry switch Max 230V AC - H05VK1²			
0...230V	orange		1mm²
analogic signals -0-10 VDC / or 0-20 mA - H05VK 0,75²			
+0...10 V DC	violet/purple		0,75mm²
0 V DC	white/blanc		0,75mm²

Ausführung der Schallanlage nach BGV A3 und den Richtlinien VDE 0113 / Switching circuit installed in compliance with BGV A3 and with VDE 0113 Guidelines  
Schutzmassnahmen und Errichtungsbestimmungen des örtlichen EVU's sind einzuhalten. N.B.: Equipotential bonding must be provided to suit local conditions

Vérifié et approuvé:  
checked and confirmed:

Date/Date	28/10/2022	Index	1	 <div>Halton Foodservice SAS Technoparc Futura 62400 BETHUNE www.halton.fr</div>		CCW - C		Groupe/Group M	Abs./sec. 1	Bl./page. 1			
Dessiné par / drawn by	MH					Page de garde - Main sheet							
Lien/Link	tableau Control Cabinet LHC-2.dwg												

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Groupe/Group		Fonction/ Function															
M	Page de garde / Main sheet																
L	Listes des pages / List of pages																
S	Schéma d'implantation / Général drawing																
C	Nomenclature / Component list																
F	Schéma filaire / Wire plan																
B	Plan de bornier / Terminal plan																



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		CCW-C	
		Schéma d'implantation / Général drawing	
		Groupe/Group	S
		Abs./sec.	1
		Bl./page.	3



## NOMENCLATURE / COMPONENT LIST

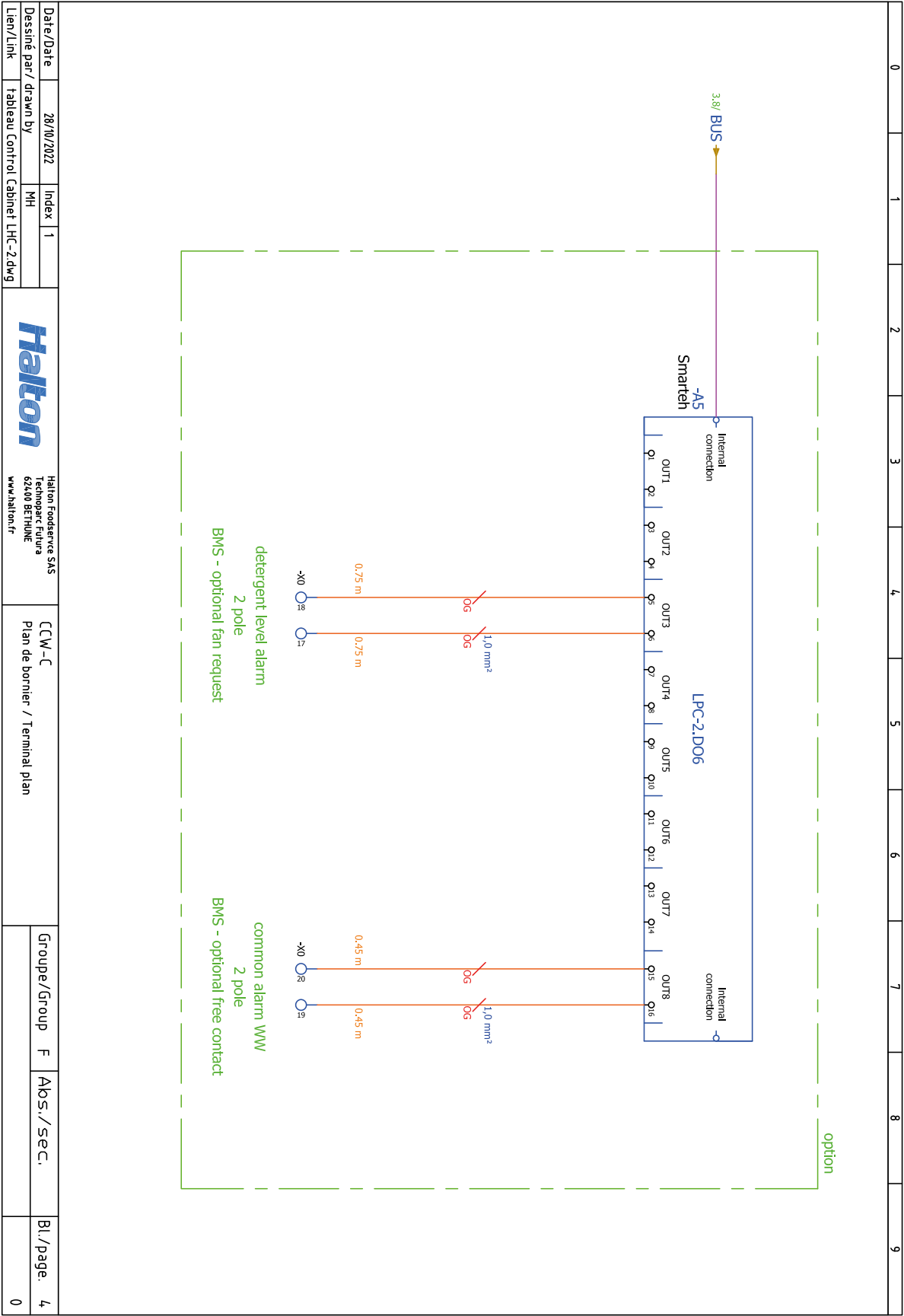
Etiquette/ Title	Désignation / Component	Référence / Model	Quantité / Number
Tableau électrique /Electrical Panel			
D1	Disjoncteur 10A / breaker 10A	Schneider Courbe C 10kA - 2P - 16A	1 pce
D2	Disjoncteur 4A / breaker 4A	Schneider IC60N - 2P - 4A - courbe D	1 pce
D3	Disjoncteur 6A / breaker 6A	Schneider GB2CD12 6A	1 pce
MU4	Controlleur / Controller	SMARTEH LHC-2.MU4 Main Ww Module	1 pce
DI5	Module Entrées / Input Module	SMARTEH LPC-2.DI5 Input Module	1 pce
DO6	Module Sorties / Output Module (Option)	SMARTEH LPC-2.DO6 Output Module	1 pce
T1	Alimentation / 24V Power Supply	MeanWell 0.63A/24V HDR-30-24	1 pce
K1	Relais / Relay	Finder -230VAC - 40.52.8.230.0000	1 pce
K2	Relais / Relay	Finder -230VAC - 40.52.8.230.0000	1 pce
SW	Ethernet switch	Brainboxes - SW-504 / 4 ports	1 pce
MW1	Controlleur / Controller	SMARTEH LPC-2.MW1 Main Module	1 pce
Face avant / Front face			
HM1	IHM / HMI	WEINTEK MT8071IE	1 pce
Q1	Interrupteur Sectionneur / disconnecter	Siemens 3LD22103-0TK53 - 400V/9.5kW/AC-23A	1 pce
ED	EDGE (option)	IoT Gateway	1 pce

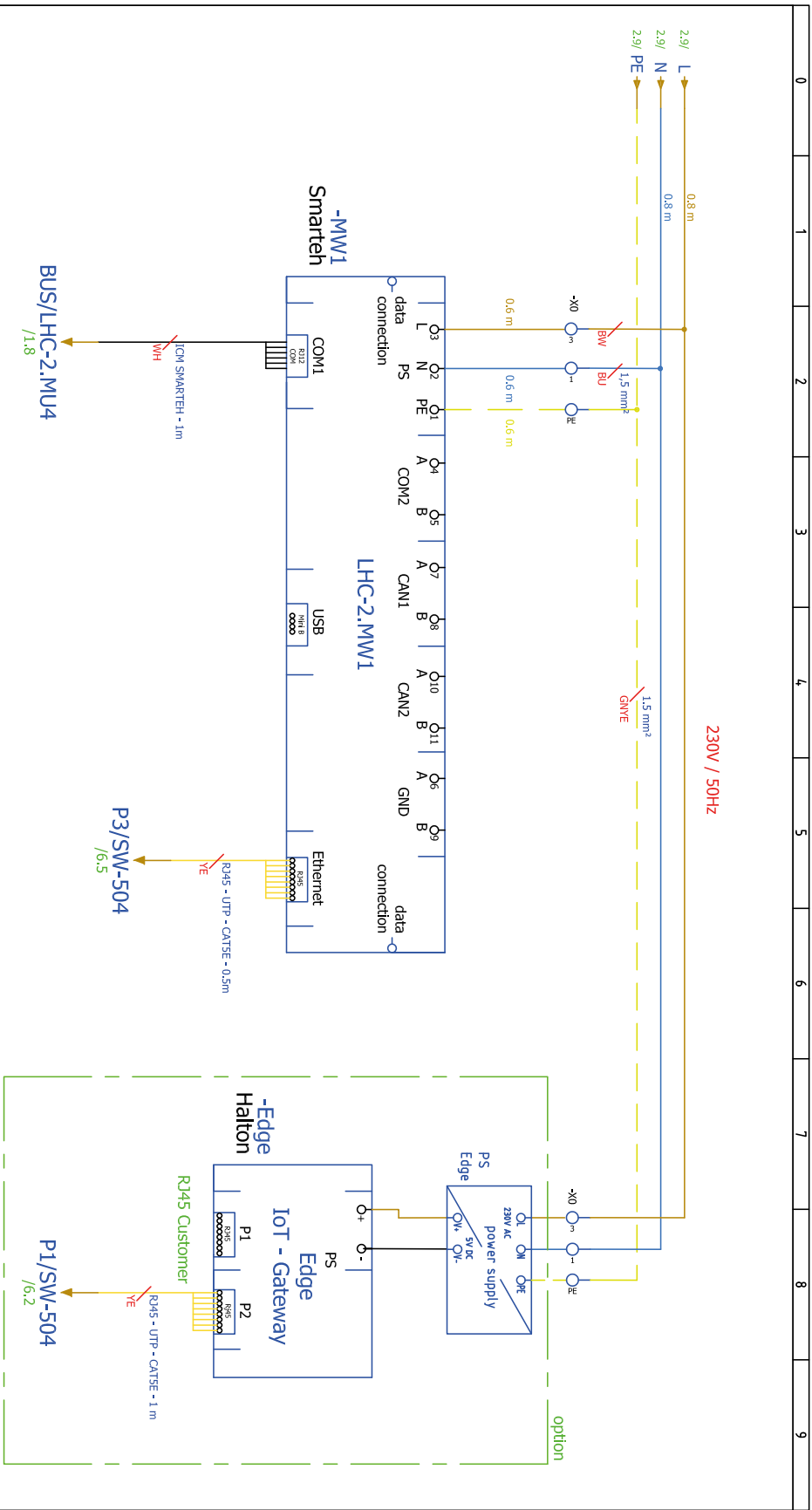
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				Groupe/Group	B	Abs./sec.	1	Bl./page. 5					
								1					



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<div> <div> Main Power Supply  3G 2,5 mm<sup>2</sup> </div> <div> <div> PS Edge/N <div> <div>D1/1</div> <div>PS Edge/L</div> <div>D1/3</div> <div>PS Edge/PE</div> <div>N</div> <div>L</div> <div>PE</div> <div>N</div> <div>L</div> <div>PE</div> </div> <div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>PE</div> <div>5</div> <div>6</div> <div>PE</div> <div>7</div> <div>8</div> <div>PE</div> </div> <div> <div>MW1/2</div> <div>MU4/4</div> <div>MW1/3</div> <div>MU4/3</div> <div>MW1/1</div> <div>D3/4</div> <div>K2/14</div> <div>D2/4</div> <div>K1/14</div> </div> <div> <div>F52</div> <div>F26</div> <div>F52</div> <div>F26</div> <div>F52</div> <div>F18</div> <div>F17</div> <div>F15</div> <div>F14</div> </div> </div> <div> <div> <div>Q1/L1</div> <div>Q1/L2</div> </div> <div> <div>F11</div> <div>F11</div> </div> <div> <div>2 x 1,5 mm<sup>2</sup></div> </div> </div> </div> <div> <div> Detergent pump  3G 1,5 mm<sup>2</sup> 2m </div> <div> <div> Detergent pump (option)  3G 1,5 mm<sup>2</sup> 0.7m </div> <div> <div> F63 SW-504/1  F63 SW-504/2  F62 SW-504 PE </div> <div> <div>9</div> <div>10</div> <div>PE</div> </div> <div> <div>T1/V-</div> <div>T1/V+</div> </div> <div> <div>HMI Weintek PE F67</div> <div>HMI Weintek - F67</div> <div>HMI Weintek + F67</div> </div> </div> </div> <div> <div> Solenoid valve 0.6m  YSL JZ 3G 1 mm<sup>2</sup> </div> <div> <div> Temperature sensor  2 x 0.5 mm<sup>2</sup> 1.1m  Detergent level  2x 0.5 mm<sup>2</sup> 2m  Detergent level Alarm  2 x 1 mm<sup>2</sup> (option)  Common Alarm  2 x 1 mm<sup>2</sup> (option) </div> <div> <div> W (White)  Bw  W (White)  Bw </div> <div> <div>13</div> <div>14</div> <div>15</div> <div>16</div> <div>17</div> <div>18</div> <div>19</div> <div>20</div> </div> <div> <div>MU4/10 (white) F28</div> <div>MU4/9 F28</div> <div>D15/6 F34</div> <div>D15/5 F34</div> <div>D06/6 (option) F45</div> <div>D06/5 (option) F45</div> <div>D06/16 (option) F48</div> <div>D06/15 (option) F48</div> </div> </div> </div> </div> </div></div>									

Date/Date	28/10/2022	Index	1	<div> <div>Halton Foodservice SAS</div> <div>Technoparc Futura</div> <div>62400 BETHUNE</div> <div>www.halton.fr</div> </div>		CCW-C		Plan de bornier / Terminal plan		Groupe/Group		B		Abs./sec. 1		Bl./page. 7												
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## 5.5 Topmatic Perfect Safety Data Sheet



# SAFETY DATA SHEET



Conforms to EU regulation EC 1907/2006 and amendments

## Topmatic Perfect

Code : 107887E

Version : 6

Date of revision 13 October 2010

### 1. Identification of the substance/preparation and company/undertaking

#### Identification of the substance or preparation

Product name : Topmatic Perfect

Product use : Machine Warewashing Detergent

Product is for professional use only

#### Company/undertaking identification

### 2. Hazards identification

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : C; R35

Human health hazards : Causes severe burns.

See section 11 for more detailed information on health effects and symptoms.

### 3. Composition/information on ingredients

Ingredient declaration according to detergent regulation 648/2004/EC:

≥5 - <15% polycarboxylates  
<5% phosphonates

Substance/preparation : Preparation

Ingredient name	EINECS	CAS	%	Classification
Sodium hydroxide	215-185-5	1310-73-2	20 - 25	C; R35 [1]
potassium hydroxide	215-181-3	1310-58-3	10 - 20	Xn; R22 [1] C; R35
See section 16 for the full text of the R-phrases declared above				

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] PBT-substance

[4] vPvB-substance

Occupational exposure limits, if available, are listed in section 8.

### 4. First aid measures

#### First-aid measures

Inhalation : Move exposed person to fresh air. Get medical attention immediately.

Ingestion : Wash out mouth with water. Move exposed person to fresh air. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention immediately.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention immediately.

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## **Topmatic Perfect**

**Eye contact** : Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids.

**Specific treatments** : Not available.

See section 11 for more detailed information on health effects and symptoms.

## **5. Fire-fighting measures**

**Extinguishing media - Suitable** : In case of fire, use water spray (fog), foam, dry chemical or CO<sub>2</sub>.

**Extinguishing media - Not suitable** : None known.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## **6. Accidental release measures**

**Personal precautions** : Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation.

**Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**Small spill** : Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large spill** : Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13).

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

## **7. Handling and storage**

**Handling** : Do not get in eyes or on skin or clothing. Do not ingest. Keep away from acids. After handling, always wash hands thoroughly with soap and water.

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Separate from acids. Keep container tightly closed and sealed until ready for use.  
Store between the following temperatures: 0 and 40°C

**Packaging materials**

**Recommended** : Use original container.

**Specific uses** : Not available.

## **8. Exposure controls/personal protection**

**Exposure limit values** : Not available.

**Exposure controls**

**Occupational exposure controls** : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

**Respiratory protection (EN 143, 14387)** : A respirator is not needed under normal and intended conditions of product use.

**Hand protection (EN 374)** : 1 - 4 hours : butyl rubber , nitrile rubber

**Eye protection (EN 166)** : Goggles, face shield, or other full-face protection.

**Skin protection (EN 14605)** : Safety apron . Suitable protective footwear.

**Date of issue** : 13 October 2010

**9. Physical and chemical properties****General information****Appearance**

<b>Physical state</b>	: Liquid.
<b>Colour</b>	: Colourless.
<b>Odour</b>	: Odourless.

**Important health, safety and environmental information**

<b>pH</b>	: 13 to 14 (100%)
<b>Boiling point</b>	: Not available.
<b>Melting point</b>	: Not available.
<b>Flash point</b>	: > 100°C
<b>Flammability (solid, gas)</b>	: Not applicable.
<b>Explosive properties</b>	: Not applicable.
<b>Explosion limits</b>	: Not applicable.
<b>Oxidising properties</b>	: Not available.
<b>Vapour pressure</b>	: Not applicable.
<b>Relative density</b>	: 1.43 g/cm <sup>3</sup> (20 °C)
<b>Solubility</b>	: Easily soluble in cold water, hot water.
<b>Octanol/water partition coefficient</b>	: Not applicable.
<b>Viscosity</b>	: Not available.
<b>Vapour density</b>	: Not available.
<b>Evaporation rate (butyl acetate = 1)</b>	: Not applicable.

**10. Stability and reactivity**

<b>Stability</b>	: Stable under normal conditions.
<b>Materials to avoid</b>	: Extremely reactive or incompatible with the following materials: acids. Do not mix with other products.

**11. Toxicological information****Potential acute health effects**

<b>Inhalation</b>	: May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
<b>Ingestion</b>	: May cause burns to mouth, throat and stomach.
<b>Skin contact</b>	: Causes severe burns.
<b>Eye contact</b>	: Causes severe burns.
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: No known significant effects or critical hazards.

**12. Ecological information****Ecotoxicity**

The product is not subject to ecological classification according to directive 1999/45/EC.

**Persistence and degradability**

The total of the organic components contained in the product achieve values below 60% BOD/COD or CO<sub>2</sub> liberation, or below 70% DOC reduction in tests for ease of degradability. Threshold values for 'readily degradable' (e.g. to OECD method 301) are not reached.

**Date of issue** : 13 October 2010

## Topmatic Perfect

### 13. Disposal considerations

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Can be added to general waste collection after completely emptying. Use packages for recycling only when totally empty.
- European waste catalogue (EWC)** : 200115\*

### 14. Transport information

#### International transport regulations

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label
<b>ADR/RID Class</b>	UN1719	CAUSTIC ALKALI LIQUID, N.O.S. (Sodium hydroxide, Potassium hydroxide)	8	II	8
<b>IMDG Class</b>	UN1719	CAUSTIC ALKALI LIQUID, N.O.S. (Sodium hydroxide, Potassium hydroxide)	8	II	8

Follow special pack instructions for air transport.

### 15. Regulatory information

#### EU regulations

**Hazard symbol/symbols** :



Corrosive

**Contains**

- : sodium hydroxide  
potassium hydroxide

**Risk phrases**

- : R35- Causes severe burns.

**Safety phrases**

- : S2- Keep out of the reach of children.  
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.  
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### 16. Other information

- Full text of R-phrases referred to in sections 2 and 3 - Europe** : R22- Harmful if swallowed.  
R35- Causes severe burns.

#### History

**Date of printing** : 13 October 2010

**Date of revision** : 13 October 2010

**Version** : 6

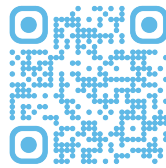
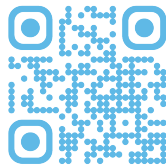
**Prepared by** : Ecolab Regulatory Department Europe

#### Notice to reader

*The above information is believed to be correct with respect to the formula used to manufacture the product in the country of origin. As data, standards, and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.*

**Date of issue** : 13 October 2010

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## Halton Manufacturing and Sales Facilities in the world



Sales and service centers



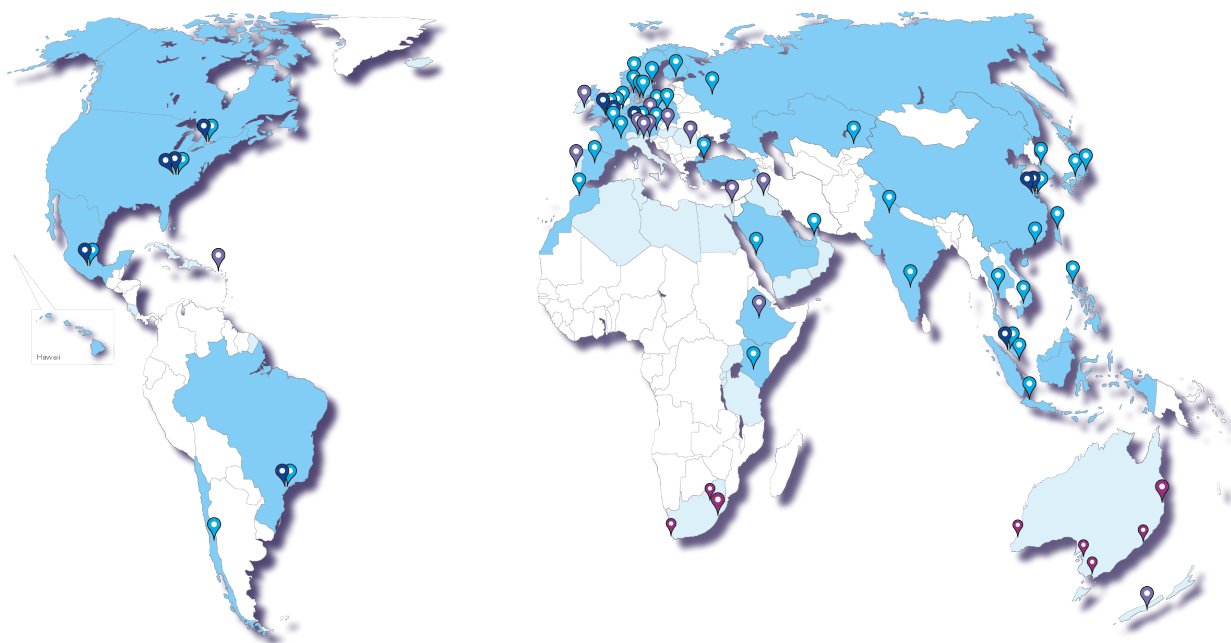
Representatives



Factories



Manufacturing licences



## Halton Foodservice partnerships



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