INSTALLATION AND MAINTENANCE GUIDE

DB1000C / DB1025C

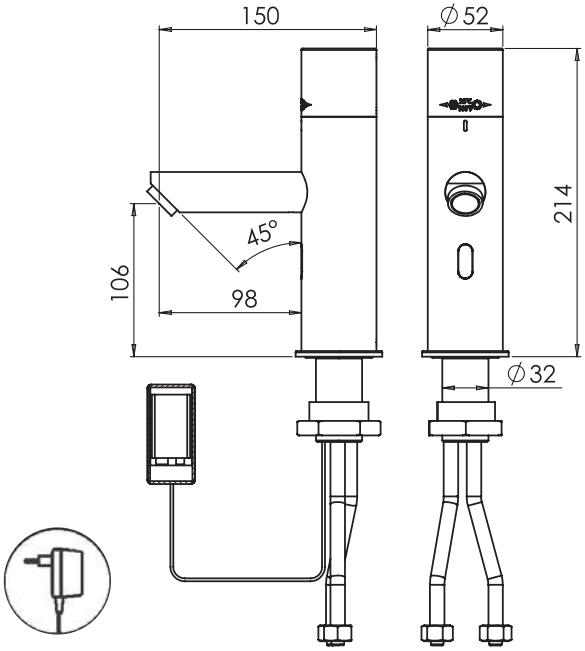
ELECTRONIC TAP – SAVING WATER, SAVING POWER, PROMOTING HYGIENE

Important:

Read carefully before installing product

INDEX

TECHNICAL DATA



Power supply:	9 V battery or 9 V transformer
Min Operating Water Pressure:	1 bar (14.5 PSI)
Max Operating Water Pressure:	5.0 bar (72.5 PSI)
	With water pressure of more than 5 bars, use a pressure reducing valve.
Sensor range:	170 mm. Adjustable with remote control.
Minimum sensor range:	50 mm
Maximum sensor range:	350 mm
Security time: 90 seconds.	Can be reduced with the remote control.
Hot water temperature:	Max 70˚C

For Type 3 valves the supply conditions under section: 'Type 3 valves information' takes precedence over this information.

TEMPERATURE ALTERNATIVES

Dolphin 1000C models includes a thermostatic mixer located in the tap cap.
The mixer has been factory calibrated to 38°C.

MANUAL MIXER

Rotate the cap to the left to obtain cold water and to the right to obtain hot water.

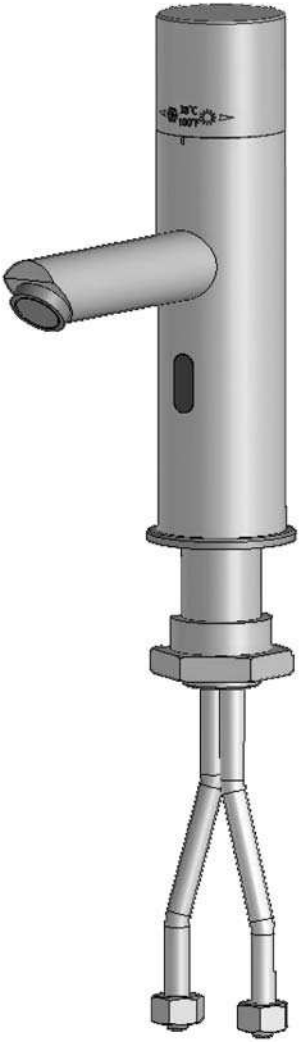
FIXED TEMPERATURE

To set a desired stable temperature:
Release the thermostatic mixing cap by unscrewing the M4X6 screw located behind the thermostatic cap, using the 2mm Allen Key.

Set the desired temperature using a thermometer and fasten the M4X6 screw all the way.
To regain the smooth rotation of the cap, unscrew the cap bottom screw partially.

PACK CONTENTS

Familiarise yourself with the part names and confirm that the parts are included.



1 x tap and attachments

1 x Allen key

2 x filters

DB 1000C

9 V Battery box

DB 1025C

9 V Transformer

PRE INSTALLATION INFORMATION

CHECK CONTENTS

Separate all parts from the packaging and check each part with the pack contents section. Pay attention to the different models variations.

Make sure all parts are accounted for before discarding any packaging material.

If any parts are missing, do not attempt to install your electronic tap until you obtain the missing parts.

PREPARATION FOR INSTALLATION

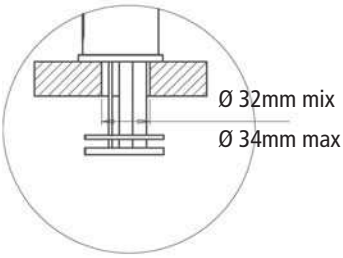
Flush water supply lines thoroughly before installing the tap. Do not allow dirt, Teflon tape or metal particles to enter the tap. Shut off water supply.

IMPORTANT

Isolation valves should be fitted in an accessible location prior to the mixing valve.

All plumbing is to be installed in accordance with applicable codes and regulations.

Recommended hole size



TAP INSTALLATION

Step 1 – Preparation for mounting the tap

Pay attention: for Type 3 valves, make sure that all site requirements corresponds to the information given in section: 'Type 3 valves information'

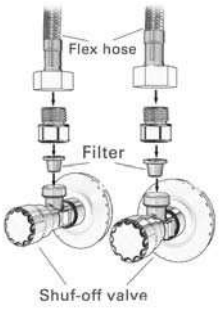
Shut off water supply and remove the hexagonal nut, the disk and the gasket. Do not remove the O-ring from the base of the tap.

Step 2 – Installing the tap

1. Place the tap with O-ring into the hole in deck or lavatory. Make sure the O-ring is located between the deck or lavatory and the bottom of the tap.
2. Secure the tap to deck or lavatory with the hexagonal nut.

Step 3 – Connecting the water supply

1. Connect the red flexible pipe to the hot water supply and the blue flexible pipe to the cold water supply.
Note: the flexible hoses are equipped with check valves to prevent back flow of water into the shut off valve.
2. Turn on the central water supply and the shut-off valves (angle valves)
3. Check for leaks.



Make sure that the filters are installed between the flexible pipe and the shut off valve (angle valve) (not supplied).

TAP INSTALLATION

Step 4 - Connecting the power source

1. Connect the power source:

a. For battery versions: install the battery box at the wall underneath the sink using the two sided adhesive foam facet. The cable connection must point down.

b. For transformer versions: Plug the transformer into the electricity socket and connect the connectors.

Battery version

Transformer version

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2. Remove the protecting sticker that covers the sensor and wait 10 seconds before activating the tap.

If the range is unsatisfactory, refer to the section titled "setting adjustment".

Note: Dolphin 1000C includes a special aerator that allows you to adjust the water stream direction on site in order to prevent water splashing if needed. To change the angle of the water stream, simply move the adjustable tilting plate by pressing it smoothly.

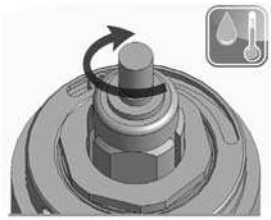
ADJUSTING THE MIXED WATER TEMPERATURE

The mixer has been factory calibrated to 38°C under ideal installation conditions.
Due to variations in site conditions, the mixed water temperature may need adjustments to make sure that it is safe.

1. Unscrew the tap cap screws and remove the cap.

2. Proceed to achieve a 38°C temperature by turning the spindle and measuring the water temperature with a thermometer.

Note: Make sure always to use a thermometer with proven accuracy.



4. Assemble the cap to 38°C position making sure that the 38°C marking corresponds to the marked line on the tap body, without moving the spindle.

5. Screw the tap cap screws and tighten them.

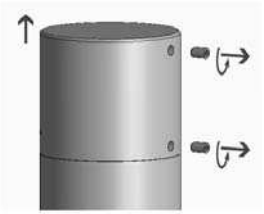
The mixer is now calibrated according to the site specific conditions.

LIMITING THE MAXIMUM TEMPERATURE

The mixer includes an internal temperature stopper that limits the maximum water temperature the user can obtain. The internal stopper factory setting is 38ºC and can be calibrated from 38ºC to 55ºC.

1. Place the cap in the 38ºC position.

2. Unscrew the tap cap screws and remove the cap without changing the position of the spindle.



Minimum Temperature Position

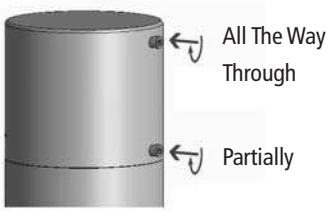
3. Unscrew the stopper screw partially for a medium resistance and locate it on the minimum temperature position.

4. Locate the cap in the 38ºC position.

Important: For type 3 valves in healthcare installations, the maximum mixed water temperature (defined by the mixer internal stopper) should not exceed the 41°C limit as determined by the application. Refer to section: 'Type 3 valves information' for more details.

LIMITING THE MAXIMUM TEMPERATURE

5. Fasten the upper spindle screw all the way through and the bottom cap screw partially for a smooth rotation of the cap.



6. Rotate the cap until you obtain the desired maximum temperature (with the help of a thermometer).

7. Return the cap to 38ºC position and remove it by unscrewing the top and bottom screws.
   Note: make sure not to change the spindle position while removing the cap.

8. Fasten the stopper screw all the way through.

9. Locate the cap in the 38ºC position. Fasten the upper spindle screw all the way through and the bottom cap screw according to the site conditions (see also page 2).

TYPE 3 VALVES INFORMATION

DESIGNATION

DB 1000C	HP-W Maximum temperature 41 °C
DB 1025C	HP-W Maximum temperature 41 °C

CONDITIONS FOR NORMAL USE (HP)

Maximum Static Pressure (bar)	10
Flow Pressure, Hot and Cold (bar)	1.0-5.0
Hot Supply Temperature (°C)	52-65
Cold Supply Temperature (°C)	5-20
Max. Temperature differential (°C)	50

MIXED WATER TEMPERATURE C° (at point of discharge)

Washbasin	41C° max.

Note: For washbasins, washing under running water is assumed.

COMMISSIONING

1. Check that the designation of the thermostatic mixing valve matches the intended application (washbasin)
2. Check that the supply pressures are within the range of operating pressures for the designation of the valve
3. Check that the supply temperatures are within the range permitted for the valve and by guidance information on the prevention of legionella etc.
4. Adjust the temperature of the mixed water in accordance with the instructions in this manual and the requirement of the application and then carry out the following sequence:
   a) Record the temperature of the hot and cold water supplies
   b) Record the temperature of the mixed water at the largest draw-off flow rate
   c) Record the temperature of the mixed water at a smaller draw-off flow rate, which shall be measured
   d) Isolate the cold water supply to the mixing valve and monitor the mixed water temperature
   e) Record the maximum temperature achieved as a result of (d) and the final mixed temperature

Note: The final mixed water temperature should not exceed the values presented in the below table

f) Record the date, equipment, thermometer etc. used for the measurements

TYPE 3 VALVES INFORMATION

MAXIMUM STABILIZED TEMPERATURES RECORDED DURING SITE TESTS

Application	Mixed Water Temperature C°
Washbasin	43 C° Max.

TYPE 3 VALVES MAINTENANCE

Planned maintenance for Type 3 valves should include the 'in service tests' procedure detailed below as well as the procedure detailed in the general 'maintenance' section. The thermostatic cartridge does not contain any serviceable parts. Therefore, if it malfunctions a full replacement of the cartridge is required.

IN-SERVICE TESTS

General

The in service tests are meant to monitor and record the continuing satisfactory performance of the thermostatic mixing valve.

Procedure

1. Carry out step 4 (a) to (c) in the 'Commissioning' section. Make sure you are using the same equipment or equivalent.
2. If the temperature has changed significantly from the last test results follow the next steps:
   a. Record the change
   b. Check if the filters are clogged and clean them accordingly (refer to section 'Maintenance, filter cleaning instructions')
   c. Check that the check valves located in the flexible hoses are in good working conditions. Replace the flexible hose\s if necessary.
   d. If the mixed water temperature still differs significantly, re adjust the mixed water temperature (refer to section 'Adjusting the mixed water temperature').
3. If the temperature has not changed significantly, complete the procedure [Commissioning, step 4 (d) to (f)]
4. Pay attention to the final mixed water temperature recorded in Commissioning, Step 4 (e). If it exceeds the maximum mixed water temperature stated in the 'Maximum stabilised temperatures recorded during site tests', or if it exceeds the temperature of the last test by more than 2C° proceed to the 'troubleshooting' section.

TYPE 3 VALVES INFORMATION

IN-SERVICE TESTS FREQUENCY

Healthcare

The in-service tests should be followed 6 to 8 weeks and 12-15 weeks after commissioning.

The results of these two tests combined, determines the frequency for future in-service tests as follows:

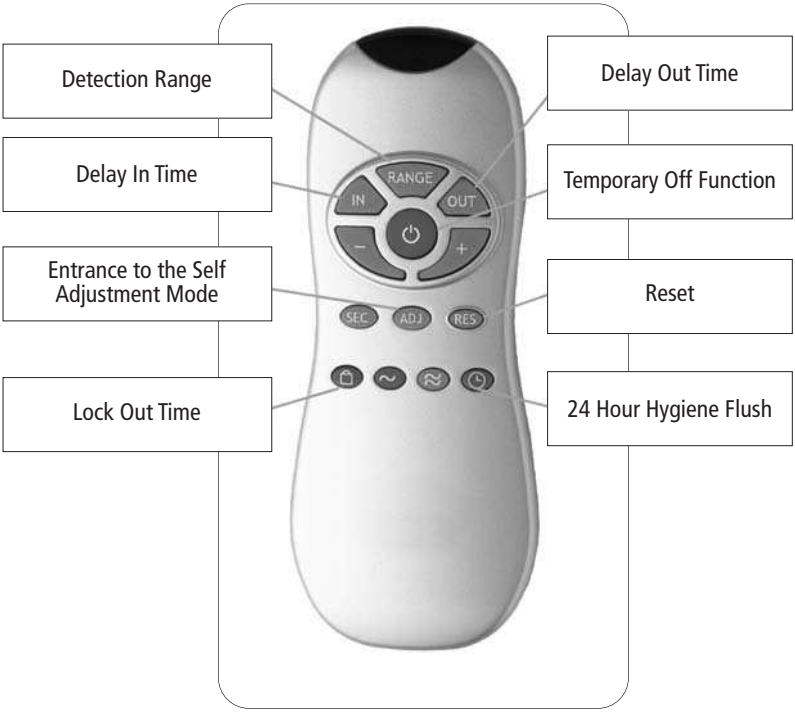
6-8 weeks after commissioning test	**12-15 weeks after Commissioning test**	**Future in-service Commissioning test**
≤ 1 C°	≤ 1 C°	12-16 weeks
1 C° > 2 C°	≤ 1 C°	12-16 weeks
≤ 1 C°	1 C° > 2 C°	12-16 weeks
1 C° > 2 C°	1 C° > 2 C°	6-9 weeks
≤ 2 C°	≤ 2 C°	6-9 weeks

Note: Intervals of in-service tests can be set to the maximum specified in this table following 2-3 in-test results with a change in the mixed water temperature no larger than 1 C°.

Commercial

TEST	**FREQUENCY**
Final mixed water temperature	Every 6 month
In-service test procedure	Every 12 month

SETTING ADJUSTMENT



Adjusting the settings with the remote control

If necessary, the sensor settings can be adjusted as following:

Shut off the water supply. In order to adjust the sensor with the remote control, hold the remote control straight in front of the sensor in a distance of about 6-8" (15-20cm). Choose the function you want to adjust by pressing once on one of the function buttons. After pressing once on a specific function button, a quick flashing of the red light at the front of the sensor will occur. At this stage, you can change the setting by pressing the (+) or the (-) buttons, every push will increase or decrease one level. After finishing the adjustment, turn the water supply back on.

SETTING ADJUSTMENT

DETECTION RANGE: This tap was supplied with a Self Adjusting Sensor. The ideal detection range for the specific location will be set automatically.
Only if necessary, use the remote control to adjust the sensor range as follows:
Press the RANGE button. Wait until a quick flashing of the red light of the sensor eye is perceived. Then, press + to increase the delay out time and – to reduce it every push will increase or decrease one level.

Note: Once you have changed the detection range with the remote control, this distance will be remembered by the sensor, even if the power source is disconnected. To get back to the self adjustment mode, use the ADJ button only.

ENTRANCE TO THE SELF ADJUSTMENT MODE: Check that no objects are in front of the sensor. Press the ADJ button. Once a quick flashing of the red light of the sensor eye is perceived, remove your hand holding the remote control and move away from the sensor area. The ideal sensor range for the specific location will be set automatically. Once the self adjustment has taken place the solenoid valve will be opened and closed for 1 second as an indication that the ideal sensor range was set and the product is ready for use.

SECURITY TIME: The Security time, prevents continuous running of water due to reflections or vandalism. By default, if the sensor is covered for more than 90 seconds the water flow will shut automatically. To resume regular operation any obstruction must be removed.
Press the SEC button. Wait until a quick flashing of the red light of the sensor eye is perceived. Then, press + to increase the security time and – to reduce it.

SETTING ADJUSTMENT

DELAY IN TIME: It is recommended to change the delay in time for flush valves for urinals or toilets only.
If required, the delay in time can also be modified in taps as follows: Press the IN button. Wait until a quick flashing of the red light of the sensor eye is perceived. Then, press + to increase the delay in time and – to reduce it.

DELAY OUT TIME: This button allows modifying the water flow time after the user removes his hands from the tap. A delay out time close to 0 will save more water. An increased delay out time will make the user experience more comfortable. If required, the delay out time can be modified as follows: Press the OUT button. Wait until a quick flashing of the red light of the sensor eye is perceived. Then, press + to increase the delay out time and – to reduce it.

24 HOUR HYGIENE FLUSH: If you have a compatible model with a 24 hours hygiene flush it is possible to enable and disable it .
To activate the hygiene flush, press the clock button. Wait until a quick flashing of the red light of the sensor eye is perceived. Then press + to activate the hygiene flush or – to deactivate it.

TEMPORARY OFF FUNCTION: This function is ideal to perform any kind of activity in front of the sensor without operating the system (for example, cleaning). The tap will remain shut for 1 minute when this button is pressed once. To cancel this function and to return to normal operation press the On/Off button again or wait 1 minute.

RESET BUTTON: This function restores all the factory settings except for the sensor range. If required, press the Reset button and without releasing it, press the + button once.

Note: To enter the self adjusting mode, use the ADJ button. To change the sensor range, use the RANGE button.

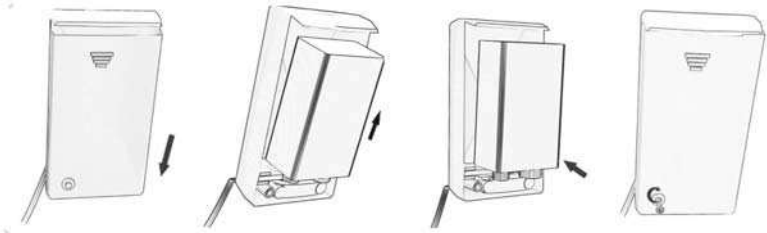
BATTERY REPLACEMENT

Battery models only

When the battery weakens, the red indicator light will blink at a constant rate. The battery must be replaced within two weeks.

To replace the battery at battery models:

1. Close the water supply
2. To reach access to the battery, unscrew the set screw located at the underside part of the Trendy 1000 body using the 2mm Allen key provided.
3. Disassemble the sensor cap.
4. Remove the old battery, disconnect from the battery connector and take out the battery cover protection.
5. Replace the used battery with a new 9V battery.
6. Carefully place the battery inside the body and reassemble the electronic unit connector to the battery.



Important: Spent batteries should not be disposed of with normal household waste. Contact your local authority for information on waste disposal and recycling.

MAINTENANCE

Filter cleaning instructions

This tap is provided with two stainless steel filters preventing foreign particles to enter the lines. If the water flow has decreased, this may be because the filters are clogged. The filters can be cleaned as follows:

1. Shut-off the water and shut-off the valve.
2. Disconnect the flexible pipes
3. Remove the filters and wash them under running water
4. Reassemble the parts
5. Reconnect the flexible pipes and restore the incoming water supply
6. Make sure that there is no water leakage.

Care and cleaning of chrome and special finishes

DO NOT use steel wool or cleansing agents containing alcohol, acid, abrasives, or the like. Use of any prohibited cleaning or maintenance products or substances could damage the surface of the tap. For surface cleaning of tap us **ONLY** soap and water, then wipe dry with clean cloth or towel. When cleaning bathroom tile, the taps should be protected from any splattering of harsh cleansers.

TROUBLE SHOOTING

PROBLEM	INDICATOR	CAUSE	SOLUTION
No water coming out of the tap:	1.Sensor flashes continuously when user's hands are within the sensor's range.	Low battery.	Replace battery.
	2. Red light in the sensor does not flash when user's hands are within the sensor's range.	1. Range is too short.	Increase the range.
		2. Range is too long.	Decrease the range.
		3. Battery is completely used up	The battery must be replaced.
		4. Unit is in "Security Mode"*	
		5. Sensor is picking up reflections from the washbasin or another object.	Eliminate cause of reflection.
	3. Red light in the sensor flashes when user's hands are within the sensor's range.	1. Connectors between the electronic unit and solenoid are disconnected.	Connect the electronic unit connectors to the solenoid.
		2. Debris or scale in solenoid.	Reduce the supply water pressure
Water flow from spout does not stop:		1. Sensor is dirty or covered.**	Clean or eliminate case of interference.
		2. Sensor is picking up reflections from the washbasin or another object	Decrease the range or eliminate cause of reflection.
Water flow diminished		Filter or aerator is clogged	Remove, clean, re-install
The final mixed water temperature during Type 3 valves in-service tests exceeds the limit of 43ºC or the temperature of the last test by more than 2º C		One or both check valves located at the flexible hoses are not working properly.	Replace the flexible hose/s.
		One or both filter/s is/are clogged	Remove, clean and re-install the Filter/s (refer to section 'Maintenance, filter cleaning instructions')
		The difference between the hot and cold water pressures exceeds 2 bars	Adjust the hot and cold water pressures according to the 2 bars pressure difference limitation.

* "Security Mode": If the sensor is covered for more than 90 sec. the tap will automatically shut off water flow. To return to normal operation remove any blockage.
** In this case, the water flow will stop anyway after 90 seconds because of the security time.

SPARE PARTS LIST

Part Name	Part Code
Sensor Kit	Cat. No. BC 07220086
Thermostatic cartridge	Cat. No. BC 07110016
Solenoid valve	Cat. No. BC 07500065
Battery box	Cat. No. BC 06530008
Transformer	Cat. No. BC 06522042
Filter	Cat. No. BC 08530014
Remote Control	Cat. No. BC 07100005

WARRANTY

This product is covered by a limited warranty for two years from date of purchase.

During this period, Bell-Chem Products Co. undertakes, at its option, to repair or replace any faults caused by defective materials or manufacturer defaults that may arise.

The guarantee does not cover faults or damage caused by incorrect installation and/or manufacture, wear and tear, battery or water compositions. This includes but is not limited to the following:

- incorrect installation, inversions or supply pipes
- Pressures or temperatures exceeding recommended limits
- Improper manipulations, tampering, bad or lapsed maintenance
- Foreign bodies, dirt or scale introduced by the water supply

hands free hygiene
clean hands, safe hands

Hands Free Hygiene

Ph: 1800 039 764

sales@handsfreehygiene.com.au

handsfreehygiene.com.au