

# Billi™

## Install Guide

Billi Quadra Sparkling & Quadra Sparkling Plus



# Installation requirements.

## XL

### Unpacking your Billi Quadra Sparking Unit

Before commencing installation, carefully check for any damage to outer carton, inner liner, appliance metalwork, pipework fittings and electrical power cord. If damage is found, please photograph and record details for use if a claim is to be made.

**WARNINGS relating to this appliance must be read before commencing installation. Refer to page 8.**

When unpacking your appliance, ensure you have identified the following components:

1. Boiling water module
2. Chilled water module
3. CO<sub>2</sub> cylinder
4. Dispenser
5. Tube spring clamps x 2
6. Natural and 2 x black Ø6 mm PE tubes with stem elbows fitted
7. Extra 6mm stem elbow fitting
8. 600mm flexible braided hose
9. Filter cartridge (installed)
10. User guide
11. Warranty registration card
12. Warning label
13. Plastic Ø6mm tube cap
14. 5mm door spacer pads
15. Ventilation grille - cupboard base

### Determine Unit Location

Plan the installation carefully, taking into consideration dispenser tube lengths, position of power and water outlets, ventilation airspace requirements and access for service. Refer to diagrams 1, 2, 3a, 3b and 4. Diagram 4 shows minimum clearances required around the units for ventilation

### Water Supply

A single cold water supply point with a ½" BSP stop tap is required. Stop tap is to be installed in an easily accessible position, within 600 mm of the inlet to the boiling water module. Sparkling chilled water module is supplied from an outlet fitting on the Boiling water module.

Dynamic supply pressure: Min. 250 kPa, max, 1000 kPa

NOTE: Quadra Plus models require an additional ½" BSP stop tap water supply tap. Refer to instructions on Page 6.

Supply temp: Min. 5°C, max. 30°C

**Do not install with water that is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts.**

### Power Requirements

Quadra Sparkling models: 460 and Plus 9 require 2 single or 1 double 10 amp GPO, installed in an accessible position. Refer to Diagram 1. Quadra Sparkling models: 4100 and Plus 15 boiling module require a separate 15A GPO with a dedicated circuit. Power circuits must be fitted with an earth leakage protection device (RCD). Both boiling and chilled water module are supplied with a 1 meter flex cord and plug. Cupboard ventilation fan kits require an extra 10A GPO outlet.

### Ventilation Grilles

A ventilation kit including lower cupboard vent grille and 5mm door spacers is supplied with each Billi Sparkling/Chilled water unit. Separate installation instructions are provided within the vent kit packaging. For lower usage, domestic installations, sufficient ventilation may be provided by natural air movement through the cupboard airspace. Minimum area of lower and upper air vent openings is 100 cm<sup>2</sup>

### Fan assisted vent kit

For units installed in higher usage or warm climate areas, including office or commercial installations, additional cupboard ventilation should be provided. Billi provides a fan assisted air circulating vent kit which draws air in through the cupboard base in front of the kickboard. Billi part no 990715 Installation instruction are provided with kit packaging. Ventilation fan kits require an extra 10A GPO outlet.

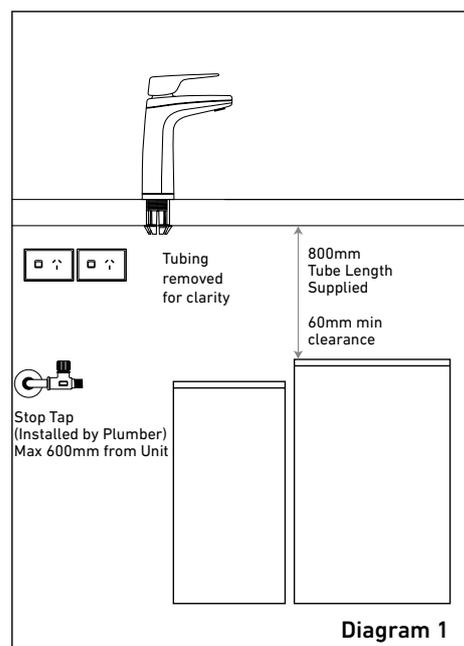


Diagram 1

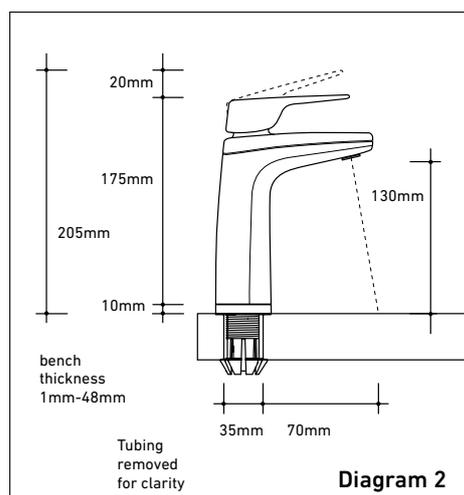
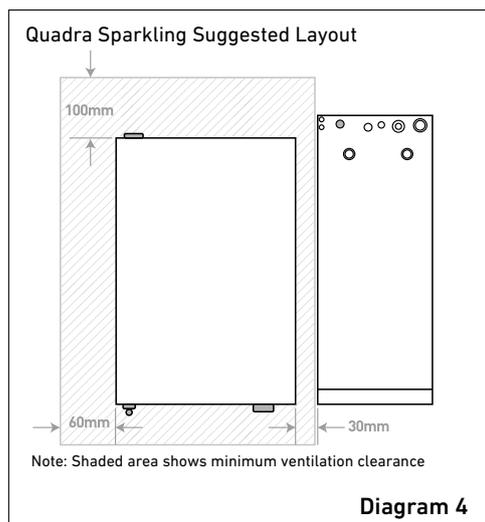
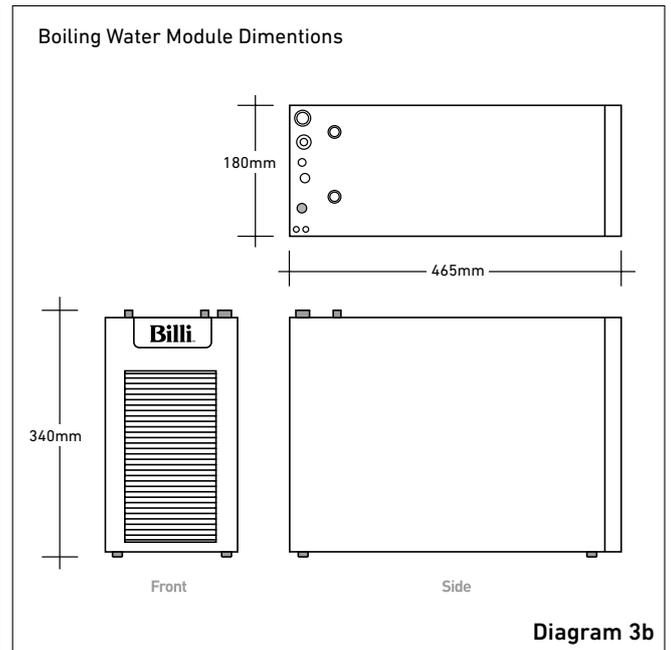
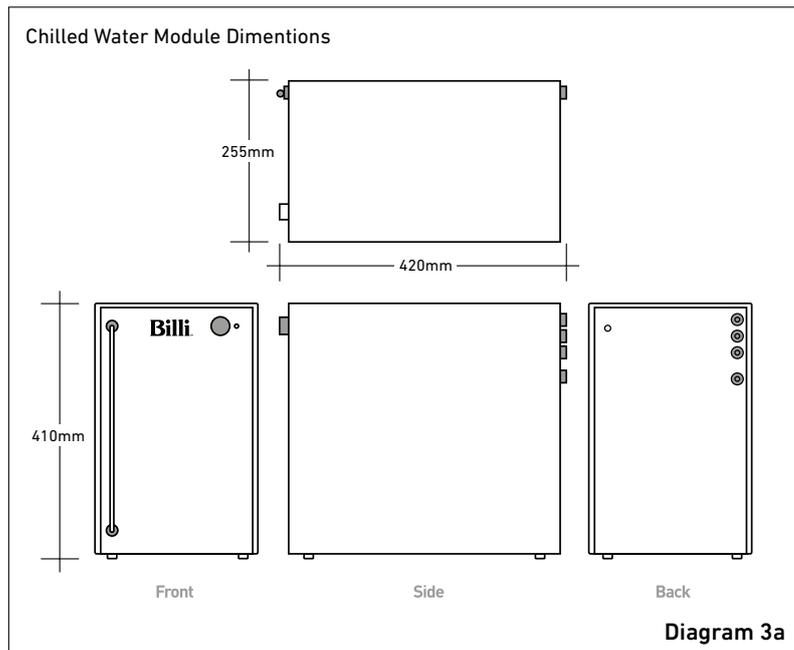


Diagram 2

# Installation requirements. XL



# Installing the dispenser. XL

**IMPORTANT:** This Billi appliance is to be installed by a licensed trades person in accordance with AS/NZS 3500.1 and AS/NZ 3500.2 and in compliance with applicable state regulatory requirements. For correct operation of this appliance, it is essential to observe the manufacturer's instructions.

## 1. Install Dispenser Assembly

Determine position of dispenser mounting hole in sink top or bench top. Dispenser base template (Diagram 5) may be cut out and used to assist in correct positioning. Refer to Diagram 2 for clearances allowed. Hole size required is  $\varnothing 32\text{mm}$ .

The Billi XL dispenser is supplied with base assembly preassembled into dispenser upper and this must be first removed prior to starting installation. Using allen key supplied in installation kit, remove chrome plated M4 screw from rear of housing. Twist base casting around  $60^\circ$  and then slide assembly out of upper housing. Carefully pull tubing and electrical cable and plug through base assembly.

### —Stainless Steel Sinktop

A suitable 32mm hole punch (Part no: 857901) is available as an accessory from Billi Pty Ltd. If possible, cut hole with die mounted below the sinktop surface so that burr is pulled downwards. Alternatively, remove burr and radius edge of hole with fine file. This allows barbed dispenser mount to slide smoothly into mounting hole.

### —Timber/Laminate Benchtop

Maximum benchtop thickness is 50mm. Cut 32mm hole in appropriate position. When drilling through a particle board bench top, take care to avoid substrate chipping and breaking away as drill breaks through underside surface. We recommend drilling a small pilot hole through benchtop, partially drilling the 32mm hole from underneath and then completing drilling the hole from above. The large 30mm washer supplied may be used to secure barb where bench top substrate has chipped away.

### —Granite/Marble Benchtop

For granite or marble bench tops we recommend that you use a certified stone mason to pre-drill the hole.

## 2. Activate Dispenser Swivel Feature

The XL dispenser can be installed either as locked into straight position or able to swivel  $45^\circ$  in either direction. To activate the swivel feature of your dispenser, remove the locking piece from the dispenser base. Simply push out the piece as show in Diagram 6. This will allow the tap to swivel to the left and right.

## 3. Fit Dispenser Base

- Cut a 32mm hole in sinktop or benchtop. Remove burr if protruding upwards.
- Push barbed mounting shaft through mount hole.
- Insert barb locking bush as shown in Diagram 7. Finger tighten nut.
- Ensure barb is centred in mount hole before tightening. Check position of base ring and gasket.
- Moderately tighten locking nut using multigrips or spanner. Take care to avoid overtightening nut which may break the plastic threaded shaft.
- Place large D washer over thread as shown in Diagram 7.
- Cut off excess threaded shaft with a hacksaw, using washer as a cutting guide. (Diagram 8)

**IMPORTANT:** Remove burrs and check internal bore is completely smooth.

## 4. Fit Dispenser Head Assembly

- Feed dispenser tubing and loom through center hole in the following order:
  - Dispenser power cord
  - Silicone tubes
  - Blue PE tube.
- Gently pull hoses from under the bench top. Do not attempt to force tubing through with a pointed object as silicone tube is easily punctured. Check tubing is not kinked or twisted. Refer to Diagram 9.
- Turn dispenser head assembly to approximately  $60^\circ$  from the straight ahead position of dispenser base. Slide head assembly onto base assembly whilst gently pulling tubing downwards from underneath to prevent tubing bunching and kinking. Head retaining lugs will pass nut and slide down the 3 grooves on the swivel bearing.
- Once fully down, turn dispenser to straight ahead position. Fit chrome plated M4 retaining screw to lower rear threaded hole and tighten using the allen key supplied. If swivel feature is activated, check dispenser now swivels smoothly  $45^\circ$  in each direction.

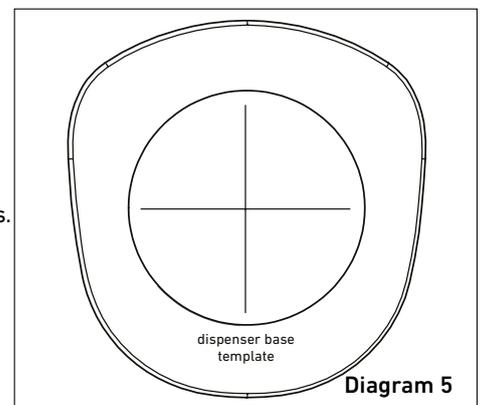


Diagram 5

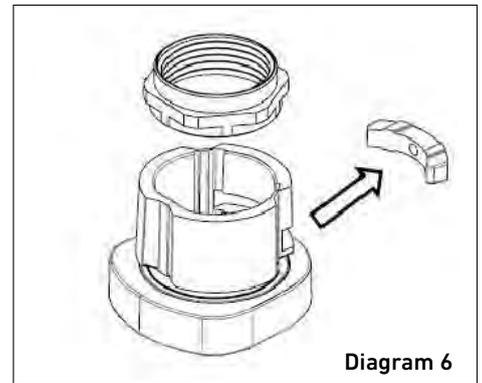


Diagram 6

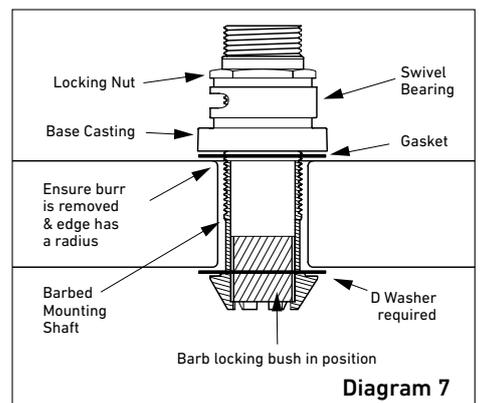


Diagram 7

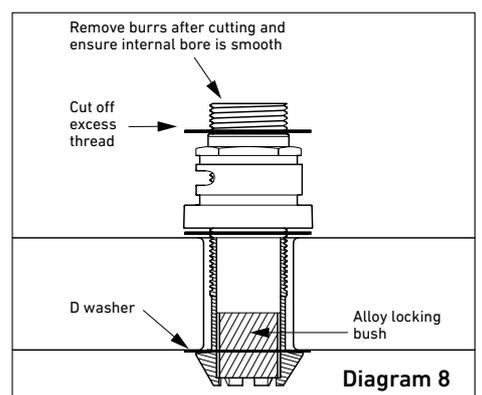


Diagram 8

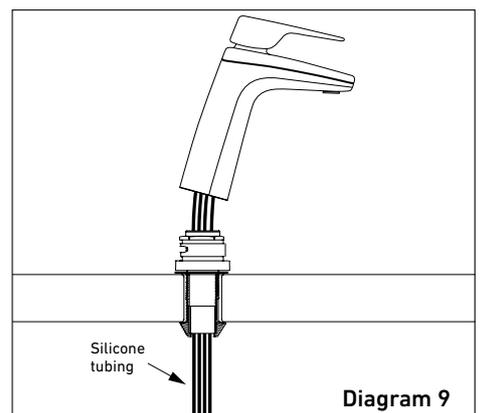


Diagram 9

# Installing underbench module. XL

## 1. Flush Water Supply

Flush water supply pipework before installing the underbench unit by connecting 600mm flexible braided hose to the supply tap and running water into a bucket. NOTE: Blockages/unit malfunction caused by debris are not covered by warranty.

## 2. Install Underbench Unit

Take care to observe minimum clearances. Refer to Diagram 1 and Diagram 4. Ensure there is adequate clearance for ventilation and service access to the units, considering the tube lengths and space available.

## 3. Connect Dispenser Tubing and Plug

**IMPORTANT:** Boiling outlet (red), vent tube (grey) must not be kinked and must be installed with a continual fall and no sag.

Connect all tubing and electrical plug as shown in Diagrams 10 and 11.

NOTE: For Quadra Plus 9 and Plus 15 models, refer to installation instructions on page 6 for installing sink mixer tap.

- Trim silicon tubes to correct lengths using a sharp knife or plastic tube cutter. Avoid leaving excess tubing which will sag and trap water. Fit spring clamps to tubing prior to connecting.
- Red silicone tube pushes on to boiling module fitting labelled BOILING (RED). Secure with spring clamp supplied.
- Grey silicone tube pushes on to boiling module fitting labelled VENT (GREY). Secure with spring clamp supplied.
- Dispenser electrical cable Mini-Din connector plugs into boiling unit socket.
- 6mm PE tube connections are made using push-fit connectors. There are 3 x Ø6mm tubes supplied loose in your installation kit; 2 x black, and 1 x natural (clear). Each tube has an elbow fitting attached to one end. An additional 6mm elbow is supplied which is to be fitted to the blue dispenser tube once tube has been trimmed to correct length.
- Tube elbows are inserted into fittings at rear of chiller. Refer to diagram 10 and 11 for correct tube orientation and colour coding. **TIP:** It is easiest to fit these tubes to chiller before unit is installed. Before inserting tubing into push-fit connectors, ensure that tube ends are cleanly cut and not flattened or kinked. Tube is pushed firmly into connector until properly seated. (To release, press the retaining collet ring inwards while pulling gently on the tube).
- Connect power lead with 6-way mini din plug from boiling module to socket located at rear RHS of the sparkling water module -refer to diagram 12. Rear mounted plug guide bracket helps to locate socket position and orientate plug correctly.

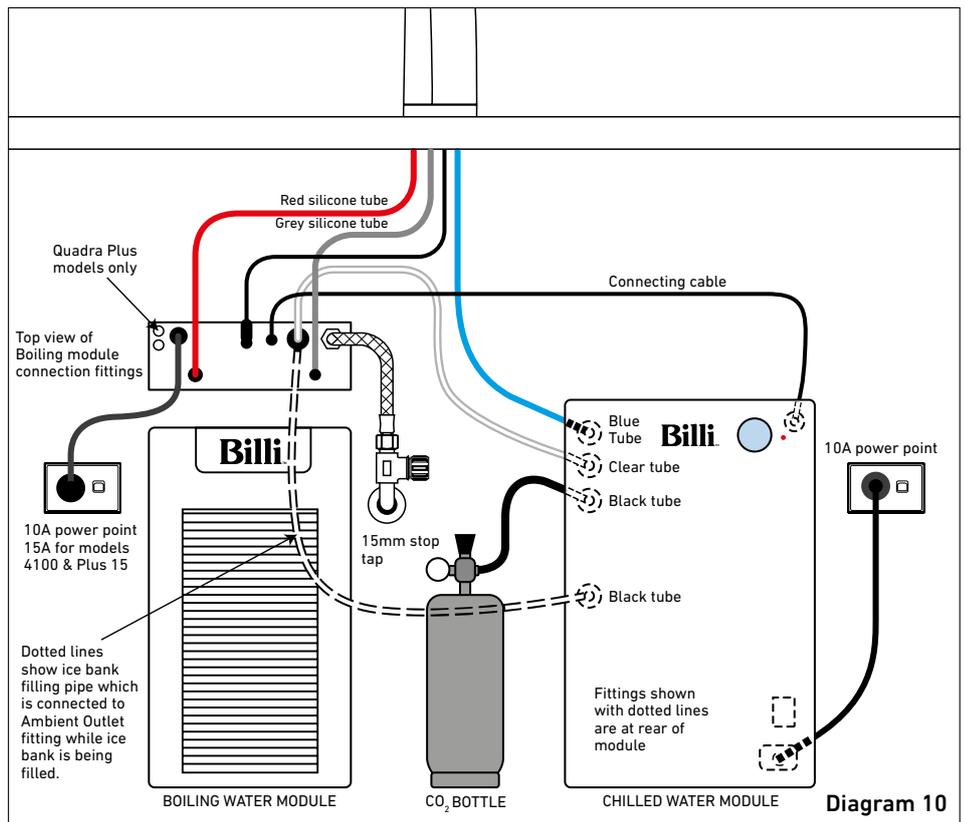


Diagram 10

NOTE: At this stage, do not connect CLEAR feed tube between boiling and chilled water modules. This will be connected once ice bank had been filled. Instead, connect the BLACK tube to the ambient water fitting on the boiling module. Refer to diagram 10.

## 4. Connect CO<sub>2</sub> bottle and pressure regulator

- Remove CO<sub>2</sub> bottle from packaging box. Remove plastic cap from threaded outlet of bottle.
- Remove CO<sub>2</sub> pressure regulator from packaging and check pressure control knob is turned fully anticlockwise.
- Holding the CO<sub>2</sub> bottle upright, screw the pressure regulator onto outlet. A small amount of CO<sub>2</sub> gas will escape until regulator has been tightened.
- Decide location of CO<sub>2</sub> bottle in cupboard space.
- Black Ø6 mm tube from chiller module connects to outlet of gas regulator. Trim tube to correct length, push into fitting and tighten retaining nut. Refer to diagram 10 & 13.

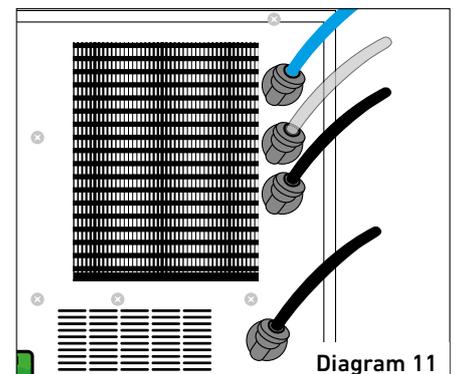


Diagram 11

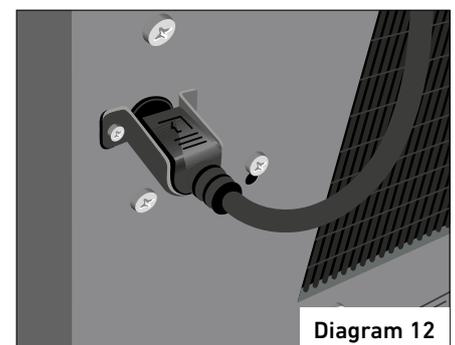


Diagram 12

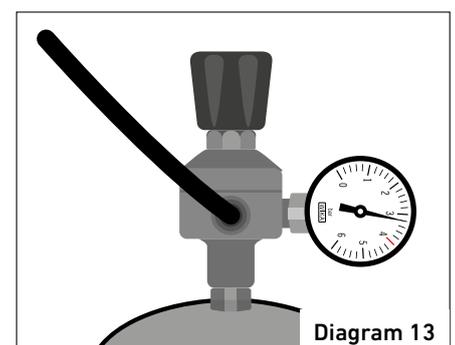


Diagram 13

# Installing Quadra Plus Sparkling mixer tap. XL.

## Additional Components for Billi Quadra Sparkling Plus 9 and Plus 15 Models

Before commencing installation, identify the following components:

1. O-ring (large)
2. Tap base ring
3. Mount clamp (brass)
4. Mount clamp plate gasket
5. Mount thread
6. Extended fixing nut
7. Barb adaptor fitting (short)
8. Barb adaptor fitting (extended) marked 'TAP-H'
9. Spring hose clamps x 2
10. ½" joining nipple
11. 1 metre PVC tubing
12. Braided flexible hoses x 3
  - i. Marked 'UNIT HOT-IN'
  - ii. Marked 'TAP-IN'
  - iii. Marked 'TAP-OUT'
13. Mixer Tap

## Mixer Tap Mounting Procedure

1. Drill or punch mount hole and deburr.
    - Hole size: 35mm.
    - Sink or Benchtap thickness: 1 – 45mm.
  2. Screw in 35mm brass mounting thread into the bottom of the mixer.
  3. Insert tap base ring over mounting thread. Ensure it is flush against the tap body with inset O-ring facing down.
  4. Screw barb adaptor fitting (extended) marked 'TAP-H' into marked 'H' threaded hole in base of mixer tap.
  5. Insert mixer tap through the mount hole and place tap in correct position with Billi logo facing front.
  6. Insert the large O-ring, followed by mount clamp plate gasket. Finally insert the brass mount clamp with 2 locking screws. See Diagram 14.
- NOTE: Ensure that the grooves from the mount clamp plate gasket are inserted into the channel of the brass mount clamp.
7. Hand tighten the fastening assembly until it is quite firm. Using a philips head screw driver tighten both locking screws until the dispenser is firmly secured. See Diagram 14.
  8. Insert braided flexible hose marked 'TAP-OUT' into marked 'OUT' threaded hole into base of mixer tap. Screw in clockwise until tight.
  9. Insert braided flexible hose marked 'TAP-IN' into marked 'IN' threaded hole into base of mixer tap. Screw in clockwise until tight.
  10. Push PVC tubing onto barb and fit spring hose clamp. Position hose clamp lugs as shown in Diagram 15.

## Connecting Mixer Tap to Quadra Plus

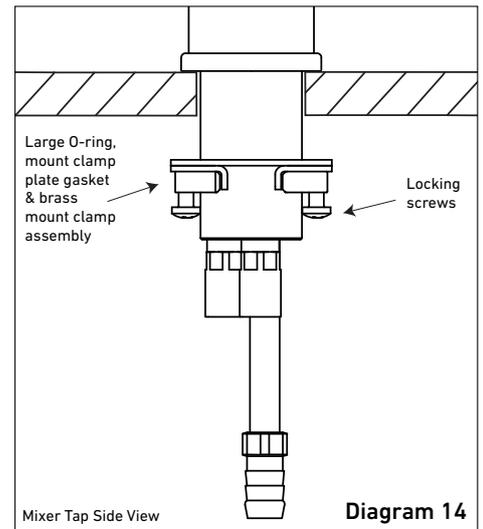
Fit tubing connections as shown in Diagram 16a & 16b.

1. Water supply inlet tube marked 'TAP-IN' incorporates an inline strainer. Connect to ½" BSP stop tap.
2. Fit short barb adaptor to port at the rear of Quadra unit marked 'Hot Outlet'. Trim PVC tubing to correct length using sharp knife. Excess tubing will cause sagging and possible kinking. Push tube onto barb adaptor and fit spring hose clamp. Support may be needed for PVC tube if there is a horizontal run.
3. Fit braided coupling marked 'UNIT HOT-IN' to matching port. Join to braided coupling marked 'TAP-OUT' using ½" joining nipple.

## Operating the Mixer Tap

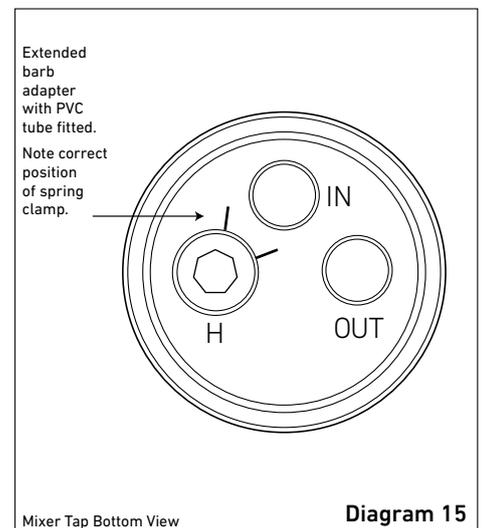
Operation of the mixer tap is as with any single lever tap. Lift lever to start water flow. Swing to the left for hot water and to the right for cold water.

Hot water will not be available until Quadra boiling water tank has filled and heated. Bubbling in the hot water flow indicates insufficient boiling water is available. Wait a few minutes for tank to fill and heat.



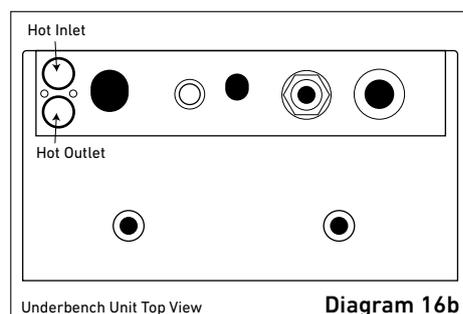
Mixer Tap Side View

Diagram 14



Mixer Tap Bottom View

Diagram 15



Underbench Unit Top View

Diagram 16b

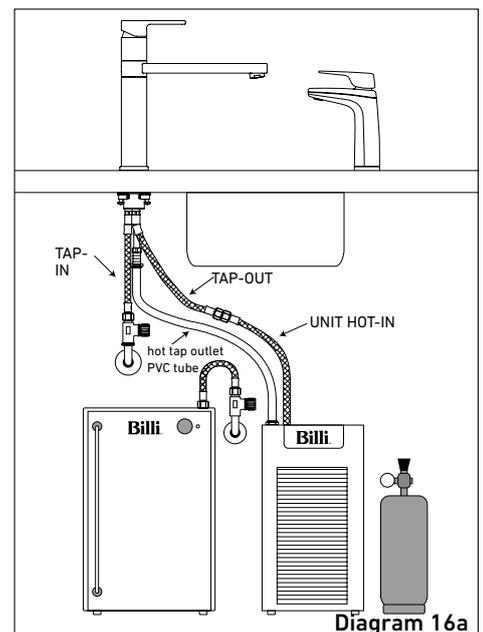


Diagram 16a

# Commissioning XL

## Basic unit operation

Left hand lever dispenses boiling water. Right hand lever dispenses chilled water. Pressing or lifting both dispenser levers together dispenses sparkling chilled water. Dispenser levers can be pressed for single cup delivery or lifted for continuous flow. Levers will latch when lifted and can be released with a slight touch. Red and blue dispenser lights flash when water is initially heating and cooling and remain steady on when set temperatures are reached. Refer to User Guide for further operational instructions

## Turn on Water Supply

Remove boiling module front panel. Remove foam packing piece from under filter canister. Ensure filter is securely locked back into place. Turn on water supply tap and ensure that there are no leaks.

## Turn on power to chilled module

Plug both boiling module power lead and chiller module power lead into power points. Switch boiling module only on. Do not switch chiller on at this stage. Boiling unit will begin filling automatically. During the initial fill, red dispenser LED flashes rapidly. Water level in the hot tank rises until it reaches the lower level sensor.

## Boiling water temperature calibration

NOTE: During hot water calibration mode, cold water delivery is disabled and chiller module cannot be commissioned until calibration cycle is complete. Hot water calibration cycle can be aborted by turning the power off and back on again.

Boiling water module will begin to heat after water level in the tank reaches the lower level sensor. Hot water temperature calibration cycle begins automatically. During the calibration cycle, hot water temperature continues to rise until it begins to boil. The unit will continue to boil for up to 30 seconds while the temperature sensor calibrates.

**WARNING: Steam and small amounts of hot water may be discharged from the tap and vent during this period.**

While calibration cycle is operating, the hot water indicator (red) will double blink rapidly. Once calibration cycle is completed, the unit will resume normal operations and the calibration data is saved.

## Fill Sparkling Chiller Module ice bank

- Fit black ice bank fill tube from chiller into 'AMBIENT OUTLET' fitting on Boiling Module. Refer to Diagram 10. NOTE: Do not turn on power to chiller at this stage.
- Lift cold water lever on dispenser tap. After about 15 seconds, water will show in the bottom of the sight glass tube. Watch this level rise as water is fed in. Note: If ambient water flow stops before

ice bank is full, release cold lever and lift again.

- Release cold lever when water level reaches the minimum fill marker. Refer to Diagram 18. If tank is overfilled, disconnect sight glass elbow fitting from top bulkhead fitting and swing tube downwards and drain required amount of water. Water level in this tank will rise a little later as an ice bank forms.
- Disconnect  $\varnothing 6$  mm black fill tube from boiling module ambient water outlet fitting. Fit cap supplied in installation kit onto end of tube. Coil and tuck black tube behind modules for later use.
- Connect clear  $\varnothing 6$  mm tube from chiller module to the boiling module fitting labeled 'AMBIENT OUTLET'.

## Chiller set up

- Ensure Chiller power lead is plugged into power point. Switch power point on.
- Ensure chiller module power switch located at rear of module is turned on. (Diagram 17)
- Soda water pump starts to run.
- Lift chilled lever on dispenser and let the water run until it stops automatically. (60s)
- Return the chilled lever to the center position.
- Soda water pump continues to run until soda tank is full.

## Set up CO<sub>2</sub> system

- Screw CO<sub>2</sub> cylinder into CO<sub>2</sub> regulator and hand tighten. Some gas may escape during this process. Refer to instruction on pg 5.
- Open the CO<sub>2</sub> regulator by turning the black knob clockwise (Diagram 13)
- Set the initial pressure to around 3 Bar.
- Press both tap levers and dispense water and ensure the gas pressure stabilizes. NOTE: Water carbonation levels will continue to increase until water in the soda canister has become chilled and air has been dispelled.

## Purging air from the CO<sub>2</sub> system

Air trapped in the soda tank is detrimental to the production of sparkling water and full carbonation may not be reached until 2-3 days of use. To speed this process, it is beneficial to purge the tank with CO<sub>2</sub> using the following procedure:

- Lift both tap levers and allow soda water to flow.
- Continue to run the tap until the tank is empty and gas flows from the outlet. Soda water feed pump will continue to run.
- Release tap levers. Wait until soda water pump stops. Press both tap levers together and check that water flows.
- Press cold lever only and check that water flows.

## Set Chilled Water Temperature

Set the desired water temperature using temperature control knob. Refer to Billi User Guide. Chiller refrigeration system will run

continuously for approximately 2 – 3 hours as ice is formed in the ice bank. As a significant amount of heat is dispelled during this time, it is advisable to leave a cupboard door ajar during the initial cool down. As ice expands, the water level in the ice bank tank will rise slightly. Check water level is within operating range on sight glass level markings. Water level can be reduced if necessary. See Diagram 18. NOTE: To drain water from ice tank, disconnect upper sight-glass fitting, swing tube downwards and drain water into a cup or container.

## Adjusting carbonation level

It is advisable to wait for cold water temperature to stabilize and air to be purged from the sparkling water unit before adjusting the carbonation level. Initial set point may vary once the unit is running. You may need to adjust the pressure once the system has stabilized. A pressure between 3 and 4 Bar will typically provide the right level of carbonization.

**WARNING: CO<sub>2</sub> pressure must not exceed 5 bar**

Re-check connections for leaks.  
Explain operation to user.

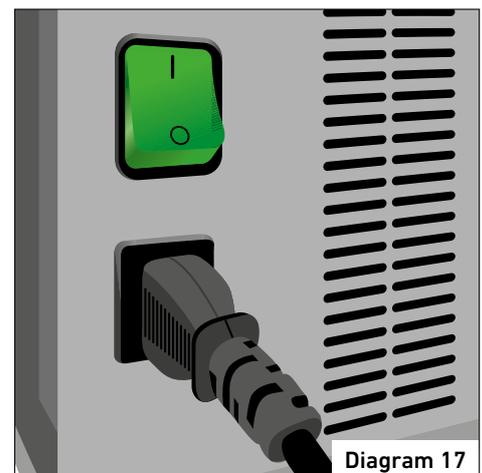


Diagram 17

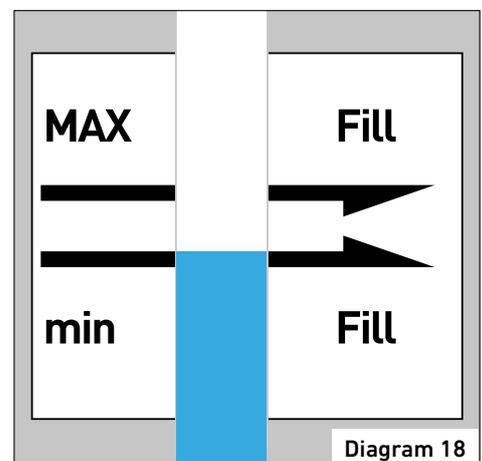


Diagram 18

# Commissioning Checklist

## WARNINGS.

### CHECK EACH OF THE FOLLOWING ITEMS:

- Filter packing foam removed from under filter cannister.
- Dispenser mounted securely – M4 chrome retaining screw fitted.
- Dispenser swivels 45° in each direction (if activated) - locking piece is removed.
- Tubing is cut to correct lengths and not kinked or sagging. Red and grey silicone tubes have a continual fall.
- Tubing secured correctly – nuts and spring clips fitted.
- Water main flushed before connection to unit.
- Unit connected to COLD water supply.
- Correct air clearances around unit.
- Power circuit fitted with an RCD – earth leakage protection device.
- Sawdust cleaned out of cupboard area.
- Door vents and spacer pads fitted correctly
- Initial program settings correctly set for dispenser tube length.
- Unit heating and cooling (after initial fill). Red and blue dispenser icons flashing (or on continually when reached correct temperature).
- Boiling and chilled water flow correct.

If any problems or difficulties arise contact **Billi (UK) LLP** on 020 7456 6789. To validate your warranty refer to the warranty card or validate online at [www.billi-uk.com](http://www.billi-uk.com).

For information on our filtration and service contracts please contact Billi Customer Service on 020 7456 6789 or [client.care@billi-uk.com](mailto:client.care@billi-uk.com).

For continued safety of this appliance it must be installed, operated and maintained in accordance with the manufacturer's instructions. For correct operation of this appliance, it is essential to observe the instructions as outlined in this booklet.

- Your appliance should be installed by a suitably qualified tradesperson.
- For correct operation of this appliance it is essential to observe the instructions as outlined in this booklet.
- Do not use this appliance with water that is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts.
- Filter replacement must be performed at intervals of not more than 12 months.
- Use this appliance only as directed in these instructions and relevant Billi User Guide and only for its designed purpose.
- Do not install unit if power cord is damaged.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Always activate boiling water safety lock switch where children or mentally disabled persons could access the appliance.
- This appliance is designed for indoor installation only and must not be exposed to direct sunlight, rain and excessive heat, cold, damp or dust.
- Do not store solvents or corrosive chemicals or other flammable items on or around this appliance
- DANGER:** High Voltages. Power supply must be disconnected before cleaning or removing and outer covers form the appliance. Any service or unit repairs must be performed by a trained and suitably qualified technician.
- Children should be supervised to ensure that they do not play with the appliance.
- DANGER:** The operation of the thermal cut-out indicates a possibly dangerous situation. Do not reset the thermal cut-out until the water heater has been serviced by a qualified person.
- WARNING:** Do not connect any restrictor or pressure relief device to the vent pipe of this water heater if installed.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- New hose-sets supplied with the appliance are to be used and old hose-sets should not be re-used.
- Packaging material including plastic bags must be kept out of reach of children and disposed of according to local regulations.
- If the appliance has been turned upside down during transport and handling, wait for at least 8 hours before switching appliance on.

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