

# Ablution Plant - Model BTHW

## Safe Hot Water with Fluid Category 5 Protection – Datasheet – Page 1 of 2

### Description

The Ablution Plant unit delivers hot water at the required safe temperature with the highest backflow protection. The primary application is bidets or ablution hoses adjacent to a WC or bidet. The unit can also be used for many other applications requiring hot water with Fluid Category 5 protection.

Toiletry applications are strictly Fluid Category 5, requiring a point of use air gap from the mains water or building supply pipe. There is a duty of care to provide warm water at a safe temperature with suitable legionella controls in place.

The Ablution Plant is packaged in a cabinet - consisting of –

- Solenoid filled Break tank with type AB air gap complying with BSEN13077: 2003
- Booster Pump
- Water Heater with thermostat and safety relief valve
- Thermostatic Mixing Valve (TMV3, DO8)
- Controls, fittings and sound proofing

There is a growing need to provide international toiletry facilities. This Ablution Plant helps with Muslim Qadaahul Haajah requirements and also forms part of the performance of Wudhu (Ablution for Prayer). The Ablution Plant is normally behind a removable panel in a washroom and delivers warm water to a trigger operated hose (supplied separately) adjacent to a toilet, bidet or wash area. This enables the users to hygienically clean themselves possibly without toilet paper.

The unit automatically switches on when a pressure drop is detected – e.g. when the user operates the trigger valve on the hose - optional extra. The pump has a “soft start” feature, which avoids water and electrical surges. The pump and heater are protected via a low level float switch in the cistern.

To enable a standard 13 A supply to be used - thus avoiding high current demands - the unit incorporates a 5 litre heater, which is factory set to 62°C (*Legionella bacteria die within 32 mins in water @ 60°C*).

The internal TMV blends the hot water down to 38°C (adjustable), which is maintained for a period – see Hot Water Capacity. An additional cold water outlet with Fluid Category 5 protection is optional (BTHW-OP1).

The unit is quiet by virtue of a high quality brass pump fitted with anti-vibration mounts, stainless braided internal hoses and thick fire proof sound insulation.

There are several optional upgrades – see page 2

### Mechanical Specification

Pressure Supply	10 bar max. 0.8 bar min.
Temperature Inlet	1° - 25° C max.
Outlet Temperature	30–50° C ± 2° C (38° C factory set) (Tamperproof adjuster in cabinet)
Safety Relief Valve	6 bar pressure relief
Water Regulations Approval	1710700

### Electrical Specification

Volts/Phase/Frequency	230/1/50
Power Consumption	2 kW (heater) + 0.4 kW = 2.4 kW
Full Load Current	10.2 A (inc. heater)
Heater Controls	Thermostat, safety temperature cut-out (manual reset)
Low Level Protection	Pump and heater (auto reset)



**Model BTHW-1**  
delivers safe hot water with Fluid Category 5 backflow protection

### Water Regulations

The Water Regulations identify bidets and any hose used for toiletry purposes as Fluid Category 5. This is the highest risk and requires a suitable air gap arrangement. To prevent cross contamination within the building, WCs and bidets should be protected with point of use Fluid Category 5 protection. Therefore in hotels water companies normally insist on one unit per bathroom to ensure no cross contamination.

For legionella control, the terminal fitting should reach final temperature within 30 s, typ. 5 m max 15 mm copper. (G18.4)

### Materials

Cabinet	Steel – powder coated RAL7032
Pump (wetted parts)	Brass
Heater (wetted parts)	Stainless Steel
Pipe / Fittings	Copper / Brass / Stainless
Cabinet Insulation	Sound absorbing fire retardant
Hoses	WRAS approved stainless braid

### Applications

Public buildings such as hotels, education departments, hospitals, healthcare and government buildings now frequently cater for multi-cultural use and are being suitably equipped.

- Ablution hose adjacent to a WC
- Bidets - ascending spray or with a flexible hose
- Medical & mortuary tables
- Veterinary & animal washing
- Laboratories
- Butchery

### Connection Pipes

A stainless steel braided hose with Y strainer and servicing valve is supplied - as required by the Regulations (G16.4). The outlet and pressure relief are 15 mm Tectite.

### Codes and Descriptions

Size	Code	Description
15 mm	BTHW-1	Ablution Unit-1 Hot FC5 TMV 230 V

### Arrow Valves Ltd

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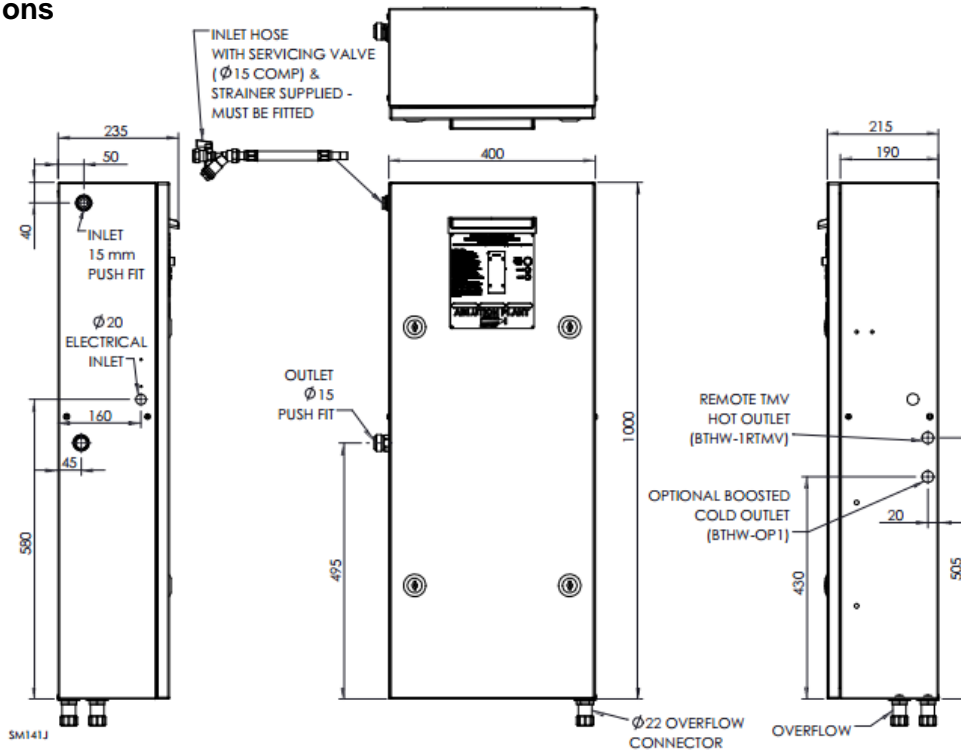
All unit-less dimensions in mm.  
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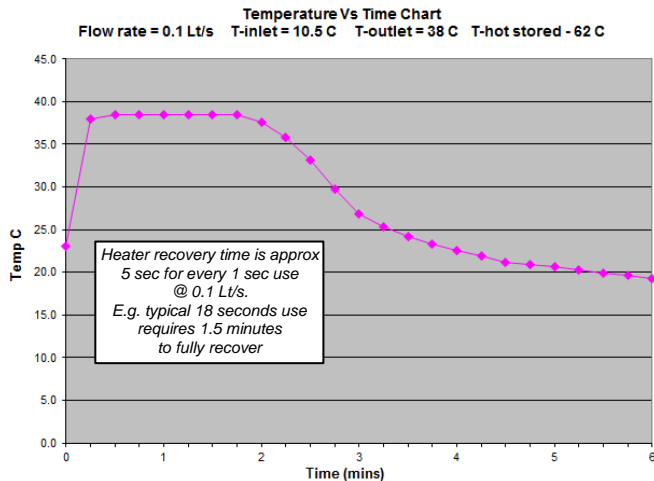
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## Dimensions



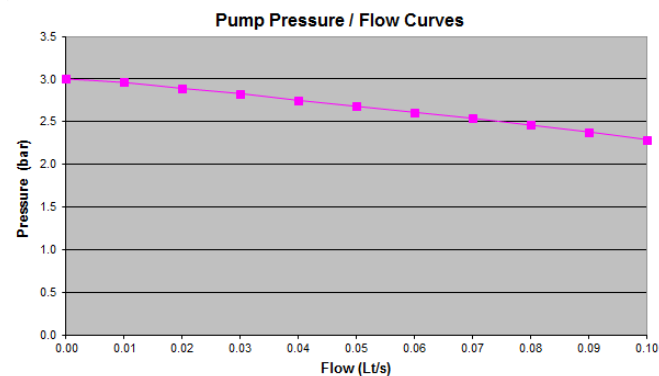
## Hot Water Capacity

The standard unit (5 litre heater) at a flow rate of 0.07 Lt/s, can supply water at 38°C for 2 minutes then a reducing temperature for a further minute.



## Pump Performance

The standard unit is limited to 0.07 Lt/s but user can change to 0.1 Lt/s and more pressure to the nozzle.



## Installation Considerations – see O&M Manual

The unit should be mounted at a serviceable height. There must be sufficient clearance under the base of the cabinet to connect the overflow.

The servicing valve with flow limiter and flexible hose must be used.

The overflow/warning pipe should discharge in a safe and conspicuous manner. The safety relief valve also discharges via the overflow connection at the base of the cabinet.

Electrical - supply via a 2 pole isolator and RCD or RCBO.

## Options

- Wall Mounting Bracket (MIDIBRA).
- Ablution hose and trigger Chrome.
- Cold water outlet (FC5 protection) in addition to hot
- Automatic Tank Purge – *legionella control*
- PRV – constant outlet pressure – factory fitted
- Drip Tray – *catches any leaks from a faulty unit*
- BMS fault monitor (BTBMS3) – volt free with changeover. Activates fault lamp and BMS relay if tank water level is too high or low, or if there is a low pressure fault.
- Remote Thermostatic Mixing Valve (if >5 m pipe run)

Code	Description
MIDIBRA	Wall Mounting Bracket for Midi range
CSHT-2	Ablution Hose & Trigger Chrome
BTHW-OP1	Ablution FC5 Cold Water Outlet Option
BTHW-OP2	Automatic Tank Purge System /24h
BTHW-PRV	PRV for BTHW-1
BTHW-1RTMV	BTHW-1 with Remote TMV
BTBMS3	BTMD/BTHW Alarm BMS - Volt Free
BTDT3	Drip Tray for Midi range Stainless

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