

# Ablution Plant - Model BTHW

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## Description

The Ablution Plant unit delivers hot water at the required safe temperature with the highest backflow protection. The primary application is bidets or abluion 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 –

- 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 or bidet. This enables the users to hygienically wash themselves without the need for 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 (supplied by others). The pump has a “soft start” feature, which avoids water and electrical surges. The pump and heater are protected via 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 10 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 FC 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 25 mm 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
Approval	WRAS 1112063

## 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.

## Materials

Cabinet	Steel – powder coated RAL7032
Cistern	Stainless Steel 304
Pump (wetted parts)	Brass
Pipe / Fittings	Copper / Brass / Stainless
Cabinet Insulation	Sound absorb fire retardant 25 mm
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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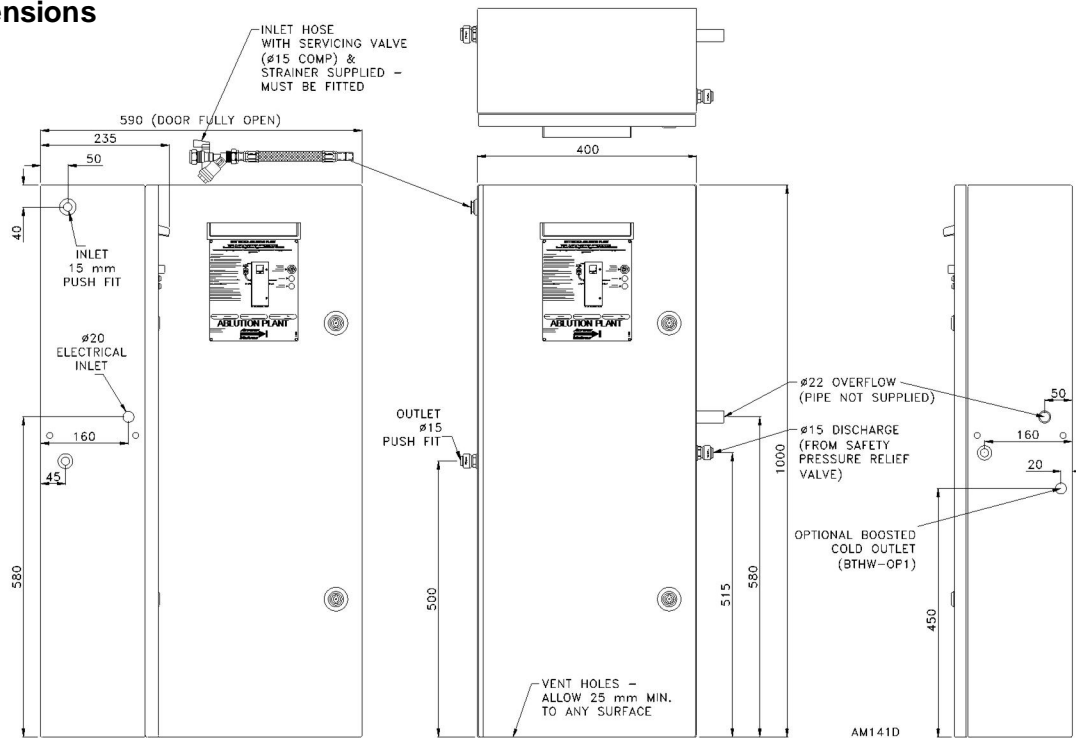
All unit-less dimensions in mm.  
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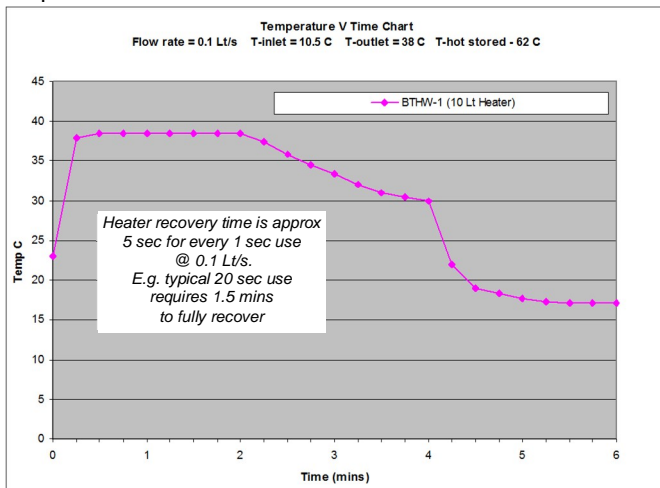
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## Dimensions



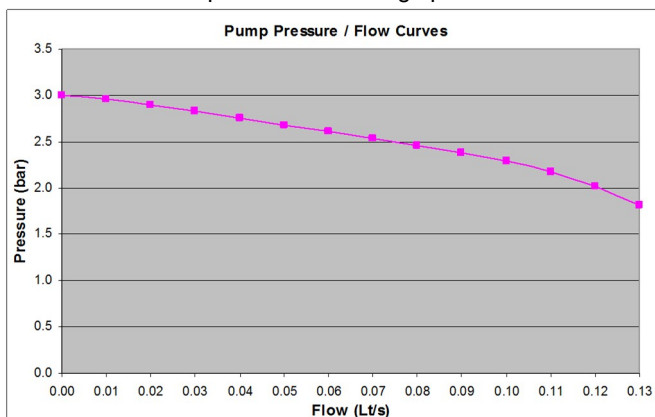
## Hot Water Capacity

The standard unit (10 litre heater) at a flow rate of 0.1 Lt/s, can supply water at 38°C for 2 minutes then a reducing temperature for a further 2 minutes.



## Pump Performance

The standard unit is limited to 0.1 Lt/s but user can select 0.13 Lt/s and more pressure to suit high pressure nozzle.



## Installation Considerations

The unit should be mounted at a serviceable height. The base has drainage holes, which must not be obstructed. Allow for door to open.

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

The overflow/warning pipe and safety relief should discharge in a safe and conspicuous manner.

Electrical - supply via a 2 pole isolator and RCD.

## Options



Hose and Trigger (CSHT-1)

- Ablution hose and trigger Chrome.
- Cold water outlet (FC5 protection) in addition to hot
- Automatic Tank Purge – legionella control
- High level (overflow) BMS
- Solenoid filling in place of float valve
- Drip Tray – catches any leaks from a faulty unit
- Higher outlet pressure (4 bar)
- BMS pressure monitor – volt free with changeover

Code	Description
CSHT-1	Ablution Hose & Trigger Chrome
BTHW-OP1	Ablution FC5 Cold Water Outlet Option
BTHW-OP2	Automatic Tank Purge System /24h
BTBMS2	High Alarm BMS
BTMDSOL	Solenoid Filling Assy BTMIDI Range
BTDT3	Drip Tray for Midi range Stainless

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