

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 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 contained in a cabinet - with drainage holes in its base - 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 small storage heater. The standard model (BTHW-1) is supplied with a 10 Lt heater, which is factory set to 62° C (*Legionella bacteria die within 32 mins in water @ 60° C*). Please enquire regarding instantaneous continuous-use heater.

The internal TMV blends the hot water down to 38° C, which is maintained for a period – see Hot Water Capacity. An additional cold water outlet with FC 5 protection is optional.

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.

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 (air gap / pump)	KIWA UK 0605701

Electrical Specification

Volts/Phase/Frequency	230/1/50
Power Consumption	2 kW (heater) + 0.4 kW = 2.4 kW
Fully Load Current	10.4 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

The inlet is via a 15 mm compression AFL Valve with integral strainer flow limiting cartridge and a stainless flexible hose. The AFL Valve also serves as a full bore isolation valve 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

Note – 10 Lt heater standard (model BTHW-1). 15 Lt heater (model BTHW-2) by special order only – please enquire.

Arrow Valves Ltd

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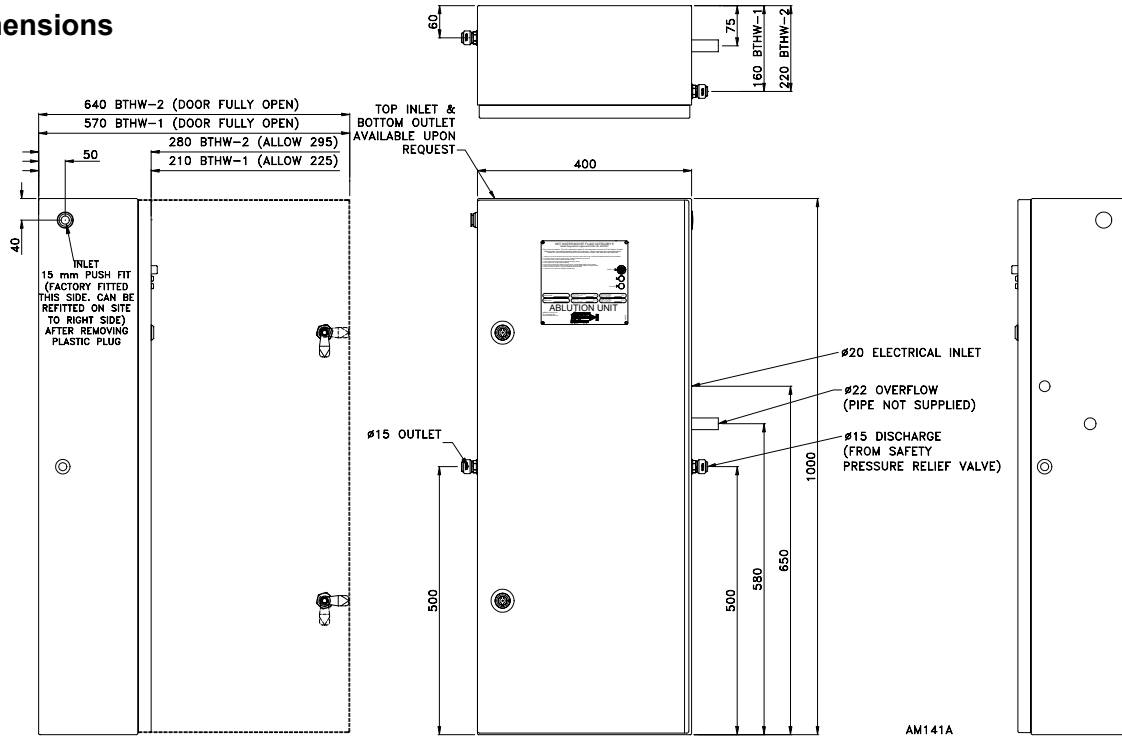
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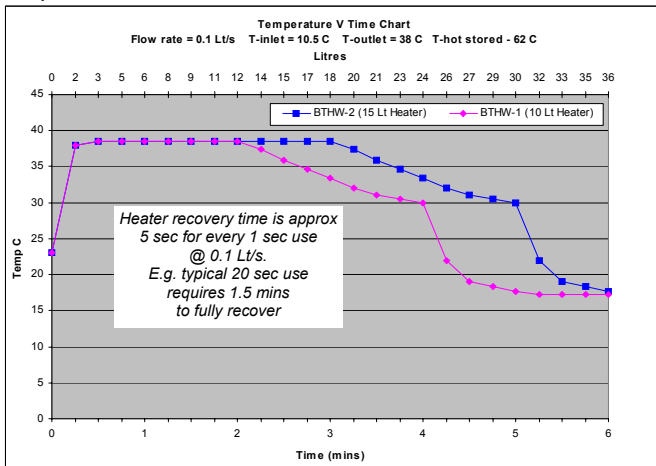
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Dimensions



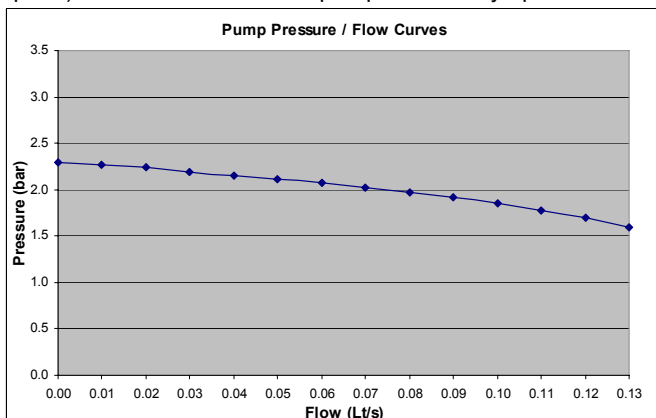
Hot Water Capacity

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 (0.13 Lt/s factory option). Also a 3 bar nominal pump is a factory option.



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. Lift-off door optional.

The AFL servicing valve with flow limiter and flexible hose must be used. Standard entry is on the left and may be changed on site to right entry.

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

We can manufacture special units to suit most applications. The options listed below are non-stocked items and subject to a minimum order – please contact us.

- Model BTHW-2 (features 15 Lt heater)
- Ablution hose and trigger assy.
- Top entry / bottom outlet
- Higher outlet flow rate (0.13 Lt/s)
- Higher outlet pressure (3 bar nominal)
- Instantaneous heater – for continuous use
- Cold water outlet (FC5 protection) in addition to hot
- Solenoid filling in place of float valve
- BMS – volt free contacts with changeover - low pressure

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