

**WM SERIES Models:
WM3, WM3SS, WM7, WM7SS,
WM15-3SS, WM15-6SS & WM25SS**

**Auto-Fill, Wall-mount Catering
Water Boilers**

Installation and User Instructions



The Professional's Choice



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Introduction

Dear Customer,

Congratulations on the purchase of your Instanta machine.

Your new boiler is designed to give years of trouble-free service, provided that the instructions contained in this manual are followed.

All new series Instanta products are energy efficient, simple to operate and easy to service. Find out more about Instanta products at www.instanta.com

Safety Information



Please read the following carefully before switching on this appliance:

A competent installation engineer should install this appliance in accordance with the installation instructions for this appliance and all relevant local and national standards including the following:

- Health and Safety at Work Act
- IEE regulations

- Local and national building regulations
- BS Codes of practice
- Water supply regulations

Your new water boiler is designed to provide a constant source of near-boiling water for the preparation of hot drinks.

Caution Safety: All personnel must be provided with sufficient and appropriate training in the safe use of this appliance.

- In line with Health and Safety requirements we recommend that a risk assessment be carried out after the boiler has been installed.
- A warning notice, displayed next to the machine, is often helpful in notifying users that the appliance contains and dispenses near-boiling water.
- Inform users that certain surfaces will become hot (especially the draw off tap). Care should be taken to avoid potential injury from burns and scalding whilst operating this appliance.
- The unit must be earthed.
- Always disconnect the unit from the power supply before servicing

Environmental

(Information on Disposal for Users of Waste Electrical & Electronic Equipment)

The “crossed out wheelie bin” symbol on this product means that discarded electrical and electronic products should not be mixed with general waste. Disposing of the product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. For proper treatment, recovery and recycling of end-of-life products, please contact your dealer or supplier for further information, or local authority for details of your nearest designated collection point.

Technical Specification

Outer casing is constructed from either impact resistant plastic or Type-304 stainless steel. The tank is made from Type-304 stainless steel and the internal baffle-plates [for condensing steam within the tank, are made from Type-316 stainless steel. The tank is fully insulated with high-temperature polystyrene.

The appliance has electronic control of the main functions. This means that the heating, filling and temperature are controlled precisely within given parameters.

Model	Width	Depth	Height	Power Rating	Rapid Draw-off	Weight (empty)	Weight (full)	Water Inlet Pressure
	mm	mm	mm	kW	Litres	KG	KG	Bar
WM3	332	210	452	3	3	7.3	12.5	2 to 7
WM3SS	314	215	414	3	3	9.4	14.5	2 to 7
WM7	350	220	498	3	7	8.4	18.6	2 to 7
WM7SS	320	225	456	3	7	9.5	19.7	2 to 7
WM15-3SS	350	250	545	3	15	10.7	29	2 to 7
WM15-6SS	350	250	545	6	15	10.9	29.2	2 to 7
WM25SS	410	304	596	3 or 6	25	17.1	48	2 to 7

Checklist

Before starting installation check that you have the following parts:

1. Main Boiler Unit
2. Boiler Case
3. Paper Mounting Template
4. Fitting Kit (screws & wall-plugs etc.)
5. Instruction Booklet

Installation [All Models]

a) Positioning the unit

The boiler should be positioned in a convenient place, on a wall that is capable of supporting it safely (refer to section “Technical Specification” for weight of boiler). Use the mounting template and fitting kit provided.

Position the boiler so that the tap is approximately 400mm above a draining board. Leave sufficient space around the unit to enable access for servicing, paying particular attention to the position of the top-centre fixing screw that holds the case in place.

When mounting on wall, screw in the top two screws leaving about 6mm protruding and hang the machine using the keyhole slots provided. Once the machine is positioned, tighten the top screws and insert the bottom screw.

b) Electrical Connection

3.0kW Units: (WM3, WM3SS, WM7, WM7SS, WM15-3SS)

Supply: 230V, 50/60Hz (3.0kW).

The circuit should be protected by its own 13amp double pole connection unit with flex outlet to BS5733, alternatively the circuit should have means of disconnection incorporated in fixed wiring, having a contact separation of at least 3mm in all poles. Minimum cable size is 1.5mm². The use of an ELCB is recommended.

Base Entry of Cable: Use the cable gland. Loosen cable-gripping nut and pass cable through gland, leaving enough free cable to connect to terminal block. Tighten cable gland grip nut.

Alternative Rear Entry Installation (Electrical):
The fixed or flexible cable is connected direct to the terminal block – the cable gland is not utilised.

DO NOT SWITCH ON UNTIL THE INSTALLATION IS COMPLETE AND THE CASE AND TAP ARE IN PLACE

6.0kW Unit: (WM15-6SS)

Supply: 230V, 50/60Hz (6.0kW).

This unit is 6KW so must be connected to a 30amp isolator fitted with a suitable ELCB.

Electrical installation should conform to current I.E.E. wiring regulations.

3.0 or 6.0kW Unit: (WM25SS) - Optional on installation

The 25 litre unit can be configured to either 3KW or 6KW.

As it leaves the factory it is configured to 3KW. This can be changed to 6KW by fitting the link wire (supplied) to the second heating element.

NOTE:

If the unit is configured to 6KW then the unit must be connected to a 30amp isolator fitted with a suitable ELCB. Electrical installation should conform to current I.E.E. wiring regulations.

In addition, the “Heater Rating” must be changed in the Program Mode, from 3KW to 6KW (select “Set Heater Rating”). To access Program Mode, follow instructions as on page 6

- WARNING: This appliance must be earthed.
- Electrical installation should conform to current I.E.E. wiring regulations.

ONLY A QUALIFIED ELECTRICIAN SHOULD CARRY OUT THIS WORK

c) Water Connection

The water supply must have a pressure not exceeding 7bar and no lower than 2bar.

If the mains water pressure is below 2bar, a fault situation could arise.

If the water pressure exceeds 7bar a suitable water pressure reducing valve will need to be fitted to the water supply to bring it to a level that the machine can cope with. Failure to do so could result in the boiler overflowing.

THE MANUFACTURERS CANNOT BE HELD RESPONSIBLE FOR ANY MACHINE MALFUNCTION IF THE WATER PRESSURE IS NOT WITHIN THE RANGE STATED. IF IN DOUBT, CONSULT YOUR WATER SUPPLY COMPANY.

- Connect to a suitable cold water drinking supply using 15mm copper pipe and using “T” piece supplied.
- Push the “T” piece firmly onto the water inlet solenoid pipe with the brass plug facing forward (**Note: the “T” has been blanked off using a brass plug – leave the plug in-place.**)
- Push the 15mm cold water supply firmly into the bottom of the fitting.

Alternative Rear Entry Installation (Water Connection):

Remove the brass plug from “T” piece and re-fit into the bottom of the “T” piece instead. Push firmly onto the inlet solenoid pipe with the “T” facing the wall. Push the 15mm cold water supply firmly into the “T” fitting.

NOTE: To avoid damage to the appliance, do not use any solder connections whilst pipes are connected to the boiler.

- A 15mm stop valve must be fitted between the water supply and the boiler so that it can be isolated.
- Water purification filters are available from Instanta to ensure fresh tasting water. In hard water areas, scale can cause problems. Fitting a scale reducer will help minimise scale but will not eliminate scale completely.

d) Overflow/Drain

The fitting kit includes a 15mm, straight push-fit coupling with a small piece of 15mm copper pipe pushed into it. **NOTE: This connector must be pushed onto the corresponding brass overflow connection on the services-bracket (along side the solenoid).**

If the overflow is to be extended, remove the copper pipe (supplied) and replace with 15mm pipe of your chosen length. The pipe must have a continuous fall and should not be longer than 300mm (if a longer run is required, use 22mm pipe to avoid airlocks). The overflow pipe should have no more than four right angle bends and should discharge to a safe, visible position.

Alternative Rear Entry Installation (Overflow/Drain):

If rear entry has been chosen, the straight push-on coupling must be replaced with a

15mm push-fit elbow (available from plumber’s merchants). Push the elbow onto the brass overflow connection on the services bracket (alongside the solenoid). As described above, the pipe must have a continuous fall etc.

Under certain conditions the overflow pipe could vent steam, hot water or cold water. The manufacturers cannot be held responsible should damage occur from such discharge, if the overflow pipe has not been directed to a suitable position where overflowing water can run away safely.

VENT PIPE:

A small silicone rubber tube connects the tank-lid to the back panel. Ensure this is connected (and hasn’t come off in transit) and that the outlet fitting in the back-panel is not obstructed.

e) Fitting Case:

- Stainless Steel Case Units Only: Attach the Earth wire connection to the bottom of the boiler-case (screw & washer supplied).
- Position the boiler-case close to the wall-mounted boiler assembly and plug-in the communications lead (located on inside of boiler-case) into the circuit board.
- With the communications lead connected, offer up the case to the wall-mounted boiler assembly, aligning the tap and plastic spring-mounted tap moulding with the cut-out in the boiler-case.
- Secure case in position using M4 screws (supplied) at top and bottom of the case.
- Slide the grey tap collar along the chromed tap assembly so that it fits snugly against the plastic tap moulding.

Operation

First use (once water and electrical connections have been made):

NOTE: If the “7-day Timer” or “Filter Monitor” features are not required, the boiler can be used without any program set-up.

Simply switch the machine on by pressing the small button at the top of the LCD window.

- Switch on. The boiler will run through an initial self-diagnostic check and various messages will display within the LCD window.
- Providing a water supply is present, the boiler will begin to fill with water (message: **BOILER FILLING**).
- Once primed with water, the boiler will begin to heat (message: **BOILER HEATING**).
- When the correct temperature has been reached, the **Green Tick** will illuminate and the display will show **DATE & TIME**.
- The boiler will not fill completely at once. The water is electronically controlled with small amounts of water added to ensure the water at the tap is always at the correct temperature.

IMPORTANT: In daily use the boiler may be used as soon as the GREEN TICK illuminates, BUT ON FIRST INSTALL, WAIT 15 MINUTES BEFORE STARTING TO USE.

Regular Daily Use

- 1) Switch on and wait for the Green Tick to illuminate. The boiler will then be at the correct temperature and ready to use
- 2) Dispense water using the lever tap on the front of the appliance



(Safety Caution: Use with caution as the boiler dispenses near-boiling water)

ECO Mode

(Not WM3 & WM3SS models)

To activate **ECO** power saving mode, simply press **ECO** button (globe symbol). The display will show message "**ECO MODE ACTIVE**". This reduces the boiler operating capacity by approximately 50%. When the volume of water in the tank has fallen below half, the boiler will continue to operate on half capacity. To revert to full capacity, simply push the **ECO** button again.

Program Mode and LCD Display

The LCD display informs the user of the boiler's status (e.g. filling, heating, ready etc.). In conjunction with the On/Off button it also gives access to the Program Menu which allows various settings to be selected.

To access the Program Menu, switch power on to the boiler at the mains whilst at the same time, pressing the On/Off button until the display reads "**PROGRAM MODE**".

IMPORTANT: Once in program mode, pressing ON/OFF button (short-push) advances through the 18 menu selections. When the desired mode is displayed, select by holding the button in for 3 seconds (long-push).

A full list of the program selections is listed at the back of this manual.

PROGRAMMING BOILER FEATURES ON INITIAL SET-UP:

SET CLOCK TIME (24h) – required if 7-day timer or filter monitor is to be used.

Having entered the program mode (as described above), the first menu is "**SET CLOCK TIME (24H)**". The time will have been factory-set but you may need to adjust for changes such as British Summer Time.

- Press and hold On/Off button (long-push) to access.
- Set the hours, minutes and day of the week. As each are set, hold button in (long-push) to store information and advance to the next menu.
- Once hours, minutes and days are set-up, the display shows "**SET CLOCK TIME (24h)**" again. Continue through the menu by pressing the button (short-pushes).

Timer Controlled

Setting up the 7-day Timer:

The boiler can be set-up to switch on and off using the programmable seven day timer.

- With display showing "**TIMER CONTROLLED**", hold button in (long-push)...display changes to "**TIMER DISABLED / ENABLED**".

- Choose "**ENABLED**" and hold button in to select. The display shows "**TIMER CONTROLLED**" again.
- Press button (short-push) to advance to "**SET PERIOD MONDAY, TUE, WED etc.**" Push button and hold (long-push) to set times.
- When setting the ON and OFF times, the main power ON/OFF button advances the "ON time" and the Eco button the "OFF time"...both advance in 15-minute increments (If a time is not set for a day, it is ignored and the boiler will remain in the last programmed condition).
- Once the chosen ON and OFF times have been set in the display, hold main power ON/OFF button in (long-push) to store the information and advance to the next day of the week. Repeat for each day of the week (Monday to Sunday).
- Once the timers have been set up for each day, the menu advances to next menu option.

Overriding the timer:

NOTE: The timer can be overridden when it is in a "timed off" period, simply by pressing the ON/OFF button on the front of the boiler. If the timer is overridden, the boiler will remain ON until the next programmed "time-off period" occurs or until the boiler is switched off manually.

In some situations, it may be preferable to set up the boiler so that the timer cannot be overridden (e.g. in a secure environment such as a prison). To disable the override feature, enter Program mode as previously described and advance through the menu until "**TIMER OVERRIDE**" is displayed. Hold button (long-push) to change the Timer Override from "**ENABLED**" to "**DISABLED**". Press button again (long-push) to save and then exit the Program menu.

Set filter capacity

Setting up the filter monitor:

The boiler has a built in filter monitor which can be activated when a scale reduction cartridge or water softener is installed. This will measure the through-put of water into the boiler and inform

(via the display) when the filter is exhausted and needs to be replaced.

- Once a filter cartridge/water softener has been installed, enter the Program Menu and advance through the menu options until "**SET FILTER CAPACITY**" is displayed.
- Hold button in (long-push) to enable filter monitor and select "**NUMBER OF LITRES**". This should be matched with the capacity of the cartridge/softener being used.
- The number of litres is adjustable between 500 and 9900 Litres. Press power ON/OFF button to increase the number of litres (increases in 100-L increments)
- Once the monitor has been set with the correct litres, press and hold button (long-push) to store information and come out of the filter menu. Continue with short pushes of the button to advance through the program menu.

Resetting counter when new filter is installed:

Whenever a new cartridge-filter/water softener is installed, the filter monitor can be reset by accessing the Program Menu and choosing "**RESET THE FILTER**".

Push and hold button (long-push).

Once the display changes, press the Eco Button (as prompted) to reset the counters to zero...the display briefly shows "**FILTER LOADED**" before message; "**RESET THE FILTER**" is displayed again.

Press button (short-push) to continue through the Program Menu.

Cleaning

The external surfaces of the machine can be kept clean by wiping with a damp cloth.

For units with a stainless steel case, a good quality stainless steel cleaner will keep the machine in its original condition.

The plastic front fascia may also be cleaned with a damp cloth. Do not use abrasive material on the outer surface of the machine.

Maintenance & Service Information

NOTE: After initial commissioning or subsequent re-commissioning (service-repair), check that the water supply has been established prior to switching on the boiler.

The appliance should be periodically checked for scale build-up.


In hard water areas, the boiler should be descaled on a regular basis to maintain efficient operation, minimise energy consumption, and also retain water quality. The frequency depends upon hardness of the local mains water supply and whether or not it is being treated by an effective scale reducer (**strongly recommended – see below**).

PREVENTION IS BETTER: Rather than frequently de-scaling the machine it may be preferable to install an effective scale reducer or WRAS approved water softener to the mains water supply. This will reduce the frequency of de-scaling but may not remove scale completely in some areas.

Multi-Filters (AQ35), spare parts and accessories are available from Instanta Limited – Tel: **01704 501114** and ask for spares

Descaling:

To de-scale the machine:

-  **Safety Caution: First disconnect machine from the power supply**
- Drain water down via the tap.
- Remove the boiler-case (2 screws).
- Drain the remaining water through the drain plug in the bottom of the tank.
- Remove the tank-lid by unscrewing the fixing screws, the tank is now accessible. Lift out the baffle plates on the inside of the tank (taking note of the position of the plates).
- Remove as much loose scale as possible by hand.
- Dissolve any scale that is difficult to remove using a suitable de-scaling solution. Remember to replace the drain plug before using the de-scaler.

- Clean the level-sensing probes and their white insulators completely, using a non-metallic scourer.
- Ensure all traces of de-scaler are removed by flushing with copious amounts of fresh water, before using the boiler again.
- It is preferable to install an effective scale-reducer or water softener. This will reduce the frequency of de-scaling but will not remove scale completely in some areas.

Draw-off Tap:

The draw-off tap components are subject to wear & tear. We strongly recommend that the tap is inspected periodically (at least once a year as part of a general maintenance routine). It is advisable to keep a spare tap spring and tap washer in case of emergencies.

Tap Spring	-	TP1007/N
Tap Washer	-	TP1001/L
Tap Bonnet	-	HSTP100
Upper Tap Assembly	-	XTP1050/A

Service Warnings & Fault Diagnostics

Your boiler is fitted with an intelligent fault diagnosing system. There are two levels of diagnosis.

- Simple warnings** - illumination of an amber exclamation mark. Your boiler will continue to operate as normal whilst displaying these warnings.
- Critical faults** - illumination of a red spanner.

Simple Warnings [1]:

The following messages may be displayed. To clear, switch boiler off at the mains supply and switch back on. These messages, which are not critical, should be dealt with when it is convenient:

“CHECK SUPPLY” Boiler has not sensed any drop in temperature. The most common cause is an interruption of the water supply. Check stop valve and make sure there are no kinks in the hose and no debris in the water inlet valve. The message can also indicate low incoming water

pressure. Shortly after the water supply returns to normal, the message will cease.

“CHECK FILLING” Boiler has not sensed water on the bottom level sensor. Check water supply to the boiler and make sure there are no kinks in the hose and no debris in the water inlet valve. Please note that in hard water areas this message can be caused by lime-scale (see message **“CLEAN PROBES”** below). Once water supply returns or bottom probe has been cleaned, the boiler must be switched off at the mains and back on again to reset.

“CLEAN PROBES” [+ 1 or + 2]: Your boiler is fitted with five level sensors. In some areas hard water causes a build-up of lime-scale deposits on the sensors which acts as an insulator. When a sensor becomes insulated, the water level switches to a different sensor and the **CLEAN PROBES** message will display. This is followed by a number 1 or 2. **“CLEAN PROBES 1”** indicates that the bottom and possibly ECO sensor are coated in lime-scale, **“CLEAN PROBES 2”** indicates that one of the top three sensors is coated in scale.

To clean the probes refer to ‘Descaling’

Critical Warnings [2]:

In the event of a serious malfunction, the red spanner in the display will illuminate together with the message **“CALL SUPPLIER”** alternating with one of the following messages.

“THERMISTOR O/C” The temperature sensor has been disconnected or is faulty. Consult with your supplier or phone Service/Technical Support (01704 502911).

“OVERFILL” The boiler has sensed water on the Overfill level sensor. Simply clean the probes as above. If this does not resolve the fault, the boiler has overfilled. This may have been caused by a faulty water inlet valve or very high or low incoming water pressure. Consult with your supplier or phone Service/Technical Support (01704 502911).

“ELEMENT OR TRIP FAULT” This means that either one of the two safety cut-outs has activated or the element has failed.

- Over-boil safety cut-out – This activates if boiler produces excess steam. This can be due to:**
 - lime-scale within the tank.
 - overuse of the boiler, beyond its capacity.
 - a temporary interruption in the water supply.
 - a faulty temperature sensor or internal component (triac).
- Boil-dry safety cut-out – This activates if the boiler has been boiled dry, for example, due to lime-scale build-up or water starvation.**

To reset boiler safety controls;

The safety cut-outs are manually resettable



Safety Caution: Isolate boiler from power supply before proceeding.

- Isolate from mains electrical power.
- Remove outer case (2 screws top & bottom).
- Over-Boil Safety:** Push the small reset button in the centre of the safety cut-out switch (located next to the water inlet valve).
- Boil-dry Safety:** Push the small reset button in the centre of the heating element (located left-side of tank).

If in any doubt, do not attempt just contact our Service/Technical Support department on **01704 502911**

Full Program Menu

1 SET CLOCK TIME (24h)

- SET CLOCK – HOURS
- SET CLOCK – MINUTES
- SET CLOCK – MONDAY
- SET CLOCK – TUESDAY
- SET CLOCK – WEDNESDAY
- SET CLOCK – THURSDAY
- SET CLOCK – FRIDAY
- SET CLOCK – SATURDAY
- SET CLOCK – SUNDAY

1a RESET THE FILTER

[resets filter-monitor when a new cartridge is installed]

NOTE: This menu option only appears in the menu once the filter counter has been activated

2 TIMER CONTROLLED

- SET PERIOD – MONDAY
- SET PERIOD – TUESDAY
- SET PERIOD – WEDNESDAY
- SET PERIOD – THURSDAY
- SET PERIOD – FRIDAY
- SET PERIOD – SATURDAY
- SET PERIOD – SUNDAY

- 3 SET WATER TEMPERATURE
[Adjustable: 80° & 99°C - Your boiler has been factory-set. We do not recommend increasing the factory-set temperature]
- 4 SET FILTER CAPACITY
[Enable filter monitor and set number of litres]
- 5 SET HEATER RATING
[Select KW rating of boiler: 1.5KW - 18KW KW]
- 6 ECO MODE BUTTON
[Enable or disable. Disable if you do not want to use Eco Mode]
- 7 OVERRIDE BUTTON
[Enable or Disable...you can override the timer settings by pressing the ON/OFF button at any time. If you do not want to allow this to happen, disable the override button]
- 8 PROGRAM MODE EXIT
[Exit program menus]
- 9 TEST PROBES
[Shows which sensors in contact with water]
- 10 DISPLAY ADC VALUES
[Manufacturers test values]
- 11 VOLTAGE & LOAD TEST
[Takes a reading of mains supply voltage]
- 12 POWER UP MODE
[Last-used, always-off, always on]
- 13 SHOW CLOCK ON DISPLAY
[Enable or disable clock/time display]
- 14 LOAD DEFAULTS
[Returns boiler to factory-set defaults]
- 15 ENG MODE 1 STATUS
[Not used]
- 16 ENG MODE 2 STATUS
[Not used]
- 17 PROGRAM MODE EXIT
[Exit program menus]

Service/Technical Support

Tel: 01704 502911

To ensure your service enquiry is handled as efficiently as possible, please have the following information available:

- Brief description of problem.
- Product Type (model).
- Serial Number (label on under-side of boiler-case). This is essential.

Guarantee

Your boiler is guaranteed for 2 years from date of installation.

Our guarantee includes on-site labour and parts for problems caused by fault of manufacture and component failure with the following exclusions:

- Problems caused by hard water and lime scale. We regret we cannot be held responsible for problems caused by hard water.
- Dripping Taps. These components are subject to wear & tear but in the event of a tap failing, within 12 months of installation, we will be pleased to replace the tap assembly by post. Fitting is very simple and requires no tools. An engineer call out is not necessary.
- Accidental damage, misuse or use not in accordance with these instructions and damage caused by incorrect installation.

The manufacturer disclaims any liability for incidental, or consequential damages.



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