

# TAP SPARES

## TAPSPARES UK BOILER INSTALLATION & USER GUIDE

### Minerva (Version 1) Boiler Upgrade Procedure





## Introduction

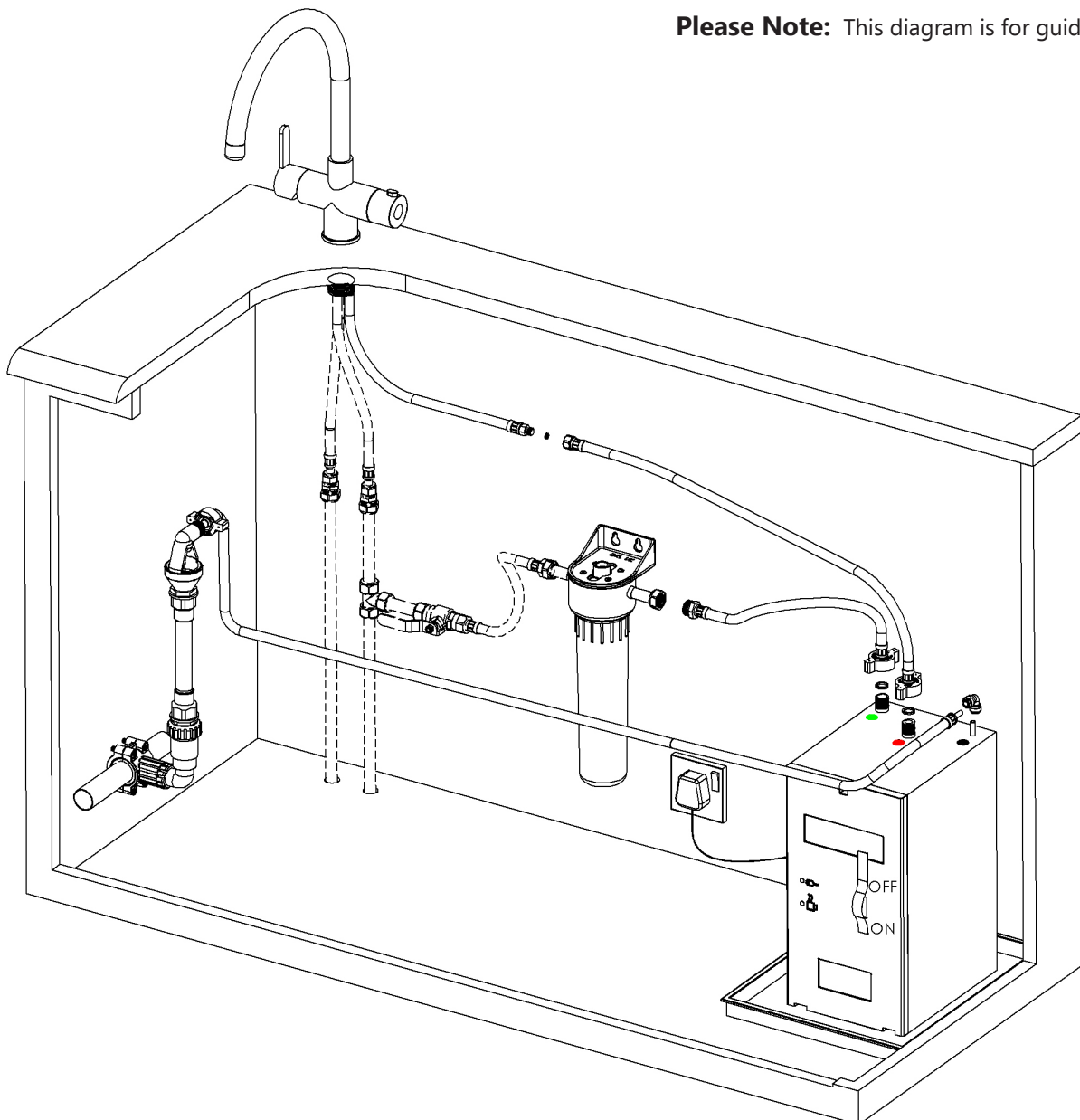
This guide explains how to remove an existing Franke Minerva boiler and replace it with a TapSpares UK boiler.

Thank you for purchasing a TapSpares UK boiler. This product has been designed and manufactured to the very highest quality standards. Correctly installed and properly maintained in accordance with the following instructions, it will provide you with reliable service for many years.

Failure to install and maintain the unit in strict accordance with these instructions will invalidate your product warranty. TapSpares UK will not accept liability for damage or accidents resulting from the use of non-genuine components and incorrect installation or operation.

## Application

This product is a boiling water device intended for domestic use only. The water supply pressure must be between minimum 1.5 BAR (22 psi) maximum 5 BAR (73 psi)



**Please Note:** This diagram is for guidance only

## Safety

**Remember: Boiling water is potentially dangerous and great care should be exercised when using the system.**

The installation must be carried out by a suitably qualified professional in strict accordance with the instructions provided and comply with the UK Water Supply (Water Fittings) Regulations 1999 and safety standards.

- If a new electrical power supply is required you must seek the services of a qualified electrician.
- The boiler must only be connected to the 230V mains electricity supply through either an earthed independent wall socket or a fused spur. It is advisable to check the circuit to establish whether or not the addition of this appliance will overload the circuit. **Important Note:** The boiler should not be fitted on the same electrical supply line with other appliances that require a constant power supply such as a fridge/freezer.
- The boiler is fitted with an electrical lead terminating in a UK 3 pin fused plug for connection to the 230 volt 13 amp domestic electricity supply. It is important to use a socket with a built in switch and position it to provide convenient access to switch off the boiler.
- The electrical lead or plug must not be modified in any way.
- Turn off the mains water supply before commencing installation.
- Never lift the boiler by the flexible connector hoses.
- The power to the boiler must only be switched on once the installation is complete and the tank is full of water.
- Always turn off the electricity supply to the boiler before you close the mains stop valve. Restore power to the boiler after the mains stop valve has been opened.
- Young people and potentially vulnerable users must be instructed how to operate the boiling water function safely by a responsible adult.
- This is a domestic appliance and must not be installed in a commercial environment.
- Extra care should be taken when installing water appliances above the ground floor. To reduce the risk of potentially catastrophic flooding, install an automatic shut-off device at the outlet of the filter stop valve.

## Boiler technical data

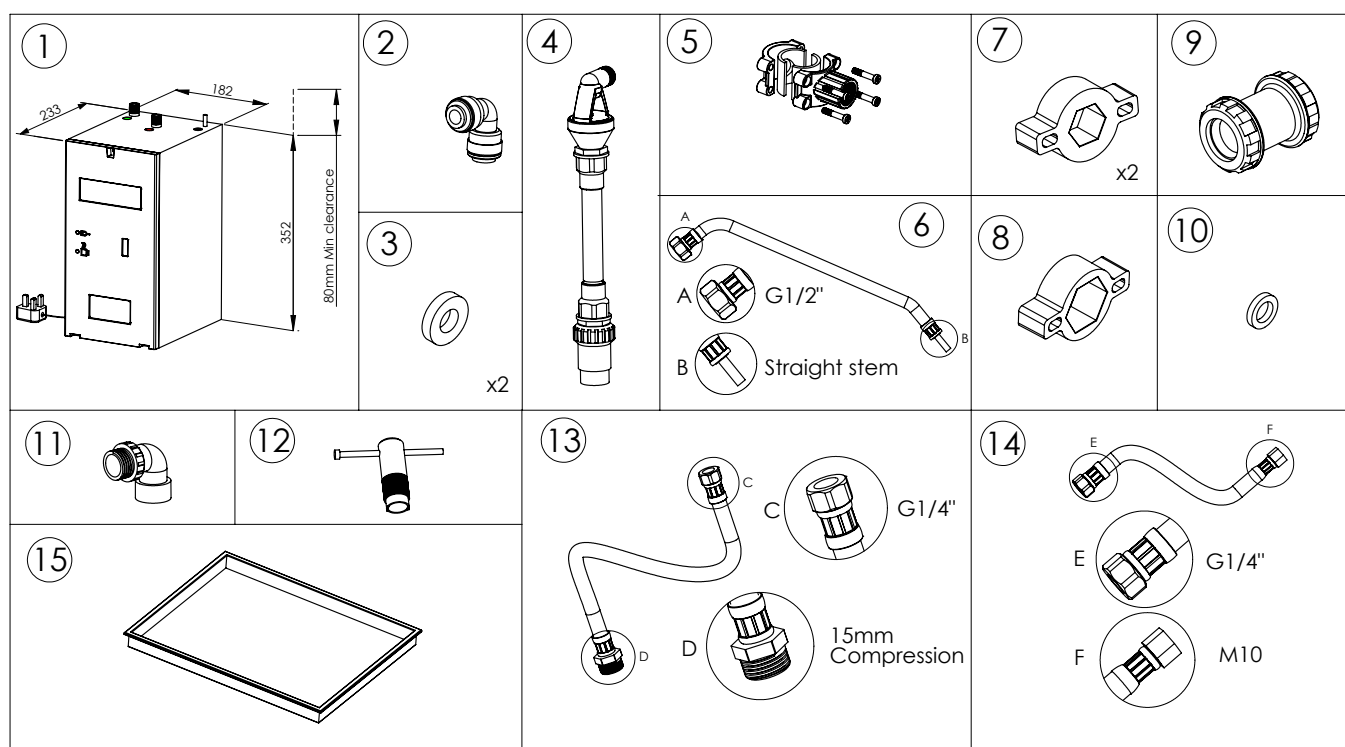
Description	Value	Unit
Dimensions	230 x 182 x 354	mm
Load	10	Amps
Voltage	230	Volts
Power	1500	Watts
Stored Temperature	100	°C
Min Water Pressure	1.5	Bar
Max Water Pressure	5	Bar
Heating Up Time	20	Mins
Recovery Time	10	Mins
Boiler Capacity	4	Litres
Pressure Release Valve Rating	8	Bar

## Before you begin

1. Check the mains water pressure. The pressure must not be below 1.5 BAR (22 psi) or above 5 BAR (73psi), measured during a low demand period – (mid-morning or mid-afternoon). If the pressure exceeds 5 BAR a pressure reducing valve must be installed in the cold mains supply to protect both the boiler and the water filter housing. A suitable pressure reducing valve can be purchased at [www.TapSparesUK.com](http://www.TapSparesUK.com).
2. The unit must be installed in a frost free environment.
3. Ensure that the cabinet is well ventilated. If in doubt it is advisable to improve the circulation of air by drilling some holes in the top and bottom of the rear panel.
4. Be careful when making the various connections to the mains water stop valve, boiler and tap. Do not be tempted to over-tighten the connections. It is only necessary to firmly hand tighten the nuts using the patented NutRunna® plastic tightening devices provided to make a secure watertight seal.
5. Shut off the mains water supply.
6. Switch off the mains electricity supply at the socket.
7. Identify and label or mark the hoses before disconnecting them from the existing boiler.

## Components List

1. TapSpares UK Boiler
2. Push-fit elbow
3. Washer for boiler water Inlet & Outlet
4. Vent Assembly
5. Saddle Clamp
6. Vent Hose
7. NutRunna® hand-tightening device for G 1/4" nut x2
8. NutRunna® hand-tightening device for G1/2" nut
9. 40mm Straight Waste Compression Coupling
10. Spare Flat Fibre Sealing Washer
11. Vent Assembly Elbow
12. Pipe Cutter
13. Inlet Hose - 15mm compression x G1/4" nut
14. Outlet Hose - G1/4" nut x M10 nut
15. Drip Tray



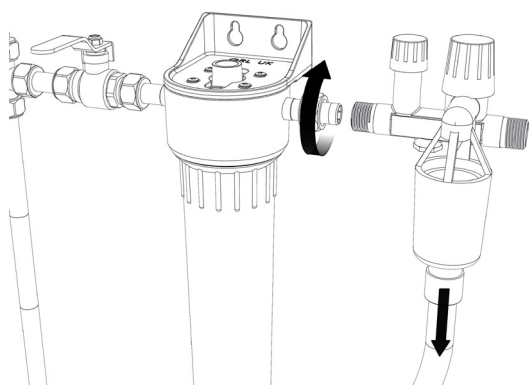
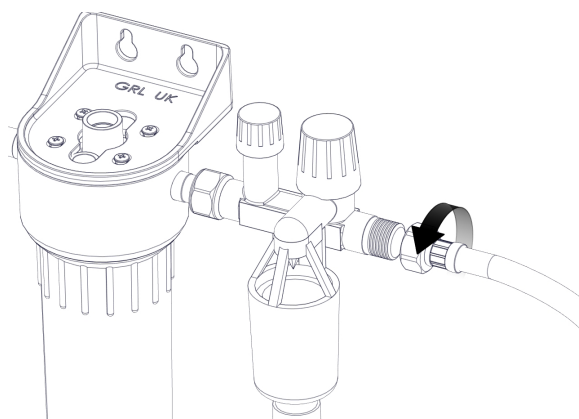
## THE INSTALLATION PROCEDURE

### Plan the Layout Inside the Cabinet

- The TapSpares UK Boiler must stand upright on a level surface in the kitchen cabinet and cannot be installed within the kick-space below the base of the cabinet. Consequently, when replacing an original Minerva boiler a new location must be found for the new boiler inside the cabinet.
- Determine the best positions for the boiler and the filter unit, making sure that there is adequate space to fit the boiler drip tray underneath the boiler and the boiler power cable, the flexible hoses, and the filter cartridge change indicator cable, are all within comfortable reach of their respective connection points without them being compressed, stretched or kinked.
- Allow a minimum clearance of 80mm at the top of the boiler for the connecting hoses.
- The boiler must be installed upright with the hose connections at the top, never on its side.
- Leave access to the boiler for future servicing requirements. The boiler will require servicing/replacing in the future so do not box it in.

## Remove the Minerva Boiler, Pressure Relief Valve & Waste Connection

1. Activate the boiling water handle of the tap to drain the water from the system. If the water is still boiling turn off the power to the boiler, then activate the boiling water handle again and run the water until it runs cold.
2. Shut off the water supply to the filter system.
3. Activate the boiling water handle of the tap again to release the pressure from the system.
4. Disconnect the filtered water inlet hose from the outlet of the tundish/pressure relief valve assembly. There will be residual water in the system so it is useful to have a cloth or towel at hand.

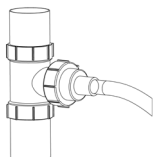
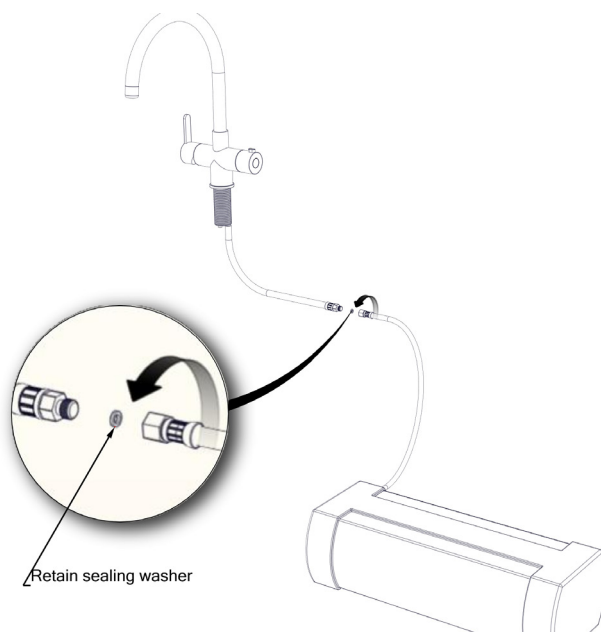


5. Remove the black waste hose from the bottom of the tundish.
6. Disconnect the compression fitting on the outlet of the filter and remove the tundish and pressure relief assembly.

7. Locate the existing boiling water outlet hose that runs from the tank and disconnect it where it joins the flexible hose from the tap. Take care to try and catch the copper washer located between the hoses. A spare (10) is provided should the existing washer go missing. Do not be alarmed that the spare washer is fibre rather than copper, it has been specified especially for this application.

8. Remove the old tank.

9. Remove the section of plastic waste pipe where the waste tee is installed (Fig A) and replace it with the 40mm Straight Waste Compression Coupling (Fig B) provided.



**Fig A**



**Fig B**

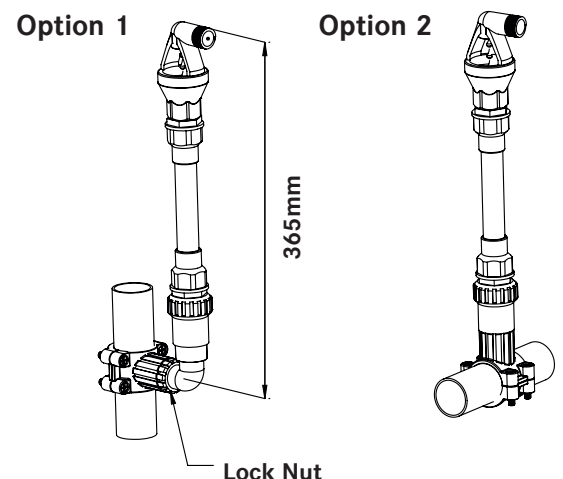
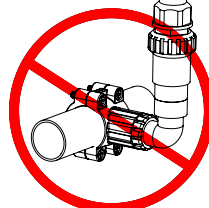
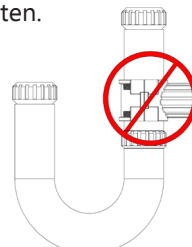
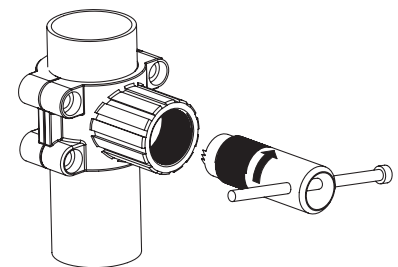
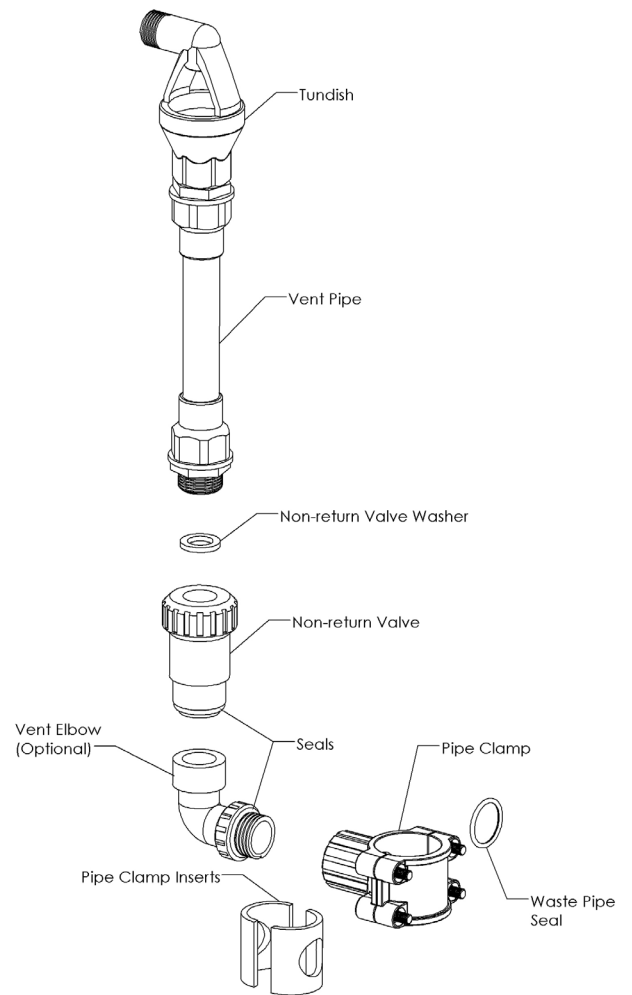
## Install the plastic vent assembly

### Important points to note regarding the Vent Assembly:

- The vent pipe must be installed vertically with the air-gap at the top and strictly in accordance with the instructions. In certain circumstances water may continuously run into the vent, it is therefore imperative that the vent is installed vertically. The vent pipe conforms to the building regulations and should not, on any account, be shortened or modified in any way.
- The tundish and vent pipe are glued together and the connection should not be broken.
- The non-return valve is factory fitted to the vent pipe with the washer in place. Do not unscrew or disturb this connection.
- To avoid debris blocking the vent and causing it to overflow do not, under any circumstances, install the saddle clamp on the U Bend, waste trap, side/underside of the waste pipe.
- If the TapSpares UK Boiler is being installed on a sink with a waste disposal unit, the vent assembly must be installed on a separate waste pipe to the waste disposal unit.

Choose a convenient position to fit the saddle clamp (5) on a vertical section (Option 1) of the waste pipe, or alternatively on a horizontal section (Option 2). When installing the saddle clamp on a horizontal section of pipe the elbow (11) is not required. Be careful to allow sufficient clearance for the height of the vent assembly and enough room to operate the pipe cutter (12).

1. Separate the two halves of the saddle clamp by unscrewing and removing the four nuts and bolts. Discard the two black rubber inserts for 41mm waste pipe. Leave them in place for 32mm pipe.
2. Insert the clamp seal into the saddle clamp and then position it on the chosen section of waste pipe, being careful to ensure the seal remains in place. Re-assemble the clamp and then tighten the bolt securely to make a watertight seal.
3. Insert the pipe cutter (12) into the saddle clamp and cut a hole in the waste pipe by rotating it to the right until it breaks through. (see diagram).
4. Screw the vent assembly (4) into the saddle clamp. When the saddle clamp is installed on a vertical section of the waste pipe screw the elbow in first and use the lock nut to secure the air gap assembly in the vertical position.
5. Take the vent hose (6) (black indicator) and connect the G1/2" nut end onto the corresponding G1/2" male thread at the top of the vent assembly. Use one of the G1/2" NutRunna® (8) to tighten the nut firmly, sufficient to make a watertight seal. Do not overtighten.

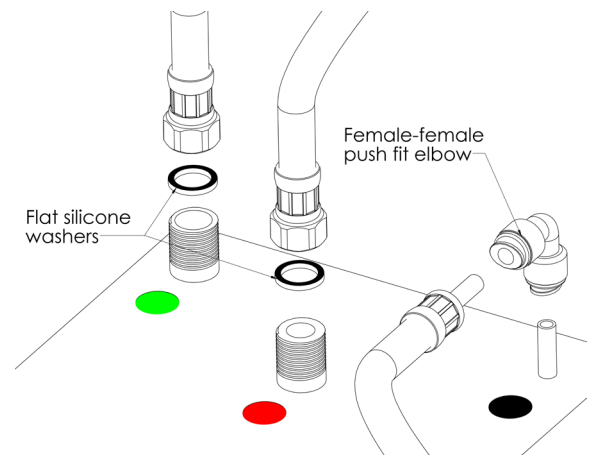


## Install the boiler

**Important note: Do not plug the boiler into the power supply at this stage.**

For ease of installation the boiler connections and the flexible hoses are colour coded:

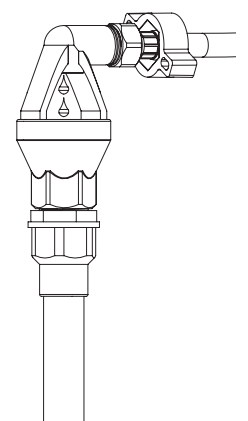
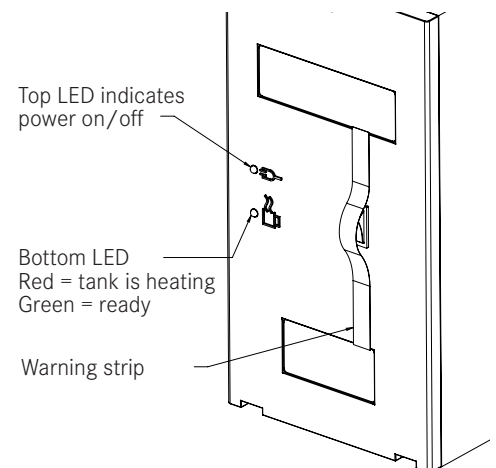
- Green - Filtered water
- Red - Boiling water
- Black - Vent



1. Place the boiler drip tray (15) in the predetermined location to sit the boiler in.
2. Remove the protective caps from the three connections on the top of the boiler.
3. Place the boiler (1) in position upright on a flat surface inside the cabinet with the connections to the top.
4. Take the 15mm compression x G1/4" Inlet Hose (13). Connect the compression end to the outlet of the filter unit.
5. Take the G1/4" female nut at the free end of the filter outlet hose (green indicator). Remove the plastic cap from inside the nut. **Important note:** be careful to make sure the washer retained in the nut does not fall out when removing the cap. Take one of the G1/4" NutRunna® (7) and place over the nut. Screw the nut onto the G1/4" male boiler inlet (green dot). Hand tighten sufficient to make a watertight seal. Do not overtighten.
6. Take the G1/4" nut x M10 nut Outlet Hose (14). Remove the plastic cap from inside the nut. **Important note:** be careful to make sure the washer retained in the nut does not fall out when removing the cap. Take one of the G1/4" NutRunna® (7) and place over the nut. Screw the G1/4" nut to the boiling water outlet on the boiler (Red indicator). Hand tighten sufficient to make a watertight seal. Do not overtighten. Connect the M10 nut on the free end of the same hose to the tail end of the boiling water hose attached to the Minerva 3-in-1 tap using the existing copper washer or the spare provided. **Important Note: Do Not Overtighten. Overtightening this connection will crack the nut.**
7. Take the push-fit elbow (2). Connect the elbow to the grey push-fit stem on the end of the vent flexible hose with the grey plastic push fit stem. (black indicator). Push the push-fit elbow firmly home in place onto the metal spigot (black dot) protruding from the top of the boiler.

## Commissioning the system

1. Turn on the water supply.
2. Operate the boiling water function for 3 minutes to flush the system.
3. Turn the tap off and check the connections for leaks.
4. Plug the boiler into the mains electricity supply socket.
5. Remove the warning strip covering the "ON-OFF" switch on the front of the boiler and turn the switch to the "ON" position. Check the top LED (Plug logo) on the boiler turns green to indicate power is on. The lower LED (Mug logo) will turn red to indicate the boiler is heating up.
6. Wait for 20 minutes and then check that water is discharging from the vent pipe. **Important note:** If water does not start to discharge from the vent pipe into the cup after 20 minutes, switch off the power, operate the boiling water function on the tap to release the pressure, and refer to the Troubleshooting Guide overleaf.
7. Allow approximately 20 minutes for the boiler to reach full operating temperature, indicated by the lower LED turning green.
8. Operate the tap boiling water function for a minute to exhaust trapped air from the system.
9. The system is now ready for use.





## CARE AND MAINTENANCE

### Deep Clean

The boiler should be deep cleaned annually to flush the system which will help keep it in optimum working order. The deep clean process is explained overleaf and the deep clean solution can be purchased online at [www.tapsparesuk.com](http://www.tapsparesuk.com)

### Water Filter

The Minerva Version 1 system was supplied with a water filter. The water filter supplied with this unit is designed to both protect the boiler and provide high quality boiling water free of sediment, chlorine and other potentially harmful contaminants.

Changing the filter cartridge every 6 months will keep the boiler in good condition and maintain the quality of the boiling drinking water. TapSpares UK will not accept responsibility for boiler failures if the filter cartridge has not been replaced at the recommended 6 month intervals. TapSpares UK alternative 07 filters for the Minerva system can be purchased online at [www.TapSparesUK.com](http://www.TapSparesUK.com)

### Removing the boiler

1. Disconnect the electricity supply to the boiler.
2. Operate the boiling water function and run the boiling water until the water flowing from the spout runs cold.
3. Shut off the water supply to the boiler.
4. Operate the boiling water for a second time until the water stops flowing to release the pressure in the boiler.
5. Disconnect the hoses from the boiler using a suitable container to catch residual water.
6. Remove the boiler carefully, unscrew the brass drain nut at the base and pour out the water it contains.

### Boiler tank deep clean procedure

1. Operate the switch on the front of the boiler to switch off the boiler power supply.
2. Drain the system of boiling water by running the boiling water until it runs cold.
3. Shut off the water supply to the filter using the adjacent stop-valve.
4. Press the red button at the top of the filter unit to exhaust the pressure in the system. It will not be possible to unscrew the filter canister if this operation is not carried out.
5. Place a shallow container in the cabinet to catch any water residues when removing the filter sump. Grip the sump firmly and turn it firmly to the left to break the seal. Unscrew the sump by hand until it separates from the head of the filter.
6. If the old cartridge does not automatically fall free press down on the top mount of the cartridge to release it. Remove the old cartridge and discard the remaining water in the sump.
7. Leave the filter cartridge in the sink.
8. Pour the deep clean solution into the filter sump.
9. Carefully replace the sump by screwing it into place.
10. Turn on the water supply to the filter system.
11. Allow 20 minutes of waiting time. Do not power up the boiler at this stage.
12. After 20 minutes, turn on the power to the boiler and allow it to heat for 20 minutes.
13. After 20 minutes, run the boiling side of your tap for 10 minutes to flush the system through.
14. Now follow the standard Minerva filter change procedure to reinstall the filter.
15. The system now should be ready for use.

### Sensible precautions

If you are planning to leave the premises for an extended period (over a week) it is a sensible precaution to turn off both the electricity supply and the water supply to your system.

## FREQUENTLY ASKED QUESTIONS AND TROUBLESHOOTING GUIDE

### **Water fails to discharge from the vent tube after power has been switched on to the boiler for 20 minutes**

- Check there is power to the boiler. The 'Plug' LED should be green.
- Check there are no kinks in the vent hose.

### **Water is continually dripping/running into the vent assembly.**

Water continuously discharging from the vent indicates that the water pressure is too high; above the 5 bar (73 psi) stipulated maximum. In normal operation the pressure relief valve will allow water to drip for approximately 20 minutes after the boiler is switched on. Thereafter it will drip periodically; after water is drawn off and as the boiler comes back up to temperature.

- Check the water pressure at a low demand period (mid morning or mid afternoon). If it exceeds 5 bar (73 psi) it will be necessary to install a 3-4 bar pressure reducing valve. A suitable valve can be purchased at [www.TapSparesUK.com](http://www.TapSparesUK.com) or from a plumber's merchant. While waiting for the pressure relief valve to be fitted turn off the boiler.

### **The vent assembly is overflowing.**

- Check that the hole has been properly cut in the waste pipe.

### **The boiling water function is dispensing cold water instead of boiling water**

- Check that the electrical supply is correctly connected.
- Check the 13amp fuse in the plug.
- If you are still experiencing problems after completing these steps please contact TapSpares UK on 01603 559096

### **Foam or a film is forming on the surface of hot drinks.**

- This is caused by a combination of the agitation of the boiling water creating millions of tiny air bubbles, the ph of the water and the amount of oil in the teabag material. To reduce the problem try filling the teapot or cup with boiling water before dropping the tea bag in rather than running the boiling water directly onto the teabag or perhaps experiment with different brands of tea bag.

### **Condensation is dripping from exposed copper pipes adjacent to the boiler.**

- This can be reduced by wrapping insulation around the pipes in question.

## Guarantee

This TapSpares UK product carries a 2 year warranty against material and manufacturing defects. You should also retain your dated invoice as proof of purchase to validate any claims under our guarantee. The guarantee will be valid from the date of purchase as shown on the sales invoice. This appliance is intended for domestic use only. The guarantee does not apply to products installed outside a domestic environment.

## Warranty

### What is covered by the TapSpares guarantee?

- The repair or replacement of the boiler if found to be defective due to faulty materials or manufacture within 2 years of purchase at TapSpares's discretion.
- If any part is no longer available, or out of manufacture, TapSpares reserve the right to replace it with a suitable alternative.

### Terms and conditions of the TapSpares 2 year guarantee

- The guarantee is valid for the UK and Republic of Ireland.
- The guarantee becomes effective at the date of purchase or at the date of delivery if this is later.
- Proof of purchase is required under the terms of the guarantee.
- The guarantee provides benefits in addition to your statutory consumer rights.

### TapSpares does not guarantee the repair or replacement of a product that has failed for any of the following reasons:

- Faulty installation, repairs or alterations not in accordance with the installation guide.
- Normal wear and tear.
- Accidental damage or faults caused by negligent use or care; misuse; neglect; careless operation and failure to use the product in accordance with the operating guidelines.
- Failure to maintain the water filter in accordance with the instructions.
- The use of anything other than genuine TapSpares replacement parts, including the water filter cartridge.
- The use of the filter system for anything other than normal domestic household purposes.
- Failures of, or failures caused by, parts not supplied with the product.

### How do I make a claim under my TapSpares 2 year guarantee?

- If you are in doubt about what is covered by your guarantee, or wish to discuss a claim, please call TapSpares UK on 01603 559 096 Monday to Friday between the hours of 9.00am and 5.00pm.
- If you are calling for the first time please have your receipt to hand so that we can record your date of purchase.
- The company reserves the right to alter, change or modify product specifications without prior notice.



### Declaration of conformity

The TapSpares UK boiler complies in accordance with the following directives:

2006/95/EC Low Voltage Directive  
2011/65/EU RoHS Directive  
2009/125/EC Eco Design Directive  
Protection Level: IP20

The TapSpares UK boiler conforms to the requirements of the relevant EU guidelines.



The symbol on the product or on its packaging indicates that this product may not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

The TapSpares UK boiler is a product of Greg Rowe Ltd, England

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# TAP SPARES

Part No. 998563. TapSpares UK is a trading name of Greg Rowe Limited (GRL).

**TapSparesUK**  
Old Winery Business Park,  
Chapel Street  
Cawston  
Norfolk  
NR10 4FE

Telephone 01603 559096  
www.tapsparesuk.com

