PROBOIL.2X
Filter Upgrade Guide

The PROBOIL water optimisation filter included as standard with every new PROBOIL.2X boiler has a scale capacity rating of 1000L at a hardness of 150ppm. Our advanced water optimisation filter has nearly double this capacity for scale control which may make it better suited or more economical for customers who have a heavy usage pattern or live in very hard water areas.
Our advanced water optimisation filter also features a bypass setting to adjust the level of scale control making it customised to your specific water conditions. If you are replacing an expired standard optimisation filter cartridge, we strongly recommend you should first descale the PROBOIL.2X boiler (see user guide) before upgrading the filter as the boiler tank is likely calcified and running less efficiently. Before beginning you should have ready to hand:

- All included parts
- A large bucket or bowl & cloth
- A screwdriver and sharp knife
- A permanent pen

⚠ All parts should be removed from their packaging and inspected for any transport damage and that all parts are present prior to installation.

Establish your water hardness & adjust the filter head to suit:

🛠 Before upgrading to your advanced filter you must establish your home water hardness using the test strip provided by running it under your standard cold water tap (not filtered or boiled water) and comparing it to the coloured scale on the packet.

1. Check the water hardness value using either the supplied test strip, digital meter or data from the supplying water companies' website by postcode check.

2. Once you have established your water hardness you should add 2° Clark (30ppm) result to allow for possible fluctuations in the supply hardness. Please use the table below for any other measurement units of hardness to convert your result to ppm.

	mmol/L	ppm, mg/L	dGH, °dH, °dKH, °KH	gpg	°e, °Clark
mmol/L	1	0.009991	0.1783	0.171	0.1424
ppm, mg/L	100.1	1	17.85	17.12	14.25
dGH, °dH, °dKH, °KH	5.608	0.05603	1	0.9591	0.7986
gpg	5.847	0.05842	1.043	1	0.8327
°e, °Clark	7.022	0.07016	1.252	1.201	1
Simplified Example: 10 ppm = 0.7 e, °Clark. If you need assistance with this step please contact the service agent noted on the top of the boiler.					

3. You must now adjust the bypass setting in the filter head to match your water using the reference table below, for example if your cold water supply is 280ppm you should add 30ppm (or 2° Clark) to get a total result of 310ppm at this value you should set the filter head bypass to number "6".

Hardness reading + 2° Clark (30ppm)		Bypass setting	Capacity in litres* (scale reduction)	Capacity in litres** (chlorine reduction)
°Clark (GB)	PPM			
5	70	6	3920	
6	90	6	3220	
8	107	6	2830	
9	125	6	2430	
10	143	6	2130	1700
11	161	6	1890	
13	179	6	1700	
14	196	6	1550	
15	214	6	1280	
16	232	6	1180	
18	250	6	1090	
19	268	6	1020	

20	286	6	960	
21	304	6	900	
24	339	6	810	
26	375	6	730	
29	411	6	670	
33	464	5	500	
36	518	5	440	
41	589	5	370	
48	679	5	340	

*Refers to the guideline maximum filter life for hard water scale reduction for vending usage.

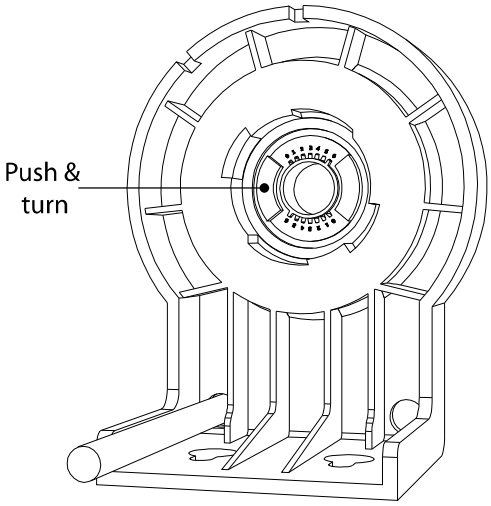
** Refers to the guideline maximum filter life for chlorine reduction according to NSF/ANSI 42 at 12.5 English Clark.

Performance can vary depending on the water quality and usage patterns, filtered (non-boiled) and filtered (boiled) water use count towards the total filter usage. Data based on a flow rate of 2 L/min through the filter unit.

4. To adjust the filter bypass valve in filter head (A) to the appropriate level, turn the head upside down. You will see a numbered central dial. Push using the blue key provided, rotate then release the dial on the correct numbered setting 0 (hard water) to 6 (not hard / softer water) then remove the key.

5. Check the opposing dual "pegs" on the centre core of the filter head align with the bypass setting to indicate its current setting (if you use the blue key the number on the key will align with the marking on the filter head also before it is removed).

Note: image right is underside of filter head (A) with key removed.

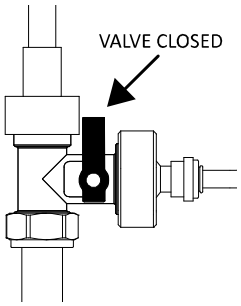


Remove the existing filter:

6. <u>Only If your (4 in 1) tap includes a cold filtered water dispense option:</u>

a) Ensure to turn off the mains valve directly before the filter inlet pipe so the valve is in the indicated "closed" position.

b) Turn the tap handle to dispense filtered cold water, let is run until the water slows then stops completely then turn the filtered water handle to the off position.

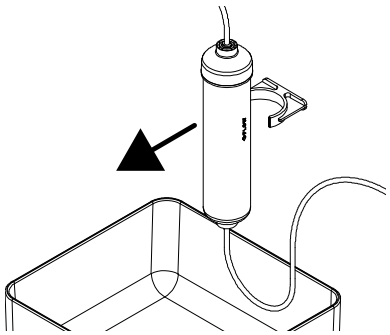


6. <u>Only If your (3 in 1) tap does not include a cold filtered water dispense option:</u>

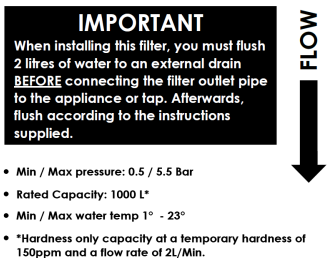
a) Turn the 98° handle to the off (upright) position.

7. Pull the existing filter cartridge from its wall mounting clip, with the blue tubes still connected.

ⓘ Place a bowl (or similar) under the filter cartridge and pipes to catch any retained water in the system.



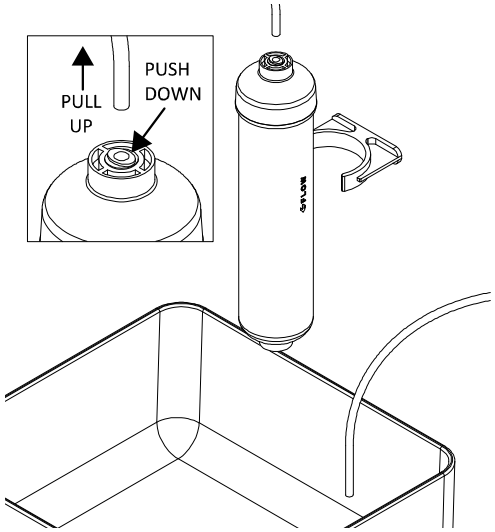
8. Take note of the direction (orientation) of the filter installed. The “FLOW->” indication on the label shows the direction of water flow from inlet to outlet. It is important that the blue flexible pipes are reinserted back into the current inlet and outlet sides of the new filter cartridge. You might wish to mark the blue pipe on the “inlet” side of the filter with the permanent pen as memory aid for later.



9. Remove the blue flexible pipe from both ends of the filter cartridge.

To do this you should push the collet (see drawing) towards the centre of the filter whilst simultaneously pulling the blue flexible pipe in the opposite direction away from the filter.

As the pipes are removed it is normal for a small amount of water in the pipes and filter to be released, catch this with the bowl and or cloth.



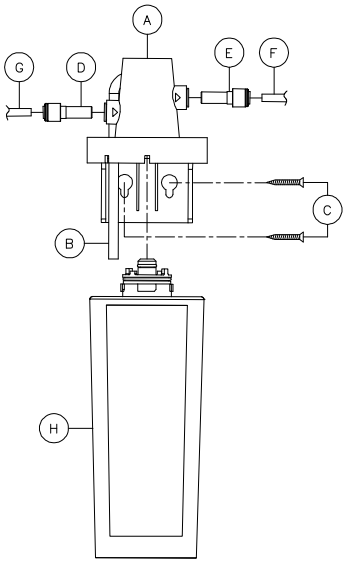
10. Check both ends of the blue flexible pipe for any signs of wear, if the ends of the pipe are badly worn you must cut away the damaged section cleanly and squarely using a snip tool, sharp craft blade or similar, try not to squash the pipe.

11. Unscrew and remove the existing filter bracket.

Install the new filter:

12. Find a good location for the new filter head (A) in your cabinet, using either the screws (C) provided (or similar) attach the filter head securely.

ⓘ Remember you will need space under the filter (H) to change it periodically.



13. The ¼” inlet pushfit adaptors (D & E) should be supplied attached to the filter head (A), if not push them into the head firmly now.

14. Firmly push the blue inlet ¼” pipe (G) into the left hand (lower) inlet pushfit (D) on the filter head (A).

15. Firmly push the blue outlet ¼” pipe (F) into the right hand (upper) outlet pushfit (E) on the filter head (A).

ⓘ If the existing blue pipe is not long enough, extra pipe is supplied with this product, cut it to length and replace the existing pipe as needed, you must cut the pipe cleanly and squarely using a snip tool, sharp craft blade or similar.

16. Remove the transport cap from the top of the new filter (H). Now firmly push the new filter (H) up and then turn it right (clockwise) to the filter (H) into the filter head (A). Write todays date on the “installed on” section on the filters label in permanent pen.

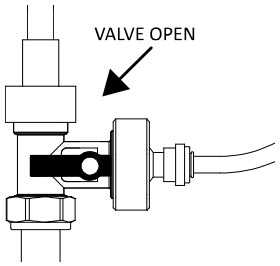
Flush the new filter:

It is normal for new filters to lose a small amount of loose carbon when first used and will dissipate with flushing, whilst harmless to consume if the carbon particles are not flushed prior to connection to the boiler, they may partly block the boiler and reduce the flow rate.

⚠ You must flush the filter with 10 litres of cold water or until the water become clear (without black carbon particles).

17. <u>Only If your (4 in 1) tap includes a cold filtered water dispense option:</u>

a) Ensure to turn on the mains valve directly before the filter inlet so the valve is in the indicated "open" position.
b) Place filter head's white flush pipe (B) in a bucket or large bowl.
c) Using a coin turn clockwise 90° the flush valve on the top of the filter head to the "open" position to start the flushing. You must flush approximately 10 litres of water through pipe (B). If you need to empty the bucket part way through turn the water off by turning the flush valve 90° anticlockwise.
d) After flushing close the flushing valve by turning the flush valve 90° anticlockwise.



17. <u>Only If your (3 in 1) tap does not include a cold filtered water dispense option:</u>

a) Place filter head white flush pipe (B) in a bucket or large bowl.
b) Using a coin turn clockwise 90° the flush valve on the top of the filter head to the "open" position.
c) Turn the 98° handle to the on position to start the flushing, you must flush approximately 10 litres of water through pipe (B). If you need to empty the bucket part way through turn the water off by turning the closing the taps boiling water handle.
d) After flushing is completed, close the flushing valve by turning the flush valve 90° anticlockwise and then turn the 98° handle to the off (upright) position.

ⓘ Your PROBOIL.2X unit displays a 'check filter reminder status bar' and has an audible beep when it reaches it's the filters estimated expiry point. This 6 month timer is based on 'average' usage volume and water quality and is designed to help remind you to check the filter. Each installation will have a different usage pattern and an individual water hardness "GB Clark rating". Because of this the PROBOIL can only remind you when to check the filter, you must judge for yourself if the filter needs changing more frequently or not, the recommended replacement frequency may increase in hard water areas or high usage applications. Each filter has a maximum life span of 6 months or volume according to your water quality (whichever occurs first). Regardless of the amount of usage it is required for you must replace the filter on schedule for reasons of product protection, hygiene and maintaining your warranty. Further information on capacity is found on this sheet and can be found in your user manual, if you have any further questions please contact us.

🛠 We only warrant the genuine PROBOIL filter types for your boiler, these are formulated specifically for the PROBOIL product. If the filter is removed or exchanged for an alternate (non-genuine model) it may have a detrimental effect to your system and accordingly will invalidate your warranty.

🛠 Failure to adjust the filter head bypass rate based on your water quality may reduce the filter life or prevent the filter from performing correctly, leading to premature damage to other components of the system and will therefore invalidate your warranty.

⚠ The filter head must be replaced after 5 years of use.

⚠ Replacement filters, descaling solutions and parts are available at proboil.co.uk or by calling (+44) 02475 098490.

⚠ All parts should be removed from their packaging and inspected for any transport damage and that all parts are present prior to installation.

ⓘ An information point or tip for installation or usage.	🛠 A service, maintenance or care consideration.	⚠ A technical or safety consideration or warning of hazardous situation with regard to life and property.