Issue 20
The information hub is designed to provide - mainly technical - information relating to Water Coolers and Boilers, to assist you with your work

Fighting Scale With A Professional Resin Scale Removal Filter & Establishing It's Maximum Capacity
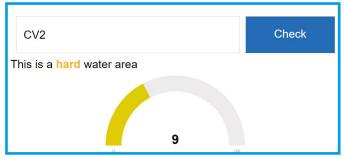
Scale is the curse of Hot Water Boilers. In Hard Water Areas only proper Resin Based Scale Filters will REMOVE the Scale from the Water. Carbon Filters with Siliphos beads will not do the job, although they are often misleadingly advertised as "Scale Filters". The temptation to use these "Scale Filters" is great because they are far less expensive than proper Resin Scale Filters.

Resin Scale Filters are consumed by the amount of water flowing through them. They have to be exchanged, once they are exhausted.

How To Calculate The Life Of A Resin Scale Filter

1. **Determine the hardness of the mains water** at the installation site (using our Post Code Scale Checker)

CV2	Check

This is a **hard** water area

9

- 0 - 5 Soft Water - No Scale Filter
- 6 - 15 Hard Water - Resin Scale Filter, Highly Recommended
- 16 - 26 Very Hard Water - Must Use A Resin Scale Filter

2. **Determine the "Bypass" setting of the Scale Removal Filter**
3. **Establish the Filter's "Useful Life"** in litres per year by cross referencing the water hardness with the "Bypass" setting from the table across the page
4. **Establish the site's annual hot water consumption by identifying the number of users at the site,** their average number of cups per day, multiplied by 5 days per week and 52 weeks per year. (See Example)

Brita 150C

Bypass	0	10	20	30	40	50	60	70	Recommended
*Hardness ↓	%	%	%	%	%	%	%	%	
5	2,508	2,759	3,073	3,476	4,013	4,766	4,766	4,766	70%
6	2,508	2,759	3,073	3,476	4,013	4,766	4,766	4,766	70%
8	2,508	2,759	3,073	3,476	4,013	4,766	4,766	4,766	70%
9	2,150	2,365	2,634	2,979	3,440	4,085	4,569	4,766	60%
10	1,881	2,069	2,305	2,607	3,010	3,574	3,998	4,515	50%
11	1,672	1,839	2,048	2,317	2,676	3,177	3,553	4,013	50%
13	1,505	1,656	1,844	2,086	2,408	2,860	3,198	3,612	40%
14	1,368	1,505	1,676	1,896	2,189	2,600	2,907	3,284	40%
15	1,254	1,380	1,536	1,738	2,007	2,383	2,665	3,010	30%
16	1,158	1,273	1,418	1,604	1,852	2,200	2,460	2,778	30%
18	1,075	1,183	1,317	1,490	1,720	2,043	2,284	2,580	30%
19	1,003	1,104	1,229	1,390	1,605	1,906	2,132	2,408	30%

Example Using A BRITA150C Resin Scale Filter

Postcode	Water Hardness	City	County
CV2	9	COVENTRY	WEST MIDLANDS

- The Water Hardness in **CV2** (Coventry) according to our Postcode Scale Checker is "9", which is hard water
- The BRITA150C Filter has a "Bypass" setting which allows a percentage of the total incoming water to be "Bypassed" with the other part passing through the BRITA Filter. This reduces the water hardness mix in the Water Tank, and with it the BRITA Filter life
- The higher the "Bypass"setting, the longer the Filter Life. BUT ..... there is a limit. By setting the "Bypass" too high one reduces the Scale Removal! In this example we are using a middle of the road setting of 30%. Combined with the water hardness of 9, this gives us a "Useful Life" of the filter of 2,979 litres per year
- Assuming the installation site employs a staff of 20, each consuming 3 cups of 0.2ltr per cup, this results in an estimated "Annual Consumption" of hot water at the site of: **20 staff x 3 cups each x 0.2ltr per cup x 5 days per week x 52 weeks = 3,120 litres per year**
- By dividing the sites "Annual Consumption" into the filters "Useful Life" you can calculate when the Filter is exhausted and needs replacing
- In our example, the Scale Removal Filter needs to be replaced in just under 12 months. 2,979ltr "Useful Life" of the filter / by the 3,120ltr "Annual consumption" = 11 months and 2 weeks

DOWNLOAD the Water Hardness and Bypass settings tables for the BRITA PURITY range to help you establish the maximum capacity of your BRITA PURITY Scale Filter. - CLICK HERE TO DOWNLOAD

*Please note that these figures are estimates, based on an estimated site usage of hot water. We have found the BRITA150C Filter to be suitable for most situations but would like to point out that BRITA (and other suppliers) have a large range of Filters with varying capacity for different demands