SIZING A WATER SOFTENER

When selecting an FRP vessel always ensue that it is 33% larger than your media requirement for backwash purposes

The calculations are based on the following constants:

- **1 litre of water dissolves 340 grams of salt**
- **150 grams salt is used per 1 litre of Resin, giving an exchange capacity of 55 grams**

Example:

Total Harness of the water:	124 ppm
Volume of water:	28 Cubes per day
Hard water per day	124 x 28 = 3472 grams
Resin needed	3472 ÷ 55 = 64 litres (+33% = 85 litre FRP vessel)

64 litres x 55 = 3520 CaCo3 (max handling capacity)

• Volume of water between regeneration	3520 ÷ 124 = 28 cubes
• Volume of salt per regeneration	150 x 85 = 12750 (13 kg)
• Volume of water required in Brine tank	12750 ÷ 340 = 37.5 litres (before salt is added)

Weight per litre:

GAC (carbon)	.60 kg per litre
Silica sand	1.40 kg per litre
Resin	0.8 kg per litre

Media x litres of vessel = amount of litres required divided by bag volume = number of bags required

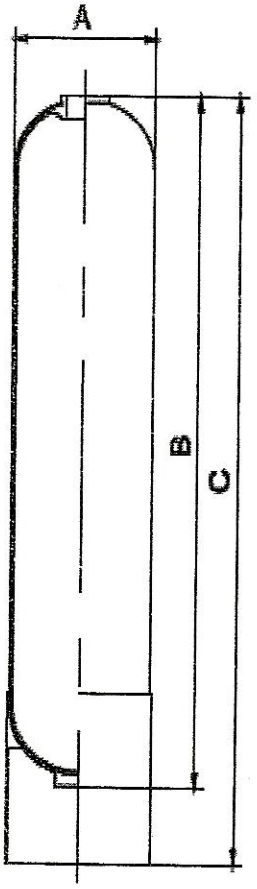
Do not forget the Free on Board volume of 33% that must be added for backwash purposes.

FIBRE RAPPED POLYETHYLENE CYLINDER

Material of construction
Inner shell material: Polyethylene
Available inlets: See chart
Operating parameters
Maximum operating pressure: 1.02MPa (10.2 BAR)
Maximum operating temperature: 40°C (104°F)

Frp Code and Inches	Frp vessel (mm)	A Diameter (mm)	B Without Base (mm	C Height With Base (mm	Top Opening (In)	Bottom Opening (In)	Capacity Liters
FRP-07X24	170X610	181	610	645	2.5	N/A	15
FRP-08X35	200X890	206	890	905	2.5	N/A	25
FRP-10X54	240X1370	257	1375	1390	2.5	N/A	62
FRP-12X52	300X1320	308	1320	1340	2.5	N/A	84
FRP-13X54	330X1370	334	1370	1405	2.5	N/A	104
FRP-14X65	350X1620	360	1620	1640	2.5	N/A	154
FRP-16X65	400X1620	410	1620	1640	2.5	N/A	185
FRP-18X65	450*1650	470	1665	1902	4	6	253
FRP-20X72	500X1800	520	1800	1980	4	6	337
FRP-24X72	600-1800	620	1800	2030	4	6	480
FRP-30X72	750X1800	775	1800	2020	4	6	740
FRP-36X72	900X1800	925	1800	2090	4	6	1071
FRP-40X72	1000X1800	1025	1800	2418	6	6	1282

Approximately 30% Of vessel capacity must remain free for backwash purposes.



NOTE: Specifications are approximations only; individual tanks may vary slightly.

Weight per litre
Gac carbon .60kgs per litre
Silica sand 1.40kgs per litre
Resin 0.80kgs per litre (may vary slightly depending on how much water is in the resin)

All weights per kg are approx my vary slightly due to different manufactures and water residual in product

Formula (sand ,carbon, resin kgs per litre) X (litre of vessel) = amount of litres required
Divide total by bag volume to give bag quantitys

Please remember to minus 30 % of vessels total volume for freeboard (for better backwash)

Frp Accessories

FRP-VAL-1"TMF56F	MANUAL VALVE WITH TOP STRAINER AND BACKWASH 1 INCH INLET/OUTLET 2.5"BASE
FRP-VAL-2" TMF56D	MANUAL VALVE WITH TOP STRAINER AND BACKWASH 2 INCH INLET/OUTLET 4"BASE
FRP-HD-1"	HEAD FOR FIBERGLASS VESSEL WITH 1" INLETS/OUTLET 2.5" BASE NO BACKWASH
FRP-HD-2"	HEAD FOR FIBERGLASS VESSEL WITH 2" INLETS/OUTLET 4" BASE NO BACKWASH