

GLASS FILTER MEDIA

An introduction to the benefits
of glass filter media versus
traditional silica filter media.

For further information

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Glass Filter Media

What is it?

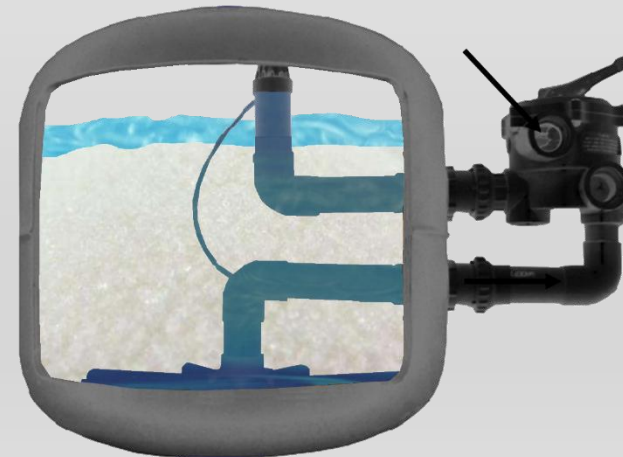
- A High-Tech Filter Media
- Recycled plate-glass (no bottle glass)
- Advanced Manufacturing Technology
- Slightly negatively charged surface attracts particles (released on backwash)

Glass Filter Media

What is it for?

➤ Substitute for Silica (Sand) Filter Media

- To begin taking advantage of the benefits of Glass Filter Media :
 - Remove old filter media
 - Fill with Glass Filter Media
 - Start normal operations



Glass Filter Media

What is it for?

- **Water Savings!**
 - Reduced Backwash time
 - Approximately 50% savings
 - Fewer Backwashes needed
- **Energy (and equipment) Savings**
 - Reduced Friction
 - Increased volume
 - Less Equipment Maintenance
- **Chemical Cost Savings**
 - Flocculent products
 - Disinfection products
 - pH control products



Glass Filter Media

What is it for?

- **Longer Life Span**
 - Silica lasts 3 – 5 years, glass media lasts 20 years
 - A single grain type is used, filters can be emptied for maintenance and the same media can be used again.
- **Increased Quality and Hygiene**
 - Reduces presence of bacteria
 - No biofilm buildup
 - Reduced Chloramines & presence of disinfectants
- **Eco-friendly**
 - Facility performs more efficiently
 - Reducing environmental impact
 - Glass Media is re-cyclable

Glass Filter Media

Our Product Quality

Recycled Plate Glass as a raw material and has a final particle shape that is sub-angular with a high sphericity.

Glass Filter Media



Bottle Glass Filter Media



Glass Filter Media

Our Product Quality

Glass Filter Media		Bottle Glass Filter Media	
<ul style="list-style-type: none"> ➤ Glass merchants. ➤ Limited amount of Raw materials. 	Origin	<ul style="list-style-type: none"> ➤ Landfill Sites ➤ Unlimited Amount of Waste Glass available. 	
<ul style="list-style-type: none"> ➤ Clear flat glass (windows). ➤ Tempered Glass 	Composition	<ul style="list-style-type: none"> ➤ Bottles and mix glass from landfill sites. 	
<ul style="list-style-type: none"> ➤ Selected sources (offcuts) 	Contamination	<ul style="list-style-type: none"> ➤ From used bottles and glass. 	
<ul style="list-style-type: none"> ➤ Crystal Clear Cullet 	Appearance	<ul style="list-style-type: none"> ➤ Various Coloured Glass Cullet 	
<ul style="list-style-type: none"> ➤ Advanced Grading systems 	Grading	<ul style="list-style-type: none"> ➤ Fixed Grading for various applications 	
<ul style="list-style-type: none"> ➤ Specialized Glass Filter Media Manufacturing plant 	Sector	<ul style="list-style-type: none"> ➤ Industrial Waste recycling plants 	

Glass Filter Media



Bottle Glass Filter Media




Glass Filter Media

Our Product Quality

Crushing and screening methods:

Particles shape is of extreme importance. Sub-angular particles with high sphericity is needed for the increased contact area. Other crushing methods result in splintered particles that pack tightly against each other and restricts water flow.

	Well Rounded	Rounded	Sub-Rounded	Sub-Angular	Angular	Very Angular
High Sphericity						
Low Sphericity						

Glass Filter Media



Silica Filter Media



Glass Filter Media Comparative Testing Using Imhoff Cones

Recycled Glass Filter Media		Silica Filter Media
Size : 0,70 – 1,70mm Uniformity : 1,6	Envelopes (used for test)	Size : 0,45 – 0,55mm Uniformity : 1,36
01 min 03 sec	Filter Time (4 liters)	03 min 48 sec
1,4 NTU	Raw Water Turbidity	1,4 NTU
0,02 NTU	Filtered Water Turbidity	1,0 NTU
42 Pt co	Raw Water Colour	42 Pt co
0 Pt co	Filtered Water Colour	29 Pt co

Glass Filter Media

Summary of Advantages / Benefits

Single Media Filtration

- Prevents channelling as in dual media filtration
- Can be re-used

Filtration Time

- Sub-angular particle shape packs less dense
- Reduced friction due to particle shape
- Minimum sizes as per envelope - no fines
- Will improve filter run time and reduce water losses due to backwashing.

Has an oval to sub-angular grain shape

- Is safe to handle (does not cut hands)
- Optimum amount of surface area.

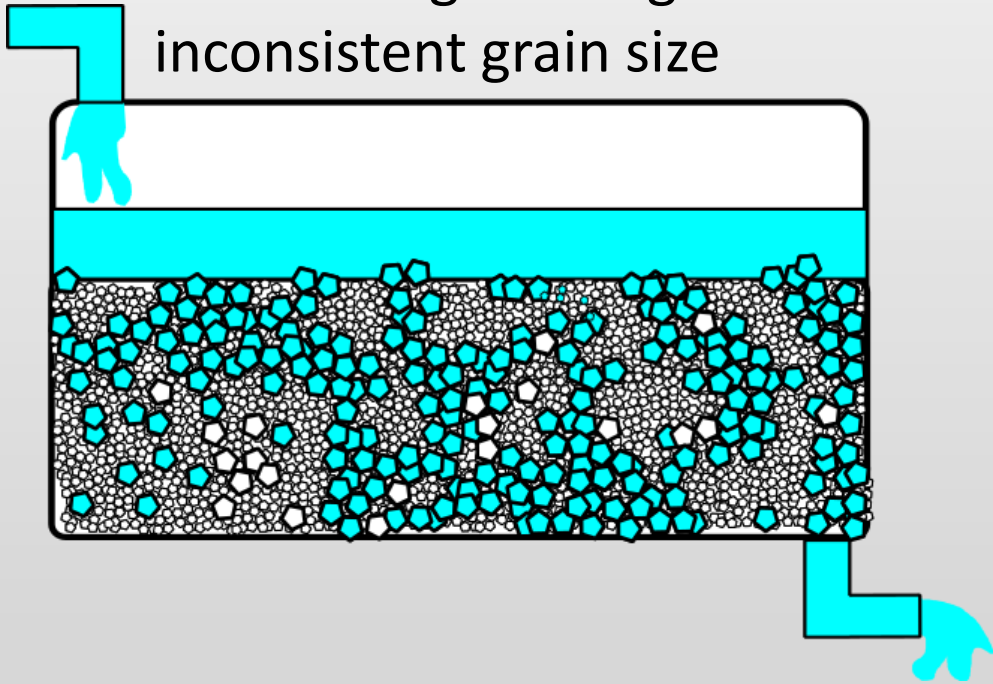
Glass Filter Media

Summary of Advantages / Benefits

Concept	Advantage
Longer filter runs & Less Backwash time	Water Savings with Less interruptions
Reduced friction	Less equipment strain during backwash
Negatively Charged	Attracts particles
Filter to +-5 micron	Effective colour & turbidity removal
Lower bulk density	10% Less product used per filter compared to silica
No channelling forming	More effective operation (use of entire filter bed)
Particles does not clump together	No channelling forming
Longer lifespan	Cost savings over long term

Glass Filter Media Filtration

Channelling forming due to inconsistent grain size



Uniform/ effective use of filter due to uniform grain size

