Save Water and Reduce Pool Maintenance

- Centrifugal water filtration
- No filter media to clean or replace
- 2 year warranty

Reduce frequency of backwashing
Reduce filter cartridge maintenance

2007 Piscina Barcelona Sustainability Award

www.waterco.com
MultiCyclone is a pre-filtration device that is capable of saving water and reducing filter maintenance. The MultiCyclone works on the basis of centrifugal water filtration. There are no moving parts to wear and tear, and no filter media to clean or replace.

**Save Water**
MultiCyclone is ideal as a pre-filter, extending the life of your existing filter and cutting water consumption as it eases the workload on your swimming pool filter.

**Reduce backwash frequency**
MultiCyclone + Sand (granular) filter = Reduction in backwash frequency + Extends the life of the filter media
The reduction in backwash frequency of a sand filter could result in the savings of up to 1,300 gallons of water per year for an average domestic swimming pool.

**Reduce filter cartridge maintenance**
MultiCyclone + Cartridge filter = Reduction in cleaning frequency + Extends the life of the filter cartridge

Waterco’s MultiCyclone is designed to work effectively with Waterco’s extensive range of pumps and filters.

**Centrifugal filtration**
1. Incoming water enters 16 hydro cyclones tangentially, generating a strong centrifugal effect.
2. The sediment is spun out to the hydro cyclone’s wall, and then spirals down to the sediment bowl.
3. The filtered water migrates towards the center of the hydro cyclone where the flow reverses and spirals upwards through the outlet.
4. Accumulation of sediment can be visibly monitored through the MultiCyclone’s clear sediment bowl.
5. The MultiCyclone is easily cleaned by opening the valve.
   Only 4 gallons of water is discharged to cleanse the MultiCyclone.
Laboratory tests
The MultiCyclone was field tested on an outdoor swimming pool and the contents of its sediment bowl were laboratory tested.

The laboratory test below revealed that the Multi Cyclone was capable of trapping sediment between 10 to 100 microns.

![Volume Frequency vs. Diameter](image)

The filtration efficiency of the MultiCyclone was tested by feeding 5 to 80 micron dust particles through the MultiCyclone and analyzing the percentage dust particles trapped in the sediment bowl.

The laboratory test below revealed that the MultiCyclone was effective in filtering particles sized 40 to 80 microns.

<table>
<thead>
<tr>
<th>Micron Rating</th>
<th>Particle Size 11.6 NTU Influent</th>
<th>Particle Size 10.2 NTU Effluent</th>
<th>Average % of Particles trapped</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0 – 20.0</td>
<td>24141</td>
<td>16824</td>
<td>30.31%</td>
</tr>
<tr>
<td>5.0 – 20.0</td>
<td>23608</td>
<td>16561</td>
<td>29.85%</td>
</tr>
<tr>
<td>20.0 – 40.0</td>
<td>509.20</td>
<td>260.13</td>
<td>48.91%</td>
</tr>
<tr>
<td>40.0 – 60.0</td>
<td>22.000</td>
<td>2.861</td>
<td>86.97%</td>
</tr>
<tr>
<td>60.0 – 80.0</td>
<td>2.333</td>
<td>0.000</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

DE powder was passed through the MultiCyclone to discover its effective flow rate.

At 13.2 gallons a minute, the MultiCyclone was able to remove approximately 60% of DE powder and at 92.5 gallons a minute; the MultiCyclone was able to remove 80% of DE powder.
Minimum flow rate | Maximum flow rate | Maximum pressure
--- | --- | ---
13 gallons per minute | 132 gallons per minute | 58psi (400 kPa)