

POOL FILTRATION 01/24 ACTIVATED FILTER MEDIA



✓ Technical features

Biological instead of chemical approach

Traditional water treatment tries to avoid disease transmission by using more and more chlorine, UVC irradiation or ozone. But the transmission of pathogens is a biological problem and therefore needs a biological solution. The approach of the Dryden Aqua integrated water treatment system does exactly that: Instead of using more powerful disinfections and expensive equipment, we designed a pool water treatment process that changes the water to make it difficult for viri, bacterium and parasites to live and reproduce.

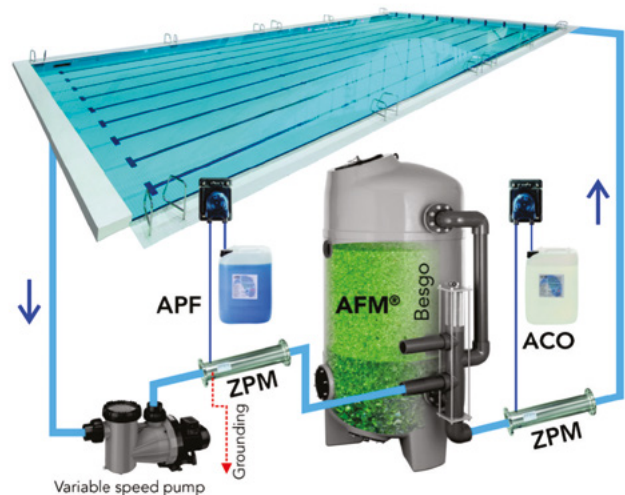
Prevent instead of killing!

- 1. No substrate:** As a consequence of our bio-resistant AFM[®], bacterium have no substrate on which they can grow and multiply.
- 2. No nutrients:** We remove food for bacteria by advanced coagulation, variable speed pump flocculation and filtration. Bacterium cannot grow anymore.
- 3. The lower the chlorine demand, the lower the disinfection by-products (DBP'S):** DAISY filters almost everything out of the water and reduces the chlorine demand to the lowest level possible. The lower the chlorine oxidation demand, the lower the concentration of chlorine disinfection by-products in the water and in the air. AFM[®] stands for Activated Filter Media, a revolutionary filter media made from green container glass, developed by marine biologist Dr. Howard Dryden. AFM[®] exceeds the performance of quartz and glass sand by filtering 30% - 50% more organics and sub 5 micron particles out of the water. The catalytic properties on the surface of AFM[®] make it self-sterilizing and bio-resistant, which means no biofilm is formed in the filter bed. This reduces the chlorine demand and therefore the formation of harmful volatile disinfection by products such as THM's, cyanogen chloride and trichloramine. Not only the chlorine smell but also the risk of getting infected by pathogens like Legionella or cryptosporidium, is greatly reduced. The pool is healthier for people, especially children, safer for the environment and economical with crystal clear water. AFM[®] has been successfully used in over 500,000 public and private swimming pools worldwide.



AFM[®] — ACTIVATED FILTER MEDIA 10

AFM[®] is a unique bio resistant filter media. The raw material used for AFM[®] is green container glass. The glass is washed, disinfected, thermally treated and then reduced to a very specific grain size and shape. For security reasons, the production process (cyclonic size reduction) assures that no dangerous glass splinters are present in the filter media. After size reduction, the grains are activated in a patented three step process. This creates a mesoporous structure with a huge catalytic surface area of 50'000 m² per m³. The surface area is 300 times larger than the surface area of sand or other glass filter media. The surface area is important for all adsorptive and catalytic reactions. In contact with the water free radicals (OH-radicals) are formed, which protect the surface from bio-fouling. The larger the surface area the higher performance and bio-resistance you will get from the media.



- 1** Filtration with AFM[®]
- 2** Coagulation and flocculation with APF and ZPM
- 3** Catalytic oxidation with ACO

To produce one ton of AFM[®], 1.8 tons of green glass is needed. AFM is produced according to ISO 9001-2008 standards. We now also have the world's most important certification for drinking water: NSF 61.

ADVANTAGE

- Crystal clear water - AFM[®] filters at least 30 - 50% more than quartz or glass sand
- Lower consumption of chlorine - The better the filtration, the lower the chlorine demand
- No trichloramine - no chlorine smell AFM[®] prevents growth of biofilm
- No biofilm, no Legionella - Biofilm is a home for pathogens such as Legionella
- Perfection for chlorine-free systems - AFM[®] greatly reduces the oxidation demand

- AFM[®] 0 has been developed for best filtration where flocculation cannot be used
- AFM[®] 0 is able to remove particles of 1 micron at an efficiency of more than 95%
- AFM[®] 0 cannot be combined with flocculation. The backwash speed should be about 30 m³/h

Important:

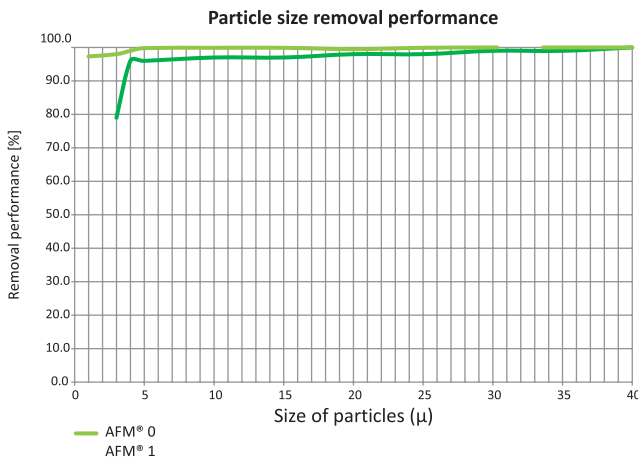
For smaller filters (<1000 mm diameter) and for all filters with nozzle plate, irrespective of filter diameter, use 70% of AFM[®]1 and 30% of AFM[®]2. AFM[®]3 is for larger diameter filters to ensure adequate filtration.

Filter filling:

Dryden Aqua recommends the following layers:

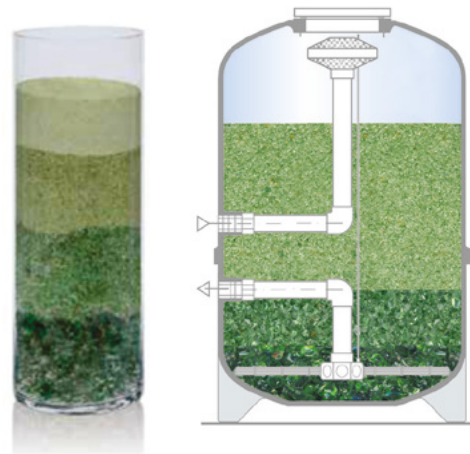
WITHOUT AFM [®] 0	WITH AFM [®] 0
70% AFM [®] 1	20% AFM [®] 0
15% AFM [®] 2 as supporting layer	50% AFM [®] 1
15% AFM [®] 3 as supporting layer	30% AFM [®] 2 and AFM [®] 3 as supporting layer

AFM[®] - ACTIVATED FILTER MEDIA



The graph opposite shows the latest test results (July 2014) from IFTS (Institut de la Filtration et des Techniques Séparatives, www.ifts—sls.com).

Different glass filter media and sands were tested. The experiment was done without flocculation and at a filtration rate of 20m³/h to get a representative comparison. AFM[®] 1 will remove more than 95% of all particles in the water down to 4 microns. The best a new, very high quality sand or other glass filter media can achieve is 20 microns at an efficiency of 95%. In addition, the filtration performance with AFM[®] will stay at this high level for many years.



Models

PRODUCT CODE	DESCRIPTION	PACKING	WEIGHT kg	VOLUME m ³
AFM-00	AFM [®] GRADE 0 0.25 - 0.5 mm	1	25	0.015
AFM-01	AFM [®] GRADE 1 0.5 - 1.0 mm	1	25	0.015
AFM-02	AFM [®] GRADE 2 1.0 - 2.0 mm	1	25	0.015
AFM-03	AFM [®] GRADE 3 2.0 - 4.0 mm	1	25	0.015



Your global partner since 1974. Trusted for superior quality and exceptional innovations.



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