HI / UCE Filter

Article number	75387	75262	75388
Primary filter characteristics	A, D	B	D, E
Secondary filter characteristics	C	C	A, C

1st Filter 75387

1st Filter 75262 (EM-X)

2nd Filter 75388

Filter characteristics

A. Active Carbon Filter - Due to its highly porous structure, active carbon has a large „specific surface“ (300-2000 m^2/g) and that is the reason for its large absorption capacity. If you could unwind the total surface of a teaspoon full of active carbon, this area would cover a complete soccer field (hence a huge „inner surface“ of the active carbon). Through absorption of hazardous substances (physical or chemical adhesion of molecules on a compact surface) active carbon is able to remove various substances in a natural way. Active carbon binds with microorganisms, which even under mechanical stresses such as high pressure water, the microorganisms cannot get out of the filter unit (also called chromatography effect, i.e. loss of previously absorbed hazardous substances to the water). This active carbon filter is not provided with vapor-plated silver and has a „NSF-42“ approval. Only non recycled active carbon is used.

B. CARBONIT® Block Filters remove from water substances such as heavy metals, asbestos, bacteria, pesticides or pharmaceutical residues without filtering taste forming minerals such as calcium or magnesium. Furthermore, active carbon removes undesired odorous or flavoring substances and neutralizes chlorine which is often added by the waterworks as a disinfectant. CARBONIT®-Filters function without the use of chemicals but rather using only the water pressure of the water source. Carbonit-Filters are made from the high-carbon shell of coconuts. Hermetically sealed, the shells are carbonized and refined in a unique, internationally patented process. The black powder is then baked in ovens at high temperature and pressed in form of cartridges. The filters are made in Germany by CARBONIT®.

C. With the help of microorganism (lactobacillus, yeast and photosynthetic bacteria and a series of high quality organic substances) all **EM ceramics** are fermented for at least 6 months during a special production process and afterwards they are formed with high quality clay into a plastic mass and baked at a temperature of up to 1300°C. The clay contains organic material from plants, which formed enzymes together with prehistoric microbes during a transformation process which took place millions of years ago. The mixture of **E**ffective **M**icroorganisms and high quality clays resulted in a particularly effective combination. This ceramic increases the emulsification and dispersion capacities of water as well as a better dissolving power with other substances. Being an anionic ceramic, the water becomes slightly alkaline. The ceramic neutralizes oxidized (acid) components in the water, has an antibiotic and sterilizing effect and removes bad taste and smell from the water. Altogether, with the help of this ceramic the balance of ions in the water is stabilized.

D. DM (double membrane) filters - Thin textile fiber layers with varying permeability are manufactured in a special process to a stable double membrane. This means that the water that passes through the filter, flows through two layers of this fine filter material. The material whose pore size decreases from the outside inwards, filters contaminants from a diameter of 5µm. Due to the strength of the double membrane filter further active ingredients are stabilized, thus ensuring a constant distribution. Thus a uniform filter effect is accomplished even at varying pressures.

E. During ultra-filtration with a **UF membrane filter** water is pressed with the pressure of the domestic water pipe through small plastic tubes. The fine pores, 0.01 – 0.1 µm, serve as a filter. For comparison: a human hair has a diameter of about 50 µm, which is 5000 fold the diameter. 0.1 µm correspond to 0.0001 mm. The big advantage of ultra filtration compared to conventional filter methods is the sterility of the filtered water. The pores of the UF membranes are so tiny that bacteria and even virus are too big to pass through the UF membrane. The bundling of a lot of these small filter tubes to a filter module the necessary surface is created to allow a sufficient water flow for a water ionizer.

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