

Combi-System Integrated Multi-Filter Package

Emperor Aquatics, Inc. and Water Management Technologies have collaborated to create the **Combi-System**. This low head-pressure, filtration package design challenges the philosophy of “component style” filtration systems.

The Combi-System joins efficient micro-screen solid waste filtration with effective UV disinfection. Both are integrated into a cost-effective, dependable operating filter package. Operators can expect trouble-free operation with minimal maintenance due to the system’s open, low head-pressure design.

Reduced operating costs are realized due to the Combi-System’s simplistic, yet highly efficient, open channel design. Unlike sand filtration, our micro-screen solid waste separation eliminates problematic filter media beds while dramatically decreasing waste water generated during filter cleaning. The integrated UV module provides **precisely matched** effective germicidal protection down stream from the micro-screen filter.



Combi-System



NEMA 4X Power Enclosure features durable fiberglass construction, lamp indicator LEDs, on/off switch, input power light and clear protective instrument cover.

Note: All of our electrical enclosures are UL 508-A listed (for safety and electrical code compliance).

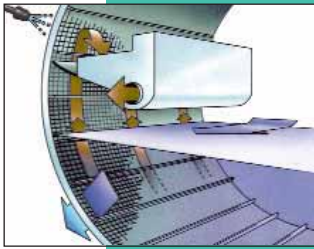


Options:

The PLC (Programmable Logic Control) is optional. See page 17 and please consult your Emperor Aquatics, Inc. sales representative for more details.

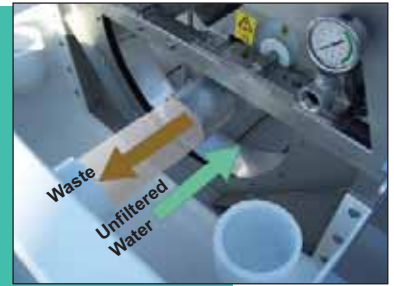
20218 - Over-Temperature cut off switch (must be purchased with unit).

The Combi-System was deigned specifically for heavy solid waste applications including *grow-out fish culture systems, large scale water features and mammal/reptile/avian bathing pools.*



The Micro-Screen Drum Filter is a dependable solids separation filter. This *mechanical, self cleaning* filter works by utilizing gravity. "Micro-screening" dramatically outperforms sand filter technology, replacing troublesome media beds with an industrial grade filter cloth. Solid waste particles are carefully separated from water, then rinsed off the filter cloth into a solids collection tray and discharged. Filter cloth is of a specific micron porosity (commonly 60 µm).

"Micro-screening" also eliminates problems associated with sand filter technology which include: under-lateral fouling and excessive waste water (used for filter cleaning).



The Combi System's integrated Open Channel Style UV is positioned downstream from the micro-screen filter where it treats filtered water. This optimizes UV transmittance and ultimately the performance of the UV module itself. The UV module is precisely matched to the system's operating parameters: *recirculating flow rate, UV transmittance, and targeted microorganism's "required" UV exposure*. This provides optimum pathogenic organism disinfection.



Advantages:

- Open Channel Style design allows easy visual inspection of the system's integrated components.
- No fixed hydraulic requirements, which allows for a variable flow.
- Reduction in plumbing costs and associated head loss in contrast to component-style pressurized systems.
- The industrial grade construction of all components optimizes filtering performance and system operating life.
- Provides gross filtration ranging from large matter (plant, etc.) to very fine matter (tannins and organic matter).
- Micron-specific solid waste removal.
- Continuous self-cleaning solids removal assures high water quality with low maintenance.
- Low head-pressure design prevents particle fragmentation.
- Integrated Open Channel UV is specifically matched to the requirements/parameters of the application. These parameters include: the targeted microorganism's required UV exposure and the UV transmissibility.

Clean Water Return



Combi-System Specifications Chart

Model No.	Approximate Flow Rate	Screen Opening	Float Initiated Screen Cleaning	High Pressure Rinse	No. UV Lamps/ Watts	UV Dose µWs/cm ²	UV Power Supply	Combi Tank Model	Recommended Pump
COMBI HDF 801 1A	425 GPM	60 µm	YES	YES	5/150	35,000	Standard	CF 5 x 5	EQ750-7.5 HP
COMBI HDF 802 1A	850 GPM	60 µm	YES	YES	8/150	35,000	Standard	CF 5 x 5	EQK1500 HP
COMBI HDF 803 1A	1,275 GPM	60 µm	YES	YES	12/150	35,000	Standard	CF 9.6	EQ1000-10 HP(x2)