

Section Eight Incubation



Applications

- * Aquaculture
- * Research/Laboratory

Function

- * Egg Incubation

Up-Well Egg Incubator

Our EA Up-Welling Egg Incubators reduce labor commonly associated with tray-style egg incubators. Removing troublesome dead eggs from tray-style incubators takes time (labor), up-welling incubators use the up-flow water circulation to force dead eggs to the surface where they are easily removed.

Our Up-Welling Egg Incubators virtually eliminate "stagnate dead areas"...a leading contributor of fungal problems and commonly associated with "tray-style incubators". Instead; our Up-welling Incubators provide constant up-flow water circulation that holds the eggs in constant suspension virtually eliminating those troublesome stagnant areas. Up-welling Incubators deliver comparable hatch rates when compared to tray incubators with far less required labor and without chemical treatments!

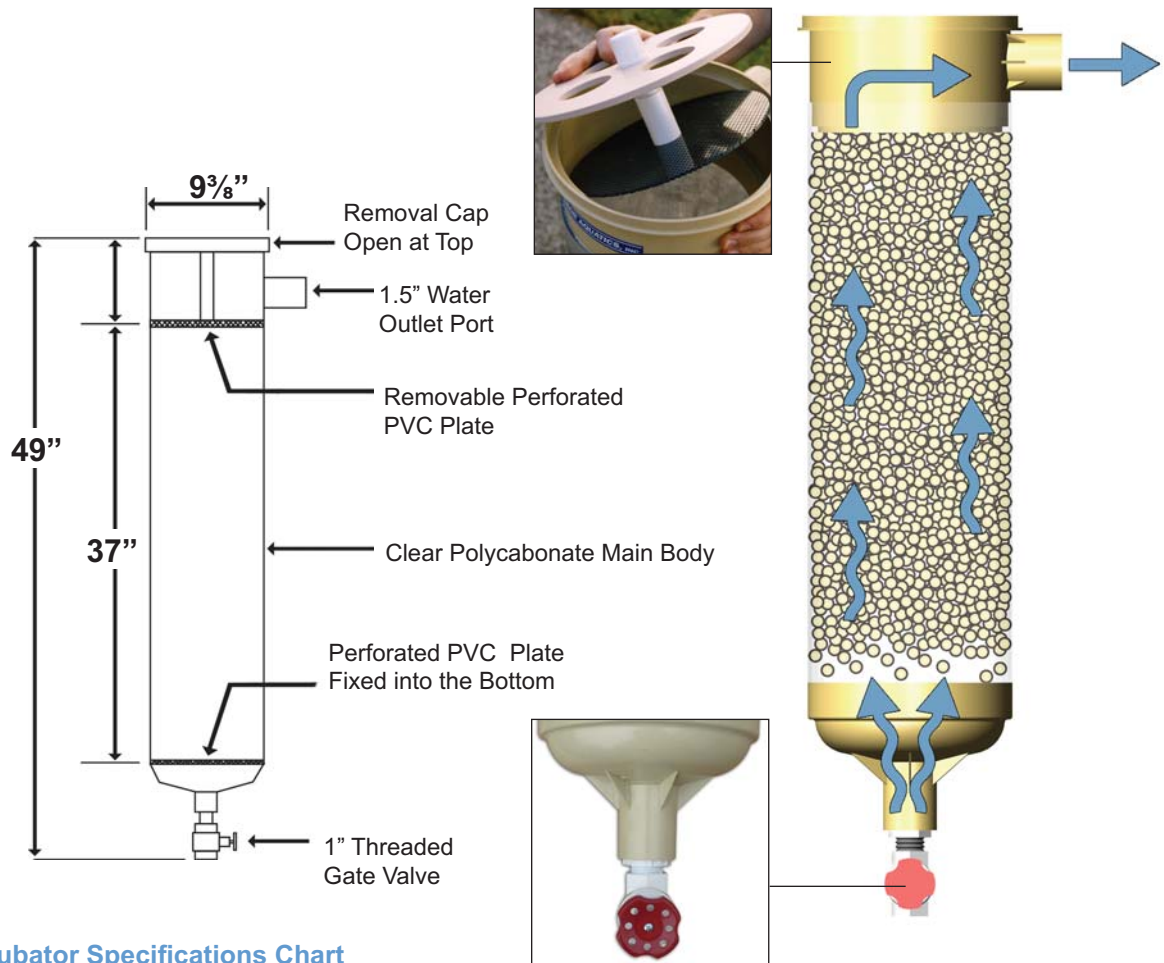
EA Egg Incubators are made of polycarbonate, ABS with PVC plumbing (supplied with gate valve for precise flow control).



Up-Well Egg Incubator

Advantages:

- Reduces labor separating dead eggs, egg shells and debris commonly associated with "tray style" incubators.
- Stagnate areas inside the EA Up-welling Incubator are virtually eliminated.
- Up-flow water circulation holds eggs in suspension; fungus does not attach and smother fertile eggs.
- Easy to remove lid allows quick removal of dead eggs, egg shells and debris that float to the top of the incubator.
- Inlet gate valve allows for easy flow adjustments.
- Clear polycarbonate body allows for visual inspection of eggs.
- 20 Quart Capacity increases incubation/hatching capabilities

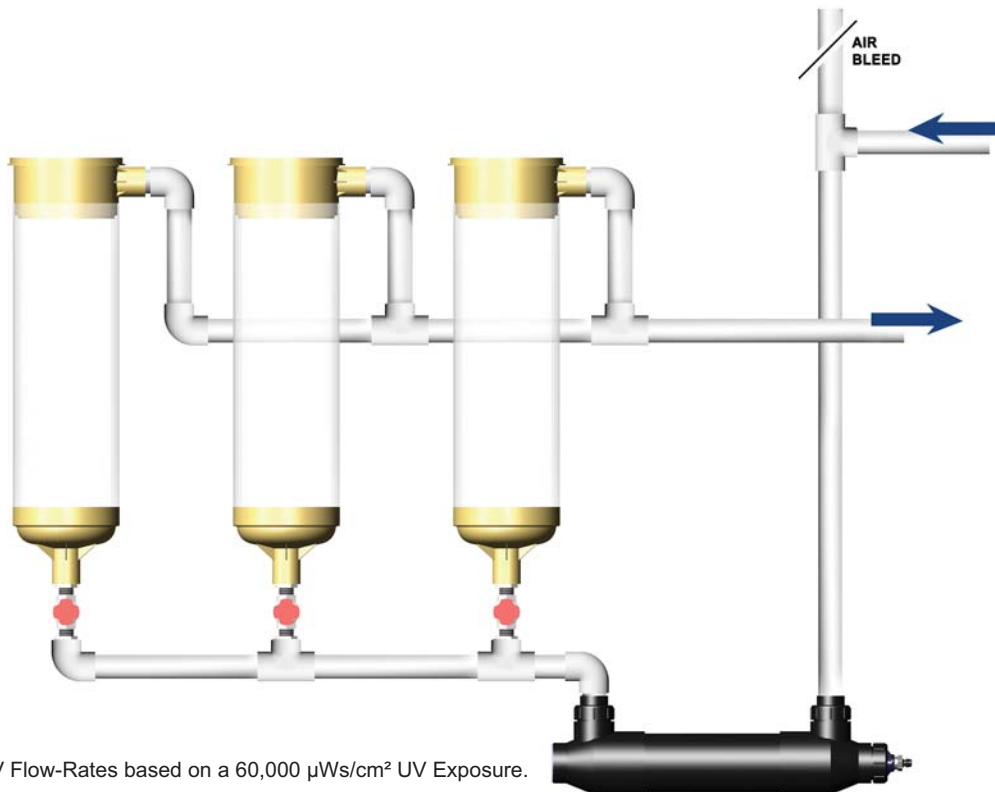


Up-Well Egg Incubator Specifications Chart

Model No.	Total Height	Incubation Area	Incubation Diameter	Inlet Port	Outlet Port	Capacity	Water Volume	Water Flow
	49"	37"	9 3/8"	1" MPT	1.5" Slip	Approx. 280,000 Rainbow Trout Eggs	8 Quarts	Approx. 5 GPM

Up-Welling Egg Incubators with UV

EA has combined our Up-Well Egg Incubators with UV providing protection against harmful waterborne bacteria and fungus. Saprolegnia zoospores (fungi) require a UV exposure rate of 39,600 $\mu\text{Ws}/\text{cm}^2$, we recommend a liberal UV exposure of 60,000 $\mu\text{Ws}/\text{cm}^2$ when applying UV with incubators. Purchase the incubators and UV separately or purchase our 3 or 6 incubator roll-around rack with UV.



UV Flow-Rates based on a 60,000 $\mu\text{Ws}/\text{cm}^2$ UV Exposure.



Pulling Eggs from a Rainbow Trout.




Incubator in use at Bellefonte Hatchery, PA.



Multiple Up-Welling Egg Incubators.

Photos Courtesy of PA Fish & Boat Commission



PENNSYLVANIA FISH & BOAT COMMISSION

Up-well egg incubation is the method of choice over standard tray incubation at the Bellefonte State Fish Hatchery. We have found the Emperor Aquatics Up-well Incubators to be very efficient; a 20 quart capacity increases space utilization, yet **increases our incubation/hatching capacity**. Eggs are kept in constant suspension **keeping fungus from attaching to and smothering fertile eggs, chemical treatments, specifically formalin are not required during incubation**. Our hatch rates for all three trout species (brook, brown and rainbow) are comparable to tray incubators without chemical treatments while achieving a significant reduction in labor.

Jeffrey L. Weaver, Manager
Bellefonte State Fish Hatchery
Pennsylvania Fish and Boat Commission

UV Recommendation Chart

No. of Incubators	Flow Rate GPM / GPH	Recommended UV Model
1	5 GPM / 300 GPH	02040 / 40 Watt
2	10 GPM / 600 GPH	025050 / 50 Watt
3	15 GPM / 900 GPH	025080 / 80 Watt
4	20 GPM / 1,200 GPH	025080 / 80 Watt
5	25 GPM / 1,500 GPH	025120 / 120 Watt
6	30 GPM / 1,800 GPH	025120 / 120 Watt

