

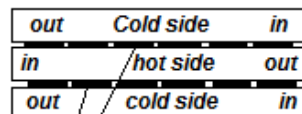
**Part # WHALEFIN12-40mmLIQUID**

**DESIGN PARAMETERS:** Our liquid sinks are designed around maximum cooling. Design based on the Blue Whales Pectoral fins. The fins on steep vertical angle dives do not allow water to cavitate (air to form) against the fin and lose lift. This in turn allows the whale to use the least amount of energy maximizing work performed by forcing the water against the fin at a higher rate than the speed of descent. The design creates micro vortexes that speed up the flow of liquid that allows liquid to cling to the bottom of the plate where the modules are mounted. This allows for much lower power and flow from the pump for the same amount of work. The design also saves power by creating turbulent flow with low flowing water thereby maximizing mixing of the liquid to pick up maximum heat flux. All of this is done with parallel flow.

**Feature:**

- All Aluminum construction for the liquid sink
- 1/2" ID 5/8" OD barbed fittings for both in port & out port.
- Mate to a 1/2" ID silicon tube for best results with 3/16" wall thickness.
- Low flow low pressure drop design.
- Flow rates are 2 liters to 4 liters per minute with on slight back pressure
- Optimal flow rate is 2.5 liters per minute.
- All flow is in parallel **NO** serial flow.
- Up to 24 modules can be placed on a 3 deck design.
- ~13.5" long x ~4.25" wide x ~1" thick

\*\* Because of our large flow surface under the modules of the cold interface plate. The correct number of modules are required for proper operation of the liquid sink. Failure to use 4 x 56mm modules in this case will reduce counter pressure on the o-ring which may cause it to leak.



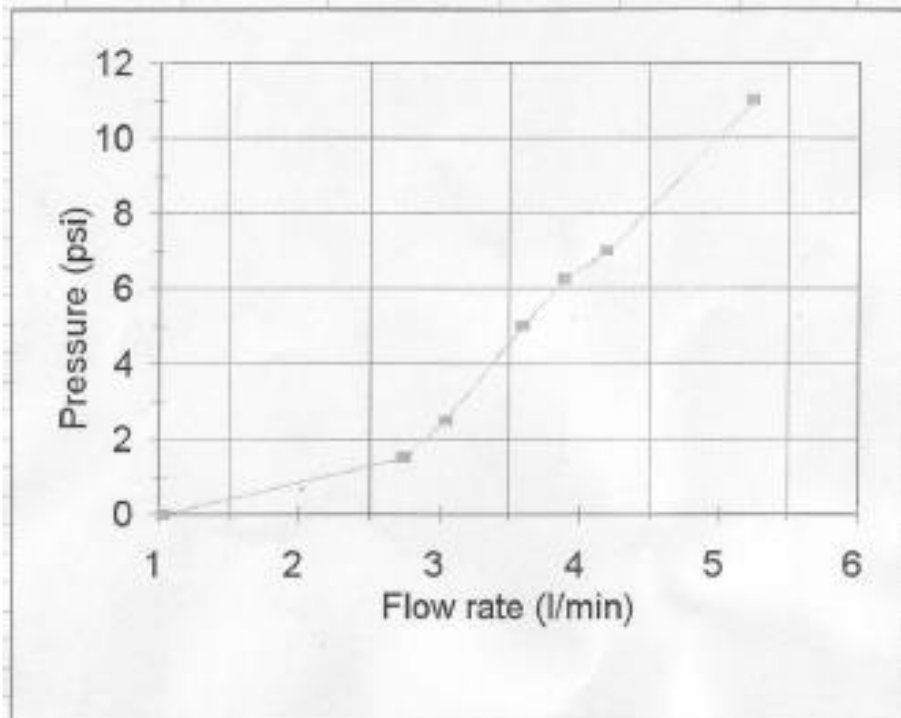
*TEG Modules  
Electrically can be  
wired in series or  
parallel*



Populated with 12 pieces of 40 x 40mm recommended modules:

- TEG1-12610-5.1
- TEG1-4199-5.3
- TEG1-12610-4.3
- TEG1-07025HT-SS

No#	flow (l/min)	Pressure(psi)	
1	1.03	0	0
2	2.75	1.5	0
3	3.05	2.5	0
4	3.6	5	3.3
5	3.9	6.25	5
6	4.2	7	8
7	5.25	11	11



\* Above flow rate as compared to water pressure is representative of all Whalefin™ designs