

“As seen on The New Inventors”.

The Mussel is a two-piece containment device which clamps around the pick-up end of a suction hose or pipe of pumping installations.



Range



Open showing Valve



Operating Mode



Working in Shallow Water

Pump Water - Not Air, Mud, Sand, Stones or Weed

No - Air!

- Due to no vortex being formed, the Mussel allows water to be pumped to very low levels in dams, creeks, wells etc.

No - Mud!

- Due to low velocity, mud is not sucked into the system if installed properly and therefore buildup of mud in the impellers, pipes, filters and sprinklers is reduced dramatically.

No - Sand!

- Due to low velocity, sand is not sucked into the system to cause blockages in pumps, filters, pipes and sprinklers. Foot valves and check valves are more likely to seat properly and not leak.

No - Stones!

- Due to low velocity, stones will not be sucked into the system causing problems with foot valves, check valves, pump impellers, pipes, filters and sprinklers.

No - Weed!

- Due to low velocity and protected inlet, the amount of weed sucked into the system will be minimal, helping with filtration problems, foot valve problems and pump impeller problems.

Improve Pump Efficiency

The specifications of the Mussel are carefully designed to optimize fluid flow dynamics into and inside the device.

The area of the inlet gap, the angle of the diffusion shells and the volume of the expansion envelope are all designed to work together to create better suction and pump efficiencies.

How Does This Work?

The suction pickup is held in the centre of the two opposing discs, surrounded and protected. The inlet gap which fully encircles the unit, expands the limited suction area, horizontally spreading and slowing down the ingressing liquid. By housing and protecting the inlet, horizontally spreading and diffusing a laminar flow and optimising the fluid velocity of the ingressing liquid to pressurise the inlet, major problems such as blockages, vortices, turbulences and pump cavitations are all virtually eliminated, even when operating in very shallow depths with high capacity pumps.



**SIDE ENTRY
MODEL**

M40EPSCOMP
M50EPSCOMP
M80EPSCOMP
M100EPSCOMP

**FLOW RANGE
L/MIN**

50 – 350 l/min
150 – 550 l/min
250 – 900 l/min
400 - 1800 l/min
900 - 3600 l/min

**TOP ENTRY
MODEL**

M50EPTCOMP

M80EPTCOMP
M100EPTCOMP
M150EPTCOMP



Other Flows and special installations can be catered for

Points to Watch

- Must be within flow range to work efficiently.
- Mussel must be able to swivel on hose to sit properly and work properly.
- Will not sit on top of some types of sludge and silt.
- Does not give 100% protection in all cases.
- Go to bottom of flow range for best weed protection.
- Go to middle of flow range for high suction heads.
- Made to fit specific foot valves.
- If suspended by floats the Mussel must still sit horizontally to work efficiently.

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HYDRO-FLO HIGH FLOW FOOT VALVES

PVC 2" TO 4" FEMALE BSP



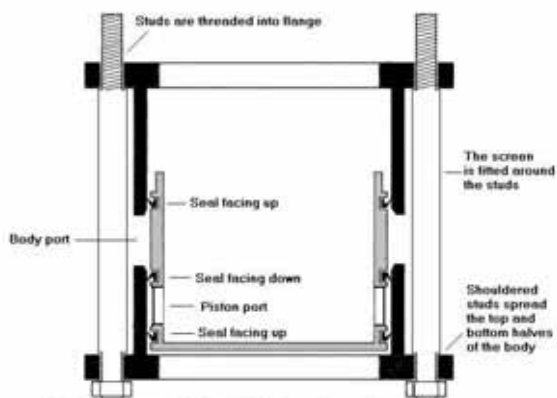
STAINLESS STEEL 3" TO 10" TABLE D OTHERS IF NEEDED



Compare Our Flows at 1 Mtr Suction Head

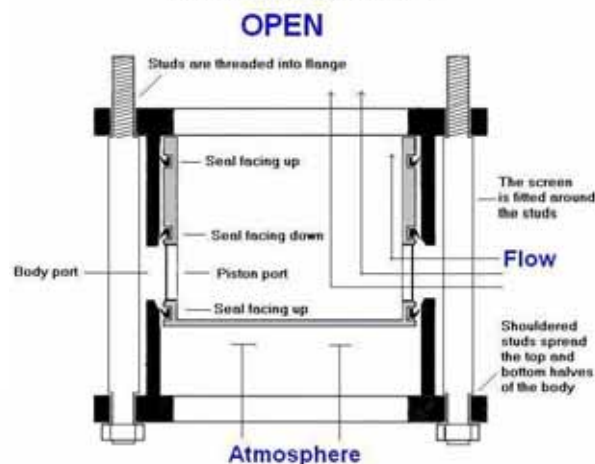
2" PVC	Flow – 9.8L/Sec	580L/Min	3" Stainless Steel	Flow – 41.2L/Sec	2400L/Min
3" PVC	Flow – 20.6L/Sec	1200L/Min	4" Stainless Steel	Flow – 67.5L/Sec	4000L/Min
4" PVC	Flow – 44.2L/Sec	2600L/Min	6" Stainless Steel	Flow – 103.5L/Sec	6200L/Min
			8" Stainless Steel	Flow – 187.6L/Sec	11200L/Min
			10" Stainless Steel	Flow – 310.2L/Sec	18600L/Min

Basic Construction



All Parts are 316 Stainless Steel.
Seals: Urethane 'U' Cup style.
Other body and seal materials used on request.

Basic Construction



Some Edited Testimonials for the Mussel

Our river levels are constantly varying and have a lot of problems moving the irrigator pump in and out to accommodate and getting it to work in low flows. Your Mussel coupled with the high flow water dump valve has solved the problem and give us much more reliability for our pasture irrigation. Best of all the pump is running much quieter so the Mussel has obviously solved the subtle cavitation that was always there, without making any other changes. Many Thanks. Brook Waugh – Irrigator – Bellingen, NSW.

My Contracting business depends on quick turn around for the water tankers. For years I tolerated situations that I thought were just a normal part of pumping water. Your Mussel and Valve package has transformed our operation – no more tolerating these problems your Mussel just so easily solved. Magic for what it does, its cheap at double the price. Gary Rossiter – Contractor – Mungindi, QLD.

This is an incredible product, a real eye popper whenever I put the Mussel into operation on construction and excavation sites in my remediation business for petroleum companies. With the mussel I am able to almost completely dewater the excavation without suction loss or contaminated sediment intake and because of the Mussel's unique design I can even have the intake sitting on the bottom sediment. I have always used traditional foot valve methods but that is a thing of the past. Craig Rivera – Rivera Contracting – Sydney, NSW.

We looked around for the weediest spot we could find to test the M80 and the M100. We just threw them in and started up. Not only were we able to draft water from the weed infested hole, when we retrieved the Mussels we were amazed that the units didn't have any weeds inside. We would have had a lot of problems if not impossible trying to pump from this area without Mussels. Graeme McCoy - Kurrajong Rural Fire Brigade, NSW

As soon as able we took the Mussel to the river and let her rip. The steep edge where I am forced to pump from did not allow the mussel to settle horizontally but vertically, standing on edge on the bottom. The Mussel still worked fine and the best result was the lack of turbulence which astonished us when we checked our tank, the delivered water is much cleaner. We could not be more delighted with this invention. Sheer brilliance. Thanks again. Jeff Bach – Pomona. QLD

We performed a flow simulation of the M50 Mussel fitted to a suction pipe verses a standard open pipe with no Mussel. The Mussel dramatically reduces the amount of turbulent energy at the pipe inlet. Comparative measurements of the turbulent kinetic energy and associated pressure drops shows a 40% improvement in terms of energy losses in the system when the Mussel is attached..

Michael Roomina, PhD – Fluvius Pty Ltd – Sydney, NSW.