



DUCKBILL VALVE OUTFALL DIFFUSERS

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<http://www.powercanadasolutions.com/checkvalves.html>

General:

- Outfalls must be able to discharge peak flows from a treatment facility and maintain dilution to comply with water quality standards. Entry of saline and sediment intrusion into the outfall over time will interfere with efficiency. Conventional diffusers that incorporate fixed ports are unable to prevent sediment intrusion.
- Salt water can intrude into the outfall if the plant flow rate is low. Since salt water is typically two percent heavier than effluent, it will intrude into conventional diffuser ports.
- Sediment can also intrude into the outfall pipe if the riser pipes or the outfall pipe itself are damaged. Riser pipes that are made from metal or plastic and are prone to shearing when subjected to impact loads. Dragging anchors or fishing nets cause metal or plastics to shear; allowing the outfall to fill with sediment.

DUCKBILL VALVES WITH HEAVY RUBBER REINFORCED RISER will substantially improve the mixing and dilution of effluent into a receiving water body. Duckbill Valves greatly reduce or prevent the intrusion of salt water and sediment. Risers are fabricated and are similar to Duckbill construction, but incorporate wire reinforcement. They are very durable and are able to deflect and return when subjected to impact loads from boating activity. Having all rubber components above the bed will minimize or eliminate physical damage to the outfall.

These DUCKBILL VALVES <http://www.powercanadasolutions.com/checkvalves.html> manufactured in Canada utilizes vulcanized rubber reinforced with nylon or polyester fabric similar to a truck tire. The upstream end of a duckbill valve is circular and contours to a flattened portion known as the duckbill. The elasticity of the rubber keeps the bill in the closed position in the absence of backpressure. Low reverse differential pressure assists in maintaining a positive closure. Positive differential pressure progressively opens the valve as effluent flow increases. By modifying the elastomer and fabric matrix, specific characteristics such as jet velocity and head loss can be controlled. The duckbill valve has no moving parts that can corrode or be fouled which allows it to perform exceptionally well in the adverse conditions of marine waters.

DUCKBILL VALVE advantage is that it is a variable orifice; the effective open area increases with increase in flow, and decreases with reduction in flow. The duckbill's variable orifice generates higher jet velocity at lower flows, and reduced head loss at peak flow. This **self-regulating characteristic of duckbills** keeps a more consistent differential pressure across the ports.

Duckbill valve outfalls, outfalls, bubbler systems; Duckbill Valves Slip on models, Flange Mount models and Insertable duckbill check valve models: Canada company Power Plant Supply Co, serve customers in Ontario, ON, Quebec, QC, Nunavut, Northwest Territories, NWT, and Yukon. We supply customers in Atlantic Canada including New Brunswick, NB, PEI, Nova Scotia, NS, Newfoundland and Labrador, NL. We ship same day in Toronto, GTA. We also ship to, British Columbia, BC, Alberta, AB, Saskatchewan, Manitoba; Man, including cities Vancouver, Calgary, Fort McMurray, Edmonton, Regina, Winnipeg, Thunder Bay, Churchill, Hamilton, Ottawa, Montreal, Quebec City, Saint John, Fredericton, Moncton, Halifax, Charlottetown, Sydney, ST John's. We also ship to all USA points

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