The Eddy Pump can be applied to many different industry applications and flawlessly handle high solids, high viscosity, and corrosive materials. Depending on your project needs, The Eddy Pump can be deployed to suit your slurry pump application. Use this guide to determine what type of pump set up that is right for you.

### Flooded Suction Pump
Applications pumping slurry or liquid from a tank or hopper above your pump usually signifies a flooded suction application. What this means is that the liquid or slurry is positioned to gravity feed into the suction of the pump. This primes the pump and allows it to move the slurry or liquid.

### Submersible Pump
A submersible pump is designed to work with the entire assembly, consisting of a pump and motor, fully submerged in the liquid or medium to be processed. This is efficient because the pump is in the liquid source no energy is spent in drawing the liquid into the pump.

### Self-Priming Pump
Self-priming pumps incorporate a vacuum assisted priming unit. This process fills the pump with slurry or target material, which is required for the main EDDY Pump to prime and take over. Self-priming units are not submerged. The suction hose goes into the target material or slurry and the unit acts like a super-sized wet vacuum.
FLOODED SUCTION PUMPS

A flooded suction pump, like any other pump, is used to move liquids from one point to another. The major difference between a flooded suction and submersible pumps is that the flooded suction pump is gravity fed and mounted outside of the tank or hopper which holds the slurry or fluid. The flooded suction pump is typically positioned at the bottom or underneath the tank or hopper so that gravity will constantly feed the pump fluid while the pump is in operation. This ensures the pump is always primed and ready to operate without losing prime or taking in too much air.

ADVANTAGES OF FLOODED SUCTION PUMPS

- **Priming**: Automatically primed because fluid is gravity fed directly into the pump, always keeping it primed.

- **Efficiency**: Unit does not need to use as much energy in drawing liquid into the pump because it has the head pressure of liquid on the suction end to help it operate.

- **Maintenance & Accessibility**: Since the pump is mounted outside of the tank or fluid, routine maintenance is much easier to accomplish because the pump is capable of being worked on immediately.

- Lower cost maintenance and less expensive motors verse submersible pumps.

*Flooded Suction Deployment positioned below tank or hopper.

COMMON MATERIALS

<table>
<thead>
<tr>
<th>Wastewater/ Sewage</th>
<th>Slurry / Mud</th>
<th>Sand / Gravel</th>
<th>Drill Mud / Drill Cuttings</th>
<th>Chemicals/ Low PH</th>
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SUBMERSIBLE PUMPS

A submersible pump is completely submerged in the liquid and operates by pushing, as opposed to drawing, liquid during the pumping process. This is extremely efficient because the pump uses the head of liquid in which it is submerged to operate and no energy is spent in drawing the liquid into the pump. The motor is cooled by the liquid around it, preventing overheating.

ADVANTAGES OF SUBMERSIBLE PUMPS

- **Priming**: They are self-priming because they operate below the surface of the fluid being pumped.
- **Cavitation**: Because they are fully submerged, submersible pumps are not prone to cavitation.
- **Efficiency**: A submersible pump has the head pressure of liquid on the suction end to help it operate. It doesn’t need to use as much energy in drawing liquid into the pump.
- **Noise**: Being submerged, these pumps are very quiet in most common applications.

*Submersible Deployment is shown fully submerged in materials.*
SELF-PRIMING PUMPS

One of the challenges engineers face when designing a self-priming or process pump is removing air from the piping and pump casing. These casings create the suction necessary for forcing the liquid to the pump. If any air gets into the self-priming pump, it cannot operate properly. For this reason, the pump creates a vacuum at the impeller eye so that air will not get into the suction line. Air is released during the discharge phase after it has primed the liquid. The removal of the air creates the suction necessary for the pump to work. As long as the lines are clear of air, dirt, and sand, the pump can prime the liquid efficiently up to 26 ft.

This self-priming pump incorporates a vacuum assisted priming unit, which then allows the EDDY Pump to take over. This process fills the pump with slurry or target material, which is required for the main EDDY Pump to work. Most EDDY Pumps are submersible, however, with a self-priming unit, the pump and power unit are not submerged. The suction hose goes into the slurry and the unit acts like a super-sized wet vacuum.

ADVANTAGES OF SELF-PRIMING PUMPS

- Since the pump is not submerged, both the operation and maintenance of self-priming pumps are economical and relatively easy.
- Optimal Performance. Built for pumping the toughest of materials including high viscosity liquids, high-solids content slurries with a non-clogging design.
- This type of pump can remove air on its own and continue operation without assistance.

- The EDDY Pump self-priming pumps can handle up to 9 inches of solids.
- Pump target material while the unit is situated out of the pit.
- Great option for replacing expensive vacuum trucks for sump cleanout. Clean sumps in-house for a fraction of the price with the EDDY Pump Self-Priming System.