



# ProFlow

Division of Burt Process Equipment



## Pol-E-Duc Dry Polymer Makedown System

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**Pol-E-Duc Dry Polymer Makedown Systems**

Reduce Costs | Ensure Consistent Output | Eliminate Fisheyes

# Control the Timing and Amount of Polymer Addition For Optimal Results

ProFlow's Pol-E-Duc Dry Polymer Makedown Systems combine the latest PLCs and equipment to ensure efficiency and cost savings. Pol-E-Duc allows for the optimal blending of the dry polymer into the liquid at the best rate for the desired concentration. This proven system has a 30-year history of performance in the field, backed by dozens of successful installations. Applications include:

## Paper Making

Polymers are added to the paper-making process to increase the strength of the end paper product, and Pol-E-Duc ensures the polymer is optimally added and blended to obtain a smooth, uniform slurry.

## Industrial Waste Treatment & Mining

In industrial waste treatment and mining, Pol-E-Duc efficiently makes down and feeds the polymer to achieve a high-performing flocculent.



## A durable, plug-and-play, skid-based system that enables industrial and mining facilities to manage dry polymer makedown

ProFlow's **Pol-E-Duc** Dry Polymer Makedown Systems are custom engineered to meter out the dry polymer at the precise rate required to ensure proper makedown. We've added a window at the point where polymer is added, so operators can ensure the polymer is flowing properly from the connected bag. A screen helps to filter clumps of polymer that could lead to the formation of fisheyes in the process. The system incorporates an iris valve to prevent uncontrolled bursts of material. The bag outlet spout is pulled through the iris valve, which is then closed around the spout to prevent material flow. The spout can then be untied, the access door closed, and the valve released slowly.

Powder transfer is done with a vacuum, which ensures polymer powder will be pulled into the system, not blown around the facility, in the event of a leak. A single control panel monitors the mix and run tank levels and controls the dry polymer feeder, the water pump, the mixer in the mix tank, and the transfer pump, which, when combined, makes this an automatic, self-contained system.

Pound for pound, dry polymer offers a substantial cost savings over wet polymer, and it's easier to store and handle. Easy to operate and reliable, Pol-E-Duc makes dry polymer the best option for other dry material makedown applications.

## Benefits

**Uniform, Consistent Product** — The high energy in the eductor ensures fully dispersed material. Polymers are fully activated and free from clumps, or “fisheyes.” Even difficult-to-wet powders are smooth, uniform slurries that are free of agglomerates and lumps.

**Safety and Cleanliness** — With a vacuum-based system, any powder leaks are drawn into the unit, rather than pushed out, which eliminates the potential for airborne particles. Airborne particles released into the workplace are a challenge to clean up and present a potentially harmful breathing hazard.

**Process Stability** — The latest PLC technologies ensure tight control over all operating parameters during the makedown and across batch operations. With lower process variability, it's possible to achieve uniform, consistent quality and optimized application rates.

**Operational Versatility** — The Pol-E-Duc can accommodate all types of dry polymers. For other dry makedown applications, contact ProFlow for available options.

**Scalable** — The Pol-E-Duc is scalable to accommodate specific requirements, from very low pounds per day, up to thousands of pounds per day.

## Options

- Tanks of all sizes, including ASME certified
- Level controls
- Programming, including communication to DCSs
- Transfer pumps for additional downstream applications
- Fast-fill valves that fill the mix tank faster to decrease batch time
- Fully outfitted metering skids as required
- Agitators



## ProFlow's Pol-E-Duc system features an optional bulk bag system.

Some polymers can come in supersack bags. For this reason, ProFlow offers a bulk bag assembly option that straddles the standard Pol-E-Duc system. The bulk bag unit can pick up a bag of polymer up to 2000 pounds using a motorized trolley. With simple controls, the bulk bag unit allows the polymer bag to be hoisted up and fed into the hopper. A window into the hopper offers visibility into the unit, which was a feature requested by many of our customers.

The bulk bag system is rugged, yet easy to set up. It includes a spreader bar for bulk bag straps, as well as safety cables to prevent the bag from falling. Options include a forklift loading frame and a loss-in-weight system.



## Service & Support

Every unit comes with a detailed manual that simplifies operation and maintenance. ProFlow offers start-up service, remote modem diagnostics, onboard help screens, and on-call, around-the-clock emergency service to ensure peak productivity.

## Design Options

Pol-E-Duc Dry Polymer Makedown Systems are available in a wide range of configurations and capacities to meet unique process requirements. We offer standard models ranging from small manual units delivering less than 100 pounds per day up to fully automated systems capable of making down several tons per day.

## Controls and Programming

Pol-E-Duc offers a wide range of control options, including PLC-based controls which can be integrated with the plant's DCS. Localized operations can be monitored and carried out at the operator interface terminal.



## The ProFlow Difference

ProFlow's turnkey solutions are value-driven. Our true differentiator lies in our ability to control and manage all aspects of a project. Our customers have a requirement, and we create the best solution to meet their specific process requirements and budget. Our highly skilled team – including engineering, fabrication, assembly, and welding experts – manages your entire project, from concept to operation.

**Engineering** – Our project engineers have the latest in CAD programs for preparing P&IDs, 3-D modeling of piping and structural layouts, mechanical, electrical, and control panel designs.

**Quality** – We follow very specific quality procedures to comply with our certifications, including ISO 9001, ASME U and R stamps for the fabrication and repair of pressure vessels, and ASME certification for TIG and MIG welding of carbon steel, stainless steel, and other high-nickel alloys. ProFlow is also a UL-listed panel shop.

**Documentation** – ProFlow delivers detailed drawings, 3D solid models, PLC programming documentation, parts lists, and field-proven operating instructions to ensure installation, startup, operation, and maintenance of the system meets expectations.

**Service and Support** – In addition to our field service group, who can assist at start-ups and field repairs, our project engineers are available 24 hours a day, seven days a week through remote diagnostics to troubleshoot and resolve any technical problems.

