



PROCESS EQUIPMENT & FLUID HANDLING SYSTEMS FOR THE PAPER INDUSTRY

40 Sebeth Drive
Cromwell, CT 06416
sales@proflow-inc.com
www.proflow-inc.com

When you need to measure, control, and direct the flow of liquid, you need ProFlow.

The pulp and paper industry is highly competitive. With challenges like process variability, unexpected mill downtime, raw material quality inconsistencies, and the high cost of chemicals, utilities, and maintenance, it is difficult to keep prices low without sacrificing margin.

At ProFlow, we know the systems we design and build are critical components to our customers' operational functionality and overall profitability. If our systems don't work, the entire process stops. What's why we focus on quality and exceptional performance throughout the entire process. Paper manufacturers and paper chemical suppliers have come to depend on ProFlow, because our systems work within the tightest operational parameters.

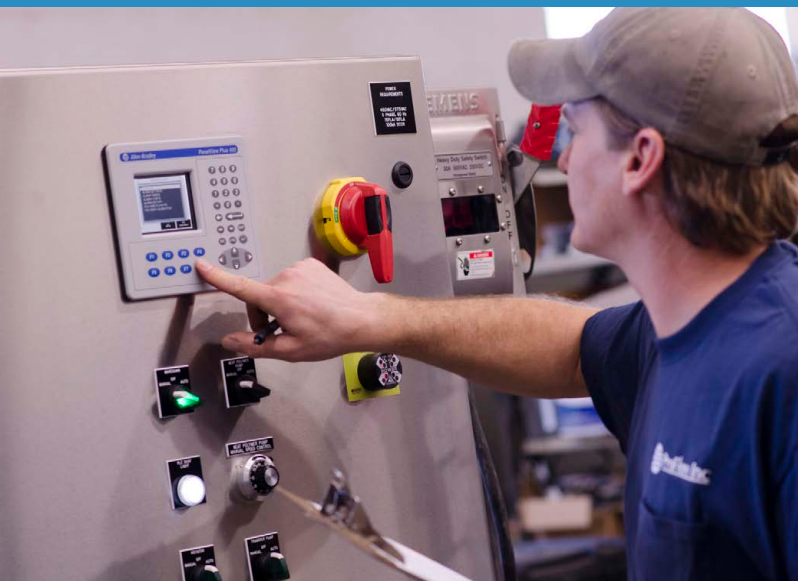


You Can't Afford Unreliable Equipment

Cheap systems are readily available—but they come with hidden costs, like high failure rates, unexpected repairs, poor paper quality, and unexpected shutdowns.

Less-than-optimal equipment eats into profits even when the system is operating, due to variations in makedown streams, such as polymer dilutions and starch dispersions. Overfeeds waste costly material. Underfeeds cause problems downstream. The cost of these fluctuations, while deceptively small at any given time, can add up to a significant budget hit over time.

ProFlow has a track record of over 30 years of field-proven success and ongoing support. When you choose ProFlow, you get our long-term commitment to excellence.



ProFlow's Commitment to Quality

Comprehensive In-House Capabilities

We perform all design work, fabrication, and testing at our facilities in Cromwell, Connecticut. Our growing team consists of engineers, project managers, assemblers, welders, and quality control experts. Each project has a dedicated ProFlow project manager who ensures clear and direct lines of communication and responsibility, so your project can be expedited in a timely, cost-effective manner.

State-of-the-Art Engineering Support

Our project engineers have the latest in CAD programs for preparing P&IDs, 3-D modeling of piping and structural layouts, and mechanical, electrical, and control panel designs. The speed and accuracy of these programs enhance our design, review, and revision processes. Using our highly efficient communications systems, our engineers can instantaneously access drawings, technical data, and product information, regardless of their location, worldwide.

Certified Quality, Certified Expertise

ProFlow maintains all industry-standard certifications for quality, including ISO 9001, UL and cUL for control panel safety, 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 Hastelloy®.

Complete and Clear Documentation

Every ProFlow system comes with detailed drawings, PLC program documentation, a parts list, and field-proven operating instructions. This package is a valuable tool in the installation, start-up, operation, and maintenance of the system.

SERVICES AND CAPABILITIES

System Design, Fabrication, & Assembly

- Component selection
- Control panel design

Process Control

- Operator interface terminal
- Integration of PLC with existing DCS
- Data logging
- Closed loop control

Full System Documentation

- Drawings
- PLC/OIT programs
- Parts list
- Installation, operation & maintenance manual
- Weld maps
- Test documentation

AutoCAD Design Programs

- AutoDesk Inventor software
- Electrical design software
- P&ID design software

Full System Support

- Start-up assistance
- Engineer on call 24/7
- Remote system monitoring/adjustment via modem

Fabrication Expertise

- ASME-certified welding of carbon and stainless steels, and Hastelloy®
- ASME-certified U and R pressure vessel stamps
- Orbital welding

Testing Facilities

- Pressure and flow testing equipment
- Water supply loop
- Multi-voltage transformer/power source
- Steam boiler for testing



The Right System Improves the Productivity of the Papermaking Processes

ProFlow ASA Emulsification System

The ProFlow ASA Emulsification Unit supplies ASA/Starch emulsion directly to the head box. For this critical application—in which unit failure would halt the whole papermaking operation—the ProFlow Emulsifier is recognized as the world standard of reliability, with numerous installations worldwide. From its rugged design and solid construction to its PLC control, the ProFlow Emulsifier is designed to perform without fail.



ProFlow Pol-E-Duc Dry Polymer Makedown System

The ProFlow Pol-E-Duc Dry Polymer Makedown System provides a clean and reliable means to makedown dry polymer and other difficult-to-wet powders. Its unique PowerDown Eductor transfers dry polymer by vacuum instead of air pressure, virtually eliminating the airborne particle spread and housekeeping problems associated with our competitors' pressurized units.

ProFlow Liquid Metering Systems

Different processes have unique requirements, including chemical compatibility, shear, viscosity, performance, and durability. ProFlow's metering skids are available in three customizable models. The Simplex Metering Skid (SMS) uses a single pump to deliver an accurate amount of fluid to a process or tank. The Duplex Metering Skid (DMS) has a primary pump and a backup inline spare pump and is ideal for critical processes. The Triplex Metering Skid (TMS) is designed for larger applications and includes two primary pumps and one backup inline spare pump.





ProFlow, Inc. has become the de facto standard for quality in the industry. We build in quality at every step of the process, based on well-defined, well-documented ISO9001 procedures. This focus on quality ensures the performance of your system from day one—and every day thereafter.

ProFlow Starch Cookers

ProFlow Starch Cookers provide industry-best technology for your wet-end and size-press starch applications. Our closed-loop system maintains steady output even when steam or water pressures vary. Operator-friendly controls provide direct concentration settings, eliminating the need for manual calculations and flow rate adjustments. ProFlow's patented Q-Jet direct steam injection equipment has a micro-adjustable mixing tube that allows for in-process fine tuning to eliminate ear-splitting, equipment-damaging steam hammer.



ProFlow Dye Metering Systems

The ProFlow Dye Metering Systems deliver precise, uniform quantities of dyes and optical enhancing chemicals to the paper machine. Utilizing a precision metering pump, the units are designed to give reproducible, accurate flows of these critical chemicals. This high degree of control over the flow translates directly into more uniform dye intensity on the finished paper. The systems include calibration columns for standardization of flow rates and convenient flush lines to facilitate the removal of material at change over.

ProFlow Series MD Liquid Polymer Makedown System

ProFlow Series MD Liquid Polymer Makedown Units deliver uniform, consistent dilute polymer concentrations regardless of fluctuations in incoming water pressure, thanks to a water buffering system that compensates for these changes in supply. Moreover, ProFlow Series MD units deliver specific dilutions at up to 50% higher viscosities than other units tested. This fully activates the polymer and allows you to hit process targets using less material—at measurable cost savings.



40 Sebethe Drive
Cromwell, CT 06146
sales@proflow-inc.com
www.proflow-inc.com

Trust ProFlow to develop the plan, mobilize the resources, and engineer the system

While every project is as unique as our customers' requirements, ProFlow has developed best practices that allow us to control all elements of the process. No matter where you are in the project planning process, ProFlow is ready to support your project to successful completion. Our full range of in-house capabilities includes:

Design

From preliminary designs to detailed plans, our engineering team uses state-of-the-art design software to prepare P&IDs, 3D modeling of piping and structural layouts, mechanical, electrical and control panel designs.

Fabrication

ProFlow's 50,000 square feet of facilities in North Haven, CT accommodate electrical, UL-listed, control panel fabrication, instrumentation, and ASME-certified welding (including U and R welding stamps for pressure vessel repair and fabrication).

Programming

ProFlow's in-house specialists handle all programming, including PLC and operator-interface programming, which may include interfacing with data acquisition, historians, DCSs, and other subsystems.

Testing & Documentation

Our on-site test facility ensures that the system operates as designed. A complete documentation package, including drawings, parts list, weld maps, installation/operation manuals and test results, is prepared.



ProFlow designs and builds modular fluid systems for critical applications, such as supplying starch/size emulsion straight to the head box or feeding retention aids to the process.



Examples of Pulp & Paper and Paper Chemical Applications

Starch Cooker (Jet Cooker Design)	Yankee Sprayboom Water Conditioning System
Starch Cooker (Cooking Chamber Design)	Felt Wash Skids
Continuous Enzymatic Starch Converter	Dye Skids
Starch Pump Skid	Acid Metering Systems
Dry Polymer Makedown Systems	Polymer Metering & Dilution Skids
Liquid Polymer Makedown Systems	Post Dilution and Filter Systems
CMC, PVOH, & Bentonite Makedown Systems	Emulsifiers - PAE/SAE
Sodium Biocarbonate Makedown Systems	Tissue Machine – Chemical Feed Systems
Starch Slurry Makedown Systems	Tissue Machines – Dryer Release Agent Systems
Starch Metering Systems	Chemical Dilution Skid
Yankee Sprayboom Shower Supply	Direct Steam Injection
Yankee Sprayboom Recirculation System	Late Product Differentiation



Waukesha Rotary Pump

The Waukesha ECP pump is the ideal pump for many paper industry applications. As the master distributor for the Waukesha pump in the paper industry, ProFlow helped to design the pump for the paper industry, and we assist in the sizing of all Waukesha pumps sold to the paper industry.

40 Sebethe Drive
Cromwell, CT 06416
sales@proflow-inc.com
www.proflow-inc.com

When the System Must Be Right

ProFlow delivers excellence in process equipment and modular fluid systems

ProFlow has been designing and manufacturing fluid handling equipment for more than 30 years. We build process equipment knowing our customers' success depends on our work. Our team includes mechanical and electrical engineers, programmers, welders, panel builders, and field service technicians.

Today, ProFlow supplies a wide range of process solutions, from simple pump & filter skids, to completely automated process systems for a wide range of applications.

For more information, visit us online at www.proflow-inc.com or email at sales@proflow-inc.com.



ProFlow has a significant global presence, with customers in over 30 countries worldwide.

