KÄDANT

CHEMICAL PULP SYSTEMS

Chemi-Washer®
Horizontal Belt Washer

Performance-proven pulp washer featuring multi-stage displacement washing in one machine

With installations worldwide, the Chemi-Washer is delivering outstanding results on applications ranging from hardwood kraft to softwood sulfite.

Chemi-Washer®
Horizontal Belt Washer

Applications

- Hardwood Kraft
- Hardwood Sulfite
- Softwood Kraft
- Softwood Sulfite
- Semi-chemical Pulp
- Post Oxygen Washing
- Chlorine Dioxide Washing
- Caustic Extraction Washing
- Non-wood Furnishes
- Dissolving Pulp

Simple and Efficient Operation

Pulp, fed through the Chemi-Washer headbox, is distributed evenly on the moving wire. In the formation zone, the area between the headbox and first shower, pulp is dewatered from inlet consistency to displacement consistency, forming a pulp mat. Suction boxes under the wire collect the displaced liquor.

Displacement Washing

Displacement washing occurs when the mat goes under the shower where filtrate from each succeeding washing stage flows onto and through the pulp. By controlling the flow to the last shower, the dilution factor can be set at the desired level, usually 1.0, thus ensuring the high concentration of dissolved solids in the liquor to recovery.

Multi-Stage Washing

The Chemi-Washer employs multiple stages of displacement washing, the number of which will depend on the furnish and the washing efficiency required. Dewatering and displacement of shower liquid is a function of the arrangement of the suction box, pump, fan and hood.

In each washing stage, a suction box collects the displaced liquor sending it to a shower pump, which in turn pumps it to the preceding stage. A pressure differential between the hood and suction box forces the liquor out of the stock into the suction box. Since the differential is small, vapor is drawn through the mat at low velocities.

A controlled liquid level combined with an atmosphere of high relative humidity reduces the potential for foaming in the suction boxes. The vapor in each suction box is drawn into a centrifugal blower and recycled back to the hood.

Benefits

Low dilution factor
Uses less wash water to produce higher dissolved solids for substantial steam cost savings in the evaporation plant.

High efficiency washing
Multi-stage displacement washing provides the highest efficiency in the industry.

Low installation cost
No separate tanks, piping or foundations needed. The selfcontained Chemi -Washer requires only one foundation and one filtrate tank.

Low level installation
No barometric drop leg required. Vacuum is provided by a simple direct drive fan.

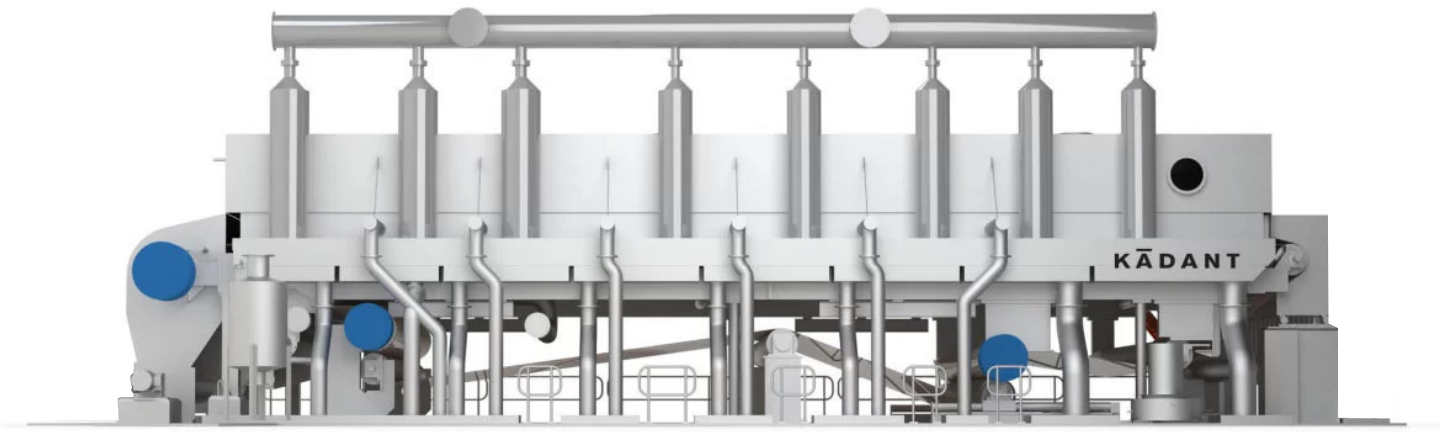
Multi-stage washing in one machine
Depending on the application, the Chemi-Washer can have one to ten washing stages on a single machine.

Low vacuum
Minimum vacuum ensures least amount of drag, long wire life and reduced power consumption.

Remote controlled
No local operator activity required.

Even pulp mat formation
Pulp mat formed by flowing over moving wire without the need for pressure or vacuum.

Achieving a 1.0 dilution factor, no other pulp washer uses less wash water than the Chemi-Washer.



Easy and Economical Installation

The Chemi -Washer's self-contained, multi-stage design translates into a low cost installation. It requires only one foundation and one filtrate tank, regardless of the number of washing stages. Low level installation provides another key cost advantage. The driving force for the displacement washing mechanism is provided by centrifugal fans mounted just above the hood.

This eliminates not only barometric drop legs required by vacuum drum washers, but the construction of facilities to accommodate them. The Chemi-Washer's new non-cantilevered design significantly reduces installation space requirements. Its low profile enables it to be installed in a building where headroom is limited, or it can be installed outside in milder climates, eliminating the cost of a building to house it.

Remote Operation

The Chemi -Washer, with its limited number of control loops is easy to integrate into a mill's Distributed Control System (DCS). No local operator activity is required because the DCS monitors every function while the Chemi-Washer is in operation.

Delivering the highest chemical recovery efficiency, the highest COD removal and the highest total dissolved solids removal on brown and bleachable grade pulps.

Environmentally Compliant

The Chemi -Washer process is contained in a sealed stainless steel hood without external vents. This prevents odorous gas escape and/or outside air entry while maintaining atmospheric pressure in the hood. This system also retains heat in the hood. The higher temperature aids drainage and helps maintain equilibrium between vapors and gases in the suction boxes and hood.

A Trusted Partner

Stock preparation is in our DNA. We know this industry like few others – your equipment, your processes, and your challenges. We have the know-how and tools to elevate the efficiency of your production. Our team can help monitor, maintain, and upgrade your line, providing process improvements, replacement parts, rebuilds, and comprehensive maintenance plans.

We understand what it takes to remain competitive, protect your investment, and extend the life of your stock preparation assets. To that goal, we offer:

- Field services, inspections, and audits
- Rebuilds and retrofits
- Upgrades and modernizations
- Maintenance and service contracts
- Process control solutions
- Replacement upgrades and spare parts

Certified Parts and Service 24 Hour Hotline for North America: 1-800-448-5422

Expertise to Empower You

Our team is there for you at every step. We help you select the right options to best meet your specific needs.

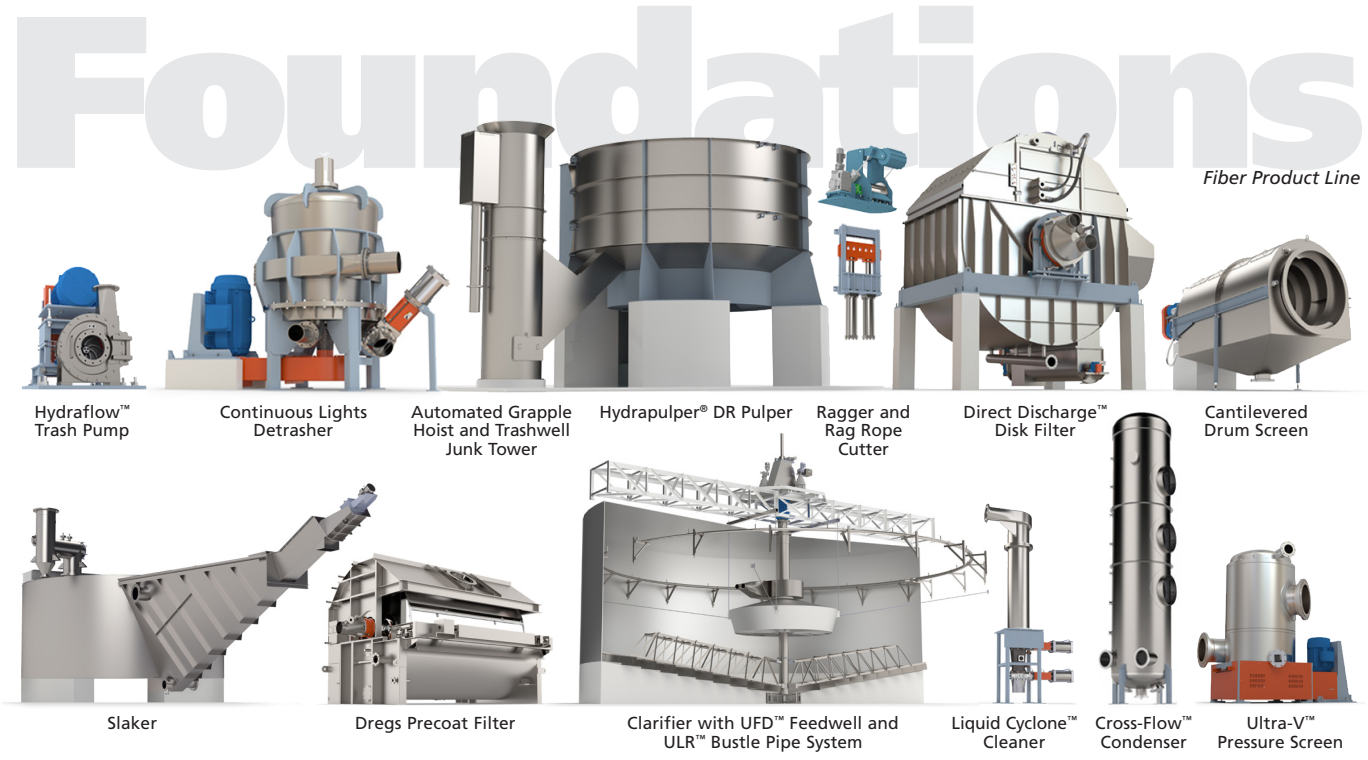
We have generations of experience, a history of innovation, and a proven record of success across the globe. Our skilled engineers, process professionals, application experts, manufacturing, and field service teams have thousands of successful installations to their credit.

Get You Running, Keep You Running

Our technical service and support teams are ready. We provide superior guidance in the planning, design, engineering, installation, and start-up of your systems. Our products and expertise cover the full range of stock preparation and pulping, including:

- Pulping
- Screening
- Cleaning
- Thickening
- Deinking
- Detrashing
- Refining and dispersing
- Reject handling
- Recovery systems
- Heat transfer
- Pulp washing
- Recausticizing

The Kadant Foundations product line offers a full range of fiber processing equipment and services.



For patent information about this and other Kadant products visit https://kadant.com/en/patents

KADANT

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