

Aqualizer



The Aqualizer™ is a versatile system for controlling cross direction (CD) moisture profiles, enhancing the finishing process and remoisturizing the sheet. It provides CD moisture profile control and can increase the average sheet moisture with revolutionary vortex air atomizing spray nozzles and intelligent actuators.

Aqualizer has been designed to be installed in paper machine dryer sections for CD moisture profile control, or at the dry end for finishing enhancement of premium supercalendered grades. The Aqualizer gives the papermaker the ability to raise average moisture targets while profiling in order to produce a better quality sheet, more efficiently.

The Aqualizer has been specially engineered to enable a single row of actuators to provide results on any application—from light weight specialty SC papers to board grades.



Features and Benefits

- Patented vortex air atomizing nozzles provide streak-free spray
- Compact design for quick installation with only 3 connections per beam required; one each for water, air and electrical
- Improved finishing by enhancing sheet properties such as smoothness and gloss
- Improved moisture profiles

- Improved reel build
- Improved paper quality
- Reduced rejects
- Avoid dry edges and sheet damage due to over drying
- Control curl
- Fast recovery at start-up and after grade changes or process upsets
- Increased average moisture for fiber savings and/or reduced dryer loads

Aqualizer's high MD and CD control resolution ensures precise application of moisture to the sheet at any flow rate, allowing a single beam with a single set of nozzles to be used for virtually all paper applications. Aqualizer has over 1,000 steps of setpoint resolution which allows a single system to correct dry edges while maintaining optimum control resolution in the center of the sheet.

The stainless steel spray boom houses the spray units, water and air supply headers, network cabling, access door and quick disconnects for ease of maintenance. Fixed boom mounting brackets are included. Optional custom designed retraction is available to suit each application. Applications of Aqualizer in the dry end of the paper machine may include custom engineered equipment to minimize overspray or misting, such as evacuation duct(s) or shrouds.

Easily accessible, compact spray units include the vortex nozzle, metering valve and intelligent driver module. The 4 mm (0.16 inch) diameter nozzle opening resists clogging and the actuators are field replaceable in a matter of minutes. The stainless steel, vortex air atomized nozzles deliver a

consistent, narrow spray pattern with control over the water particle size and velocity to ensure uniform water application to the sheet. The intelligent actuators provide constant position



feedback and exchange of information from all zones to the supervisory control system.

The Aqualizer system includes a water control unit which provides the spray boom with a constant supply of filtered water, and a skid-mounted self-contained air supply blower

which provides atomizing air to the spray nozzles. The WCU consists of a stainless steel tank, pump, heat exchanger, filtering system and pressure control valve.

Each Aqualizer system includes a CDWeb™ which provides the interface between the supervisory control system (QCS) and actuators. The easy-to-use CDWeb Explorer software is used for actuator configuration, tuning, advanced diagnostics and troubleshooting.

Standard Options

- Pneumatic retraction

Custom Design Options

- Steam-heated drip tray for above sheet applications

Specifications

Category	Specification – Aqualizer, Models 9580, 9580-10
Spray Module Body Material	316L stainless steel and epoxy encapsulated driver module
Spray Module Water Flow per Zone	0 – 0.70 l/min (0 – 0.18 gpm)
Actuator Zone Width	50mm (1.97 inches) standard Narrower zones available subject to space
Spray Boom Material	316L stainless steel
Water Pressure and Temperature	415 kPa (60 psi) 60°C (140°F) maximum
Air Purge	Recommended volume: 2.5 m ³ min. per meter CD width (27 cfm per foot CD width) Pressure: 50-100mm H ₂ O (2-4 inches H ₂ O) Temperature: 40°C (100°F) maximum
Air Control and Water Control Unit Electrical Requirement	3 phase, 115 or 230 VAC, 50 or 60 Hz
Spray Boom Retraction (optional)	Epoxy coated mild steel standard. Available as slide or pivot (up to 500mm/ 20 inches standard retraction).
Retraction Air Pressure Requirements	415 kPa (60 psi) minimum

More Information

For more information on Aqualizer, visit www.honeywell.com/ps or contact your Honeywell account manager.

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Automation & Control Solutions

Process Solutions
Honeywell
1860 W. Rose Garden Lane
Phoenix, AZ 85027
Tel: 800-822-7673
www.honeywell.com/ps

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