

AquaJet™

Aqueous Batch Cleaning System

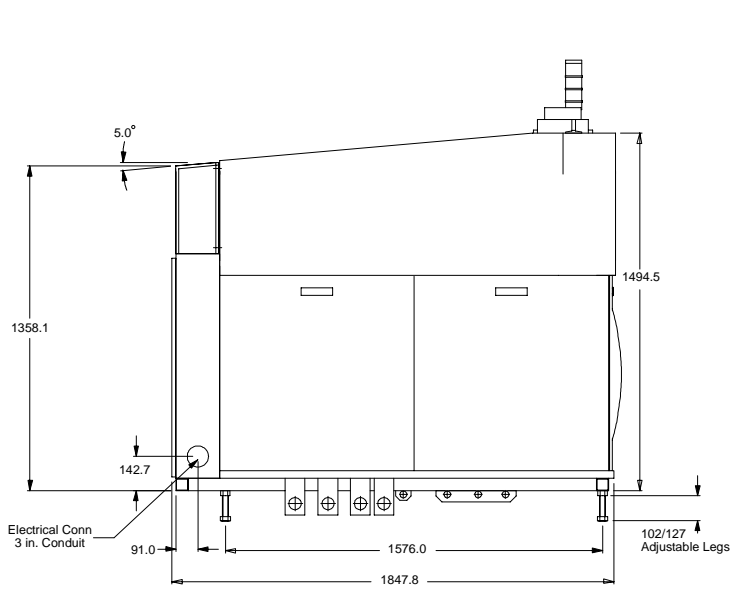


Electrovert | AquaJet

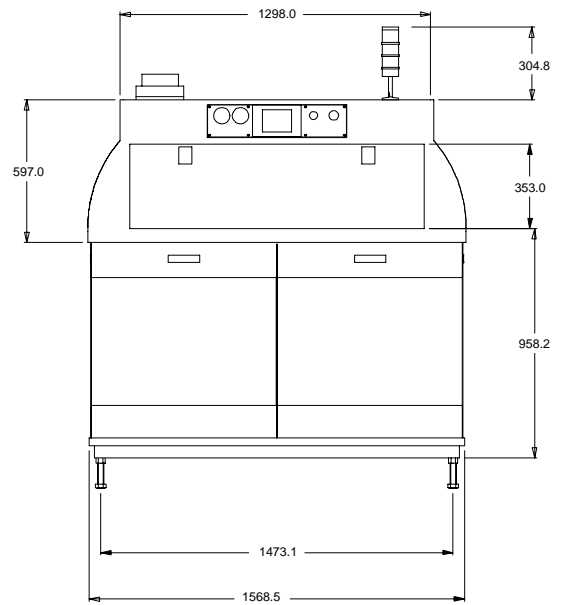
AQUAJET™ SPECIFICATIONS

Specification Type	Specification
Dimensions	Machine Height: 1496 mm (59 in.) Machine Depth: 1848 mm (73 in.) Machine Width: 1569 mm (62 in.)
Floor Loading	Total of four (4) leveling feet: 102-127 mm (4-5 in.) Total Weight: 1306 kg (3500 lbs)
Noise Levels Measured at 914.4 mm (36 in.) height and distance (ambient 65 dBa)	Front: < 78 dBa Rear: < 78 dBa Left: < 78 dBa Right: < 78 dBa Levels depend on blower HP ratings and blower airknife configurations
Exhaust Requirements	One (1) 152.4 mm (6.0 in.) stack requires: 19.8 m ³ /min (700 SCFM) @ 25 mm (1 in.) of H ₂ O static pressure
Standard Utility Configurations	460 Volt, 60 Hz, 3 phase, 72 Max. FLA 380 Volt, 50 Hz, 3 phase, 87.2 Max. FLA 220 Volt, 60 Hz, 3 phase, 151 Max. FLA
Plumbing Requirements	Main drain line: Two (2) 1-½ in. CPVC Pipes
Water Requirements	Stainless steel water input: 1.9 mm (0.75 in.) fill line Two (2) for Dual Tank System One (1) for Final Rinse
Water Requirements	Required water supply: 11–19 L/min. @ 2.8–3.3 kg/cm ² (3–5 gpm) @ 35–40 psi 49–66 °C (120–150 °F)
Dry Compressed Air Requirements	Air input supply ≥ 172.5 Kpa (25 psi)
Documentation Package on CD Rom	Installation and Instruction Guides Electrical and plumbing drawings/schematics Machine-specific Bill of Materials Note: See Options for printed documentation
Chemical Compatibilities	The chemicals used with this equipment must be compatible with the following materials: Teflon, Nylon, CPVC, polyethylene, polypropylene, polyurethane, Buna-N, Delrin, silicon, stainless steel, cast iron, and titanium. Failure to use compatible thinners, fluxes, cleaners and other chemical materials with this system will void the warranty.

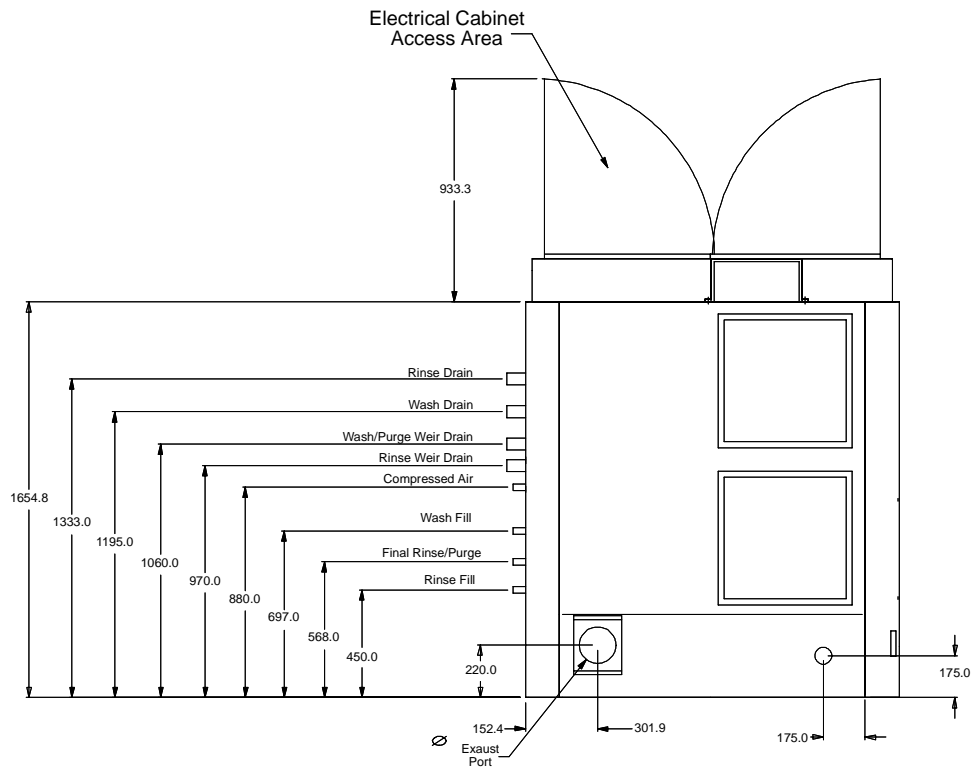
SYSTEM FOOTPRINT DRAWINGS



Side View



Front View

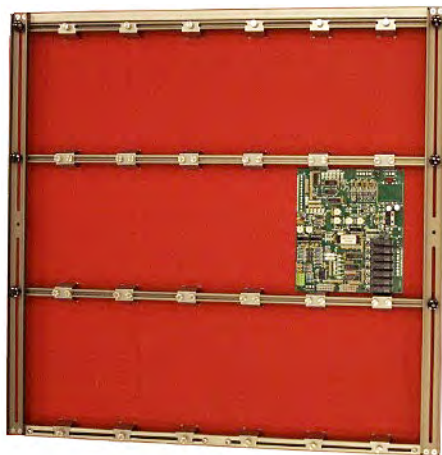
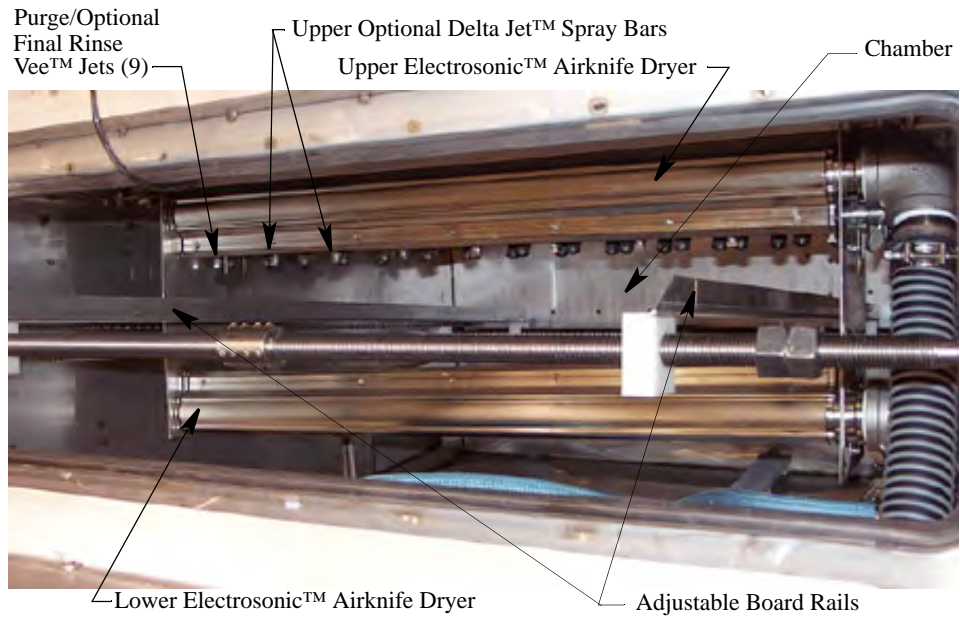


Top View

FRAME AND ENCLOSURE SPECIFICATIONS

Specification Type	Specification
Cabinet Design	<p>Cabinet frame 50.8 x 76.2 mm (2 x 3 in.) welded steel</p> <p>Cabinet exterior Textured, gray polypropylene top cover 12.7 mm (½ in.) and 6.35 mm (¼ in.) Side and front removable access panels Curved painted cold rolled steel with sound dampening insulation Allows easy access to: Tank catch screens Water pump inlet filters High/low level float switches Tank heating elements Blower belts and filters Chamber access doors</p> <p>Spray Chamber Stainless steel welded construction</p> <p>Conveyor Single direction chain drive with jam alert ¼ hp, 90 VDC motor Dual speed operation High speed 18 seconds/pass <u>±25%</u> Low speed 30 seconds/pass <u>±25%</u></p> <p>Plumbing Recirculating Wash and Rinse Separate triple welded polypropylene tanks 151 Liter (40 gallon) capacity each Split auto fill for wash and rinse tanks ¾ in. NPT stainless steel pipe Final Rinse Requires separate water supply ¾ in. NPT stainless steel pipe or CPVC Compress Air Supply ¾ in. quick disconnect male fitting Stainless Steel pressurized plumbing with quick release clamps Stainless Steel Spray Manifolds CPVC drain plumbing 1 ½ in. NPT CPVC pipe 38.1 L/min. (10 gpm) Manual ball valves</p>

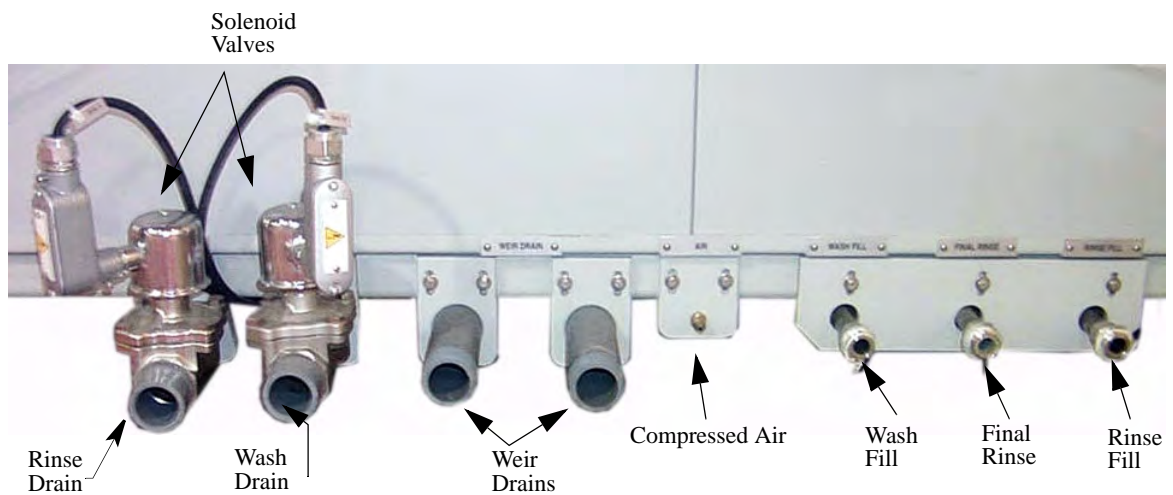
FRAME AND ENCLOSURE



Adjustable PCB Processing Rack



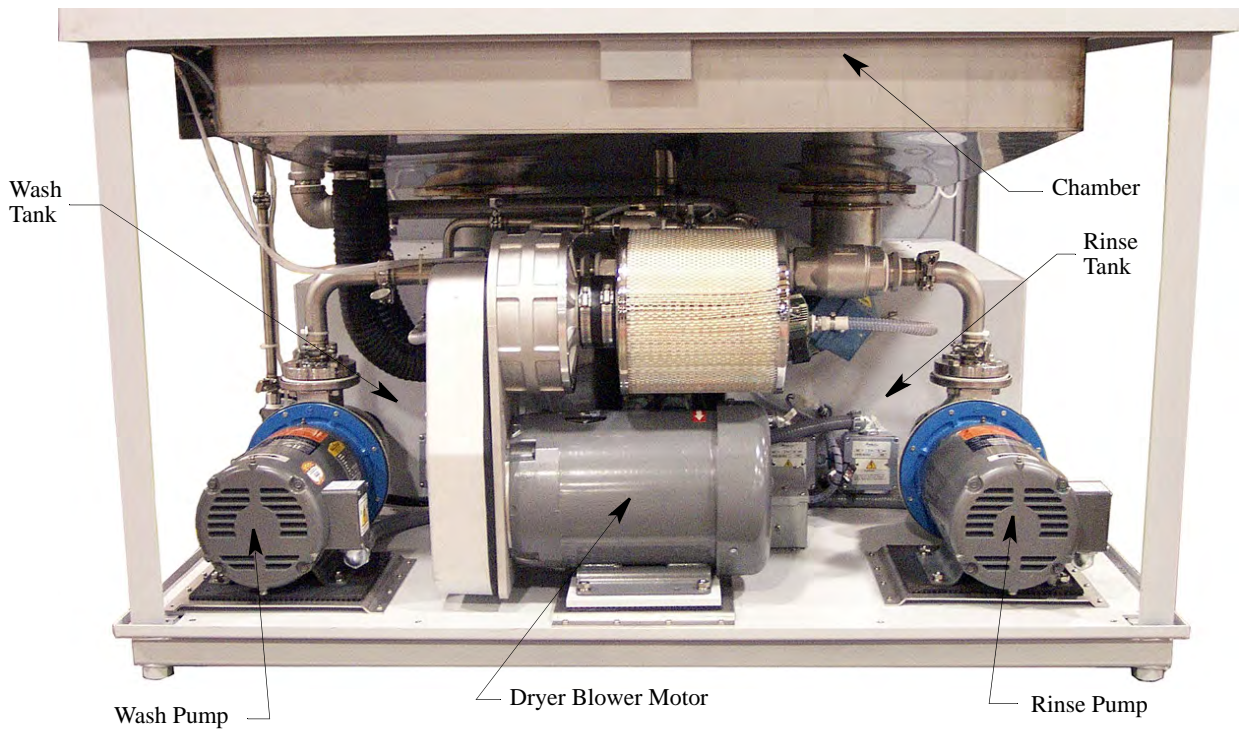
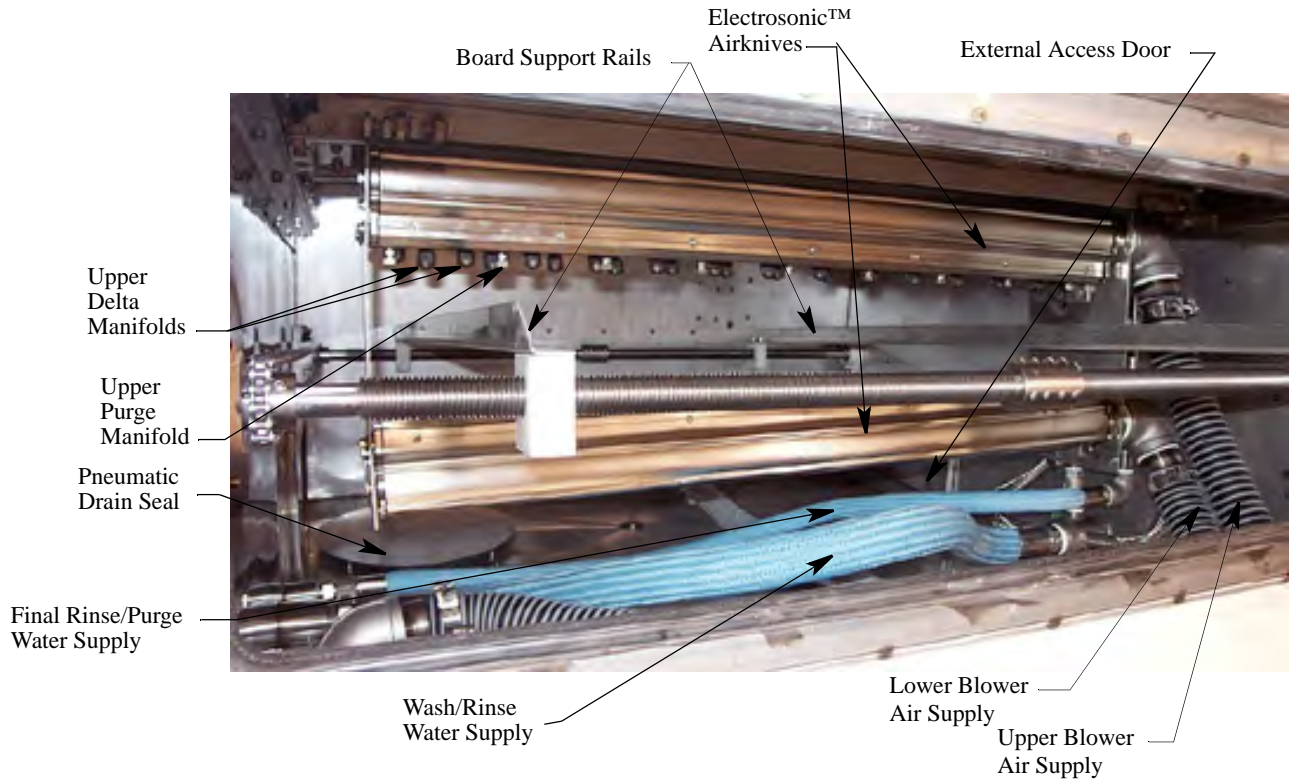
PCB Processing Basket



WASH/RINSE/PURGE AND DRY SPECIFICATIONS

Specification Type	Specification
Wash/Rinse Features	<p>Two (2) 7.5 HP water pumps One (1) pump per tank 215 L/min @ 345 kPa (57 gal/min. @ 50 psi)</p> <p>Spray manifolds: One (1) upper spray bar with 27 stainless steel Vee Jet™ nozzles One (1) lower spray bar with 9 stainless steel Vee Jet™ nozzles Total of 36 nozzles</p> <p>Heaters: Two (2) 10 kW per tank</p> <p>Frame Rails: 914.4 x 914.4 mm (36 x 36 in.)</p> <p>Pressure reduction valve to clean delicate stencils and other fragile product</p>
Wash Only Option	<p>Automatic detergent injection system with external polypropylene tank 700.0 mm (27.6 in.) L x 390.0 mm (15.4 in.) W x 400.0 mm (15.7 in.) H</p> <p>Positive displacement chemical metering system</p> <p>External power five (5) micron bag filter</p>
Wash/Rinse Options	<p>Dual Delta Jet™ spray manifolds Powered by two (2) 10 HP water pumps instead of standard 7.5 HP pumps Total of 40 nozzles: Two (2) upper spray bar with 13 stainless steel Delta Jet™ nozzles each One (1) lower spray bar with 14 stainless steel Delta Jet™ nozzles Combined Delta Jet™ nozzles flow: 227–246 L/min @ 552–587 kPa (60–65 gal/min. @ 80–85 psi) + 25/-10% tolerance</p> <p>Dual Hurricane Jet™ Upper and Lower spray nozzles Powered by two (2) 10 HP wash/rinse pumps in lieu of standard 7.5 HP pumps Hurricane nozzles deliver high impact force coherent water sheets Combined dual Hurricane Jet™ nozzles flow; 227 L/min @ 621 kPa (60 gal/min. @ 90 psi) + 25/-10% tolerance</p>
Recommended with all closed loop systems.	Digital flow meter/totalizer Flow monitoring capacity: 0-38 L/min (0-10 gpm)
Final Rinse/Purge	<p>Spray manifolds: One (1) upper spray bar with 9 stainless steel Vee Jet™ nozzles One (1) lower spray bar with 9 stainless steel Vee Jet™ nozzles 18 nozzles total</p> <p>11–19 L/Min (3-5 gal/min) @ 2.8–3.3 kg/cm² (35–40 psi) + 25/-10% tolerance</p>
Final Rinse/Purge Option	<p>Final rinse digital resistivity monitor LCD readout 0-20 Meg Ohms range alarms</p>
Recommended with all closed loop systems.	Digital flow meter/totalizer Flow monitoring capacity: 0-38 L/min (0-10 gpm)
Dryer Features	<p>Electrosonic™ Airknives One (1) upper fixed airknife One (1) lower fixed airknife</p> <p>Blower Separate 7.5 HP high velocity centrifugal blower Operation pressure: 96.52 cm (38 in.) water – total of 14 M³/min. (500 cfm)</p>
Dryer Options	<p>Blower Upgrade 10 HP high-velocity centrifugal blower in lieu of standard 7.5 HP blower Operation pressure: 165 cm (65 in.) water – total of 21.95 M³/min. (775 cfm)</p> <p>Blower failure detect Detects blower motor failure, belt failure, and clogged airknives</p>

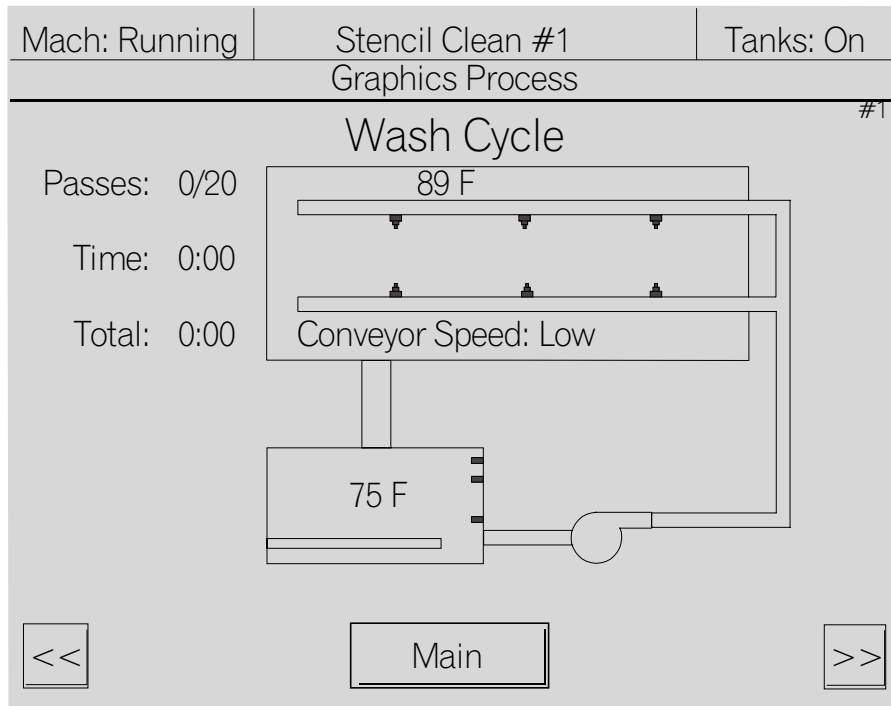
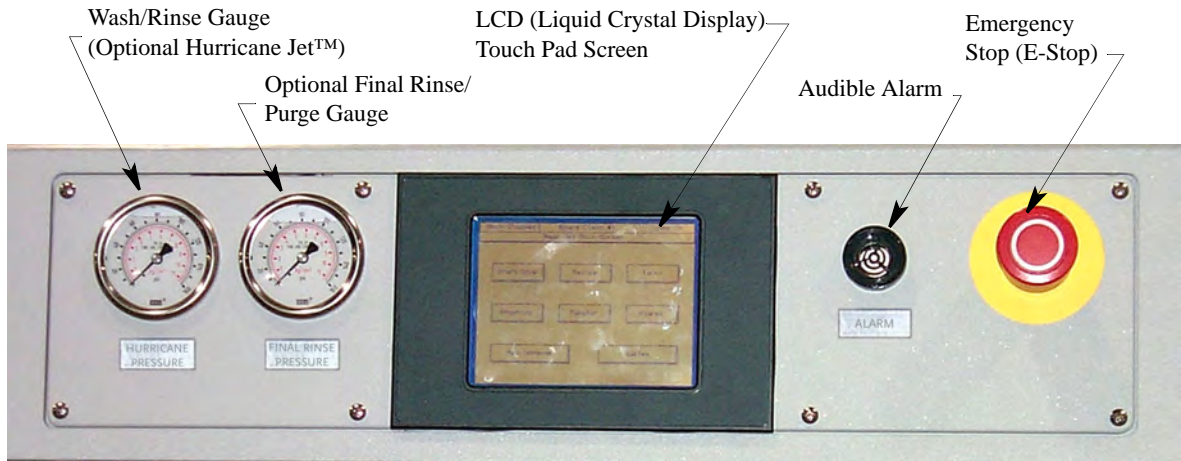
WASH/RINSE/DRY CHAMBER



CONTROLS AND SAFETY SPECIFICATIONS

Specification Type	Specification
Controls Features and Descriptions	<ul style="list-style-type: none"> One (1) emergency stop on front panel Operator control touchpad Imperial or metric readout
Controls Options	<ul style="list-style-type: none"> Three (3) color light tower to display machine status Key Lock Out Protection <ul style="list-style-type: none"> Level 0 (No key) <ul style="list-style-type: none"> Basic On/Off Functions Process Product Change Recipe Level 1 <ul style="list-style-type: none"> All Level 0 Activities Configure Units Edit Recipe Parameters Level 2 <ul style="list-style-type: none"> All Level 0 and Level 1 Activities Preventive Maintenance Level 3 <ul style="list-style-type: none"> All Level 0, Level 1, and Level 2 Activities Configure Options and Alarms Calibrate Machine Watchdog Test
Safety Features and Descriptions	<ul style="list-style-type: none"> Safety labels identify potentially hazardous areas Shut-off/Shut down safety controls <ul style="list-style-type: none"> Wash/rinse contains separate high temperature shut-off switches Chamber control set to 82 °C (180 °F) <ul style="list-style-type: none"> System functions turn Off in over temperature condition Water heater switches set to 82 °C (180 °F) <ul style="list-style-type: none"> Shuts off immersion heaters in over temperature condition Resets automatically when water temperature cools to set point Liquid level protection float switches <ul style="list-style-type: none"> Shuts down pumps and heaters when water level drops below minimum level High level liquid alarms in all sump tanks Motor overload protection on all pumps and blowers

CONTROLS



Optional Lighted Status Tower

MACHINE OPTIONS

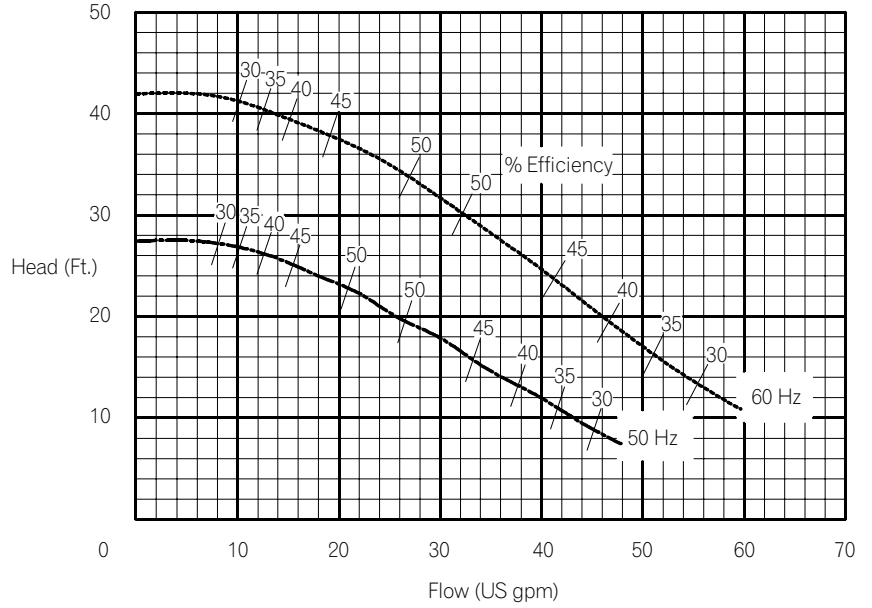
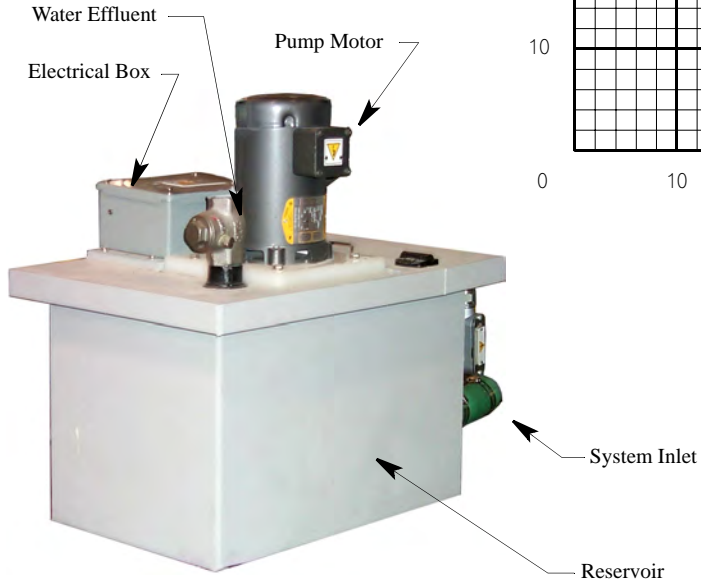
Specification Type	Specification
Machine Options	<p>Machine Drip Tray Molded polypropylene tray completely covers machine underside</p> <p>Enclosed PCB processing basket 762 mm x 762 mm (30 in. x 30 in.) Stainless steel mesh Mesh cover lays over product and latches into place</p> <p>Adjustable PCB processing rack 737 mm x 737 mm (29 in. x 29 in.) Adjustable finger mounts hold product in place Sections adjust to hold different size product</p>
Additional User Manuals Set	Includes one (1) additional set of complete machine user manuals in either printed format or CD ROM format.
Additional Documentation Set	Includes the bill of materials and schematics in either printed format or CD ROM format. Note: Printed documentation is priced higher than CD ROM documentation.

DRAIN OPTIONS SPECIFICATIONS

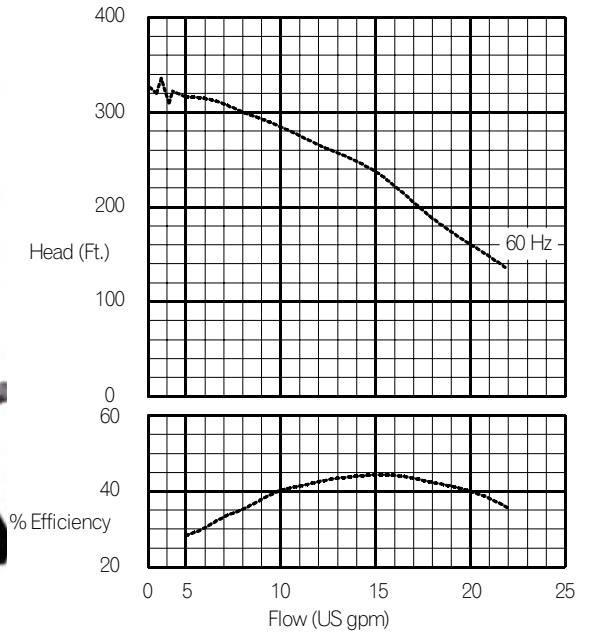
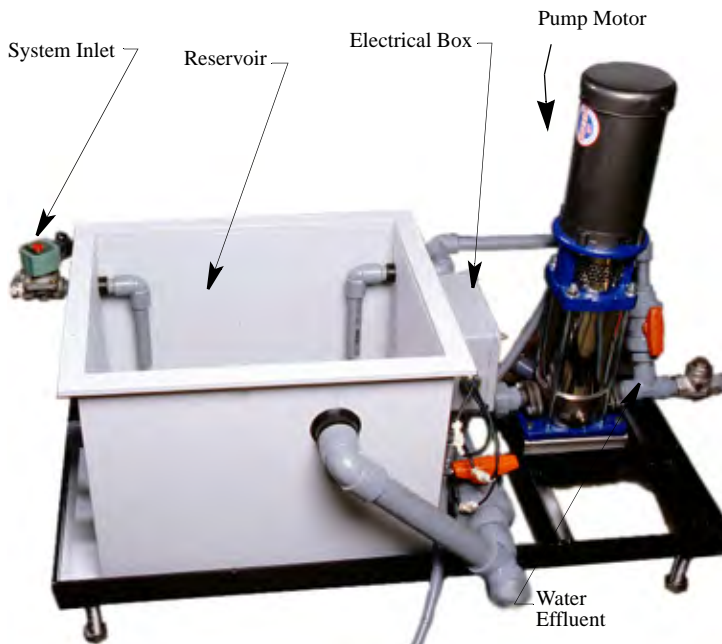
Specification Type	Specification
Drain Options	<p>Auto drain solenoid valves Two (2) brass solenoid valves Three (3) stainless steel solenoid valves</p> <p>Note: A brass solenoid is standard on the purge drain. If the stainless steel option is installed, the brass solenoid on the purge drain is replaced with a stainless steel solenoid.</p>
<p>Sump Pump Specifications</p> <p>Reference drawing for pump curve information.</p>	<p>Single drain sump station</p> <p>¾ HP Sump Station with brass solenoid valve OR ¾ HP Sump Station with stainless steel solenoid valve 49 L (13 gal.) holding tank to receive cleaner effluent Pump provides flow pressure to pump cleaner effluent to a remote location Electrical interface with Aquastorm™- via quick disconnect on system exit end</p> <p>Utility connections: Drain line in: One (1) 1 ½ in. FNPT Output: One (1) 1 in. FNPT</p>
Reference drawing for pump curve information.	<p>Single drain sump station</p> <p>2 HP Sump Station with brass solenoid valve OR 2 HP Sump Station with stainless steel solenoid valve 94.6 L (25 gal.) holding tank to receive cleaner effluent Pump provides flow pressure to pump cleaner effluent to a remote location Electrical interface with Aquastorm™- via quick disconnect on system exit end</p> <p>Utility connections: Drain line in: One (1) 1 ½ in. FNPT Output: One (1) 1 in. FNPT</p>

DRAIN OPTIONS

¾ HP Sump Unit



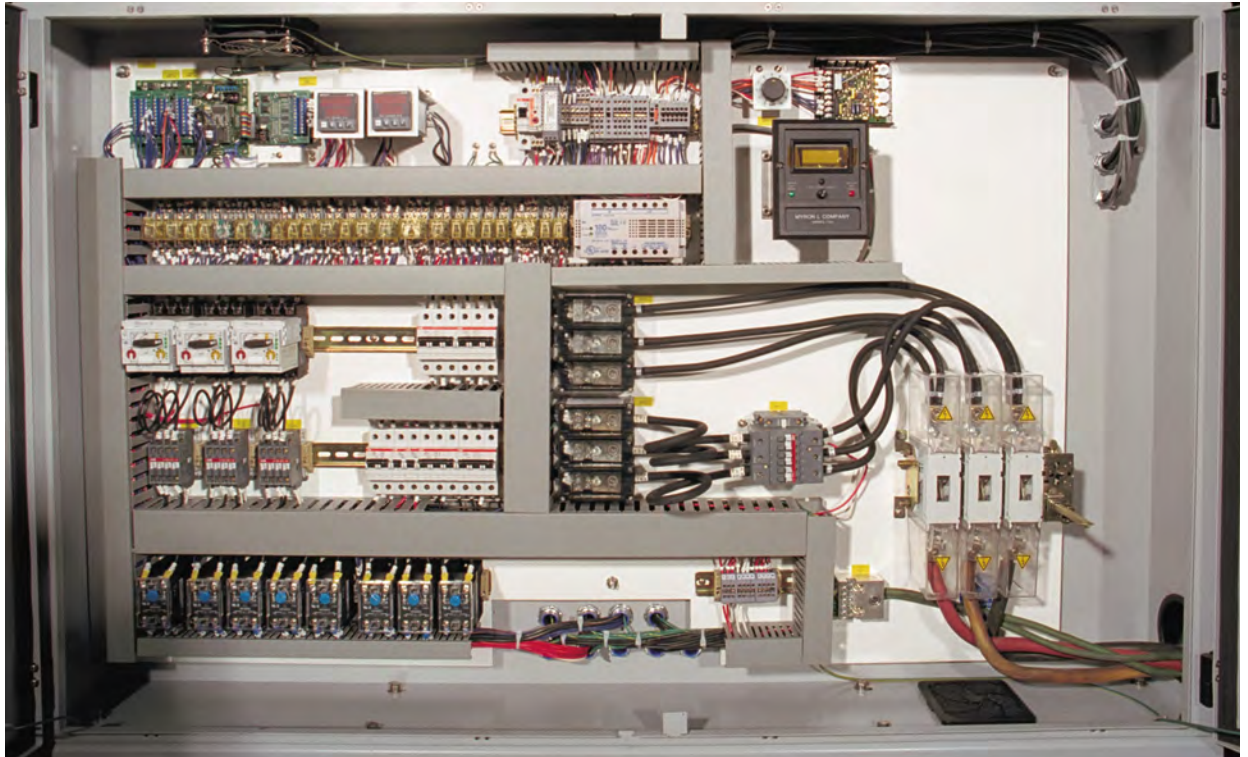
2 HP Sump Unit



ELECTRICAL SPECIFICATIONS

Specification Type	Specification																										
Standard Electrical Requirements Normal operating power is 80-85% of maximum power required, depending on process parameters and operation load for the product being run.	Standard voltage: 460 VAC, 3 phase, 60 Hz (72 Max. FLA) Other voltage: 380 VAC, 3 phase 50 Hz (87.3 Max. FLA) 220 VAC, 3 phase, 60 Hz (151 Max. FLA)																										
	Single point electrical drop Integrated system disconnect Lock out/Tag out capability All loads configured with over current protection																										
Full Load Calculation	FLA (Full Load Amps) 57.4 maximum kVA $\text{Amps Required} = \frac{\text{Total Machine kVA} \times 1000}{(1.732) (\text{Machine Voltage})}$ AquaJet™ System <table border="0"> <tr> <td>Item</td> <td>Total Power</td> </tr> <tr> <td>Controls</td> <td>3 kVA</td> </tr> <tr> <td colspan="2">Wash/Rinse</td> </tr> <tr> <td>Heater</td> <td>40 kVA</td> </tr> <tr> <td>3 HP Pump – One (1) per tank</td> <td>3.3 kVA</td> </tr> <tr> <td>7.5 HP Pump – One (1) per tank (Option)</td> <td>7.2 kVA</td> </tr> <tr> <td>10 HP Pump – One (1) per tank (Option)</td> <td>10 kVA</td> </tr> <tr> <td colspan="2">Dryer</td> </tr> <tr> <td>7.5 HP Blower</td> <td>7.2 kVA</td> </tr> <tr> <td>10 HP Blower (Option)</td> <td>10 kVA</td> </tr> <tr> <td colspan="2">Drain Options</td> </tr> <tr> <td>¾ HP Sump Pump (Option)</td> <td>0.83 kVA</td> </tr> <tr> <td>2 HP Sump Pump (Option)</td> <td>2.2 kVA</td> </tr> </table>	Item	Total Power	Controls	3 kVA	Wash/Rinse		Heater	40 kVA	3 HP Pump – One (1) per tank	3.3 kVA	7.5 HP Pump – One (1) per tank (Option)	7.2 kVA	10 HP Pump – One (1) per tank (Option)	10 kVA	Dryer		7.5 HP Blower	7.2 kVA	10 HP Blower (Option)	10 kVA	Drain Options		¾ HP Sump Pump (Option)	0.83 kVA	2 HP Sump Pump (Option)	2.2 kVA
Item	Total Power																										
Controls	3 kVA																										
Wash/Rinse																											
Heater	40 kVA																										
3 HP Pump – One (1) per tank	3.3 kVA																										
7.5 HP Pump – One (1) per tank (Option)	7.2 kVA																										
10 HP Pump – One (1) per tank (Option)	10 kVA																										
Dryer																											
7.5 HP Blower	7.2 kVA																										
10 HP Blower (Option)	10 kVA																										
Drain Options																											
¾ HP Sump Pump (Option)	0.83 kVA																										
2 HP Sump Pump (Option)	2.2 kVA																										
Electrical Codes/Compliance	Underwriters Laboratory (UL) Listed for Factory Automation Equipment File #E181409 on 440 V and 220 V machines Note: To view the Underwriters Laboratory Certification File online, go to http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/gfilenbr.html and enter E181408 in the search data entry box. The page is also accessible at www.ul.com >Certifications>UL File Number. European Customers CE Compliance Package Listed for 380 V and 415 V machines Machine drip tray Electrical panel lexan cover E-Stop safety relay Electrical Standard for Industrial Machinery, NFPA 70																										

ELECTRICAL PANELS





Speedline Technologies
World Headquarters:
16 Forge Park
Franklin, MA 02038
Tel- (508) 528-0083

Manufacturing Facilities

ACCEL & ELECTROVERT

Highway 5 South
Camdenton, MO 65020
Tel- (573) 346-3341
Fax- (573) 346-5554

CAMALOT & MPM

16 Forge Park
Franklin, MA 02038
Tel- (508) 520-6999 or (508) 520-0083
Fax-(508) 520-2288

Sales and Customer Support Offices

US

16 Forge Park
Franklin, MA 02038
Tel- (508) 520-6999
Fax-(508) 541-6424

MEXICO

Carretera Base Area #5850 Km. 5
Edificio 11
Zapopan, Jalisco, Mexico
Tel- +52 (3) 818-9017
Fax- +52 (3) 818-9816

EUROPE

Im Gefierth 14
D-63303 Dreieich, Germany
Tel- +49 (0) 6103-8320
Fax- +49 (0) 6103-832-299

ASIA

150 Kampong Ampat
KA Centre #05-08, Singapore 368324
Tel- +65 6286-6635
Fax- +65 6289-9411
