

ECOSILENCE 3.0

Aquajet high-pressure pump system

Close the door to harsh environments



AQUAJET



ECOSILENCE 3.0

High-pressure pump system

Silent high-pressure pump unit

The Ecosilence 3.0, is truly revolutionary in terms of both efficiency and environmental benefits. With the latest technology, design and features we've reimagined the Power Pack high-pressure pump and built an innovative new version that's ready for anything. Build your own Ecosilence 3.0 with our Aquajet Configurator and take a closer look at all available options and accessories.

The Ecosilence 3.0 has evolved from customer feedback over the years to meet both noise, efficiency and environmental requirements that contractors face today. It's not only quieter and easier to operate, it also has the latest technology all over – making it more effective and fuel efficient than ever, with the lowest emissions. Capable of handling up to 3000 bar/40000 PSI and almost any flow and with total enclosure for harsh environments, the Ecosilence 3.0 is all you need in one super compact package.

Latest technology

The Ecosilence 3.0 has a state-of-the-art interior and exterior. It has a reduced size to a standard 20 ft container, engine and pump built as a single, skid-mounted system, new liquid-to-air cooling system and Revo control system 3.0. It also provides the latest automatic start/stop technology and fully automated main power with a number of built-in features. The new Ecosilence 3.0 is truly revolutionary.

The Ecosilence 3.0 is our latest technological wonder for the hydrodemolition and industrial cleaning industries and are available in 3 different versions, 400, 500 and 700, depending on pressure and flow. It's ready for any mission and improved in every way, with both standard and optional features and functions.

Features and benefits

Skid mounted engine and pump

The engine and pump in the new Ecosilence 3.0 are built as a single, skid-mounted system that is located in the container. This skid system is more complete than its predecessors and includes integrated water tank and filters. Double water filters are also available. The new engine and pump combination provides improved water routing, making it both smarter and more efficient. Additionally, all drainage pipes are gathered to one location with only one drain water outlet for easy access and maintenance.

Engine

The engine was designed with the latest environmentally friendly emission technology, making it more effective and fuel efficient than ever before. As a bonus, it offers a flat torque curve, meaning it can run with full pressure at lower rpm. The Revo control system is fully integrated with the engine, optimizing engine life and service intervals.

Exhaust silencers

The Ecosilence 3.0 features a specially developed exhaust silencer designed to eliminate low frequency engine sound. It is heat protected and mounted inside the container to make the operation very quiet.

REVO 3.0 control system

The new REVO control system is equipped with the latest technology to focus on both efficiency and the environment. The system features all the functions you need to control and monitor the Ecosilence 3.0, and it's safe and user friendly. Parameters are easily set on the graphic color display, with operator instructions available in multiple languages. See all important information in real-time or view the history, such as alarm lists and trip meters of fuel consumption. The system also automatically tracks service schedules, keeping downtime to a minimum.

Revo Remote

The Revo remote system is standard on the new Ecosilence. It can either be left in its place on the unit, or detached and used up to 300 meters away with extension cables. It allows you to take full control of all processes wherever you are operating your Aqua Cutter. The Revo remote also has a connection point for the radio receiver in case the radio signal cannot reach the operator directly from the Ecosilence unit. It can be used, for example, when you

are working inside a structure while the Ecosilence remains outside.

Radio remote

The Radio remote control is also standard on the Ecosilence 3.0. The radio remote is a simpler version of the Revo remote, with basic functions such as pressure on/off and emergency stop. The radio remote receiver is mounted inside the container with an antenna outside. If the worksite is far away or inside a building, the radio receiver can be brought closer to the worksite and connected to the Revo remote.

Auto start/stop

The Ecosilence 3.0 comes with the latest automatic start/stop technology, meaning the system automatically shuts down and restarts the engine to reduce the amount of time the engine spend idling, thereby providing a more environmentally friendly operation with reduced fuel consumption and emissions. This function also increases operational safety and service intervals while prolonging engine life. In addition, this function typically saves as much as 20-25 liters of fuel a day.

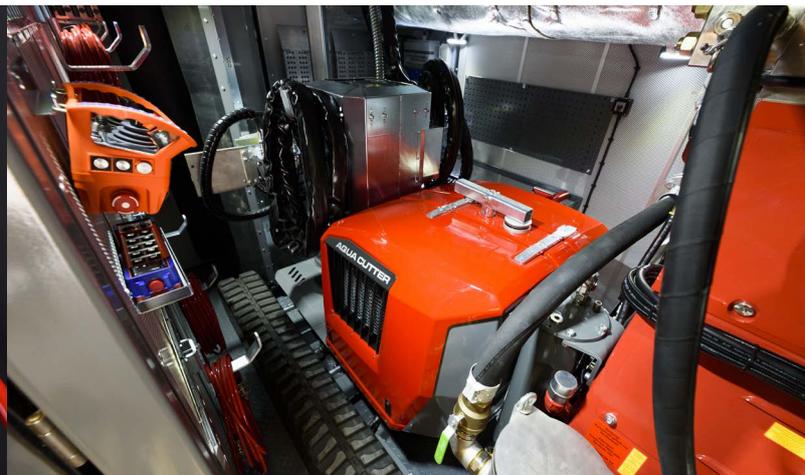
Auto shutdown

The main power system is fully automatic and includes a number of built-in features.

- Auto shutdown at low battery level: System monitors the battery level and will automatically shut down when the level gets critical.
- Auto shutdown timeout: System has an adjustable timeout so that it can automatically shut down the main power after a certain time.
- Auto shutdown at engine boot down: The main power is also automatically kept on until the engine has finished its shutdown processes.
- Auto shutdown at lights off: For service purposes, the ignition can be switched off and the ignition key removed, but the system keeps the power on as long as the container's light is on. This is a safety mode where all functions are disabled except for the container light. When the container light is switched off, the main power is also switched off.

Auto main power system activation

When ignition is switched on, the main power system is also switched on.



ECOSILENCE 3.0

Features and benefits

Liquid-to-air cooling system

The Ecosilence 3.0 has a completely new cooling system design. It uses engine coolant to transfer heat from the engine to the cooler module, which has a large cooler area. Through sound-absorbing air vents, cold air is drawn in by electric speed-controlled fans. The space behind the coolers pressurizes as the air comes in, cools the cooler area, and transports the heat out through the front-end air vents.

The noise level is kept to a minimum thanks to the electric speed-controlled fans with low air-flow velocity, the extremely large cooler area and the low pressure drop. Power consumption is also reduced, which saves as much as 20 liters of diesel a day. Also, the new liquid-to-air cooling system is totally separated from the skid compartment, creating a partition wall in the container. This ensures the skid compartment is closed and heat regulated, preventing dust or debris from entering.

Quick start (liquid-to-air cooling system)

With the electric fan system on the Ecosilence 3.0, the engine quickly reaches operating temperature, reducing engine wear and downtime. As a bonus, the electric fan provides quieter, more efficient running compared to a traditional belt-driven fan. This can easily save as much as 20 liters of diesel a day.

Flashing status light

A flashing status light is attached to the Ecosilence 3.0 on both the outside and inside. This safety feature communicates both information and warnings by changing the flash frequency and color.

Standard 20-foot container size

The 20-foot container, with ISO approved twistlock openings at the corners, provides many benefits. As a world-wide standard size, it is easier to transport while also requiring less space on crowded worksites. Thanks to the new Ecosilence skid's state-of-the-art design, there is still ample space for a work bench, tools, hose storage and an Aqua Cutter 710 robot. In addition, the compact container provides secure storage and protection from the elements for your equipment.

Fork pockets

For easier handling, we've added fork pockets to the container so that it can be moved by a forklift.

Sound-absorbing design

The container is designed to minimize sound. It employs a new type of highly effective, sound-absorbing insulation. Noise is also minimized by eliminating roof hatches and reducing the number of doors to two, which are located at the back and on one side. Further innovations, including closing and regulating temperature in the engine room and directing air through sound-absorbing vents with the new electric-fan-driven cooling system, make the Ecosilence 3.0 our quietest Power Pack ever.

Aqua Cutter inside Ecosilence 3.0

Although the Ecosilence 3.0 is smaller than its predecessors, both the 410 and 710 Aqua Cutter robots still fit inside. All of your equipment is ready to transport in one compact container, eliminating the need for an extra trailer. The container also provides secure storage for the robot on the jobsite.

Easy access for maintenance and service

The clean, open design of the Ecosilence 3.0 provides easy access for routine maintenance operations such as checking fluid levels or oil and filter changes. This means less downtime for maintenance and more time getting the job done. If necessary, the wall section on the side can be removed to access the complete skid-mounted unit.

Water inlet and outlet

The water inlet and outlet remain at the front of the container, protected by a sliding hatch. All drain points on the unit are routed to one outlet. Nothing drains under the container.

Pressure and flow

The Ecosilence 3.0 can be configured up to 3000 bar UHP (Ultra high pressure) and almost any flow.

Stainless steel all the way

All components that come in contact with the water are made from stainless steel. From the water filter to the water tank and every pipe and fitting, components are made from this non-corrosive material. Even the booster pump is stainless steel. It is mounted between the water tank and the high-pressure pump to provide adequate inlet pressure.



Accessories and options

Revo Remote Logic

The Revo Remote Logic has built-in logics , allowing operators to connect several different high-pressure tools, including high-pressure guns, foot pedals and other pressure actuators. This makes it an ideal option for industrial cleaning contractors looking to use different tools for different worksites. The tools are connected directly to the Revo Remote Logic with a standard 7-pole connector. The Revo Remote Logic is portable up to 300 meters.

Compatible high-pressure tools are:

- All Aquajet tools, both with cable and radio controls.
- Tools from the most common manufacturers.
- Tools with 2xNO switches.

Exhaust silencers

The Ecosilence 3.0 features a specially developed exhaust silencer designed to eliminate low frequency engine sound. It is heat protected and mounted inside the container to make the operation very quiet.

Roll on/off frame

The Roll on/off frame eliminates the need for an additional vehicle. Simply place the container on the ground for easy access. This also enables the unit to be moved with vehicles other than a crane or truck.

Air vent protection

Grate protection is mounted on the Roll on/off frame to shield air vents on the front of the container during loading and unloading. This option is only available with the Roll on/off frame.

Lifting device for pump head

The lifting device is a small crane for lifting the pump head of the high-pressure pump for service. This device is attached to the pump with two screws and can either be removed when service is done or be stationary-mounted until next service.

Frost protection kit

As an option, you can add a frost protection kit with an anti-freeze and anti-corrosion liquid tank and electric pump. This protects and preserves the pump in low temperatures when not in operation. It also prevents corrosion and dried gaskets. The recirculating system recycles the glycol every time it's used. Better for the environment, better for you!

Proportional inlet valve

This new feature creates constant and controlled water flow into the unit. Constant pressure in the inlet hose prevents it from brushing the ground when pressure fluctuates. This significantly reduces wear on the hose. It also makes overall operation more efficient while prolonging the life of the equipment.

Work bench with tools

A built-in workbench with vice and toolboard is another available option. It includes all the most common tools needed for service, as well as storage space for spare parts.

Storage

Storage features include: 10 movable, heavy hooks for storing hoses, cables and clothing; brackets for radio control, both for Ecosilence and robot.

Driving ramps for Aqua Cutter

Aluminum ramps to load an Aqua Cutter 710 or 410 into the container. Includes fixing brackets on the back door and security straps to secure the robot to the floor brackets.

Outside fuel and AdBlue filler caps

As standard, the fuel and AdBlue filler caps are located on the inside of the Ecosilence 3.0, next to the door. Having them on the exterior, with a lockable hatch as protection, is available as an option.

Diesel heater

A diesel heater is available for installation inside the container. This system includes a timer and keeps the container warm without the need for an external power supply.

Water prefilter

An optional water filter at the inlet line is available to catch any particles before they enter the water tank. This also provides additional safety, since there will be two serial connected filters. This option is recommended for all UHP-pumps used with untreated water.

Dual heavy-duty water filter station

This option is recommended when using the Ecosilence 3.0 with unfiltered water that may contain larger particles, such as leaves, mud or gravel, that might damage the regular filter and pump. Dual water filters can be changed or cleaned during operation



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Accessories and options

by alternating which filter is in use. This is a station that is placed outside the container.

Protective film for display

Optional protective film for the REVO display glass (151x92mm).

Extension cables

Aquajet cables are specially designed for Hydrodemolition equipment and come with 7-pole, heavy-duty Aquajet connectors. This option includes a cable drum with lifting handle and brake and comes in following cable lengths: 25m, 50m, 75m, 100m.

Aquajet special extension cables are also available without the cable drum in following lengths: 3m (for use between pressure control handle and an extra emergency stop box or other short distances), 10m, 15m, 25m.

USA equipped

High-pressure and water supply connections that fit the U.S. standard are available as an option.

Electric kit 400/230 VAC

Optional electrical kit for European standard.

- 32A inlet and outlet outside container
- 32A inlet/outlet and 1-phase outlets inside container
- Battery charger
- 5kW electric heater

Inlet pressure reducing valve, max 40 bar

Placed on the water inlet coupling, this optional feature reduces inlet water pressure from a maximum of 40 bar down to 4-6 bar, allowing for proper function of the inlet valve. This option is recommended for situations when the connection to the water supply exceeds maximum inlet pressure to the unit.

Check valve

An optional valve that closes the water passage from the booster pump when high-pressure water is not activated – such as while idling. With this option, no water comes out of the nozzle during idle.

Filter differential pressure monitoring

With this optional function, you get a warning if any water filter needs to be replaced.

Air kit with airgun

Optional air compressor unit, 230V, for the workbench. Only available with the Electric kit 400/230 VAC.

Comfort wall with sliding doors

An optional wall with sliding doors to separate the pump and engine compartment from the workspace to isolate both sound

and heat .

Spark arrestor

Optional spark extinguisher for ex-classified areas. Spark arrestor is mounted on top of the container and can be removed for transport.

Shut down valve

Shuts off the intake air when the engine is switched off in the event of flammable gases.

Extra receiver for connected controls

An extra receiver can be added to the robot's radio remote control, allowing both Ecosilence and Aqua Cutter to be connected to each other and to the operator via the radio remote control. Simple and with no need for extra cables or devices. Provides full control over both units in an easy and safe way. Through the remote control you can turn the high-pressure ON/OFF and emergency stop both units, as well as see and change the settings of pressure and engine rpm.

Kit dump valve

When flow from the high-pressure pump is too high for the tool, a dump valve can be used to route some of the high-pressure water back to the water tank.

Kit dump gun

A mechanical dump gun is available for high-pressure cleaning to dump the water at shut down. It doesn't need an electric remote cable and can be used for all brands of pump units.

Foot pedal Revo

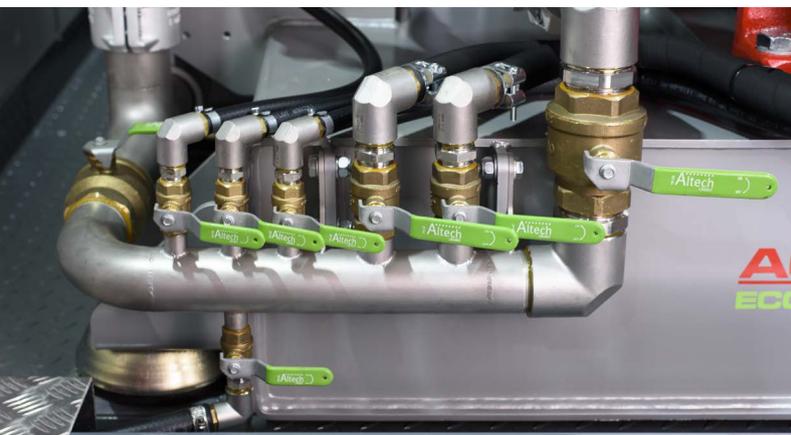
The foot pedal Revo is used when the operator needs to have both hands free. The pressure is activated when pedal is pushed and de-activated when pedal is released. It comes with an emergency stop box and includes a 10m cable. Not for robot operation.

Emergency stop box Revo

The emergency stop box Revo is used as an extra emergency stop. If needed, multiple emergency stop boxes can be placed along the remote cable. The kit includes an emergency stop and 1m cable.

Complete dosing system

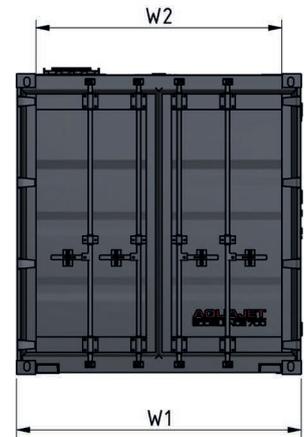
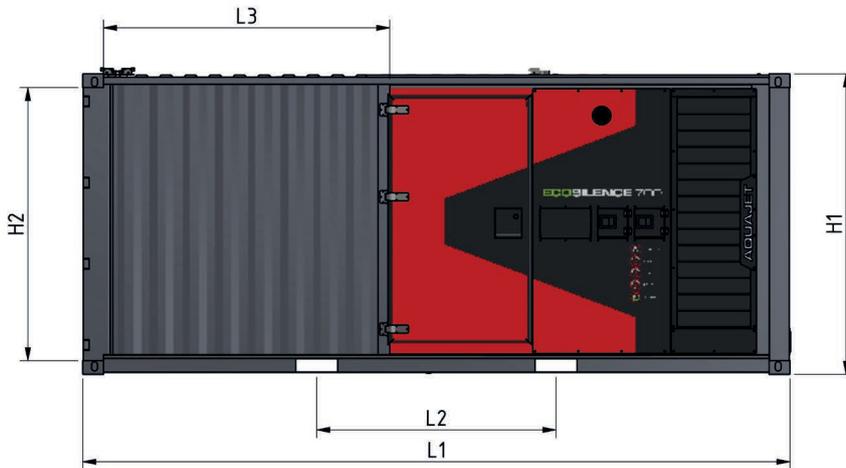
A complete dosing system for measuring and correcting water conductivity is available as an option. If the water conductivity is too low (water too hard) the piston seal assembly can be destroyed. This applies to high pressure pumps with tungsten carbide plunger seal sets. The dosing system adds a sodium carbonate solution to the water to keep conductivity at a proper level.





Facts

	Ecosilence 400	Ecosilence 500	Ecosilence 700
Pressure	1100 - 2500 bar (15954-36259 psi)	1050-2500 bar (15228-36259 psi)	1040-2550 bar (15080-36984 psi)
Flow	60 - 145 l/min (15 - 38 US gal/min)	79-183 l/min (20-48 US gal/min)	100-262 l/min (26-69 US gal/min)
Reaction force	700-1238 N	922-1384 N	1179-1972 N
Engine	400 hp (315 kW)	500 hp (405 kW)	700 hp (515 kW)
Tank volume	950 l (250 US gal)	980 l (259 US gal)	980 l (259 US gal)
Length (L1)	6,058 m (ISO 20')	6,058 m (ISO 20')	6,058 m (ISO 20')
Cargo length 20' (L3)	2,6 m (8,5')	2,6 m (8,5')	2,6 m (8,5')
Width (W1)	2,438 m (ISO 8')	2,438 m (ISO 8')	2,438 m (ISO 8')
Inner width (W2)	2,2 m (7,2')	2,2 m (7,2')	2,2 m (7,2')
Height (H1)	2,591 m (ISO 8,5')	2,591 m (ISO 8,5')	2,591 m (ISO 8,5')
Inner height (H2)	2,4 m (7,8')	2,4 m (7,8')	2,4 m (7,8')
Fork pockets (L2)	2050 mm (6,7')	2050 mm (6,7')	2050 mm (6,7')
Approx. weight	10500 kg (23149 lbs)	11000 kg (24250 lbs)	12000 kg (26456 lbs)



Reliable and easy service

The clean, open design of the Ecosilence 3.0 provides easy access for routine maintenance operations such as checking fluid levels or oil and filter changes. This means less downtime for maintenance and more time getting the job done. If necessary, the wall section on the side can be removed to access the complete skid-mounted unit.

Portable garage

The Ecosilence also serve as a portable racing garage for your robot and tools. Basically everything you'll ever need for your contracts – in one place.



www.aquajet.se

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