

AQUA CUTTER 410V
Hydrodemolition robot

**Small
and aiming
for the top**



AQUAJET



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Hydrodemolition robot

Compact and highly versatile

The Aqua Cutter 410V is small, compact and suitable for all kinds of operations. With our innovative design the operator has the freedom to reach all horizontal, vertical and overhead areas up to 4 meters (13,1 ft) without support.

The Aqua Cutter 410V is specially designed for confined space applications and to replace hand lance work. Its small, compact size and low weight allow the robot to easily pass through narrow passages, such as door frames or operate from scaffolding.

Our unique 3D positioning system can perform wonders. The front power head gives the operator full freedom to efficiently reach all areas. One example is vertical operations along or against the surface. For vertical and overhead operations the 410V has a steel mast constructed in sections. The mast can operate at heights up to 4 meters without support, and even more with support.

Two in one

The Power Control Module (PCM) can be disconnected from the tracked crawler. This allows you to drive the crawler into tight and inhospitable environments, such as small tunnels and flooded sewer pipes. You can operate the crawler from a safe distance by radio remote control. In such situations the PCM is connected to the crawler by a cord, ensuring complete control of the robot in horizontal, vertical and overhead operations.

Features and benefits

Evolution 2.0 control system (Aqua Cutter 410/710)

The Aqua Cutter Evolution 2.0 control system features highly computerized robotic management for all advanced operations.

Interactive graphic display

The display is interactive and uses clear and simple symbols combined with multi language text, making it very easy to program the most advanced operations.

Speed zones/3D zones

The use of speed zones enhances the possibility of even more accurate removal, and removal of different depths in the same overpass. These zones can also be used to control the lance angle and oscillation. The 3D zones works like our patented shape function, which means that it can cut shapes in depth. Perfect for removal of complex structures and uneven concrete, with the ability to create geometrical shapes.

Geometrical shapes

All robots with the Evolution control system have the ability to cut geometrical shapes, such as circles, triangles, squares and rhomboids. You can program your shape of choice on the display or draw on the surface and use the robot's teach-in system. Speed zones and 3D zones can be combined with the geometrical shapes function. For example, you can create a circle with an inclined bottom or a rhomboid on several levels.

Smart lance control

The pattern of the oscillation can be changed in different steps and wave-lengths. You can also set a fixed wavelength and program for multiple oscillation patterns, lance angles and removal depths in the same overpass. All movements are precise and smooth. In other words – better lance control and increased lifetime of mechanical parts.

Tower and 3D positioning system (410V/710V)

The easy-to-extend tower system on all V models of our robots has proved its versatility and the multi axis 3D positioning system of the cutting head, gives the ability to operate on all surfaces. The 710 robot's standard reach is 7 meters (23 ft), and can be extended further.

Disconnectable PCM (410)

The Power Control Module (PCM) can be disconnected from the tracked crawler and operated with a radio remote control. Perfect for tight and inhospitable environments, such as small tunnels and flooded sewer pipes. It can also be connected to an Aqua Spine.

EDS – Equal Distance System (410/710)

All of our Aqua Cutter robots feature our patented EDS system, short for Equal Distance System. The EDS keeps a preset distance from the nozzle to the concrete surface, regardless of the attack angle of the water jet. This is a major advantage. Standard systems without EDS make the water jet lose a lot of power before it hits the concrete.

Nozzles (410/710)

At Aquajet we use unique ceramic nozzles that are specially designed for highly demanding operations and all kinds of Hydrodemolition applications. The lifespan of an Aquajet ceramic nozzle is up to 300-350 hours, depending on the water quality, almost ten times longer than traditional steel nozzles. In terms of efficiency, our nozzles are unbeatable.

Super lance (410/710)

One single system, one standard, all the way up to 3000 bar. Same threads, same seals, and with multiple fittings for different hoses.

ISC - intelligent sensing control (410/710)

Intelligent Sensing Control, ISC, uses intelligent software operating via closed loop systems that continuously memorizes the movements of the water jet. It also monitors the process from the operator's settings. The system is standard on all Aqua Cutter robots as well as the Ergo unit, used for controlling the Aqua Spine. The ISC is easy to program and enables trouble free basic operations. Basically it gives you less downtime and no cables to cope with.

Robot inside Ecosilence (410/710)

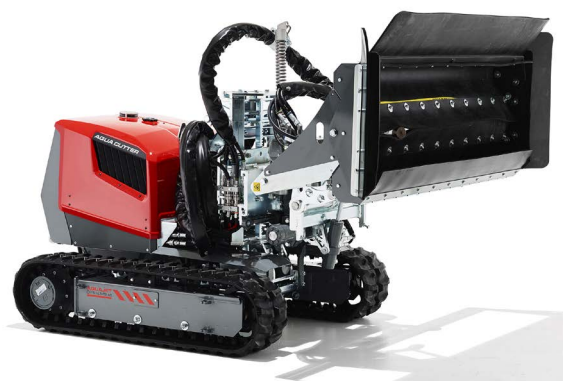
All our Aqua Cutters fit inside our 20 ft high-pressure pump units, the Ecosilence. All in one package ready to go to the worksite and no need for an extra trailer. This is a key point for quick set-up on the worksite. The robot is also protected from unauthorized intrusion during the night.

Oscillation system (410/710)

The stroke can be changed in a minute to adapt to the scope of the work. A shallow cut requires a longer stroke and a deep cut needs a short stroke. This allows you to get a higher removal rate and better cut results in all situations.

Radio remote control (410/710)

A radio remote control allows you to operate the Aqua Cutter robot from a safe distance, wireless or with a hard wire. That's up to you and the operation at hand.



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Facts

Total weight	1250 kg (2756 lb)
Length	2,1-2,27 m (6,9-7,4 ft)
Min. width	0,78 m (2,6 ft)
Track width	0,78-1,16 m (2,6-3,8 ft)
Min. height	0,99 m (3,2 ft)
Operating height	4 m (13,1 ft)
Side reach	0,95 m (3,1 ft)
Lance angle	±45°
Working width	0-1,7 m (0-5,6 ft)
Working width extended	0-3,2 m (0-10,5 ft)
Drive source	Electric motor 3 phase 5,5 kW 400 VAC 16A (other on request)



Easy service

The innovative design provides unrivalled ease of access for all maintenance jobs. This means less downtime for maintenance and more time for actual work. The foldable back cover of our Aqua Cutter 410 robots offers total access for both daily maintenance, such as checking oil levels, and regular service jobs, such as oil and filter changes.

