

**AQUA CUTTER PCM**  
Hydrodemolition robot

**Power  
and control  
at a distance**



**AQUAJET**



## AQUA CUTTER PCM

Aqua Cutter 410

# Hydrodemolition power control module

The Power Control Module (PCM) is used to power any of our fixed hydrodemolition equipment, making it possible to perform Hydrodemolition operations in difficult places – on a safe distance.

The Power Control Module (PCM) makes it possible to perform a hydrodemolition operation or industrial cleaning work in confined and inhospitable environments, such as small tunnels and flooded sewer pipes. All at a safe distance with a radio remote control.

The Aqua Cutter PCM comes with an PCM Carrier, a specially adapted trolley that allows for easy handling of the power control module.

Based on the operation at hand, connect the PCM by a cord to best suited equipment, such as an Aqua Spine or Circular power head. Perfect for work in tight or otherwise difficult spaces. It can also be used to drive a crawler into flooded areas, for examples under a pier. The possibilities are basically endless.

# 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.

## **Disconnectable PCM (Aqua Cutter 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 (Aqua Cutter 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 (Aqua Cutter 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 (Aqua Cutter 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 (Aqua Cutter 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 (Aqua Cutter 410/710)**

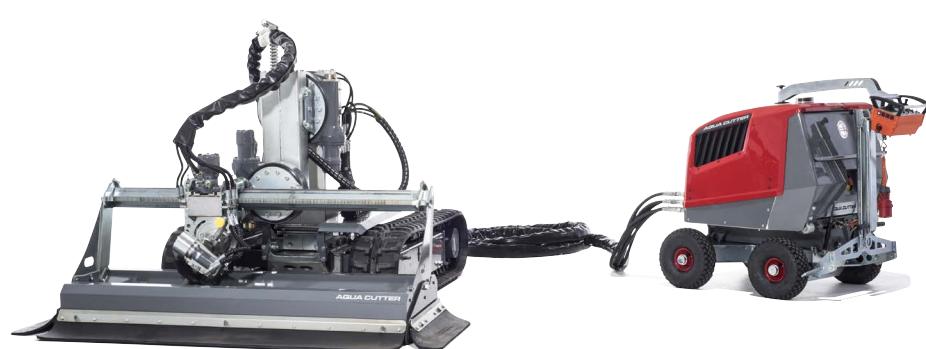
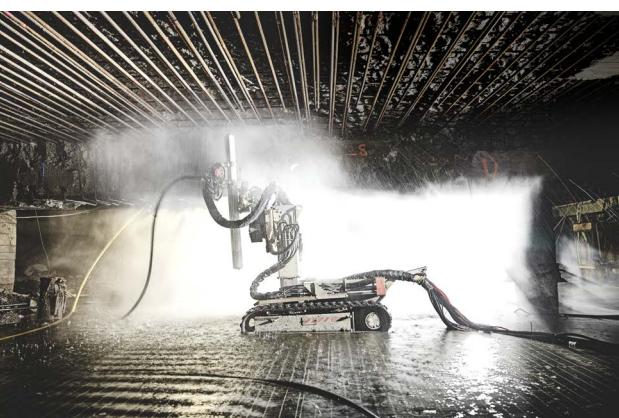
All our Aqua Cutters fit inside our 20 ft high-pressure pump units, the Ecosilence. All in one package ready to go to the worksite and no need for an extra trailer. This is a key point for quick set-up on the worksite. The robot is also protected from unauthorized intrusion during the night.

## **Oscillation system (Aqua Cutter 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 (Aqua Cutter 410/710)**

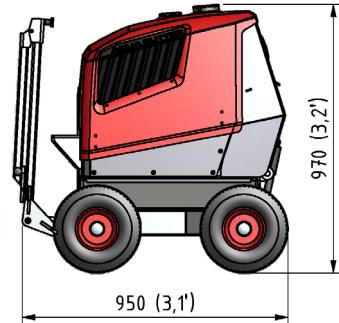
A radio remote control allows you to operate the Aqua Cutter robot from a safe distance, wireless or with a hard wire. That's up to you and the operation at hand.





## Facts

PCM weight	375 kg (827 lb)
PCM Carrier weight	70 kg (154 lb)
Weight Carrier (all weights)	300 kg (661 lb)
Max ambient temperature	38°C
Max hydraulic pressure	160 bar
Operational hydraulic pressure	110 bar
Max hydraulic flow	35 l/min
Motor power	5,5 kW
Voltage (standard)	3x400 VAC @ 50Hz
Voltage (standard)	3x480 VAC @ 60 Hz
Recommended fuse (standard)	16A
Sensor system roller	Pulse/ISC/Inductive/Pulse angle
Sensor system lance	Pulse/Time
Sensor system hoist	Pulse/Time
Sensor system tracks	Pulse/Time
Max hose extension length	20 m (66 ft)
Max hose ext. length with larger hose diameter	60 m (197 ft)
Drive source	Electric motor 3 phase 5,5kW 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.

