

**ERGO**

Compact hydrodemolition system

# Beyond handheld surface prep



**AQUAJET**

# The Ergo system

The Ergo system is specifically designed for tasks like scarifying, surface preparation, rust and paint removal, and industrial cleaning. Its lightweight and compact design ensures easy access to even the most confined or hard-to-reach places with ease. Whether you're dealing with stubborn rust, prepping surfaces for coatings, or handling industrial cleaning, the Ergo system is up for the job.

Using the Ergo system, our most compact hydrodemolition system, offers many benefits compared to traditional methods like handheld water jet equipment, milling machines, and jack-hammers. It packs four times the power of a hand lance into a compact unit. This powerful yet maneuverable system is designed to ensure worker safety during hazardous cleaning applications in industries such as oil, gas, and refractory.



## Applications

### Scarifying and surface preparation

Hydrodemolition can be used to scarify or roughen concrete surfaces in preparation for overlays, coatings, or bonding of new concrete. When the aim is to create an optimal bonding surface while minimizing material removal, employing a rotating tool proves highly effective. This will ensure precise and swift removal of a shallow layer of concrete, resulting in a rough bonding surface for new coating.



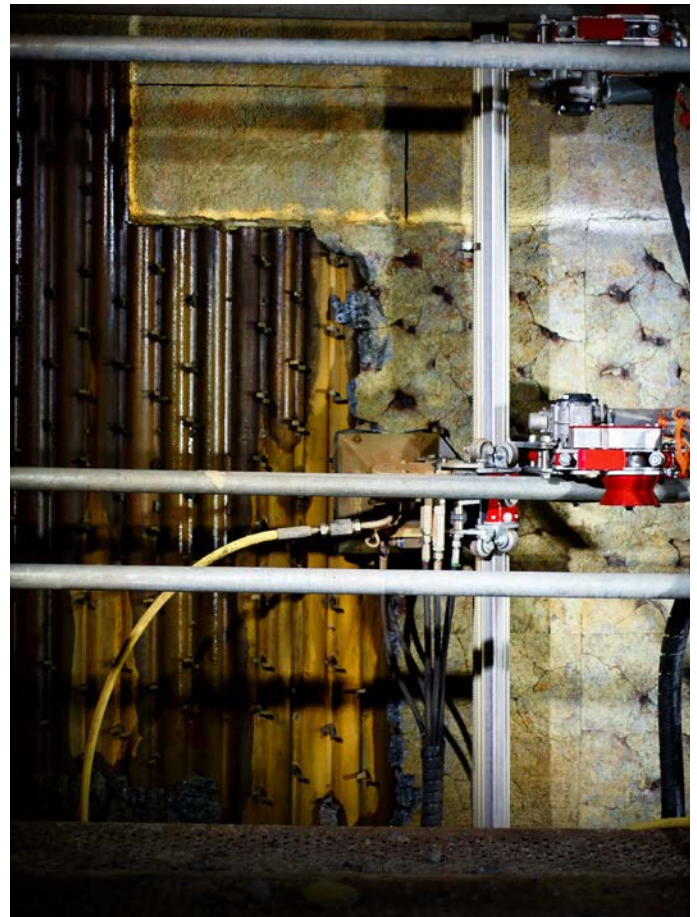
### Rust and paint removal

High-pressure water can also be used to remove paint or rust, avoiding use of grid blasting. This means no dust pollution, no contaminated sand to dispose of, just a clean steel surface left after removal. Rubber coatings or rubber on, for example, airplane runways from the tires can also be removed.



### Industrial cleaning

Traditional industrial cleaning has historically been carried out by handheld tools. This is a very dangerous operation and something that could be avoided by the use of robotic cleaning. More and more contractors are switching from manual to automated cleaning, increasing both safety and efficiency.







## ERGO GO

Hydrodemolition robot

# Compact hydrodemolition system

The Ergo Go is a revolutionary alternative in industrial cleaning, surface preparation and concrete repair applications where a compact hydrodemolition system is required. The Ergo Controller offers four times the power of a hand lance in a compact unit. It provides the maneuverability and power to keep workers out of harm's way during hazardous cleaning applications in oil, gas, refractory and other industries.

Hydrodemolition robots, such as the Ergo Go system, remove decayed concrete and built-up materials to a preset depth consistently. Using a number of productivity-enhancing attachments, contractors can remotely operate the Ergo system for efficient work in confined spaces.

### Highly adaptive

The Ergo Go incorporates the controller unit, which powers and controls the hydraulics; the Ergo power head, which manipulates the high-pressure lance; and the climber, which is a unique system used to support and maneuver the power head, based on project needs. The climber attaches to any standard scaffolding pipes and robotically moves along it to deliver powerful hydrodemolition forces for removal of materials such as paint, rubber coatings, petroleum products, rust and decayed concrete in a number of vertical vessels.

The Ergo System also works with any of two attachments in the Ergo Rotolance series for improved capabilities in confined or hard to reach places.



## Get to know your Ergo go

The Ergo Go starter kit is designed for hydrodemolition operations in confined areas and to completely replace hand lance work on floors, walls or ceilings. It's perfect wherever a robot or other kinds of larger fixed hydrodemolition equipment won't fit. Above all, it's optimal wherever you need to clean or sanitize a construction site, a concrete floor, a ship's hull, and basically everything in between.

### One size fits all

Each component brings a specific functionality to the system. Furthermore, the system is designed to make things easier and safer for the operator. All components are easy to connect with Aquajet's unique one-size, single-bolt solution. One tool is all you need.



### Climb to the top

The Ergo Climbers are lifted into place with the tension handle loosened. The Ergo Climbers are designed to work on standard 48,3 mm (1,5") scaffolding pipes. The tension handle is pushed down and is secured automatically with the safety latch.

Thanks to the spring-loaded design and the all-wheel drive system, the Ergo Climbers are not sensitive to variations in pipe diameter. Dirt or concrete layers on the pipe is not a problem at all.



### Grab, clamp and snap

When both climbers have been clamped to the pipes, the roller beam is snapped in place. The roller beam is secured with a single bolt on each side. All connection bolts have the same size. All you need is one single tool.

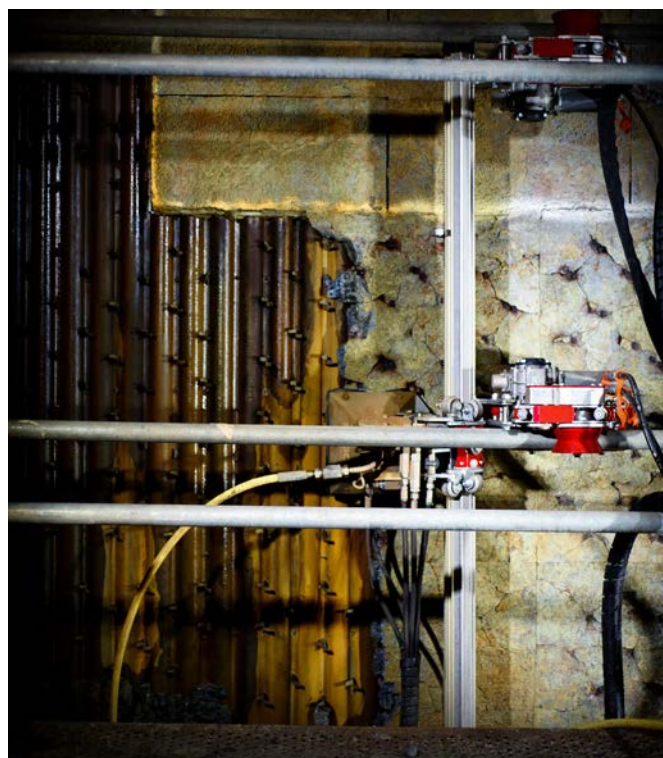
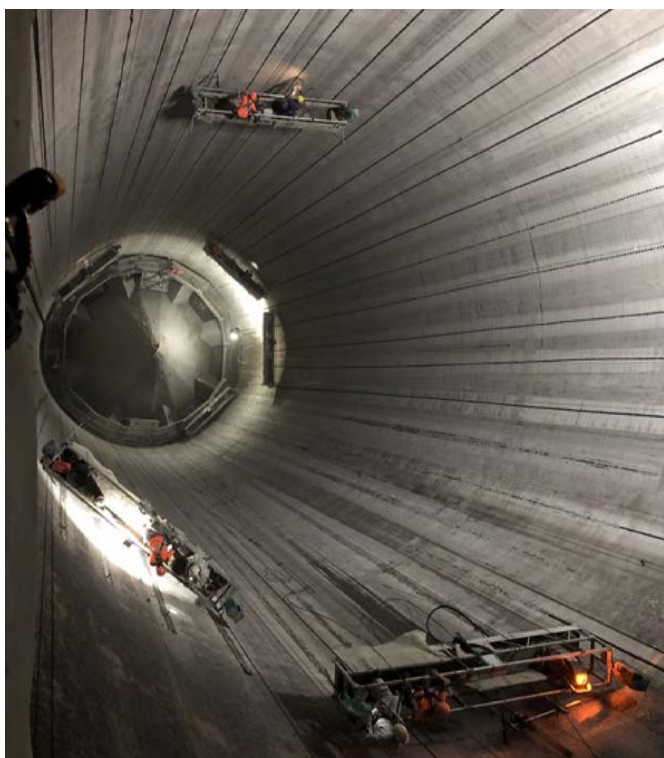
The Power Head is snapped on to the roller beam and secured with one single bolt.



### Press play and go

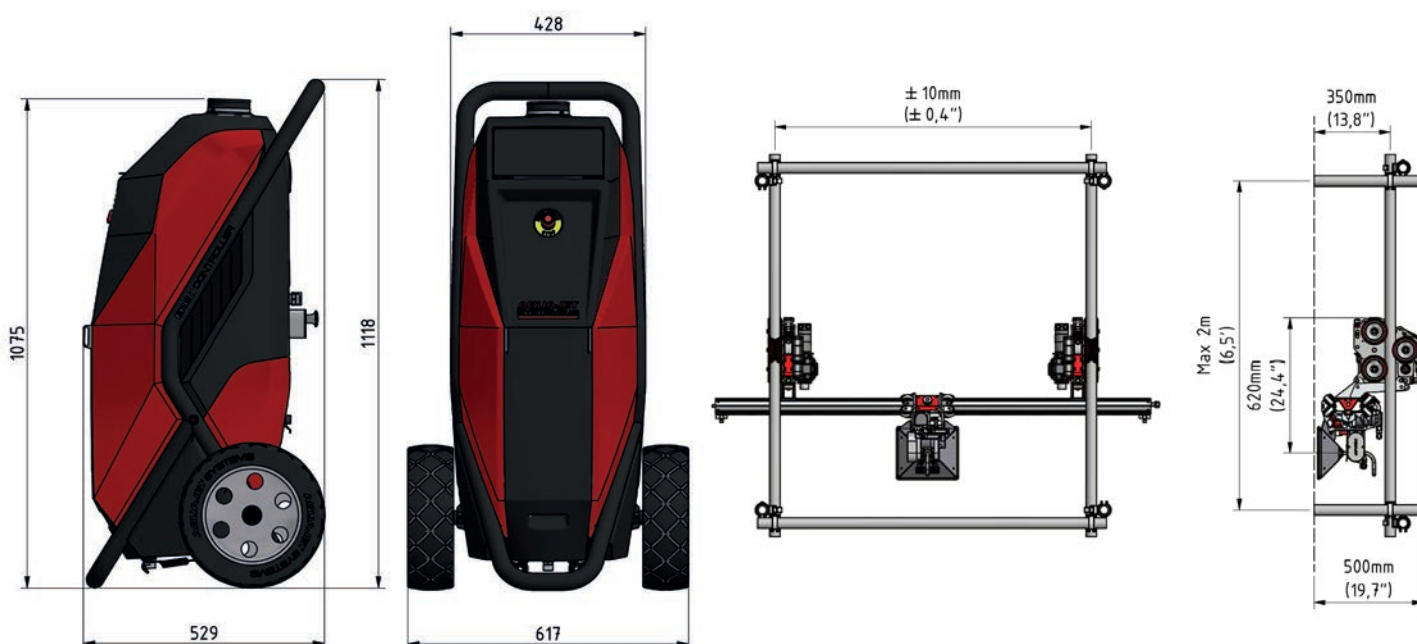
The hydraulic hoses are connected to the Ergo Controller with a multi connector. This is also secured with one single bolt. After the high pressure hose has been connected, the operation can be started. The settings can be controlled either from the display on the Ergo Controller or from the display on the radio remote control.





## Facts

Working width	0-2,0 m (0-6,6 ft)
Max length between supports	2.0 m (6,6 ft)
Min clearance height	320-500 mm (12,6-19,7 in)
Roller beam lengths	0,25/0,5m/1,0m (0,8/1,6/3,3 ft)
Lance angle	±45°
Oscillation steps	8° / 22mm (0,9 in) and 14° / 42mm (1,7 in)
Transport boxes	1100x355x400 mm (43,3x14,0x15,7 in)
Climber weight	22 kg (49 lb)
Power Head weight	23 kg (51 lb) / 37 kg (82 lb)
Roller beam weight	9,5 kg (21 lb)
Controller weight	98 kg (216 lb) dry, 124 kg (273 lb) with oil
Max reaction force	1000N
Parallel drive	±2%







## ERGO SPINE GO

Hydrodemolition robot

# Flexible hydrodemolition system

The Ergo Spine Go is an innovative and powerful hydrodemolition alternative for the most challenging spaces to work, opening up the productivity of robotic hydrodemolition to nearly anybody in any location. The system is easily mounted to any vertical, horizontal or overhead surface for unrivaled maneuverability. Coupled with the convenience and portability of the Ergo system, a lightweight yet formidable hydrodemolition solution is a sure thing.

The Ergo Spine Go includes an Ergo Spine, Ergo Controller and a power head attached with a single bolt to a roller beam, which is connected to a spine roller mounted on a spine rail. Depending on the configuration, the setup may be supported by standard support legs, or the spine rail may be attached directly to a surface.

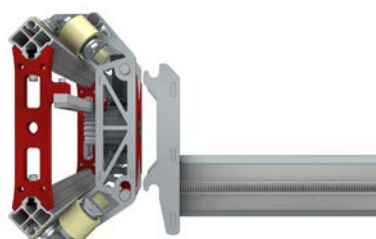
The roller beam and spine rail robotically position the power head as it moves along. As it maneuvers, the Ergo Controller's intelligent sensing controls automatically adjust the water jet to control the concrete removal depth. As the power head moves along the Ergo Spine, it removes concrete in sections as small as 0.25 meter (9.8 inches) up to 2 meters (6.6 feet), leaving the rebar clean and undamaged.

### Key features

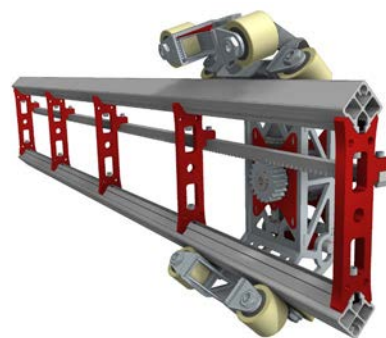
All parts can be carried by one person and all connection points are with a single bolt. We use the same bolt size for connections between spine parts and all intersection points are marked with red. The Ergo Spine features a low weight, high strength skeleton base with a wheel setup that divides forces for the ability to handle high reaction forces.

### Setups

The Spine's standard setup easily tackles concrete walls, floors and ceilings while the side setup delivers hydrodemolition power to narrow spaces.



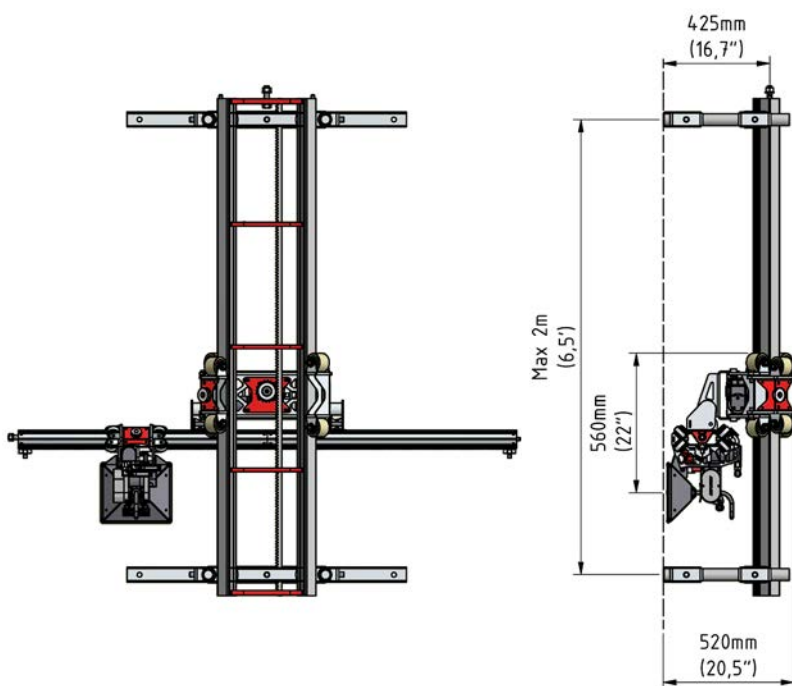
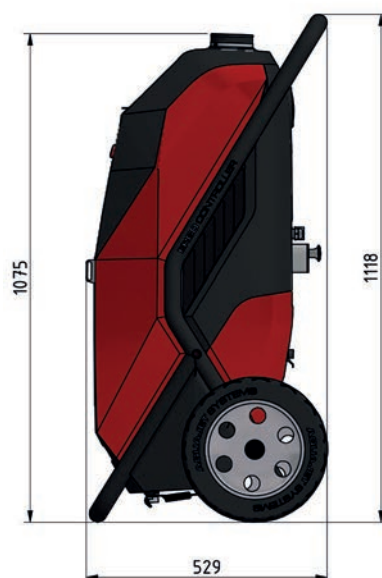
Quick connection with a single bolt for different brackets and tools.



The spine roller is connected to the spine rail with a single bolt.

## Facts

Working width	0-2,0 m (0-6,6 ft)
Max length between supports	2.0 m (6,6 ft)
Min clearance height	320-500 mm (12,6-19,7 in)
Roller beam lengths	0,25/0,5m/1,0m (0,8/1,6/3,3 ft)
Lance angle	±45°
Oscillation steps	8° / 22mm (0,9 in), 14° / 42mm (1,7 in)
Power Head weight	23 kg (51 lb) / 37 kg (82 lb)
Ergo Spine Roller	28 kg (62 lb)
Ergo Spine dual rail section (1,0m)	11 kg (24 lb)
Controller weight	98 kg (216 lb) dry, 124 kg (273 lb) with oil
Max reaction force	1000N / 2000N







## ERGO ROTOLANCE

Ergo system

# Surface preparation tool

The Ergo Rotolance is the perfect complement to the Ergo system. It will cover a lot of areas beyond the standard Ergo power head. Basically everything that is surface related, for example industrial cleaning, surface preparation, concrete scarification and paint removal.

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### Versatile tool

The Ergo Rotolance comes in two versions; Rotolance 130 and Rotolance 130S. Ergo Rotolance 130, has a hydraulically driven swivel with up to 8 nozzles and a spray pattern of  $\varnothing 130$  mm. Thanks to the hydraulic drive the rotation speed is controlled in a very precise way and will perform even results all the time. The large spray pattern makes it perfect for everything from paint removal to concrete scarification. Ergo Rotolance 130S, has the same swivel design but is also equipped with suspension to be able to follow an uneven or curved surface, for example a ship hull. The suspension mechanism has an ingenious design that allows the spring force to be adjusted in four steps and can at the same time also lift the rotor head up from the surface to make assembly easier and to inspect the result.

All versions can be equipped with vacuum connection for removing water and debris.



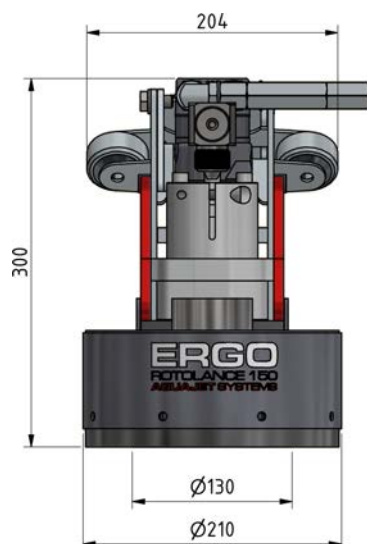


### Facts

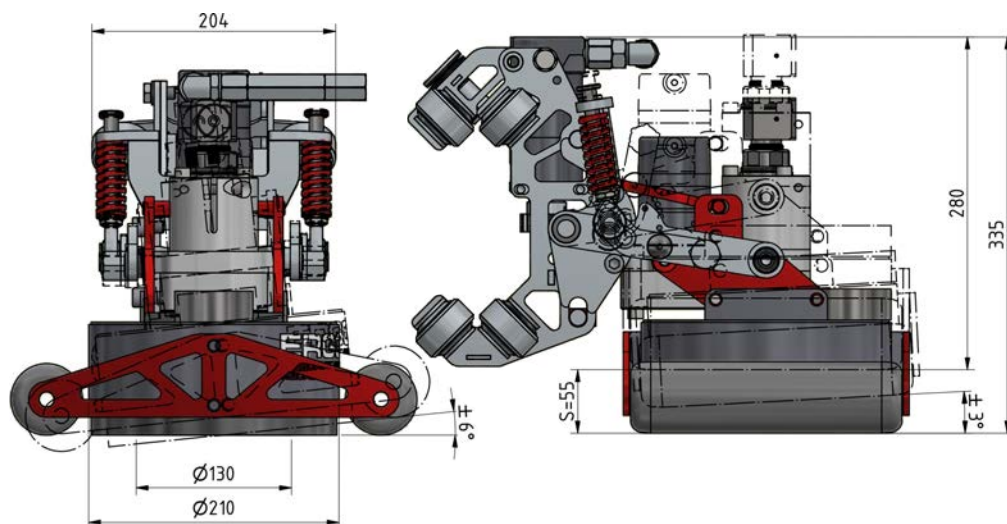
	Rotolance 130	Rotolance 130S
Working diameter	130 mm (5,1")	130 mm (5,1")
Water pressure	400-3000 bar (5800-43500 psi)	400-3000 bar (5800-43500 psi)
Water flow	0-38 l/min (0-10,0 gpm)	0-38 l/min (0-10,0 gpm)
HP hose connections	9/16 HP	9/16 HP
Max n:o of nozzles	8	8
Vacuum connections	2" BSP / 2" camlock	2" BSP / 2" camlock
Weight (with/without hydraulic hoses)	22 kg (49 lb) / 31 kg (68 lb)	29 kg (64 lb) / 39 kg (86 lb)
Rotation speed	0-1100 rpm (hydraulic)	0-1100 rpm (hydraulic)
Min water pressure when rotating	400 bar (5800 psi)	400 bar (5800 psi)
Pressure drop @ 19 l/min	19 bar (276 psi)	19 bar (276 psi)
Pressure drop @ 28 l/min	42 bar (609 psi)	42 bar (609 psi)
Pressure drop @ 38 l/min	77 bar (1117 psi)	77 bar (1117 psi)
Nozzle type	102XXX	102XXX
Suspension stroke	-	55mm (2,2")
Tilt sideways	-	±6°
Tilt back/forward	-	±3°
Max hydraulic Pressure	160 bar (2320 psi)	160 bar (2320 psi)
Max hydraulic Flow	7,2 l/min (1,90 gpm)	7,2 l/min (1,90 gpm)



Rotolance 130



Rotolance 130S





SCAN ME

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