

Application Data Hydrodemolition



Benefits of Water Jetting

- Leaves a sound surface ready for repair
- Good quality concrete is unaffected
- No micro cracks which pneumatic hammers cause
- Vibration to the surrounding structure eliminated
- Faster than any other process
- Steel reinforcing bars do not get damaged but are blasted by the water jet & concrete particles to descale them
- Depth of cut is controllable
- Robots keep the operator away from the water jet
- Robots are programmable to provide accurate, consistent results
- Can be used to clean & roughen (scabble) concrete surfaces.
- The pump is versatile & can be used for other cleaning & cutting applications

Typical Pumps & Performances		
Pump	Performance	Application
HPS2200	44lpm at 1400bar (11.5gpm at 20,000psi)	Hand held dump gun
HPS3000	120lpm at 1000bar (31.6gpm at 14,500psi)	Hand held gun with gimbal device
HPS5000	200lpm at 1000bar (52.7gpm at 14,500psi)	Hydrodemolition robot (Aquajet)

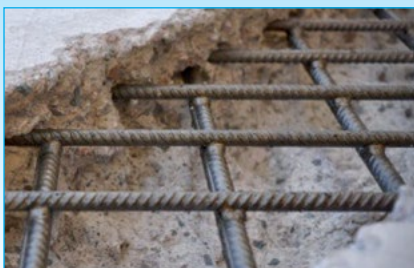
Hydrodemolition (also referred to as concrete cutting) is a process of using a water jet at 1000 to 1400bar (14,500 to 20,000psi) to remove loose, deteriorated & damaged concrete from road bridges & other concrete structures & to expose steel reinforcing bars for inspection.

Many jobs are carried out using a hand held jetting gun. In these circumstances the reaction force created by the water jet should not exceed 250 Newton's (25kgf) to ensure the operator can work in a safe manner e.g. 35lpm at 1400bar.

Higher flowrate increases reaction force so the cutting nozzle needs to be constrained. At 120lpm at 1000bar it is common to use a gimbal device to connect the jetting gun to. For maximum productivity the HPS5000 pump with a performance of 200lpm at 1000bar is coupled to a hydrodemolition robot.



HPS2200DRT unit, 43lpm at 1400bar



Precise concrete removal without damage to rebar



Hydrodemolition robot, 200lpm at 1000bar



HPS5000DC unit, 200lpm at 1000bar

This information is intended to be a guide only. The required pump size & performance can vary depending on many factors including rate of work required, hardness of deposit or work piece, operator skill, site access etc.

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