

CONCRETE HYDRO-DEMOLITION REMOVAL RATES

Job Description	Source	Results (cf/hr)	Average Results (cf/hr @ 100 hp)
Bridge deck in Illinois, 1980's 40 ksi with 2 nozzles, 4 gpm, 93 hp 2 ips, 600 rpm 2.5" deep at 1.35 sy/hr =12 sf/hr	<i>Waterjetting Technology,</i> David A. Summers, p.323	2.5	2.6
Highway bridge in NY, 1985 FIP equipment oscillating jet 15 ksi and 62 gpm, 542 hp 3" deep gave 5-16 sy/hr (45-144 sf/hr)	<i>Waterjetting Technology,</i> David A. Summers, p.329	11-36	2-7
Bridge in NY, 1985 Conjet system 18 ksi, 25 gpm, 262 hp	<i>Waterjetting Technology,</i> David A. Summers, p.331	18, 2" deep 11, 2.4" deep 26, 6" deep	7 4 10
38" wide path in Dominique, 04/1991 20 ksi and 40 gpm, 467 hp using SA swivel on their robot	Blasters, Fred Boos	14, 7" deep	3
Launch pad at Vandenberg AFB, 09/1996 10 ksi compressive strength Using 20 ksi and 70 gpm, 816 hp, NLB robot, Meylan swivel, single jet	Meylan, Mark Stigge	10	1
3/4" crushed stone aggregate, 10/1996 4 ksi strength No power specified, assume 500 hp, NLB robot	NLB, flyer	12-34, 3/4" deep 26-41, 1" deep 30-52, 2" deep 34-56, 3" deep 30-66, 4" deep	2-7 5-8 6-10 7-11 6-13
Concrete repair material, 1996 "Very hard", 50 MPa afr 5 days, 7ksi? Jackhammers "wouldn't touch it", lots of 1" rebar also used CDV wiyh 20 ksi and 25 gpm, 292 Hp 3" deep, were able to do 4 sq M in 12 Hr (75% avail?)	CEDA-ChemEst Regina	1	0.4

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Bridge overlay in BC, 10/1997 "Very hard", used CDA at 20 ksi and 29 gpm = 338 Hp (but found later that 15 ksi at 45 gpm was better, 394 hp pump) 4" deep x 39" wide x 360 ft took 150 hrs total job (25% waiting?)	Prince George HydroMechanical	3.5	1
Aquacutter HVD-6000 robot, 04/1999 51 gpm at 14,500 psi, equal to 430 Hp, says they are capable of 17.7 to 53 cf/hr	Aquajet AB, WJTA Jet News	18-53	4-12
Robot 360, 06/1999 40 gpm at 12,300 psi equal to 287 Hp in damaged concrete, 5" deep, achieved 36 cf/hr	Conjet AB, WJTA Jet News	36	12
Robot 362, 10/1999 48 gpm at 14,700 psi = 411 Hp in damaged concrete, 5" deep, achieved 53 cf/hr	Conjet AB, WJTA Jet News	53	13
Robot 361, 03/2000 234 ltr/min at 1400 bar = 728 Hp dam turbine expansion, 3-30" deep, 36 cf/hr	Conjet AB, WJTA Jet News	36	5
Robot 360, 04/2000 450 hp with 140 ltr/min at 1100 bar = 340 Hp Overpass girder deck, 3 cubic meters/ 10 hr shift	Conjet AB, WJTA Jet News	11	3
Robot on bridge deck, 11/2000 25 ksi and 26 gpm=380 hp 1/2" depth and 300 to 500 sf/hr	Blasters, WJTA Jet News	12-21	3-5
Robot on bridge deck, 01/2002 17400 psi and 26 gpm=264 hp 1.2" depth and 376 sf/hr	Aquajet, WJTA Jet News	38	14
Robot on bridge deck, 03/2002 20,000 psi and 52 gpm=606 hp 2.5" depth, 0.5 cmtr/hr=17.6 cf/hr	ConJet, WJTA Jet News	17.6	2.9
Vertical wall on Long Hollow Dam, 2013 15" thick 3800 psi concrete Blackhawk, 20,000 psi and 42 gpm, 490 hp	StoneAge, recorded	41	8.4