

Abrasive Cutting



Whether you need to cut through metal, concrete, composites, or another hard material, use an abrasive cutting system from NLB. Our high-pressure and ultra-high pressure water jets (up to 40,000 psi, or 2,800 bar) can slice through thick concrete with rebar, or cut inspection openings in petrochemical storage tanks.

NLB can provide a complete system, from cutting nozzles,

track crawlers (for automated cutting) and hydraulic control unit to feed hoppers and metering discs. Features include:

- Choose from 20,000 psi or 40,000 psi (1,400 or 2,800 bar)
- Adjustable nozzle angles and tracking speed
- Cuts round or flat materials
- Air or hydraulic drive

SEVEN GOOD REASONS TO CUT WITH WATER JETS

Many years of experience have shown that the combination of high-pressure water jets and abrasive has some major advantages over other cutting methods.

- 1) Clean cuts, without burrs, slag or warping
- 2) Leaves a smooth edge, with minimal kerf loss
- 3) Less dust, noise and heat
- 4) Without heat build-up, no thermal distortion or changes in metallurgy
- 5) Cuts a variety of materials and shapes
- 6) Easily automated to save labor and improve productivity
- 7) Spark-free, for use in explosive areas

20K Abrasive Cutting Head

- Body is made of stainless steel for long life
- Assembly includes replaceable, long-life nozzle and carbide orifice
- Compact, lightweight cutting head is compatible with automation equipment
- Various nozzle combinations available for different cutting applications from 1 to 4 gpm (3.8 to 15.1 lpm)



NLB-6020-AC

40K Abrasive Cutting Head

- Nozzle assembly mixes water and abrasive into a powerful cutting force, which exits the carbide focusing nozzle at high velocity.
- Utilizes BN3539 sapphire orifice nozzle
 - Adjusting rings allow angular and lateral nozzle adjustments for proper alignment
 - Requires Connection Kit BA8223
 - 40,000 psi (2,800 bar) pressure rating



NLB7790

Abrasive Hopper

- NLB-300-AC hopper holds 300 lbs. (136 kg) of abrasive; NLB-600-AC holds 600 lbs. (272 kg)
- Includes NLB kit DM5820-05 to meter abrasive at adjustable rate (see chart for meter discs included)
- Pressurized hoppers available



NLB-300-AC

Hydraulic Control Unit

- Unit included with Pipe Cutter or Track Crawler
- Includes hydraulic power unit, Model CA2674, 1/2 hp (.37 kW), 110 volt AC
- Includes Control Stand, Model BA1969, for forward/reverse and speed adjustment
- Pneumatic drive option available
- Adjusts nozzle speed from 0.5" to 18" (1 to 46 cm) per minute



CA2674

Abrasive Pipe Cutter, 20K-APC-1A

- Rugged, yet lightweight
- Chain guides hydraulically-powered nozzle assembly around steel, concrete or PVC pipe
- Chain easily adjusts to pipes of different diameters
- Adjustable nozzle angle and tracking speed

- Requires NLB-6020-AC abrasive cutting nozzle



Abrasive Track Crawler, NLB ATS-1

- Ideal for flat surfaces, vertical or horizontal (e.g., refinery tanks)
- 4' (1.2 m) heavy-duty stainless steel track held in place by pneumatic suction cups (8 cfm per section)
- Dependable hydraulic power
- Sections can be joined for long, continuous cuts
- Complete system mounted on lightweight steel base
- Requires NLB-6020-AC abrasive cutting nozzle
- Air-powered option available; order Part No. ATS-1P

Track Options:

- Model DA9687 is for straight cuts, or curved cuts with radius up to 3' (91 cm)
- Model DA9688 is flexible, for radial cuts of 4" to 4' (10 cm to 1.2 m)



Metering Disc Kit

Part Number	Disc Size	Flow Rate Per Minute, #36 or #50 Garnet	Flow Rate Per Minute, #80 Garnet*	Flow Rate Per Minute, Silica Sand**
CA2031	10	1 lb./min. (0.5 kg/min.)	1.1 lbs./min. (0.5 kg/min.)	0.7 lbs./min. (0.3 kg/min.)
CA2032	15	1.5 lbs./min. (0.7 kg/min.)	1.6 lbs./min. (0.7 kg/min.)	1.1 lbs./min. (0.5 kg/min.)
CA2033	20	2 lbs./min. (0.9 kg/min.)	2.1 lbs./min. (0.9 kg/min.)	1.5 lbs./min. (0.7 kg/min.)
CA2034	30	3 lbs./min. (1.4 kg/min.)	3.2 lbs./min. (1.5 kg/min.)	2.2 lbs./min. (1.0 kg/min.)
CA2035	40	4 lbs./min. (1.8 kg/min.)	4.2 lbs./min. (1.9 kg/min.)	2.9 lbs./min. (1.3 kg/min.)
CA2036	50	5 lbs./min. (2.3 kg/min.)	5.3 lbs./min. (2.4 kg/min.)	3.7 lbs./min. (1.7 kg/min.)
CA2037	60	6 lbs./min. (2.7 kg/min.)	6.4 lbs./min. (2.9 kg/min.)	4.4 lbs./min. (2.0 kg/min.)
CA2038	70	7 lbs./min. (3.2 kg/min.)	7.4 lbs./min. (3.4 kg/min.)	5.1 lbs./min. (2.3 kg/min.)
CA2039	80	8 lbs./min. (3.6 kg/min.)	8.5 lbs./min. (3.8 kg/min.)	5.6 lbs./min. (2.5 kg/min.)
CA2040	90	9 lbs./min. (4.1 kg/min.)	9.5 lbs./min. (4.3 kg/min.)	6.6 lbs./min. (3.0 kg/min.)
CA2041	100	10 lbs./min. (4.5 kg/min.)	10.6 lbs./min. (4.8 kg/min.)	7.3 lbs./min. (3.3 kg/min.)

*The flow rate of #80 Garnet is approximately 6% higher than #36 or #50.

**Silica sand is used for wet abrasive blasting, but not recommended for abrasive cutting.