APPLICATIONS

U.S. to Australia, Europe to Japan, ICS® products are used across the world. The unrivaled versatility of Diamond Chain Technology makes ICS products indispensible for a wide variety of applications. Fire and rescue crews depended on ICS saws at the scene of the Oklahoma City bombing. ICS had a hand in the renovation of the Notre Dame Cathedral. When precision demolition needed to be done at the Louvre in Paris, cutters chose ICS concrete chain saws. Contractors at key nuclear facilities, universities, hospitals, dams, bridges and stadiums around the world have relied on the portability, versatility, and precision of the patented Diamond Chain Technology .

Carve perfect corners, cut small openings, or take out entire walls, it can all be done safely and efficiently with ICS concrete chain saws. Whether the need is rescue, precision demolition, remodeling, landscaping, even sculpture, the unique capabilities of Diamond Chain Technology and ICS concrete chain saws are unmatched. The following section shows a variety of applications that lend themselves to the unique benefits of ICS products and is meant to open your eyes to the possibilities of Diamond Chain Technology and its unmatched versatility. With a little imagination and an ICS concrete chain saw, you too can be **UNSTOPPABLE.**

APPLICATIONS

SMALL OPENINGS

ICS® VS. CORE DRILL AND HAMMER STITCH DRILLING

Not all small openings need to be round. While many small holes are core or stitch drilled, the time saved with a square hole may reduce costs. A small opening can be made in as little as 5 minutes with ICS® concrete chain saws.

ICS METHOD

1. Score cut the opening on all 4 sides 2 minutes.

2. Plunge cut each side starting at the center of each cut and working toward the corners 3 minutes.

The result: A small opening, with perfect corners and no overcuts.
TOTAL ELAPSED TIME: 5 MINUTES.

CORE DRILL METHOD

1. Drill a hole to mount the core drill 2 minutes.

2. Mount the drill stand - 1 minutes.

3. Attach and tighten a core bit 1 minute.

4. Drill the hole 8 minutes.

5. Remove the core bit and stand - 2 minutes.

TOTAL ELAPSED TIME: 14 MINUTES.

STITCH DRILL METHOD

1. Drill initial holes on 4 sides of the circle 8 minutes.

2 Continue drilling holes around the circumference of the circle, as close together as possible 28 minutes.

3. Use a chipping hammer to remove core - 10 minutes.

4. Use a chipping hammer with a chisel bit to clean the hole 5 minutes.
Note: As seen in the photo, use of percussive tools can crack openings.

TOTAL ELAPSED TIME: 51 MINUTES.

APPLICATIONS

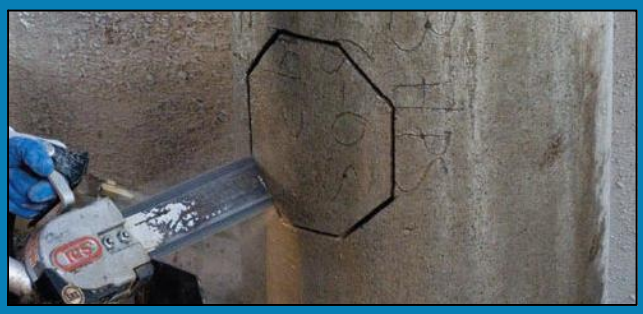
CONCRETE PIPE TAP

ICS® VS. CUT-OFF SAW AND CHIPPING HAMMER

While ICS® concrete chain saws won't cut round circles, they can easily make 8-sided cuts, providing quick, tight fitting joints for concrete pipe taps. With proper technique, gaps of less than 1 (2.5 cm) are easily achievable, requiring very little patchwork. The same job with a cut-off saw takes longer, results in overcuts, and requires the use of potentially damaging percussive tools to finish the work.

ICS METHOD

1. Carefully score cut all 8 cuts - 3 minutes.



2. Plunge straight into all 8 sides in a stitching method working from the center to both ends of each cut - 12 minutes.

3. The result: A pipe tap with less than one inch gap installed, no over-cutting or cracking from percussive tools.

   Note: Proper attention to layout and keeping the bar perpendicular to the pipe are important for tight joints.

   TOTAL ELAPSED TIME: 15 MINUTES.

CUT-OFF SAW AND CHIPPING HAMMER METHOD

1. Score a square cut on the first 4 sides of the layout - 3 minutes.

2. Score a second square cut offset by 45 degrees - 3 minutes.

3. Chip out the concrete inside the layout, exposing the steel reinforcement - 10 minutes.

4. Cut out the exposed steel with a cut-off saw - 6 minutes.

5. Chip out remaining concrete in opening for proper pipe fit - 7 minutes.

6. Install the pipe in the opening and patch the over-cuts - 20 minutes.

   TOTAL ELAPSED TIME: 49 MINUTES.

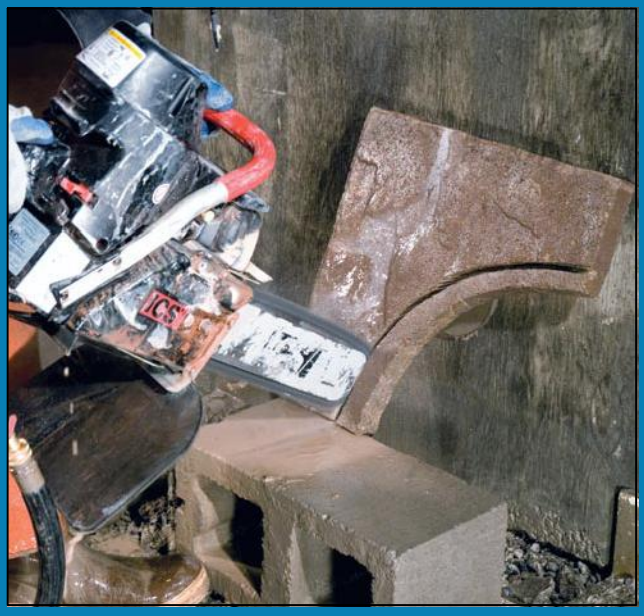
APPLICATIONS

LANDSCAPE

ICS® VS. GRINDER WITH DIAMOND BLADE

ICS® concrete chain saws are capable of making mitered cuts and small openings in natural and synthetic stone. Custom cuts can be made in pavers, water features, and many other landscaping elements. Portable and lightweight, ICS concrete chain saws are easy to move around the jobsite. Safe and simple to operate, they can be used by any member of the crew.

ICS METHOD - CURVES IN PAVERS



1. Score cut about 1 deep, following the intended curve 1 minute.

2. Continue step cutting following the curve - 4 minutes.

The result: A perfect curve with an exposed surface that is smooth and clean. No snapping or breaking of the core minimizes breakage.

TOTAL ELAPSED TIME: 5 MINUTES.

GRINDER METHOD - CURVES IN PAVERS

1. Score cut the curve, using a stitch cut with a diamond blade - 4 minutes.

2. Continue stitch cutting the curve to full depth - 4 minutes.

3. Snap the piece to remove the core. Grind the surface smooth, if required 2 minutes.

TOTAL ELAPSED TIME: 10 MINUTES.

APPLICATIONS

POOL SKIMMER

ICS® VS. HAMMER STITCH DRILLING AND CHIPPING GUN

When repairing or installing new pools, ICS® concrete chain saws provide fast and accurate cutting on installations such as skimmers, lights, and drains. Many of these applications require deep, mitered openings, a job perfectly matched to the unique capabilities of Diamond Chain Technology .

ICS METHOD

1. Score cut the opening, including the mitered sides - 3 minutes.

2. Plunge cut all sides of the opening, starting with the bottom cut - 10 minutes.

3. Carefully finish corners starting in the center and working to the edge - 14 minutes.

The result: a mitered opening with little or no patching required.

TOTAL ELAPSED TIME: 27 MINUTES.

STITCHING HAMMER METHOD

1. Score cut the opening with a skill saw and grinder with diamond blades - 8 minutes.

2. Hammer drill the mitered corners - 8 minutes.

3. Stitch drill the opening - 90 minutes.

4. Chip the edges of the opening - 14 minutes.

5. Continue chipping the opening with hammer drill - 10 minutes.

6. Clean out the opening to fit the skimmer - 20 minutes.

7. Grind all surfaces smooth to finish.

Note: It is difficult to maintain accurate opening dimensions when using percussive techniques and patching may be required.

TOTAL ELAPSED TIME: 150 MINUTES.

APPLICATIONS

AC UNIT INSTALL

ICS® VS. RING SAW

Diamond Chain Technology allows ICS® concrete chain saws to create openings less than 2 (60 cm) square in less than 20 minutes, with square corners and no finish work required. Ring saws, on the other hand, come with several limitations. Unlike ICS concrete chain saws, plunging is not possible and the smallest opening is 14 (35 cm). In addition, square corners are only possible to 6 (15 cm) deep without grinding or chipping.

The following sequence of photos compares an ICS concrete chain saw with a standard ring saw performing a typical AC unit installation.

ICS METHOD

1. Score the entire cut, plunging the bar 1 (2.5 cm) into the concrete - 3 minutes.

2. Plunge the saw all the way into the cut, starting on the bottom first. Use the same technique to finish the remaining three sides, ending with the top - 12 minutes.

3. The AC Unit is installed with less than 1/4 (.64 cm) gap on all sides, with perfectly square corners, a clean finish, and no chance for leaks.

Note: Pay attention to the sequence of cutting to avoid pinching the bar in the cut. Always start with the bottom cut first. Proper alignment of the score cut will help ensure straight cutting when at full depth.

IMPORTANT - concrete weighs as much as 150 lbs per cubic foot (2371 kg/cu. meter). Pay attention when removing cores larger that 1 /sq (.3m/sq) in diameter. When working from elevated location, it may be necessary to strap core when cutting to avoid losing core prematurely.

TOTAL ELAPSED TIME: 15 MINUTES.

RINGSAW METHOD

With a ring saw, plunging is not possible. In addition, the smallest opening possible is 14 (35 cm). Furthermore, square corners are only possible to 6 (15 cm) deep without grinding or chipping.

1. Score cut the entire opening (note that dust is created until the blade is more than 4 inches (10 cm) into the cut on horizontal cuts) - 3 minutes.

2. Step cut the bottom - 3 minutes.

3. Next, step cut the sides 8 minutes.

4. Finally, step cut the top 4 minutes.

5. The final opening shows the overcuts that are required when using a ring saw to create openings of less than 14 (35 cm).

TOTAL ELAPSED TIME: 20 MINUTES (not including the required finish work).

APPLICATIONS

MECHANICAL OPENINGS

Mechanical openings smaller than 2 x 2 (60 cm X 60 cm) can be created in under 20 minutes with ICS® concrete chain saws. Even new operators can achieve great results with minimal experience. Note: A core can weigh as much as 150 lbs per cubic foot (2371 kg/cu. meter). Pay special attention to shifting materials and proper cutting sequence when making larger openings.

1. After laying out the opening, score cut to 1 (2.5 cm) deep (Use a small level when making horizontal cuts to ensure a straight cut) - 4 minutes.

2. Plunge cut all sides of the opening, starting with the bottom cut - 10 minutes.

3. Carefully finish each corner.

TOTAL ELAPSED TIME: 14 MINUTES.

EGRESS WINDOWS

Diamond Chain Technology allows remodelers to easily add windows and egress windows to additions and basement remodels. Because there are no overcuts, water proofing issues around the windows are reduced.

1. Layout and score cut the entire opening to 1 (2.5 cm) deep - 6 minutes.

2. Cut the bottom first to avoid pinching the bar in cut. Plunge saw into cut and cut to the corners on each side - 12 minutes.

3. Use wedges on the bottom of the cut to keep the core in place and avoid cracking while cutting the top - 12 minutes.

TOTAL ELAPSED TIME: 30 MINUTES.

HVAC & ELECTRICAL

With an ICS® concrete chain saw, electrical and HVAC contractors can install small openings in minutes without any additional setup time or stand mounting. In addition, channels and slots can be added with the same tool for access to the installation from pipes and conduit. Note: An ICS saw with shorter height bar, like the 814PRO or 603GC, is easier to use when cutting small openings.

1. Carefully layout the electrical box to be installed - 1 minute.

2. Carefully score cut the entire opening, working slowly to each corner. Use a small level on horizontal cuts - 2 minutes.

3. Plunge into the center of each cut avoiding the corners when pushing the saw in. Then slowly work the saw to the corners - 2 minutes.

TOTAL ELAPSED TIME: 5 MINUTES.

FREQUENTLY ASKED QUESTIONS

CAN A DIAMOND CHAIN CUT REBAR?

Yes, Number 4 or 5 (12 mm or 16 mm) bar is not a problem. Anything over number 8 (25 mm) is difficult. Large amounts of rebar will reduce chain life. Caution: Rebar or steel must be surrounded by concrete or aggregate material.

HOW LONG WILL A DIAMOND CHAIN LAST?

This depends on the material being cut, chain type, experience of the operator and how much rebar is present. For example, diamond chain on gas saws will typically cut 40 to 80 linear feet (12 to 24 meters) in 6-inch (15 cm) concrete. On hydraulic saws, this range is most often doubled

HOW LONG DOES A GUIDE BAR LAST?

Normally two or three chains. Heavy rebar can shorten bar life. The bar can be flipped over to extend life.

CAN A CONCRETE CHAIN SAW CUT DRY?

No. It is a wet cut system. 20 psi (1.5 bar) minimum is required.

IS “KICKBACK A SAFETY PROBLEM?

No. There is no rotational kickback. Wood cutting chain has sharp hooked teeth that can grab the wood causing kickback. Diamond chain grinds through concrete with very small teeth (diamonds) without hooks. The preferred method of starting a cut is to plunge straight into the wall. A firm footing and a two-handed grip is required and important for safety.

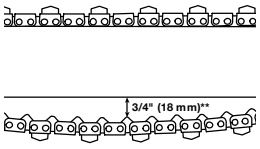
HOW FAST WILL A CONCRETE CHAIN SAW CUT?

This also depends on the material being cut, chain type, experience of the operator and how much rebar is present. Gas saws will typically saw 1 foot x 6 inches deep (30 cm x 15 cm) in 2 minutes. Hydraulic saws are even faster.

WHEN DOES THE CHAIN NEED TIGHTENING?

All chains have a tendency to stretch when used. Diamond chains stretch more than wood cutting chains because of the abrasive materials they are cutting. When a chain stretches to a point where the drive links are hanging approximately 1/2 - 3/4 (12 mm - 18 mm) below the bar, it s time to tension the chain.

** As measured without pulling downward (eg. hanging by gravity)

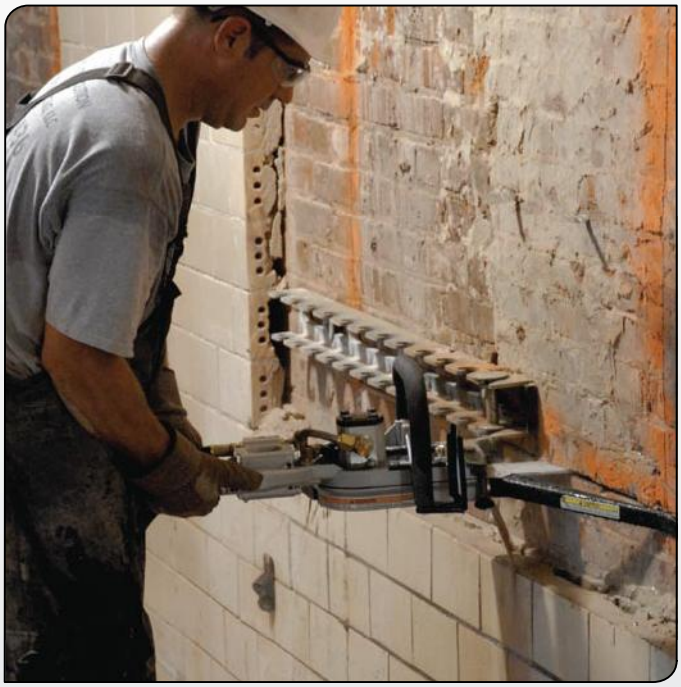


WHAT IS THE MIXTURE RATIO OF FUEL TO OIL?

25:1 (4%) fuel to oil mixture. It is best to use a separate gas container marked: ICS® 25:1 (4%). Use ICS formulated oil to provide maximum protection for the engine. ICS saws have a heavy duty cycle of up to 15 minutes of extended loading. 25:1 (4%) adds extra protection to your investment.

HOW OFTEN SHOULD THE KEY GAS SAW PARTS BE REPLACED?

Replace the air filter, rim sprocket, and guide bar every two to three chains.



TIPS FOR CUTTING SUCCESS

- Do not over-tension chain. Chain must move freely around guide bar when pulled by hand.
- 25:1 (4%) fuel to oil mixture. Use a separate gas container marked: ICS® 25:1 (4%). Use ICS formulated oil to provide maximum protection for the engine.
- Wet cut only. 20 psi (1.5 bar) minimum water pressure.
- Rinse with water and spray first with penetrant and then lightweight oil on saw, bar & chain, especially inside the recoil starter area. Start the saw after rinsing.