PRODUCT & APPLICATION CATALOG



THE COMPANY

Known as the world leader of Diamond Chain Technology[™], new patented designs and industry-leading innovations, ICS[®] specializes in diamond tools and equipment for the cutting, drilling, demolition and finishing of hard materials. ICS manufactures utility chain saws and diamond chain, which have revolutionized concrete cutting in the construction industry.

Headquartered in Portland, Oregon, as a division of Blount International, ICS also has a sales and distribution office

in Belgium and a worldwide network covering more than 70 countries. ICS concrete chain saws, diamond chains, and related products are sold and supported by a worldwide network of ICS Authorized Dealers and backed by a comprehensive network of factory trained personnel and service centers.





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ICS CUSTOMER SERVICE

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Trust the experience and product knowledge of the ICS^{*} Customer Service team to help you make the most of your investment in ICS products. Proud of their quick response time, our helpful representatives are available by phone or email to answer questions about maintenance and repair, to place orders for products and parts, direct you to a local dealer, and to make sure you are delighted with your ICS experience.



From the very beginning, the goal was to increase dependability, reduce downtime, and make the ICS concrete chain saw the tool of choice for serious cutters across the globe. After pioneering diamond chain technology, the next huge breakthrough came with the invention and patent of SealPro® which effectively uses micro O-rings to seal out abrasive materials from the moving parts of the chain, significantly reducing the chain-stretching abrasion caused by concrete slurry. SealPro® dramatically improved chain life.

Next, ICS[®] set out to build a diamond chain of unparalleled strength and durability. After years in development and reflecting all of the technology, experience, and customer feedback that could be brought to bear, FORCE4[®] is a



leap ahead in concrete cutting. Based on a patented design of the chain elements, it is an innovation-packed powerhouse that has proven to be another great milestone in ICS history, allowing ICS to build on the strength and proven track record of this chain into even more great new products like PowerGrit[®] Utility Saw Chain for cutting pipe.





PRODUCT HISTORY

Whether it's pioneering new concrete cutting technology, launching the world's first petrol-operated concrete chain saw, or leading the industry in online presence, ICS[®] has a long history of innovation, starting with an R&D exercise within Blount, Inc. that received its first patent for Diamond Chain Technology[™] (DCT[™]) in 1990. A year later, the 801H hydraulic saw helped launch the ICS brand in the U.S. and Europe.

Over the next decade, ICS continued to improve on design, rolling out a series of advances in both saws and diamond chains. 1994 saw the birth of the first saw to be completely designed by ICS, the 823H hydraulic. It was during this decade that ICS also unveiled the 623G, the first petrol powered concrete chain saw.

Over the course of two decades ICS has continued to leverage its industry knowledge and unique expertise to take the science of DCT[™] in new and inventive directions. In 1996, ICS used special grade diamonds and stronger chassis

- **1990:** Introduction of Diamond Chain Technology concept with first OEM sales.
- 1991: ICS Brand is launched in North American with the 801H, a hand-held hydraulic chain saw.
- 1994: Introduction of the 823H hydraulic chain saw, the first saw designed and produced completely by ICS.
- **1997:** Launch of the world's first petrol-powered concrete chain saw, the 623G, a 100 cc machine that wins rave reviews for its portability and versatility. A major breakthrough and growth milestone for ICS.
- **2000:** Launch of the 853PRO, a re-engineering of the original 823H platform to meet the specific needs of professional sawing and drilling contractors.
- **2001:** Patented SealPro* o-ring technology is introduced, a major advance in the durability of diamond chain. A major breakthrough and growth milestone.
- 2002: The 613GC, 80 cc petrol-powered saw is launched. Value priced to make the benefits of DCT affordable to a wider market and begins a period of unprecedented growth for ICS.
- 2005: Release of 60 cc petrol-powered saw sold under the Redzaw^{*} brand, the line proves the ability of ICS to continue to drive the cost of DCT[™] lower.
- 2007: The 680GC, a new 76 cc petrol-powered saw that represents a leap ahead in reliability and durability, is unveiled.
- 2008: Unparalleled FORCE4* diamond chain rolls out in combination with top-of-the-line 880F4 hydraulic saw, providing new levels of strength and durability.
- 2009: PowerGrit[®] Utility Saw Chain for ductile iron and other pipe cutting, opens new markets across the globe to the benefits of Diamond Chain Technology.
- 2010: The 695GC is introduced and replaces the 633 to become the newest, most technologically advanced and most powerful petrol-powered saw in the ICS line.
- 2012: A new motor and drive design accompanies the launch of the latest hydraulic powered flush cutting chain saw, the 880F4-FL.

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elements to create the first diamond chain engineered specifically for professional concrete cutters. This was followed by the patented SealPro[®] O-ring technology in 2000, a major improvement that advanced DCT[™] to a new level of durability and ease of use.

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In 2008, ICS continued its tradition of ingenuity by launching FORCE4^{*}, the toughest diamond chain ICS has ever created, paving the way for the 880F4 saw that same year. With the invention of PowerGrit^{*} in 2009, ICS has addressed operator safety with its revolutionary grinding technology by eliminating rotational kickback. This patented platform, exclusively from ICS, is designed to cut a variety of materials from ductile iron to plastic pipe with far less excavation. The ability to cut all the way through from one side radically reduces the difficulty of the job. Ingenuity and experience, combined with deep customer knowledge and a drive to bring the benefits of Diamond Chain Technology[™] to a wider market, are the ingredients in what is guaranteed to be a recipe for future success.

GUIDED BY CUSTOMERS

The best source of information for ICS engineers has always been the people whose livelihood depends on reliability, people who cannot afford downtime, people who expect engines to start, saws to cut, and have no patience whatsoever for apologies or excuses. If this sounds familiar, ICS products are built for you. The fact is nothing happens without the knowledge and experience of ICS customers.

From the superior engineering of the 695GC, a lightweight and portable tool designed to be the most reliable petrol saw ICS has ever produced, to the 880F4, a hydraulic powerhouse built specifically to handle the raw cutting power of FORCE4[®] chain, it took both your experience and that of ICS to make them happen. It turned out to be a great partnership.



POWERED BY INNOVATION

Innovative products are the hallmark of ICS, including FORCE4®, the toughest diamond chain ICS has ever created, the 880F4, a rugged hydraulic saw specially built to power FORCE4®, and the 695 model 94 cc petrol powered saw that represents a leap ahead in durability and reliability.



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PETROL POWER SAWS

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POWER AND PORTABILITY IN ONE TOOL

ICS^{*} petrol powered concrete chain saws are safe, versatile, and simple-to-operate tools that are valuable at any jobsite. Powerful and dependable two-stroke engines feature slurry-resistant crankshaft sealing and dust-proof air filtration, water-resistant electronic ignition, and a starter built to stand up to the extreme conditions of the concrete cutting environment. A wet-cutting system reduces dust and can be supplied by a standard garden hose. A built-in WallWalker^{*} provides leverage to reduce operator effort. Able to plunge cut up to 40 cm or cut perfectly square small openings with no overcuts, ICS petrol concrete chain saws should be in the back of every contractor's truck.

SAW SELECTION

In addition to cutting depth and power requirements, estimated frequency of use is important when selecting a saw. Use the chart below to determine the right saw for your cutting needs.



PETROL POWER SAWS



680GC PACKED WITH INNOVATIONS

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Built to meet the operational and flexibility demands of the general construction user, the 680GC stands alone in terms of reliability and value. Packed with innovations and loaded with dependability, the 680GC is the perfect saw for the less frequent user. The powerhead houses specially designed carburetion and ignition systems that work together to ensure easy starting, cooler operation and dependable performance at just about elevation. Improved airflow design keeps the engine much cooler, extending its life. Available with 30 cm and 35 cm guidebars and MAX series diamond chains.

680GC PRODUCT SPECIFICATIONS				
WEIGHT	9.6 kg without bar and chain			
BAR LENGTH	Up to 35 cm			
HORSEPOWER	3.7 kW @ 9500 rpm			
ENGINE TYPE	2-stroke, single cylinder, air cooled			
DISPLACEMENT	77 cm ³			
POWERHEAD DIMENSIONS	45 cm length 29 cm height 25 cm width			
NOISE LEVEL	100 dB @ 1 m			
VIBRATION LEVEL	10.5 meters/second ² (front handle)			
WATER SUPPLY	Minimum 1.5 bar			
FUEL MIX RATIO	25:1 Fuel to Oil (4%)			
FUEL CAPACITY	0.88 liter, 15-18 minutes run time per tank			

Petrol Power Saws

PETROL POWER SAWS



695F4 A POWERFUL FORCE

The 695F4 is compatible with ICS exclusive FORCE4^{*} technology. The 695F4/FORCE4 upgrade takes the power and performance of the new 695GC and combines it with the longest lasting, strongest diamond chain ever made. Further, the use of FORCE4 technology on the 695F4 allows the operator go beyond concrete and stone with the use of PowerGrit[®] Utility chain for cutting Ductile Iron, PVC, Insituform, Cast Iron, and HDPE pipe.

695F4 PRODUCT SPECIFICATIONS				
WEIGHT	9.6 kg without bar and chain			
BAR LENGTH	Up to 40 cm			
ENGINE SPEED	9300 +/- 150 rpm max, 2700 rpm idle			
POWERHEAD DIMENSIONS	48 cm length 36 cm height 30 cm width			
ENGINE TYPE	2-stroke, single cylinder, air cooled			
HORSEPOWER	6.4 @ 9000 rpm			
DISPLACEMENT	94 cc			
FUEL MIX RATIO	25:1 Fuel to Oil (4%)			
FUEL CAPACITY	1.0 liter, 17 - 20 run-time minutes per tank			
VIBRATION LEVEL	3.9/4.1 meters/sec ² (front/rear handle)			
WATER SUPPLY	Minimum 1.5 bar			

PETROL POWER SAWS





695GC PRODUCT SPECIFICATIONS				
WEIGHT	9.6 kg without bar and chain			
BAR LENGTH	Up to 40 cm			
ENGINE SPEED	9300 +/- 150 rpm max, 2700 rpm idle			
POWERHEAD DIMENSIONS	48 cm length 36 cm height 30 cm width			
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DISPLACEMENT	94 cc			
FUEL MIX RATIO	25:1 Fuel to Oil (4%)			
FUEL CAPACITY	1.0 liter, 17 - 20 run-time minutes per tank			
VIBRATION LEVEL	3.9/4.1 meters/sec ² (front/rear handle)			
WATER SUPPLY	Minimum 1.5 bar			

695GC POWERFULLY VERSATILE

The 695GC, at only 9.6 kg, yet 6.4 hp, provides all the power to tackle the toughest concrete, stone and masonry. Further, new product enhancements on this saw dramatically improve the user experience by dampening vibration and sound without sacrificing power and performance. Perfect for the everyday general construction user or professional sawing & drilling contractor, the 695GC offers up to 40 cm deep, narrow cutting and square corners with less effort than other methods.

Choose the 695GC to run our line of **MAX** diamond chains or upgrade to the 695F4 to utilize our revolutionary **FORCE4**^{*} Diamond Chains for all of your concrete, stone, and masonry cutting needs.





HYDRAULIC POWER SAWS

FOR THE SERIOUS CUTTER

Quiet and smooth, powerful and rugged, ICS^{*} hydraulic concrete chain saws are built for the professional concrete cutter. With features that include a built-in WallWalker^{*} for easier cutting, trigger-activated valve for on-demand water, and a modular design for easier servicing, these saws are designed specifically for those who make a living cutting concrete. From the powerful 880F4 to the compact 814PRO, there is an ICS hydraulic saw for every application, whether it's cutting a small mechanical opening or taking down an entire wall. Square corners and no overcuts mean less time is needed to complete projects.

SAW SELECTION

In addition to cutting depth and power requirements, estimated frequency of use is important when selecting a saw. Use the chart below to determine the right saw for your cutting needs.



HYDRAULIC POWER SAWS



880F4 A GREAT SAW WITH A BAD ATTITUDE

The 880F4 cutting system offers the superior strength of FORCE4^{*} technology in a package that meets industry standards of design and ergonomics. Built for the hardcore cutter, this sleek powerhouse is packed with features designed to make it the hardest working saw ICS has ever made.



880F4-FL MAKES FLUSH CUTS FAST AND SIMPLE.

The superior strength and technology of the 880F4 with the added benefit of a unique flush-cut design. This flush-cut feature allows the 880F4-FL to cut within 4.8 mm from walls or floors bringing the precision of Diamond Chain Technology™ to a new level. Available in both 30 and 45 lpm models.

WEIGHT	30 LPM	45 LPM		
WEIGHT	10.4 kg without bar and chain			
BAR LENGTH	Up to 63 cm			
MOTOR SPEED	6100 rpm 6500 rpm			
POWERHEAD DIMENSIONS	58.5 cm length 26.5 cm height 24 cm width			
TORQUE	13.8 Nm 19.2 Nm			
HORSEPOWER	8.6 kW 13 kW			
HYDRAULIC SUPPLY	30 lpm, 172.5 bar) 45 lpm 172.5 bar			
NOISE LEVEL	98 dB @1m (Sound pressure level) 107 dB@1m (Sound power level)			
VIBRATION LEVEL	2.0 m/second ² (front handle) 6.0 m/second ² (rear handle)			
WATER SUPPLY	Minimum 1.5 bar			

880F4 & 880F4-FL PRODUCT SPECIFICATIONS

 Product data shown is rated based on maximum input conditions and efficiency assumptions and may vary dependent on power supply.

The 880F4 combined with PowerGrit[®] Utility Saw Chain Offers a Great Solution for Cutting Ductile Iron Pipe.





HYDRAULIC POWER SAWS



814PRO BIG PERFORMANCE IN A SMALL PACKAGE

It may be small, but with as much power as its big brother the 880F4, the 814PRO is ready for the big jobs. Lighter than other hydraulic saws with the ability to cut perfectly square openings as small as 9 cm, the 814PRO is a natural for utility work and other applications where a mix of portability and power are required.

814PR0 PRODUCT SPECIFICATIONS				
WEIGHT	5.8 kg without bar and chain			
BAR LENGTH	32 cm			
MOTOR SPEED	8800 rpm			
POWERHEAD DIMENSIONS	36.3 cm length 28.7 cm height 23.4 cm width			
TORQUE	9.5 Nm			
HORSEPOWER	8.6 kW			
HYDRAULIC SUPPLY	30 lpm, 172.5 bar			
NOISE LEVEL	88 dB @ 1 m			
VIBRATION LEVEL	3.5 meters/second2 (front handle)			

 WATER SUPPLY
 Minimum 1.5 bar (20 psi)

 • Product data shown is rated based on maximum input conditions

and efficiency assumptions and may vary dependent on power supply.



DIAMOND CHAINS

DIAMOND CHAIN TECHNOLOGY™

Diamond Chain Technology[™] is a revolution in concrete cutting. Diamond segments laser-welded to a steel chassis grind through concrete and other aggregate material, eliminating kickback and the damage that percussive methods can cause. This remarkable property allows ICS[®] saws to plunge cut up to 63 cm into the hardest concrete or make perfectly square corners with no overcuts. The patented SealPro[®] design reduces wear and extends chain life. Available in a variety of configurations to match specific applications, there is an ICS diamond chain ready to meet any cutting challenge. As the inventors of Diamond Chain Technology[™], ICS is committed to continually improving the quality and versatility of this important advance in concrete cutting.

DIAMOND CHAIN SELECTION CHART								
		680/ 695GC	695F4	880F4	Soft Abrasive/ Brick	Natural Stone	Medium Concrete/ Light Reinforcement	Hard Concrete/ Heavy Reinforcement
MAX SERIES	TwinMAX™	•			•	•	•	
	TwinMAX [™] Plus	•				•	•	•
	TwinMAX [™] Abrasive	•			•			
FORCE4 SERIES	ProFORCE™		•	•		•	•	•
	ProFORCE™L		•	•		•	•	•
	ProFORCE [™] S		•	•			•	•
	ProFORCE [™] Abrasive		•	•	•			

DIAMOND CHAINS

DIAMOND CHAINS

MEET THE FORCE IN CONCRETE CUTTING TECHNOLOGY: FORCE4®

Designed to be the strongest, longest lasting diamond chain ever made, FORCE4* is on the cutting edge of Diamond Chain Technology[™].



New rivet design means less stretch Deep engagement drivelinks help keep cuts straight

Water distribution feature allows for better lubrication between bar and chain

Patented SealPro* O-ring and bumper design for smooth cutting performance and maximum life

Compare the size of FORCE4* against standard chain

FORCE4° DIAMOND CHAIN REQUIRES UNIQUE FORCE4° COMPONENTS

FORCE4° DRIVE SPROCKET

Upgraded guide ring design distributes load for greater durability



Tool steel alloy guarantees exceptional strength, life, and abrasion resistance

FORCE4° GUIDEBAR

Laser-cut internal water channels keep the nose sprocket lubricated Available in 25, 38, 50, and 63 cm cutting depths



Deep groove stabilizes FORCE4's chassis for straighter, cleaner cuts

FORCE4° has been proven to have 1.5 times the tensile strength of standard chains.



USER TIP

A new user can experience up to 50% less chain life with the first chain than a second chain. This is because the learning curve for breaking-in a chain, learning how to cut properly and cutting straight greatly improves after the first few hours of cutting. For this reason, a second chain is recommended with saw purchase. Operators will not only experience greater chain life on the second chain but also faster and straighter cuts.

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CHAINS

DIAMOND CHAINS



FORCE4° DIAMOND CHAIN

From the company that revolutionized concrete saws comes a revolution in diamond chains: FORCE4[®]. Designed to be the strongest, longest lasting diamond chains ever made, the ProFORCE[™] series delivers unrivaled performance in professional cutting applications.

ProFORCE[™]

Tough general purpose diamond chains that excel in common cutting jobs.

ProFORCE[™] PREMIUM L

Delivering longer life in hard aggregate, this is the best choice when faced with the more demanding jobs.

ProFORCE[™] PREMIUM S

Speed and strength in one chain. Built to cut fast in medium to hard concrete.

ProFORCE[™] ABRASIVE

A heavy duty diamond chain that excels in the harshest cutting environments.



INSIST ON GENUINE ICS DIAMOND CHAINS WITH SEALPRO[®]





MAX SERIES DIAMOND CHAIN

Designed to be used with the full line of ICS petrol powered chain saws (except 695F4), these chains offer the ultimate combination of versatility and affordability. Named for the patented double-bumper design, TwinMAX[™] chains feature smooth cutting performance and easy installation.

TwinMAX*

A good general purpose chain that will handle 80% of cutting jobs, this diamond chain is designed to be affordable and user-friendly.

TwinMAX[™] PLUS

Built to tackle harder materials and more steel, TwinMAX[™] Plus is a long-lasting general purpose diamond chain.

TwinMAX[™] ABRASIVE

A special diamond concentration and harder bond make this diamond chain perfect for cutting through highly abrasive aggregate like brick and sandstone.





SAFER. FASTER. EASIER.

The ICS Utility chain saw, equipped with PowerGrit® utility chain has addressed operator safety with its revolutionary grinding technology with the elimination of rotational kickback and improved operator positioning when cutting pipe. This patented platform, exclusively from ICS, is designed to cut a variety of materials from ductile iron to plastic pipe with far less excavation. The ability to cut all the way through from one side radically reduces the difficulty of the job. Complete your next job safer, faster and easier with ICS Utility chain saws.

PRODUCT BENEFITS:

- NO ROTATIONAL KICKBACK
- SINGLE-POINT ACCESS
- BETTER OPERATOR CONTROL
- SAFETY NOT COMPROMISED
- NO FLYING DEBRIS OR DUST
- CUTS MULTIPLE MATERIALS:
- DUCTILE IRON PIPE
- CAST IRON PIPE
- PVC PIPE
- HDPE PIPE
- INSITUFORM PIPE LINING
- ASBESTOS* CONCRETE PIPE



CONVENTIONAL METHOD



POWERGRIT® METHOD

- INCREASED SAFETY
- IMPROVED OPERATOR CONTROL
- REDUCED EXCAVATION
- BETTER ACCESS
- VERSATILITY

ICS UTILITY SAW CHAI

- Cutting depth of 38 cm/40 cm, 50 cm & 63 cm
- No rotational kickback
- Gyroscopic motion eliminated
- Chain stops quickly after throttle released
- Reduced excavation below the pipe
- Cutting depth allows for single side access
- \cdot Direct drive sprocket eliminates slippage

CONVENTIONAL METHOD

- \cdot Cutting depth of 10 cm 12 cm
- · Operator exposed to potential rotational kickback
- Gyroscopic motion reduces saw control
- Blade continues turning after throttle is released
- · Excess excavation needed to cut below the pipe
- $\boldsymbol{\cdot}$ Access to both sides of pipe is required
- Blade slips when belts get wet

Observe all local and national excavation regulations

* Asbestos is a hazardous material, known to cause serious respiratory diseases. Cutting into asbestos can release asbestos fibers into the air. Always research and follow the correct safety procedures, including applicable national and state or provisional occupational health and safety regulations, and protect yourself and those around you from asbestos-related disease. Always arrange for the material to be removed safely by a qualified person. ICS is not responsible for exposure to asbestos caused by use of this product.



695PG BEYOND CONCRETE

The 695PG uses ICS exclusive FORCE4® technology, the longest lasting, strongest diamond chain ever made, allowing the operator go beyond concrete and stone with the use of PowerGrit® Utility chain for cutting Ductile Iron, PVC, Insituform, Cast Iron, and HDPE pipe.

695PG	PRODUCT SPECIFICATIONS
WEIGHT	9.6 kg without bar and chain
BAR LENGTH	Up to 40 cm
ENGINE SPEED	9300 +/- 150 rpm max, 2700 rpm idle
POWERHEAD DIMENSIONS	48 cm length 36 cm height 30 cm width
ENGINE TYPE	2-stroke, single cylinder, air cooled
HORSEPOWER	6.4 @ 9000 rpm
DISPLACEMENT	94 cc
FUEL MIX RATIO	25:1 (4%) fuel-to-oil
FUEL CAPACITY	1.0 liter, 17 - 20 minute run-time per tank
VIBRATION LEVEL	3.9/4.1 meters/sec ² (front/rear handle)
WATER SUPPLY	Minimum 1.5 bar



880PG

THE NEW STANDARD FOR CUTTING PIPE

The 880PG takes the superior utility of the 880 series hydraulic power head and combines it with ICS proprietary PowerGrit[®] Utility chain to create the ultimate way to cut ductile iron, PVC, Insituform, cast iron, and HDPE pipe in the ditch. Safer, more reliable than old methods and no fumes in the ditch.

880PG PRODUCT SPECIFICATIONS					
WEIGHT	30 LPM	45 LPM			
WEIGHT	10.4 kg without bar and chain				
BAR LENGTH	Up to 63 cm				
MOTOR SPEED	6100 rpm 6500 rpm				
POWERHEAD DIMENSIONS	58.5 cm length 26.5 cm height 24 cm width				
TORQUE	13.8 Nm	19.2 Nm			
HORSEPOWER	8.6 kW 13 kW				
HYDRAULIC SUPPLY	30 lpm 172.5 bar 45 lpm 172.5 ba				
NOISE LEVEL	98 dB @1m (Sound pressure level) 107 dB@1m (Sound power level)				
VIBRATION LEVEL	2.0 m/second ² (front handle) 6.0 m/second ² (rear handle)				
WATER SUPPLY	Minimum 1.5 bar (20 psi)				
Product data shown is rated based on maximum input conditions and efficiency assumptions and may vary dependent on power supply					



880PG PIPE CLAMP ACCESSORY

In addition to the time saving value of PowerGrit technology, the pipe clamp accessory developed for the underground pipe application brings a whole new level of safety, accuracy and ease of use to the job. With a simple adaptor, you can mount your 880 hydraulic saw to this clamp and dramatically reduce the effort of handling the saw, while providing a solid, stabile cutting platform that also improves operator safety and the precision of the cut.

For 880PG Hydraulic Saw Only.

WORK-PROVEN ACCESSORIES FOR EVERY JOB

Whether it's power for a saw or a way to keep the jobsite cleaner, there is an ICS[®] accessory that gets the job done. 20 years of experience and a whole lot of ingenuity has gone into making these work-proven products an indispensable complement to your ICS concrete chain saw.

PORTABLE POWER FOR THE PROFESSIONAL CUTTER

ICS petrol operated power packs are a dependable, self-contained source of hydraulic power that offer superior cooling capacity. The functional, ergonomic design makes them easily transportable to any job site.

P95 13.5 kW POWERPACK

Affordable hydraulic power with exceptional cooling capability in an easy to carry package. Adjustable for 20 lpm or 30 lpm operation.

P110 17 kW POWERPACK

Step up to the power of the newest addition to the ICS line of reliable powerpacks. Adjustable to 30 lpm or 45 lpm operation.

*The P110 may not be available in all markets.

P95 13.5 KW POWERPACK ENGINE 13.5 kW One 20 lpm or CAPACITY one 30 lpm circuit LENGTH 94 cm WIDTH 58 cm HEIGHT 73 cm WEIGHT (WET) SINGLE CIRCUIT BRIGGS 150 kg FUEL TANK CAPACITY 26 litres ESTIMATED PETROL CONSUMPTION PER HOUR 5 litres HYDRAULIC RESERVOIR CAPACITY 11 litres RELIEF VALVE "CRACK" SETTING 145 bar FULL RELIEF SETTING 172 bar

P110 17 KW POWERPACK				
ENGINE	17 kW			
CAPACITY	One 30 lpm or one 45 lpm circuit			
LENGTH	94 cm			
WIDTH	58 cm			
HEIGHT	73 cm			
WEIGHT (WET) SINGLE CIRCUIT BRIGGS	150 kg			
FUEL TANK CAPACITY	23 litres			
ESTIMATED PETROL CONSUMPTION PER HOUR	5 litres			
HYDRAULIC RESERVOIR CAPACITY	11 litres			
RELIEF VALVE "CRACK" SETTING	145 bar			
FULL RELIEF SETTING	172 bar			

ICS

WATER TANK

When water isn't readily available, this corrosion resistant poly tank provides the solution. Able to hold up to 94 liters, this tank offers the required pressure and flow that ICS saws require. The diaphragm High-Flo pump provides 3.75 lpm at 2.4 bar and comes with molded alligator clips for 12 v battery hookup. Comes with a whip fitted with a standard hose end, ready for any regular hose you desire.



REDUCE OPERATOR FATIGUE AND EXTEND CHAIN LIFE WITH SPEEDHOOK®

SpeedHook® is an ingenious accessory designed to support the weight of ICS Hydraulic saws, dramatically reducing operator effort and extending chain life. Attaching quickly and easily, SpeedHook* is convertible to left-hand or right-hand operation, and expandable with 107 cm sections. SpeedHook* has been redesigned to include a new plastic cam to ensure even straighter cuts with less operator know-how.

*Speedhook is not compatible with all saws. Please check compatibility before purchasing.





PROTECT YOUR INVESTMENT

Intensive laboratory and field testing have resulted in an oil formula that is cleaner burning, provides better thermal protection and an improved film

barrier reducing piston ring wear. Protect your investment with workproven ICS 2-stroke engine oil. Important: Failure to use ICS Oil and a 25:1 (4%) fuel to oil ratio could result in premature engine failure and/or up to a 90% reduction in engine life.







THE PARTS YOU NEED TO **STAY ON THE JOB**

Whether you need an air filter or a complete motor, ICS carries a wide selection of replacement parts, shipped fast!



FLOW ADAPTER VALVE

Enjoy the convenience and efficiency of powering your ICS hydraulic saw from skid steers, backhoes, and other common construction equipment. Available for both 30 lpm and 45 lpm saws.

CONTAIN SLURRY WITH TSS™

The Total Slurry Solutions systems provide an easy way to contain and dispose of slurry produced when wet-sawing in concrete, stone, or masonry. The TSS[™] Vacuum attachment fits all ICS hydraulic saws and can be used with most industrial wet-cutting vacuum systems to recover most of the water and slurry

produced when wet-cutting.



U.S.A. to Australia, Europe to Japan, ICS^{*} products are used across the world. The unrivaled versatility of Diamond Chain Technology[™] makes ICS products indispensable 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.

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 - 3 minutes.



2. Mount the drill stand - 5 minutes.



3. Attach and tighten a core bit - 1 minute.



4. Drill the hole - 12 minutes.



5. Remove the core bit and stand - 15 minutes.

TOTAL ELAPSED TIME: 36 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 - 32 minutes.



4. Use a chipping hammer with a chisel bit to clean the hole - 37 minutes.

Note: As seen in the photo, use of percussive tools can crack openings.

TOTAL ELAPSED TIME: 105 MINUTES.

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 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.



TOTAL ELAPSED TIME: 15 MINUTES.

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

TOTAL ELAPSED TIME: 10 MINUTES.

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[™].

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

- 10 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.

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- 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.

AC UNIT INSTALL ICS VS. RING SAW

Diamond Chain Technology[™] allows ICS concrete chain saws to create openings less than 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 35 cm. In addition, square corners are only possible to 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.

1. Score the entire cut, plunging the bar 2.5 cm 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 .64 cm (1/4 inch) gap on all sides, with perfectly square corners, a clean finish, and no chance for leaks.

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

TOTAL ELAPSED TIME: 15 MINUTES.

RINGSAW METHOD

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

- Score cut the entire opening (note that dust is created until the blade is more than 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 35 cm.

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

MECHANICAL OPENINGS

Mechanical openings smaller than 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 2371 kg/cu. meter. Pay special attention to shifting materials and proper cutting sequence when making larger openings.

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.

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 660GC, is easier to use when cutting small openings.

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

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

3. Carefully finish each corner.

TOTAL ELAPSED TIME: 14 MINUTES.

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

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

 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.

 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.

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.

CAN A DIAMOND CHAIN CUT REINFORCED STEEL?

Yes, 12 mm or 16 mm bar is not a problem. Anything over 25 mm is difficult. Large amounts of steel will reduce chain life. Caution: 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 steel is present. For example, diamond chain on petrol saws will typically cut 12 to 24 meters in 15 cm concrete. On hydraulic saws, this range is most often doubled.

HOW LONG DOES A GUIDEBAR LAST?

Normally two or three chains. Heavy steel 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. 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 twohanded 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. Petrol saws will typically saw 30 cm x 15 cm deep in 2 minutes. Hydraulic saws are even faster

WHEN DOES THE CHAIN NEED TIGHTENING?

All chaints have a tendency to stretch when used. Diamond chains stretch more than wood cutting chains because of the abrasive tmaterials they are cutting. When a chain stretches to a point where the drive links are hanging approximately 12 mm - 18 mm below the bar, it's time to tension the chain

WHAT IS THE MIXTURE RATIO OF FUEL TO OIL?

4% Oil to Fuel mixture. It is best to use a separate fuel container marked: ICS® (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. 4% adds extra protection to your investment

HOW OFTEN SHOULD THE KEY PETROL SAW PARTS BE REPLACED?

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

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TIPS FOR CUTTING SUCCESS

- Do not over-tension chain. Chain must move freely around guidebar when pulled by hand.
- 4% Oil to Fuel mixture. Use a separate petrol container marked: ICS® 4%. Use ICS formulated oil to provide maximum protection for
- Wet cut only. 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.

ICS[®] IS AVAILABLE AROUND THE GLOBE. See our dealer locator at: icsbestway.com

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