



**BEAMCUT**™  
SYSTEMS

**ROBOTIC PLASMA CUTTING SYSTEMS**

## ABOUT BEAMCUT

Beamcut is part of the Machitech Automation manufacturing group with 17 Years of Dedicated Experience, 1500 Machines in Service Worldwide and 98% Customer Referral. There's no machine quite like BeamCut, a 6-axis robotic CNC cell that uses high definition plasma technology to cut metal profiles for every structural steel and miscellaneous metals industry. With the push of a button, all the bothersome manual layout work and cutting and grinding goes away. With BeamCut, you are automated in every aspect of structural fabrication. Productivity goes up 80% with the same number of employees.

## OUR MISSION

We created Beamcut to give our customers maximum optimization of their manufacturing processes. Our proprietary operating system is a user friendly, versatile, 3D cutting platform that comes complete with exceptional Lifetime aftermarket support. Our mission is simple: "Give Customers a Lifetime of Exceptional Customer Support, and We Will Always Have Customers."



## ADVANTAGES

- Minimizes the amount of space needed on the floor
- Reduces maintenance needs (costs/delays due to interruptions).
- Reduces your operating expenses (gas, electricity, parts, etc.).
- Replaces traditional angle lines, beam drill lines, band saws, hydraulic punches and hydraulic iron workers.
- Eliminates manual coping, manual weld prep beveling and traditional cutting and grinding.
- Reduces material handling and the associated risks of accidents.
- Our safety latch work envelope access door will help lower insurance costs and our safety enclosure prevents the OSHA health risks of plasma smoke - polluted air syndrome.

## BENEFITS

- Very Fast Return on Investment (ROI)
- Reduces Production Labor Costs
- Increases Production Capability Quotas
- Reduces Production Downtime
- Improves Part Repeatability and Accuracy
- Eliminates Common Production Mistakes
- Improves the aesthetic value, quality and workmanship of your manufacturing
- Ability to take on more jobs with the same number of employees
- Fulfills more complex jobs



## MADE FOR STRUCTURAL FABRICATORS.

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- Buildings and Bridges
- Arenas and Stadiums
- Shipbuilding
- Pipe Racks
- Stair Stringers and Skids
- Embeds
- Power Transmission Towers and Solar Panels
- Equipment Fabrication
- Industrial
- Trailer Frames
- Pump Jacks
- Mining and Oil Rigs
- Elevators and Conveyors
- Miscellaneous and Decorative Metals

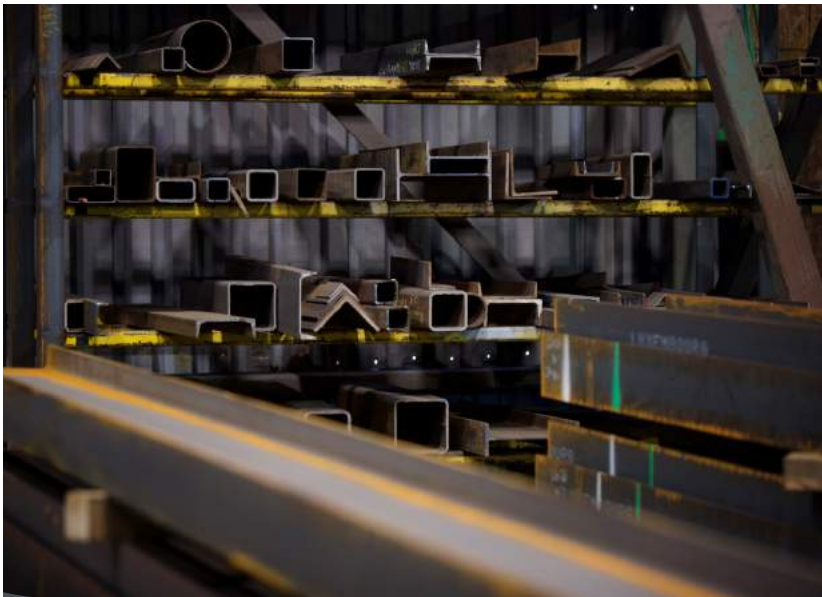
# FEATURES

## SPEED AND PRECISION



The Robot is equipped with a Photo-Laser Measuring Device and a mobile measuring cart, allowing automatic split-second profiling and positioning of your piece and guarantees the most precise cut possible. The mobile measuring unit and the infeed and outfeed conveyors increases the output by reducing material handling. Your Beamcut will quickly pay for itself by meeting your customer's deadlines.

Beamcut is the only Structural Fabrication Robot that lets you manually calibrate the machine before production runs.



## VERSATILITY



More than just precise and quick, Beamcut lets you cut every structural profiles. There are many industry leading options available for your Beamcut such as the Round Tube Cutter and Sheet Cutting Water Table. It's guaranteed to meet your every need.

***" BEAMCUT IS THE ONLY STRUCTURAL FABRICATION ROBOT THAT LETS YOU MANUALLY CALIBRATE THE MACHINE BEFORE PRODUCTION RUNS"***

## USER-FRIENDLY



Beamcut is very easy to use and requires very little training for those operating it. Developed in partnership with operators and CNC technicians, the software is intuitive and user-friendly. It comes equipped with a user interface that is simple to use.

## 4 SIDES CUTTING



Also called "4 sided", 3D cuttings allows pieces to be cut 360°.

# BEAMCUT STANDS FOR

## A TEAM OF EXPERTS AT YOUR DISPOSAL

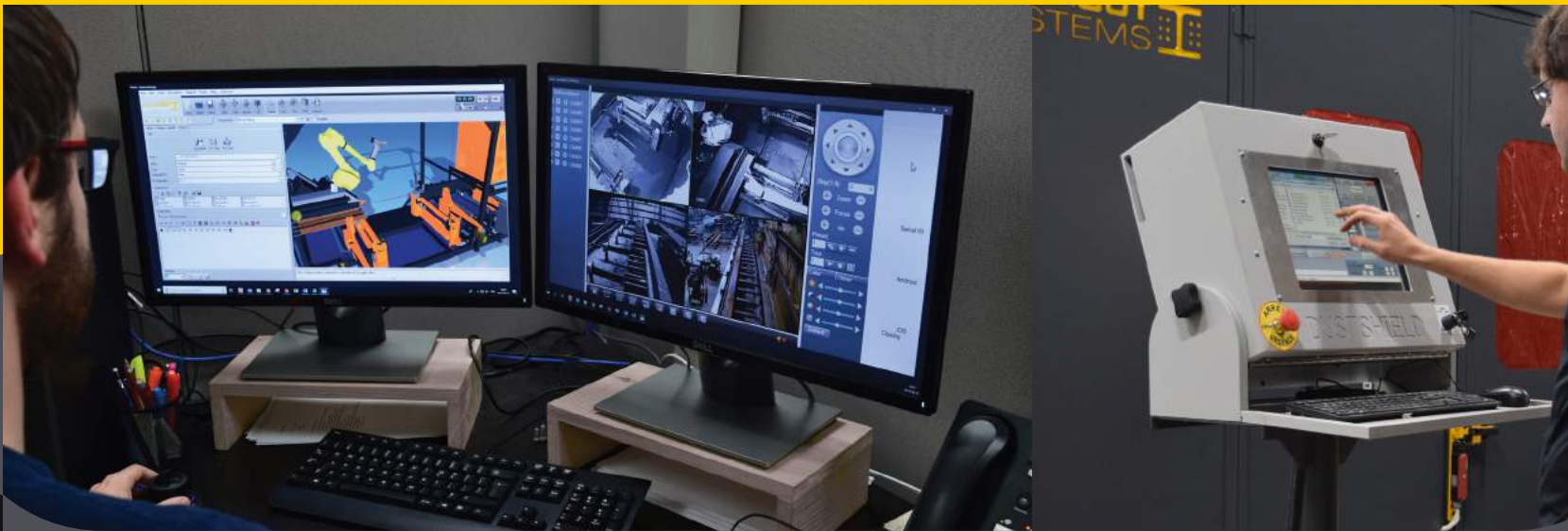
With Beamcut, you get LIFETIME remote support. Our team of experts ensures the best quality cuts and highest productivity. Our team is happy to help!

- Our specialists are attentive to your needs. They will give you the comprehensive advice you need and will provide solutions that will exceed your expectations.
- Our equipment is designed, manufactured and assembled by dedicated and qualified technicians who are committed to delivering the highest quality product and ensuring your complete satisfaction.

## SUPPORT, TRAINING AND SERVICE

Our customer service department will take care of any issue you have. Our highly trained and experienced technicians are always available to provide assistance for any problem or question you may have.

- Training programs tailored to your specific skill level.
- Careful installation of your equipment according to your specifications.
- Support and Service you can depend on.



## WORLD-CLASS SUPPLIERS

Our outstanding suppliers enable us to locate the parts used in the manufacturing of our equipment quickly and easily in any country. We choose our suppliers based not only on quality but also innovation, new product development and the technical support they provide.

**Hypertherm**

**Allen-Bradley**

**FANUC**  
Robotics

**Rexroth**  
Bosch Group

# SPECIFICATIONS

## BEAMCUT SOFTWARE ①

Beamcut Soft is our proprietary software used to program robotic trajectories. Beamcut operates using DSTV files from 3D profiling software and 2D DXF AutoCAD files. Once your files are imported, BeamCut Soft automatically simulates the cutting sequence. The automatic cutting trajectory is created and verified on the drafting computer instead of the machine. Why is that such a big deal? That means the operator and the Beamcut are free to do what they're meant to; Cut Beams.

## SAFETY CABINET & SMOKE TRAP ②

The safety enclosure is state of the art. It serves to delimit the space reserved for robotic cutting and the circulation area around the system. Our safety latch work envelope door allows for easy access and will shut the machine down if opened during production. In addition, an air outlet with a market leading 4250 CFM blower makes it possible to extract the smoke (dust collector not included - optional) and prevents health risks associated with plasma smoke. The safety cabinet complies with OSHA and Canadian safety standards and may help lower insurance costs.



***" NO SPECIAL TRAINING REQUIRED. IF THE OPERATOR CAN USE A CELLPHONE, HE CAN OPERATE BEAMCUT "***

## INFEED AND OUTFEED CONVEYORS

The Infeed and Outfeed Conveyors ensure precise and quick positioning of the material. They are manufactured of 4" heavy duty rollers mounted on pillow-blocks on solid heavy duty welded frame. A motor that is located in the central unit drives the conveyor rollers.

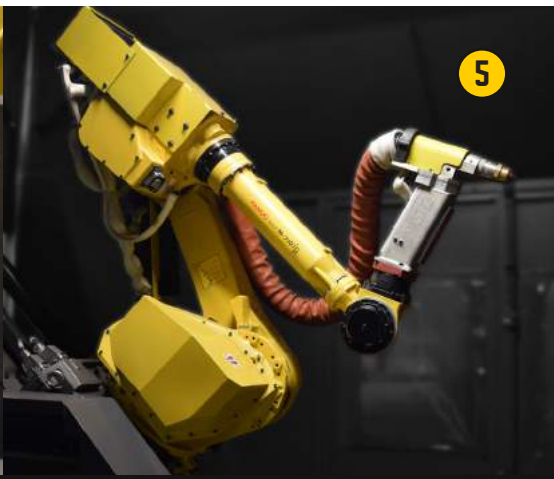
## MOBILE MEASURING UNIT ③

Our mobile measuring ensures continuous monitoring of the piece length by moving along the infeed conveyor following the piece. Its special design makes up to 2x more precise than other measuring devices.



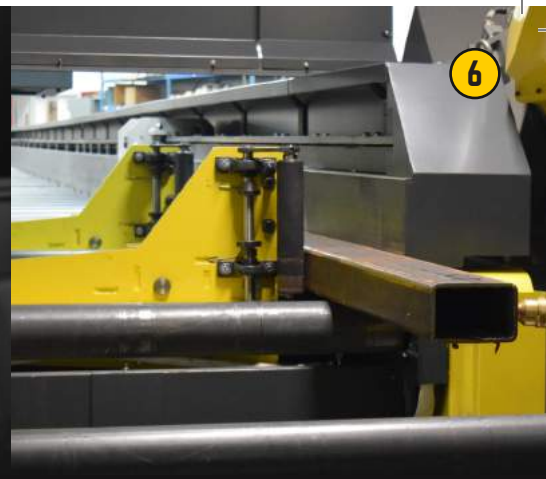
## PHOTO-LASER MEASURING DEVICE ④

Our custom Photo-Laser Measuring Device is unique to the industry allowing automatic split-second profiling and positioning of your piece and guarantees the most precise cut possible.



## 6-AXIS FANUC ROBOTIC ARM ⑤

The 6-axis industrial FANUC Robotic Arm ensures best in class cut quality by eliminating motion sway and cutting vibration. Whats special about ours? It's more than 4x stronger and more powerful than the closest competition resulting in faster and more precise cuts.



***" A ROBOT MORE THAN 4X STRONGER AND MORE POWERFUL THAN THE CLOSEST COMPETITION RESULTING IN FASTER AND MORE PRECISE CUTS. "***

## HYDRAULIC UNIT ⑥

Beamcut uses hydraulic clamps to correct the positioning of pieces on the infeed conveyor and to firmly hold round profiles in place preventing them from rotating when moving. Its main purpose is to hold the pieces in place so that they do not move when the robot is cutting.

## OPERATOR CONTROL SYSTEM

The Operator Control System is an industrial grade touch screen computer that is both powerful and easy to use. It features the most advanced windows based operating systems on the market.

## HYPERTHERM PLASMA

Hypertherm's versatile plasma systems have been designed and built for maximum efficiency and productivity for x-y cutting, chamfering and robotics operations. Combined with the FANUC robot arm, it produces perfect bolt holes with no taper.

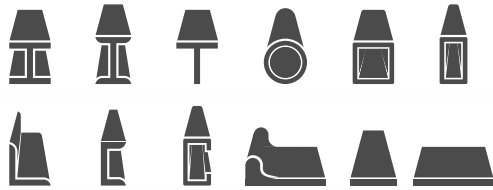
## REMOTE REAL-TIME MONITORING

The Beamcut is equipped with four cameras that capture all of the activity that is taking place around the Beamcut, even if you're not there to see it happen! They're accessible over the internet so you can monitor your production, anywhere you are.

# MODELS COMPARISON CHART

## VERSATILITY

More than just precise and quick, Beamcut allows you to cut many kinds of profiles and cuts. There are many options available with your robot, it's guaranteed to meet your every need!



## STRUCTURAL

### MINIMUM

### MAXIMUM

H Beam	4" x 4"	36" x 16"
I Beam	4" x 4"	36" x 16"
T Beam	H Beam cut in half	
Pipe (diameter)	1.5" (Optional)	16" (Optional)
HSS Square	1.5" x 1.5"	16" x 16"
HSS Rectangular	1.5" x 2"	16" x 12"
Angle	1.5" x 1.5"	8" x 8"
C channel	4" x 2"	36" x 4"
Bulb flat	2"	18"
Flat	2" x 3/8"	36"
Sheet and Bar Grading	5' x 10' (Optional)	
Min. beam length	4'	
Max. beam length	65'	
Material faces	4	
Plasma unit	Hypertherm XPR300	
Thickness	Piercing: 2", Edge start: 3 1/8"	
Welding prep. bevel	52°	
Etching and Marking	Yes	
Infeed and Outfeed Cross Transfer Conveyors	Optional	
Second Access Door	Optional	
Dust Collector	Optional	
Cutting table (plate)	Optional, includes ProNest Software	
Hypertherm Plasma Unit HPR400XD	Optional	

## OPTIONS AVAILABLE

### CROSS TRANSFER CONVEYOR

The Cross Transfer Conveyor system creates a platform for increased output by reducing material handling. It can be added to the infeed or outfeed conveyor to avoid loading/unloading the piece directly onto the conveyor.

### SECOND ACCESS DOOR

An additional access door can be installed on the opposite side and / or corner of your cutting enclosure, depending on your needs

### DUST COLLECTOR

The dust collector that Beamcut offers is both compact and robust. Its strength: a superior filtration capacity. A cartridge dust collector that is equipped with a device for cleaning using a compressed air jet, then filters very fine particles in moderate concentration. Industry leading 4250 CFM.

***" BEAMCUT SYSTEMS CAN PRODUCE UP TO 10 TIMES FASTER THAN ANY TRADITIONAL CUTTING METHOD "***



### SHEET-CUTTING WATER TABLE

A cutting table can be added to your Beamcut Structural for cutting sheets. You will also be able to use your robot more efficiently because while your pieces are being loaded on the conveyor, you can use the robot on the cutting table and we include the nesting software, the robot mount over the rail.

### ROUND TUBE CUTTER

This system prevents round tubes from rotating while being cut, simplifying the cutting of round tubes on Beamcut.

# HYPERTHERM PLASMA

**Hypertherm**<sup>®</sup>  
SHAPING POSSIBILITY™

## XPR300 plasma cutting system

The new XPR300<sup>®</sup> represents the most significant advance in mechanized plasma cutting technology, ever. This next generation system redefines what plasma can do by expanding its capabilities and opportunities in ways never before possible. With unmatched X-Definition™ cut quality on mild steel, stainless steel and aluminum, the new XPR300 increases cut speed, dramatically improves productivity and slashes operating costs by over 50%. New ease-of-use features and engineered system optimization make the XPR300 easier to run with minimal operator intervention, while also ensuring optimal performance and unmatched reliability.



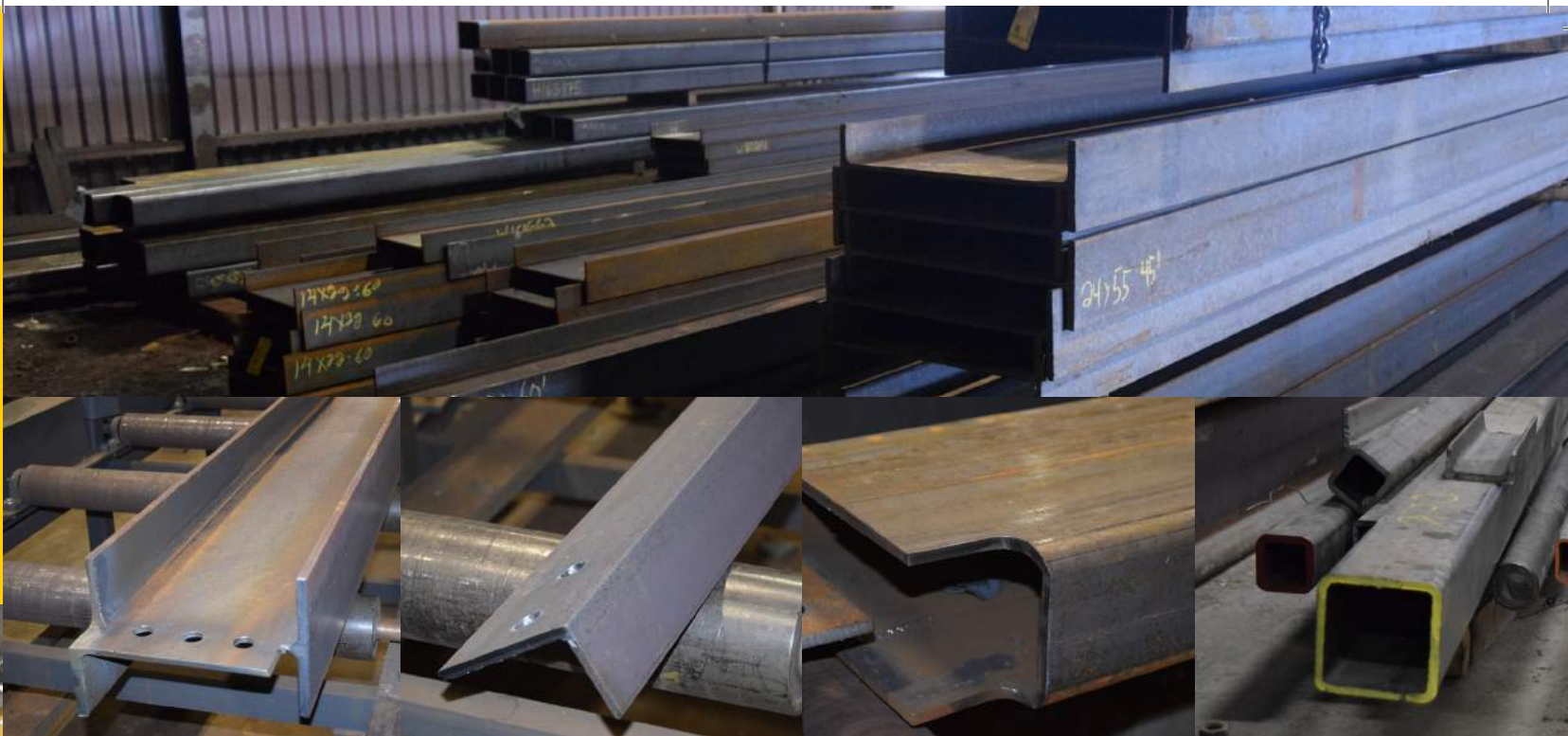
XPR300

MILD STEEL CUT CAPACITY	STAINLESS STEEL CUT CAPACITY
Pierce Capacity 45 mm (1 3/4")	Pierce Capacity 38 mm (1 1/2")
Edge Start 65 mm (2 1/2")	Edge Start 50mm (2")



HPR400XD

MILD STEEL CUT CAPACITY	STAINLESS STEEL CUT CAPACITY
Pierce Capacity 50 mm (2")	Pierce Capacity 45 mm (1 3/4")
Edge Start 80 mm (3")	Edge Start 80 mm (3")



## HOW FAST IS IT?



HBeam W18X40

### BEAMCUT TIME



**9MIN 30SEC**

AMPS : 130  
LENGTH : 281"

12 HOLES OF 13/16" ON TOP FLANGE  
20 HOLES OF 13/16" ON WEB  
COPEES ON BOTH ENDS



HSS 5x5x1/4

### BEAMCUT TIME



**4MIN 31SEC**

AMPS : 260  
LENGTH : 186"

2 INTERNAL CUTS  
COPEES ON BOTH ENDS



**BEAMCUT**™  
SYSTEMS

A Machitech Automation Company

**BEAMCUT.COM**

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