



PythonX
A Lincoln Electric Company

LINCOLN
ELECTRIC



PythonXTM
A Lincoln Electric Company

STRUCTURAL FABRICATION SYSTEM



15 YEARS OF EXPERIENCE & OVER 250 MACHINES IN SERVICE WORLDWIDE

PythonX™ is the robotic CNC plasma cutting system that has revolutionized structural steel fabrication. More than a machine, PythonX™ has created a **NEW STANDARD** in the way you think about running a fabrication shop.

Compared to traditional machines, PythonX™:

- » Uses Just 20% of the Floorspace
- » Needs Only 20% as Much Processing Time
- » Requires only One Operator and No Programming
- » Offers Complete Fabricating Capability for a fraction of the Price



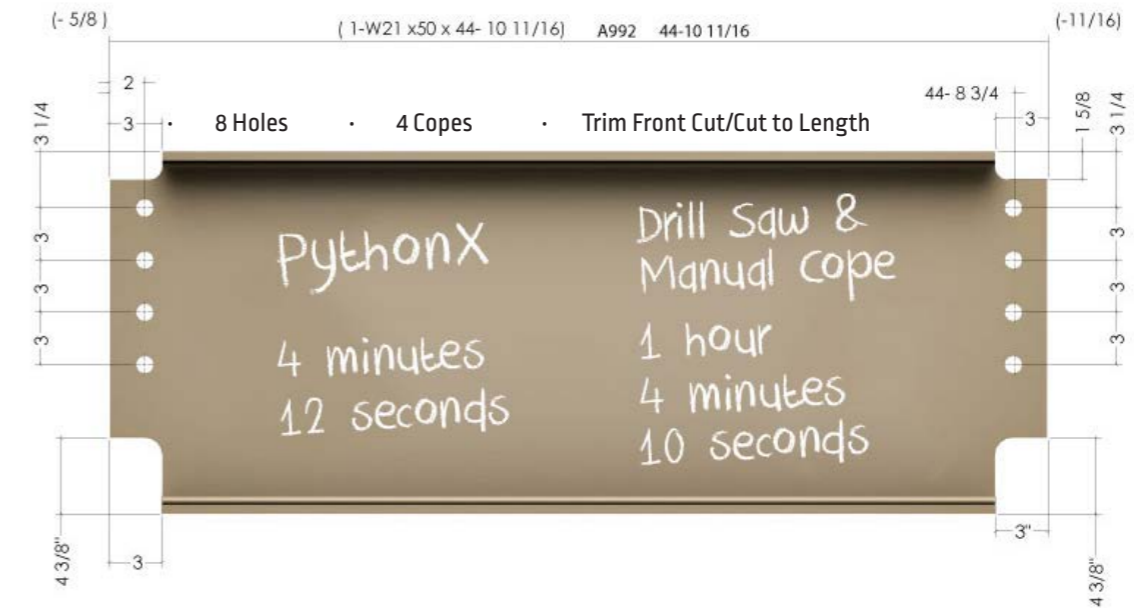
PythonX™ users are processing steel at the lowest cost per ton in the following industries:

- » Buildings
- » Oil and Gas
- » Industrial
- » Mining
- » Off Shore Rigs
- » Pipe Racks
- » Transmission Towers
- » Stadiums
- » Elevators
- » Trailers
- » Shipbuilding
- » Bridges
- » Equipment Manufacturers

COMPARE BEAM MACHINES

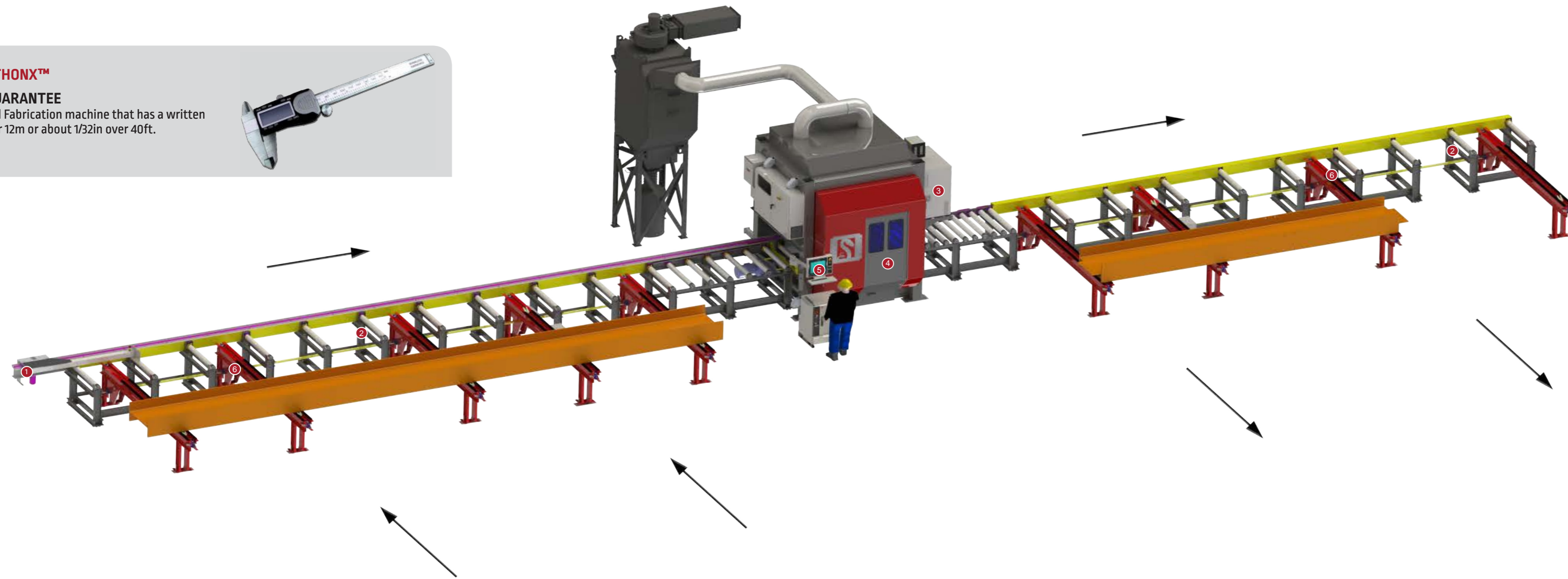
THINK YOU ARE AUTOMATED WITH A DRILL & SAW??

Let's analyze a common beam in structural fabrication.



Machine Capability	Single Spindle Beam Drill Line	Three Spindle Beam Drill Line with Band Saw	PythonX™
Produces Quality Bolt Holes <small>(Approved for Structural Joints)</small>	YES	YES	YES
Maximum Hole Diameter	2 in (50mm)	2 in (50mm)	24 in (609mm)
Produce Layout Marks for Clips & Stiffeners	LIMITED	LIMITED	YES
Downloads from Design / Detailing Software <small>(TEKLA, SDS/2, StruCAD, ProSTEEL, AUTOCAD)</small>	YES	YES	ANY SHAPE
Time to Cut-to-Length one W24 x100	INCAPABLE	5 MINUTES	1 MIN 15 SEC
Automatic Part Handling <small>(set it and forget it)</small>	FLIP MANUALLY	YES	YES
Cut Copes with CNC Accuracy	INCAPABLE	INCAPABLE	YES
Make Cutouts for Bracing & Knife Connections	INCAPABLE	INCAPABLE	YES
Text Scribing <small>(any size)</small>	INCAPABLE	INCAPABLE	YES
Fabricate Complete Stair Stringers <small>(including Tread Layout)</small>	INCAPABLE	INCAPABLE	YES
Miter Cut	INCAPABLE	COSTLY OPTION	YES
Cut Slots & Any Other Shapes	INCAPABLE	INCAPABLE	YES
Weld Prep Bevel Cut	INCAPABLE	INCAPABLE	YES
Rip I-Beams into T-Beams	INCAPABLE	INCAPABLE	YES
Tool Change Required	YES	YES	NEVER
Overall Production Output	SLOW	AVERAGE	FASTEST
Price	LOWEST	HIGHEST	MID RANGE

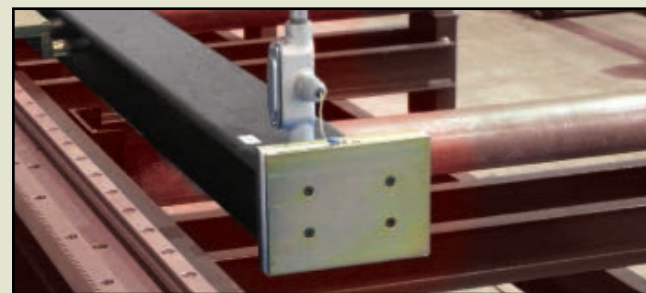
ONLY AVAILABLE WITH PYTHONX™
1mm ≈ 1/32in - ACCURACY GUARANTEE
 PythonX™ is the only Structural Fabrication machine that has a written guarantee of 1mm accuracy over 12m or about 1/32in over 40ft.



A single PythonX™ machine replaces all traditional equipment:

- » Beam Drill Line
- » Bandsaw
- » Coping Machine/Torch
- » Angle Line
- » Plate/Bar Line
- » Marking Machine

1. MEASURING CART



The measuring cart relays the exact position of the work piece to the robot.

- Superior accuracy and measurement compared to pinch roll systems, which can slip
- Initially measures and displays the full length of the beam, which is not possible on pinch roll systems

2. INFEED/OUTFEED CONVEYORS



Precision machined rollers with no flat spots for ultimate accuracy.

- 4in[101.6mm] diameter on heavy duty welded frames
- Built to last with oversized 75hp motors, compared to most others using 2.0hp

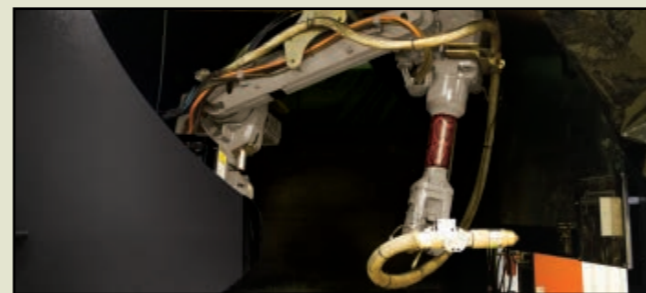
3. HIGH DEFINITION TORCH



High Definition Plasma technology aligns and focuses the plasma arc, improving arc stability and energy for more powerful precision cutting.

- Completely automatic gas and kerf control
- **PATENTED** hole taper compensation and advanced bevel tuning

4. MULTI-AXIS ROBOTIC ARM



Tuned twice for absolute best in class accuracy and least cut-path following error.

- Complete with collision detection
- Stronger with a higher payload, further reducing vibration and sway

5. OPERATOR CONTROL SYSTEM



Versafab Studio is the most advanced robotic plasma cutting software ever with over 15 years in development.

- Touchscreen industrial PC
- Networked
- Upgradeable

6. CROSS TRANSFERS



Accumulate and transfer material for Infeed and Outfeed conveyors. (Optional feature)

- Reduces material handling, increases output
- Heavy duty motor and gear reducer controlled by a variable frequency drive
- Separate Operator Station

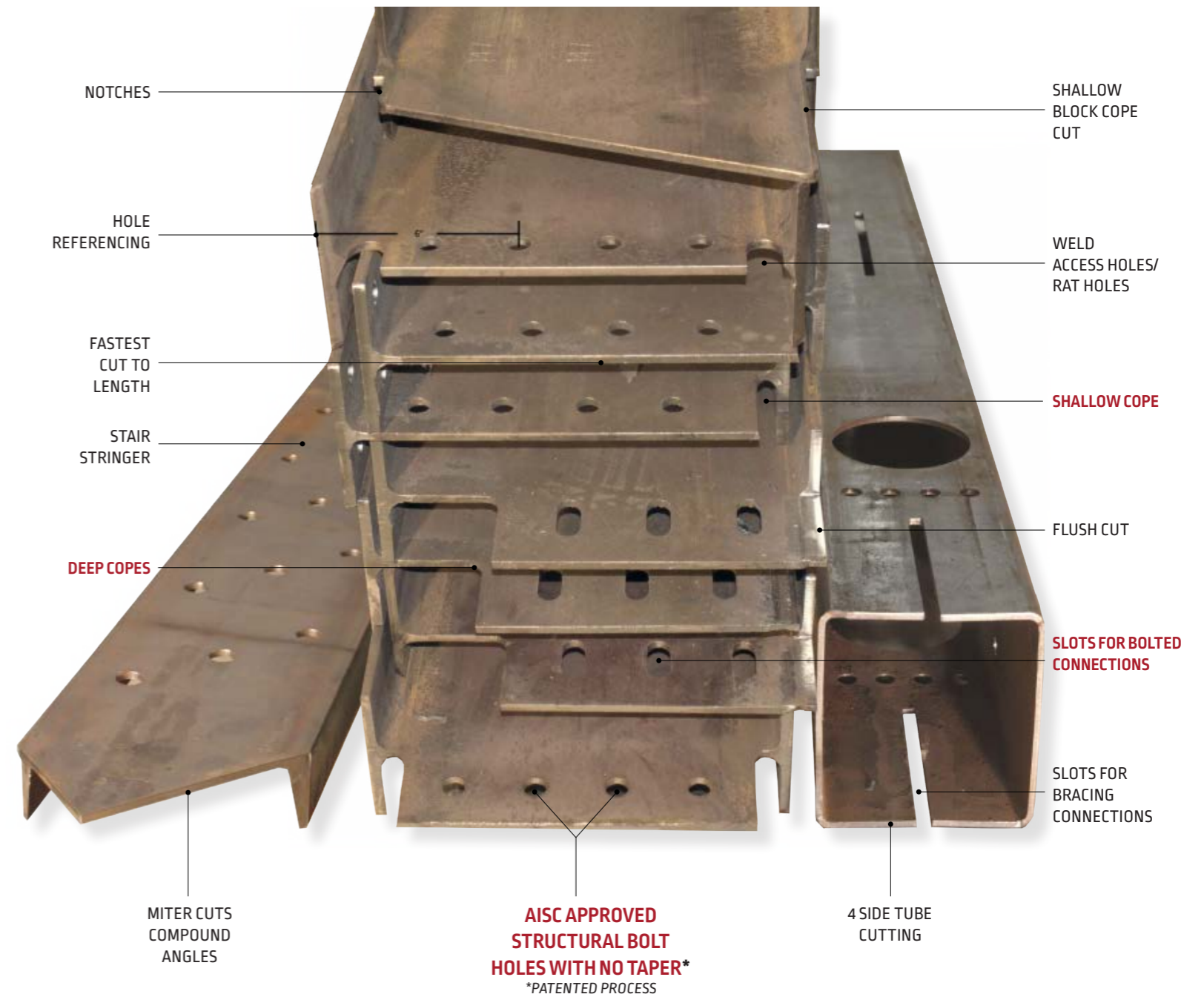


"Some of our competitors do not bid on jobs if we are on the bidder's list because they know we have a PythonX. They think bidding on the job will just be a waste of time."
 - Structural Fabricator Ontario, Canada
 PythonX™ # 23

MATERIAL CAPACITY



CUTTING CAPABILITIES



PART LENGTH:

A standard system accommodates 40ft [12m] lengths. Can increase up to 80ft [24m] by increments of 4ft [1.2m] at a time.

MATERIAL THICKNESS:

Max pierce thickness is 1.5in [38 mm];
Edge start max thickness is 2in [51mm],
Upgrade Available: 2in [51 mm] pierce, 3in [75 mm] edge

OTHER MATERIALS:

Bulb, Flatbar, Strip Plate, Aluminum, Stainless

	Minimum Capacity		Maximum Capacity	
	Width in (mm)	Height in (mm)	Width in (mm)	Height in (mm)
BEAM	4 [101]	4 [101]	48 [1219]	18 [457]
CHANNEL	3 [76]	1 [25]	36 [914]	4 [101]
HSS TUBE	2 [51]	1 [25]	12 [308]	18 [457]
ANGLE	2 [51]	2 [51]	10 [254]	10 [254]

*36in[914mm] is standard and most popular size. 48in[1219mm] is an upgrade

WELD PREP BEVEL ANGLES



PART MARKING/SCRIBING



BEAM SPLIT

