Product selection guide

Step 1 Nesting software			Step 2 CNC			Step 3 THC			Step 3 Plasma				
ProNest	TurboNest	NestMaster	EDGE Pro	MicroEDGE	EDGE Ti	ArcGlide THC	Sensor™ THC, Command® THC	Sensor PHC	HyPerformance Plasma HPR800XD, HPR400XD, HPR260XD, HPR130XD	HySpeed HSD130, HT2000®	Powermax65, Powermax85	MAX200®, Powermax1650, Powermax45	● = Best ◐ = Better ○ = Good = Not a key contributor
													Cut quality
●			●	●		●	●		●				HyDefinition cut quality
●			●	●		●	●		●				True Hole cutting technology
										●			Conventional LongLife O_2 and air cut quality
											●	●	Conventional non-LongLife O_2 and air cut quality
						●							Automatic arc voltage adjustment as consumables wear without operator input
●	○		●	●	●								Automatic kerf compensation based on material thickness, amperage and speed
													Productivity (parts per hour)
●	◐	○	●	◐	◐	●	◐	○	●	◐	○	○	Increase parts produced per labor hour due to rapid job set ups, fast cut speeds, less secondary operations and fewer consumable changes
			●			●			●				Minimize cut-to-cut cycle time with rapid ignition techniques
●			●			●							Minimize cut-to-cut cycle time and avoid collisions using tool path optimization techniques
													Operating cost (cost per part)
●	◐	○	●	◐	◐	●	◐	○	●	◐	○	○	Increase parts produced per labor hour due to rapid job set ups, fast cut speeds, less secondary operations and fewer consumable changes
									●	◐			LongLife ramping technology for significantly longer consumable life
●									●	●			Optimize consumable life for HyPerformance and LongLife processes using lead out optimization for proper ramp downs
						●							Optimize consumable life using automatic arc voltage monitoring and adjustment without operator input
●	◐	○											Part nesting efficiency to minimize material waste
●			●	●	●	●	●	○					Optimize consumable life using automatically set pierce and cut heights
													Ease of use
●	○		●	●	●	●	●		●	○	◐	○	Cutting process parameters automatically set up by the off-line software
●			●	●	●	●	●		●	○	◐	○	Easy job set up using the CutPro Wizard
●			●	●	●								Plate type and consumable part number prompts for the operator on the CNC
			●	●	●								Cutting optimization tips on the CNC
			●	●	●								Instruction manuals for CNC, THC, and plasma systems on the CNC
													Diagnostics
●	●	●	●	●	●	●	●		●		◐		Remote diagnostics over the internet
●	●	●	●	●	●						◐		Off-line nesting or CNC software diagnostics for the part program

Hypertherm®

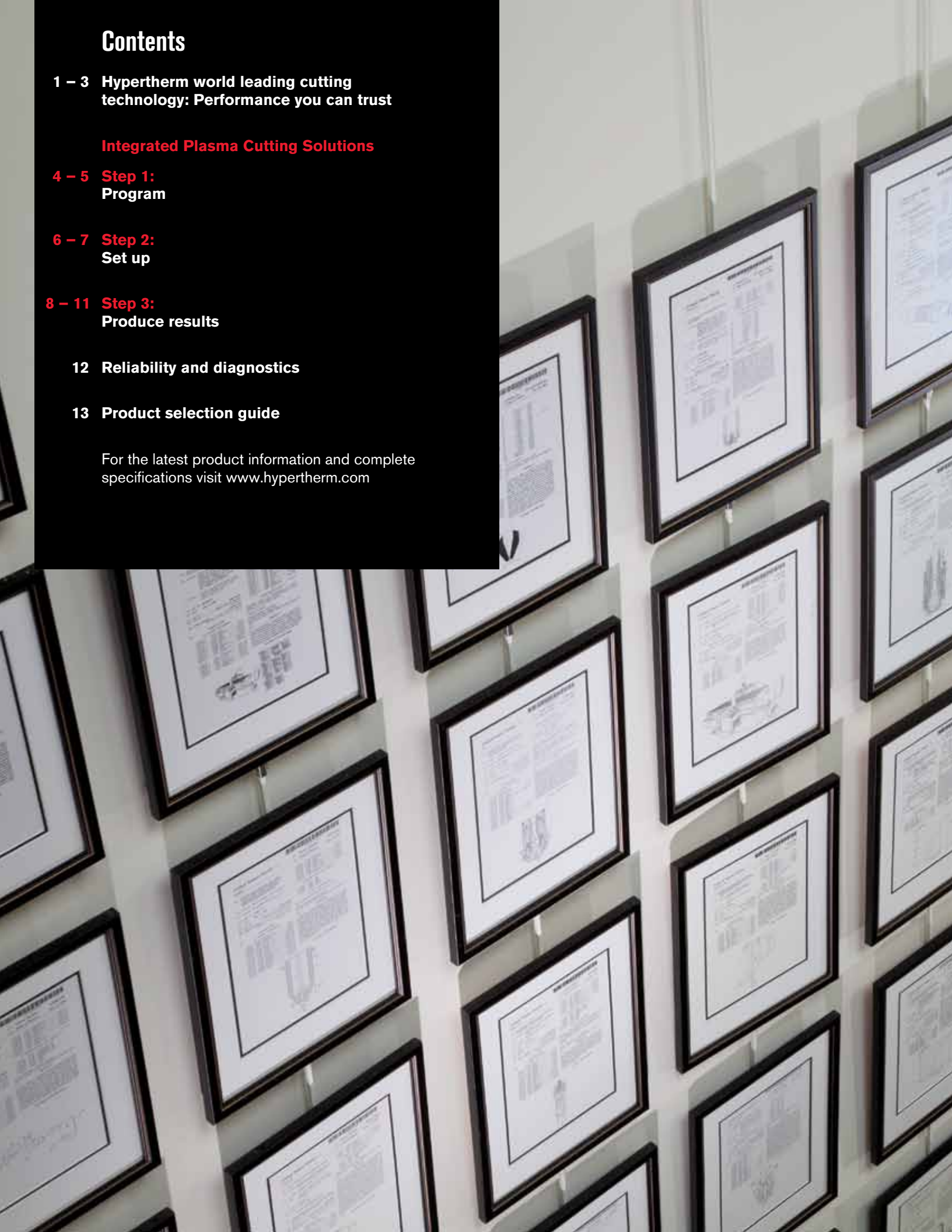
Hypertherm®

Integrated Plasma Cutting Solutions

Performance you can trust

Contents

For the latest product information and complete specifications visit www.hypertherm.com



Hypertherm

The world leader in cutting technology

Hypertherm's mission is to provide customers throughout the world with the best cutting equipment and service in the industry. Since 1968 we have had a single goal: leverage technology to cut the cost of cutting metal. Because of our long-standing commitment to customer-focused innovation, Hypertherm holds more plasma cutting patents and has more customers worldwide than any other brand. In customer testing, Hypertherm systems consistently outperform the competition in cut quality, productivity, and operating costs. With Hypertherm you can have confidence that our solutions will help maximize the productivity and profitability of your cutting operation.

Hypertherm facts

- Hypertherm engineers have developed over 75 patented plasma cutting technologies to provide customers with industry-leading performance.
- Hundreds of thousands of Hypertherm cutting systems are in use throughout the world.
- Hypertherm has achieved a majority market share in plasma cutting worldwide.

Each Hypertherm associate owns shares in the company. Share ownership is a powerful motivator, with clear benefits for Hypertherm customers: every product we design is built with the highest quality.

Hypertherm wall of patents

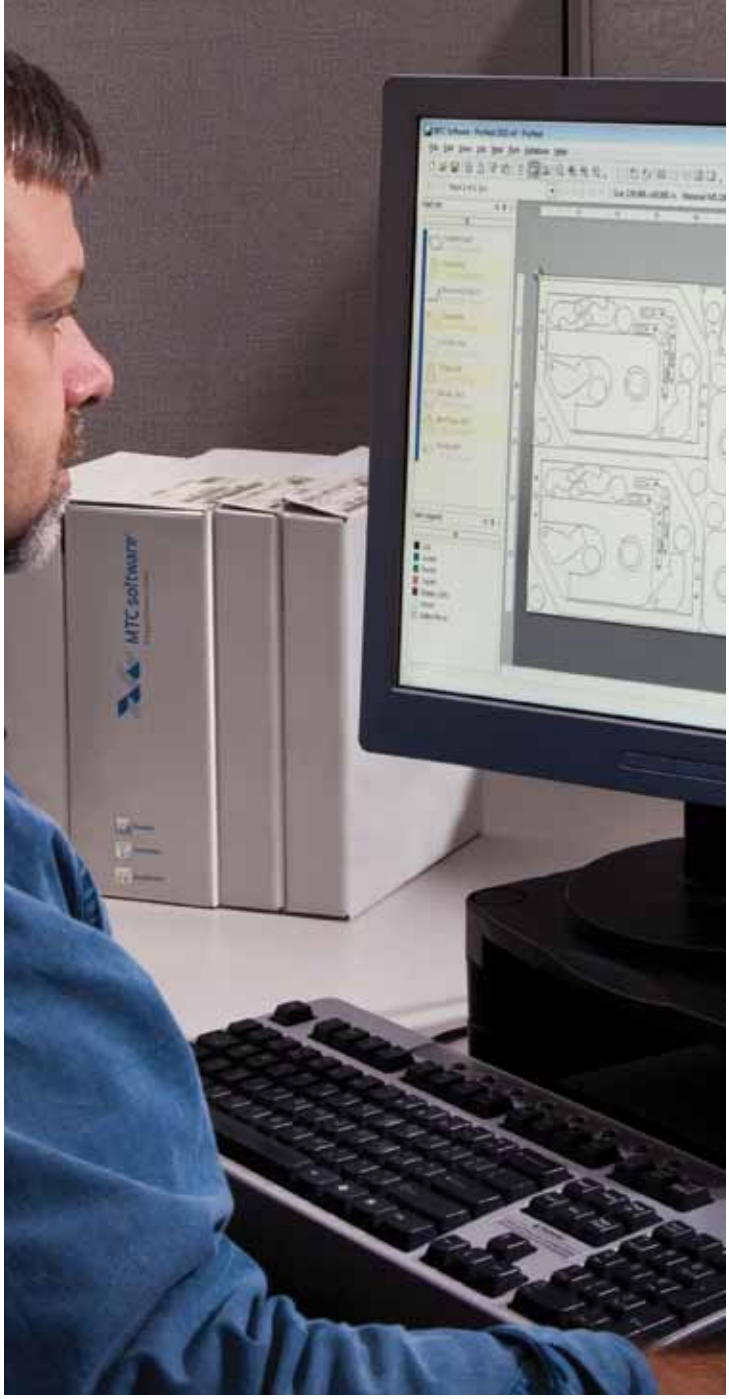
Performance you can trust

It is like having your best operator equipped with the latest technology on every shift

Hypertherm's automated cutting products have over 40 years of innovation and cutting process expertise built into them. Our nesting and process optimization software, computer numerical controllers (CNCs), torch height controls (THCs), and plasma systems work together seamlessly to get the most out of your cutting operation. It is like having your best operator equipped with the latest technology optimizing cut quality, productivity and operating cost every day.

Hypertherm's integrated cutting products:

- Embed process expertise to make it easy to:
  - Train new operators to cut like a pro within minutes
  - Maintain more consistent performance from operator-to-operator, shift-to-shift and site-to-site
- Produce a dramatic improvement in hole quality that outperforms anything previously possible with plasma
- Achieve up to a 100% increase in the number of parts produced per hour through cut-to-cut cycle time reductions
- Optimize consumable life without requiring operator adjustment
- Make it easy for your cutting table provider and Hypertherm to access the system within seconds via Remote Help



From part program to finished part, Hypertherm's integrated cutting solutions make it easy to produce consistent results.

Step 1 = Program using the nesting and process optimization software

Hypertherm's off-line nesting and process optimization software automatically nests parts and applies optimal cutting techniques in the NC Code (Numerical Control Programming Language).

Step 2 = Set up on the CNC

The off-line nesting and process optimization software interacts with the CNC software to make it easy for the operator to set up a job and cut like a pro.

Step 3 = Produce results

Hypertherm's integrated nesting and process optimization software, CNC, THC and plasma systems work together seamlessly to optimize cut quality, parts per hour and cost per part.

Step 1: Program using the nesting and process optimization software

Build Hypertherm expertise into your part programs to eliminate operator variability

Hypertherm's nesting and process optimization software makes it easy to:

- Import part drawings
- Efficiently nest them on the plate
- Apply optimal cutting techniques
- Generate the NC code

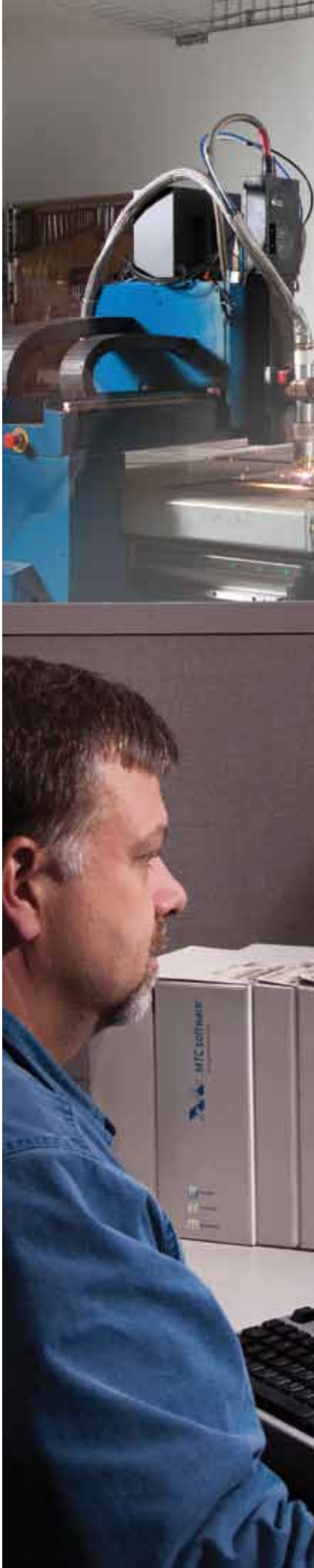
The resultant NC code will be used by the CNC to complete the job. Embedding Hypertherm's cutting techniques into the part program will help you achieve more consistent results (cut quality, productivity and consumable life) from operator-to-operator, shift-to-shift, and site-to-site. In less than an hour you will be programming jobs like an industry pro.

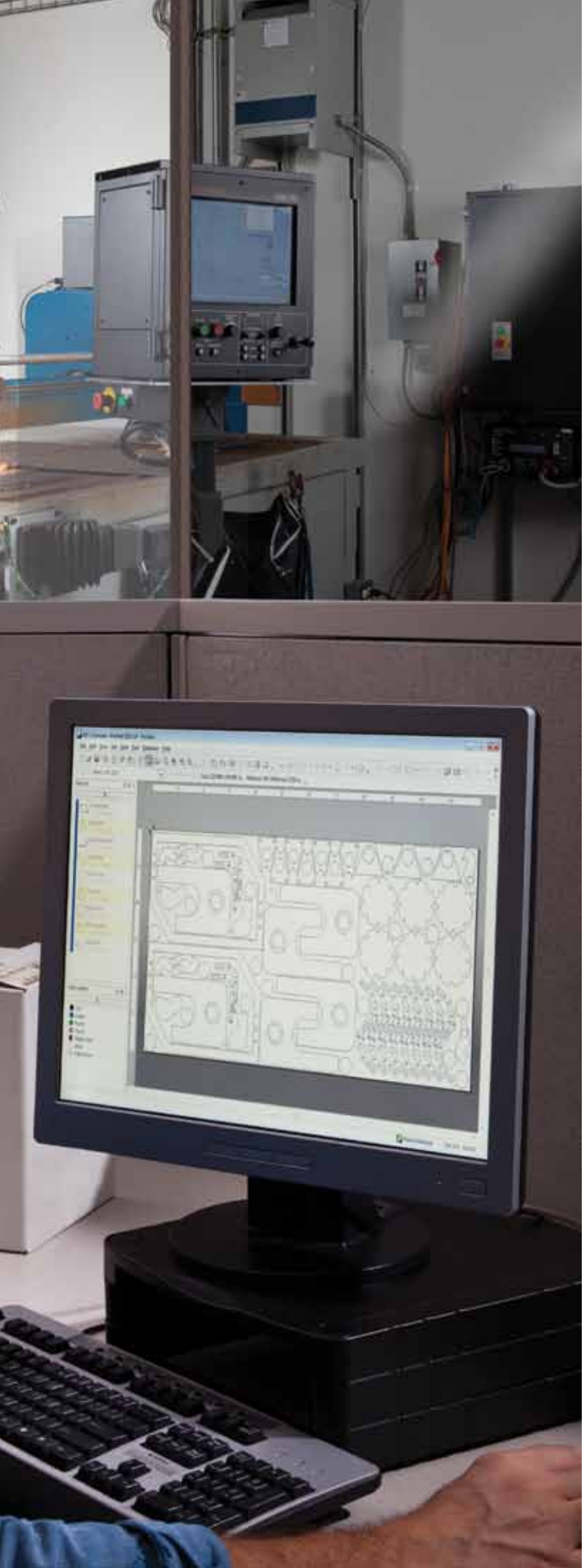
Easily import CAD:

- 2D and 3D CAD/CAM file import and conversion
- Industry-specific design files

Nest parts efficiently to maximize material utilization.

Hypertherm's superior nesting optimization capabilities deliver measurable material savings by placing the parts efficiently on the plate; full sheets or remnants.





Automatically apply expert cutting techniques to optimize performance

The software places decades of plasma, laser, oxyfuel, and waterjet process expertise at your fingertips. It automatically applies optimal cutting techniques that are specific to the parts being cut (material type, thickness, part geometry) and the processes being used to cut them.

Operators simply select the desired job on the CNC and the part program will automatically apply the ideal cutting parameters.

The plasma operator at the cutting table does not need to set*:

- Amperage
- Plasma gas type, preflow and cut flow
- Shield gas type, preflow and cut flow
- Torch pierce height, time and delay
- Torch cut height
- Arc voltage
- Interior and exterior profile feed rates/techniques
- Kerf compensation

The software automatically programs torch motion routines to optimize cut quality, productivity and operating cost.

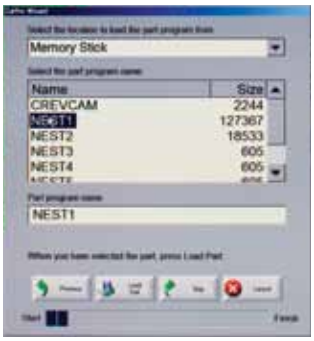
- Lead in type, location and speeds are set to optimize quality and minimize material scrap.
- Lead-outs, part sequencing, and torch height control settings are managed to optimize quality, reduce traverse time between parts and maximize the number of parts produced per hour.
- Collision and tip up avoidance routines minimize down time.

*Cutting table operators can easily achieve optimized system performance when the off-line nesting and process optimization software is used together with Hypertherm CNCs, THCs and HyPerformance® Plasma HPRXD® systems with auto gas capability.

Step 2: Set up on the CNC

Setting up a job and cutting like a pro is as easy as 1, 2, 3

In customer testing, new operators were cutting high-quality parts in less than 5 minutes without any training. The expert cutting techniques that are built into the software will ensure consistently optimized cut quality, productivity and operating cost with minimal operator intervention.



1. Select the program on the CNC

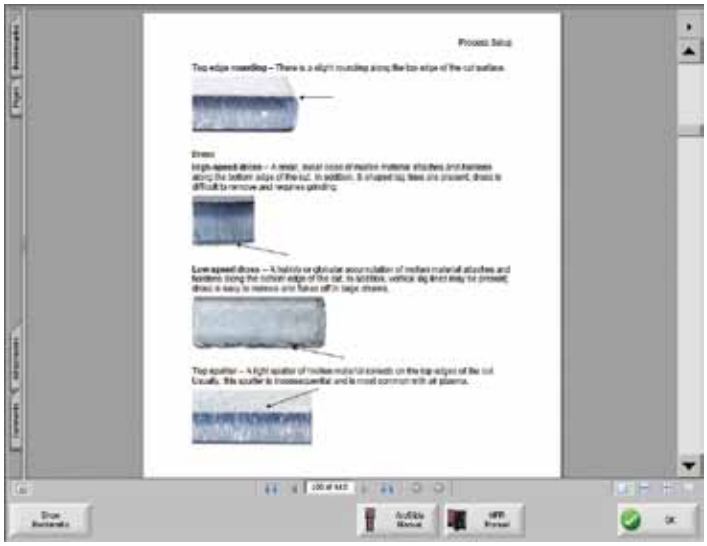
- The operator selects the job created using Hypertherm's nesting and process optimization software.
- The software automatically sets the optimal cutting parameters in the CNC that are specific to the parts being cut and the equipment being used to cut them.
- The operator does not need to set torch height, pierce delay, cut speeds, and kerf compensation.
- When using Hypertherm plasma systems with auto gas capabilities the operator does not need to set amperage, plasma/shield gas type, and plasma/shield gas flows.

2. Load the plate and consumables

- The CNC software prompts the operator with the specific material type, thickness and size to be loaded onto the cutting table.
- The consumables that need to be loaded into the torch are identified with pictures and part numbers on the CNC display.

3. Align the plate

- The CutPro™ Wizard guides the operator through a step-by-step process of aligning the plate.



If the operator needs help they can have access to cutting optimization tips with the click of a button.

Hypertherm's instruction manuals for the CNCs, THCs, and plasma systems are all available on the CNC. Available in multiple languages, these support tools help the operator and maintenance teams maximize the performance of the cutting table.

Step 3: Produce results

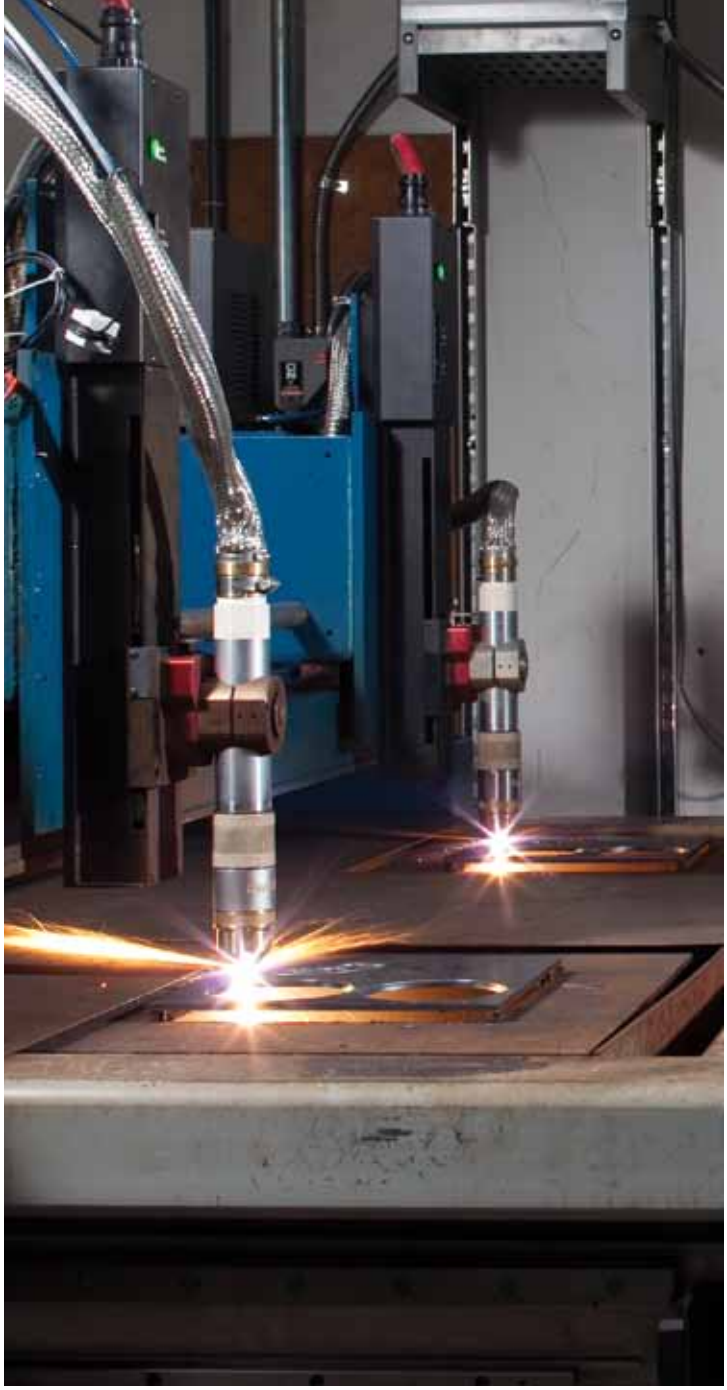
Optimized cut quality, productivity and operating cost = greater profitability

Hypertherm's integrated nesting and process optimization software, CNC, THC, and plasma cutting systems have over forty years of cutting innovation and process knowledge built into them. Our products are designed to work together seamlessly, making it easy to optimize cut quality, parts per hour and cost per part.

Optimize cut quality

Hypertherm's integrated nesting and process optimization software, CNC, THC, and plasma systems provide:

- Automatically applied cutting techniques to ensure consistently optimized quality
- Monitoring and automatic adjustment for:
  - Arc voltage as the consumables wear, to ensure that quality is maximized throughout the life of the consumables
  - Kerf compensation based on material thickness, amperage and speed to produce tighter tolerances and more consistent quality
- Cut quality optimization tips on the CNC that are easily accessed with the click of a button
- Hypertherm plasma cuts fine-feature parts with superior quality and consistency, reducing the cost of secondary operations.



Revolutionary plasma performance: True Hole™ cut quality

Our patent-pending True Hole* cutting technology for mild steel produces significantly better hole quality than what has been previously possible using plasma. This is delivered automatically without operator intervention.

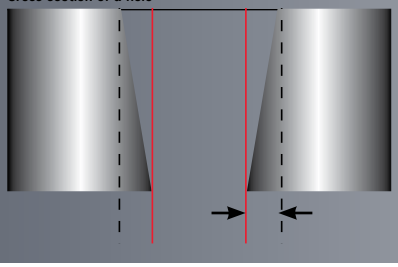
Hypertherm's True Hole cutting technology for mild steel is a specific combination of cutting parameters (process gas type, gas flow, amperage, piercing methodology, lead in/out technique, cut speed, and timing) that is optimized for each material thickness and hole size. This new process is exclusively available for use on Hypertherm's HPRXD auto gas plasma systems and is automatically applied by our nesting and process optimization software and CNC software to mild steel holes with hole diameter to thickness ratios as low as 1:1.

*True Hole technology requires a HyPerformance Plasma® HPRXD® auto gas system along with a True Hole enabled cutting table, nesting software, CNC, and torch height control. Consult with your table manufacturer for more details.

With True Hole you achieve part design dimensions more consistently so secondary operations are needed less frequently.

Without True Hole

Cross section of a hole



12 mm (1/2") hole cut **without** True Hole technology

With True Hole

12 mm (1/2") hole cut **with** True Hole technology

With True Hole technology, taper is virtually eliminated and the ding is reduced and biased to the outside of the hole. Dross is still present but can be easily removed.

Increase parts per hour

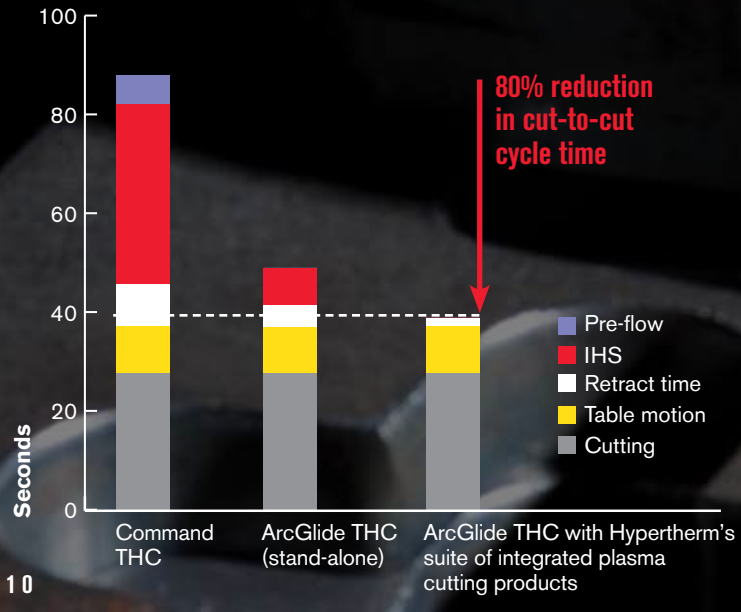
- Hypertherm's patented plasma technologies, embedded cutting techniques and active process monitoring optimize cut quality and minimize time-consuming secondary operations.
- Hypertherm's easy to use nesting and process optimization software coupled with the patent-pending CutPro Wizard on the CNC make job set up extremely fast and easy.

Achieve up to a 100% increase in the number of parts produced per hour through cut-to-cut cycle time reductions

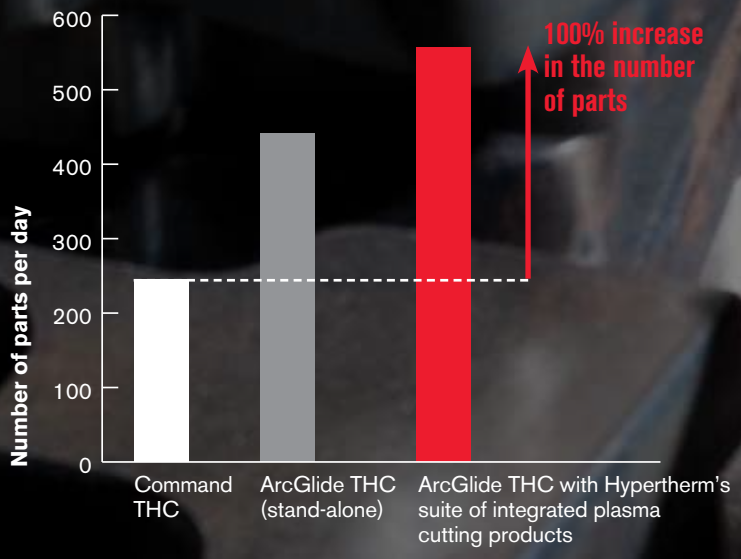
- Rapid ignition and motion optimization techniques programmed into the software minimize wasted time in between cuts and increase the number of parts produced per hour by up to 100%.

Example part – 203 mm flange (8")

Part processing time – 203 mm flange (8")



Number of parts – 203 mm flange (8")



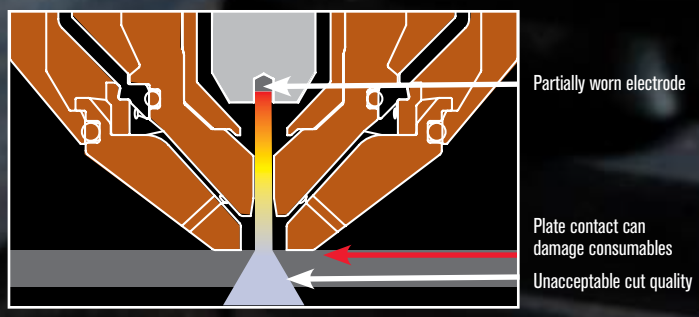
Reduce cost per part

- Optimized process and torch height settings are automatically applied by Hypertherm's software. This reduces the chance of operator error and helps ensure optimal consumable life.
- Hypertherm's patented LongLife® technology reduces current and gas flow at the end of a cut to minimize electrode hafnium wear and produce industry-leading consumable life that can be as much as twice the life of any competitor.
- Hypertherm's nesting and process optimization software maximizes consumable life by automatically managing cut lead-outs and arc shut-off timing to avoid extinguishing the arc prematurely by using a controlled ramp down.

Optimize consumable life without requiring operator adjustment

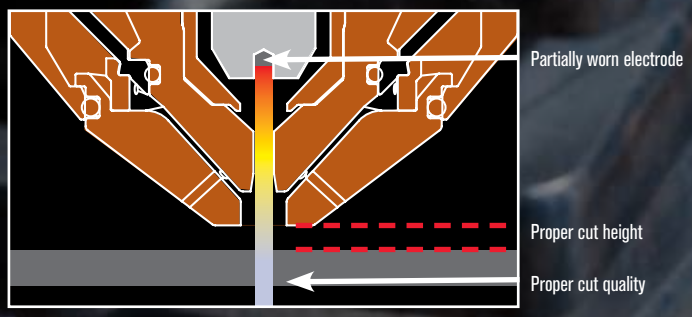
- Using Hypertherm's proprietary techniques, the ArcGlide™ THC automatically and continuously samples and adjusts arc voltage to correct for consumable wear. This results in proper torch height for optimal cut quality over the life of the consumables without requiring operator adjustment.

Improper cut height due to not adjusting arc voltage for electrode wear



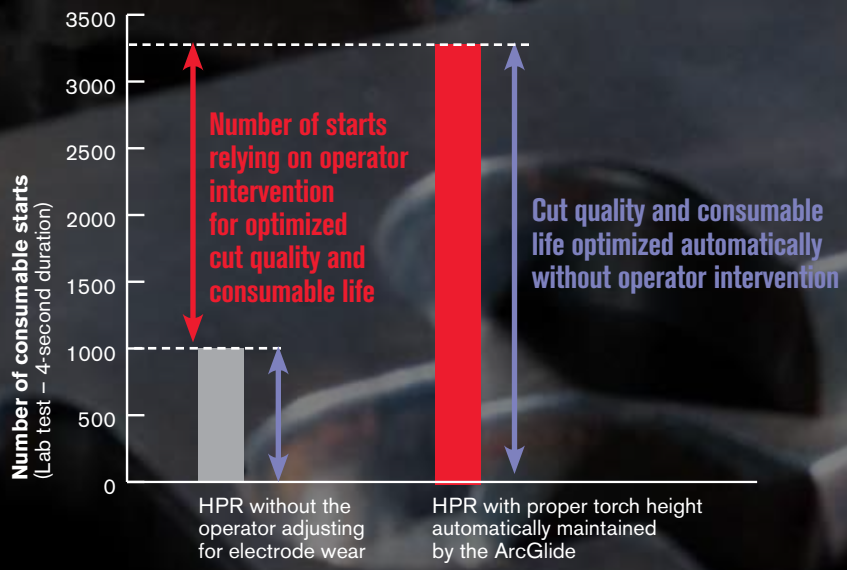
Consumables discarded prematurely

Proper cut height automatically maintained by ArcGlide THC



Consumable life and cut quality optimized

Number of consumable starts with < 0.25 mm (0.010") deviation from proper cut height without operator intervention (130 A) 12 mm (1/2") mild steel



Proven reliability, on-board diagnostics, and Remote Help maximize uptime

During development Hypertherm systems endure rigorous reliability testing procedures that are equivalent to years of use in extreme operating environments. The equipment is subjected to a wide range of temperatures, humidity levels, vibration, electrical noise, dust and incoming voltage to ensure that the products are extremely robust.

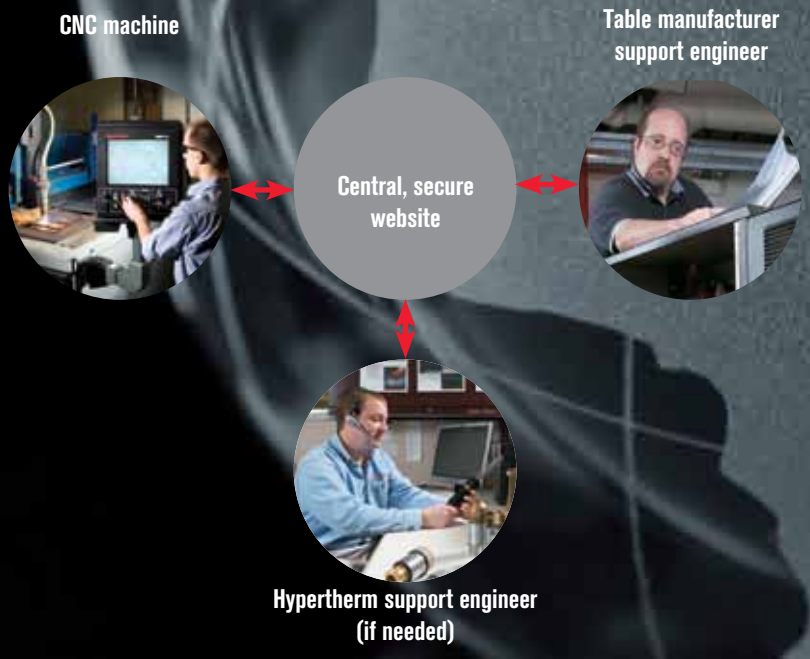
- Hypertherm's preventative maintenance and troubleshooting tips are available on the CNC for all of our equipment (CNC, THC, and plasma systems). This makes vital system information easily accessible when you need it.
- Hypertherm's CNC can be used to run CNC, THC, plasma system and other table component diagnostics.

Remote Help

Remote Help is an Internet based tool that allows your table manufacturer and Hypertherm to be virtually in your factory within minutes. Part program, CNC, THC, plasma system, and cutting table motion diagnosis and repair can often be accomplished without an on-site visit. Hypertherm's Remote Help utility allows cutting system diagnostics over the Internet to help avoid costly downtime.

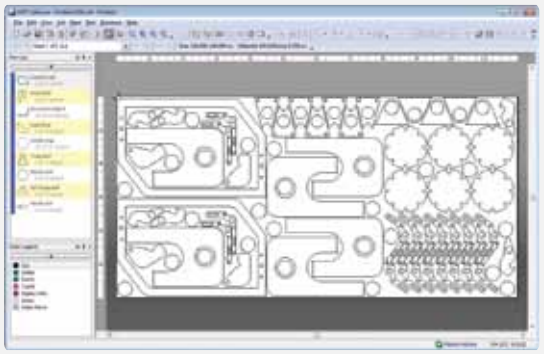
Remote Help features include:

- Fast and secure connectivity
- Safe remote access to the CNC to view and modify setups
- Secure and rapid file transfer
- Up to 15 participants can join the same session
- Ability to conduct HyPerformance Plasma system diagnostics remotely
- Useful for technical training
- Free access for all participants



Nesting and process optimization software

NestMaster™ TurboNest® ProNest®



Computer numerical controllers (CNCs)

EDGE® Ti

MicroEDGE®

EDGE® Pro

Torch height controls (THCs)

Sensor PHC

ArcGlide™ THC

Mechanized plasma systems

Powermax®

HySpeed® HSD130™

HyPerformance® Plasma HPRXD®