Plasma Cutting Systems

Plasma-Jet DSL

Allowing maximum utilization of all possibilities offered by plasma technology

- Selection of the ideal Hypertherm® plasma source
- Hypertherm® CNC & Software package
- Sensor for automatic torch height control (THC)
- Electro-pneumatically controlled vacuum table

Plasma-Jet DSL

World-Class Plasma Cutter Systems based on the know-how and technology of the market leader Hypertherm®

- **PREMIUM cutting systems come in a wide variety of equipment packages featuring up to 6-axis cutters**
- Extremely rigid design for maximum cutting precision
- Dual-drive bridge
- High-quality linear guides on all axes
- Dynamic AC servo drives on all axes with maintenance-free, zero-backlash planetary gears
- Low-wear and low-maintenance helical gears are designed for continuous operation
- Optimum track speed even for fine contours and tight radii
- Automatic torch height control
- Stand-alone cutter table features rigid steel construction for high load capacity

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Shown with optional „Messer“ oxy-fuel cutter head

- Adjustable cutting current
- Stand-alone table eliminates thermal and mechanical influences on the plasma cutter system
- Quick-coupling for cutter head changes in seconds
- Minimized tooling time ensure maximum cost savings
- Use the existing cutting parameters stored in the control to find the optimum cut
- Available with 5-axis cutter head, tube cutter, and many more options

NEW

Shown with 5-axis cutter head and tube cutter (optional)

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Hypertherm® TECHNOLOGY INSIDE

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CNC-Control

- The optimum control for any requirements
- Easy to operate, absolutely reliable and powerful
- With the CutPro Wizard, even inexperienced users can manufacture cut parts after a few minutes

Edge® Pro CNC

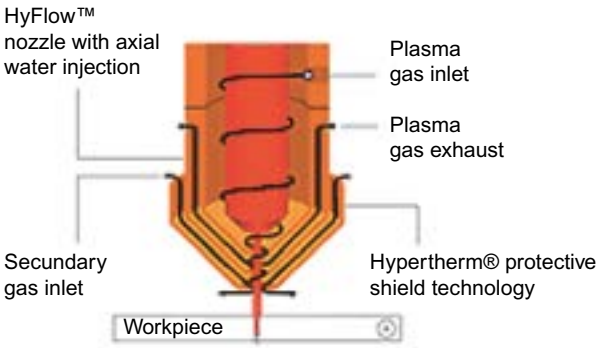
MicroEDGE® Pro CNC

True Hole®

- This cutting technology for plain carbon steel produces a significantly improved hole quality

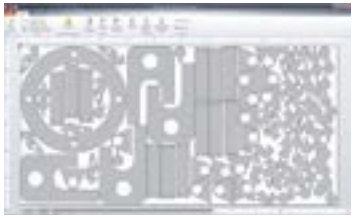
HDi™-Technologie

- For superior angularity, glossy cut surfaces, and sharp edges in thin alloyed steel

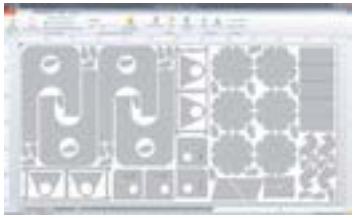


Nesting Software

- CAD/CAM nesting software can fulfill the most demanding requirements. Let us help you select the perfect solution for your needs.



NestMaster®



TurboNest®

ProNest®

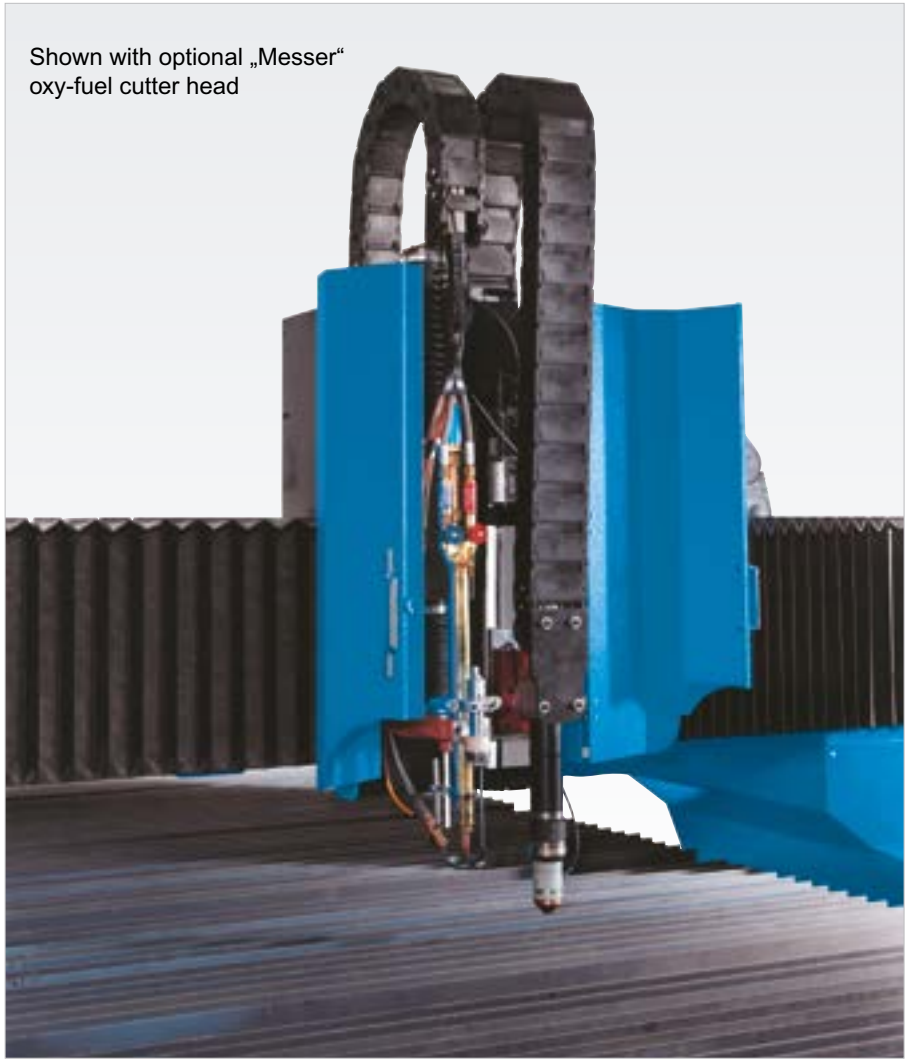
Included technology depends on the selected plasma source and options - we will be happy to assist you in making the perfect selection for your needs!

Specifications DSL		1530	2040	2060	2080	20120	3020	3040	3060	3080	30120
Work area											
Cutting Width	mm	1600	2100	2150	2150	2150	3150	3150	3150	3150	3150
Cutting length	mm	3050	4150	6250	8350	12550	2050	4150	6250	8350	12550
Dist. from cutter head and table	mm	170	170	170	170	170	170	170	170	170	170
Rapid feed	mm/min	30000	30000	30000	30000	30000	30000	30000	30000	30000	30000
Table load capacity max.	kg/m²	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Table height	mm	800	800	800	800	800	800	800	800	800	800
Dimensions/Weight											
Total width	mm	3000	3500	3500	3500	3500	4500	4500	4500	4500	4500
Total length	mm	4500	5500	7500	9500	13500	3500	5500	7500	9500	13500
Weight	kg	2950	5400	7000	8600	11800	4500	6600	8700	10800	15200

Specifications DSL		30150	30180	30240	4060	4080	40120	40150	40180	40240
Work area										
Cutting Width	mm	3150	3150	3150	4150	4150	4150	4150	4150	4150
Cutting length	mm	15700	18850	25150	6250	8350	12550	15700	18850	25150
Dist. from cutter head and table	mm	170	170	170	170	170	170	170	170	170
Rapid feed	mm/min	30000	30000	30000	30000	30000	30000	30000	30000	30000
Table load capacity max.	kg/m²	1000	1000	1000	1000	1000	1000	1000	1000	1000
Table height	mm	800	800	800	800	800	800	800	800	800
Dimensions/Weight										
Total width	mm	4500	4500	4500	5500	5500	5500	5500	5500	5500
Total length	mm	16500	19500	25500	7500	9500	13500	16500	19500	25500
Weight	kg	19300	21300	27400	10800	13800	19800	25700	28800	37800

Standard Equipment:

- Hypertherm® MicroEDGE® Pro CNCg
- Hypertherm® plasma source
- Hypertherm® cutter head,
- Hypertherm® Nestmaster® nesting software
- Z axis with servo-THC,
- magnetic torch coupler
- work table with vacuum connector and automatic shutter control
- operator manual, programming instructions



Shown with optional „Messer“ oxy-fuel cutter head

Servo-control for torch height (THC)

- Height sensing and height control via plasma arc for maximum quality and productivity throughout the cutting process

Magnetic torch disengagement

- The magnetic torch coupling reduces not only tooling times, but also ensures more safety for drives and torch in case of a collision

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Options	Art.-Nr.		Art.-Nr.
• Automatic gas console	251 916	• 5-axis cutter	251 922
• „Messer“ oxy-fuel cutter head „Messer“	251 915	• Tube cutter for up to 3 m lengths	251 923
• Manual control unit	251 910	• Tube cutter for up to 6 m lengths	251 936
• Joystick at the machine bridge	251 932	• Extension for tube cutter 1 m each	251 927
• Pronest® Software	251 918	• Additional tube support	251 925
• ProNest® Module software option		• Adapter for square tube cutter	251 926
- Gap cutting	251 921	• Filtered exhaust system, 4000 m³/h	251 929
- Collision prevention	251 919		
- Combined severing cuts	251 920	• Filtered exhaust system, 8000 m³/h	251 930
• Turbonest® Software Option	251 917	• Filtered exhaust system, 12000 m³/h	251 931
• Mechanical angle cutter	251 933		

Autogencutting head From Messer Cutting Systems

- This proven technique allows for high efficiency when cutting low alloy steels.

Part No. 251 915

Automatic gas console (Hypertherm®)

Part No. 251 916

Filtered exhaust system

- Filter capacity 4000 / 8000 / 12000 m³/h
- Pressure 2500 PA
- Centrifugal vent
- Motor rating 7.5 kW
- Filter size 9x21 m²: 189 m²
- Inlet air pressure 7 bar + 1 bar
- Dimensions 1860x2130x2180 mm
- Weight 1100 kg
- Noise level 75 dB

4000 m³/h Part No. 251 929
8000 m³/h Part No. 251 930
12000 m³/h Part No. 251 931

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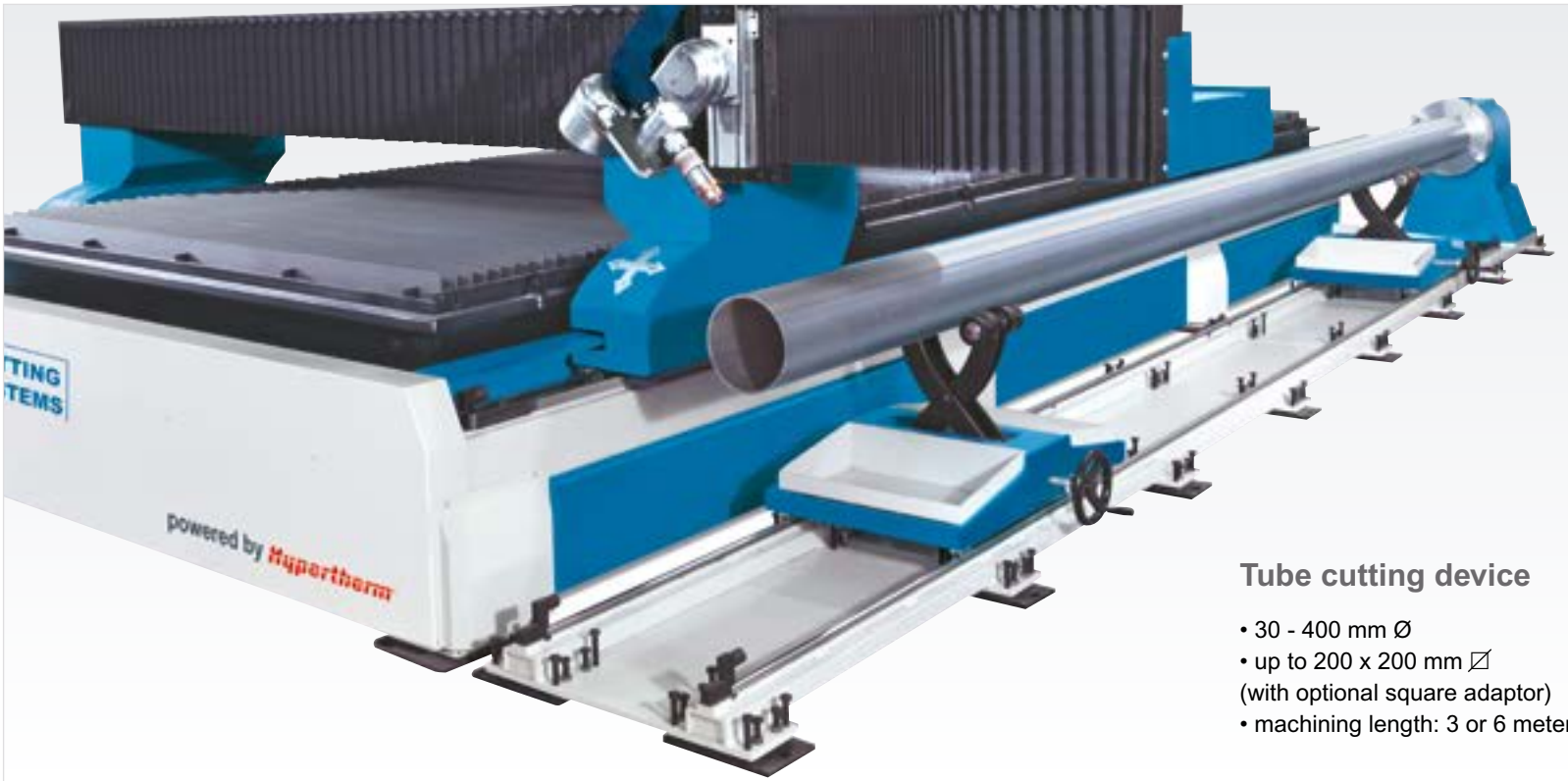
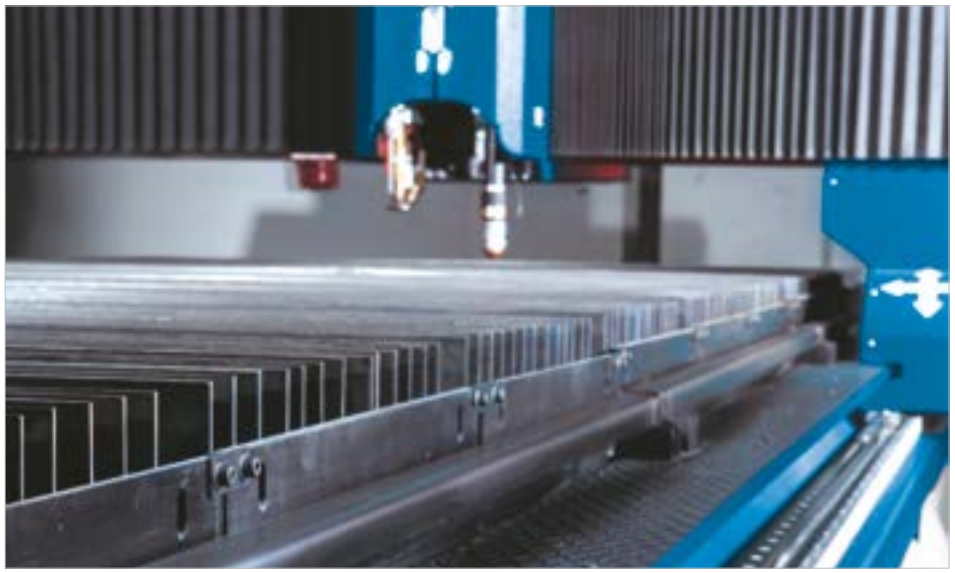


Tube cutting device

- 30 - 400 mm Ø
- up to 200 x 200 mm ⍁
(with optional square adaptor)
- machining length: 3 or 6 meters



- high quality
- interlocked racks
- powerfull servo-axis drives

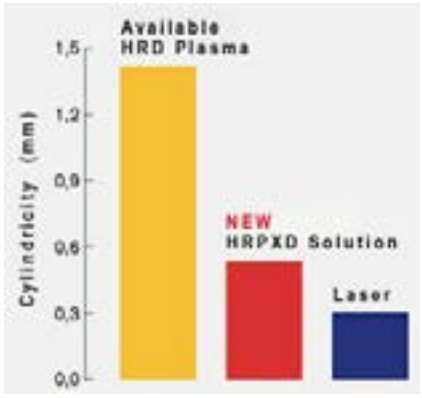
True Hole Technology (Part No. 251 916 and 251 918)

Revolutionary plasma power: True Hole® cutting quality

True Hole cutting technology* (patent pending) for plain carbon steel produces a significantly better cut hole quality than conventional plasma cutting. Plus, everything runs fully automated without any operator intervention.

What benefits does True Hole Technology bring?

- It produces high quality bolt holes fully automatic with only minimal operator intervention
- It eliminates the bevel that is typical for holes cut with plasma technology
- It reduces unevenness by shifting it to the outside of the hole, where it cannot interfere with the bolt
- Some minor burrs do exist, but can easily be removed



How does the hole quality compare to laser-cut holes?

The hole cylindricity projection that was typical for laser cuts has been reduced. See chart below. Please note that deviations in hole size continue to exist as in all plasma processes.

10 mm holes, 9.5 mm plain carbon steel plate, 130-A process

Cylindricity is a measure for the hole quality.

True Hole Technology requires a HyPerformance Plasma HPRXD Auto Gas System with True Hole-capable cutting table, nesting software, CNC, and torch height control. For more information, contact the cutting table manufacturer.

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Plasma sources

Powermax 105® • Max Pro 200® • HPR 130 XD® • HPR 260 XD® • HPR 400 XD®

These plasma sources fulfill all the needs of a powerful, heavy-duty plasma cutting system - they are simple, reliable and unbelievably productive

- Superior cut quality and durability
- Maximized productivity
- Minimized operating cost
- Unsurpassed process flexibility

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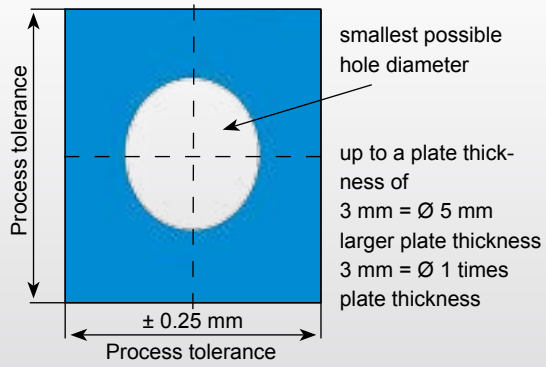
Plasma Source		Powermax 105®	Max Pro 200®	HPR 130 XD®	HPR 260 XD®	HPR 400 XD®
Cutting capacity in plain carbon steel						
Virtually burr-free	mm	-	20	16	32	38
Hole cutting capacity in production	mm	22	32	32	38	50
Cut-off (edge-start)	mm	38	75	38	64	80
Cutting capacity in steel alloy						
Hole cutting capacity in production	mm	-	25	20	32	45
Cut-off (edge-start)	mm	-	64	25	50	80

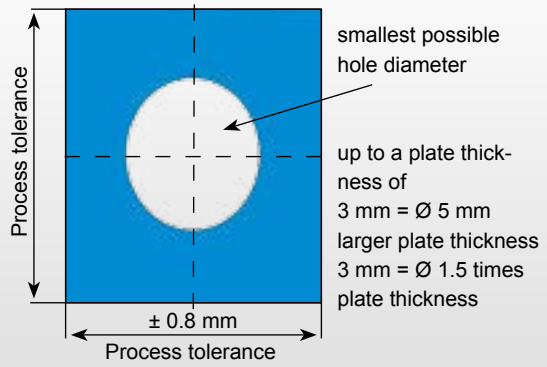
Plasma Sources

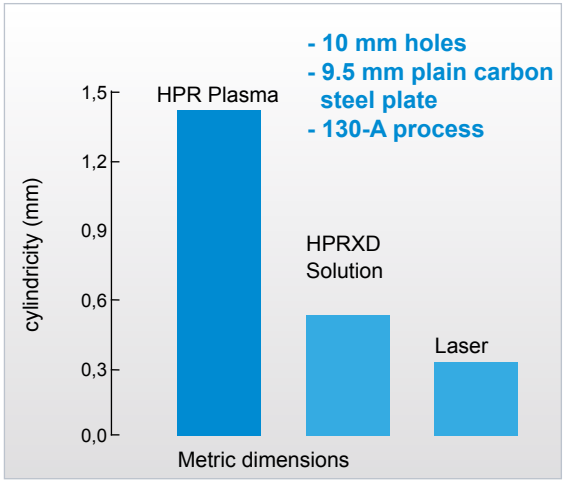
Powermax 105® • Max Pro 200® • HPR 130 XD® • HPR 260 XD® • HPR 400 XD®

Tolerances → Hy Definition



Tolerances → conventional plasma





Tolerances for Plasma Cutting

Dimensioning of cut using a ring as an example:

Thickness	Outside	Inside
1.5 to <70 mm	- 0 / + 3 mm	+ 0 / - 3 mm
70 mm to just below 100 mm	- 0 / + 5 mm	+ 0 / - 5 mm
100 to 150 mm	- 0 / + 10 mm	+ 0 / - 10 mm

ISO 9013 (DIN 2310)

	ISO Range 1		ISO Range 2		ISO Range 3		ISO Range 4		ISO Range 5	
Metric	Deviation	Angle	Deviation	Angle	Deviation	Angle	Deviation	Angle	Deviation	Angle
1.5	0.0021	2.2	0.0063	6.54	0.0163	16.51	0.0327	30.66	0.0493	41.82
3	0.0024	1.1	0.0068	3.21	0.0171	7.97	0.0342	15.64	0.0519	23.05
6	0.0027	0.7	0.0077	1.93	0.0183	4.59	0.0365	9.13	0.0560	13.85
10	0.0031	0.5	0.0085	1.39	0.0195	3.18	0.0390	6.33	0.0604	9.754
12	0.0035	0.4	0.0094	1.17	0.0207	2.258	0.0415	5.15	0.0647	8.00

Plasma-Jet DSL

CNC Control

Hypertherm® MicroEDGE® Pro

Reduce cost by increasing quality and productivity through advanced control technology!

Easy operation

- With the patented CutPro® Wizard, even inexperienced users can produce cut parts in less than 5 minutes
- LAN/WLAN network and USB ports allow loading of parts programs and software updates
- Access documentation with the push of a button, including valuable tips for optimizing cuts, instructions for wear parts replacement and diagnostic tools in several languages
  Wizards and support tools for diagnostics allow simple configuration, easy operation, and quick troubleshooting
- Communication is integrated in plasma and torch height control systems resulting in an automated and professional control that is based on factory installed or custom cutting data tables.

Reliable

- Structure and tested load capacity ensure reliable and consistent operation in harsh cutting environments
- Optimum industrial touchscreen with SAW (surface acoustic wave) technology glass ensures superior reliability and consistent operation even under harshest cutting conditions
- Air cooling reduces the load on electronic components, while preventing any dust from entering the system
- Manuals for Hypertherm, CNC and Torch Height Control can be accessed in various languages with the push of a button
- 2 -Year Factory Warranty

- **HyDefinition cut quality**
- **Automatic kerf width compensation according to material thickness, amperage and speed**
- **Maximized life of wear parts due to automatically set plunge-cut and cutting height**

High user comfort

- Offline software automatically sets up cutting process parameters
- Easy configuration of jobs using the CutPro® Wizard
- User is prompted to enter plate/sheet type and consumable part number
- Tips for cut optimization
- Operator manual for CNC, torch height control, and plasma source right on the control panel display
- Diagnostics via internet
- Offline diagnostics via form request or CNC software for the parts program

Standard Equipment

- **Operating system: Windows**
- **Industrial PC with 15" Touchscreen**
- **Graphic user interface**
- **USB port**

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