

Hypertherm[®]

powermax1650[®] G3 SERIES[™]

The performance standard for air plasma cutting and gouging



1 1/4" (32 mm)
Recommended capacity

1 1/2" (38 mm)
Maximum capacity

1 3/4" (44 mm)
Severance capacity

ISO 9001

1650[®] G3 SERIES™

Performance in a proven technology!



Performance in a proven technology!

The latest addition to our line of systems. Available in both power and air, the G3 products offer performance, reliability, and safety. Its design allows for automatic voltage sensing from 200 to 400 V AC, microprocessor-based control, and Hypertherm's advanced safety-to-read controls. It's the most powerful, compact plasma cutter money

Performance: metals to cutting speeds of 482 mm/min. **Reliability:** metals to cutting speeds over 250 mm/min. **Safety:** rough cut on metals (up to 1/2 inch) at low speed.

Machine torch operation

- **Recommended pierce capacity:** Up to 1/2 inch (12 mm).
- **Maximum pierce capacity:** Up to 3/4 inch (19 mm).
- Cutting above 3/4 inch (19 mm) requires an edge start.

Note: The cut capacities noted above are on mild steel. Some metals, such as aluminum and stainless steel, may require up to a 20% reduction in cut speed and capacity.

The power supply: the heart of the system

Advanced technology gives the Powermax1650 the power to cut with greater quality and efficiency.

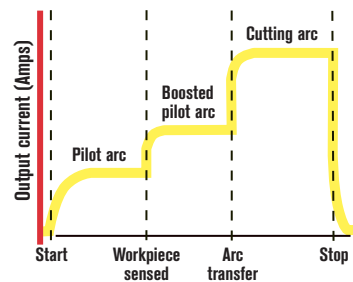
- 100-amp, 16-kilowatt output provides ample power for cutting heavy plate cleanly and quickly.
- Auto-voltage input sensing allows you to run on voltages from 200 to 600 volts, 3-phase, with no rewiring.
- CNC/Robotic machine interface is standard on all units, allowing for automated control and rapid mechanized installation.
- New Boost Conditioner™ circuit compensates for input voltage variation.

- Advanced digitally-controlled inverter design delivers continuously adjustable constant current output, from 30 to 100 amps, producing high-quality cuts over a wide range of metal thicknesses.
- An active, electronic pilot-arc controller for cutting expanded metal or grating preserves consumable life.
- A new gouging setting allows for longer arc lengths and easier operation, plus a metal removal rate in excess of 22 pounds per hour (10 kg).
- Wheels are standard on the Powermax1650 and provide improved mobility over rough and uneven surfaces.
- Back-lit LED's clearly convey all the information necessary to monitor the system status, including an easily readable and understandable air pressure gauge.

The torch: intelligent design combines performance, durability, comfort and safety

The Powermax1650 features Hypertherm's patented T100 safety trigger torch and T100M mechanized torch, which produce outstanding cut performance, reliability and operator comfort.

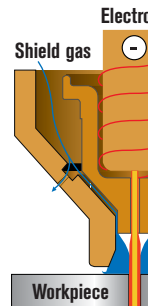
- The longest consumable life in the industry, and we'll prove it. HyLife® electrodes last longer than ordinary designs by using the same patented technologies developed for advanced Hypertherm mechanized systems.
- Dual-threshold™ pilot circuit significantly reduces nozzle wear by boosting pilot current precisely when needed.



- Patented nozzle shield technology lets you drag the torch on the workpiece at full output, without damaging consumables, and protects the nozzle from molten metal spray and double arcing.
- Postflow cooling reduces torch stress.



- Hypertherm's patented jet design boosts cut quality as 20% over conventional.



- Hypertherm's ETR™ system allows for easy hand and machine operation. A radical integrated design for durability.
- Hypertherm's patented safety-to-read protects against accidental interlocks deactivation, reducing consumable parts and increasing durable mechanical life.
- No breakable ceramic.
- Patented "blow-back" provides a pilot arc and high-frequency interlock.
- Consumables for gouging, cutting, pipe saddle applications. Most compatible with existing G3 systems. Fewer SKU's.

Engineered for safety

The Powermax1650 is designed for use in very harsh conditions.

- Mechanical and electrical components are validated through accelerated testing.
- Fan-on-demand feature reduces dust ingestion.

powermax1650[®] G3 SERIES[™]

High-performance portable plasma cutting system

Powermax1650 G3 Series standard system components

- Power supply
- T100 or T100M torch
- Spare consumables
- Work cable with clamp
15 feet (4.5 m)

Options

- Circle cutting guide – 027668
- Leather cable covers – 024548
- Air filtration kit – 128647
- Extended work cable – 123655
- Hand heat shield – 128658
- Stationary mounting kit –
128788

Ordering information

	Systems part numbers		
	With 25' (7.5 m) torch	With 50' (15 m) torch	With 75' (23 m) torch
200 – 600 V, 3-PH, CSA			
Hand system	059275	059276	059301
Machine system	059279	059280	059303
230 – 400 V, 3-PH, CE			
Hand system	059288	059289	059302
Machine system	059290	059291	059304



Specifications

Input voltages	200 – 600 V, 3-PH, 50 – 60 Hz, CSA 230 – 400 V, 3-PH, 50 – 60 Hz, CE
Input current @ 16 kW output	200/208/230/240/400/480/600 V, 3-PH: 53/51/46/44/27/22/21 A
Output voltage	160 VDC
Duty cycle @ 40° C (104° F) @ 100 amps	60% @ 200 – 208 V 70% @ 230 – 240 V 80% @ 400 – 600 V
Output for 100% duty cycle @ 40° C (104° F)	80 A @ 200 – 208 V 85 A @ 230 – 240 V 90 A @ 400 – 600 V
Maximum OCV	300 VDC
Dimensions	26.4" (671 mm) D; 16.8" (427 mm) W; 25.8" (655 mm) H
Weight with torch	128 lbs (58 kg)
Gas supply	Clean, dry, oil-free air or nitrogen
Flow rate	550 scfh; 9.2 cfm (260 l/min) at 90 psi (6.2 bar)
Flow pressure	75 psi (5.1 bar) flowing, 25' leads 80 psi (5.4 bar) flowing, 50' leads

Standard machine interface signals

Plasma start
Transfer (start machine motion)
24 VDC (100 ma maximum)
Arc voltage (torch height control) – signal not available on rear panel connector

For more information, refer to your operator's manual.

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Hypertherm[®]

The world leader in
plasma cutting technology[™]

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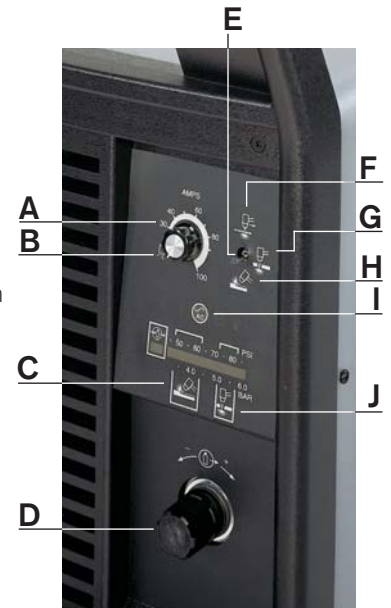
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- A: Cutting-current output control, 30 – 100 amps
- B: Gas test/set position
- C: Air pressure range, gouging mode
- D: Air pressure adjustment knob
- E: Cutting mode selector switch
- F: Pilot arc control mode
- G: Normal cutting mode
- H: Gouging mode
- I: Power on indicator
- J: Air pressure range, cutting mode



Operating data

	Hand torch	Machine torch
Recommended capacity	1 ¼" (32 mm)	½" (12 mm)
Maximum capacity	1 ½" (38 mm)	¾" (19 mm)
Severance capacity	1 ¾" (44 mm)	–

Material	Thickness		Current (amps)	Maximum travel speed* (mm/min.)	
	(inches)	(mm)		(ipm)	(mm/min.)
Mild steel	26 GA.	0.5	25	638	16205
	10 GA.	3.4	40	151	3835
	¼	6.4	60	132	3353
	½	12.7	100	88	2235
	¾	19.0	100	47	1193
	1	25.4	100	28	711
Aluminum	1 ¼	31.8	100	19	482
	½	0.8	25	610	15494
	⅜	3.2	40	204	5182
	¼	6.4	60	145	3683
	½	12.7	100	108	2743
	¾	19.0	100	57	1447
Stainless steel	1	25.4	100	33	838
	26 GA.	0.5	25	631	16027
	14 GA.	1.9	40	221	5613
	¼	6.4	60	110	2794
	½	12.7	100	79	2006
	¾	19.0	100	39	990
1	25.4	100	23	584	
1 ¼	31.8	100	14	355	

*Maximum travel speeds are the results of Hypertherm's laboratory testing. For optimum cut performance, actual cutting speeds may vary based on different cutting applications. Refer to the operator's manual for more details.