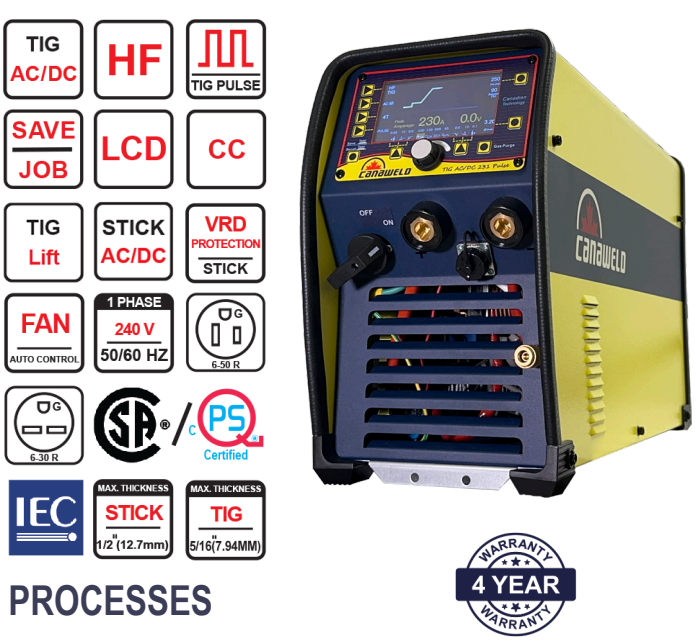
TIG AC/DC WELDER

● Heavy Industrial ● Medium Industrial

TIG AC/DC 231 Pulse

The TIG AC/DC 231 Pulse is a powerful, heavy-duty, and portable Canadian-made welding machine designed for industrial use. Despite its robust performance, it remains easy to carry. Equipped with advanced pulse waveforms, full professional functions, and HF start, it delivers high-quality TIG welds on both thick and very thin materials, ensuring precision with minimal distortion.

Digital control of all welding parameters, combined with a 5-inch color display and smart automatic settings, provides unmatched accuracy, simplified setup, and customizable memory for quick access.



4 YEAR WARRANTY

Weldable metals

- Aluminum
- Magnesium
- Steel
- Stainless Steel
- Chrome-moly
- Copper
- Nickel Alloys
- Silicon Bronze
- Brass

TIG — **GTAW (AC/DC) , HF and no HF**

PULSED — **PULSED**

STICK — **SMAW**

Key Features – TIG AC/DC 231 Pulse

AC Waveforms:

- **Advanced Square Wave** provides deeper penetration, higher torch speed, and rapid cooling of the weld pool.
- **Sine Wave** simulates a conventional power source and provides quieter arc sound.
- **Triangular Wave** minimizes heat input and distortion on thin aluminum, enabling faster travel speeds.

Advanced pulse features:

- Comprehensive pulse parameter adjustments: Pre-flow, Initial Amperage, Initial Slope, Peak Welding Amperage, Base Amperage, Pulse Frequency, Pulse Width, Final Slope, Final Amperage, and Post-flow, all easily accessible via the LCD screen.

The Power of Pulse:

Clean, Strong, and Precise Welding

- **Heat control** – minimizes distortion and burn-through.
- **Thin metal capability** – precise control for very thin materials, even aluminum.
- **Arc stability** – smooth, consistent arc in all positions.
- **Penetration** – strong welds on thicker metals.
- **Flexibility** – adapts to different joints, positions, and thicknesses.
- **Electrode life** – extends tungsten durability.
- **Weld quality** – clean, spatter free welds.

CANAWELD
Elevating Welding Equipment Standards

TIG AC/DC WELDER

TIG AC/DC 231 Pulse

TIG AC/DC 231 Pulse Technical Specification

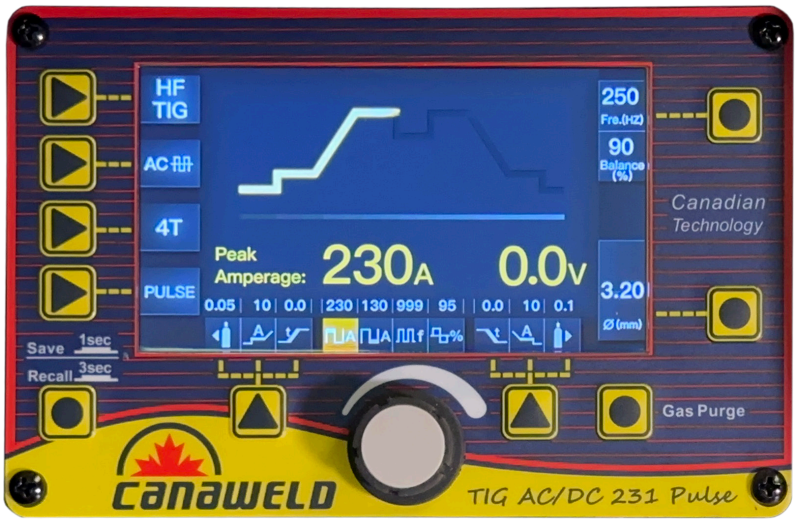
Process	Unit	TIG		Stick Electrode	
		AC	DC	AC	DC
Input Voltage, Single Phase, 50/60 Hz	V	208 to 240 V(±10%)			
Primary Current@ Rated Maximum Welding Current(@220V)	A	26		30	
Maximum Primary Effective Current (I1 eff max)(@220V)	A	20		19.2	
Welding Current Range	A	10 - 230	10 - 230	10 - 200	10 - 200
Duty Cycle @ Rated Maximum Welding Current at 104° F (40°C)	A	30%@230A	25%@230A	35%@200A	35%@200A
Welding Current @ 100% Duty Cycle in 104° F (40°C)	A	190	165	140	140
Welding Current @ 60% Duty Cycle in 104° F (40°C)	A	200	180	160	160
Stick Modes				AC and DC	
Arc Force				0 – 10	
Hot Start				0 - 10	
TIG Parameters					
TIG Process Types		TIG HF , TIG Lift			
TIG Process Modes		Pulse, Tack ,Stitch, No-Pulse			
TIG Output Control		2T , 4T , Foot Pedal			
Adjustable parameters		Pre Flow, Initial Amperage, Initial slope, Welding Amperage, Base Amperage, Pulse Duty Cycle, Pulse frequency, Final slope, Final Amperage, Post Flow, tungsten electrode diameter			
Pre-flow	sec.	0.1 – 5			
Initial Amperage	A	10 – 230			
Initial Slope	sec.	0.0 – 20			
Peak Welding Amperage	A	10 – 230			
Final Slope	sec.	0.0 – 20			
Final Amperage	A	10 – 230			
Post flow	sec	0.1 – 25			
TIG Pulse Parameters					
Pulse Functions		Base Amperage, Pulse Duty Cycle, Pulse frequency			
Base Amperage	A	10 – 230			
Pulses Frequency	pps	0.5 – 999			
Pulse Duty Cycle	%	5 – 95			
TIG AC Parameters					
AC Wave Shapes		Advanced Square Wave, Sine wave,Triangular wave			
AC Controls		Frequency , Balance			
Balance	%	30 – 90%			
Frequency	HZ	50 – 250			
TIG Sequence Control Parameters					
ON Time(Tack ,Stitch)	sec.	0.1 – 10.0			
OFF Time(Stitch)	sec	0.1 – 10.0			
Maximum Material Thickness (TIG)					
Maximum Electrode Diameter (Stick)					
Minimum Power of Generator	KVA	7.2 KVA			
Torch Cooling		Water			
Weight	lb. (Kg)	42 lb (19 kg)			
Dimensions Including Handle (D, W, H)	in. (mm)	24'x 8.5'x 16.5'inch (610 X 215 420 mm)			

TIG AC/DC WELDER

TIG AC/DC 231 Pulse

Professional Features for welding:

- **TIG AC Welding, with Pulse**
- **TIG AC Welding without Pulse**
- **TIG DC Welding, with Pulse**
- **TIG DC Welding without Pulse**



Tack, TIG Welding

Produces very short, low-heat tacks during fit-up to keep parts aligned before the final weld. Helps prevent burn-through or warping of material and minimizes the need for clamping.

Cold Tack, TIG Welding

Produces very short, low-heat pulse tacks during fit-up to keep thin parts aligned before the final weld. Prevents burn-through or warping of thin material and reduces the need for clamping.

Stitch TIG Welding

Creates short weld segments with small gaps that allow the joint to cool between passes, reducing heat input and distortion on long seams and sheet. Ideal for edge and lap joints.

Cold Stitch, TIG Welding

Uses low-heat pulsed TIG to place small beads in sequence, allowing each to cool before the next. Produces strong, low-distortion, and clean joints on thin stainless steel, aluminum, and other heat-sensitive alloys.

Practical Welding Parameters

TIG Welding

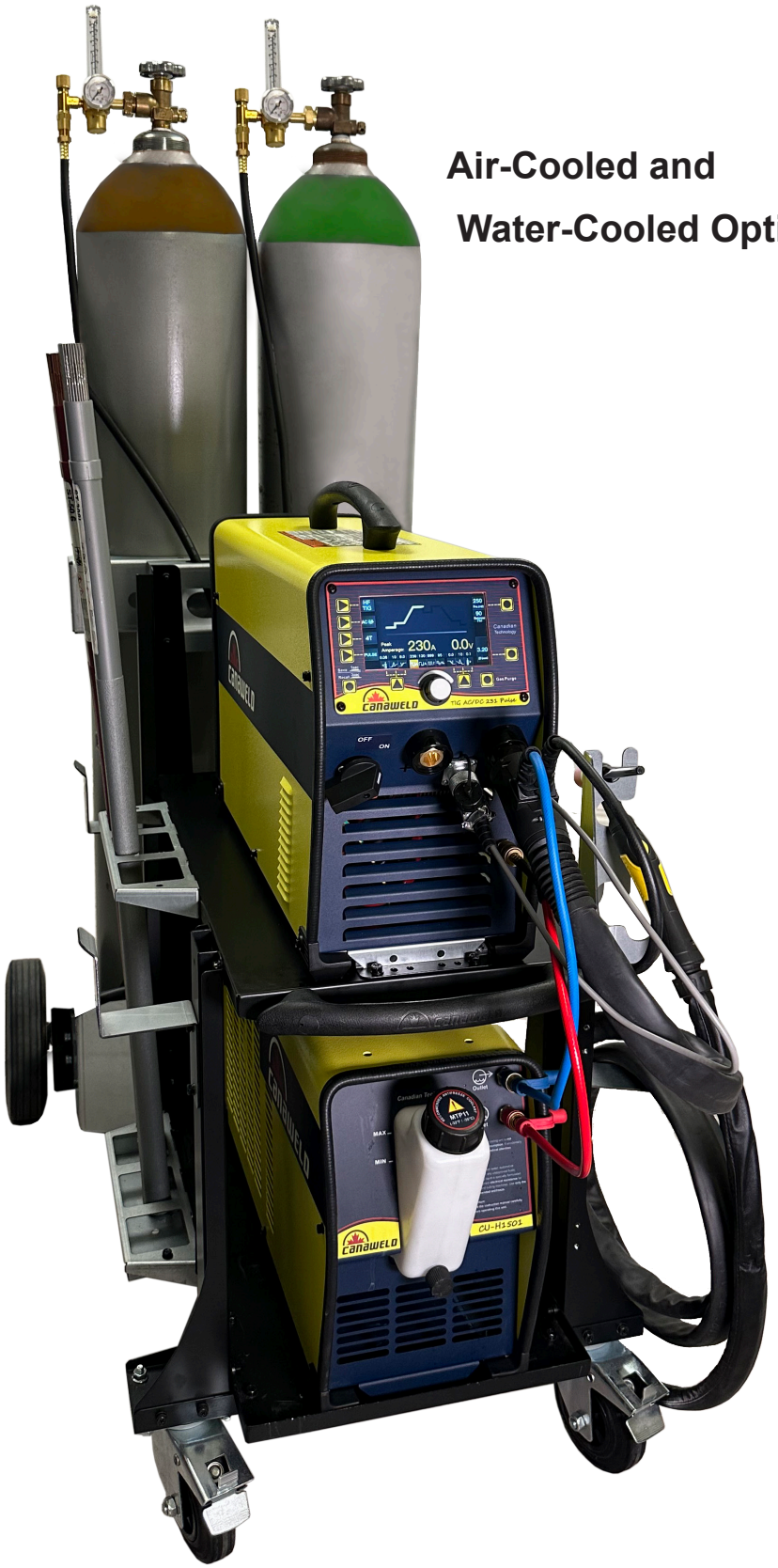
- **Maximum Output:** 230 A at 30% duty cycle (200 A at 60%). Capable of TIG welding aluminum and steel up to 9/32" (7 mm) thick.
- **5-inch LCD screen** for quick, intuitive setup. Ideal for both experts and beginners. Simplifies parameter selection, cuts setup costs, prevents adjustment errors, and boosts productivity.
- **Adjustable balance settings** provide full control over themix of cleaning and penetration during aluminum welding.
- **HF Start** provides reliable, contactless arc ignition, prevents tungsten contamination, extends tungsten life, stabilizes the arc, and supports smooth puddle formation for superior weld quality.
- **Hot Start** Improves ignition, enhances tungsten durability, stabilizes the arc, supports puddle formation, and increases overall weld quality at the start. Once the tungsten diameter is set on the panel, the hot start is automatically adjusted.
- **Stores up to 10 job** memories for quick recall of preferred weld settings.
- **Remote amperage control** via foot pedal, available in both wired and wireless options for maximum flexibility.

Stick Welding

- Excellent arc ignition with a stable and smooth arc.
- Compatible with E6013, E7014, E7018, and E7024 electrodes.
- Arc Force and Soft Start functions optimize arc characteristics in Stick mode.
- VRD (Voltage Reduction Device) enhances safety by lowering idle open-circuit voltage in Stick mode without affecting performance.

TIG AC/DC WELDER

TIG AC/DC 231 Pulse



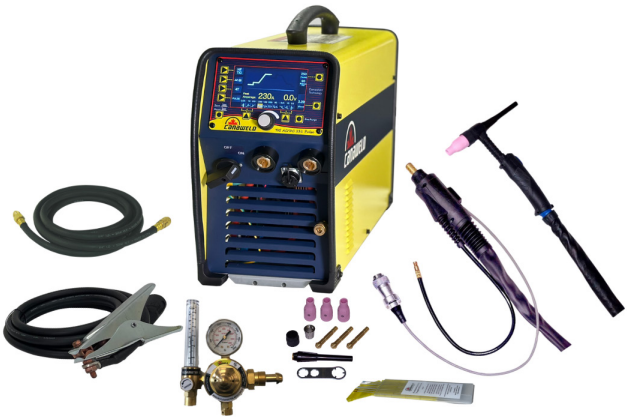
Air-Cooled and Water-Cooled Options:

The **Canaweld TIG AC/DC 230A** is designed primarily as a **water-cooled system,** making it highly convenient for **heavy-duty welding** and **industrial applications.** With a **60% duty cycle,** the water-cooled torch ensures better heat management, operator comfort, and extended consumable life—features essential for continuous or demanding work. In today's market, there are no true heavy-duty air-cooled TIG torches that match this level of performance.

However, for **lighter duty jobs** or when a cooling system is not required, the machine can also be fitted with an aircooled torch. **Air-cooled torches** have a lower current capacity and duty cycle compared to the machine, but they can be used effectively if operated within their limits. To protect the torch, the **rear connector** of the machine allows the welder to switch to **air-cooled mode**, ensuring they are aware of the reduced capacity and adjust their usage accordingly.

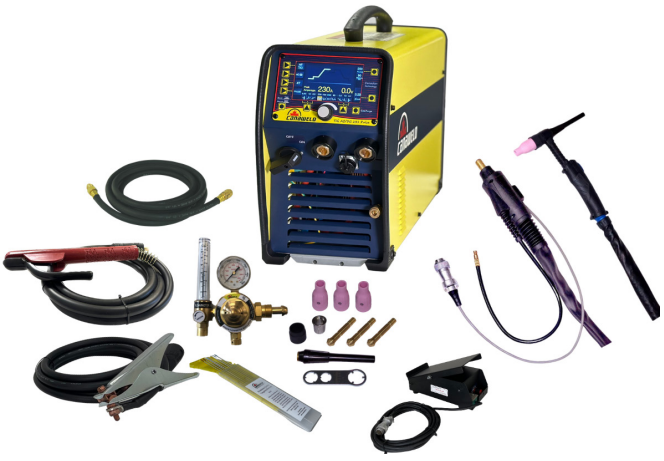
TIG AC/DC 231 Pulse (Air Cooled-Silver Package) (PLB2380156)

What Is Included		
TIG AC/DC 231 Pulse (Air Cooled-Silver Package)		
ITEM	**PART NO.**	
The TIG AC/DC 231 Pulse	CWS.004RM.T93-CN	
300A Complete Ground Clamp Assembly set	CWGC300A-2-10-35D	
TIG Torch T3 – Air-Cooled	CWT3FX-S1-4M-SL	
Flowmeter Regulator	CWFM-250-60CF-AR	
Gas Welding Hose	TLJ1080191	
TIG Tungsten Electrode MIX of 10	CTE500-RGBW-116332018	
TIG Consumable Kit	ALPTORCHCON18	



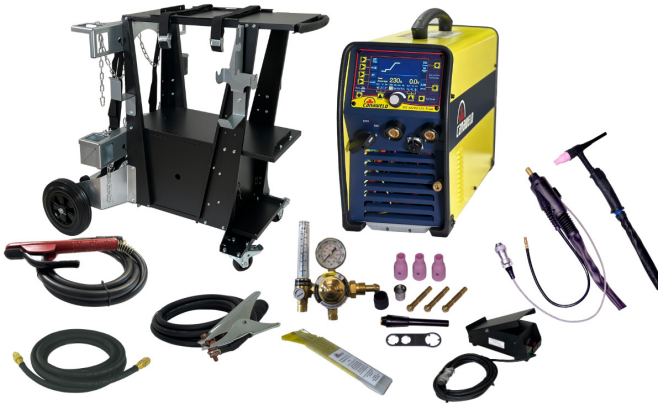
TIG AC/DC 231 Pulse (Air Cooled-Gold Package) (PLB2380157)

What Is Included		
TIG AC/DC 231 Pulse (Air Cooled-Gold Package)		
ITEM	**PART NO.**	
The TIG AC/DC 231 Pulse	CWS.004RM.T93-CN	
300A Complete Ground Clamp Assembly set	CWGC300A-2-10-35D	
300A Complete Electrode HolderAssembly set	CWEL300A-2-10-35D	
TIG Torch T3 – Air-Cooled	CWT3FX-S1-4M-SL	
Flowmeter Regulator	CWFM-250-60CF-AR	
Gas Welding Hose	TLJ1080191	
TIG Tungsten Electrode MIX of 10	CTE500-RGBW-116332018	
TIG Consumable Kit	ALPTORCHCON18	
Wired Foot pedal	TGJ2580472	



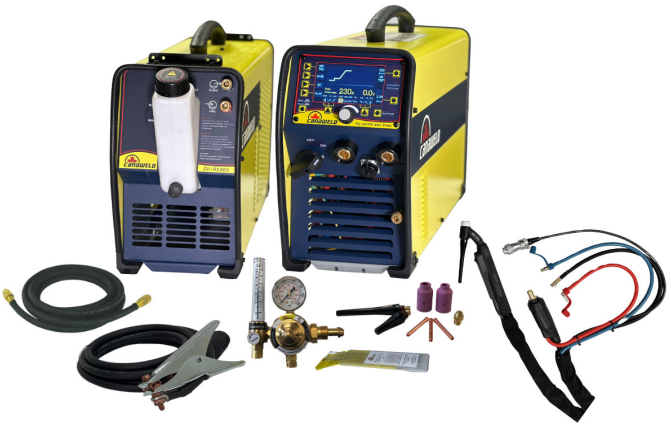
TIG AC/DC 231 Pulse (Air Cooled-Gold Pluse Package) (PLB2380158)

What Is Included		
TIG AC/DC 231 Pulse (Air Cooled-Gold Pluse Package)		
ITEM	**PART NO.**	
The TIG AC/DC 231 Pulse	CWS.004RM.T93-CN	
300A Complete Ground Clamp Assembly set	CWGC300A-2-10-35D	
300A Complete Electrode HolderAssembly set	CWEL300A-2-10-35D	
TIG Torch T3 – Air-Cooled	CWT3FX-S1-4M-SL	
Flowmeter Regulator	CWFM-250-60CF-AR	
Gas Welding Hose	TLJ1080191	
TIG Tungsten Electrode MIX of 10	CTE500-RGBW-116332018	
TIG Consumable Kit	ALPTORCHCON18	
Wired Foot pedal	TGJ2580472	
Welding Cart (Single Gas Bottle)	TR4-D1-1	



TIG AC/DC 231 Pulse (Water Cooled-Silver Package) (PLB2380159)

What Is Included		
TIG AC/DC 231 Pulse (Water Cooled-Silver Package)		
ITEM	**PART NO.**	
The TIG AC/DC 231 Pulse	CWS.004RM.T93-CN	
300A Complete Ground Clamp Assembly set	CWGC300A-2-10-35D	
CLASSIC TIG 18 TORCH- 12FT C/W ML3550 END- Zip Cover and Snap on	CAN-UWP18FX-12-0B-MSL-WR1-GS4-ZSch	
Flowmeter Regulator	CWFM-250-60CF-AR	
Gas Welding Hose	TLJ1080191	
TIG Tungsten Electrode MIX of 10	CTE500-RGBW-116332018	
TIG Consumable Kit	ALPTORCHCON18	
Cooling Unit CU-H1801	CWS.055RM.056-CN	

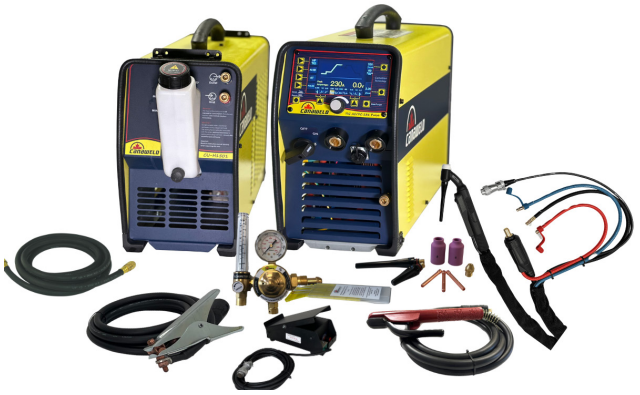


TIG AC/DC 231 Pulse (Water Cooled-Gold Package) (PLB2380160)

What Is Included

TIG AC/DC 231 Pulse (Water Cooled-Gold Package)

ITEM	PART NO.	
The TIG AC/DC 231 Pulse	CWS.004RM.T93-CN	
300A Complete Ground Clamp Assembly set	CWGC300A-2-10-35D	
300A Complete Electrode HolderAssembly set	CWEL300A-2-10-35D	
CLASSIC TIG 18 TORCH- 12FT C/W ML3550 END- Zip Cover and Snap on	CAN-UWP18FX-12-0B-MSL-WR1-GS4-ZSch	
Flowmeter Regulator	CWFM-250-60CF-AR	
Gas Welding Hose	TLJ1080191	
TIG Tungsten Electrode MIX of 10	CTE500-RGBW-116332018	
TIG Consumable Kit	ALPTORCHCON18	
Cooling Unit CU-H1801	CWS.055RM.056-CN	
Wired Foot pedal	TGJ2580472	

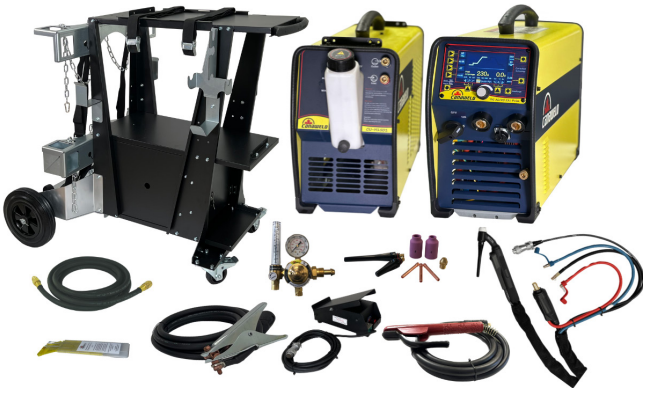


TIG AC/DC 231 Pulse (Water Cooled-Gold Pluse Package) (PLB2380161)

What Is Included

TIG AC/DC 231 Pulse (Water Cooled-Gold Pluse Package)

ITEM	PART NO.	
The TIG AC/DC 231 Pulse	CWS.004RM.T93-CN	
300A Complete Ground Clamp Assembly set	CWGC300A-2-10-35D	
300A Complete Electrode HolderAssembly set	CWEL300A-2-10-35D	
CLASSIC TIG 18 TORCH- 12FT C/W ML3550 END- Zip Cover and Snap on	CAN-UWP18FX-12-0B-MSL-WR1-GS4-ZSch	
Flowmeter Regulator	CWFM-250-60CF-AR	
Gas Welding Hose	TLJ1080191	
TIG Tungsten Electrode MIX of 10	CTE500-RGBW-116332018	
TIG Consumable Kit	ALPTORCHCON18	
Cooling Unit CU-H1801	CWS.055RM.056-CN	
Wired Foot pedal	TGJ2580472	
Welding Cart (Single Gas Bottle)	TR4-D1-1	



TIG AC/DC WELDER

TIG AC/DC 231 Pulse

Reliability and Convenience

- Ability to pre-set all parameters before welding.
- Compatible with Canaweld auxiliary cooling system.
- Innovative wind-tunnel cooling design for enhanced durability
- Fan-cooled & thermally protected against overheating.
- Auto-fan control reduces noise, minimizes dust intake, saves energy, and extends the life of both the fan and the machine.
- Canaweld's innovative cooling system extends machine life while reducing weight and volume.
- Durable metal face panel.
- Tested at 104°F (40°C) and built for tough industrial conditions.
- 4-Year Comprehensive Warranty.

Applications:

- Aerospace fabrication and repair
- Aluminum fabrication (frames, tanks, tooling)
- Boat & yacht building
- Automotive manufacturing; parts & body repair
- Work/service bodies; truck & trailer fabrication (light/medium)
- Railcar component repair (light/medium)
- Machinery and component manufacturing
- Medical device fabrication
- Food industry & high-purity process piping (sanitary TIG)
- Technical training schools
- Civil construction (shop/field TIG)
- Mechanical contractors
- Installation, maintenance & repair (field operations)
- Electric Power generation maintenance
- Refineries (non-cellulosic TIG tasks)
- Plumbing & HVAC (copper, stainless, aluminum)

OPTIONAL ACCESSORIES

PRODUCT	PART NO.	
Wireless Foot Control System	CW-FP-WR-01	
Wired Foot pedal	TGJ2580472	
Ground Clamp Set(300-500A, 20-50 ft)	CWGC*	
Electrode Holder Set (300-500A, 20-50 ft)	CWEL*	
TIG Tungsten Grinder	CWMJJ-STD-01	
C5 Black (Series Helmets)	CWELITE-550S-BLK	
C8 Black (Series Helmets)	CWPOWER-980S-BLK	
C8 Coal Fire (Series Helmets)	CWPOWER-980S-CO	

TIG AC/DC WELDER

TIG AC/DC 231 Pulse

Advanced Cooling Systems for Welding and Cutting

Efficient cooling is essential when working with powerful MIG, TIG, and Plasma machines. High welding currents generate significant heat in the torch, which can reduce performance, cause premature wear, and limit operator comfort. Our integrated cooling systems are designed to address these challenges by ensuring stable torch temperatures, even under heavy-duty conditions.

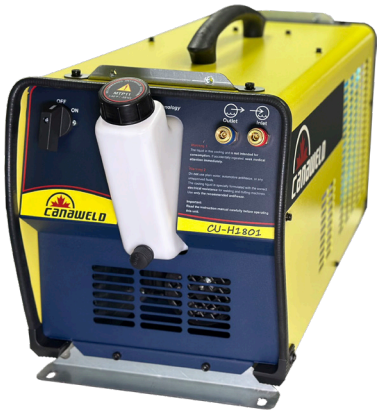
By circulating coolant through the torch and cables, these systems dissipate excess heat and protect key components. This allows welders to use lighter and smaller torches, improving maneuverability and reducing fatigue during long shifts. With less overheating, torches last longer, consumables stay in better condition, and maintenance costs are reduced.

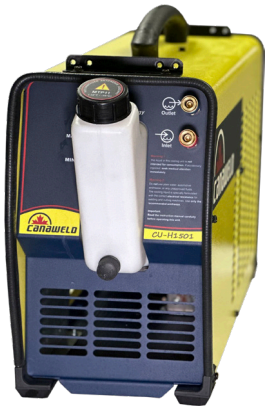
Key Advantages:

- Maintains consistent torch temperature at high currents
- Extends torch and consumable lifespan
- Allows use of compact, lightweight torches for better handling
- Increases operator comfort and productivity
- Supports reliable performance in demanding MIG, TIG, and Plasma applicationsWhether in fabrication shops, heavy industry, or precision welding environments, a dependable cooling system ensures maximum efficiency, durability, and operator comfort.

Canaweld Water Coolant Systems

Canaweld water coolant systems provide efficient, reliable cooling for TIG, MIG, and Plasma applications. Built with cutting-edge design and engineering, they are designed for both light- and heavy-duty use, feature a compact design, come in various power levels to match different torch capacities and cooling needs, and are compatible with most welding and cutting machines on the market.





Key Features:

- **Powerful fan** for effective heat dissipation.
- **High-efficiency heat exchanger** for maximum cooling performance.
- **Special filter** to absorb particles in the water circulation system.
- **Multiple protections,** including water circulation monitoring and pressure switch.
- **Brass regenerative turbine electric pump** provides reliable pressure and flow,even for long torches or high-altitude work.
- **Smart air-cooling design** ensures maximum efficiency with minimum volumeand weight
- **Special coolant liquid supplied** with the system, lubricating the pump and protecting gainst freezing in winter.
- **Available in different power levels**, depending on the required cooling capacity