

APT-HP PLASMA TORCH

LIGHTWEIGHT • COMPACT • RELIABLE • EASY TO HANDLE

**THE ENVIRONMENTALLY-FRIENDLY ALTERNATIVE
TO FOSSIL FUEL BURNERS**

Available in a lightweight, vortex-stabilized, compact configuration, the APT-HP plasma torch distinguishes itself from other torches by its capacity to reach high power levels (up to 1 MW).

The APT-HP torch is an excellent, environmentally-friendly tool for the transformation of materials to value-added products in mining and metallurgy, waste treatment, and oil and gas.

PyroGenesis APT-HP Plasma Torch Advantages

REDUCE GHG EMISSIONS

By about 250 tonnes CO₂e per GW-h*

REDUCE OPERATING COSTS

By 5-30%

EASY TO OPERATE

Automatic start-up, operation, shutdown & restart

LOW MAINTENANCE

Completed in a few minutes to minimize downtime

SAFE

Minimal personnel Intervention

RELIABLE

Multiple orders from long term clients (ex. US Navy)

** or 70 kg CO₂e per MMBTU when hydro power is available*

Main Applications



- MSW Gasification
- Incinerator Ash Vitrification
- Asbestos Vitrification
- Radioactive Waste Disposal



- Iron Ore Pelletization
- Steel Tundish Heating
- Metallic Dust Recovery

FEATURES

Vortex Stabilized

- No magnetic field needed
- Compact design

Electrode Life

- Cathode: 1000 hours
- Nozzle: 500 hours
- Anode: 500 hours

Plasma Forming Gas

- Air
- Nitrogen
- Others available

Power Range

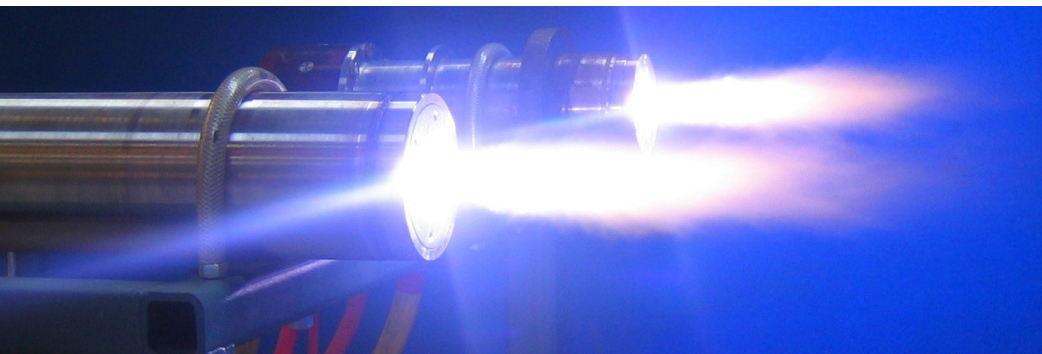
- 200 kW to 1 MW
- 5:1 turndown ratio

Safety & Operability Features

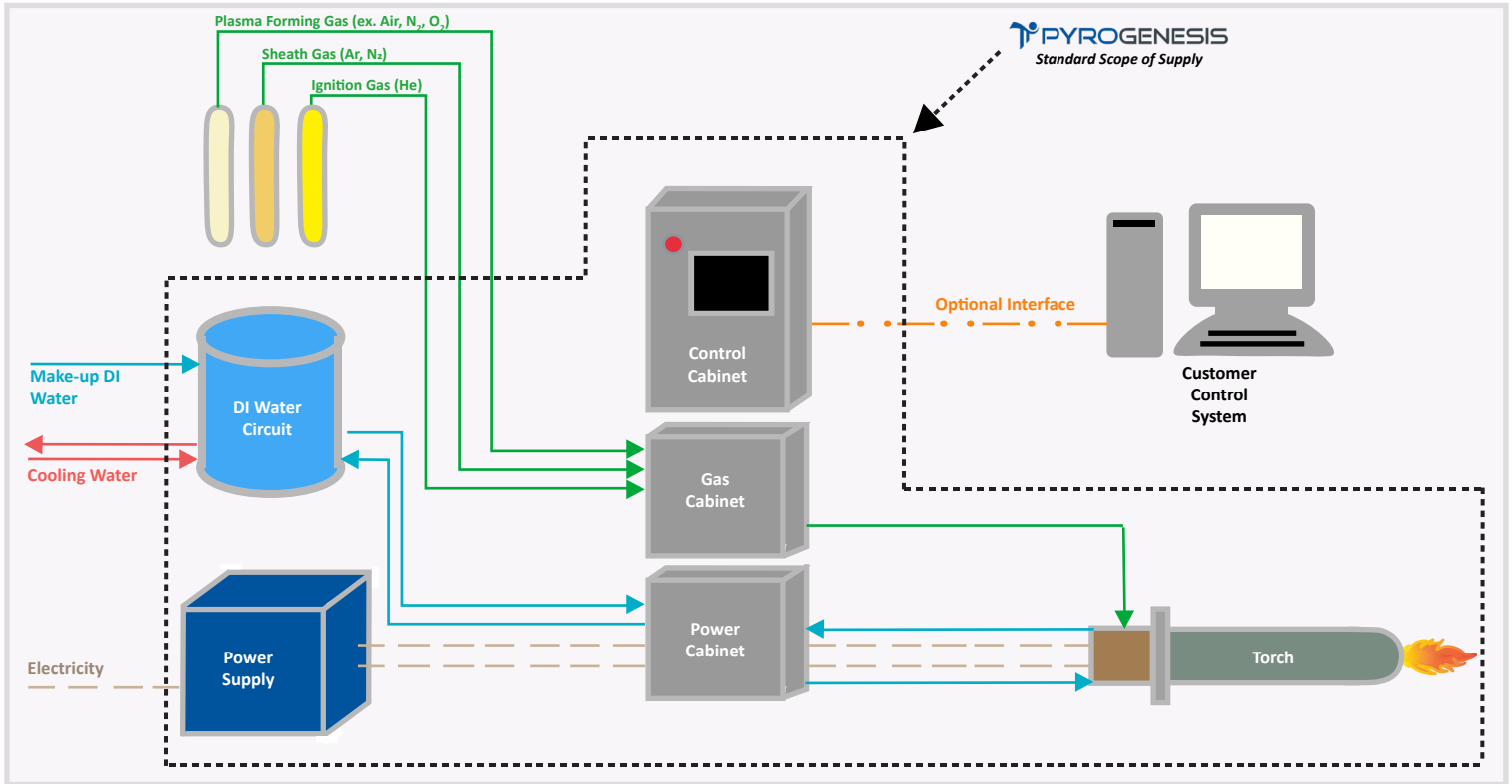
- Electrically isolated torch cover
- Lightweight
- Automated controls

For more information, please contact:

Business Development Department
PyroGenesis Canada Inc.
plasma@pyrogenesis.com
T. +1 (514) 937-0002
F. +1 (514) 937-5757



Fully Integrated Plasma Torch System



APT-HP Plasma Torch System Configurations

POWER (kW)	PLASMA FORMING GAS	POWER SUPPLY	TORCH DIMENSIONS	CONTROLS & CABINETS	DI WATER COOLING ASSEMBLY	FEATURES/ OPTIONS
200 to 1,000 5:1 turndown > 1,000 in development	Main: Air Nitrogen Other Sheath: Argon Nitrogen	Type: SCR IGBT Cooling: Air Water Input: 240V, 380V 460V, 600V 3-phase 50Hz/60Hz Rating: NEMA12 (others available)	Standard Length: 10" - 15" from support flange Standard Diameter: 4" to 8" Customized Dimensions: On request	PLC Control Human Machine Interface: 5" Touch Screen 10" Touch Screen 15" Touch Screen Desktop Customer Interface Rating: NEMA4 (others available)	DI Water Requirements: (Closed circuit) 225 lpm ≤ 50 °C 250 psi ≤ 20 μS/cm Cooling Water Requirements (if no DI): 500 lpm ≤ 30 °C 60 psi	Multiple Torches Communication with other devices (ex. Ethernet IP) Full integration with control systems Base Warranty = 1 year (extended warranty available) Remote Monitoring and Technical Support Control Cabinet Operational at ambient conditions of up to 40 °C (50 °C available as an option)

PyroGenesis Canada Inc. is a world-renowned high-tech company specializing in high-temperature processing of materials and waste and counts the US Navy and the US Air Force amongst its extensive client base.

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