TECHNICAL DATA SHEET

PlasmaNova™ Portable 5 kW Integrated Plasma Torch System

Portable DC arc plasma torch system · 3–5 kW continuously adjustable · Flame core exceeding 6000 °C



ACS Material PlasmaNova™ portable 5 kW integrated plasma torch system (image for reference only)

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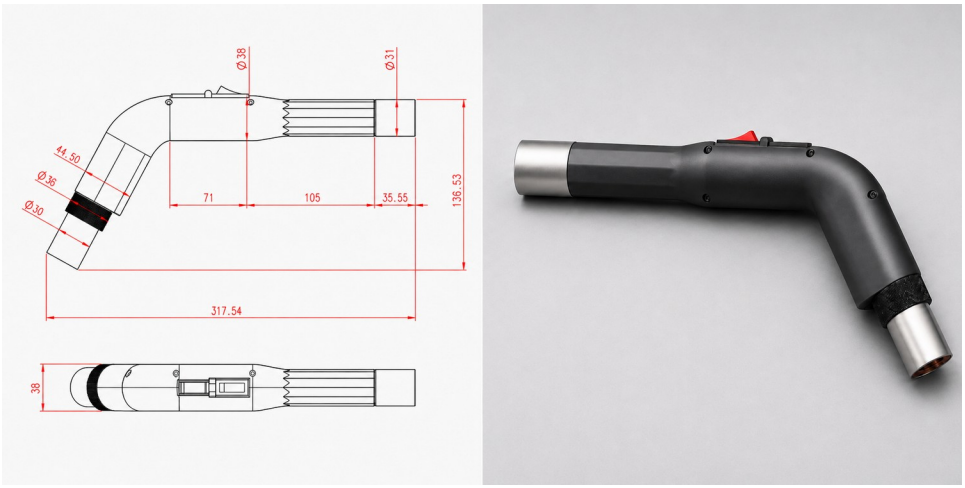
SECTION I

Product Overview

PlasmaNova™ is a portable, fully integrated 5 kW plasma torch system for plasma torch experiments and fusion welding of conventional and specialty materials. It generates a DC arc plasma with a flame core exceeding 6000 °C, runs on nitrogen or air, and offers continuously adjustable output power from 3 to 5 kW. A built-in water-cooling system and integrated, mobile design make it suitable for both handheld operation and integration with robotic-arm automation, with support for continuous 24-hour operation.

Product Features

- Wide temperature range with high stability.
- Built-in water-cooling system for high cooling efficiency and extended electrode lifespan.
- Continuously adjustable power parameters for easy control.
- Integrated design — easy to move, safe, and reliable.
- Supports both handheld operation and integration with robotic-arm automatic control systems.



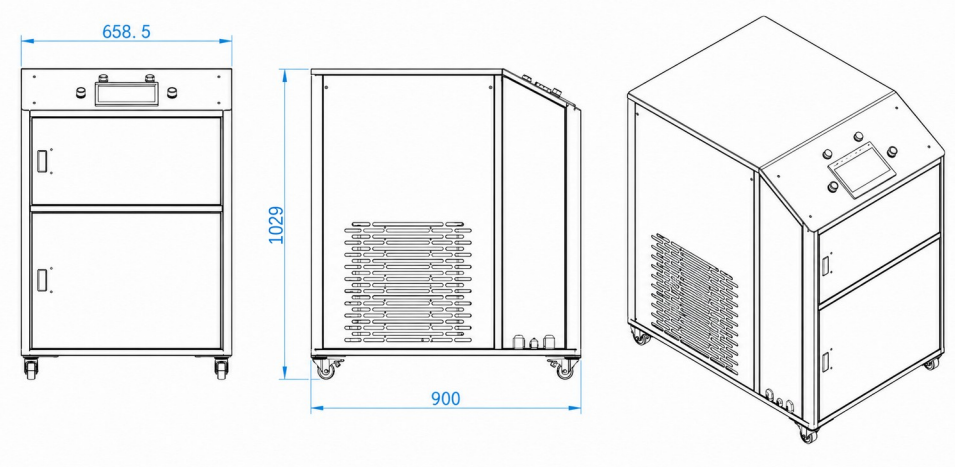
PlasmaNova™ plasma torch — design drawing (left) and product view (right). Dimensions in the design drawing are in millimeters (mm). For reference only; actual dimensions are subject to final delivery.

SECTION II

Technical Specifications

Item	Specification
Power supply	Three-phase four-wire, AC 380 V ±10%, 50 Hz (customizable)
Rated output power	3–5 kW, continuously adjustable
Plasma discharge type	DC arc plasma
Working gas	Nitrogen, air
Flame diameter	0–30 mm
Flame temperature	Outer flame approx. 1200 °C; core exceeds 6000 °C
Flame length	5–10 cm
Cooling method	Forced air cooling (with built-in water-cooling system)
Operation mode	Manual control; continuous 24-hour uninterrupted operation
Torch handle type	Handheld; supports robotic-arm operation
Operating ambient temperature	−10 °C to +40 °C

Mechanical Dimensions

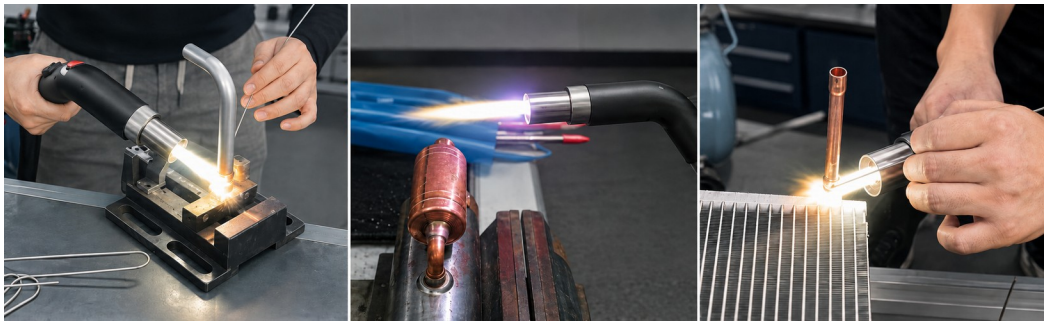


PlasmaNova™ 5 kW system mechanical dimensions. All dimensions are in millimeters (mm). For reference only; actual dimensions are subject to final delivery.

SECTION III

Applications

PlasmaNova™ is suited to plasma torch experiments, fusion welding of conventional and specialty materials, and related applications:



PlasmaNova™ plasma torch in a welding application (for reference only).

- Plasma torch experiments — an adjustable DC arc plasma source.
- Fusion welding — for conventional and specialty materials.

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