

TECHNICAL DATA SHEET

Low Temperature Plasma Jet Generator Series

Jet-type atmospheric low-temperature plasma surface-treatment equipment



ACS Material low-temperature plasma jet generator

CONTENTS

- 01 Product Overview
- 02 Specifications
- 03 Plasma Gun Options
- 04 Applications

ACS MATERIAL, LLC

959 E Walnut St., Suite 100
Pasadena, CA 91106, USA

Phone +1 (866) 227-0656

Fax +1 (781) 518-0284

contact@acsmaterial.com

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SECTION I

Product Overview

The jet-type atmospheric low-temperature plasma jet generator produces a neutral (electrically non-charged) plasma with ion and electron energies in the range of 6–10 eV. Because the ejected plasma flow is non-charged, it can be used for surface modification, cleaning, and etching of metals, semiconductors, and non-metallic materials — including polymers, rubber, and PCBs — without a vacuum chamber, and installs directly on a production line.

Product Features

- Non-conductive plasma — processes virtually any material or product, including metals and items with electronic components.
- Low temperature — suitable for products with temperature-sensitive surface materials.
- No enclosure required — installs directly on a production line, with no vacuum chamber.
- Consumes only air and electricity — low operating cost and safer operation.
- No ozone generation and no chemical pollutants emitted — compliant with environmental regulations.

SECTION II

Specifications

Standard models

Power-adjustable and wide-width models

Specification	PG-1000ZD/N	PG-1000ZD	PG-1000ZE	PG-1000ZH
SKU #	EPG1ZDN1	EPG1ZD01	EPG1ZE01	EPG1ZH01
Torch width	2–7 mm	10 mm	10 mm	15 mm
Processing speed	30–90 m/min	30–90 m/min	30–90 m/min	30–90 m/min
Gas pressure	4–6 atm	4–6 atm	1.05 atm	>4–6 atm
Gas source	Air compressor	Air compressor	Rotary compressor	Air compressor

Wide-width models

Specification	PG-1000Z/F	PG-1000Z/G	PG-1000Z/FK
SKU #	EPG1ZF01	EPG1ZG01	EPG1ZFK1
Torch width	20–40 mm	20–40 mm	50–90 mm (adj.)
Processing speed	30–90 m/min	30–90 m/min	30–90 m/min
Gas pressure	>4–6 atm	FP-290 booster	>4–6 atm
Gas source	Air compressor	Vortex booster	Air compressor

Common specifications (all standard models)

Parameter	Value	Parameter	Value
Input power	AC 220 V (±10%)	Frequency	20 kHz
Power	300–1000 VA	Flow rate	20–80 L/min
Unit dimensions	180 (W) × 450 (D) × 220 (H) mm	Weight	~12 kg
Operating temp.	–10 °C to 50 °C	Relative humidity	<93%

Parameter	Value	Parameter	Value
Atmospheric pressure	86–106 kPa	Storage temp.	–25 °C to 25 °C
Material handled	Polymer or metal		

Vortex booster station

Product	SKU #	Model	Features
Jet Plasma Vortex Booster Station	EPJFP290	FP-290	Supplies clean, oil-free, water-free gas to 1 or 2 plasma torches

Smart wide-width models

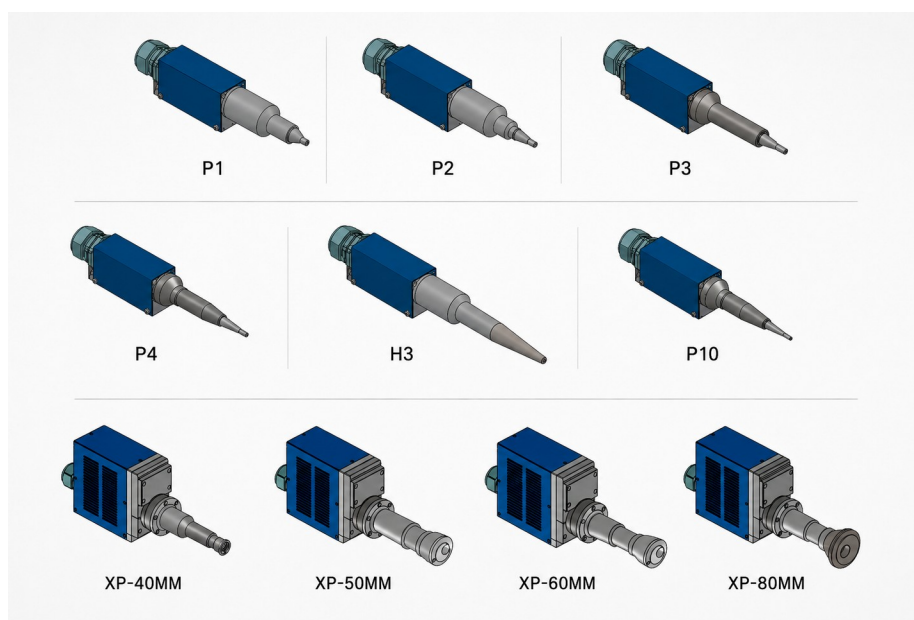
Specification	PTS-2000D	PTS-X000D
SKU #	EPPTS2D1	EPPTSX2D
Model	PTS-2000D	PTS-X000D
Torch width	2–90 mm (adjustable)	2–90 mm (adjustable)
Plasma torches	Connects 1–2 torches	Connects 1–4 torches
Application	Polymers or metals	Polymers or metals

Smart models add full monitoring and data feedback — plasma state, energy/power, rotation speed, gas-source status, and consumable-replacement tracking and reminders — with data exchange, predictive warning, and fail-safe design.

SECTION III

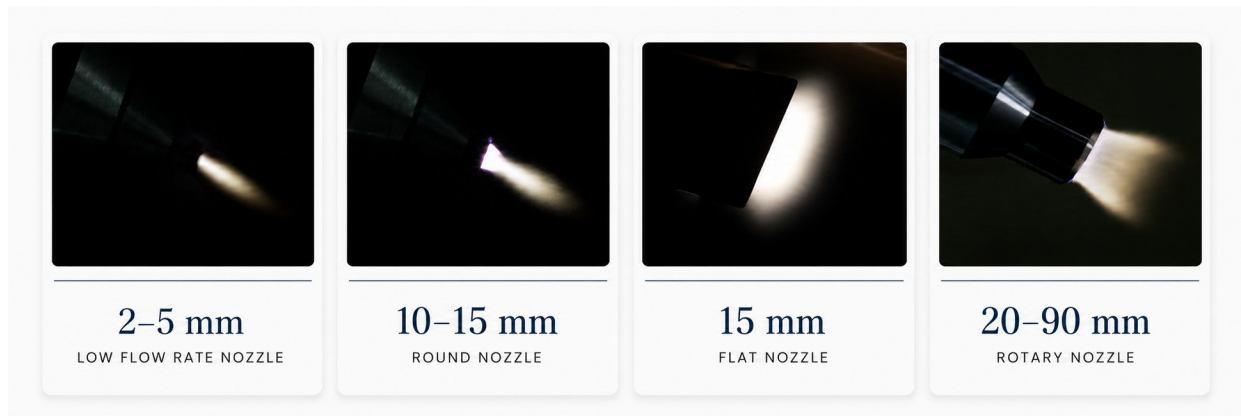
Plasma Gun Options

All models use a direct-jet plasma gun. The gun family covers a range of torch geometries — from fine, low-flow-rate tips for precision work through round and flat nozzles to wide rotary nozzles — so the plasma footprint can be matched to the part being treated.



Direct-jet plasma gun options across the jet-type plasma series

Different nozzle geometries produce different plasma footprints, from a narrow low-flow jet to a wide rotary plume:



Plasma flame by nozzle type: low-flow-rate (2-5 mm), round (10-15 mm), flat (15 mm), and rotary (20-90 mm)

SECTION IV Applications

Low-temperature plasma pre-treatment improves cleaning, activation, and adhesion across a wide range of industries:

- Automotive Manufacturing
- Plastics & Rubber
- Electronics, Optoelectronics & Medical
- Metal & Coating
- Synthetic Fiber & Textile
- Printing & Coding
- Box Manufacturing

Custom equipment

Beyond the standard generators, ACS Material builds custom low-temperature plasma treatment systems — integrated benchtop and inline stations engineered around a specific part, throughput, or automation requirement, including multi-head and sealing-strip configurations.



Examples of ACS Material custom low-temperature plasma treatment equipment

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