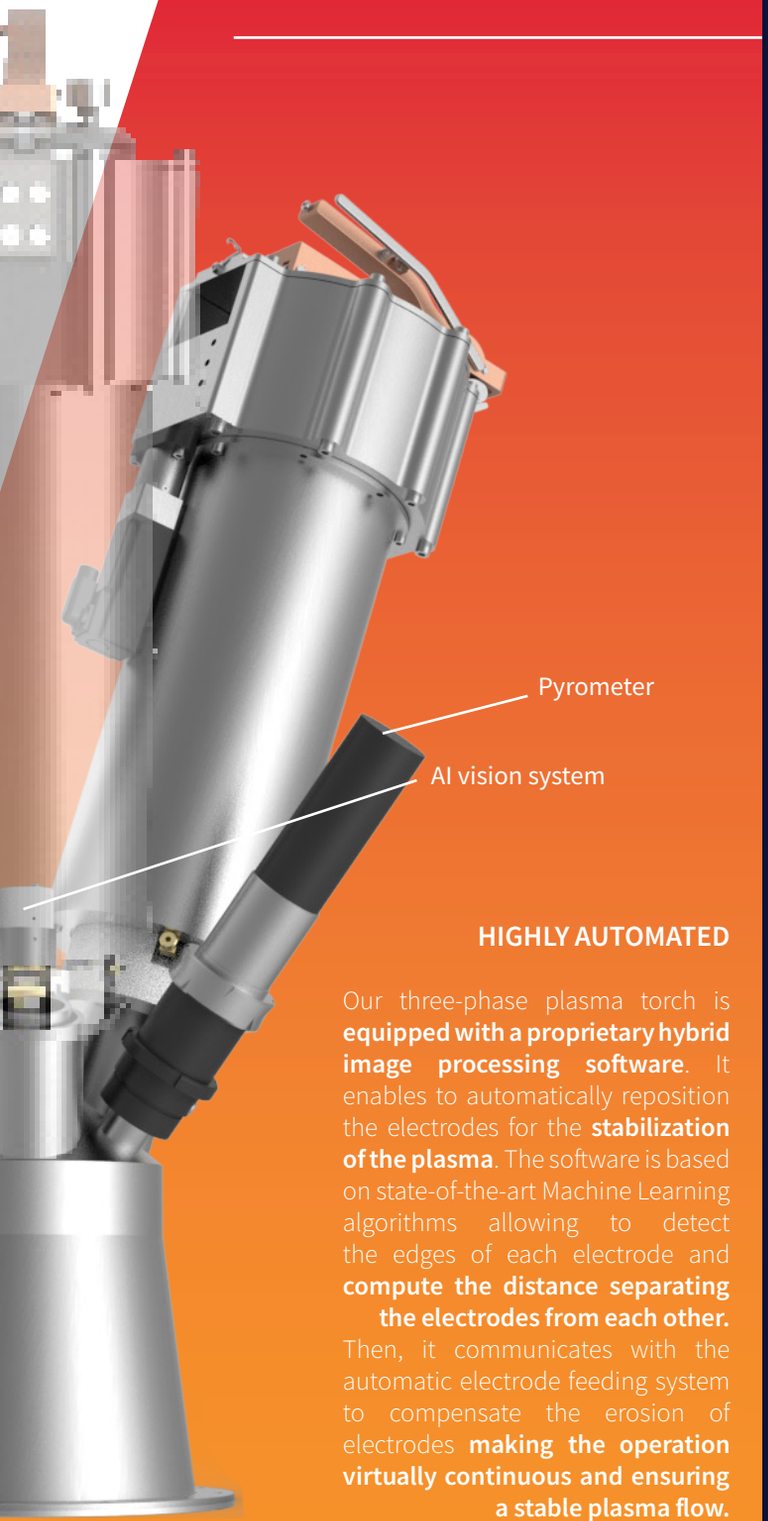

HIGHLY AUTOMATED

Our three-phase plasma torch is **equipped with a proprietary hybrid image processing software**. It enables to automatically reposition the electrodes for the **stabilization of the plasma**. The software is based on state-of-the-art Machine Learning algorithms allowing to detect the edges of each electrode and **compute the distance separating the electrodes from each other.** Then, it communicates with the automatic electrode feeding system to compensate the erosion of electrodes **making the operation virtually continuous and ensuring a stable plasma flow.**

plenesys.com
info@plenesys.com
+33 (0)4 65 84 84 40
1900 route des crêtes,
06560 Valbonne, France

plenesys
PLASMA ENERGY SYSTEMS

DISCOVER OUR INNOVATIVE AND AUTONOMOUS INDUSTRIAL AC PLASMA TORCH

- Providing heat without direct CO_2 emission using electricity
- Working with different gases (air, N_2, H_2, Ar, etc.)
- Capacities from tens of kWs to several MWs
- Continuous and autonomous operation

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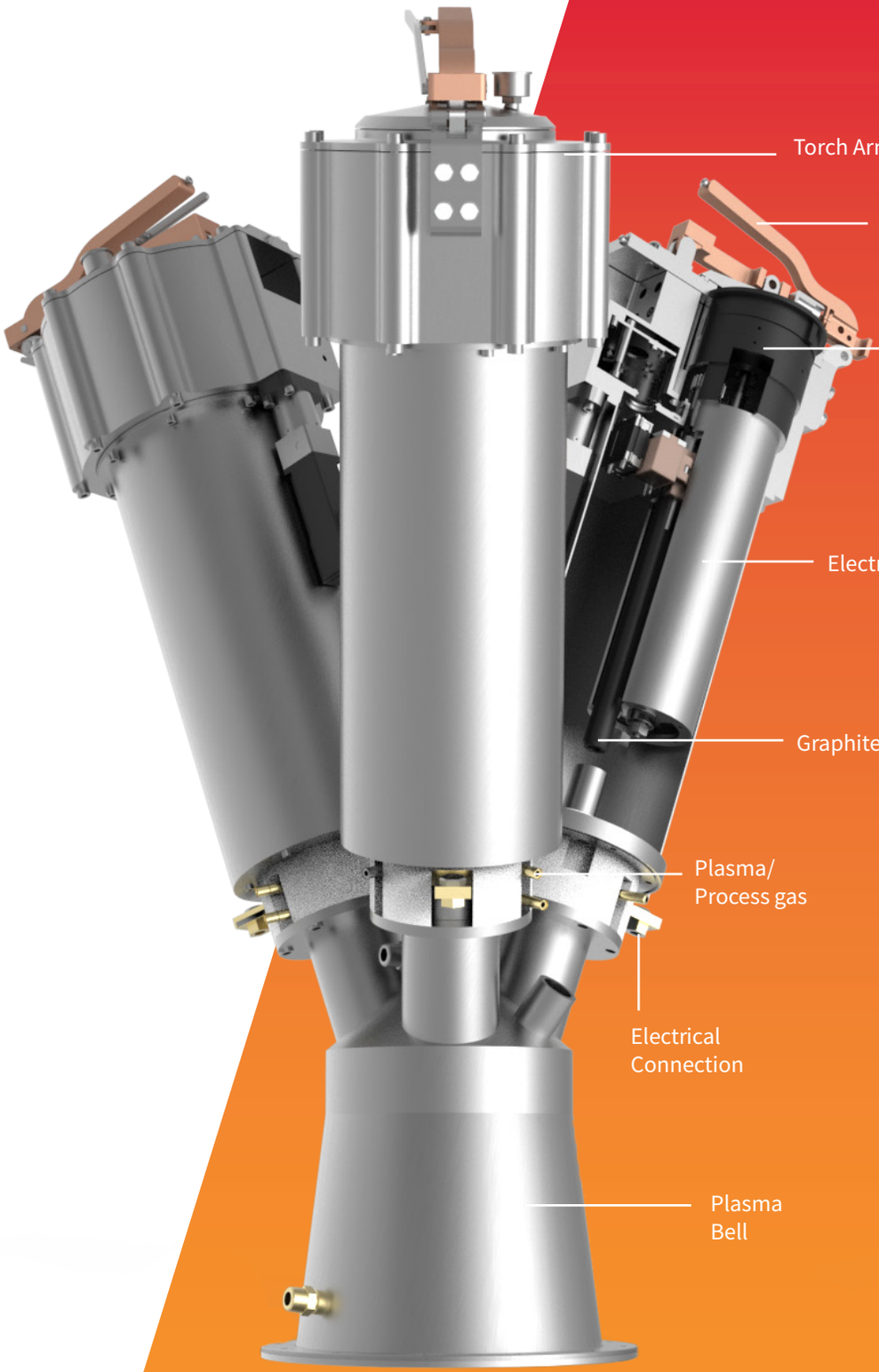
PRODUCT SPECIFICATIONS PT25AT



CHARACTERISTICS

PLASMA GAS	Nitrogen, argon, air, hydrogen, methane, ect.
POWER RANGE	From 10s of kWs up to multiple MWs
TEMPERATURE RANGE	Up to 3000 K
OPERATION TIME	Virtually continuous using our patented electrode feeding mechanism
CAPACITY OF THE ELECTRODE FEEDING SYSTEM	6 electrodes with single charge
OPERATION PRESSURE	Up to 5 bar for now
MONOTORING AND SURVELLANCE	• AI camera monotoring of electrode erosion • Pyrometer for temperature surveillance
UTILITIES	• Closed loop water cooling • Nitrogen Sheathing

MAIN ADVANTAGES

• **Unique AC plasma torch** : plug & play flexible technology , no need for AC/DC rectifier , it can be connected **directly to the local AC power supply**.
• **High energy conversion efficiency** : 90 % of the electrical power supplied is converted to heat, integrated closed water-cooling loop for the plasma bell.
• **Low OPEX** : inexpensive graphite electrodes, **slow consumption,** low maintenance is required and flexible efficient process.
• **Highly automated** : continuous and intelligent process thanks to IA and automation for the inter-electrode distance detection.
• **Robust and reliable technology** : **easy** assembly, **redundancy** in security factors , **automated** moving electrodes

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