

## Standalone Plasma Machine

### Plasma for advanced materials

Applying an electric field to a gas produces an ionized gas (plasma), with applications in:

- Surface activation or modification
- Chemical grafting
- Etching polymers
- Metal oxide reduction
- Thin film deposition

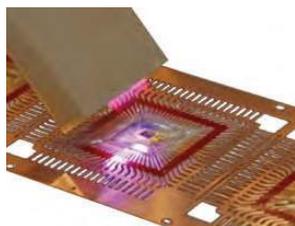


### Atmospheric plasma—safe, versatile

Advancing beyond vacuum, atmospheric plasma can be easily incorporated into process lines to enhance manufacturing outcomes.

Surfx Technologies' Atomflo™ solutions are:

- **Low temperature**- safe for use on thermally sensitive materials
- **Clean**- breakthrough technology is clean room compatible
- **Flexible**- multiple plasma source form factors
- **Fast**- high reactive species density



### Standalone Plasma Machine

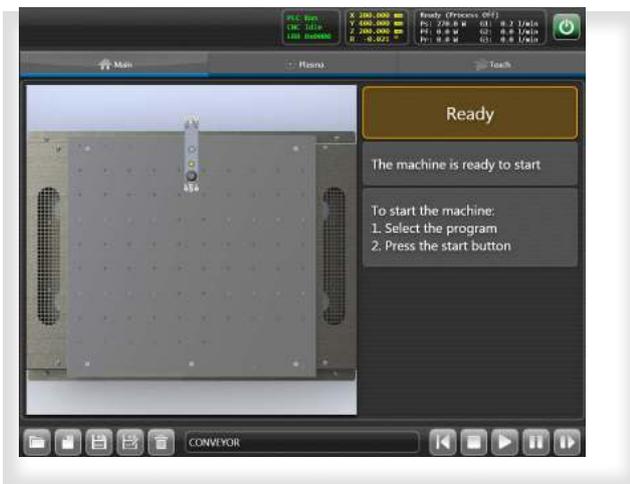
The Standalone Plasma Machine provides customers with a **turnkey** system that integrates the Atomflo™ solution into a neat, compact multi-axis application system.

- Advanced **graphical motion management** software
- **4-axis motion** with 400 x 400 x 300 mm plasma treatment volume
- **Modular control system** architecture, capable of interfacing to other systems
- Offers **helium** and **argon** plasmas with multiple reactive gas options

# Standalone Plasma Machine

## Advanced motion control and programming

The Standalone Plasma Machine's software provides **real-time system monitoring and control** and **versatile programming** options.



## Remote plasma control

Click the Surfx® logo to open a screen that allows you to remotely control the Atomflo™ plasma unit and set operating parameters.



## Custom motion and plasma programming

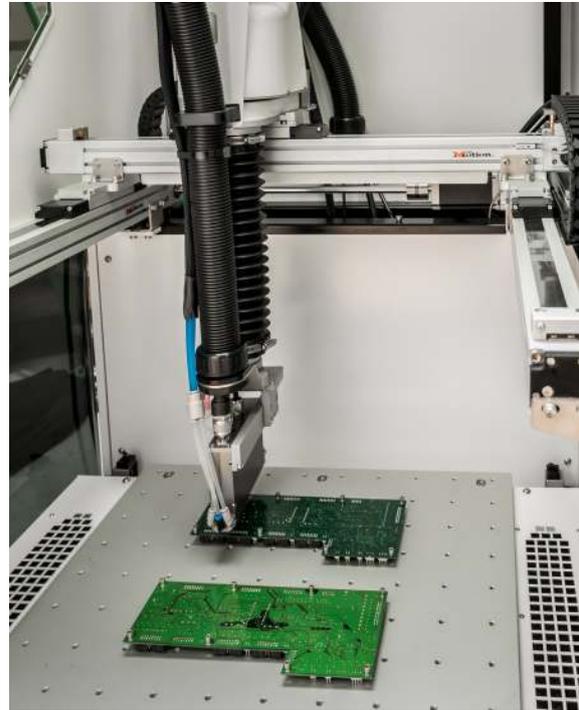
The PC software allows you to create customized **programs**, specifying motion and plasma component actions, and user interaction. You can choose from two methods of creating and editing programs:

- **Program** screen allows you to create actions directly in a G-Code editor
- **Sequence** screen allows you to add and visually configure actions and objects

# Features and Specifications

## Standalone Plasma Machine—versatile and user friendly

- **4-axis motion** with 400 x 400 x 300 mm plasma treatment volume
- Very **quick to get “up and running”**—easy set up and programming
- **Helium** and **argon** plasmas with oxygen and/or nitrogen secondary gases (other chemistries supported)
- Cooled and **temperature controlled plasma** sources enable use of argon
- **Small footprint**—can fit through a standard door aperture
- Operator or **conveyor part loading**
- **Modular control system** architecture, capable of interfacing to other systems
- Integrated **vapor/gas extraction**
- Optional **activated carbon filter** for ozone abatement



1" linear head



Deposition head



Minibeam head



## System technical specifications

Item	Specifications
Dimensions (H x W x D)	2038 x 760 x 1110 mm (excluding display)
Mass	Approximately 250 kg
Electrical supply	230 VAC ±10%, 50-60 Hz, 15A
Primary gas	Argon or helium
Typical secondary gases	Oxygen, nitrogen, hydrogen (others available)
Ethernet connection	RJ45
Supported plasma heads	Minibeam 1" linear head, water-cooled 3" linear, water-cooled

## Motion component specifications

Axis	Range (mm)	Resolution (mm)	Accuracy (mm)	Max velocity (mm/s)
X	400	0.1	0.5	500
Y	400	0.1	0.5	500
Z	300	0.1	0.5	350
Theta	±90°	0.1°	0.25°	360°/s

## About Us

### Surfx Technologies LLC

Founded in 1999, Surfx Technologies has over 25 years experience in plasma and surface chemistry. Surfx's plasma technology is exclusively licensed from the University of California, Los Angeles where the technology was first developed.

Its high-speed atmospheric plasma technology can be used to treat microelectro-mechanical systems (MEMS), microfluidics, semiconductors, solar cells, medical devices, sensors, plastics and composites. Our mission is to become the worldwide leader in atmospheric plasma surface treatment for the Aerospace, Medical Device and Semiconductor industries.

Surfx is a rapidly growing company that is driven by a total commitment to our customers. Surfx's technical team of engineers and scientists provide expert service and support for your plasma processing needs.

Contact us today for more information about our complimentary application study to see if Surfx is right for you.

USA/ North America  
–Head Office

2631 Manhattan Beach Blvd  
Redondo Beach, CA 90278  
USA  
Ph: +1 (310) 558-0770  
sales@surfxtechnologies.com

Taiwan, China, Singapore  
& Malaysia

No. 129, Yonghe St.  
South Dist.  
Taichung City 40253 Taiwan  
(R.O.C.)  
Ph: +886-4-2263 8200  
sales@surfxtechnologies.com

Europe

Novel Technology Transfer GmbH  
Dorfstrasse 16  
D-85235, Pfaffenhofen a.d. Glonn,  
Germany  
Ph: +49 8134 55700 x 12  
alex.wanninger@novel-tec.de