

Introducing the ST55 ion source system for Physical Vapor Deposition processes

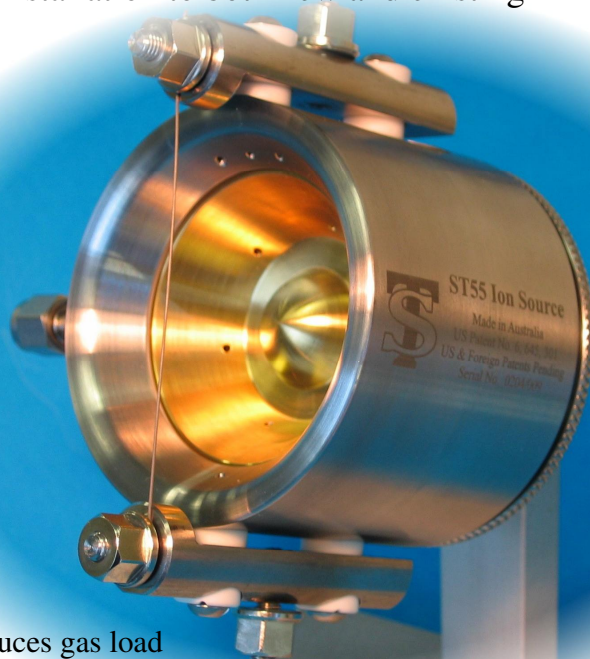
The **SainTech ST55 Ion System** has been specially developed to provide a cost effective solution for ion-based vacuum processes for small to medium sized deposition systems. The ST55 provides an extremely reliable and maintenance-free facility for many applications in physical vapour deposition processes. The compact design and rugged construction allows easy installation to both new and existing vacuum deposition systems.

The ST55 and Ion Assisted Deposition

The IAD of thin film growth is a proven technique that provides dense and highly stable films without need of additional substrate heating.

The **ST55** has further enhanced the IAD process to include deposition onto a wide variety of glasses, plastics and metals.

The **ST55** provides unparalleled film adhesion for both metal and non-metal films.



ST55 Features:

- Ion beam energies up to 230eV
- Ion beam power to 1.2 kilowatts
- Beam currents to max of 6 amps
- Full-time use of high purity oxygen.
- Highly efficient gas injection design greatly reduces gas load
- Direct water-cooling of the anode to reduce maintenance, radiation load and vent delays
- Extremely low maintenance. The patented design utilizes a specially coated anode, which resists build-up of electrically insulating oxide coatings.
- Extremely stable operation in IAD processes due to patented electrode design
- Broad - beam divergence for large area coverage with a uniform ion flux.
- **Pulse-mode Operation** for ion-assistance of radiation-sensitive film materials such as many commonly used infrared and UV thin film materials eg MgF₂ & LaF₂. For further information please refer to separate information sheets.
- **Remote Control & Monitoring** of process parameters. A front panel control toggles control from local operator to remote master control and monitoring of all operational parameters.

Options available: DF - Dual Filament and DG - Dual Gas see separate information sheets for details

SainTech Pty Ltd

PO Box 3042, Monash Park 2111
New South Wales, Australia

Visit our web site at www.saintech.com

Tel: +612 9817 0466, Fax: +612 9817 0488

Email: sales@saintech.com

SAINTTECH ION SYSTEMS



SPECIFICATION – ST55

Dimensions	Source diameter 75 mm diameter by 70 mm long (3" x 2.75") Source weight – 1.75 kgs (approx. 4 lbs)
Beam power	Anode volts selectable to 225 volts, Anode Power 1200 W Beam current to maximum 6 amps under manual or automatic beam control
Beam divergence	Wide beam divergence in excess of 60 degrees
Gas flow	Approximately 8 sccm argon required to produce 2 Amps (typical)
Cooling water	minimum 4 liters/minute
Power Unit	Weight approx. 30 kgs (66lbs) Dimensions 7" high x 19" wide x 16" deep

Options Available:

- ❖ **Dual filament.** Electronic system detects filament failure and auto switches to second filament. Operator is alerted to first-filament failure by audible and visual alarms
- ❖ **Dual Gas with Gas Mixing.**
- ❖ **Mounting Hardware.** Several options available. Refer to separate information sheet.

Complete ST55 package includes:

- ST55 Ion Source
- ST55 Power supply - 208 to 240 VAC, single phase 50 or 60Hz
- Mass flow controller.
- Operational, maintenance and service manual
- Installation and operational instruction supplied on CD-ROM



System supplied complete with all hardware for installation to new or existing vacuum systems. All vacuum feedthroughs for process cooling water, reactant gas and electrical supply are supplied to individual requirements. Customer should specify vacuum chamber flange types at time of order.

For further information please contact the SainTech Sales Office at the address below:

Principal Office : SainTech Pty Ltd
PO Box 3042, Monash Park 2111
New South Wales, Australia
Visit our web site at www.saintech.com

Tel: +612 9817 0466, Fax: +612 9817 0488
Email: sales@saintech.com