

# 60kV Electron Beam Welder

## ECO MODEL



Modular, flexible design to enhance production capabilities



Small footprint area for economical space solutions



Ideal for welding small-to-medium-sized components



High-efficiency



## Equipment, Features and Options

### Standard Equipment

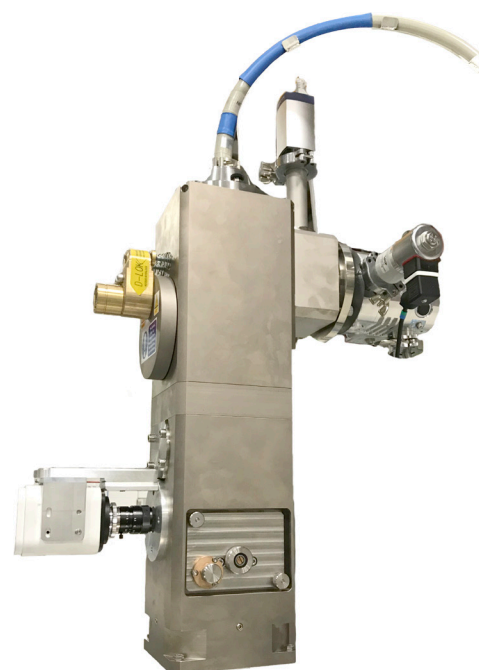
- > Air-conditioned electrical cabinet
- > Beam deflection patterns
- > Chamber viewing window
- > Directly heated cathode
- > eWon ethernet hub for remote diagnostics
- > External rotary manipulator
- > Filament alignment jig
- > Function generator for application of welding patterns
- > High-quality HDMI camera, with adjustable cross hairs and video capability
- > Industrial PLC
- > Manual gun-slide  $\pm 32\text{mm}$
- > Mechanical and diffusion pumps for high-vacuum operation
- > PC-based HMI, with recipe storage and data logging
- > Separately pumped gun column (turbo-molecular)

### Advanced Features

- > Automatic focus and alignment
- > Automatic joint finder and imaging using back scattered electrons
- > Bino optics
- > CNC control
- > Dry vacuum pumps
- > Larger, motorised gun-slides (PLC controlled)
- > Recirculating water chiller
- > Special beam functions, including beam splitting

### Tooling Options

- > Chamber extensions
- > Custom tooling
- > Indexing carousel
- > Internal rotary manipulator and tilt
- > Tail-stock
- > XY table



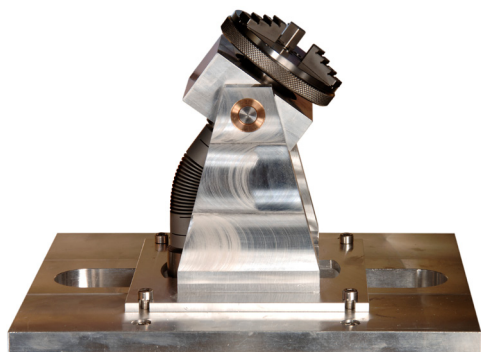
D60LN gun column and HDMI camera



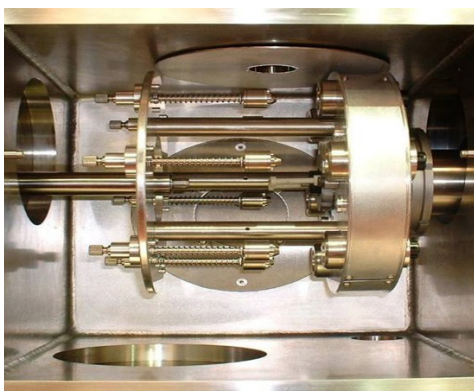
HMI with CNC control

# Specification

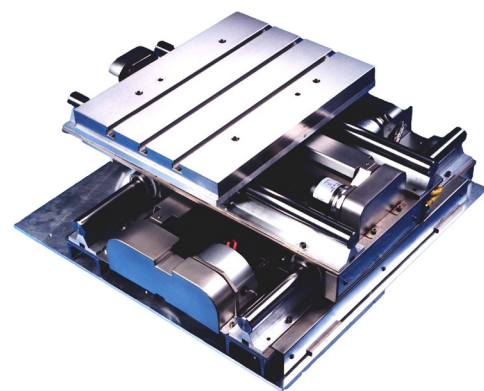
<b>Standard chamber sizes include</b> (Other sizes are available upon request)	300x300x300mm 355x355x355mm 450x450x450mm 610x610x610mm
<b>60kV beam power</b>	Standard up to 4kW (60mA at 60kV) Optional up to 6kW (100mA at 60kV)
<b>Gun vacuum</b>	10 <sup>-5</sup> mbar range
<b>Chamber vacuum</b>	10 <sup>-4</sup> mbar range
<b>Chamber pump down time</b> (to 10 <sup>-4</sup> mbar)	30-120s Dependent on pump specification, chamber size and customer requirements
<b>Weld depth at 760mm per minute (at 4kW)</b>	Stainless steel = 15mm



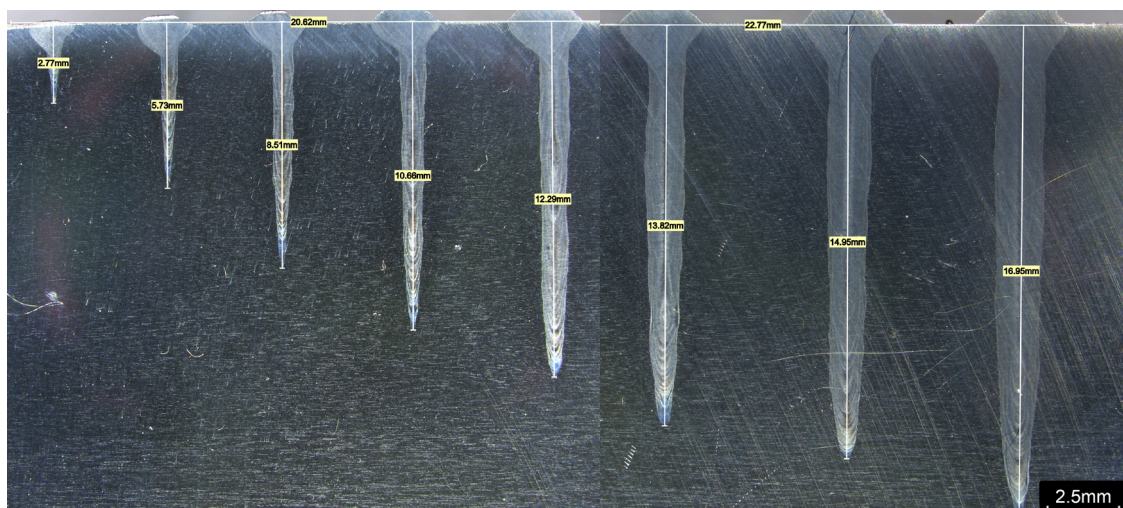
Rotary table



Internal carousel



XY table



60kV welds from 10-80mA in 10mA increments

## USA

Cambridge Vacuum Engineering Inc.  
Unit 7 630, Silver Street  
Agawam  
Massachusetts  
01001-0867  
United States of America

+1 (413) 789 4600



## UK Headquarters

Cambridge Vacuum Engineering  
Pembroke Avenue  
Waterbeach  
Cambridge  
CB25 9QX  
United Kingdom

+44 (0) 1223 863481

E-mail: [sales@camvaceng.com](mailto:sales@camvaceng.com)  
Web: [www.camvaceng.com](http://www.camvaceng.com)

## China

Aquasium Technology (Beijing) Co. Ltd  
Suite 5, East Tower, 10th Floor  
B12 Jianguomenwai Avenue  
Beijing  
100022  
People's Republic of China

+86 (10) 512 25102