

# 150kV Electron Beam Welder

## XW MODEL



Ideal for the welding of medium and large sized components



Suitable for electrically conductive materials



Modular, flexible design to enhance production capabilities



## 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
- > Filament alignment jig
- > Function generator for application of welding patterns
- > High-quality HDMI camera, with adjustable cross hairs and video capability
- > Industrial PLC
- > 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
- > Chamber extensions
- > CNC control
- > Custom tooling
- > Dry vacuum pumps and cryo-coil
- > High-speed data logger
- > Horizontal gun mount
- > Indexing carousel
- > Internal rotary manipulator, tilt, and Z lift
- > Motorised gun-slide
- > Motorised run-out platform
- > Mylar film protector for CCTV
- > Recirculating water chiller
- > Special beam functions, including beam splitting
- > Tail-stock
- > Wire-feed
- > XY table



150kV gun column



HMI with CNC control

# Specification

<b>Standard chamber sizes include</b> (Other sizes are available upon request)	1,400x1,000x1,250mm 2,250x1,250x1,400mm 1,800x1,800x1,800mm 4,000x2,100x3,000mm
<b>150kV beam power</b>	Standard up to 6kW (40mA at 150kV) Optional up to 15kW (100mA at 150kV) and 30kW (200mA at 150kV)
<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)	Dependent on chamber volume, pump specification and customer requirements



Five-axis manipulator  
(X, Y, R, T, Z)



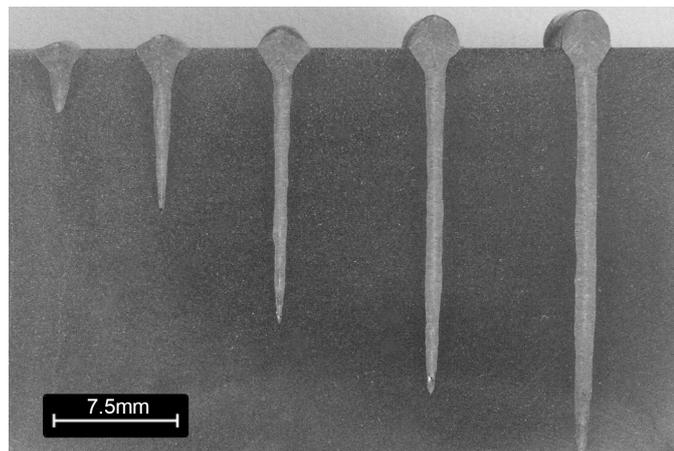
CNC controlled wire-feed



Rotary tilt headstock and tail-  
stock fixed on an XY table

Advantages of 150kV systems:

- > Higher accelerating voltage allows the beam to travel a longer distance - up to 1,500mm to the work-piece from the inside of the chamber
- > Greater depth of focus compared to low-voltage 60kV machines
- > Less affected by external magnetic fields



150kV welds

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