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 ±32mm
- 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

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

### Images:
- Rotary table
- Internal carousel
- XY table

### Welds:
60kV welds from 10-80mA in 10mA increments