

PR16122 – Supply of a Wire Electro Discharge Machine and Standalone Separate Small Hole Electro Discharge Machine

Science and Technology Facilities Council, Rutherford Appleton Laboratory is looking to purchase a Wire Electro Discharge Machine and Standalone Separate Small Hole Electro Discharge Small Machine.

Wire Electro Discharge Machine

ISIS Target Production Section requires a Wire EDM machine to shorten the time it takes to manufacture targets and thereby mitigate the high risk of ISIS not running, at a cost of £300K per day, due to a target not being available.

The machine will be able to cut the water channels in the target cooling sleeve and thereby remove the need to send this to an external company for processing. Also WEDM is the only method for cutting Tantalum test pieces and weld samples, which are crucial to the target development programme. More components will be manufactured internally after this purchase.

The main drivers are for high precision, reliability, after sale service, ease of use, and training packages. Issues with size and floor space are very important in a small workshop. It is also necessary to purchase a separate small hole drill machine to accompany the WEDM.

The base specification for the WEDM machine is:-

Dimensions in mm

- Cutting accuracy +/- 2µm
- Min finishing 0.1 Ra
- Vertical sliding door
- Minimum work piece dimensions X 900 Y 700 Z 400
- Minimum workpiece weight 900
- Z minimum 400
- Min taper angle +/- 30 / 300
- Wire diameter 0.15 to 0.3
- Auto wire feeding and rethreading
- Edge, centre and corner finder is required
- Chiller must be possible to be positioned outside
- Fully CE
- collision protector
- CAD CAM software with simple interface controls
- Tank auto fill connector
- Linear glass scales

Small Hole Electro Discharge Machine

To aid the use of the EDM machine it is necessary to support production with a Small Hole EDM. This would create the void to feed the wire on components where the features cannot be accessed from the external faces.

Specifications required would be:-

Edge, centre and corner finder is required

Option for small holes a plus

Simple interface controls

X - Axis Travel	300
Y - Axis Travel	200
Z - Axis Travel	400 min
W - Axis Travel	250 mm
Electrode Diameter	0.3 – 3mm
Work Table min	250 x 350 mm
Maximum machine Dimensions min	1500 x 1000 mm
Minimum Work piece Weight	250 kg

Training is to be provided for both the Wire Electro Discharge Machine and Standalone Separate Small Hole Electro Discharge Small Machine.

The Bidder shall provide warranty for a minimum period of 12 months for both Wire Electro Discharge Machine and Small Hole Electro Discharge Machine