

## TECHNICAL SPECIFICATIONS AND OTHER ALLIED REQUIREMENTS

Sl No.	Description of items	Quantity
File No.	<b>PUR/75/ERTG/RM/E/2024-25</b>	
1	<b>SUPPLY, INSTALLATION, COMMISSIONING, SUPERVISION AND DEMONSTRATION OF SOLAR PANEL GLASS REMOVING MACHINE</b>  <b>(DETAILED SPECIFICATIONS AS PER ANNEXURE – I)</b>	01 No.

### 1. DELIVERY, INSTALLATION, COMMISSIONING, SUPERVISION AND DEMONSTRATION:

The delivery, installation, commissioning, supervision and demonstration are to be completed within 120 days from the date of issue of Purchase Order. The installation and commissioning shall be carried out by your expert- engineers of supplier/Manufacture. During installation & commissioning necessary training on operation and maintenance of the goods/system shall be imparted to relevant Scientist/Engineer/Technicians.

### 2. PAYMENT TERMS:

100% payment shall be paid within 30 days after delivery, installation, commissioning, supervision and demonstration of solar panel glass removing machine and acceptance of the material upon submission of claim supported by the acceptance certificate issued by the purchaser.

### 3. BID SECURING DECLARATION FORM:

Bid Securing Declaration is to be submitted by the Bidder as per the format prescribed in the tender document.

### 4. WARRANTY:

24-Months warranty will be provided by the supplier from the date of satisfactory installation and commissioning of ordered goods.

### 5. MANUFACTURER AUTHORITY FORM:

Manufacturer Authorisation Form will be provided by the supplier.

### 6. PLACE OF DELIVERY:

CSIR- Central Mechanical Engineering Research Institute, M.G. Avenue, Durgapur- 713209, West Bengal.

### 7. MAKE IN INDIA CERTIFICATE FOR LOCAL CONTENT

Certificate for local content to be provided by the supplier in form 14 (Format attached along with Tender Document). Percentage of value addition & Name and address of the factory where the value addition was made should be mentioned clearly in the Form 14.

## **Solar Panel Glass Remove Machine**

## **Annexure-I**

End use: Recovery of glass from decommissioned or damaged solar panels, facilitating the recycling of glass.

External dimension of panel:  $800 \times 800$  mm (min) &  $1090 \times 2100$  mm (max)

Glass thickness: 2.8 – 4.0 mm

Process time: 2 - 3 min (depending on the panel size)

Glass Remove Mechanism: Roll Crusher with double roller made of high tempered mild steel

Roller size: 5" (min) with manual pressure control knob

Geared Motor: Motor Power - 5 HP (min),  $415V \pm 10\%$ ,  $50\text{ Hz} \pm 5\%$ , 1440 RPM of Crompton/Siemens/BBL make and Gear Box with ratio of 50:1

Machine RPM: 30

Provision for hammer mill to grind the separated glass particle to different sizes.

Vibrating table of size  $900 \times 3000$  mm, height 700 mm, MOC: MS, Drive: 2 Nos. of unbalanced vibro motor with amplitude 0.5 – 2.0 mm (max) for the separation of glass particle to different sizes.

Medium duty twin shaft shredder for shredding of the EVA sheet with 5 HP, 3 phase motor power to size less than 5 mm.

Platform for placing the solar panel at feeding and discharge of the machine. The platform is to be made from HR sheet of 3 mm thickness.

Control Panel: Made from 1.6 mm CRCA sheet duly painted with 32A, 4P MCB, starter for motors with relay and power indication lamps.

Machine structure: MS channel of size –  $100 \times 50 \times 5$ , Make: SAIL/VSPL/TATA

Bearings: Make – SKF/NTN/TIMKEN

### **Scope of services:**

The supplier shall be required to perform the following services:

1. Installation & Commissioning, Supervision and Demonstration of the goods;
2. Providing required jigs and tools for assembly required for the completion of the installation;
3. Onsite training to Scientists/Technicians/Staff is to be provided by Supplier for at least 03 (three) days for operation of the equipment to the complete satisfaction of the user department;
4. All safety requirements are to be incorporated during the installation & commissioning and demonstration of the goods at CSIR-CMERI.

**Unloading of the item at CSIR-CMERI:** In the scope of supplier