



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
Powai, Mumbai 400076

Reference No. 173 PR No. 1000016489 (Rfx No. 6100000760)

Detailed Technical Specifications for Wedge type Heat Sealing Machine

A. Wedge Type Welding machine with mandatory following features

1. Welding Width: 8mm-60 mm
2. Variable Speed, Minimum – 0.1 m/min, Maximum 30 m/min
3. Automatic Temperature Control (Max 650 degrees Celsius)
4. Digitally Regulated Temperature, Roller Pressure and Sealing Speed.
5. Onboard Digital Touchscreen to change Parameters
6. Machine Heating time should be less than 5 seconds.
7. Machine should be ready within 60 seconds of turning on the main switch.
8. Adjustable speed during welding process.
9. Easy Roller and Wedge Calibration.
10. Up to 50% speed difference between Top and Bottom roller for curvature welding.

B. Materials to Join

1. Metallised-PET, LLDPE, LDPE, HDPE, PVC, Mylar, Polyvinyl chloride (PVC), Polyurethane(PU), Polyethylene (PE), and Polypropylene (PP)
2. All above Material thickness-(0.1- 2 mm) and (10-1500 GSM)

C. Weld Type

1. Butt joint, Lap joint, Curvature Joint, Tubular Joints

D. Machine Accessories Needed

1. 8mm 3D Wedge Bracket (Set of 5) x 1 Unit.
2. 13 mm 3D Wedge Bracket (Set of 5) x 1 Unit.
3. 25 mm 3D Wedge Bracket (Set of 5) x 1 Unit.
4. 8mm High Speed Wedge Bracket (Set of 5) x 1 Unit.
5. 13 mm High Speed Wedge Bracket (Set of 5) x 1 Unit.
6. 8 mm Silicone Roller set with Hardness 30,50 and 70 Shore (total 3 sets of 2 rollers each) x 1 Unit.
7. 13 mm Silicone Roller with Hardness 30,50 and 70 Shore (total 3 sets of 2 rollers each)x 1 Unit.

8. 25 mm Silicone Roller with Hardness 30,50 and 70 Shore (total 3 sets of 2 rollers each)x 1 Unit.
9. Steel Roller with Knurling (8 mm, 13 mm and 25mm), (total 3 sets of 2 rollers each)x 1 Unit.
10. Steel Roller with Flat (8 mm, 13 mm and 25mm), (total 3 sets of 2 rollers each)x 1 Unit
11. Tape Delivery System based attachment for Easier Butt jointx 1 Unit.
12. Quick Arm and Overlap guidex 1 Unit.
13. Adjustable Overlap Guide (0-64 mm) x 1 Unit.
14. Adjustable Hem/Piping Guide (0-60 mm) x 1 Unit.
15. Open Hem Guide up to 110 mm x 1 Unit.
16. Modular 3D Guide with Guide Holder Systemx 1 Unit.
17. Connection adaptor for fume extraction x 1 Unit.

E. Digital Safety Lock with USB Port to save Welding parameters

F. Suitable online UPS system (capacity 3 kVA, backup time 20 min)

G. The bidders must submit the roller design and drawing details through the Technical Bid, which will be studied by concerned at IIT Bombay before opening of the Commercial Bid.

H. Suitable software for providing inputs to the Heat-Sealing Machine and setting various parameters.

I. The bidders, who are found to conform to the specifications and requirements given by IIT Bombay in the Tender document, should arrange a demonstration run of the Heat-sealing machine (of similar or comparable capacity) with accessories selected by IIT Bombay. Bidders without satisfactory results or reports shall be subject to rejection on technical grounds.

J. The bidder will supply and ensure installation and provide initial training and demonstrate the successful working of the complete system on suitable materials provided by IITB.

K. Warranty: At least 1 year from the date of installation and commissioning

L. Packaging: As per standard terms

M. Delivery, Installation and Commissioning at IIT Bombay should be take care by the bidder.