R&B Plastics MACHINERY LLC

RBS-E550D

All Electric Shuttle Machine

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Specifications

Extruders

70mm x 24:1 L/D Extruder (20% Virgin for Inner Layer)

- **LD Ratio:** 24:1
- **Barrel:** 70mm, nitride hardened to 1050HV
- **Screw:** 70mm with Maddox mixing section
- **Heating:** 3 heating/cooling zones plus one (heat only) for barrel flange
- **Barrel Heating Capacity:** 11kW (approx.)
- **Cooling:** 3 high-capacity cooling fans
- **Gearbox:** High performance, extra heavy-duty gear box
- **Drive Unit:** Allen Bradley AC inverter and 25HP motor
- **Screw RPM:** 15 – 60 rpm's
- **Throughput:** 130lbs/hr (60kgs/hr) (virgin resin, MFI dependent)
- **Features:** Hopper with magnet drawer and low-level material alarm

100mm x 26:1 L/D Extruder (60% Regrind for Middle Layer)

- **LD Ratio:** 24:1
- **Barrel:** 100mm, nitride hardened to 1050HV
- **Screw:** 100mm with Maddox mixing section
- **Heating:** 4 heating/cooling zones plus one (heat only) for barrel flange
- **Barrel Heating Capacity:** 18kW (approx.)
- **Cooling:** 4 high-capacity cooling fans
- **Gearbox:** High performance, extra heavy-duty gear box
- **Drive Unit:** Allen Bradley AC inverter and 75HP motor
- **Screw RPM:** 15 - 60
- **Throughput:** 330lbs/hr (150kgs/hr) (virgin resin, MFI dependent)
- **Features:** Hopper with magnet drawer and low-level material alarm

70mm x 24:1 L/D Extruder (20% Virgin for Outer Layer)

- **LD Ratio:** 24:1
- **Barrel:** 70mm, nitride hardened to 1050HV
- **Screw:** 70mm with Maddox mixing section
- **Heating:** 3 heating/cooling zones plus one (heat only) for barrel flange
- **Barrel Heating Capacity:** 11kW (approx.)
- **Cooling:** 3 high-capacity cooling fans
- **Gearbox:** High performance, extra heavy-duty gear box
- **Drive Unit:** Allen Bradley AC inverter and 25HP motor
- **Screw RPM:** 15 – 60 rpm's
- **Throughput:** 130lbs/hr (60kgs/hr) (virgin resin, MFI dependent)
- **Features:** Hopper with magnet drawer and low-level material alarm

Tri-Layer Extruder Platform

- **Platform Adjustment:**
  - Electric – forward and backward adjustment of 500mm
  - Manual – left and right adjustment of 100mm (+/- 50mm from centerline)
  - Electric – up and down adjustment of 200mm
- **Platform Access:** Access stairs with entry gate and perimeter safety railings

W. Müller Tri-Layer Extrusion Head (2 x 250mm)

- **Type:** W. Müller S2/120-250 P-PE, TK, 2-channel with parison programming
- **Die-Head Configuration:** 2-Parison on 250mm center distance
- **Number of Layers:** 3 (Tri-layer configuration)
- **Max Die Size:** 120mm (and includes one total set/2 pins and bushings, ovalized)
- **Heating:** 12 zones (estimated/to be confirmed at time of order)
- **Heating Capacity:** To be determined at time of order placement
- **Throughput Capacity:** Minimum of 225lbs/hr (100kgs/hr) HDPE, per parison
- **Features:** External weight adjusters located at front of die-head W. Müller die-head support frame

W. Müller Parison Programming System (for 2 x 250mm)

- **Type:** W. Müller servo-electrical wall thickness control (EWDS)
- **Configuration:** Two (2) channel for two parison x 250mm CD
- **Drive:** Individual electrical servo drives rated at 10 tons for each parison
- **Gearbox:** High performance, extra heavy-duty gear box
- **Features:** Control module for servo drive

W. Müller Manual Screen Changer (for 100mm Extruder)

- **Type:** Müller manual screen changer, Model WM 096
- **Throughput:** Maximum of 1,500lbs/hr (680kgs/hr) HDPE, MFI > 5
- **Movement:** System via power drill (power drill not included)
- **Features:** Includes melt pressure, melt temperature, and rupture disc All necessary heaters and cabling

Parison Cutting System

- **Type:** Pneumatically actuated pinch unit with integrated cold cut knife system

Clamping Stations

- **Type:** 4 tie bar electric system
- **Platens:** Aluminum, front and rear
- **Max mold size:** 530mm wide x 420mm tall x 260mm (+/- 10mm shut height)
- **Movement:** Yaskawa 7.5HP servo drive system and Sumitomo gearbox
- **Clamp Force:** 18 US tons maximum (adjustable)
- **Feedback:** Rotary incremental encoder and proximity switch
- **Feature:** Standard mold change design

Carriage Assemblies

- **Type:** Horizontal shuttle on precision linear guide rails
- **Stroke:** 550mm
- **Movement:** Yaskawa 10HP servo drive system and Sumitomo gearbox
- **Feedback:** Rotary incremental encoder and proximity switch

Blow-Pin Stations (with 1 total set/4 individual blow pins)

- **Type:** 2 position Servo control with lift and transfer function
- **Movement:** Yaskawa 6HP servo system and precision ball screw
- **Feedback:** Rotary incremental encoder and proximity switch
- **Features:** Compressed air cooling for flash/blow air flushing

Deflash/Punching Stations

- **Type:** Standard (half punch – cooling by air – full punch)
- **Movement:** Pneumatic cylinder
- **Pneumatic Valve:** Additional Pneumatic Valve or handle island punch

Product Take Out (with 1 total set/4 individual take-out pins)

- **Type:** Robot driven to middle of machine
- **Movement:** Servo motor
- **Feature:** Adjustable pick and place function
- **Feedback:** Rotary encoder and proximity switches

Machine Pneumatics

- **Type:** Most valves from Festo and/or SMC
- **Operating Pressure:** 5 – 8kg/cm^2

Machine Control System

- **Manufacturer:** Siemens
- **Type:** PC477E - PC based controller
- **I/O:** ET200S - distributed I/O system
- **Integrated Heating:** Yes
- **Interface:** Swing arm mounted, 15" Siemens color touch screen
- **Cold Start Prevention:** Yes (cold start interlock)
- **Parison Programming:** Yes – 250-point, (two channel)
- **Recipe Storage:** Yes
- **Password Control:** Yes
- **Remote Access Option:** Yes (eWON system)

Connected Load (to be confirmed at time of order)

- **Full Load (FLC):** 175 Kw
- **Average Load:** 75 Kw – 85 Kw
- **Mold Cooling Water:** 430 BTU's/lbs/hr
- **Air Consumption:** 150 CFM
- **PSI Requirement:** 110 (+/- 10) psi

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