R&B; MAX 5-Extruder System

Technical Specification - 4 x MAX 1-1/4 in x 30:1 Extruders + 1 x MAX 2 in x 24:1 Main Extruder

Manufacturer	R&B Plastics Machinery
System	MAX 5-Extruder System
Configuration	Four 1-1/4 in x 30:1 extruders mounted over one 2 in x 24:1 main extruder
Controls	R&B MAX PLC-based supervisory electrical control system
Electrical Design	380 V, 3-phase, 50 Hz
Condition	New / never placed into production

1. Four R&B; MAX 1-1/4 in x 30:1 Extruders

- Quantity: 4; 1-1/4 in, 30:1 L/D, standard-output configuration.
- X102 or equivalent bimetallic barrel liners; designed for interchangeability with existing D.S. extruders.
- Standard-output screws designed to be interchangeable with existing D.S. screws.
- New carrier and 45-degree feed-throat housing with up/down tilt and axial side-to-side adjustment.
- Rossi drive gearboxes with high-temperature Viton seals; 5 HP Marathon AC drive motors (no encoder).
- Air-cooled barrels with four heat/cool zones, heaters, blowers, dual thermocouples and barrel guarding.
- Rupture disc and pressure transducer in hose adapter; Watlow melt-temperature probe and mica band heater.
- Stainless-steel hopper, extruder base, plug-in electrical leads and operating manual for each extruder.

2. R&B; MAX Special 2 in x 24:1 Main Extruder

- Quantity: 1; 2 in x 24:1 L/D, non-vented, air-cooled extruder.
- Specialty extended base for the 2 in extruder, four 1-1/4 in extruders, coolant header, main control cabinet and operator station.
- Rossi helical gear reducer with internal forced lubrication; fixed ratio for maximum screw speed of 100 RPM; 1.50 or greater safety factor.
- 25-30 HP, 1750 RPM Marathon Blue Max TEFC motor (no encoder).
- Single-stage MAX IMPACT high-output screw with Colmonoy 56 flight lands and 0.001 in chrome plating.
- X102 or equivalent bimetallic-lined barrel; rupture disc, breaker plate, separate melt-temperature and pressure transducers.
- Three electrically heated cast-aluminum finned heaters, high-speed blowers, two thermocouples per zone and stainless heater guards.

3. Multi-Extruder Mounting Assembly

- Engineered weldment frame for four 1-1/4 in extruders positioned over one 2 in main extruder.
- Includes pivot bases, adjustment posts, mounting provisions and adjustment safety stops.
- Extruders pre-assembled on the frame at R&B;, then torn down and prepared for shipment.

4. Adapter & Heated Hose Assemblies

- Four 1-1/4 in adapter assemblies with pressure-transducer/rupture-disc mounting, Tempco thermocouple, extension cable, melt bolt and R&B; #P14382 heater band.
- Four heated hose assemblies, up to 12 ft maximum length, with hose fittings and T-blocks.

5. Material Handling

- Five Foremost Model B-6-2 self-contained vacuum loaders.
- Each supplied with mechanical/electrical components, hose, clamps and suction lance; power supplied from the R&B; main control cabinet.

6. R&B; MAX PLC-Based Electrical Controls

- Air-conditioned main electrical cabinet with galvanized back plate, main disconnect, interlocked doors, transformers, wiring, racks, fuses and hardware.
- Designed for 380 V, 3-phase, 50 Hz service.
- Allen-Bradley CompactLogix PLC/processor with communications, power supply, analog I/O and digital I/O modules.

- PLC heating/cooling control for all four 1.25 in extruders and the 2.0 in extruder; heating-only provisions for feed tubes/melt pipes and die head.
- Allen-Bradley VFDs: four 5 HP and one 25-30 HP for extruders, plus two 1 HP drives for binder/slitter functions.
- 15 in Allen-Bradley operator control screen on pedestal; EWON internet/remote-access system.
- Fixed wiring and wire-tray system connecting controls, five extruders and specified downstream equipment.
- Power/starter provisions for water-bath blower/recirculation and power provision for winder; these provisions do not mean those items are included.
- Open-architecture documentation including electrical drawings, machine logic, component information and operator manual.

7. Factory Integration & Testing

- All MAX Series extruders fully assembled at R&B;'s Saline, Michigan facility.
- Complete quality inspection and pre-shipment testing specified for all MAX Series extruders.
- R&B; supervisory controls integrated with the multi-extruder system and components electrically verified prior to shipment.
- Complete documentation and instruction manuals provided.

Important Scope Clarification

Not Included: Profile/die tooling, water bath, chiller, and proprietary zipper/profile tooling and associated proprietary components. Control-system provisions for downstream equipment do not indicate that such equipment is included.

System Overview

This R&B; MAX system is a purpose-engineered five-extruder platform combining four 1-1/4 in extruders with one 2 in main extruder on a common mounting structure, supported by centralized Allen-Bradley PLC controls, material loading, heated transfer assemblies and integrated electrical distribution.