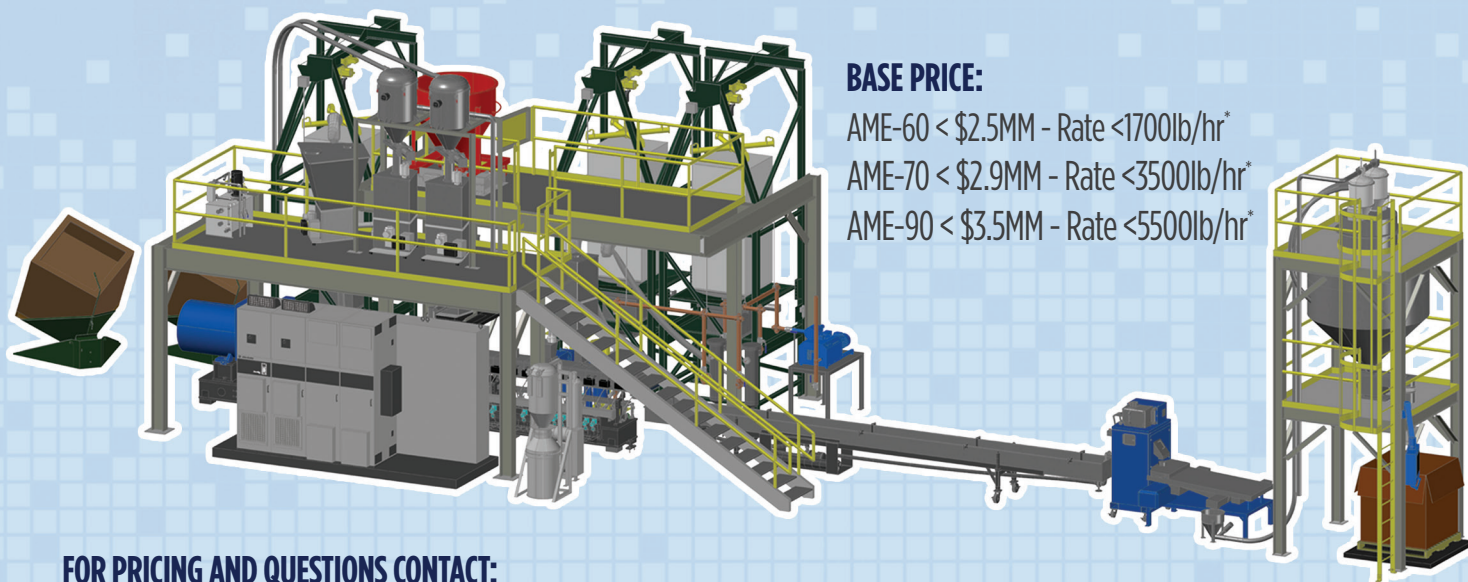


# APEX MODULAR EXTRUSION™ SYSTEMS

Apex Engineering and Apex Controls Specialists are pleased to present three low cost, standardized modular extrusion lines. The Apex Modular Extrusion™ lines are designed with 40+ years of compounding experience, providing a well designed and robust system. The base system, which is provided with a 60mm, 70mm or 90mm extruder, is provided with two resin pellet feeders and one powder resin feeder. Pigment, fiberglass and mineral feeders are optional adders. The modules are designed to easily ship over the road, yet are erected in a manner that resembles a normal process line, not a boxy sea crate frame. The 60mm and 70mm systems will fit in a clear span height of 20'-0". The 90mm line will require 22'-0" clear. Connecting the electrical system is truly a plug-and-play approach through the use of disconnect rated power plugs. Erection of the system is completed with the use of fork truck, cranes and bolted connections. State-of-the-art control software is included, specifically tailored for the plant floor. Recipe management and data collection software is optional with the AME lines. The Allen-Bradley control platform is also standard on the AME lines. All modules are pre-wired and tested prior to shipment. Ethernet and remote I/O provide for an efficient and clean electrical system. Apex Modular Extrusion™ systems are installed around the world, including countries like Brazil, Mexico, Argentina, Saudi Arabia, China and United States.



## BASE PRICE:

- AME-60 < \$2.5MM - Rate <1700lb/hr\*
- AME-70 < \$2.9MM - Rate <3500lb/hr\*
- AME-90 < \$3.5MM - Rate <5500lb/hr\*

## FOR PRICING AND QUESTIONS CONTACT:

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\*Pricing subject to change based upon current raw material costs.

# [www.apex-engineering.com](http://www.apex-engineering.com)

# APEX MODULAR EXTRUSION™ SYSTEMS

## EQUIPMENT INCLUDED

- Raw material debagging and pressure transfer
- One powder and two pellet resin feed streams
- 60mm, 70mm or 90mm extruder (rate dependent on product and fillers)
- 11 barrel machine with two atmospheric vents and one vacuum vent (L/D = 44)
- Barrel heaters and barrel cooling manifold
- Barrel cooling skid
- Vacuum pump with dual knock out pots
- High torque gearbox with clutch
- Max screw speed 750 rpm (1360Nm/screw)
- Melt pressure and temperature probe at die head
- Clamped die with swivel support
- Fume collection system
- Waterbath with heat exchanger/pump
- Strand dryer
- Pelletizer
- Classifier
- Post blend and easy clean packaging system for box and bulk bag (25 kg bag is an option)
- Dust collection duct and hoods included to customer tie-in point (optional dust collector pricing is shown below)

## OPTIONAL PROCESSING EQUIPMENT

- One fiberglass feed stream .....\$173,300
- One mineral feed stream .....\$156,600
- One master batch feed stream .....\$109,300
- One liquid feed stream .....\$97,800
- Hydraulic dual screen changer .....\$64,600
- 25 kg valve body bagger .....\$156,800
- Dust collector .....\$48,500

## CONTROLS PLATFORM SPECIFICATIONS

- Allen-Bradley CompactLogix PLC
- Allen-Bradley PF 5 Series drives
- Allen-Bradley RSVIEW ME HMI
- Ethernet feeder control
- HMI start-up permissive page
- HMI machine shutdown page
- Ethernet control
- LOTO and safety interlocks
- Plug-and-play concept
- Start-up assistance

## END OF LINE PACKAGING

- Post blending
- Magnet
- Weight scale
- Pellet hang-up points minimized
- 4500 lb/hr pack out rate for AME-60 and AME-70
- 7500 lb/hr pack out rate for AME-90
- Box or bulk bag
- AME-60 2000 lb hopper
- AME-70/90 3500 lb hopper
- No valve for contamination
- Optional: 25 kg valve bagger

## AME-60 FEEDER RATES

- Feeder 001 – Resin pellets - 255-1445 lb/hr
- Feeder 002 – Resin pellets - 255-1445 lb/hr
- Feeder 003 – Resin powder - 136-850 lb/hr
- Feeder 004 – Fiber glass - 85-680 lb/hr \*Optional
- Feeder 005 – Mineral - 85-680 lb/hr \*Optional
- Feeder 006 – Master batch - 51-255 lb/hr \*Optional

## AME-70 FEEDER RATES

- Feeder 001 – Resin pellets - 525-2975 lb/hr
- Feeder 002 – Resin pellets - 525-2975 lb/hr
- Feeder 003 – Resin powder - 280-1750 lb/hr
- Feeder 004 – Fiber glass - 175-1400 lb/hr \*Optional
- Feeder 005 – Mineral - 175-1400 lb/hr \*Optional
- Feeder 006 – Master batch - 105-525 lb/hr \*Optional

## AME-90 FEEDER RATES

- Feeder 001 – Resin pellets - 900-5100 lb/hr
- Feeder 002 – Resin pellets - 900-5100 lb/hr
- Feeder 003 – Resin powder - 480-3000 lb/hr
- Feeder 004 – Fiber glass - 300-2400 lb/hr \*Optional
- Feeder 005 – Mineral - 300-2400 lb/hr \*Optional
- Feeder 006 – Master batch - 180-900 lb/hr \*Optional

## ADVANTAGES

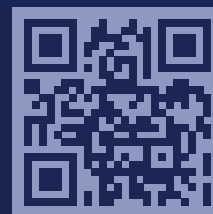
- Shorter schedules: Standardized lines can be built in parallel with building construction.
- Standardization: Engineering reduced, cost reduced, schedule reduced for additional lines.
- Cost advantage: Shop construction is 20-30% lower. Less risk of scope changes.
- Minimal plant site interruption: Reassembly is typically 3 weeks. Welding is not required.
- Client resources minimized: Single source responsibility and standardization reduces resources.
- Cash flow end loaded: Production begins prior to final payment.

## APEX TURN-KEY SUPPLY INCLUDES:

- Assembly in our shop
- Pre-fabricated modules
- Pre-piped and pre-wired
- Functionally tested in our shop
- Re-assembly of all systems in customer facility
- Start-up of systems in customer facility

## CUSTOMER SCOPE OF SUPPLY:

- Building with an internal clear span height of 22'-0"
- Clean, dry, compressed air for instrumentation
- Deionized water for barrel cooling skid
- Cooling tower water
- Electrical power
- Fire suppression/sprinkler systems
- Concrete floor with a rating of 600 lb/sf



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