

CONICAL TWIN SCREW EXTRUDERS

PROCESSING
PRODUCTION &
PROFITABILITY



ADVANTAGE EXTRUSIONTEK MILACRON

When your bottom line is superior performance, greater production, and higher profits.

As a manufacturer of PVC pipe, profiles, fence, vinyl siding or wood-fiber plastic composites, you have the need for extrusion technology that performs consistently, delivering a high quality, saleable product. After all, profitability, quality and customer satisfaction are the reasons why you're in business. And that's why ExtrusionTek Milacron sells, manufactures and delivers more twin screw extrusion systems than all other manufacturers combined.

ExtrusionTek Milacron conical twin screw extrusion systems give you all the advantages you need for the widest processing capabilities available:

- A complete conical product line with outputs ranging from 25 to 2,500 lbs/hr
- Advanced computerized screw design and manufacturing technology for custom designs tailored to meet your specific processing needs
- Large volume intake for effective conveying of fluffy materials, and efficient, uniform heat transmission to the material
- Natural compression, with large volume feed zone continuously tapering to small volume discharge
- Efficient venting/devolatilization
- Small diameter discharge providing less rotational shear and greater positive pumping characteristics as the material exits the extruder and enters the die
- Advanced wear resistant materials of construction including tungsten clad barrels and tungsten-coated screws
- Microprocessor based control or discrete control system available at the same price

If you're after greater processing, production and profitability, no other extruder can deliver like the conical twin screw extruder. Advantage ExtrusionTek Milacron.

- | | | | |
|------------------|------------------------|-----------------------------|--|
| • Pipe | • Fence | • Siding | • Homogeneous & Cellular Sheet |
| • Window Profile | • Gutters & Downspouts | • Decking & Railing Systems | • Wood-Fiber Plastic Composite Systems |
| • Custom Profile | • Vertical Blinds | • Pelletizing | |

Machine Type	Output Rates PVC Pipe	Output Rates PVC Profile	Output Rates PVC Siding	Output Rates PVC Pellets Rigid	Output Rates PVC Pellets Flexible
TC35	25 to 175 lb/h 11 to 89 kg/h	25 to 150 lb/h 11 to 68 kg/h	N/A N/A	N/A N/A	N/A N/A
TC50	To 250 lb/h To 114 kg/h	To 250 lb/h To 114 kg/h	To 250 lb/h To 114 kg/h	To 250 lb/h To 114 kg/h	To 250 lb/h To 114 kg/h
TC55	200 to 600 lb/h 91 to 279 kg/h	80 to 450 lb/h 36 to 205 kg/h	80 to 500 lb/h 36 to 227 kg/h	To 600 lb/h To 270 kg/h	To 800 lb/h** To 364 kg/h**
TC65	300 to 800 lb/h 136 to 364 kg/h	200 to 650 lb/h 91 to 295 kg/h	200 to 650 lb/h 91 to 295 kg/h	To 800 lb/h To 364 kg/h	To 1000 lb/h** To 454 kg/h**
TC80	500 to 1300 lb/h 227 to 590 kg/h	300 to 900 lb/h 135 to 410 kg/h	600 to 1200 lb/h 273 to 545 kg/h	To 1200 lb/h To 545 kg/h	To 1500 lb/h** To 682 kg/h**
TC86	500 to 1900 lb/h 227 to 860 kg/h	400 to 1200 lb/h 182 to 550 kg/h	600 to 1700 lb/h 273 to 770 kg/h	To 2000 lb/h To 910 kg/h	To 2200 lb/h** To 1000 kg/h**
TC92	1200 to 2200 lb/h 545 to 1000 kg/h	N/A N/A	1000 to 1800 lb/h* 454 to 818 kg/h*	To 2500 lb/h To 1136 kg/h	To 3000 lb/h** To 1364 kg/h**

Note: (*) Substrate output in a co-extrusion application. (**) Crammer feeder required to obtain rated output.

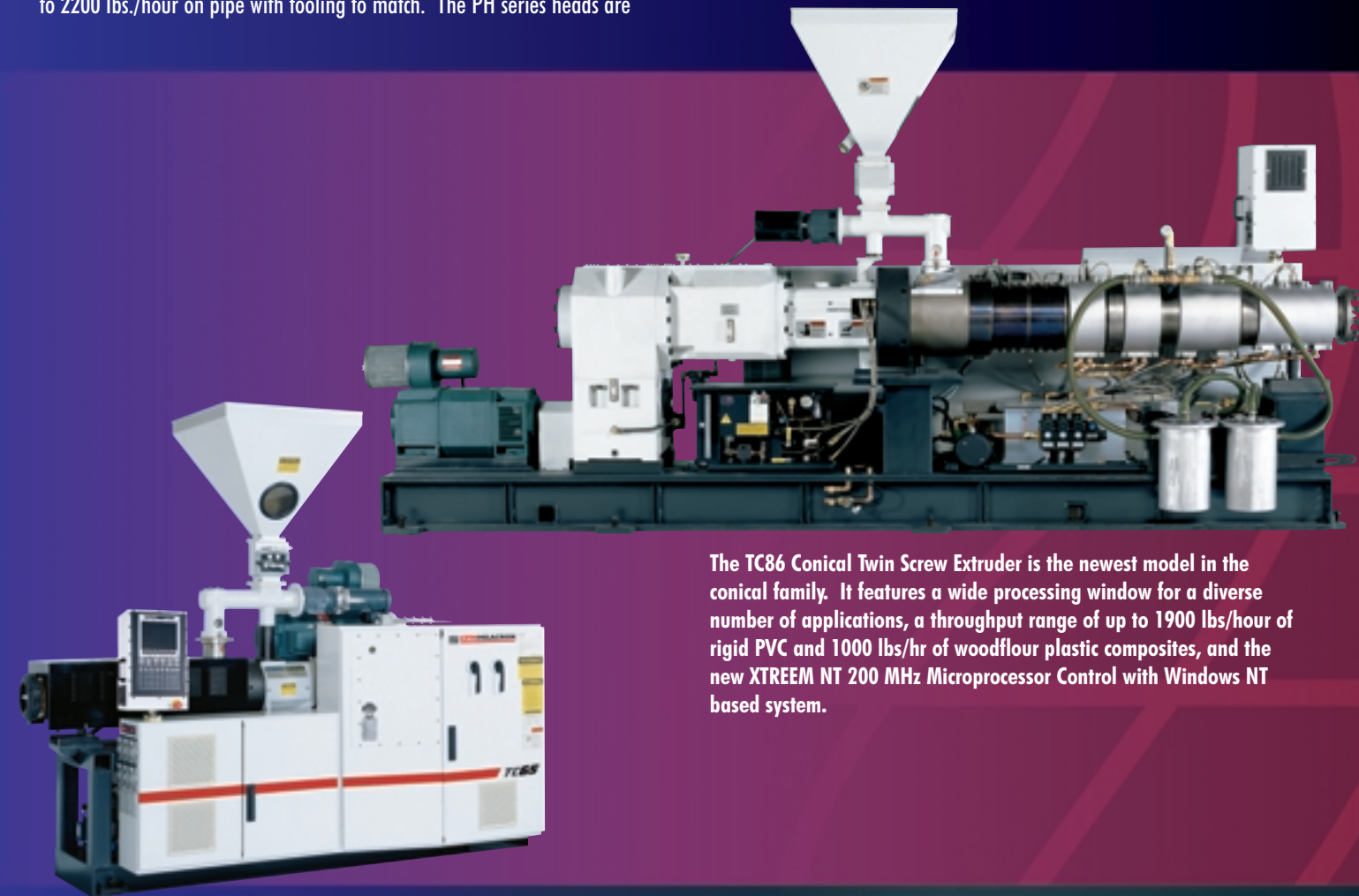
**PROCESSING
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PVC PIPE SYSTEMS

Manufacturing PVC pipe to exact specification and minimum overweight requires equipment you can depend on – for precision, versatility and reliability. ExtrusionTek Milacron's screw designs are engineered to specific pipe applications including foamed or highfilled PVC, CPVC, co-extruded PVC and NSF PVC pipe formulations.

ExtrusionTek Milacron extruders give you output capabilities up to 2200 lbs./hour on pipe with tooling to match. The PH series heads are

designed with high inventory, high compression and long lands for top pipe physical properties and appearance at high production rates. Complete downstream systems are available to meet your specific needs, including a wide variety of standard and custom vacuum tanks, cooling tanks, pullers, saws, collection tables and bellers, via quality suppliers that ExtrusionTek Milacron has developed close alliances with over the years.



The TC86 Conical Twin Screw Extruder is the newest model in the conical family. It features a wide processing window for a diverse number of applications, a throughput range of up to 1900 lbs/hour of rigid PVC and 1000 lbs/hr of woodflour plastic composites, and the new XTREEM NT 200 MHz Microprocessor Control with Windows NT based system.

WINDOW & CUSTOM PROFILE SYSTEMS

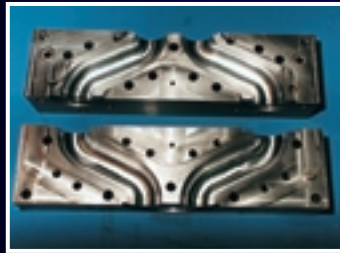
Whether you are producing window mainframes, sash, sill, door profiles or custom profiles, ExtrusionTek Milacron allows you to select the extruder that's right for your process. Our Conical Twin Screw Extruders are designed for high output and a wide processing latitude range because each application requires maximum flexibility and versatility.

ExtrusionTek Milacron Conical Twin Screw Extruders offer several advantages that are key to successful processing in the profile market:

- Reduced motor horsepower requirements reduce energy consumption.
- Lower melt temperatures permit superior color retention and impact strength.
- Running powder compound with less stabilizer means significant formulation cost savings.

• ExtrusionTek Milacron's screws are designed to ensure exceptional profile quality, wall tolerance and linear integrity.





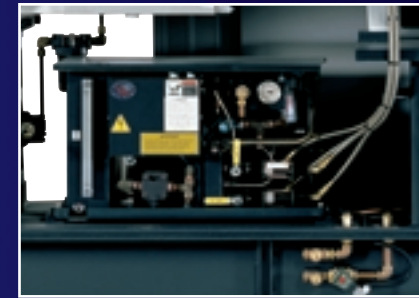
Dual pipe configurations on PH1, PH2 and PH3 (up to 6") are easily facilitated with our system engineered 16" and 27" (centerline) dual pipe manifolds.

XTREEM NT 200 MHz Microprocessor Control with Windows NT based system, or discrete controls mounted on swivel-mount pendant station for optimal operator convenience. Either system available at the same price.



Vacuum venting system with optional dual vacuum canister arrangement with by-pass valve to allow cleanout without interruption in processing.

Internal Screw Oil Heating and Cooling System on slide-out, easy maintenance trays provides efficient temperature of the screws and ultimate control over melt temperature.



Complete conical counter-rotating twin screw extruder product line with outputs ranging from 25 to 2500 lbs/hr and more.

Metered dosing feeder for accurate intake volume and increased processing latitude (optional Preheating Feeder System, Crammer Feeder and Gravity Feeding arrangements available.)

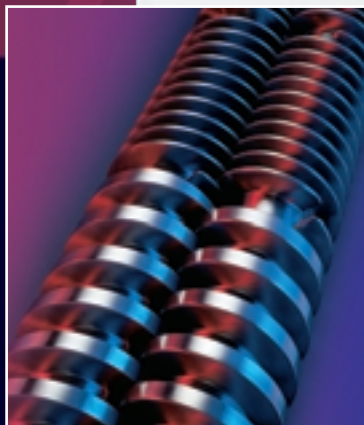


High-efficiency closed-loop water barrel cooling system with 3 temperature-controlled zones is easy to maintain and is environmentally friendly (oil cooling available as an alternative.)



Nitrided or Tungsten-Clad barrels for abrasion resistance.

Integral gear box (combining reduction and distribution functions) designed for maximum thrust and torque.



State-of-the-art screw designs with greater surface area and lower compression, providing higher output rates at low screw speeds. Available with a variety of hardfacings and coatings for abrasion and corrosion protection.

Direct coupled Reliance AC Vector motor and drive system as standard for consistent and reliable speed control.

Unitized system with all components mounted on a single base.

Subcomponents mounted on slide-out trays for easier, faster maintenance.



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COMPLETE WOODFLOUR PLASTIC COMPOSITE DECKING & RAILING SYSTEM

Always acutely aware of the plastics extrusion market demands, ExtrusionTek Milacron has been an active participant in the pioneering of extrusion systems for woodflour plastic composites. Combinations of plastic and up to 70% woodflour are mixed and extruded to create a composite perfect for use in the building and construction markets.

ExtrusionTek's counter-rotating conical twin screw extruders excel at processing either engineered profile composite shapes (i.e., precision shapes with weight-reducing hollows and outstanding physical properties)

or solid shapes with no hollows. The conical twin delivers the highest output because the large diameter feed zone allows for efficient feeding of fluffy materials like woodflour, and the natural compression of the conical screws (large volume to small volume) allows for effective wetting out of the woodflour in the plastic so that entrapped volatiles can be drawn off through the vacuum system without loss of the woodflour. Typical outputs range from 500 to 1,700 lbs/hr (227 to 773 kg/hr).



The TC92 Conical Twin Screw Extruder uses the CM140z MEDS with the Vertical Integrated Feed Option to preheat woodflour plastic composite compounds, drive off residual moisture and maximize filling of the extruder screw flights. Throughput rates of up to 1,700 lbs/hr are consistently achieved with this system.



Vacuum venting system with optional dual vacuum canister arrangement with by-pass valve to allow cleaning of the vacuum canister without interruption in processing.

All the positive characteristics of wood are provided by woodflour plastic composite profiles. Attractive look, ease of fabrication with woodworking tools, and paintability – all are enhanced by the nearly indestructible rot and insect resistance of plastic. Annual maintenance is reduced significantly. It's the perfect material for decking and railing systems, landscape timbers, door frames and brick molds.



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GET CONTROL OF SIDING PRODUCTION

ExtrusionTek Milacron's conical twin screw extruders for vinyl siding provide unprecedented process control, whether as the high-speed substrate extruder or as the coextruder for capstocking. The conical is well known for its positive displacement pumping characteristics and its ability to achieve consistently optimum melt temperatures over a wide output range. With ExtrusionTek Milacron's extruders, you'll be able to reach higher production levels and quality using fewer additives in your compound. And, you'll save again when comparing energy consumption. By reducing process shear, ExtrusionTek Milacron's extruders use less energy to drive the screws and eliminate costly heat build-up. Screw geometries used in our high-speed substrate extruders have been specifically designed for the production of postformed siding, using a wide range of formulations at high output rates. Screw designs used for the coextruder are engineered to provide accurate capstock coverage and withstand high head pressure at controlled melt temperatures.



PELLETIZING SYSTEMS

ExtrusionTek Milacron's pelletizing system brings added versatility to your extruded product capabilities, providing consistently higher quality product, superior post processing and greater overall production control. The complete ExtrusionTek Milacron pelletizing system is engineered for a broad range of product applications including rigid PVC (pipe fitting compound and impact modified weatherables), special formulations, bottle compounds, plasticized PVC, TPR and wire and cable compounds.

ExtrusionTek Milacron's 100% dry system includes pneumatic conveyors and an aircooled pelletizing head designed to keep pellets

moisture free. All tooling and downstream areas exposed to pellets are constructed of stainless steel. Other system features include high output screw design for a homogeneous low heat history pellet, your choice of metering or crammer feeder, and pellet cooler with dust and fines separator.





Cincinnati, Ohio
Corporate Headquarters



Batavia, Ohio
ExtrusionTek Milacron
Headquarters



Mount Orab, Ohio
ExtrusionTek Milacron
Manufacturing



McPherson, Kansas
New & Rebuilt
Screw & Barrel Manufacturing

Because we design and manufacture conical twin screw extruders and components at our production facilities in Batavia, OH; Mt. Orab, OH and McPherson, KS (Wear Technology), you can rely on ExtrusionTek Milacron for fast, dependable response.

Parts, service, and technical engineering assistance are readily available *when you want them, where you want them.* We think that's the kind of service you should have when you buy the latest technology in extrusion. That's the kind of service we always strive to deliver.

Find out just how ExtrusionTek Milacron can improve your performance.

Call us - let CPM conical extruders deliver what you need; superior performance, greater production and higher profits.



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All specifications reflect average values based on typical machine layouts. Actual figures will vary depending on final machine configuration. If you require more specific data, consult a certified installation print for your particular machine. Performance specifications are based on theoretical data. Shipping weights reflect average historical values. Due to continual improvements, specifications are subject to change without notice.

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