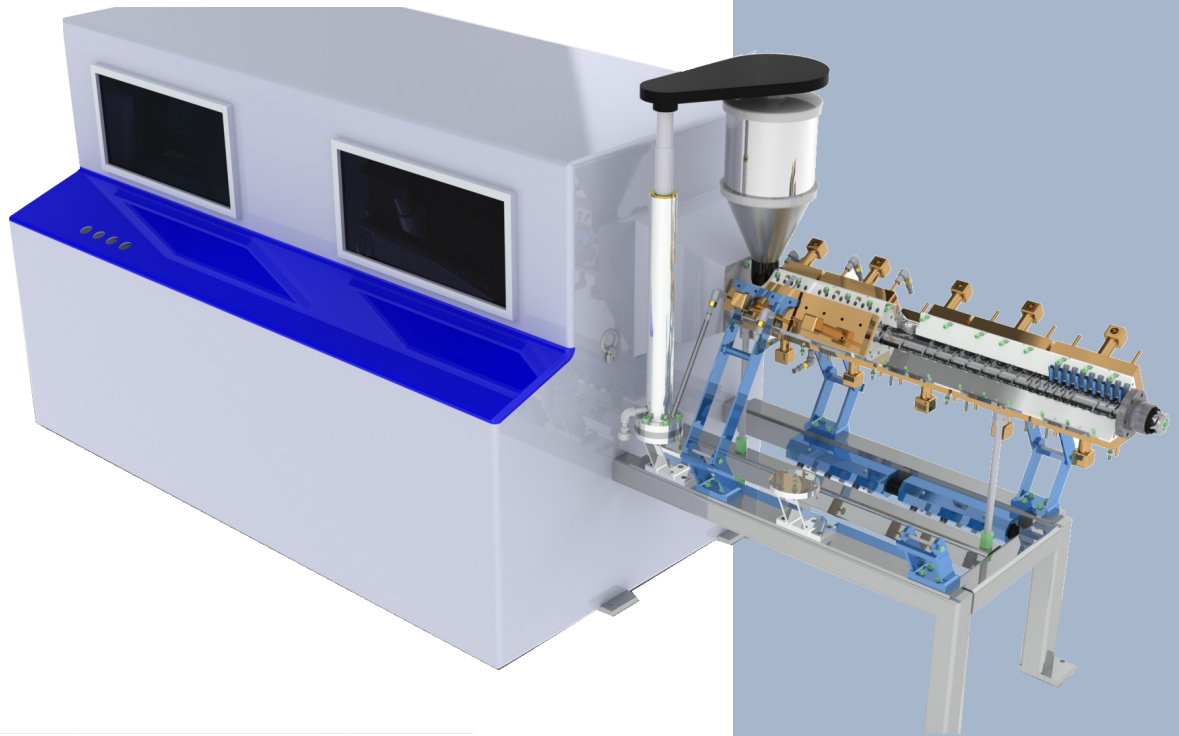


TRI-KNEADER™ TECHNOLOGY—THE STRONG CHOICE



**B&P TriVolution™ Series Tri-Kneader
Next Generation Technical Compounding**

The barrel of TriVolution™ is arranged in a triangular fashion allowing for a cylindrical interior process surface and three, flat surfaces on the exterior of the barrel for service. The kneading flights on the screw shaft interact with fixed kneading teeth along the interior barrel wall so that the various ingredients are sheared between them much more directly and rapidly than with other systems. Furthermore, the oscillating screw shaft ensures intensive mixing in the axial direction through repeated product separation, folding and reorientation.

This unique operating principle results in outstanding distributive mixing thanks to optimal orientation of the product components. That is particularly important if the melt viscosities and ranges of the various components vary widely, and if liquid ingredients or high proportions of fibers or fillers have to be incorporated.

The dispersive mixing effect is also more efficient than with other systems because there is no risk of product damage due to pressure peaks or high radial pressures. After each shear cycle the matrix depressurizes by expanding into neighboring ducts for separation, folding and reorientation before the next shear cycle. Among the notable benefits of this system are the extremely low processing length/diameter ratios, the short residence times, and significantly lower product temperatures by comparison with other systems. The high degree of self-cleaning also presents a valuable feature given the versatility of TriVolution.

Features

Superb Mixing Principle

- Uniform dispersion at lower melt temperatures
- Optimum extension and shear flow geometry
- Stable temperature vs. throughput control
- Reduced scrap and rework

Maximum Reliability

- Slower screw speeds at high capacity
- Enhanced life of wear components

Best Energy Efficiency

- Complete mixing in shortest L/D
- Optimized mechanical energy input
- More mixing per unit volume

B&P PROCESS EQUIPMENT

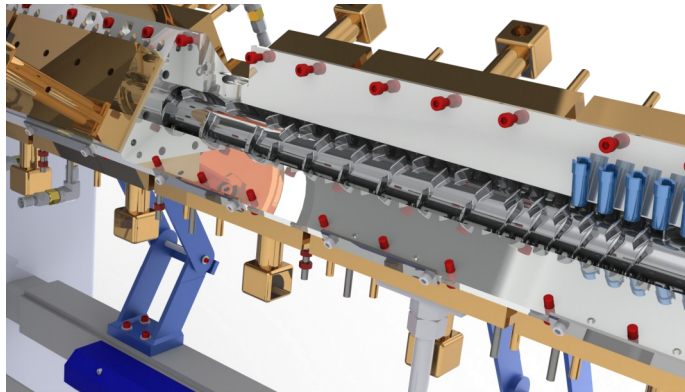
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Strong Innovation • Strong Value • Strong Choice

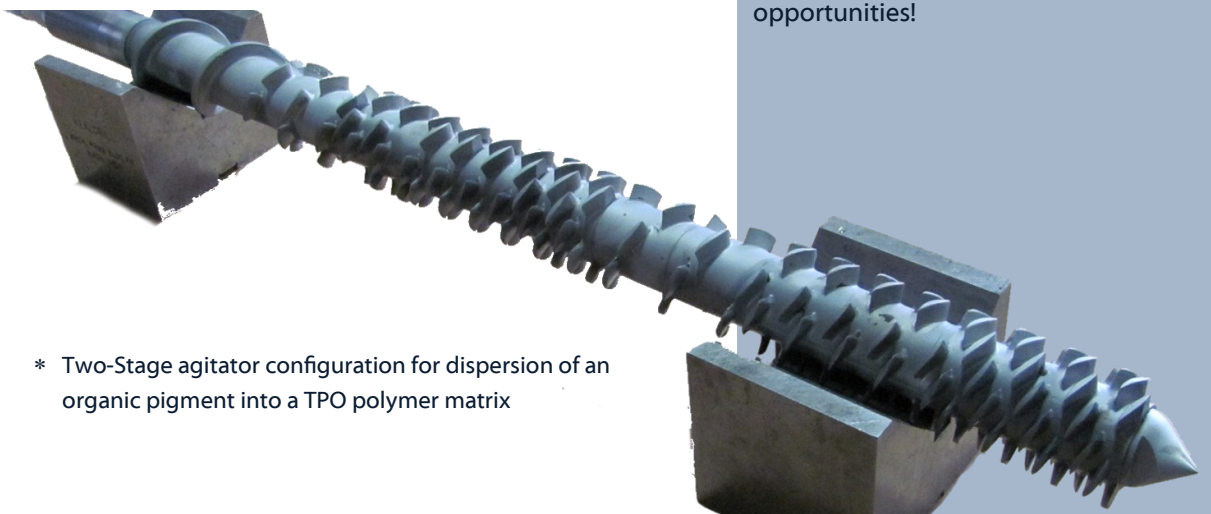
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Applications

- **Flexible PVC**
- **Rigid PVC**
- **Sioplas**
- **XLPE**
- **HFFR**
- **Semicon**
- **Color Masterbatch**
- **Bio-Plastics**
- **TPO / TPE**
- **LSR**
- **Thermosets**
- **Reactive**

Come test your materials on our TriVolution-60 demo unit in our 16,000 ft² USA Technology Demonstration Center.



* Two-Stage agitator configuration for dispersion of an organic pigment into a TPO polymer matrix

At B&P Process Equipment, we've taken our traditional strengths in engineering high-precision, high-reliability machines and added a new dimension in innovation.

We've developed the next generation of compounding extruder for the plastics and rubber markets. Branded TriVolution, the new extruder has become more nimble, more agile and versatile, breaking the barrier between twin-screw and ko-kneader technology.

Instead of having one axial stroke per revolution of the screw, TriVolution uses three strokes per revolution.

Instead of being limited to three or four-flights for mixing, TriVolution is configurable up to twelve flights.

Instead of trying to keep up as your needs change, TriVolution is becoming the driving force of change itself.

TriVolution is here! Custom-designed to exacting specifications and engineered to solve specific problems, meet unique challenges and seize opportunities!