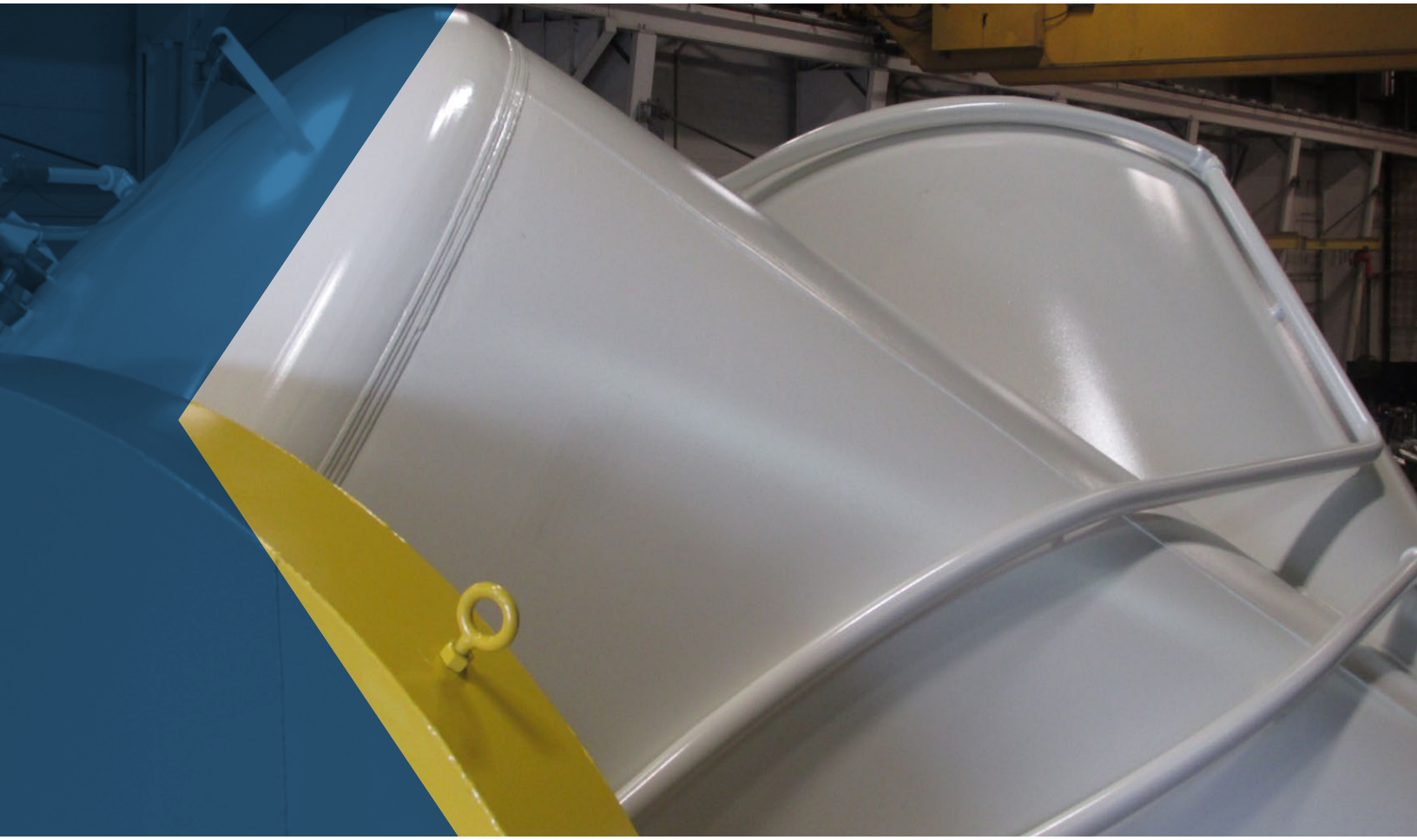
Dryers

Patterson Kelley (PK) Dryers use a jacketed vessel and tumbling motion to maximize heat transfer and achieve uniform drying—even under vacuum. This unique design enables simultaneous blending, drying, and chemical reactions in a single, streamlined step. Ideal for polymerization, solvent removal, metal powder treatment, and more.

PK Dryers are available in intensified and non-intensified configurations and are engineered for lasting performance and optimal efficiency. Built with heavy-duty construction and smart design features, they ensure consistent drying, mixing, faster processing, and easy maintenance—minimizing downtime and keeping your production running smoothly.



Drying & Powder Processing Solutions

- Tumble Dryers
- Double Cone Dryers
- Solids Processor
- Tubular Vacuum Dryers
- Continuous Tubular Dryers
- Aftermarket Parts & Service
- Lab Testing & Pilot Equipment Rentals
- Complete Systems

PK BLENDERS

Tumble Dryers (VTD)

Twin Shell NON-Intensified Configuration

Twin Shell Dryer overcomes discharge problems and creates additional mixing action at the center with two opposed simple cylinders formed in a “V”. This extra action is responsible for faster, more efficient blending. Material is rotated close to the axis, thus reducing power requirements. This dryer can handle extremely delicate to heavy abrasive materials.

Features & Benefits

- ASME Code Rated Vessels ensure safe designs.
- Auxiliary Heating, Cooling & Vacuum skids available for enhanced process control and versatility.
- Drying and blending in a single unit eliminates the need for multiple pieces of equipment.
- Versatile operating conditions to fit nearly any application.
- 8 & 16 QT, 1-100ft³ sizing available for flexibility.
- 316L stainless steel product contact for sanitary applications.
- Density ratings 62 lb/ft³ standard up to 400 lb/ft³, allows for handling of a wide range of materials.

Double Cone NON-Intensified Configuration

The Double Cone Dryers are non-intensified units consisting of vertical cylinders with conical ends that rotate around a horizontal axis. Their simple, gravity-driven motion makes them ideal for blending free-flowing solids and drying heat-sensitive materials. With a compact footprint, they are especially well-suited for installations where vertical headroom is limited.

Features & Benefits

- Gentle mixing action reduces product degradation, making it ideal for fragile or friable materials.
- Rotating shape ensures uniform mixing and drying promoting even heat and mass transfer.
- Non-intensified configuration requires fewer internal components for lower maintenance.
- Dual-function for mixing and drying reduces the need for additional equipment.
- Available in standard double-cone and slanted double-cone to fit the processing needs.

Solids Processor® (SP)

Twin Shell Intensified Configuration

One system fulfills all of your processing needs. The PK Solids Processor handles solid-solids and liquid-solids blending, coating, agglomerating, granulating, vacuum drying, heating and cooling all in one fully packaged system. Self-contained, multifunction operation reduces material handling costs and provides savings in equipment, utilities, time, manpower and space, while promising precise control in producing product.

Features & Benefits

- Multifunctional process eliminates the need to transfer product to different equipment, decreasing risk of product contamination.
- Liquid dispersion bar promotes blending and agglomerating of abrasive, fragile and lumped material.
- Custom designed systems allows for recording and monitoring process conditions.
- Heating and vacuum package available to further optimize your process needs.
- Available capacities include 8 & 16 QT, 1-100ft³ to accommodate various processing needs.

Double Cone Intensified Configuration

The Intensified Double Cone Dryer is designed to enhance blending efficiency with it's incorporated intensifier bars. Ideal for applications where vertical headroom is limited, this dryer offers a space-saving solution without compromising performance. The addition of intensifiers is ideal for applications where materials are difficult to blend or the texture of material prohibits consistent drying.

Features & Benefits

- ASME Code Rated Vessels ensures additional safety.
- Auxiliary Heating, Cooling & Vacuum skids available for enhanced process control and versatility.
- Multiple operations in a single unit eliminates the need for additional equipment, and saves space.
- Versatile operating conditions reduces downtime.
- Available in standard cone and slanted cone fits the need of varying materials.
- Size ranges available 3-100ft³ for sizing flexibility.
- 400° F max temp. handles even tough applications.
- 316L stainless steel product contact for sanitary applications.

Tubular Vacuum Dryer (TVD)

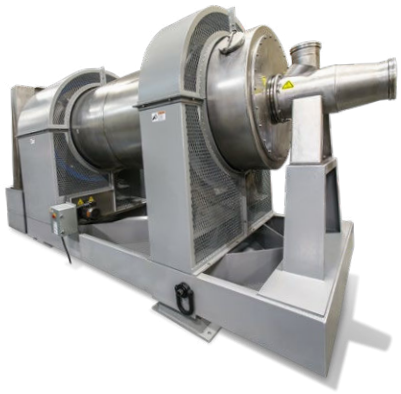
The 300 cu. ft. Tubular Vacuum Dryer (TVD) offers significantly more heat transfer surface than any other conical vacuum dryer of the same size making it a smart replacement option. Process applications include solid state polymerization of polymers and drying polymers to low moisture content.

Features & Benefits

- Exceptional heat transfer surface minimizes drying cycle time and dries materials more evenly.
- Ultra-tight vacuum to 0.5mm Hg and less reduces the risk of product contamination.
- Ability to purge with N_2 to prevent oxidation.
- Jacket temperature is available up to 500°F for faster drying.
- Automation options deliver precise control of batches and record parameters.

Continuous Tubular Dryer

Fast, even drying for a wide range of materials, including organic, inorganic, temperature-sensitive, fragile, and particles of both uniform and varying sizes. Because the material is never more than a few inches from a heated surface and is exposed to ambient airflow, drying occurs quickly and efficiently.



Features & Benefits

- Flighted tubes provide maximum product contact to heat transfer surface.
- Gentle tumbling action ensures precise drying without attrition.
- Ability to purge with N2, preventing oxidation.
- 1,000-20,000 lbs/hr throughput capacity for great scalability.
- 16 & 26 tube design at 12 & 16ft lengths provides flexibility for a variety of applications.
- ASME code rated vessels provides confidence in compliance and safety.

Dryer Options

- Glass Sample Port - provides quick sampling of products.
- Blowback - valve added to blowback vacuum filter to minimize product buildup.
- Temperature Measurement - remote transmitters; thermowell in vacuum line.
- Jacket Insulation - removable silicone ultra core blanket; fiberglass insulation with welded stainless-steel shroud.
- Heating – oil, steam, glycol, water, or other heating fluid; electric heating element blanket.
- Classification – available for various electrical and hazardous compliance classifications.

Aftermarket Parts Sales & Service

PK Blenders understands that timely access to genuine spare parts is essential for maintaining the reliability and performance of your equipment. Our team is available to process your order any time of the day, with inventory readily available for quick delivery.

Field service technicians are available to diagnose machine issues and to train your personnel in proper operation and preventative maintenance. Ask us about our Preventative Maintenance Contracts.

Parts Available

- Butterfly Valves
- Intensifier Bars
- Access Cover Assembly
- FDA/Non-FDA Valve Liners
- Access Cover Gasket
- Access Cover Filter
- OEM Motors

Industries We Serve

We proudly support a wide range of industries, whether you're blending fertilizers, lubricants, seasonings, or cleaning agents, we bring precision, consistency, and reliability to your process. Even if your industry is not on our list, we can still help.

Our team thrives on customization and collaboration. If you have a product that needs blended or dried we have the tools and expertise to make it happen.

Plastics

Chemicals

Food Processing

Metal Powders

Soaps

Ceramics

Agricultural Chemicals

Pharmaceuticals

Nutraceuticals

Cosmetics

Lab Testing

PK Blenders offers a testing lab with the complete line of PK equipment, in addition to evaporation and distillation units, dryers, and flakers. This extensive setup allows for full-scale testing and optimization of your material handling and thermal processing needs under real-world conditions.

- Fabrication shop next door
- Auxiliary lab utilities available; boiler, cooling water, compressor
- Wet lab for glassware and analytical testing
- Continued plans for future improvements and additional equipment availability

Complete Systems Integration

As a subsidiary of Carrier Process Equipment Group (CPEG), PK Blenders can provide additional thermal and dry solids processing equipment to supplement and build out your production line. These machines can be integrated upstream into existing or new process lines. Our team of experts can help determine the most suitable products for your manufacturing line. With a full spectrum of technologies, ancillary components, and automation solutions, customers worldwide rely on us to meet their unique production needs.

- Atmospheric Drum Dryers
- Vacuum Dryers: Drum, Pan, Rotary, Shelf
- Cooling Drum Flakers
- Evaporation, Distillation & Separation
- Tumble Dryers & Rotary Dryers
- Rotary Calciners
- Bin Dischargers & Loading Spouts
- Mixers & Blenders
- Dry & Wet Dust Collectors
- Vibratory & Static Fluid Bed Dryers
- Fluid Bed Coolers
- Dry & Wet Dust Collectors
- Flash, Tornesh, Media Slurry Dryers
- Bulk Material Heat/Cool Exchangers
- Vibratory Feeders & Screw Conveyors
- Vibratory Screeners & Power Sifters
- Size Reduction Equipment
- And More

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100% EMPLOYEE OWNED

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