ANDRITZ KMPT
Products and services
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ANDRITZ KMPT
Advancing separation solutions

ANDRITZ KMPT, member of the Separation Technologies division of international technology Group ANDRITZ, is one of the worldwide leading innovators in process technology for solid/liquid separation equipment. Our expertise comes from decades of experience in supplying separation solutions for the chemical, pharmaceutical, environmental, and mining industries.

ANDRITZ KMPT designs, manufactures, and services Krauss-Maffei centrifuges, filters, and dryers, and also engineers systems individually tailored to your specific needs. We provide efficient technologies to reduce life cycle costs and environmental impact.

Krauss-Maffei centrifuges, filters, and dryers are renowned globally for quality and reliability. The dynamic and flexible approach in assisting our clients makes ANDRITZ KMPT a trustworthy partner throughout the service life of the equipment.

ANDRITZ KMPT’s comprehensive support comes from the dedicated staff in our engineering groups, test center and process automation team, as well as from the skilled workers in our production facility. Our service centers all over the world provide spare parts and on-site assistance to keep your operation running smoothly.

The ANDRITZ GROUP
The ANDRITZ GROUP is a globally leading supplier of plants and services for the hydropower, pulp and paper, metals, and other specialized industries (solid/liquid separation, feed and biofuel). The Group is headquartered in Graz, Austria, and has a staff of approximately 15,900 employees worldwide. ANDRITZ operates over 120 production sites, service and sales companies all around the world.

ANDRITZ ENVIRONMENT & PROCESS
ANDRITZ ENVIRONMENT & PROCESS is one of the leading global suppliers of plants, equipment, and services for mechanical and thermal solid/liquid separation of municipal and industrial sludges and suspensions (coal, ore and mineral processing, chemical, petrochemical, and food industries). The business area's field of activity covers design and manufacture of key components (centrifuges, filter presses, rotating filters, and plants for dewatering, drying, and sludge incineration), as well as erection and start-up of turnkey plants, including automation, safety engineering, and services.
**ANDRITZ KMPT**

A modern company with tradition

**KMPT was established in 2001 following a management buy-out from the former Mannesmann Demag Krauss-Maffei AG.**

The path to independence continued in 2003, when our affiliate in the US moved into newly built office and assembly facilities in Florence, KY. In the spring of 2006, the re-organization of KMPT was completed by the move to our new headquarters in Vierkirchen, near Munich, Germany. The new facility incorporates state-of-the-art manufacturing equipment and logistical systems.

In 2010, KMPT was integrated successfully into the ENVIRONMENT & PROCESS business area of the ANDRITZ international technology Group.

**Tradition and experience**

Long-standing tradition and decades of experience lie at the heart of ANDRITZ KMPT’s success. When the first peeler centrifuge was introduced in 1928, the foundation was laid for the process technology business division at Krauss-Maffei. Since then, the company has been at the forefront of many new developments in the field of solid/liquid separation.

**Recent examples:**

- 1994 Peeler centrifuge with hinged, full opening housing; new pusher centrifuge series with pull-out rotor for easy maintenance
- 1997 Contact-free ultrasonic centrifuge feed controller
- 2000 Remote diagnostics for preventive maintenance
- 2001 New series of peeler centrifuges in pharma design
- 2003 Introduction of new bottom drive for the mixer dryer series; modularization of engineered systems
- 2004 New generation of vertical basket centrifuges
- 2005 Extension of the pusher centrifuge model range
- 2006 Conical dryer with top-driven helical mixing assembly
- 2007 Introduction of world’s largest pusher centrifuge
- 2007 New small size peeler centrifuge in pharma design
- 2007 New dynamic crossflow filter
- 2010 New series of helical mixer dryers
- 2011 New series of pressure drum filters
Dedication and know-how

**Our mission**
We are dedicated to total customer satisfaction in providing the most efficient and economical solution for solid/liquid separation applications. From the inception of a project throughout the service life of their plants, clients benefit from our expertise and the reliability of our technologically advanced, high-quality process equipment.

**Experience**
For more than 80 years, ANDRITZ KMPT has been a leader and innovator in the chemical process equipment industry. The vast experience of our engineers comes from testing more than 3,000 products and putting over 9,000 applications to work. Over 500 patents demonstrate our capacity for innovation.

This extensive knowledge governs our process and equipment recommendations, all tailored to meet your specific demands with an optimum in performance and cost.

**Our commitment – your success**
Our knowledgeable personnel is ready to assist you from our headquarters in Germany or our affiliate in the US, as well as our representative offices in China, Russia, and India. We speak your language and are familiar with your specific requirements.

**Innovation**
We are continuously improving our products and services to benefit our customers. New customer demands are quickly implemented in the development of new equipment. This is how we succeeded in becoming the leader in solid/liquid separation technology.

**Constant high quality**
Superior quality of your products, day after day, is assured by the performance and reliability of our equipment and systems. The knowledge and skills of our workforce in engineering and manufacturing, combined with rigorous checks and tests by our independent quality assurance department, guarantee that every product we deliver is of the highest standards.

**Reliability is our strength**
Krauss-Maffei centrifuges, filters, dryers, and systems are renowned for their reliable performance in the chemical, pharmaceutical and related industries all over the world, giving clients the benefits of maximum availability, superior product quality, and highest standard.

**Extensive after-sales support**
Our comprehensive after-sales service provides support from installation and start-up through preventive maintenance and repairs. We optimize your process and train your operating personnel. We stock over 6,000 different spare parts, and upgrade your equipment to comply with the latest safety standards. And at the end of the service life, you can take advantage of our equipment buyback program.
Our system integration uses a modular approach. We have the experience and expertise to deliver individual process system solutions for your specific applications.

To do so, we complement core technologies from our equipment line with peripheral components to form an integrated overall system without any interfaces for the user. Upon request, we combine single components into functional, pre-assembled process modules.

We bear the overall mechanical and thermal solid/liquid separation process in mind at all times.

Our services include:

- Pilot testing to provide a solid basis for equipment choice and performance guarantee.
- One contact partner for the entire system, from process equipment to peripherals and automation.
- Detailed engineering performed by our knowledgeable staff.
- Reduced installation time with pre-assembled process modules.
Applications

**Bulk chemicals**
Ammonium sulfate, chlorides, soda, sodium chlorate, sodium chloride, sodium sulfate

**Plastics**
ABS and POM, adipic acid, melamine, polycarbonate/bisphenol A, PE, PP

**Food, beverages, and additives**
Amino acids, caffeine, citric acid, coffee, lysine, starches, sweeteners, tea, vitamins

**Fine and specialty chemicals**
Antioxidants, calcium carbonate, dyestuff, liquid crystals, pigments, silver compounds

**Minerals and mining**
Alumina, borax/boric acid, coal, lithium compounds, potassium chloride

**Agrochemicals**
Fertilizers, fungicides, herbicides, insecticides

**Pharmaceuticals**
Antibiotics, APIs, intermediates

**Environmental protection**
Gypsum and ammonium sulfate from FGD scrubber systems in power stations, waste incineration systems and cement plants, neutralization systems in copper refining plants

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Krauss-Maffei centrifuges

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Model</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal peeler centrifuge, HZ</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Pharma centrifuge, HZ Ph</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Vertical centrifuge, VZU</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Gypsum centrifuge, VZU-G</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Pusher centrifuge, SZ</td>
<td>10</td>
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</tr>
</tbody>
</table>

Krauss-Maffei filters

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Model</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacuum disc filter, SSFE</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Vacuum drum filter, TSF</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Pressure drum filter, TDF</td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

Krauss-Maffei dryers

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Model</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helix dryer, HD</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Helix dryer, HD mobile</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Plate dryer, TT</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

Products supplied by ANDRITZ KMPT indicated by blue box.
Whether they are used in the chemical, pharmaceutical or food industry, our horizontal peeler centrifuges have always excelled. They are known for reliable operation at high capacities. Low residual moisture contents achieved by high spin speeds. High flexibility for meeting changing process conditions.

Peeler centrifuges with rotary siphon design offer substantial advantages:
- Increased filtration capacity by generating additional pressure beneath the filter medium.
- High product purity by varying the contact time by the solids and wash liquor.
- Prolonged life of the residual heel due to regeneration by backwashing.

**Process data**

**Operation**
Batch-type filtration or sedimentation

**Basket diameter**
250–1,800 mm

**Basket volume**
2–1,400 l

**Filter area**
0.1–7.1 m²

**Solids content**
From 3% by wt.

**Average particle size**
2–500 µm

**Solids throughput**
Up to 15 t/h

**Wash efficiency**
Excellent

**Solids recovery**
Almost 100%

**Main applications**
- Amino acids
- Antioxidants
- Chlorides
- Citric acid
- Crop protection chemicals
- Fertilizer
- Sulfates
- Starch
- Sweeteners
- Vitamins

**Materials of construction**
- Various grades of stainless steel
- Nickel-based alloys
- Special materials with or without lining
HZ Ph pharma centrifuge

Our peeler centrifuge in pharma design is proven for products from A (for amines) to Z (for zinc bacitracin).
Developed for the specific requirements of demanding applications in the pharmaceutical industry, our pharma centrifuge offers the following distinctive features:

- Minimal product deposits after discharge due to optimized peeler geometry.
- Cleanroom installation simplified by separating the process area from the drive components.
- Product contamination eliminated with 100% recovery of CIP fluids.
- Easy maintenance based on service-friendly design.
- Low space requirement due to compact structural design.

Special features
Designed for multi-product plants, suitable for CIP, 100% product discharge, ideal for cleanroom installation.

Process data
Operation
Batch-type filtration or sedimentation
Basket diameter
500-1,250 mm
Basket volume
20-340 l
Filter area
0.35-2.5 m²
Solids content
From 3% by wt.
Average particle size
1-250 µm
Solids throughput
Up to 1 t/h
Wash efficiency
Excellent
Solids recovery
Almost 100%

Main applications
- APIs
- Antibiotics
- Liquid crystals
- Pharmaceutical intermediates
- Silver compounds

Materials of construction
- Various grades of stainless steel
- Nickel-based alloys
- Titanium
- Special materials with or without lining

Krauss-Maffei pharma centrifuge, HZ 1250/2.5 Ph
Cleanroom installation
VZU vertical centrifuge

The new vertical centrifuge has been developed for effective and reliable processing of pharmaceutical intermediates and a wide variety of fine and specialty chemicals. It offers a host of advantages and an attractive price/performance ratio:

- Easy maintenance, thanks to a service-friendly design.
- Efficient product discharge by means of a single, large discharge opening.
- Minimum product deposits due to elimination of dead zones.
- Uniform cake formation during feeding due to dynamic feed device.
- Reduced space requirement as a result of vertical design.

Process data

<table>
<thead>
<tr>
<th>Operation</th>
<th>Batch-type filtration or sedimentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basket diameter</td>
<td>1,000-1,600 mm</td>
</tr>
<tr>
<td>Basket volume</td>
<td>250-1,000 l</td>
</tr>
<tr>
<td>Filter area</td>
<td>2.0-5.0 m²</td>
</tr>
<tr>
<td>Solids content</td>
<td>From 3% by wt.</td>
</tr>
<tr>
<td>Average particle size</td>
<td>5-500 µm</td>
</tr>
<tr>
<td>Solids throughput</td>
<td>Up to 7 t/h</td>
</tr>
<tr>
<td>Wash efficiency</td>
<td>Excellent</td>
</tr>
<tr>
<td>Solids recovery</td>
<td>Almost 100%</td>
</tr>
</tbody>
</table>

Main applications

- Amino acids
- Antibiotics
- Crop protection chemicals
- Fine chemicals
- Pharmaceutical intermediates
- vitamins

Materials of construction

- Various grades of stainless steel
- Nickel-based alloys
- Special materials with or without lining
VZU-G gypsum centrifuge

Power stations, co-generation facilities, and cement plants often use wet scrubbing processes for desulfurization of their flue gases. These systems generate large quantities of gypsum slurry. Separating this gypsum by-product in our vertical centrifuges allows the scrubber liquid to be recycled. Over 400 Krauss-Maffei vertical centrifuges are in operation for this application, proving their performance around the clock even under the most severe conditions.

Krauss-Maffei vertical centrifuges outperform belt filters in every respect:
- Lower power consumption reduces the operating costs.
- Lower residual moisture saves substantial amounts of energy in the gypsum drying system.
- Minimum space requirement – a centrifuge installation requires only one third of the building space of a comparable belt filter plant.
- Clean, quiet operation gives operators a better work environment.

Process data

<table>
<thead>
<tr>
<th>Operation</th>
<th>Batch-type filtration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basket diameter</td>
<td>1,000-1,600 mm</td>
</tr>
<tr>
<td>Basket volume</td>
<td>220-1,300 l</td>
</tr>
<tr>
<td>Filter area</td>
<td>2.0-6.3 m²</td>
</tr>
<tr>
<td>Solids content</td>
<td>10-70 M%</td>
</tr>
<tr>
<td>Average particle size</td>
<td>20 - 100 μm</td>
</tr>
<tr>
<td>Solids throughput</td>
<td>Up to 10 t/h</td>
</tr>
<tr>
<td>Wash efficiency</td>
<td>Excellent</td>
</tr>
<tr>
<td>Solids recovery</td>
<td>&gt; 98%</td>
</tr>
</tbody>
</table>

Main applications
- Gypsum from FGD scrubber systems in power stations
- Waste incineration systems
- Cement plants
- Neutralization of waste acid in smelter plants

Materials of construction
- Various grades of stainless steel
- Nickel-based alloys
- Rubber-lined steel
Our pusher centrifuge ensures maximum online availability with minimum maintenance and low space requirement in many solid/liquid separation processes.

Used in many diverse industry sectors, such as bulk chemicals, plastics processing, mining, the fiber industry, and food processing, Krauss-Maffei pusher centrifuges offer a host of advantages:

- Increased performance with high product quality due to proper selection of the basket configuration, feed accelerator and screens.
- Mechanical and hydraulic drives available for greater flexibility of operation.
- Simple maintenance thanks to service-friendly design.
- Quick installation on resilient vibration dampers.

### Process data
- **Operation**: Continuous filtration
- **Basket diameter**: 250-1,250 mm
- **Solids content**: > 20% by wt.
- **Average particle size**: 80 - 2000 μm
- **Solids throughput**: Up to 150 t/h
- **Wash efficiency**: Good
- **Solids recovery**: > 98%

### Main applications
- ABS
- Adipic acid
- Ammonium sulfate
- Borax
- Chlorides
- Lithium compounds
- POM
- Potassium chloride
- Salt
- Soda
- Sodium chlorate
- Sulfates

### Materials of construction
- Various grades of stainless steel
- Special materials
ANDRITZ KMPT presents an overall improved version of its well-known KTZ tumbler centrifuge.

Based on the experience gathered with previous designs, in systematic investigations of the requirements in practice and the most interesting kinematics of the tumbling method, a centrifuge of high capacity was developed for efficient mechanical de-watering of bulk products. These features of the new KTZ tumbler centrifuge are now opening up fields of application which were reserved in the past for more complex and costly centrifuges.

**Process data**

**Operation**
Continuous filtration

**Basket diameter**
400-1,400 mm

**Average particle size**
0.1-20 mm

**Solids throughput**
Up to 150 t/h

**Main applications**
- Crystallization products
  (Potassium chloride, sodium sulphate, sodium chloride, Glauber’s salt, ammonium phosphate, salt, carnalite.)
- Flotation concentrates
  (Potash salt, ores, coal.)
- Wet upgraded products
  (Fine coal, sand, ores, crude phosphate.)

Baffle ring centrifuges remove surface and entrapped water from plastic pellets through repeated impact of granulate particles on baffle surfaces.

The water films developing on the baffle surfaces are removed by adhesion and centrifugal force. These are two new processing techniques for centrifuges.

**Process data**

**Operation**
Continuous filtration

**Rotor diameter**
540 or 750 mm

**Solids throughput**
Up to 20 t/h

**Main applications**
- Polyethylene
- Polypropylene
- Polyamide
- Polyester
- Polystyrene
SSFE vacuum disc filter

High yield and product quality, combined with low production costs, provide the producer of bulk materials with a decisive competitive edge.

The Krauss-Maffei disc filter, based on many years of experience and countless applications, gives you efficient filter operations to achieve these attributes. These filters boast a tried-and-tested technology that you can rely on day after day.

Features of the Krauss-Maffei disc filter are:
- Large disc diameter increases the filter area.
- Increased number of filter cells reduces cell volume and substantially improves hydraulic efficiency.
- Easy filter bag installation with quick connection clamps.
- Virtually 100% product discharge, pneumatically assisted.
- Lightweight filter cells simplify changing work.

You benefit from a higher filtration capacity with better product quality and easy maintenance.

Process data
- **Operation**: Vacuum filtration
- **Particle size**: 30-200 µm
- **Filter area**: 42-400 m²
- **Filtration capacity**: 200-5,000 l/m²h
- **Solids throughput**: Up to 4,000 kg/m²h

Main applications
- Alumina
- Mining (coal, iron, ore)
- Potassium

Materials of construction
- Various grades of stainless steel
- Stainless steel
- Plastic filter cells (option)
- Special materials
Drum filters are the most frequently used continuous rotary filters and are found in many different applications due to their simplicity and ease of operation.

Applications include solid/liquid separation processes in the chemical industry, plastics production, mineral refining, food processing industry, and in the field of environmental protection.

To suit your specific requirements we provide our vacuum drum filter in gas-tight, press belt and wash belt design.

Our rotary drum filter offers a number of advantages:
- Increased filtration capacity due to improved hydraulic efficiency.
- Low operating costs thanks to maintenance-friendly design.
- Enhanced performance with gas-tight configuration.

**Process data**

- **Operation**
  - Continuous vacuum filtration
- **Special versions**
  - Press belt, gas-tight, wash belt
- **Particle size**
  - 1-300 µm
- **Filter area**
  - 0.72-100 m²
- **Filtration capacity**
  - 100-2,000 l/m²h
- **Solids throughput**
  - Up to 1,500 kg/m²h

**Main applications**

- BPA
- Carbonates
- Cellulose
- Indigo
- Iron oxide
- Pigments
- Plastic intermediates
- Red mud
- Titanium dioxide

**Materials of construction**

- Carbon steel
- Stainless steel
- Rubber-lined steel
- Special materials
Wherever continuous filtration at elevated pressure differential and high operating temperature with intensive cake wash is required, the Krauss-Maffei pressure drum filter with its high specific filtration rate is the right choice.

Easy accessibility to the process area, mainly static sealings, and fully automated operation guarantee low production costs and highest efficiency.

Features of the Krauss-Maffei pressure drum filter:
- Closed, pressurized production
- Full opening housing with hydraulic clamp ring
- All connections and drives outside the pressure vessel
- Low space requirement
- Homogeneous cake distribution
- Intensive cake wash
- Low residual moisture at high capacities

**Process data**

- **Operation**: Continuous pressure filtration
- **Cake discharge**: Scraper, roller
- **Particle size**: 1-300 µm
- **Filter area**: 4-50 m²
- **Pressure difference**: Up to 6 bar
- **Operation temperature**: Up to 135 °C

**Main applications**
- Coal dressing
- Dyestuffs
- Iron ore beneficiation
- Pigments (e.g. iron oxides, titanium dioxide)
- Plastic intermediates (e.g. BPA, PTA, PET, Melamine)

**Materials of construction**
- Carbon steel
- Stainless steel
- Rubber-lined steel
- Special materials
**DCF dynamic crossflow filter**

Dynamic crossflow filtration with rotating discs provides efficient solutions for a variety of applications. Crossflow methods for separating substances with poor filtration properties are state of the art. In applications with solvents, abrasive materials etc., the use of ceramic filter membranes is gaining popularity. In classic crossflow filtration the feed flows over the filter membrane in such a way that no clogging layer can develop on the membranes.

ANDRITZ KMPT has further developed the process of dynamic crossflow filtration. In this process, rotating ceramic or polymer discs generate a turbulent differential speed, in the feed. This effectively prevents the development of clogging layers which obstruct filtration. Energy savings of up to 80% are the key benefits of this new method. The possibility of processing a higher concentration of the retentate to viscosities of 700 mPas opens up new fields of application.

**Process data**

<table>
<thead>
<tr>
<th>Operation</th>
<th>Continuous</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Viscosities</strong></td>
<td>Up to 700 mPas</td>
</tr>
<tr>
<td><strong>Filter area</strong></td>
<td>Up to 10 m² per module</td>
</tr>
<tr>
<td><strong>Filtration throughput</strong></td>
<td>1-2,500 l/h</td>
</tr>
<tr>
<td><strong>Pore size of membrane</strong></td>
<td>7 nm to 2 µm</td>
</tr>
</tbody>
</table>

**Main applications**

- Extracting solids with high concentration requirements
- Separating biomass, e.g. when extracting enzymes, proteins, polysaccharides or antibiotics
- Recovery of materials (hydroxides, colloids)
- Concentration of suspensions
- Treatment of liquids

**Materials of construction**

- Stainless steel
- Nickel-based alloys
- Ceramics
The Krauss-Maffei HD series uses a central, top-driven helical mixer in a conical vessel for efficient mixing of friable materials. A special, segmented mixer design is available for processing sticky products. With heated vessel and mixer, the HD becomes a high-performance contact dryer for thermal processing at low temperatures under vacuum. Small clearance between the mixing device and the vessel wall in combination with a central bottom outlet guarantee easy discharge and minimum product hold-up. A variety of standard ancillaries such as integrated or top mounted dust filter, isolation valves for feed, discharge and sampling, CIP devices, inertizing and purge gas systems are available to meet requirements of the most demanding process applications.

**Process data**

**Operating principle**
Vacuum contact drying, mixing, homogenizing

**Operating mode**
Batch-type

**Consistency of wet product**
Free-flowing, centrifuge, or filter cake

**Product conveying**
Mechanical with helical mixer

**Particle size**
Up to 5 mm

**Heat transfer medium**
Water/steam/thermal oil

**Drying temperature**
150 °C max.

**Retention time**
30 min-20 h

**Main applications**
- Amino acids
- Antibiotics
- APIs
- Fine chemicals
- Foodstuffs
- Pharmaceutical intermediates
- Plastics

**Materials of construction**
- Stainless steel
- Nickel based alloys
- Special materials
BD helix dryer

In order to make use of the advantages of the Krauss-Maffei HD helix dryer, also for difficult products, its design has been enhanced in cooperation with renowned European pharmaceutical companies. The result – the Krauss Maffei BD helix dryer with its vessel design and combined anchor-helix mixer – complies with the requirements in modern plants that are crucial to production of chemical or pharmaceutical agents for treating products that are difficult to mix.

The innovative design replaces the conical shape with a rounded design, thanks to which critical areas with low peripheral speeds, bad blending, product deposits on mixer segments, and limited product discharge can be avoided. As with the standard version of the Krauss-Maffei helix dryer, the BD series is also available in a mobile and a stationary design for optimum adjustment to process conditions.

**Process data**

**Operating principle**
Vacuum contact drying, mixing, homogenizing

**Operating mode**
Batch-type

**Consistency of wet product**
Free-flowing, centrifuge or filter cake, pasty and sticky products

**Product conveying**
Mechanical with helical mixer and integrated anchor

**Particle size**
Up to 5 mm

**Heat transfer medium**
Water/steam/thermal oil

**Drying temperature**
150 °C max.

**Retention time**
30 min-20 h

**Main applications**
- Amino acids
- Antibiotics
- APIs
- Fine chemicals
- Foodstuffs
- Pharmaceutical intermediates
- Plastics

**Materials of construction**
- Stainless steel
- Nickel-based alloys
- Special materials
Where continuous drying of free-flowing bulk materials is required, the Krauss-Maffei plate dryer is the right choice. It has been proven in over 400 applications and is available in atmospheric, gas-tight or vacuum configurations. The plate dryer can dry sensitive, toxic or solvent containing products with sensitive, toxic or solvent contents, gently and without any impact on the environment.

The key performance characteristics of the TT plate dryer are:
- High quality of the dried product, with exact control of drying temperature and retention time.
- Gentle product handling without back-mixing.
- Maximum flexibility by optimizing the product layer depth and speed configuration of the plow arrangement.
- Minimum energy requirement due to efficient contact drying.
- Minimum dust load, low carrier gas flow, and integrated vapor filters.
- Easy solvent recovery.
- Easy inspection through large access doors.

Process data
Operating principle
Contact drying, contact cooling
Operating mode
Continuous with carrier gas or under vacuum
Product transport
Mechanical by plows
Size
Heat exchange area up to 200 m²
Heat transfer medium
Water/steam/thermal oil
Consistency of wet product
Free-flowing
Drying temperature
Up to 300 °C
Particle size
Up to 5 mm
Retention time
5 min-300 min

Main applications
- Antibiotics
- Antioxidants
- Fine and specialty chemicals
- Herbicides
- Plastics/polymers
- Tea
- Vitamins

Materials of construction
- Stainless steel
- Special materials

Krauss-Maffei TT plate dryer
ANDRITZ KMPT
Process automation

Perfection in process engineering requires perfection in process automation.
The superior performance of our process equipment is based on perfecting the interface between equipment hardware, electrical components, electronics, informatics, and process know-how to create an all-encompassing custom-tailored solution for each application. Using intelligent sensors and state-of-the-art communication systems, we control and monitor our machines on a result-oriented basis.

Automation of machines
Individual adaptation – we can incorporate the automation concepts for our machine into your existing control system.

Custom concepts
We provide an individually designed service package to fit your specification – from the control of individual units, to incorporation into existing control systems or automation of complete plants ready for operation.

Services
Based on your quality assurance program, we prepare all the required documents for validation and qualification of the automation software and hardware. Our extensive know-how, profound experience, and innovative drive qualify us as your partner for validation of our equipment to meet your production needs.

Machinery directives, ATEX, hazardous location regulations – there are many regulations to be met at the plant site. We are there to serve as your knowledgeable advisor for the safety of your plant.

Your benefits:
- Enhanced equipment performance
- Consistent high product quality
- Reduced consumption of utilities
- Optional status diagnostics
ANDRITZ KMPT
Services

Our goal is to provide our customers with fast and reliable service, from the first process consultation throughout the entire service life of your ANDRITZ KMPT process equipment.

To assist our global customer base, we operate service facilities around the world staffed with experienced, dedicated service teams.

Spare parts
We keep over 6,000 different spare parts and components in stock for you. Our service centers in the USA, the UK, Italy, France, and China, for example, maintain their own spare parts stock to enable faster delivery to your plant site.

Reconditioned units
We maintain a select stock of reconditioned units available for fast delivery from our facility. All machines are fully disassembled, inspected and reconditioned by replacing worn or damaged parts. A final test run validates the mechanical guarantee we provide with our refurbished equipment. With our factory reconditioned units you gain production capacity quickly with minimal capital investment.

Repairs and maintenance
Our service centers are ready to provide you with regularly scheduled maintenance or emergency service at your site. Our experts provide assistance including assembly work, installation support, commissioning, upgrades, repair work, and optimization of your process conditions.

Advisory service
Our customer service team is ready to answer any question concerning machine safety, equipment upgrades, and process optimization.

Installation and commissioning
Our experienced service personnel assists you with the installation and start-up of your equipment.

Remote diagnostics
Using modern communications and diagnostic systems, our customer service is able to offer even faster and more efficient support. Via remote access our specialists receive information on the operating condition of your machine and carry out fault diagnoses. Maximum data security is of course guaranteed at all times. We only access the data from your machine when you give your specific approval for us to do so.

24-hour on-call service
You can reach our skilled and experienced service team around the clock.

Maintenance contracts
We offer you tailor-made, long-term contracts for preventive maintenance of your equipment.

Customer training
We train your operating personnel during commissioning of the plant. In addition, we also offer you seminars for maintenance and operation of our entire line of process equipment. This training can be conducted at our site or yours.
ANDRITZ KMPT operates fully equipped test centers in Germany and the USA, offering both bench and pilot scale equipment. Our experienced engineers will consult with you to determine the equipment most appropriate for your product, then will perform the necessary trials to optimize the operating conditions for your process.

Based on these tests, we will provide a complete report which will recommend the best solution for your solid/liquid separation process, including scale-up information for the production equipment.

We can also assist in running long-term trials at your site with equipment from our rental machine pool.
ANDRITZ stands for ultimate know-how in solid/liquid separation. Our decade-long background in this field and comprehensive technology offering enable us to supply our customers with the best solution for each application, whether in municipal or industrial sewage sludge treatment, the chemical or food industry, or for preparation of minerals and ores.

Food

Chemicals

Minerals

Mining

Wastewater treatment