Fiber Lab Lines
Nonwoven lab line & Spinning lab line
Company profile

Keimei Plastifizierung Technik (Yantai) Co., Ltd., specializes in the manufacturing of Eisvogel nanotechnology products, and promotes the application technology of Eisvogel nanomaterials. The main products are masterbatches made from color pigments and functional additives.

The plant covers 80,000 m², has more than 50 production lines and a capacity of 20,000 tons per year. The Eisvogel nano-grade masterbatches are typically applied to micro fiber’s coloration and endow various functionality. The base polymers of the micro fiber are normally PP, PA and PET, application fields such as melt-spin Spunbond & Meltblown nonwoven, carpet fiber, textile fiber, etc.

Keimei Plastifizierung Technik (Yantai) Co., Ltd. is the new company name after the merger with the former company, Yantai Huada Nano Materials Co., Ltd., which was established in 1993. HUADA had more than 20 years of manufacturing experience of masterbatches, had a strong technical team and R & D capabilities, and had an established market recognition, built over a long period time. Their products were mainly used in the field of nonwovens and carpet fibers for domestic and global markets and it had established a good corporate reputation over the years. The recent acquisition by Keimei Plastifizierung Technik GmbH in Germany enables new manufacturing technologies for nano materials to be implemented into the production capabilities of the new company. It also represents an important strategic move in the world market for KEIMEI, by now having a large production base in Asia. By expanding the production capabilities and having a manufacturing facility in close proximity to Asia-Pacific customers allows for faster service and greater efficiencies in technical support.

The partial implement of the machine products of Keimei will complement the manufacturing output in the new company, reduce manufacturing costs, and provide more convenient technical services for machine products such as extruder, nonwoven and fiber spinning lab equipment, which are made in Germany.

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Nonwoven lab lines

The followings are our testing equipment: The blue font models are the original models of German Keimei Plastifizierung Technik GmbH, some models of them can be manufactured at Keimei Plastifizierung Technik (Yantai) Co., Ltd. in China, the grey font models are the original models of former Huada, which have been integrated and upgraded the design by Keimei Plastifizierung Technik GmbH in Germany. Unify the appearance style & material, optimize the structure and promoting the overall performance greatly. For example: the stable running of the machine, the standardization of components, refine the design integration of the machine parts, CE safety conformance and so on.

After the company’s merging and integration, more German Keimei Plastifizierung Technik GmbH’s technologies have been injected into the original Huada models, design upgraded and overall production cost decreased. Partial Germany original models can be manufactured in China to meet some customers’ requirements in performance and price level. All in all, the mergers and acquisitions brings not only the development chance to KEIMEI, but also some good news to the market and users.

The equipment trademark after company acquisition is KMD, which is short for Kneten . Mischen . Dispergieren, stand for kneading, mixing and dispersing in English.

Lab Equipment for Melt Spinning Nonwovens: Spun-bond, Melt-blown and SMS Nonwovens. SMS is combined by S series + M series + S series.
General characteristics:

- Suitable for a wide range of thermoplastic polymers, e.g., PP, PA, PET, PLA, etc.
- Easy to clean, channels where the melted materials flow smoothly, no need to be disassembled for cleaning. The materials are easier to change.
- The temperature of the quenching is adjustable between 15~25°C.
- The height of the quenching is adjustable to meet the application needs for the crystallization and cooling of different polymeric materials.
- Cantilever structure, easy for experimental operation and observation.
- Spinning is easy to change.
- The type of spinneret aperture is variable.
- Thermal bonding device with a unique electrical heating system for more flexible and convenient temperature control.
- Thermal bonding system can be equipped with a variety of pressure rolls with different patterns, also suitable for use in the technology of Spun-lace nonwovens.
- The combination of the equipment can be configured according to application needs, such as SS, SMS, SSMS, etc.
- Change from mono-component to bi-component: only necessary to add the extruder and spinning modules.
- Change from bi-component to mono-component: a. interchangeable spinning module; b. use the same material.

### Basic Technical Data of Nonwoven Lab Equipment for Mono-component

<table>
<thead>
<tr>
<th>Machine Model</th>
<th>S-100A</th>
<th>S-100B</th>
<th>S-150</th>
<th>S-300</th>
<th>M-100A</th>
<th>M-100B</th>
<th>M-150</th>
<th>M-300</th>
<th>SMS-150</th>
<th>SMS-300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum fiber size</td>
<td>1.0d</td>
<td>1.5d</td>
<td>1.0d</td>
<td>1.5d</td>
<td>1μ</td>
<td>1μ</td>
<td>1μ</td>
<td>1μ</td>
<td>S, 1.0d/μ, 1μ</td>
<td>S, 1.0d/μ, 1μ</td>
</tr>
<tr>
<td>Minimum grammage (g/m²)</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Effective width (mm)</td>
<td>100</td>
<td>100</td>
<td>150</td>
<td>300</td>
<td>100</td>
<td>100</td>
<td>150</td>
<td>300</td>
<td>150</td>
<td>300</td>
</tr>
<tr>
<td>Convey belt Max. Speed (m/min)</td>
<td>30</td>
<td>30</td>
<td>60</td>
<td>100</td>
<td>30</td>
<td>30</td>
<td>60</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Max. Drawing speed (m/min)</td>
<td>6000</td>
<td>6000</td>
<td>6000</td>
<td>6000</td>
<td>6000</td>
<td>6000</td>
<td>6000</td>
<td>6000</td>
<td>6000</td>
<td>6000</td>
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</table>

The blue font models are the original models of German Keime Plastifizierung Technik GmbH.

Changes to this technical data will occur and new information will be added, please check our latest information.

Please contact us for bi-component and more detail information if required.
Fiber spinning lab lines

Laboratory Equipment for Melt Spinning: BCF, FDY and POY Fibers

FDY Fiber Spinning Lab Equipment – Mono-component units with twin drawing rollers
FDY Fiber Spinning Lab Equipment – Bi-component units with twin drawing rollers

BCF Fiber Spinning Lab Equipment – Mono-component units with twin drawing rollers
BCF Fiber Spinning Lab Equipment – Bi-component units with twin drawing rollers

FDY Fiber Spinning Lab Equipment – Mono-component units
FDY Fiber Spinning Lab Equipment – Bi-component units
General characteristics:

- Suitable for a wide range of thermoplastic polymers, e.g., PP, PA, PET, PLA, etc.
- Channels where the melted materials flow smoothly, no need to be disassembled for cleaning. The materials are easier to change.
- Can have multiple drawing rollers with multiple stretching.
- The temperature of the quenching is adjustable between 15 – 25°C.
- The height of the quenching is adjustable to meet the application needs for the crystallization and cooling of different polymeric materials.
- Spinning beam has heating and soaking functions of bimetallic materials.
- Spinnernet is easy to change.
- The type of spinnernet aperture is variable.
- Systems for the production of BCF fibers with axially split texturing device, featuring electrical positioning and angle control. (optional)
- Optional dual-stretch rollers as needed, to enable the fibers to be heated more uniformly. Forming is more accurate, which improves the quality of the fiber. (optional)
- Change from mono-component to bi-component: only necessary to add the extruder and spinning modules.
- Change from bi-component to mono-component: a. interchangeable spinning module; b. use the same material.

<table>
<thead>
<tr>
<th>Machine Model</th>
<th>POY-4000</th>
<th>FDY-1000</th>
<th>FDY-1800</th>
<th>FDY-2500</th>
<th>FDY-4000</th>
<th>BCF-1000</th>
<th>BCF-1800</th>
<th>BCF-2500</th>
<th>BCF-4000</th>
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</thead>
<tbody>
<tr>
<td>Minimum dpf</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
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<tr>
<td>Maximum dpf</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
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<tr>
<td>Max./Min. fiber denier in total</td>
<td>1800/90</td>
<td>1800/90</td>
<td>1800/90</td>
<td>1800/90</td>
<td>1800/90</td>
<td>1800/90</td>
<td>1800/90</td>
<td>1800/90</td>
<td>1800/90</td>
</tr>
<tr>
<td>Max. Winding speed (m/min)</td>
<td>4000</td>
<td>1800</td>
<td>1800</td>
<td>2500</td>
<td>4000</td>
<td>1000</td>
<td>1800</td>
<td>2500</td>
<td>4000</td>
</tr>
<tr>
<td>Screw diameter (mm)</td>
<td>30</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>30</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>Max. Extrusion output (kg/h)</td>
<td>15</td>
<td>5</td>
<td>10</td>
<td>10</td>
<td>15</td>
<td>5</td>
<td>10</td>
<td>10</td>
<td>15</td>
</tr>
</tbody>
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