



KMD

Plastifizierungstechnik



Fiber Spinning & Nonwoven Lab Equipment

KMD Plastifizierungstechnik GmbH

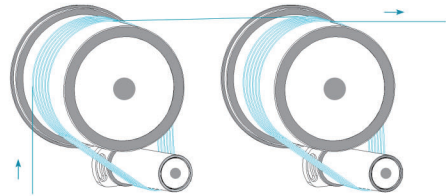
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Technical Data of Fiber Spinning Lab Equipment - Mono-component

Model	POY-4000	FDY-2500	FDY-4000	BCF-2500	BCF-4000	More
Min. dpf (denier)	1.5	1.5	1.5	1.5	1.5	...
Max. dpf (denier)	30	30	30	30	30	...
Max./Min. Total Dtex (denier)	1800/90	1800/90	1800/90	1800/90	1800/90	...
Max. Winding Speed (m/min)	4000	2500	4000	2500	4000	...
Screw Diameter (mm)	30	25	30	25	30	...
Max. Output (kg/h)	15	10	15	10	15	...
Equipment Size, L x W x H (mm)	2200 x 1950 x 3250	2200 x 1950 x 3250	2200 x 1950 x 3250	2200 x 1950 x 3250	2200 x 1950 x 3250	...
Max. Equipment Consumption						
Max. Electricity Consumption (kW)	38	46	55	55	65	...
Max. Air Consumption, 1.0 MPa (m³/min)	1.0	1.0	1.0	1.5	1.8	...
Air Gun Consumption, 1.0 MPa (m³/min)	3.2	2.0	3.2	2.0	3.2	...
Drawing System						
Godet Drive Motor	REPMSM	REPMSM	REPMSM	REPMSM	REPMSM	...
Godet Surface Material	Plating / Ceramics	Plating / Ceramics	Plating / Ceramics	Plating / Ceramics	Plating / Ceramics	...
Godet Heating Mode	Induction Heating	Induction Heating	Induction Heating	Induction Heating	Induction Heating	...
Godet Temperature Measurement Mode	Platinum Resistor	Platinum Resistor	Platinum Resistor	Platinum Resistor	Platinum Resistor	...
Number of Heating Zones	1	1	1	1	1	...
Max. Operating Temperature (°C)	220	220	220	220	220	...
Work Area Length (mm)	100	100	100	100	100	...
Separator Roller Drive Mode	Passive	Passive	Passive	Passive	Passive	...
Air Texturing System						
BCF Texturing Tube Mode	—	—	—	Axially Open Type	Axially Open Type	...
BCF Texturing Tube Negative Pressure	—	—	—	Inverter Adjustment	Inverter Adjustment	...
BCF Texturing Tube Locking Method	—	—	—	Pneumatic	Pneumatic	...
Fiber Cooling Method	—	—	—	Drum Cooler	Drum Cooler	...
Winder						
Tensioning Method	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	...
Thread Guide Traverse (mm)	240	240	240	240	240	...
Paper Tube Specification (mm)	Ø 112 x 126 x 290	Ø 76.5 x 87 x 290	Ø 112 x 126 x 290	Ø 76.5 x 87 x 290	Ø 112 x 126 x 290	...
Max. Take-up Diameter (mm)	160	160	160	160	160	...
Melt Metering						
Metering Pump Drive	PMSM	PMSM	PMSM	PMSM	PMSM	...
Spinning Beam Heating Method	Electrical	Electrical	Electrical	Electrical	Electrical	...
Metering Pump Specification (cc/r)	1 x 5.0	1 x 3.5	1 x 5.0	1 x 3.5	1 x 5.0	...

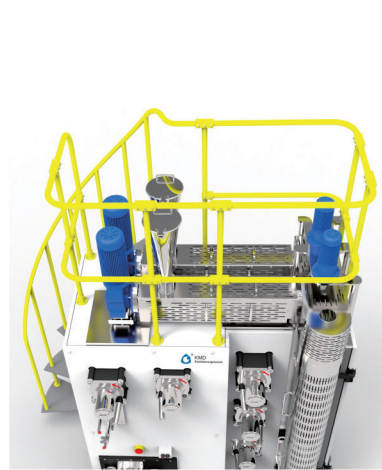
The above data is the reference data of the basic models. For more model information, please contact our sales department.
 Custom-made solution can be provided for special requests.

Laboratory Equipment for Melt Spinning POY, FDY and BCF Fibers



General characteristics:

- Suitable for a wide range of thermoplastic polymers, e.g., PP, PA, PET, PLA, etc.
- The materials can be changed easily. In other words, there is no need to disassemble the channels for cleaning since melted material flows extremely smooth.
- 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 various requirements regarding the crystallization and cooling of different polymeric materials.
- Spinning beam has heating and soaking functions of bimetallic materials.
- Spinneret is easy to change.
- Multiple types of spinneret aperture are available.
- BCF spinning lab equipments are equipped with axially split texturing device with optional electrical positioning and angle control functions.
- Dual-stretch rollers are available if required, to ensure a more uniform heating of the fibers. Fiber forming is more accurate, which improves the quality of the fiber.
- Change from mono-component to bi-component: only need to add the extruder and spinning modules.
- Change from bi-component to mono-component : a. interchangeable spinning module ; b. use the same material.



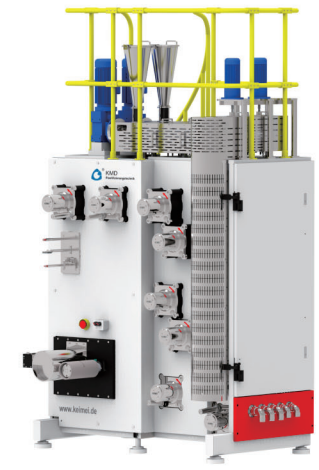
Bi-co design is available to all models



POY spinning lab equipment-Mono-component



FDY spinning lab equipment-Mono-component
With Dual-drawing rollers



FDY spinning lab equipment-Bi-component
With Dual-drawing rollers



BCF spinning lab equipment-Mono-component



BCF spinning lab equipment-Tri-color

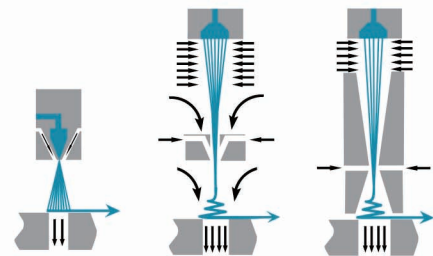


BCF spinning lab equipment-Bi-component
With Dual-drawing rollers



BCF spinning lab equipment-Mono-component
With Dual-drawing rollers

Laboratory Equipment for Spund-bond, Melt-blown and SMS Nonwoven

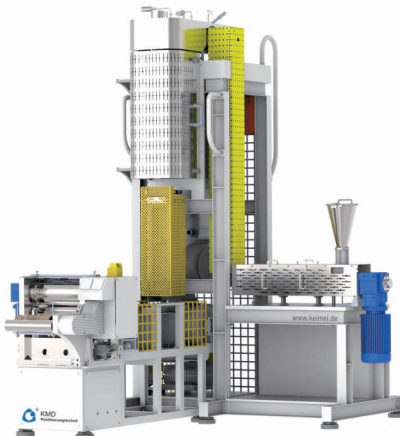


General characteristics:

- Suitable for a wide range of thermoplastic polymers, e.g., PP, PA, PET, PLA, etc.
- The materials can be changed easily. In other words, there is no need to disassemble the channels for cleaning since melted material flows extremely smooth.
- The temperature of the quenching is adjustable between 15 ~ 25°C.
- The height of the quenching is adjustable to meet various requirements regarding the crystallization and cooling of different polymeric materials.
- Cantilever structure, simple experimental operation & observation.
- Spinneret is easy to change.
- Multiple types of spinneret aperture are available.
- 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 Spunlace nonwovens.
- The combination of the equipment can be configured according to application needs, such as SS, SMS, SSMMS, etc.
- Change from mono-component to bi-component: only need to add the extruder and spinning modules.
- Change from bi-component to mono-component: a. interchangeable spinning module ; b. use the same material.



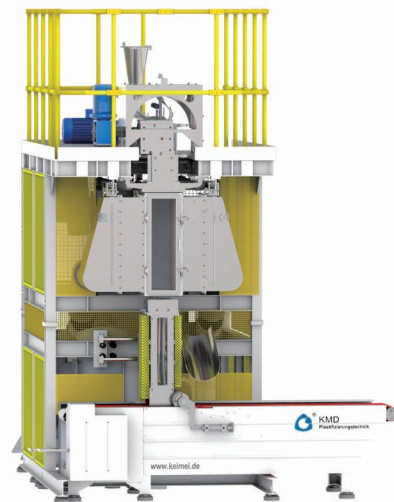
Meltblown nonwoven lab equipment



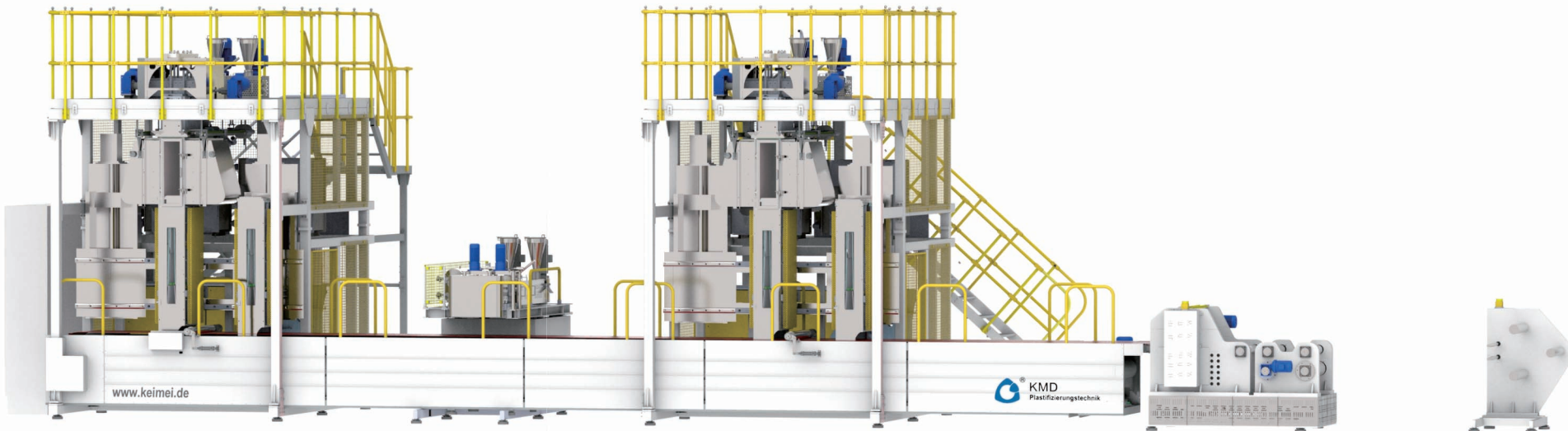
Spunbond nonwoven lab equipment -C series



Spunbond nonwoven lab equipment -A series



Spunbond nonwoven lab equipment -B series



SMS nonwoven lab line-S (Bi-co, dual drawing units)+M (Bi-co)+S (Bi-co, dual drawing units) - ● ○ ⊙ ⊗ ⊘ ⊙



Technical Data of Nonwoven Lab Equipment - Mono-component

Model	S-150	M-150	SMS-150	More
Basic Technical Data				
Minimum Titer	1.0 denier	1.0µm	1.0 denier	...
Minimal Grammage (g/m ²)	8	3	10	...
Effective Width (mm)	150	150	150	...
Conveyor Belt Speed (m/min) Max.	60	60	100	...
Spun-bond Drawing Speed (m/min)	6000	—	6000	...
Spun-bond Quenching Air Temperature (°C)	15	—	15	...
Embossing Roll Pattern	Optional	Optional	Optional	...
Screw Diameter (mm)	35	30	35	...
Max. Output (kg/h)	20	10	20	...
Melt-blown Die Head Temperature (°C) Max.	—	350	350	...
Calender Temperature (°C) Max.	220	220	220	...
Consumption Data				
Power Consumption (kW)	30~38	30~50	100~140	...
Power Consumption of Conveyor Belt (kW)	3	3	6	...
Power Consumption of Calender (kW)	10	10	10	...
Max. Air Consumption	0.1 m ³ /min, 0.7 MPa	3.0 m ³ /min, 0.7 MPa	3.5 m ³ /min, 0.7 MPa	...
Max. Chill Water Demand, 0.1~0.2 MPa, 9~10°C (m ³ /h)	2.0	—	4.0	...
Max. Cooling Water Demand, 0.1~0.2 MPa (m ³ /h)	0.1	0.1	0.3	...
Melt Metering System				
Metering Pump Drive	PMSM	PMSM	PMSM	...
Spinning Beam Heating Mode	Electrical	Electrical	Electrical	...
Metering Pump Output (cc/r)	1 x 5.0	1 x 3.5	1 x 5.0+1 x 3.5+1 x 5.0	...
Thermal Bonding System				
Calender Roll Diameter (mm)	260	260	260	...
Speed Controlling Method	Frequency Control	Frequency Control	Frequency Control	...
Speed Adjustment Method	Automatic tracking	Automatic tracking	Automatic tracking	...
Winder				
Paper Tube Specification (mm)	Ø 112 x 126 x 290	Ø 112 x 126 x 290	Ø 112 x 126 x 290	...
Max. Take-up Diameter (mm)	Ø 300	Ø 300	Ø 300	...
Winder Speed Max.	70	70	110	...
Change Winder Method	Manual	Manual	Manual	...
Winder Speed Controlling Method	Automatic tracking	Automatic tracking	Automatic tracking	...
Overall Equipment Dimensions, L × W × H (mm)	2400 x 3300 x 3960	1300 x 1950 x 1900	9500 x 2600 x 3960	...
(main machine section)				

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KMD Plastifizierungstechnik GmbH

Roggenhorster Straße 9a, Lübeck, 23556, Germany

Tel: +49 (0) 451 49897868

Fax: +49 (0) 451 49897867

info@kmd-industrie.de

www.kmd-industrie.de