



SYNTHETIC FIBERS

Processing Machinery



OVER 50 YEARS EXPERIENCE IN MANUFACTURING MACHINERY FOR ARTIFICIAL AND SYNTHETIC FIBERS



With more than 500 industrial lines operating worldwide, **Farè** designs and supplies complete plants, equipment and production technologies covering most of market nonwovens applications.

Know-how, technical assistance, training of personnel, service and quality control, revamping of existing plants are the main company values tailored on customers' needs.

Farè's daily goal is to establish a long term commitment with customers and to be the first-choice supplier for artificial fiber industrial investors looking for an excellent solution through a high-quality process.

Farè's synergies with **Fil.VA** and **FARCON** represent a considerable added value for customers as well as a know-how learning hub that can make a real difference in case of new applications and specific innovative processes.



Fil.VA is specialized in the latest and most sophisticated extrusion techniques for the production of monofilaments in PA, PP and PET mono or bi-component.



FARCON manufactures extrusion dies used for the extrusion of plastics, in particular for meltblown and spunbond artificial fibers and technical flat die films.

Fueling fibers innovation This is the company claim that stands for:

- Best quality, performance and competitive level of investment in design and manufacturing in house of turn-key plants, dies and extruders
- Possibility to run PET and PLA with the dryerless extrusion technology with lower energy consumption and best electric power efficiency in the long run
- Highest experience in composite PP Meltblown and Spunbond lines for hygienic and medical applications
- Flexibility in processing different raw materials, full accessorized lines to reach the highest inline quality controls, smart technology with innovative HMI (Human Machine Interface)

OUR MILESTONES

1970

Foundation - the early years of a pioneering challenge.

1988

Fiftieth complete plant supplied.

1994

Introduction of the patented bicomponent technology - a brand new concept to improve stable fiber performance.

2001

New buildings - availability of mounting and testing of huge and complex lines.

2003

Introduction of dryerless technology - sustainability concept as top priority in the business.

TODAY

New brand identity to boost the company awareness in the market.

1976

Establishment of Fil.VA - Performances in manufacturing become substantial part of the know how transferred to Clients.

1989

Foundation of FARCON - dies are the pulsing technological heart of the process.

2000

First steps into spunbond-meltblown technology.

2002

Introduction of new patented SHPT (Spunbond High Performance Technology) - A brand new concept for high quality nonwovens.

2017

FARE Spa turnover track record - more than 50 Mil. Euro and also top figures of the Group (up to 100 Mil Euro).

KNOW-HOW AND THE TECHNOLOGY AT THE CUSTOMER'S SERVICE

Farè Customer Care follows the Client from the process and technological requirements analysis to the plant installation at the customer's premises.

Operational training is supplied to ensure an in-depth knowledge of the entire process and to obtain the best performances.

After-sales organization grants the availability of **original replacement parts** or studying specific **line revamping** to obtain technological and innovative development or optimization of lines efficiency to let clients challenge new markets and opportunities.

Farè's **remote assistance** accompanies the entire range of machinery, allowing the customer service to connect to the machine for quick diagnostics and troubleshooting.



Quality

Since the introduction of the modern automation of the Superstaple Technology, it has been possible to ensure great reliability, high and uniform quality and safety in the production process and simple handling of the line.
At the touch of a touch screen you can manage all the parameters, or start up, slow down and shut down the line.

Flexibility






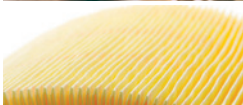









Line configuration, raw material, speed, throughput: during production, you can adjust the process parameters to directly influence the fibers/filaments properties without interfering with the process.
Farè's lines allow a high flexibility in polymers processing covering mono and bicomponents staple fibers: mono and bicomponent fibers/filaments: mono component in PP, PE, PET, PA and their combination as bicomponents including specialties such as low melting fibers PET/CoPET.

Sustainability

Farè designs and manufactures safe and reliable production lines with a minimum power consumption and technologies that facilitate the broad-scale usage of recycled plastic materials, as well as a low waste rate of raw material consumption to ensure that the investment of the plant is amortized within a short time.



APPLICATIONS

		Spunbond Fine Denier	Composite Fine Denier	Spunbond Coarse Denier	Composite Coarse Denier	Meltblown	Staple fiber One step	Staple fiber Two step
	Agriculture and horticulture	●					●	●
	Automotive	●	●	●	●	●	●	●
	Coating substrates	●		●			●	●
	Clothing	●		●		●	●	●
	Cotton type fiber (yarns)						●	●
	Electric and electronics	●		●		●	●	●
	Face masks	●	●			●	●	●
	Filtration	●	●	●	●	●	●	●
	Food and beverage	●		●			●	●
	Footwear	●		●		●	●	●
	Geotextiles and civil engineering			●	●		●	●
	Household	●		●		●	●	●
	Hygiene	●	●			●	●	●
	Medical	●	●			●	●	●
	Packaging	●		●		●	●	●
	Protective clothing	●	●			●	●	●
	Roofing/Building	●		●	●	●	●	●

● With some limitations ● Separate downstream process required

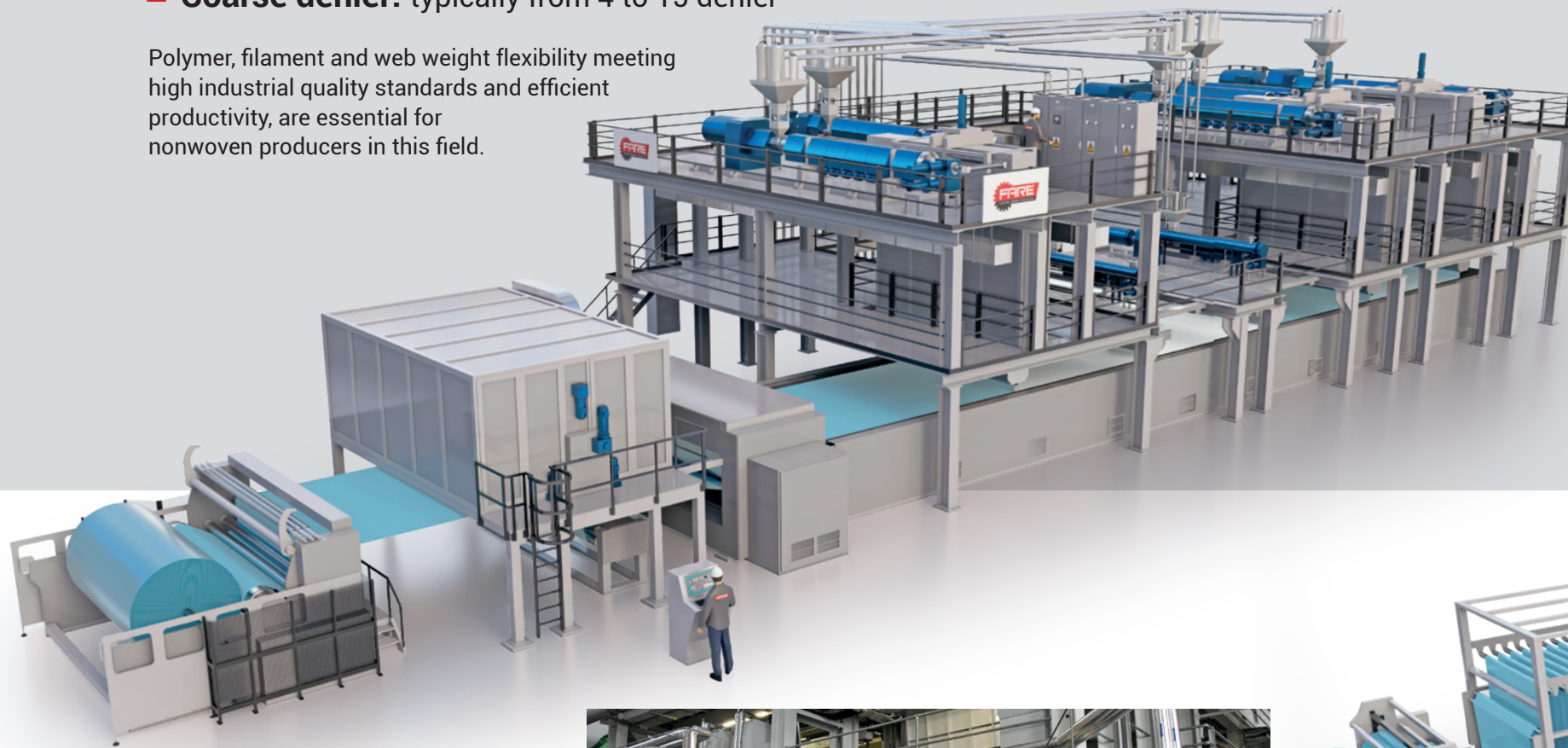
SPUNBOND LINE

In the Farè spunbond nonwoven process, polymers are transformed into endless filaments by melting and stretching, and then deposited on a perforated belt. The conversion of granulate into nonwoven takes place in a single production step.

Available configurations:

- **Fine denier:** typically from 1,5 to 3 denier
- **Coarse denier:** typically from 4 to 15 denier

Polymer, filament and web weight flexibility meeting high industrial quality standards and efficient productivity, are essential for nonwoven producers in this field.



Different downstream components are provided for subsequent treatment in accordance to specific final product applications such as:

- Thermobonding
- Trough-Air-bonding
- Hydro-entanglement
- Ultrasonic bonding



The available configurations are:

- **Spunbond:** from 1 beam (S) up to 3 beams (SSS)
- **Composite:** in combination with Meltblown from 3 beams (SMS) up to 6 beams (SSMMMS)

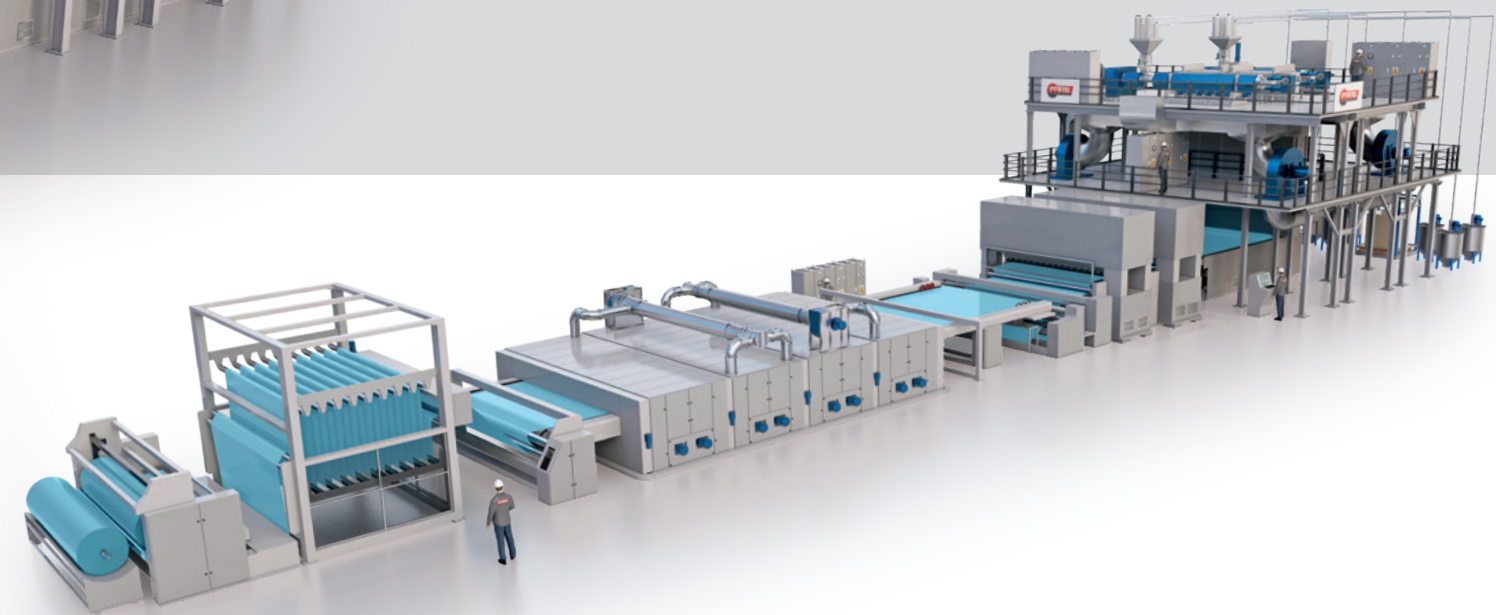
Farè offers these configurations in a monocomponent version as well as in bicomponent version, which results in high performing fabrics.

The web weight goes from:

- **Fine denier:** typically from 8 to 150 gsm
- **Coarse denier:** typically from 30 to 1000 gsm

Throughput that can be achieved go up to 250 kg/h per beam per meter of working width.

Working widths are from 1600 up to 6000 mm.



MELTBLOWN LINE

In the Farè meltblown process the polymer is extruded and spun while the drawing step is made using high speed hot compressed air forming extremely thin filaments (fibrils) which are conditioned and collected over a suitable moving surface (forming belt) creating a web. The conversion of granulate into nonwoven takes place in a single production step.

The available configurations are:

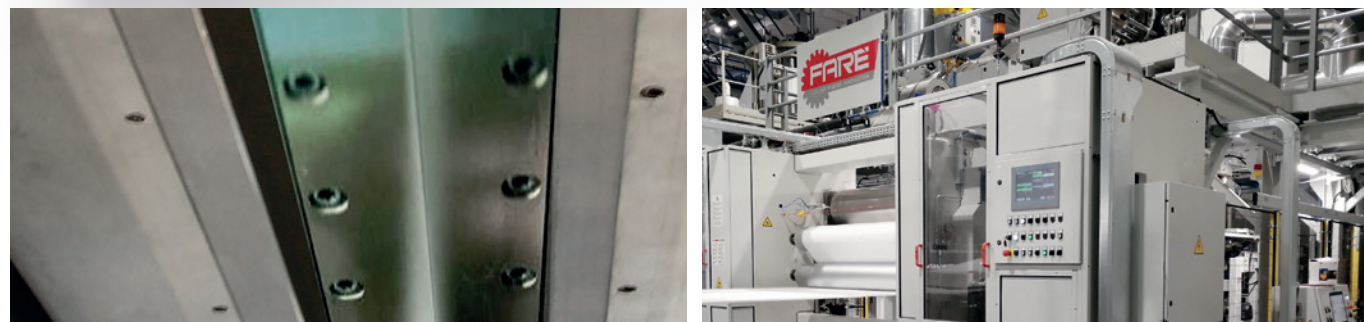
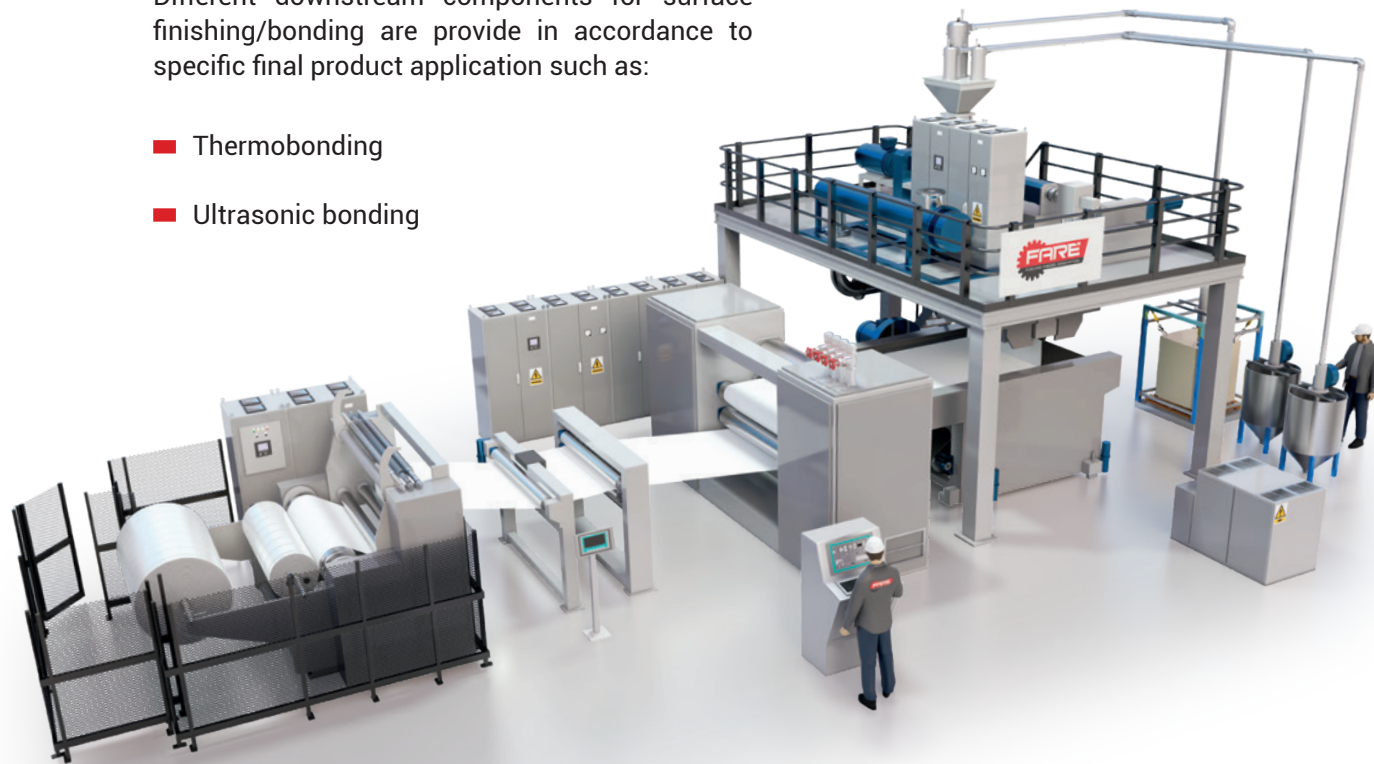
- **Stand alone:** from 1 beam (M) to 3 beams (MMM)
- **Composite:** in combination with spunbond from 3 beams (SMS) up to 6 beams (SSMMMS)

- The web weight goes from 10 up to 500 gsm
- The throughput that we can achieve go up to 100 kg/h per m
- Typical working widths are from 1600 up to 3200 mm

Low consumption values for energy, gas as well as low personnel requirements ensure the return of your investment in a short time.

Different downstream components for surface finishing/bonding are provide in accordance to specific final product application such as:

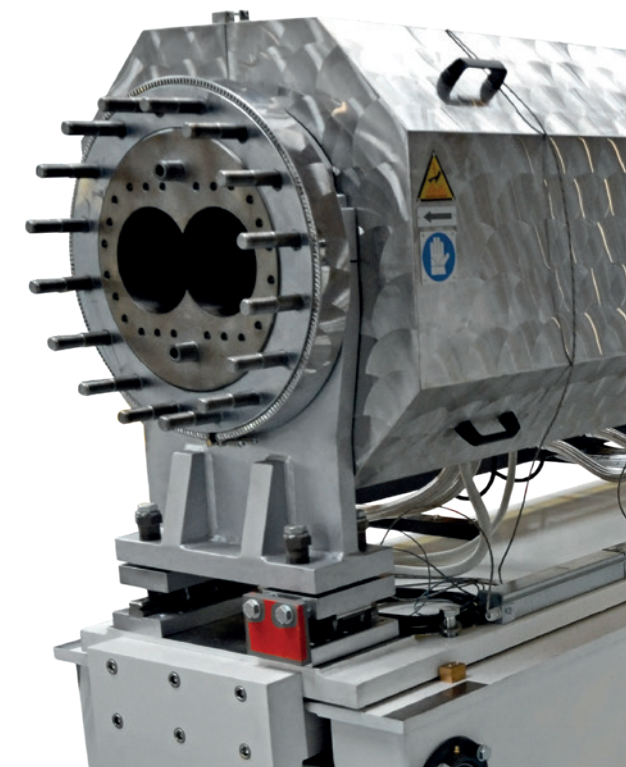
- Thermobonding
- Ultrasonic bonding



DRYERLESS PET TECHNOLOGY

The PET dryerless extrusion process is a technology, without drying, with an integrated filtration unit advised to optimize the production costs without affecting process flexibility.

This solution enables to overcome all typical issues related to the PET flakes processing such as viscosity and bulk density irregularities, presence of pollutants, the formation of dust, etc. and resulting in a significant advantage in the reduction of electric power consumption as well as a significant space reduction, thanks to the possibility to avoid to dry the polymer.



In short:

- Optimized melt homogenization
- Efficient melt decontamination
- Lower polymer degradation
- Maximum process flexibility with possibility to process either PET granules or PET flakes; mix of both is possible as well
- Lower energy consumption with production costs saving
- Equipment space reduction

STAPLE FIBERS LINES

Available configurations:

- One step process
- Two step process

Basic features

- Mono and bicomponent staple fiber
- Modular design
- Wide range of production capacities
- Uncoloured and mass coloured staple fibers with quick colour change
- PET dryerless extrusion without drying
- High flexibility in polymers processing e.g.:
 - PP, PE, PET, PLA virgin materials
 - R-PET flakes/regranulated chips



One step process

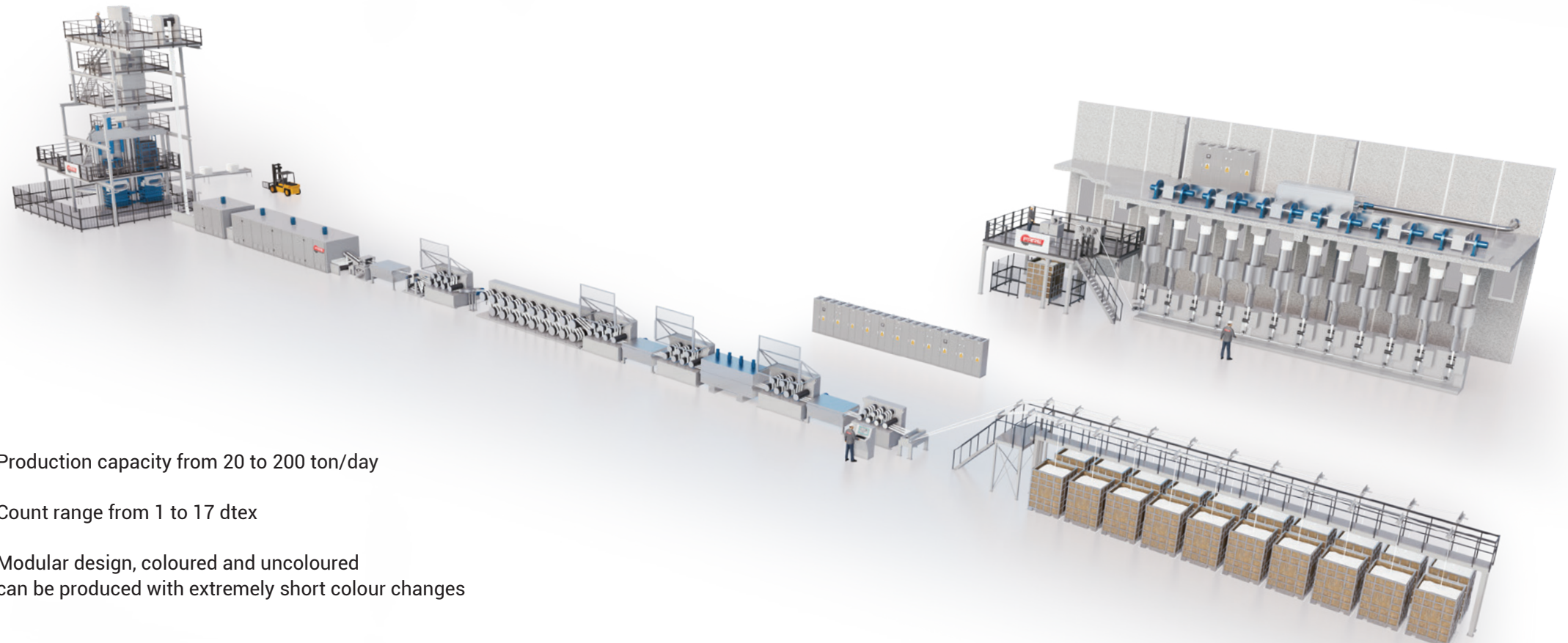
From polymer to fiber in one plant to satisfy most of the market requirements!

- Spinning operation and the subsequent drawing in a one step process
- Production capacity from 10 to 100 ton/day
- Count range from 1 to 300 dtex
- Ideal solution to process recycled polyester whether as re-granulated chips or directly as R-PET flakes (bottle flakes)
- Modular design, coloured and uncoloured can be produced with extremely short colour changes



Two step process

High speed production for special fiber!



- The two step technology includes the spinning operation and the subsequent drawing in a **two step** process. It is the traditional solution in case of high throughput lines
- Cotton type fibers for textile yarns
- Special fibers like low melting PET/CoPET fibers
- Direct spinning from the molten polymer availability
- Production capacity from 20 to 200 ton/day
- Count range from 1 to 17 dtex
- Modular design, coloured and uncoloured can be produced with extremely short colour changes



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