

# SML

EXTRUSION LINES – ENGINEERED TO PERFORM ►

100%  
eXtrusion  
SPINNING LINES

AUSTROFIL -  
BCF MULTIFILAMENT

## LINES FOR BCF YARNS





AUSTROFIL BCF MONOCOLOUR "TWIN"

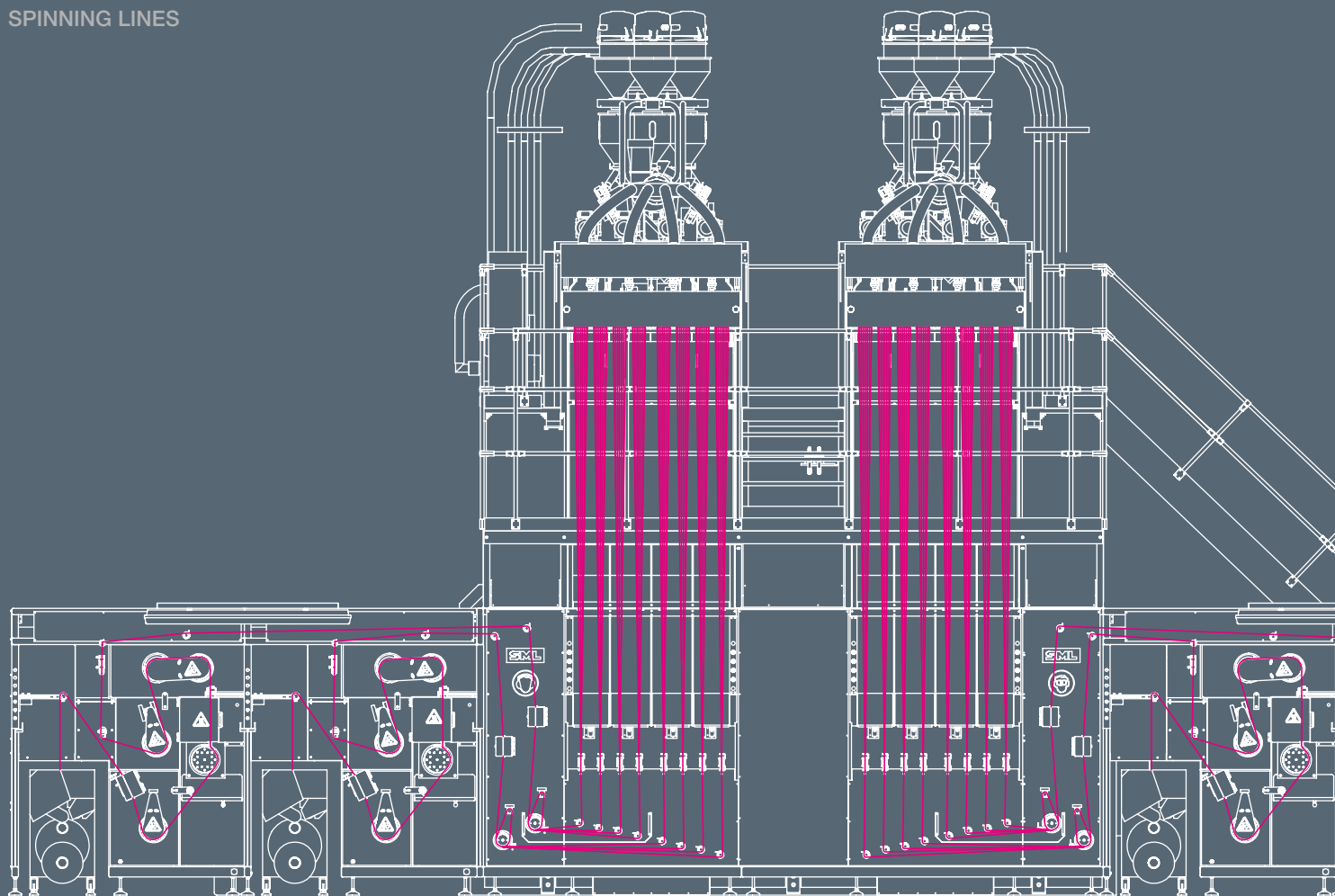
## INTRODUCTION

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Yarns manufactured using SML technology represent a quality benchmark in the carpet industry and the BCF (Bulked Continuous Filament) process is the most efficient method for their production.

Manufacturing yarns for carpet design with the highest possible efficiency and flexibility requires well planned production lines. SML's innovative detail engineering, the steady improvement and development of core components results in spinning plants that enable the company's customers to position themselves successfully in the highly specialised BCF market.

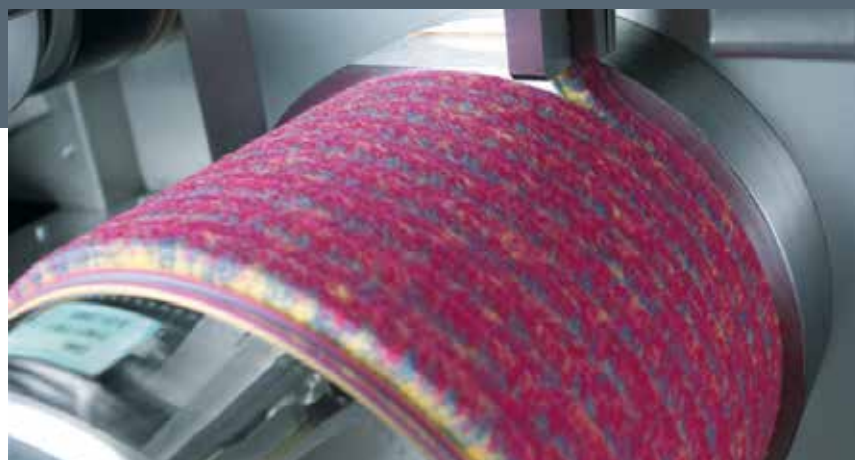
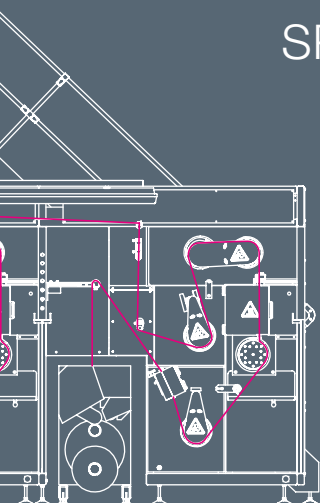
Austrofil stands for Austrian quality and four different plant designs meet every customer requirement. The proven line concept allows producers to operate SML lines with a minimum of manpower at maximum efficiency.



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## SPINNING LINES FOR BCF PP YARNS







## AUSTROFIL BCF PP MONOCOLOUR “COMPACT”

SML's BCF “Compact” spinning line is custom-designed for the production of small yarn lots with maximum efficiency and flexibility. With an output of 160kg/h this line is equipped with only one extruder and two stretching sections.

Two spinnerets per yarn provide perfect cooling conditions, which result in high output and excellent yarn quality. Top prod-

uct standards also derive from the patented SML texturing unit for top crimp contraction and low shrinkage.

A wide titer range can be produced without any changes to the texturing system components, while the ingenious design of the crimper means that steel or ceramic lamellas are not required.

Moreover, as with all SML spinning lines, the electronics is protected and conditioned inside an e-container.

- ▶ **MAXIMUM EFFICIENCY AND FLEXIBILITY**
- ▶ **HIGH OUTPUT AND EXCELLENT YARN QUALITY**
- ▶ **WIDE TITER RANGE PRODUCTION WITHOUT ANY TEXTURING SYSTEM COMPONENT CHANGES**

## PERFORMANCE LEVEL

BCF PP 2x2C / 75 Compact, 4 ends, monocolour	
Polymer	Polypropylene, MFR 23 - 27
Titer range	1,200 - 5,000dtex
Output capacity	160 kg/h, 3.8 t/d

## LINE CONFIGURATION

Dosing system	Continuous gravimetric loss in weight dosing with 2 additives
Extruder Inverter controlled AC motor	1 unit 75 / 28D Incl. static mixer
Feeding section	Water cooled, closed circuit
Spinning beam	Electrically heated
Spinning pumps	4 pcs. each 2 outlets
Spinnerets	8 pcs. Ø 110mm
Pre-intermingling	Heberlein, Migra-Jet
Godets	Ø 160mm, inductive heated, bearing lifetime lubricated
Texturing system	AUSTROJET patented without lamellas
Cooling process	Multiwrap
Intermingling	Heberlein, PolyJet-TopAir

## CONNECTED LOAD AND AIR CONSUMPTION

Connected load	226kW	
Average power consumption	Approx. 86kW	
Peak compressed air consumption	Up to 3,000dtex Up to 5,000dtex	850 Nm³/h 925 Nm³/h
Average compressed air consumption	Up to 3,000dtex Up to 5,000dtex	450 Nm³/h 550 Nm³/h
Compressor pressure	10bar	
Chiller cooling capacity	90,000 kcal/h	

## WINDING

Winder	Automatic turret winder
Mechanical winding speed	1,000 - 3,500 m/min
Bobbin diameter	Max. 320mm

## SPACE REQUIREMENT

Length	7,600mm
Width	8,750mm
Height	Approx. 7,000mm (depending on dosing unit)





## BCF PP MONOCOLOUR “TWIN”

Apart from offering yarn production at maximum productivity, the BCF Monocolour “TWIN” is ideally suited for simultaneous BCF PP MONOCOLOUR production of either 8 absolutely identical yarns or two times 4 yarns with different specifications such as titer and the number of filaments. The line therefore has two extruders and two independent spinning sections.

In addition, it is also possible to run with separate granules and every adjustment from dosing to the winder can be carried out using individual parameters. This flexibility provides SML customers with a tremendous competitive advantage.

- ▶ **TWICE THE OUTPUT**
- ▶ **SIMULTANEOUS PRODUCTION OF TWO YARNS WITH DIFFERENT SPECIFICATIONS**
- ▶ **EVERY LINE ADJUSTMENT POSSIBLE USING INDIVIDUAL PARAMETERS**



## PERFORMANCE LEVEL

BCF PP 4x2 / 2x75 TWIN, 8 ends, monocolour	
Polymer	Polypropylene, MFR 23 - 27
Titer range	1,200 - 5,000dtex
Output capacity	320 kg/h, 7.6 t/d

## LINE CONFIGURATION

Dosing system	Continuous gravimetric loss in weight dosing with 2 additives
Extruder Inverter controlled AC motor	2 units 75 / 28D Incl. static mixer
Feeding section	Water cooled, closed circuit
Spinning beam	Electrically heated
Spinning pumps	8 pcs. each 2 outlets
Spinnerets	16 pcs. Ø 110mm
Pre-intermingling	Heberlein, Migra-Jet
Godets	Ø 160mm, inductive heated, bearing lifetime lubricated
Texturing system	AUSTROJET patented without lamellas
Cooling process	Multiwrap
Intermingling	Heberlein, PolyJet-TopAir

## CONNECTED LOAD AND AIR CONSUMPTION

Connected load	400kW
Average power consumption	Approx. 180kW
Peak compressed air consumption	Up to 3,000dtex 1,200 Nm³/h Up to 5,000dtex 1,350 Nm³/h
Average compressed air consumption	Up to 3,000dtex 700 Nm³/h Up to 5,000dtex 890 Nm³/h
Compressor pressure	10bar
Chiller cooling capacity	180,000 kcal/h

## WINDING

Winder	Automatic turret winder
Mechanical winding speed	1,000 - 3,500 m/min
Bobbin diameter	Max. 320mm

## SPACE REQUIREMENT

Length	12,500mm
Width	7,200mm
Height	Approx. 7,500mm (depending on dosing unit)





## BCF PP TRICOLOUR

The BCF Tricolour spinning line offers maximum carpet design efficiency and flexibility, and multiple colour combinations for BCF yarn production.

Yarns produced on SML lines represent a carpet industry benchmark, as outstanding levels of cooling efficiency after texturing result in high output and excellent yarn quality. Two pre-intermingling positions allow a wide range of colour separations (from melange to sprinkle). In the carpet industry this

configuration is used to produce unique yarns according to individual requirements and to meet new fashion trends.

Cam rolls are available as an option and these enable the creation of carpets with a special design appearance. In addition, a patented SML texturing unit provides top and uniform crimp structure and low shrinkage.

It is the flexibility of SML lines that makes the difference. An extensive titer range can be produced without changes to the components in the patented texturing system.

- **PRE-INTERMINGLING ALLOWS A WIDE RANGE OF COLOUR SEPARATIONS**
- **NEW FASHION TRENDS CAN BE MET EASILY**

## PERFORMANCE LEVEL

BCF PP 4x2 T / 3x75, 8 ends, tricolour	
Polymer	Polypropylene, MFR 23 - 27
Titer range	1,200 - 5,000dtex
Output capacity	320 kg/h, 7.6 t/d

## LINE CONFIGURATION

Dosing system	Continuous gravimetric loss in weight dosing with 2 additives
Extruder Inverter controlled AC motor	3 units 75 / 28D Incl. static mixer
Feeding section	Water cooled, closed circuit
Spinning beam	Electrically heated with thermic oil
Spinning pumps	12 pcs. each 2 outlets
Spinnerets	24 pcs. Ø 110mm
Pre-intermingling	Heberlein, Migra-Jet, 2 positions
Godets	Ø 160mm, inductive heated, bearing lifetime lubricated
Texturing system	AUSTROJET patented without lamellas
Cooling process	Multiwrap
Intermingling	Heberlein, PolyJet-TopAir

## CONNECTED LOAD AND AIR CONSUMPTION

Connected load	463kW
Average power consumption	Approx. 210kW
Peak compressed air consumption	Up to 3,000dtex 1,500 Nm³/h Up to 5,000dtex 1,650 Nm³/h
Average compressed air consumption	Up to 3,000dtex 880 Nm³/h Up to 5,000dtex 970 Nm³/h
Compressor pressure	10bar
Chiller cooling capacity	180,000 kcal/h

## WINDING

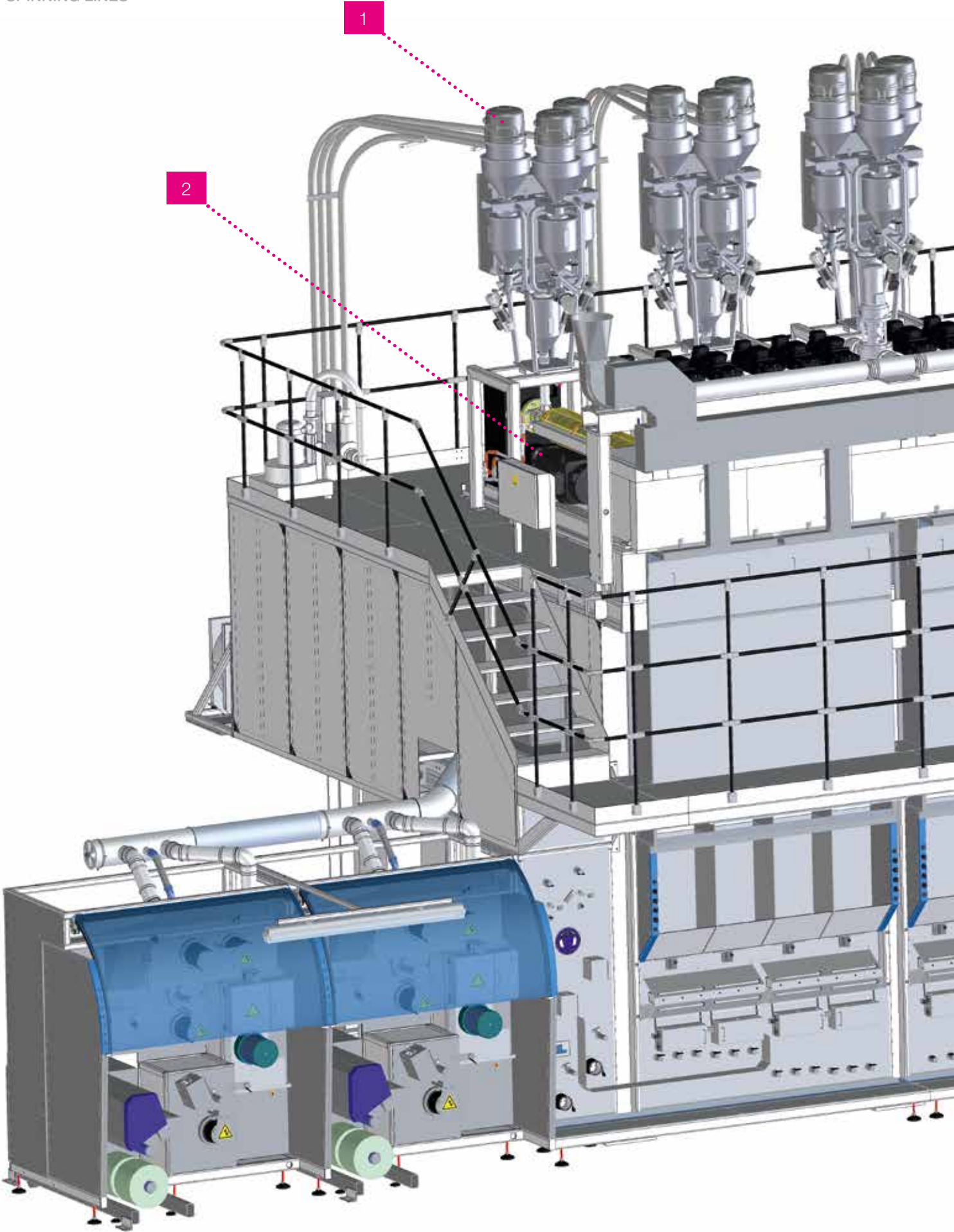
Winder	Automatic turret winder
Mechanical winding speed	1,000 - 3,500 m/min
Bobbin diameter	Max. 320mm

## SPACE REQUIREMENT

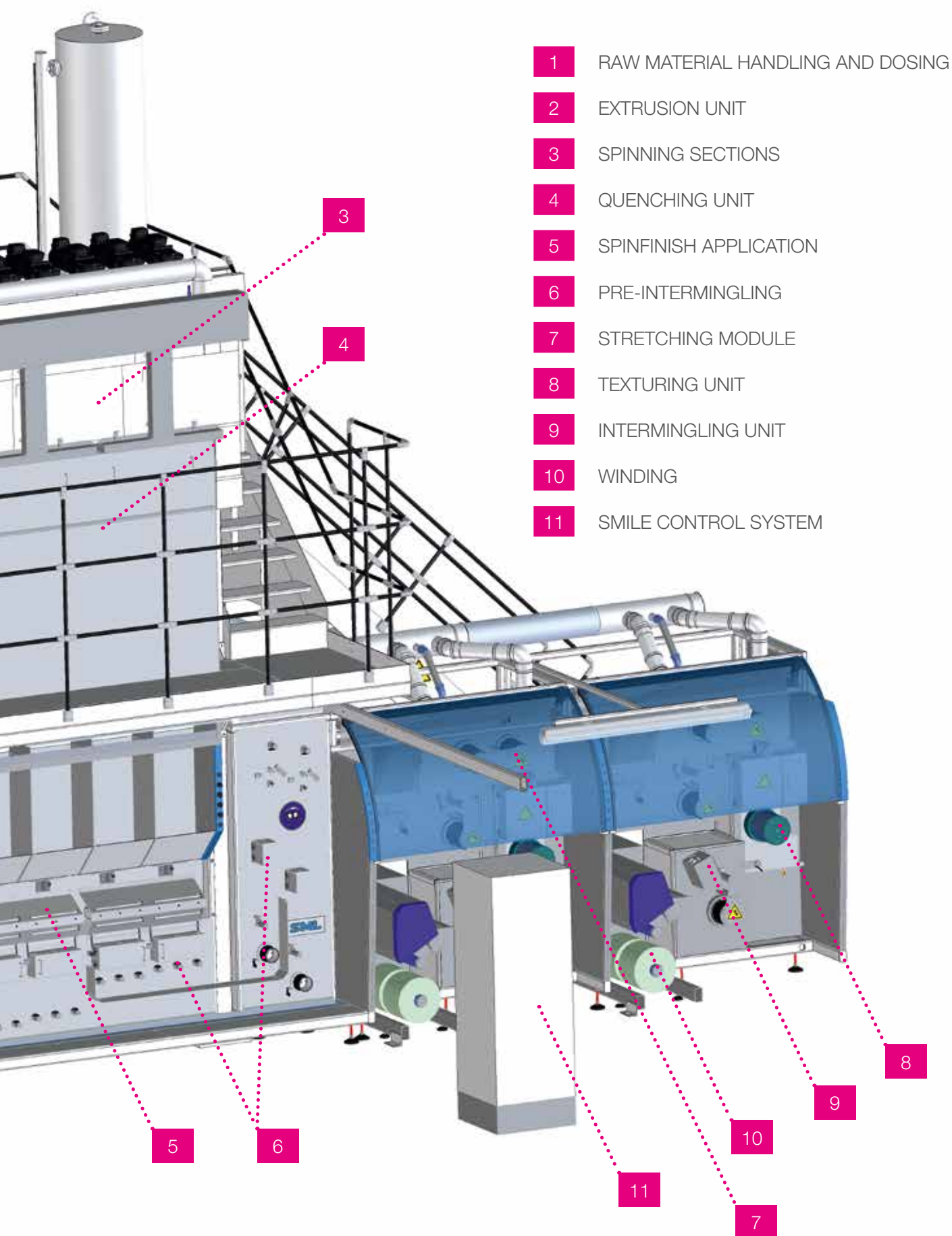
Length	14,000mm
Width	8,500mm
Height	Approx. 7,000mm (depending on dosing unit)













Extrusion unit

## 1 RAW MATERIAL HANDLING AND DOSING

Very accurate gravimetric loss-in-weight systems are integrated into SML's BCF lines for exact and reproducible colour effects. In addition, apart from the main component, as a rule two ancillary components for additives such as colour masterbatch or UV stabilisers are installed. The main functions are actuated using the SMILE control panel for easy operation at ground level.

## 2 EXTRUSION UNIT

SML BCF spinning lines are equipped with highly efficient, single screw extruders with a 75mm screw diameter and an L/D ratio of 28. High output, barrier screw design and a subsequent static melt mixer in the adapter pipe ensure top melt quality and colour distribution. An air-cooled AC motor, coupled to a water-cooled gearbox drives the extruder. Continuous melt filters are available as an option.

► EASY LINE OPERATION AT GROUND LEVEL



Spinning section

### 3 SPINNING SECTIONS

#### BCF MONO / TWIN

A spinning beam with electrical plate heaters is used for stable operation and easy maintenance. All the spinning pumps have two outlets and supply the melt stream to eight spinpacks with 110mm in diameter. Equal residence time for every melt stream is secured and this results in uniform yarn quality. Moreover, an absolutely vertical yarn path ensures excellent spinning quality and problem-free production.

#### BCF TRICOLOUR

In this case, the large spinning beam is heated by thermal oil in order to obtain a constant temperature over its entire width. To avoid safety hazards the thermal oil circulates in an open system under atmospheric pressure. Twelve spinning pumps with two outlets each distribute the melt stream to 24 spinpacks with a 110mm diameter. Lightweight design offers easy handling and replacements, and no spinpack preheating is required. The holes in the spinnerets for BCF have a trilobal design cross-section and as in all of SML's BCF lines, a monomer suction unit above the spinning beam guarantees the efficient removal of fumes from the top of the machine.

### 4 QUENCHING UNIT

Efficient quenching units supply cooling air at a defined temperature and speed to the filaments for uniform cooling. They are designed with three individually adjustable horizontal zones to ensure the correct air speed profile for top quality cooling.

- ▶ VERTICAL YARN PATH FOR EXCELLENT SPINNING QUALITY AND PROBLEM-FREE PRODUCTION
- ▶ NO SPINPACK PREHEATING REQUIRED
- ▶ THREE INDIVIDUALLY ADJUSTABLE HORIZONTAL QUENCHING ZONES



Spinfinish  
application

## 5 SPINFINISH APPLICATION

Spinfinish oil is supplied very accurately to the ceramic applicator nozzles by means of precision metering gear pumps. A single pump outlet for each yarn ensures that an exact and equal amount of oil is applied. The spinfinish tank is equipped with a level sensor and a filter prevents supply system blockages.

## 6 PRE-INTERMINGLING

### BCF MONO / TWIN

The single yarns are compacted in the pre-intermingling station by means of air jets. This provides enhanced processing performance throughout the entire line.

### BCF TRICOLOUR

Two pre-intermingling systems are installed for different effects. The first of these systems is used for strong colour separation, which creates a “sprinkle effect” in the yarn through the compacting of each single colour yarn.

The second pre-intermingling system allows the mixing of all the coloured filaments. This results in a “melange effect”, which involves the mixing of the three single colours of each yarn, and no extreme colour separation.

► COMBINATION OF SPRINKLE AND MELANGE EFFECTS  
(TRICOLOUR ONLY)





Plug on  
cooling drum

## 7 STRETCHING MODULE

One MONO godet and one DUO godet, both of which are induction heated, ensure the desired stretching ratio and guide the yarn into the texturing unit. Energy-saving motors drive the godets, which have surfaces coated with a wear-resistant, ceramic layer for long service life.

The processing of only two yarns per stretching and texturing unit ensures excellent yarn treatment. And should a yarn break, a cutting and suction unit removes the yarn, thus enabling the operator to thread up the line again beginning from the suction.

## 8 TEXTURING UNIT

This unit is the heart of a BCF line. The SML texturing jet can handle yarns in the complete titer range without the need to change parts such as lamellas. With its sophisticated, but simple and robust, lamella-free design, the patented SML texturing system sets a market benchmark for high yarn crimp.

The excellent crimp provided by the SML system results in maximum carpet pile coverage, which allows producers to employ finer yarns for equal or superior product quality. This advantage also adds up to raw material savings and therefore lower costs.

- ▶ SOPHISTICATED, BUT SIMPLE AND ROBUST, LAMELLA-FREE TEXTURING JET DESIGN
- ▶ SETS A MARKET BENCHMARK FOR HIGH YARN CRIMP
- ▶ RAW MATERIAL SAVINGS AND THEREFORE LOWER COSTS



Intermingling unit

## 9 INTERMINGLING UNIT

First class ceramic intermingling jets are used and only two different sets are needed to cover the whole titer range. The jets are mounted in a sound-insulated box, made of stainless steel. Air pressure is employed to control the number of intermingling knots (compacted zones of the yarn). Moreover, the SML design ensures low air consumption and therefore reduced energy costs.

## 10 WINDING

SML lines are available with fully automatic turret winders. First class winding quality at top speeds delivers perfect yarn bobbins.

STANDARD WINDER DATA FOR BCF LINES	
No. of yarns	2
Core diameter	73mm
Traverse length	250mm
Bobbin diameter	Max. 320mm
Mechanical winding speed	Max. 3500 m/min

► LOW AIR CONSUMPTION FOR REDUCED ENERGY COSTS





E-container

## 11 SMILE CONTROL SYSTEM

An operator-friendly HMI (human-machine interface) with two touch screens, one for the spinning line and one for the winder, provides all the functions needed by operators and maintenance personnel to handle the complete line. Everything, from the input of the proportion of each raw material to the parameters of the winder, can be dealt with from these terminals.

Different access levels and features such as alarm management, recipe administration and remote service via ethernet/internet are standard. For extended trend analysis and quality documentation, data can be transferred to a data logging system on a separate PC or existing data collection systems.

The electrical equipment is installed in an e-container. Customised solutions are supplied completely with electrical engineering, wiring and air-conditioning equipment. Naturally, only first choice and proven components are used for each device.

- CENTRAL CONTROL OF ALL PRODUCTION PARAMETERS
- REMOTE MAINTENANCE FEATURES



Control panel

AUSTROFIL BCF PET / PA6 / PP MONOCOLOUR “TWIN”





## BCF PET/PA6/PP MONOCOLOUR “TWIN”

The BCF PET/PA6/PP Monocolour “TWIN” spinning line is the ideal solution for anyone looking for top quality BCF PET yarn production in combination with a maximum choice of raw materials.

### THE BCF PET MONOCOLOUR “TWIN” LINE OFFERS ADVANTAGES THAT INCLUDE:

- Two spinnerets per yarn, which ensures perfect cooling conditions and thus high output and excellent yarn quality.
- The flexibility derived from the simultaneous production of two differing yarn titers. The line is equipped with two independent spinning sections, which permits the simultaneous production of two yarns with different specifications such as titer and the number of filaments.
- A patented SML texturing unit for top crimp contraction and low shrinkage.
- Protected and conditioned electronics in an e-container.



**PERFORMANCE LEVEL**

BCF PET/PA6/PP 4x2 TWIN, 8 ends, monocolour	
Polymer	PET IV 0.76 - 0.84
Titer range	1,000 - 4,400dtex
Output capacity	400 kg/h, 9.6 t/d

**LINE CONFIGURATION**

Dry air drying system	Dry air quantity 800 m <sup>3</sup> /h Main drying bin 3000l
Additional drying bins	Above dosing unit 6 units, each 50l
Dosing system	Continuous gravimetric loss in weight dosing with 2 additives
Extruder	2 units 75 / 28D Incl. static mixer
Feeding section	Water cooled, closed circuit
Spinning beam	Electrically heated
Spinning pumps	2x4 pcs. each 2 outlets
Spinnerets	16 pcs. Ø 110mm
Quenching unit	Steam generator Temperature, speed and humidity controlled
Pre-intermingling	Heberlein, Migra-Jet
Godets	Ø 190mm, inductive multizone heated, bearing lifetime lubricated
Texturing system	AUSTROJET patented without lamellas
Cooling process	Multiwrap
Intermingling	Heberlein, PolyJet-TopAir

**CONNECTED LOAD AND AIR CONSUMPTION**

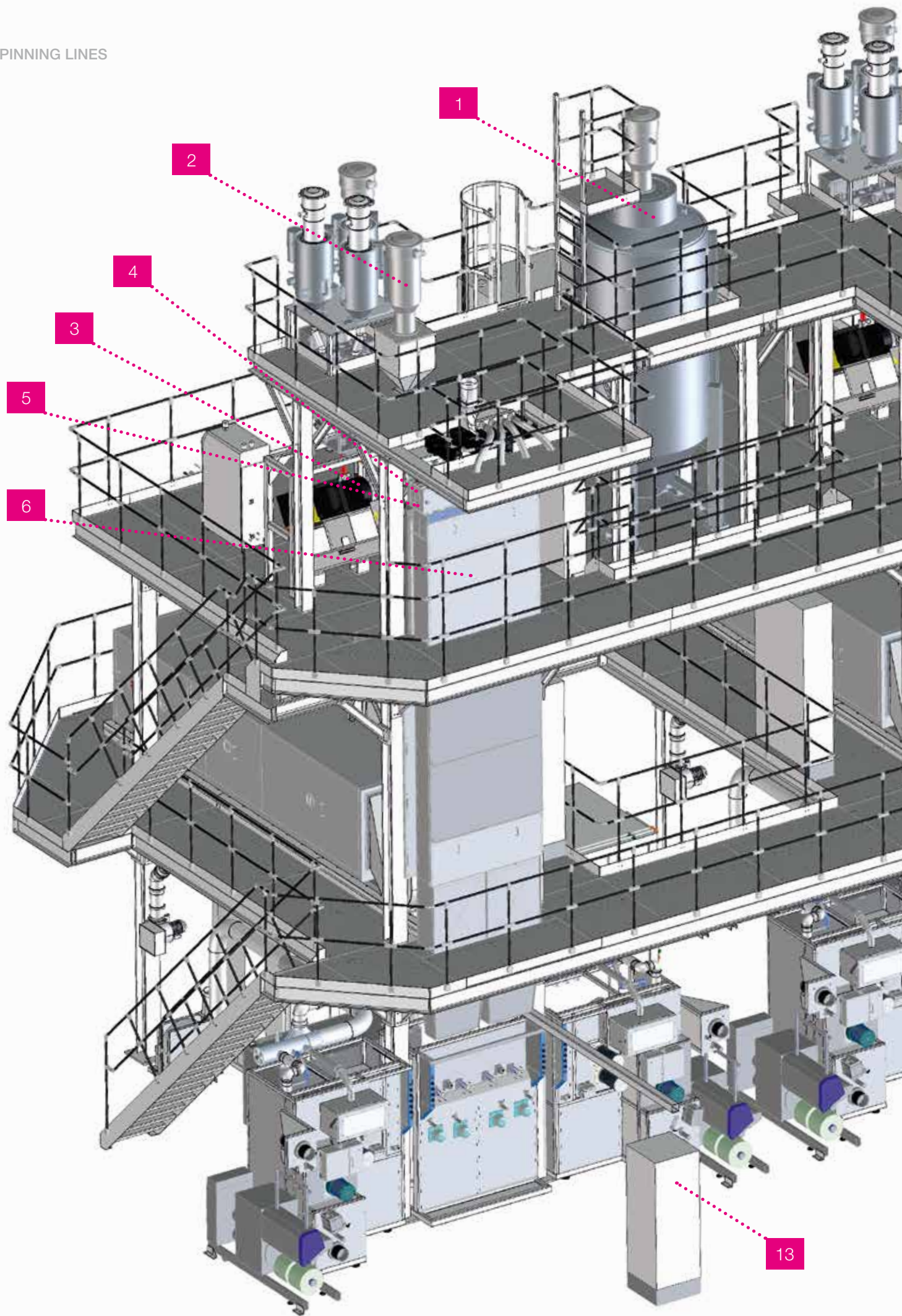
Connected load	956kW
Average power consumption	Approx. 270kW
Peak compressed air consumption	Up to 3,000dtex 1,200 Nm <sup>3</sup> /h Up to 5,000dtex 1,350 Nm <sup>3</sup> /h
Average compressed air consumption	Up to 3,000dtex 700 Nm <sup>3</sup> /h Up to 5,000dtex 890 Nm <sup>3</sup> /h
Compressor pressure	10bar
Chiller cooling capacity	180,000 kcal/h

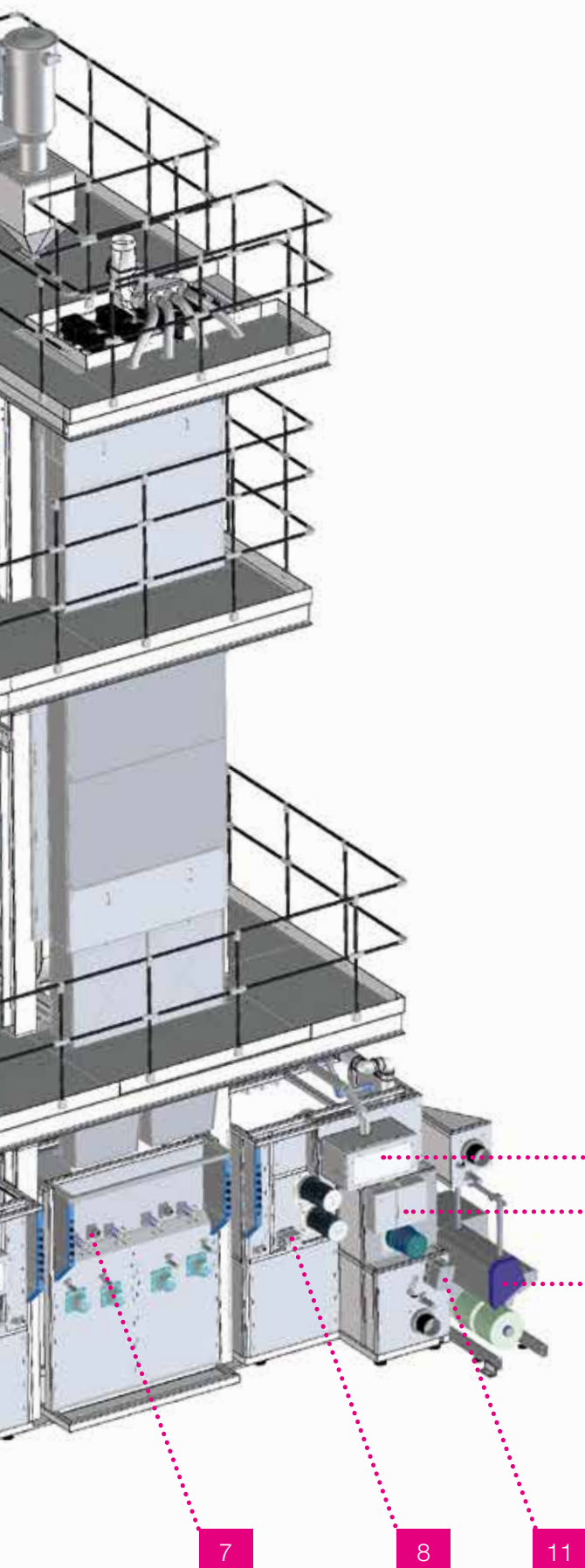
**WINDING**

Winder	Automatic turret winder
Winding speed	1,000 - 3,500 m/min
Bobbin diameter	Max. 320mm

**SPACE REQUIREMENT**

Length	13,500mm
Width	11,000mm
Height	12,000mm





- 1 DRYING EQUIPMENT
- 2 RAW MATERIAL HANDLING, DRYING AND DOSING
- 3 EXTRUSION EQUIPMENT
- 4 SPINNING SECTION
- 5 SPINPACKS
- 6 QUENCHING UNIT
- 7 SPINFINISH APPLICATION
- 8 PRE-INTERMINGLING
- 9 STRETCHING MODULE
- 10 TEXTURING UNIT
- 11 INTERMINGLING UNIT
- 12 WINDING UNIT
- 13 SMILE CONTROL SYSTEM





Drying and  
dosing unit

## 1 DRYING EQUIPMENT

Top quality drying systems ensure lower residual moisture content of the granules and additives. Closed air circuits are employed to prevent humidity absorption in the material feeding system.

Additional dryers for main material and additives guarantee optimal material conditions at the extruder inlet.

## 2 RAW MATERIAL HANDLING AND DOSING

Extremely accurate gravimetric loss-in-weight systems with one main component and two additives such as colour master batches and UV stabilisers are provided.

The main functions are implemented in the SMILE control system for easier operation and control at ground level.

- FULLY INTEGRATED GRANULE AND ADDITIVE DRYERS
- ONE EXTRUDER DESIGN FOR THREE DIFFERENT RAW MATERIALS

## 3 EXTRUSION EQUIPMENT

All SML spinning plants are equipped with proven and tested extruders with a 75mm screw diameter. Barrier screw design and an L/D ratio of 28 ensure maximum output and top melt quality for the spinning application. The extruders are driven by air-cooled AC motors connected via a coupling to a water-cooled gearbox for easy maintenance.







Spinpacks with  
post heaters

## 4 SPINNING SECTION

A spinning beam with electric plate heaters is used for safe operation and easy maintenance. The spinning pumps have two outlets and supply the melt stream to 16 spinpacks with a 110mm diameter. Equal residence time is ensured and results in a homogenous temperature profile. An absolutely vertical yarn path provides excellent spinning quality and problem-free production. All the spinning beams are equipped with a monomer suction unit.

## 5 SPINPACKS

These have lightweight design for easy handling and replacement. Spinnerets with a variety of hole shapes are available.

► ELECTRICALLY HEATED SPINNING BEAM FOR A WIDE TEMPERATURE RANGE TO PROCESS DIFFERENT MATERIALS



Feeding unit

## 6 QUENCHING UNIT

Steam generators process humidity-controlled quenching air. Quenching units supply the ideal conditioned air temperature and speed to the filaments for proper cooling.

## 7 SPINFINISH APPLICATION

The spinline is supplied very accurately by means of precision metering gear pumps. The oil is applied via ceramic applicator nozzles.

## 8 PRE-INTERMINGLING

This optimises the compacting of a single yarn for better running performance through the line.



► HUMIDITY-CONTROLLED QUENCHING AIR



Stretching module

## 9 STRETCHING MODULE BCF PET

Two DUO godets ensure the required stretching and feed the yarn into the texturing unit. A special ceramic surface coating is used to prevent wear. Cutting and suction units mean that in the case of a yarn break, stringing up from the beginning of the line is not necessary.

Excellent yarn treatment is ensured by the production of only two yarns per stretching and texturing unit.

## 10 TEXTURING UNIT

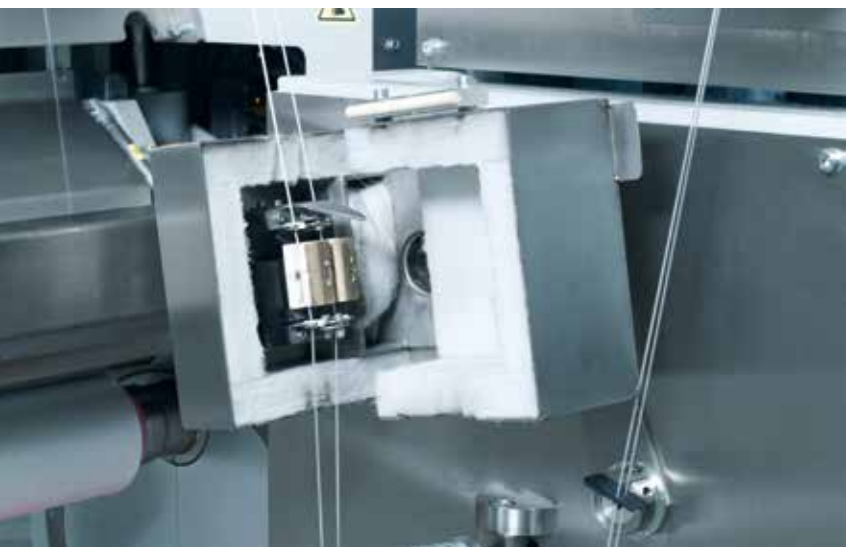
A single jet covers the whole titer range and a lamella chamber is not required. The design is sophisticated but simple and robust with no wear parts, and SML crimp constitutes an industry benchmark. Complete cooling of the yarn for a duration of about 15 seconds is achieved through a multi-wrap cooling down according to a plug length of about 6.5 meters. Plug compactness is controlled by the speed of the cooling drum and the patented texturing system is the key to highest crimp.

This results in the excellent carpet pile covering, allowing the use of finer yarns for equal or superior product quality, which adds up to raw material savings.



- ▶ EXCELLENT YARN TREATMENT DUE TO THE PRODUCTION OF ONLY TWO YARNS PER STRETCHING AND TEXTURING UNIT
- ▶ PATENTED TEXTURING SYSTEM FOR HIGHEST CRIMP
- ▶ LONG COOLING TIME OF PLUG





Intermingling unit

### 11 INTERMINGLING UNIT

Quality intermingling ensures excellent tufting and weaving performance. First class ceramic intermingling jets are used and only two sets are needed to cover the whole titer range. The jets are mounted in an insulated stainless noise reduction box and the number of intermingling nods is controlled by air pressure.

### 12 WINDING UNIT

High-performance automatic spindle-driven winders are available to meet customer requirements.

STANDARD WINDER DATA FOR BCF LINES	
No. of yarns	2
Core diameter	73mm
Traverse length	250mm
Bobbin diameter	Max. 320mm
Mechanical winding speed	Max. 3500 m/min

► ONLY TWO INTERMINGLING JETS NEEDED FOR THE WHOLE TITER RANGE





E-container

### 13 SMILE CONTROL SYSTEM

An operator-friendly HMI (human-machine interface) with two touch screens, one for the spinning line and one for the winder, provides all the functions needed by operators and maintenance personnel to handle the complete line. Everything, from the input of the proportion of each raw material to the parameters of the winder, can be dealt with from these terminals.

Different access levels and features such as alarm management, recipe administration and remote service via ethernet/internet are standard. For extended trend analysis and quality documentation, data can be transferred to a data logging system on a separate PC or existing data collection systems.

The electrical equipment is installed in an e-container. Customised solutions are supplied completely with electrical engineering, wiring and air-conditioning equipment. Naturally, only first choice and proven components are used for each device.



Control panel

- ▶ CENTRAL CONTROL OF ALL PRODUCTION PARAMETERS
- ▶ REMOTE MAINTENANCE FEATURES

	<b>BCF PP 2x2 C / 75 8 ends monocolour</b>	<b>BCF PP 4x2 / 2x75 TWIN 8 ends monocolour</b>	<b>BCF PP 4x2 T / 3x75 8 ends tricolour</b>	<b>BCF PET / PA6 / PP 4x2 / 2x75 TWIN 8 ends monocolour</b>
<b>GENERAL TECHNICAL DATA</b>				
<b>Polymer</b>	Polypropylene, MFR 23 - 27	Polypropylene, MFR 23 - 27	Polypropylene, MFR 23 - 27	Polypropylene, MFR 23 - 27
				PET IV 0.76 - 0.84
				PA6 RV 2.67 - 2.73
<b>Titer range</b>	1,200 – 5,000dtex	1,200 – 5,000dtex	1,200 – 5,000dtex	PET 1,000 - 4,400dtex
<b>Output capacity</b>	160 kg/h (> 2,400dtex) 3.8 t/d	320 kg/h (> 2,400dtex) 7.6 t/d	320 kg/h (> 2,400dtex) 7.6 t/d	PET 400 kg/h (> 3,000dtex) 9.6 t/d
<b>Drying system</b>	–	–	–	Airflow 910 m³/h
<b>Dosing unit</b>	Continuous gravimetric loss in weight dosing with 3 components			
<b>Extruder [mm] L/D</b>	1 unit, 75/28	2 units, 75/28	3 units, 75/28	2 units, 75/28
<b>Spinning beam</b>	Electrically heated with plate heaters	Electrically heated with plate heaters	Electrically heated with thermal oil	Electrically heated with plate heaters
<b>Spinning pumps</b>	4 pcs. each 2 outlets	8 pcs. each 2 outlets	12 pcs. each 2 outlets	8 pcs. each 2 outlets
<b>Spinnerets</b>	8 pcs., Ø 110mm	16 pcs., Ø 110mm	24 pcs., Ø 110mm	16 pcs., Ø 110mm
<b>Pre-intermingling</b>	Heberlein, Migra-Jet	Heberlein, Migra-Jet	Heberlein, Migra-Jet 2 positions	Heberlein, Migra-Jet
<b>Godets</b>	Ø 160mm, induction heated, lifetime lubricated bearings			Ø 190mm, inductive, multi zone heating
<b>Texturing system</b>	Patented jets, operation without lamellas			
<b>Cooling process</b>	One cooling drum, multiwrap, cooling time > 15s			
<b>Winder Winding speed Bobbin diameter</b>	Automatic turret winder 1,000 – 3,500 m/min 320mm	Automatic turret winder 1,000 – 3,500 m/min 320mm	Automatic turret winder 1,000 – 3,500 m/min 320mm	Automatic turret winder 1,000 – 3,500 m/min 320mm

<b>MAIN DIMENSIONS</b>				
<b>Length</b>	7,600mm	12,500mm	14,000mm	13,500mm
<b>Width</b>	8,750mm	7,200mm	8,500mm	11,000mm
<b>Height with standard dosing unit</b>	6,800mm	7,500mm	7,000mm	12,500mm

<b>Machine type</b>	<b>AUSTROFIL BCF monocolour</b>	<b>AUSTROFIL BCF monocolour TWIN</b>	<b>AUSTROFIL BCF tricolour</b>	<b>AUSTROFIL BCF PET/NYLON</b>
<b>Applications</b>	Carpets, rugs, upholstery, door and window seals		Multi-coloured carpets and upholstery	Carpets



**NOTES:**



EXTRUSION LINES – ENGINEERED TO PERFORM ►

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