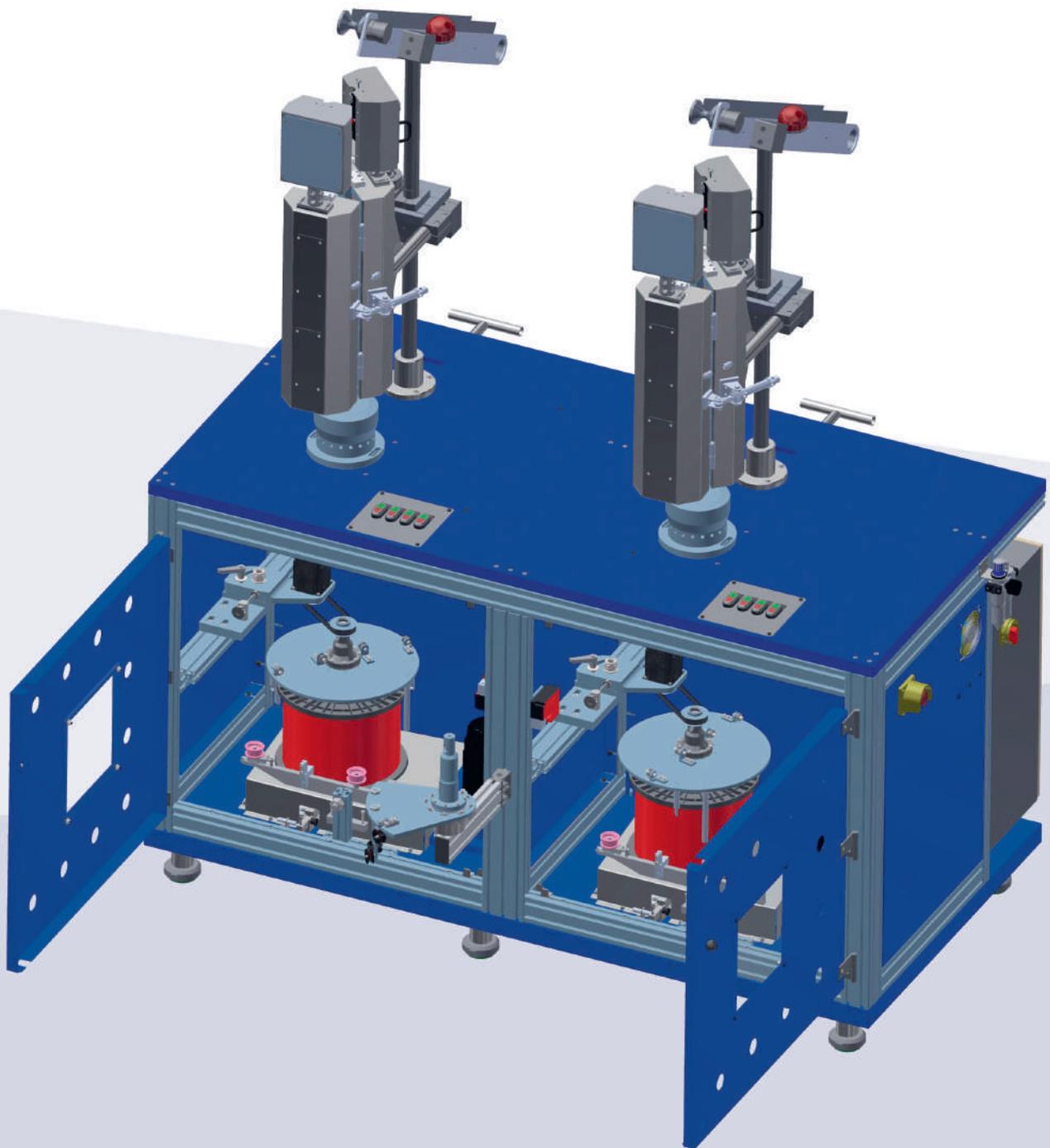


# High Efficiency Spiral Machine

for Flat and Round Monofilaments



**M&A  
DIETERLE**  
MASCHINEN- & APPARATEBAU GMBH



### Machine Programme

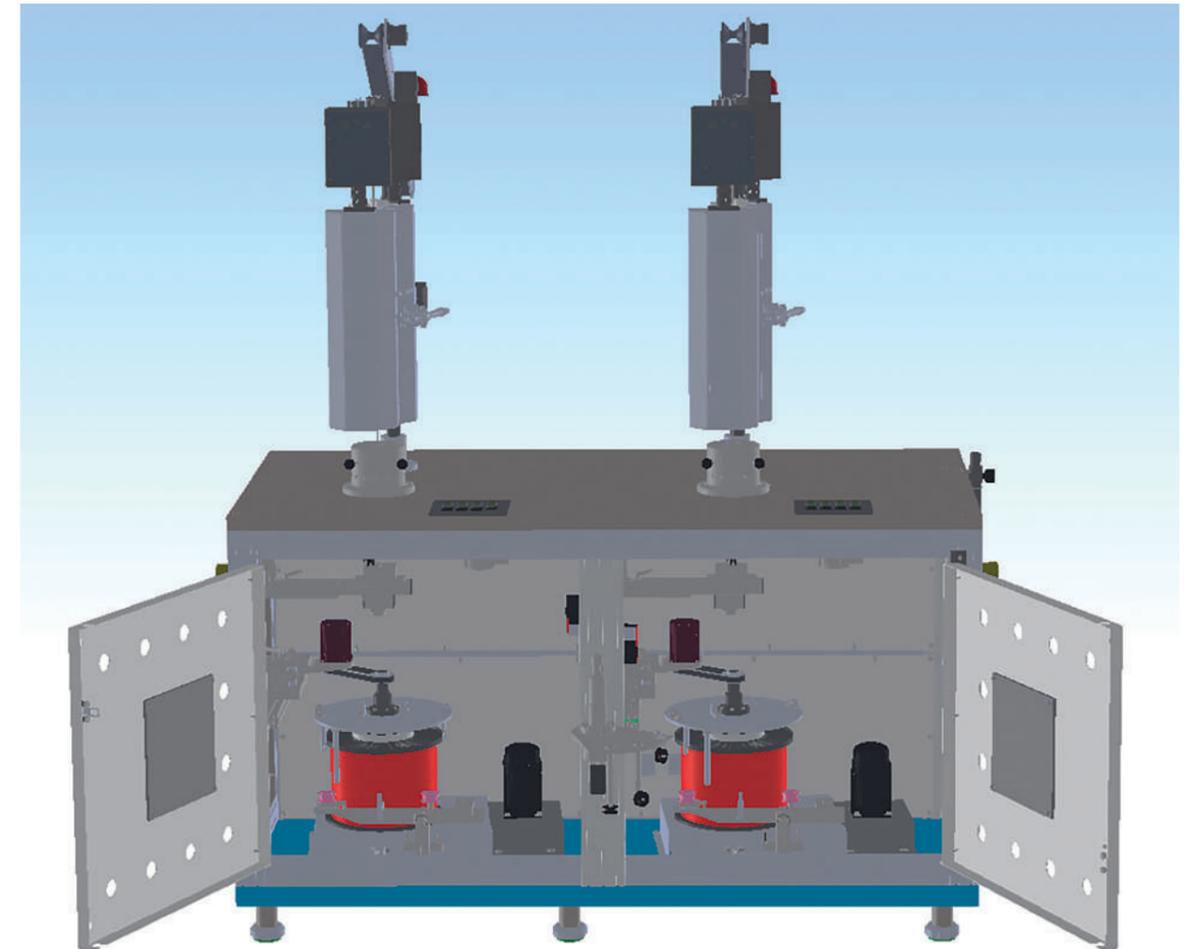
The performance range of our special purpose machines covers all production steps from the manufacturing of spirals over the jointing and filling to the thermosetting, cutting and welding of screens. By connecting the individual machines to a closed production unit, an efficient and effective manufacturing is made possible.

Our special purpose machines can be subdivided into following production areas:

Machine type	Production Areas
Spiral machines	Production of individual spirals (left/right) from various monofilaments with various cross sections
Jointing tables	Joining and connecting individual spirals (up to 64 at the same time) for the production of spiral sleeves
Filling tables	Filling fixed and unfixed spiral sleeves with cored wire (up to 32 at the same time) with various cross sections
Calender	Heat setting
Cutting and welding machines	Marking, cutting edges, welding edges. Can be used for both felts and sleeves
Coiling system for nonwoven products	Production of non-woven products as standalone machine unit or expansion of existing calender unit

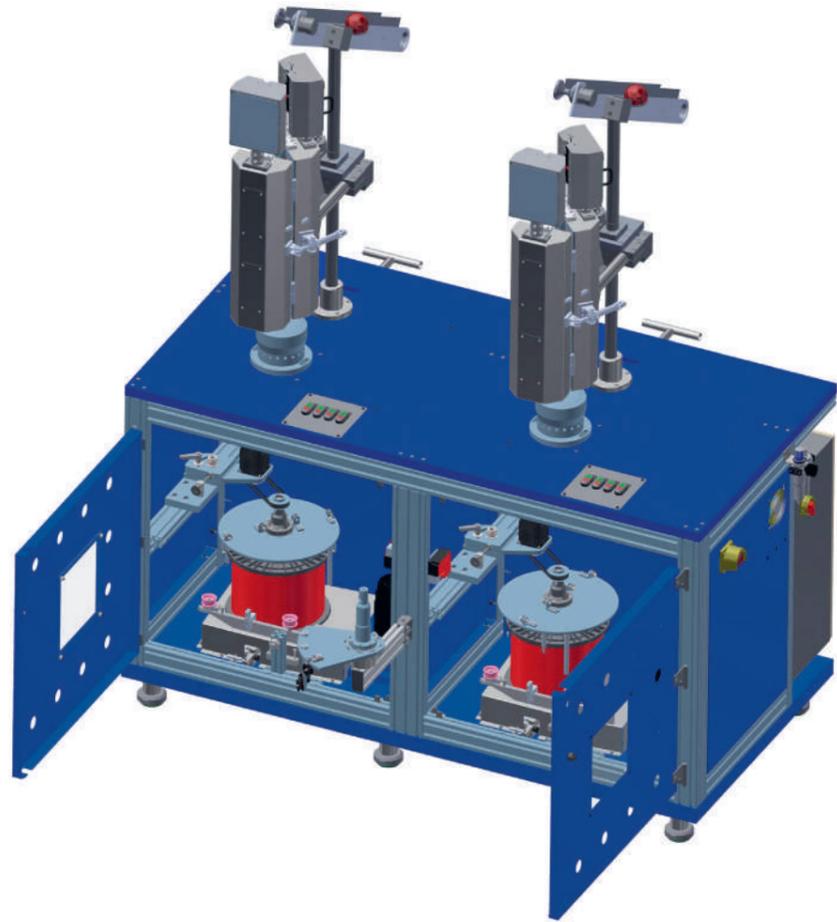
***With our special purpose machines you will be able to produce with proven high quality:***

**EFFICIENTLY, PRECISELY AND RELIABLY**



### High-Efficiency-Spiral Machine

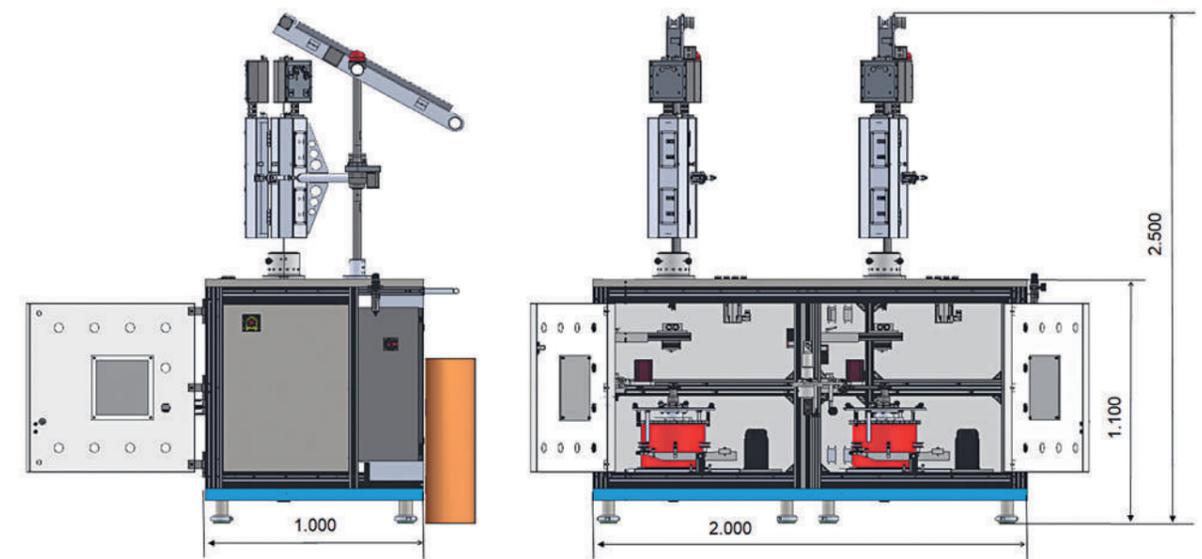
With the high-efficiency-spiral machine developed by M&A Dieterle, all current spirals with rectangular profiles, material and spiral geometries can be manufactured. Each of the machines can produce left and right spirals at the same time.



### Structure

- » Clearly arranged and functional structure
- » Easy operation due to most advanced control technique
- » Working areas can be viewed completely
- » Machine frame in lightweight construction free from vibrations
- » Very good access to all maintenance and working areas
- » Easy retooling to other spiral sizes and monofilaments
- » Safety standards according to CE standard

### Dimensions

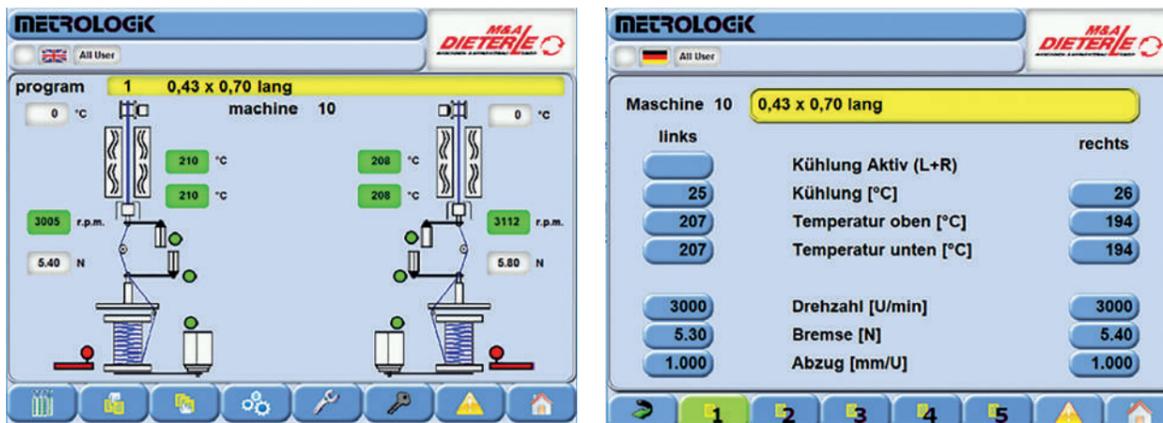


### Operation and maintenance

- » Simple operation and easy access to all areas
- » Short training period for operating staff
- » Short setup and retooling time for bobbins
- » Minimum maintenance and service work

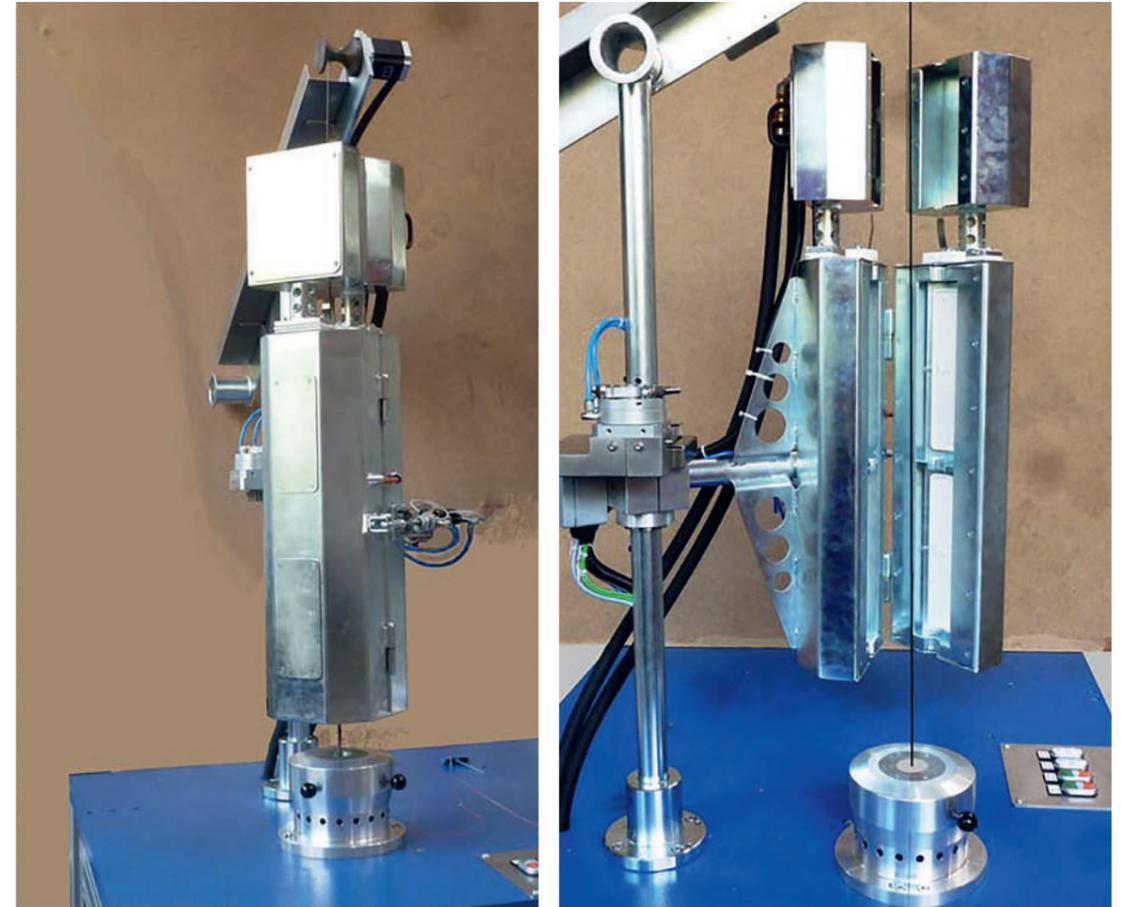
### Machine controls

- » Control and adjustment of the sequence by stored program control (PLC) and central touch panel
- » Clearly arranged operating controls
- » Indication of measured values on the display
- » All relevant indications of the current parameters on the display
- » The important manufacturing parameters are represented well-arranged in a picture



Screen Views of the touch panel

- » The manufacturing parameters for the left and/or right winding spindle can be set independently
- » Display of parameters available in various languages
- » One operator is able to monitor multiple machines simultaneously
- » Several machines optionally can be controlled by one central touch-panel (see pic.)

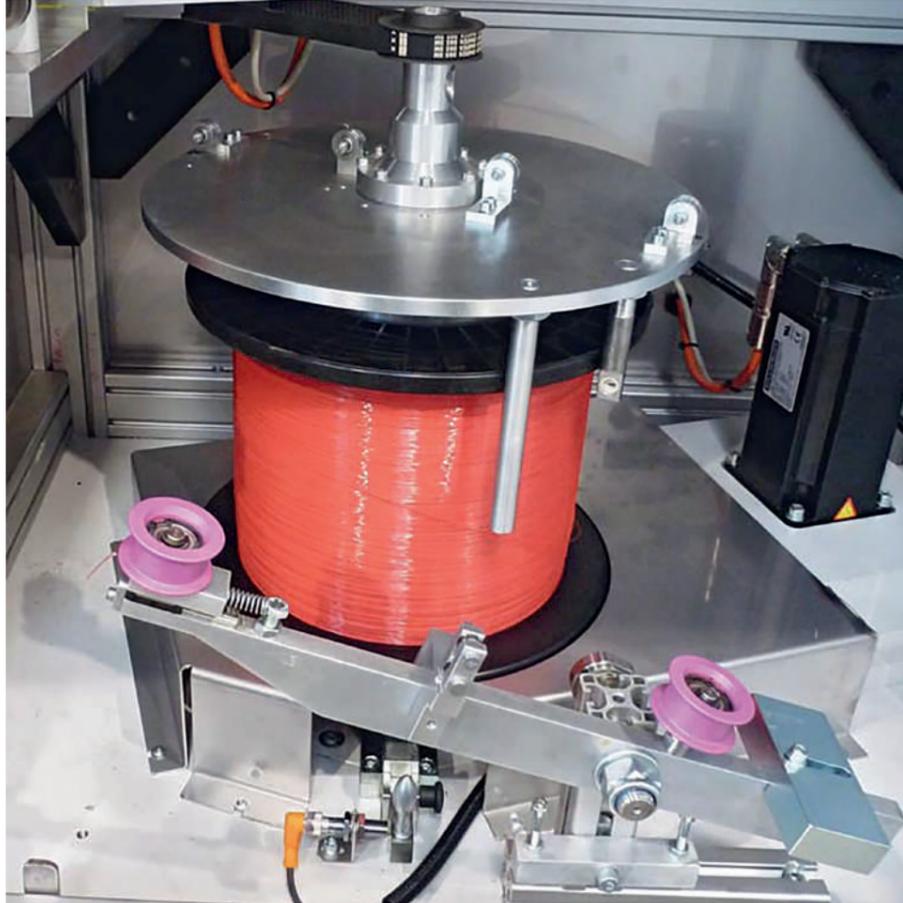


Heating element in inoperative position

and in rest position

### Fixing Unit (Spiral Heating) with Slewing Capacity

- » Low heat loss due to well insulated heating elements
- » Effective energy utilisation
- » Due to the longer structural shape, a higher number of revolutions can be used to reduce production times
- » All motion sequences (opening, closing and rotating) are monitored and executed by the machine control
- » Optional cooling unit for large spiral dimensions



### ***Winding Spindle***

- » Exact centering and vibration reducing seat of the bobbin
- » Short setup and retooling times for bobbins
- » User-friendly handling
- » Constant sensor monitoring of the number of revolutions

Monofilaments (mm)	Spirals (mm)	Revolutions r.p.m.	Production time spools / 10kg	Production quantity	
				spirals / spindle (kg/h)	spirals / machine (kg/h)
0,43 x 0,70	5,20 x 2,90	3.200	ca. 5,7 h	ca. 1,30	ca. 2,60

The reference numbers were determined with the following monofilaments:

**BEDEA 190 H / 21-70 H**

**Specifications:**

Electrical connection	380V-500V AC +/- 10% (16A), Voltage of machine sockets: 230V AC
Motors	Servo-motors
Control System	PLC-control
Compressed-air Supply	6 bar
Weight	approx. 2.000 kg
Heating	Infrared radiator: max. 420°C Temperature is adjusted via thermo regulators
Processable bobbin sizes	Bobbin K 335 with up to 10 kg
Manufacturable spiral sizes	From 4.8 x 2.0 mm to 14.8 x 8.0 mm
Processable monofilaments	Different rectangular monofilaments
Max. rotary frequency	3.200 revolutions/min
Dimensions	Width: 2000 mm Depth: 1000 mm Height: 2500 mm



**TECHNOLOGY FOR YOUR BENEFIT**

» **Advice**

» **Partnership**

» **Quality**

» **Service**

» **Customer satisfaction**

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