

œrlikon
barmag

Plug and Profit with VarioFil

compact spinning line



Gain extreme flexibility



- Various yarn types
- Processing of different polymers and colours
- Special dosing system for dope-dyeing of yarn
- Production of bi-component and microfilament yarns
- Broad overall and filament titer range
- Simple conversion possibilities

Cut operating costs in half

- Simple 1-man operation
- High production speed with extended mechanical capability
- Efficient energy management
- Low maintenance costs
- Considerably lower energy costs
- Waste management

Receive first class quality



Your benefits

- First-class yarn
- Best fitting machine configuration
- High precision dosing of master-batches and additives
- Yarns spun on VarioFil can be further processed on any texturizing system

Wide application and denier range

POY 50 – 600 den
FDY 20 – 1200 den
MTY 50 – 2400 den
HTY 70 – 2400 den

Others on request

For details see additional data sheet

As flexible as your needs



VarioFil is the ideal production unit for manufacturers that have a wide range of products, small lot numbers or specialised products.

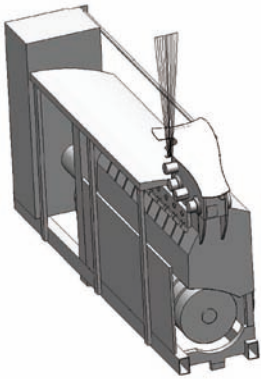
VarioFil is not limited to using only one material or a particular process. Customised conversion packages allow the unit to be adjusted to the market requirements quickly and at reasonable rates.

- Can be configured to different yarn types (POY, FDY, HTY, LSY, HMY)
- Suitable for all standard spinning polymers (e.g. PET, PP, PA, amongst others)
- Designed for dope-dyeing with highest colour uniformity
- Use of high-quality components supplied by Oerlikon Barmag
- Production capacity up to 250 kg/h (per extruder)
- Most efficient PP FDY process: 10end spinning with 4000 m/min

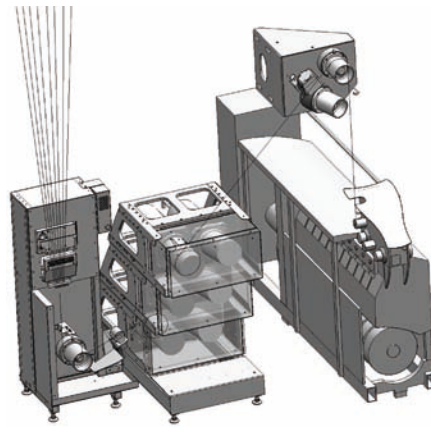
Available with WINGS technology

- Ergonomic layout for fast string-up
- The parallel like yarnpath ensures an even and consistent level of yarn tension

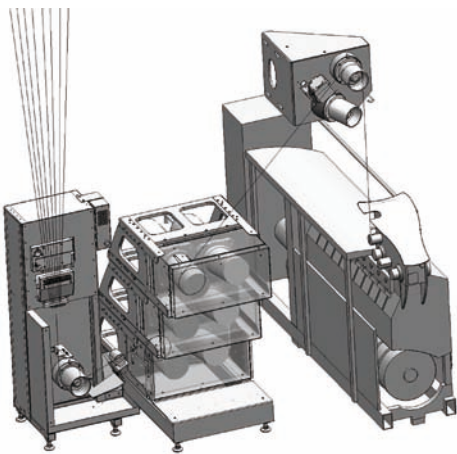
Flexibility: various machine layouts



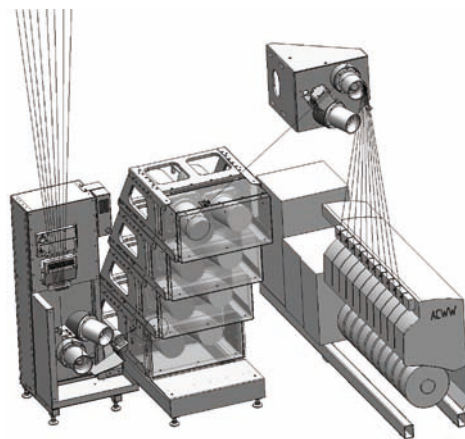
A - POY



C - FDY



B - FDY



D - HTY

VarioFil configurations

	A-POY	A-POY	B-FDY	B-FDY	C-FDY	D-HTY	D-HTY	D-HTY
	PET	PA	PET	PA	PP	PET	PA	PP
Process speed (m/min)	2800-3200	4000-4500	4000-4500	4200-4800	3000-4500	2500-3200	2500-3200	1800-2500
Titer - final (den) unplied	30-400	20-150	50-420	20-150	50-900	400-1800	33-1680	500-2000
Titer range	1:3	1:2	1:3	1:2	1:4	1:2	1:2	1:4
Filament count (dpf) (spun dyed)	0,5-6 (1-6)	0,7-4 (0,7-4)	0,5-6 (1-6)	0,7-4 (0,7-4)	1.6-6	consultation with technical department		
Ends per Pos	8,10,12	8,10,12	8,10,12	8,10,12	6,10	4,6,8	6-12	4,6
Elongation (%)	>120	>65	>29-35	42+-6	25-30			
Tenacity (g/den)	>2	>3.6	>3 - 4	>3.8 - 4	>3 - 5*	consultation with technical department		
Yarn uniformity (USTER) (%)	<1	<1	<1.2	<1.2	<1.5			

* Depending on the type of polymer

** All mentioned yarn data and production parameters are dependant on the processed raw materials, master batches, etc. The mentioned product ranges may cause different machine configurations.

VarioFil R/R+ concept



From shredded PET to value add – putting the focus on sustainability

VarioFil R+ is the world's first POY spinning line which uses recycled bottle flakes as feedstock for dope-dyed textile POY. The line provides several technological features such as a special extrusion system for bottle flake materials, the latest metering and blending technology for dope-dyeing and an advanced 2-step melt filtration. The result is a high quality dope-dyed POY. The turnkey machine comprises 4 spinning positions, each equipped with a 10-end WINGS POY winder.

VarioFil R is a turnkey spinning line for PET POY made from PET chips.

Key benefits

- Only one processing step minimizes energy consumption – no chip cutting necessary
- Energetically optimized process with pre-conditioning
- Extrusion system with degassing and large area filtration
- Dope dyeing technology for best colour evenness and appearance
- New textile spin packdesign with increased filtration performance for long lifetime
- Latest Oerlikon Barmag winding technology WINGS POY

Quality: Key components



Extruder

The utilization of top-quality, low-wear materials – in particular for the extruder cylinders and the extruder screw – ensure long-term, error-free operation.

The screw geometries with special mixing components have been determined to ensure short dwell times, in order to keep the thermal and mechanical load of the melt to a minimum. This ensures excellent melt and hence first-class yarn quality especially in case of dope-dyed yarns.

Spinning

VarioFil is equipped with the energy saving SP 87 series spinning heads, PA70 spinning heads are used in configurations with PA6.6. The melt-guiding parts of the spinning head can be cleaned with the utmost of ease. The spinning head steam heating ensures excellent temperature uniformity.

Quenching Unit

The quenching system – extremely easy to clean – supplies an even, turbulence-free airflow for achieving excellent uster values.

The airflow speed can be set using an electric drive unit.

Monomer suction for PP and PA processes.

Godet

The induction-heated HF series godets have also been taken from the proven large-scale Oerlikon Barmag spinning systems.



The electronics – especially developed for this system by Oerlikon Barmag – ensure the greatest degree of speed accuracy over the entire speed range. The high-frequency heaters permit even temperature characteristics across the entire working length for optimal yarn heat treatment.

Spin Pack

The spin packs are characterized by outstanding flow condition and excellent temperature distribution, reflected in the machine's shortest possible dye change times.

The proven “self-sealing” and “bottom-loading” principle has been retained to ensure simple, fast and error-free installation.

Spinning Pump

VarioFil is equipped with the proven Oerlikon Barmag planetary gear pumps for precise metering of each individual thread.

These pumps achieve very high titer uniformity from thread to thread.

Winder

With regards to winders, there are several models available from the fully automatic ACW series with low-wear and yarn-protecting bi-rotor traverse system, such as the layout for 6 threads with a stroke (package width) of 170 mm each or the layout for 3 threads with a stroke (package width) of 250 mm.

Furthermore, ASW series take-up units with grooved roller and camshaft are used.



Highlight is the flexible solution WINGS POY, which will give impetus to your success. Productive, energy-efficient, outstanding yarn quality, POY and FDY process on one machine possible.

Control system

VarioFil is – as standard – equipped with the Oerlikon Barmag computer control system “Guide”, which excels in terms of its particularly pleasant graphic interface. Entry and display of all process parameters is carried out on a central unit. All parameters are continually entered and displayed in the form of trend diagrams.

Furthermore, a remote diagnosis system with a direct connection to the Oerlikon Barmag customer service unit has been integrated into the spinning line, and can be activated upon request.

Oerlikon Barmag

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