



DRYER AND TUMBLER
FOR OPEN WIDTH AND TUBULAR KNITS



WAKE UP YOUR DESAIR!





Tubular Knits

VOLUME & STABILITY



Open Width Knits

VOLUME & SHRINKAGE



Niki Plush

PILE POP UP & VOLUME



Pigment Prints

TOUCH & VOLUME



Active Wear

MAXIMUM STRETCHABILITY AND WEIGHT UNIFORMITY



SHOULD I GET IT? WHY?

DESAIR is the energy of air applied to finishing, in order to gain substantial quality on your goods, enhancing performance (relaxation and dimensional stability), touch (bulkiness and soft feel) and visual changes in a repeatable and uniform way, with no abrasions, nor crease marks.

Choosing **DESAIR** means drying and at the same time improving the knits performances in a single shot, simulating the rotary drum tumblers effect in an industrial application.

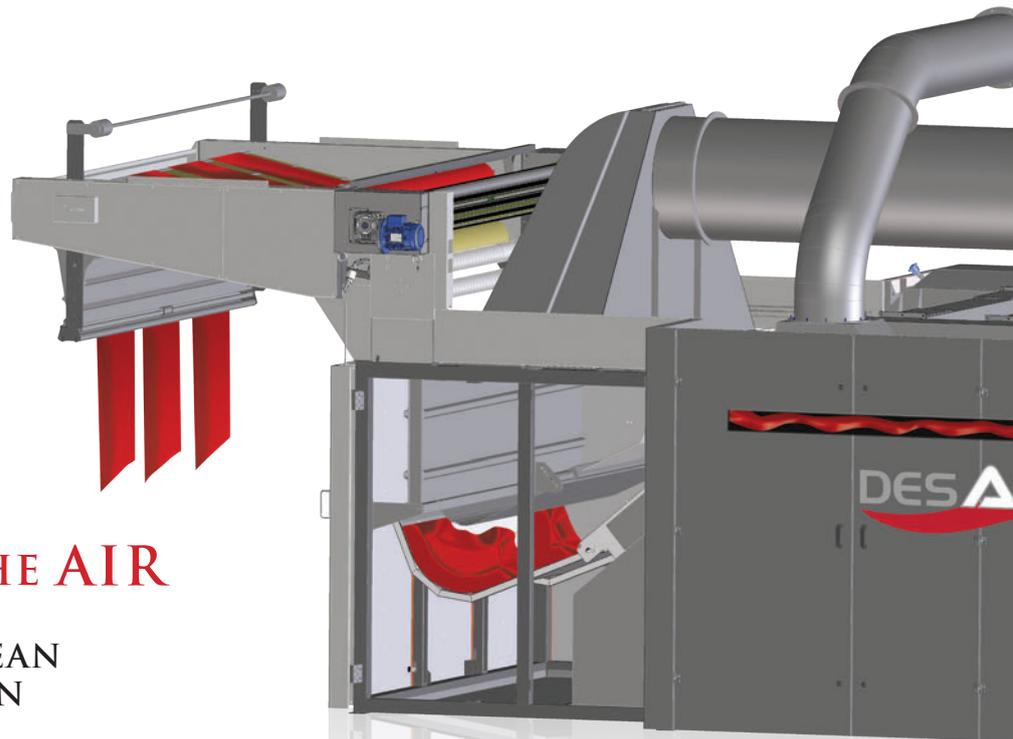
DESAIR is particularly suitable in the last steps of the drying process right before compaction or calendering: dyed or printed knits are driven with maximum sensitivity by air flows to relax and remove the previously accumulated tensions.

DESAIR gets to its best performances by processing dump fabrics (pre-dried) and by combining moisture, temperature and mechanical action it creates shrinkage and volume on the goods.

DESAIR is the only tool on the marketplace to enable drying and tumbling both in open width and tubular knits in a multi-strand mode.

WAKE UP YOUR DESAIR!





THE POWER OF THE AIR

AIR AS THE ONLY MEAN OF TRANSPORTATION

ZERO DEFECTS

The exclusive air transportation system ensures zero defects: no marks, no lusterings, no creases!

EFFECTIVENESS

The huge volume of air - distributed in several points of the fabric path - enables to dry and move the goods at the same time, minimizing tensions.

MECHANICAL ACTION

SMOOTHNESS

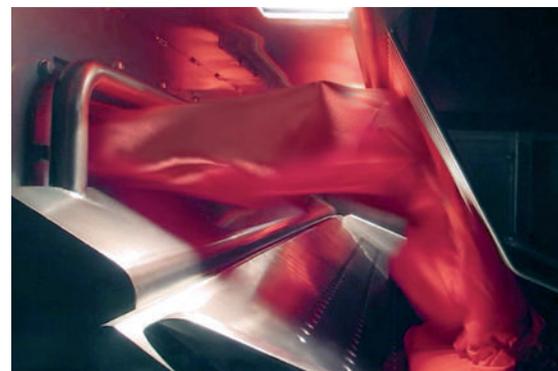
A modulated air flow, perfectly adjustable in intensity and angle, enables a smooth continuous transportation of the goods and a totally adjustable impact intensity on the stainless steel grids.

FREQUENCY & PERMANENCE TIME

The great amount of knits accumulated inside and the back and forth frequency enables long permanence times with high exposure to heat for a progressive drying performance within a delicate mechanical action.

DRYING & STEAMING

- **DesAIR** can work in a pure drying mode perfectly controlling the amount of impacts.
- A modulated steam injection into the machine generates shrinkage effects and yarn swelling.



1 STRAND

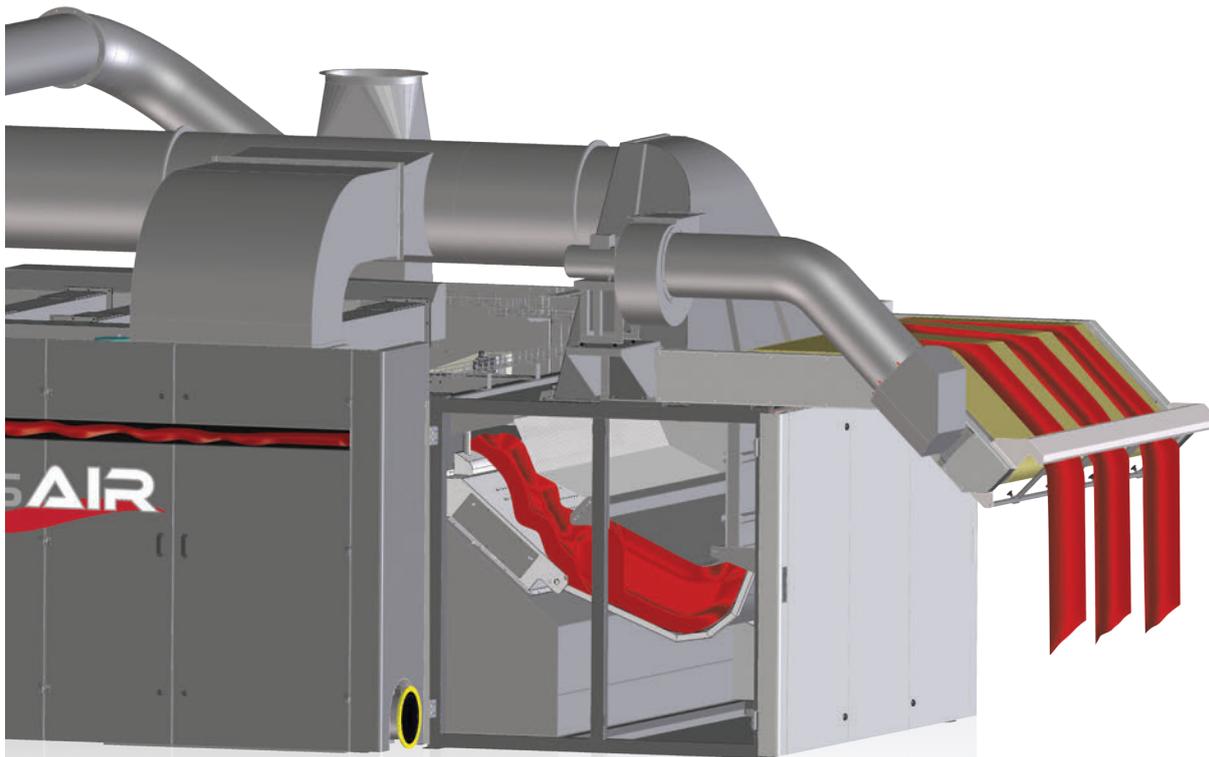


2 STRANDS



3 STRANDS





APPLICATION	EFFECTS	SUGGESTED MODEL	PERFORMANCE
 <p>TUBULAR KNITS</p>	<ul style="list-style-type: none"> • Excellent shrinkage • Volume & bulkiness 		<p>BOTH TUBULAR MULTI-STRAND AND OPEN WIDTH SINGLE STRAND</p> <p>MAXIMUM SMOOTHNESS IN HANDLING DELICATE GOODS</p> <p>TWIN BLOW AND MODULATING BLOWERS</p>
 <p>OPEN WIDTH KNITS</p>	<ul style="list-style-type: none"> • Handfeel & drape on O.E. yarns • Stability & bulkiness on fleece • Stability improvements on 3D fabrics 		
 <p>NIKI PLUSH</p>	<ul style="list-style-type: none"> • Pile pop up & Volume • Loop relax & detwisting 		<p>SINGLE STRAND OPEN WIDTH MODE</p> <p>HIGHER CRASHING POWER</p> <p>HIGH DRYING CAPACITY</p>
 <p>PIGMENT PRINTS</p>	<ul style="list-style-type: none"> • Maximum surface softness and hand breaking • Volume and drapery 		
 <p>ACTIVE WEAR</p>	<ul style="list-style-type: none"> • Maximum stretch & relaxation • Weight uniformity side to side and head to tail 		

PATENTS AND UNIQUE TECHNICAL FEATURES



RELAX & CRASH MODE

INTERNATIONAL PATENT

1

Besides the alternate motion of the goods, fabric can be kept floating in the shooting tunnel between a crash and the next for a pre-set number of seconds. Whenever necessary, it is then possible to separate the mechanical action from the drying power, switching the use of the machine from tumbler to pure dryer and all intermediate ways in between the two modes.

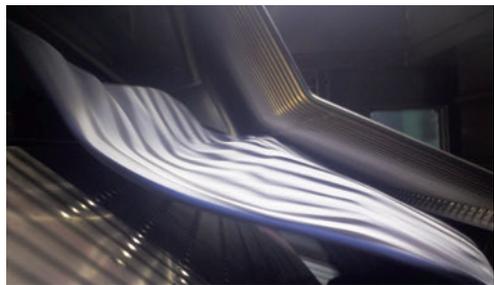


MULTIPLE STRANDS

INTERNATIONAL PATENT

2

By adjusting the side wings from control panel, tubular fabrics can be tumble-dried in multiple strands (2 or 3) to perform parallel strand processing with higher production output. The same unit can perform then both a single strand in open width or 2 or 3 strands of tubular knits. DesAIR is the only equipment worldwide able to tumble in Multi Strand mode with no fabrics overlappings.



TWIN BLOW

3

Two separate fans blow air into the tunnel providing an air cushion from the bottom for drying capacity and frictionless motion, and an air thrust from the top for crashing effect. The air comes from the top through multiple blowers, adjustable from control panel in both inversion speed and blowing angle. This enables the operator to fully control the fabric motion from virtually zero to maximum crashing. Drying capacity and tumbling effect are thus totally independent for maximum process versatility.



TENSIONLESS ENTRY

1

Optional device. Whenever the target is fabric shrinkage, the unit can be equipped with a tensionless entry both for tubular and open width fabric. The tensionless entry is composed by a conveyor belt with a suction device to move knits into the equipment without any tension whatsoever. Inverter controlled traction and air suction provide a safe and delicate fabric feeding.

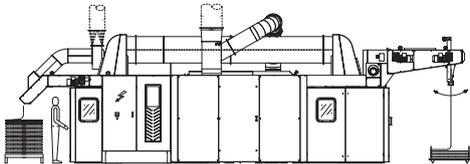


TENSIONLESS EXIT

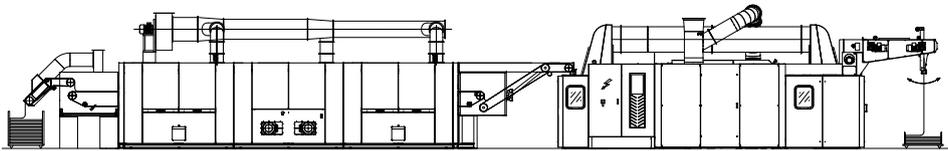
2

Fabric extraction has been designed with minimized tensions: a loop control sensor operates as a compensator between the slat centering unit and the conveyor belt. This enables to perfectly keep the fabric overfeeding on the conveyor and then flat fold it out through a V-shaped plaiter. This exit - combined with the tensionless entry ensure the best possible preservation of the achieved shrinkage inside the unit.

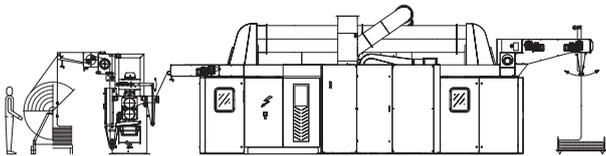
PROCESSING LINES



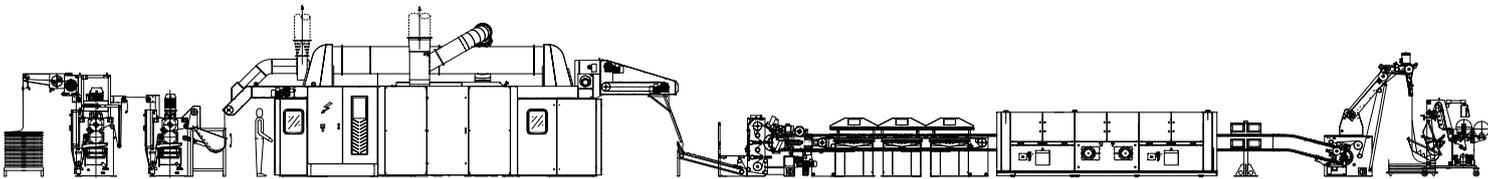
STAND ALONE UNIT



TUBULAR LINE



ACTIVE WEAR LINE



OPEN WIDTH LINE

ENAIRGY

Continuous drying, steaming and tumbling equipment in open width and rope form.

DREAMAIR

Continuous range for enzyming and chemical processes in rope form.

WANNY

Continuous modular overflow.

DESAIR

Continuous drying, steaming and tumbling equipment for tubular and open width knits.

FOULARD

Squeezing and impregnation mangles with 2 or 3 rollers.

TRIPPO

Modular discontinuous rotary drum tumbler.

PENTAIR

Discontinuous washing, drying, steaming and tumbling equipment.

FUTURA

Milling & Scouring equipment for worsted wool and blends with exclusive 3 Rollers traction system.

PENTA

Complete milling and scouring line with 2 or 4 channel with double upper shaft.

FLYAIR

Continuous tumbler in rope form

WWW.PENTEK.IT

PENTEK TEXTILE MACHINERY SRL

Via Parugiano di Sotto, 41 | 59013 Montemurlo (PO) ITALY
tel. +39 0574 064594 | fax +39 0574 064580 | info@pentek.it

