

WORKING PRINCIPLE

pentek.it



PENTEK
TEXTILE MACHINERY

POWAIR
THE GREEN CHOICE IN TUMBLING

POWAIR

PowAIR is born from the idea of joining the growing market request for maximum flexibility at lower processing cost.

The new manufacturing logics enable to use PowAIR as efficient dryer with low cost per meter, but also as a tumbler with a powerful and energetic aero-dynamic action.

PowAIR is the most flexible and universal tool on the marketplace and represents the ultimate excellence in tumbling technology, designed for the most demanding user.

The wide experience on many different fabric style and composition brought us to design and patent new technical solutions to combine power, delicacy and energy savings.

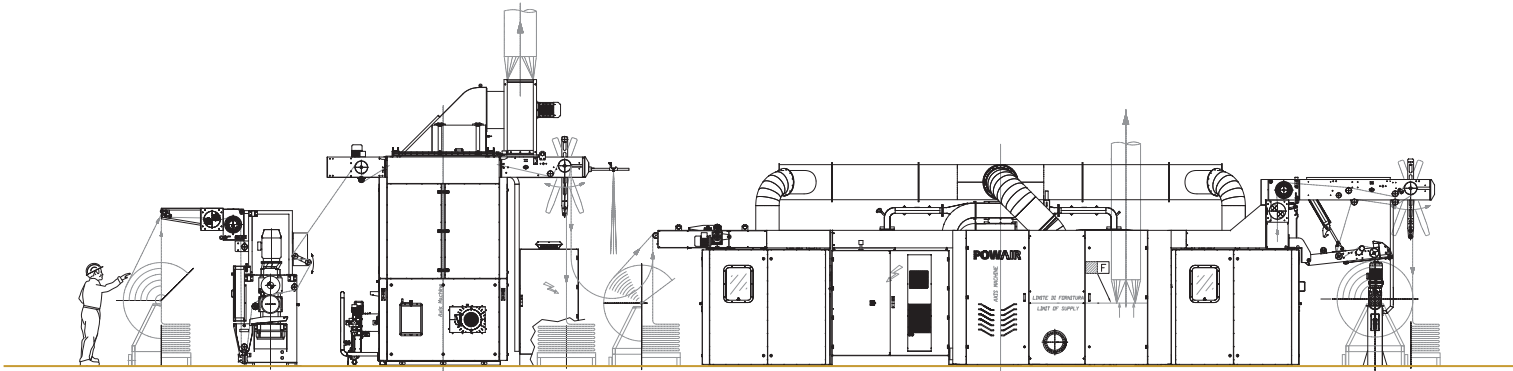


THE GREEN CHOICE

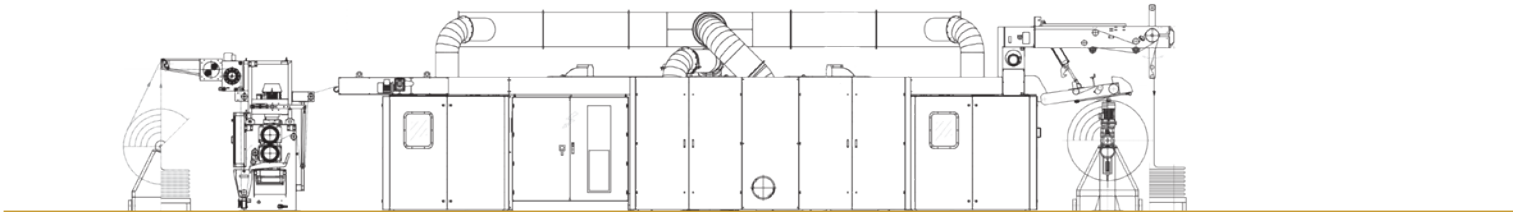
PowAIR introduces consistent novelties in direction of a sustainable process with massive air recycling system, lowering down the thermal consumption up to 39% at high temperature of process, with relevant reduction in cost per meter. The inverter controlled exhaust fan is designed to be adjusted only to extract the moisture while the majority of the hot air is fully recycled back into the burner. 4 rotating filters of easy access for mainance intercept the lints of the process and through suction devices bring all lints into a central filtering compactor.

MODULATION OF AIR FLOW: PRESSURE AND AMOUNT

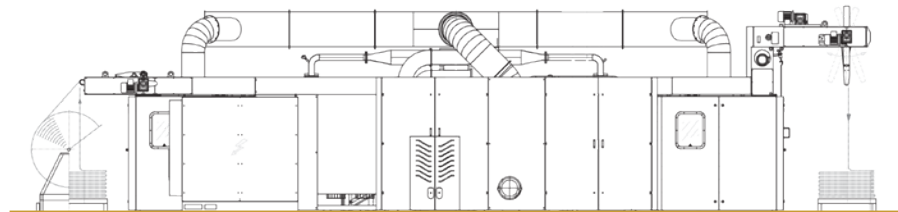
We introduced sophisticated technical devices in the air inlet to overcome the common antithesis between drying and tumbling. The operator in fact can easily switch at pleasure from the delicate mode of drying up to the most aggressive functions of the tumbler in a fluid sequence of intermediate positions. This is due to an automatic patented system (*DimmAIR*) which enables to reduce and increase the blowing nozzles at pleasure and therefore manage the balance between air quantity and air pressure, basing on the nature of fabric to be processed or the desired effect. PowAIR takes advantage of the air in two different modes: high pressure mode to pop up pile and swell the fibers, break the rigidity of the goods through the crash on the grids (*Tumbling mode*) or with a greater volume of air to enable the maximum evaporation capacity (*Drying mode*), thus becoming the ultimate alternative to conventional dryers.



COMPLETE POWAIR LINE WITH PAD MANGLE & K-BOOSTER PRE-DRYER



PADDER + POWAIR WITH COMBINED EXIT (FLAT FOLDING & BATCHER)



POWAIR WITH STANDARD FLAT FOLDING EXIT

APPLICATIONS:

PowAIR unlocks new tumbling horizons in the various fabric compositions and applications, from silky & printed goods to shirting and bottom weights, to Home Textiles up to the new cellulosic fibers (*lyocell, cupro*), to polyester, both woven and knits.

Bottom weights

Garment-like touch and exaltation of surface finishing (*emerizing, carbon brushing and raising*).

Womanswear

Tencel & blends, pes/modal, with peach-skin exaltation, voluminous hand and bounce. Printed goods and womanswear.

Shirting & Linen

Yarn dyed tumbling or linen blends tumbling with shabby feel and maximum drapery.

Knits

Intense drying power with minimal mechanical action to dry at the same time improving volume and touch.

Wool & Blends

Both for heavy woollen and delicate carded wool to confer volume and bounce.

DATA SHEET

Available Working Widths:	2200 x 2000 mm
	2600 x 2400 mm
	3400 x 3200 mm
Evaporation capacity:	up to 500 kg/h
Mechanical speeds:	3-50 mt/min
Heating modes:	Gas, Thermal Oil, Steam
Installed thermal power:	700 kW
	603,000 Kcal/h
Maximum air temperature:	170° C (gas)
Average gas consumption:	20-28 m³/h
Compressed air line:	½" - 6 bar
Average power consumption:	65 kW
Sizes:	12.300 mm
	4.975 mm
	3880 mm (h)
Weight:	16.750 - 18.000kg