



PATENTED  
TECHNOLOGY

# RADIO FREQUENCY DRYERS FOR FABRICS

Reduce process time, achieve uniform drying  
and improve quality

STALAM's outstanding efforts in researching innovative drying technologies led to the development, in co-operation with a leading Italian manufacturer of finishing machines, of a revolutionary Radio Frequency dryer for fabrics. The "RF/T" series dryer can be considered the only industrial radio frequency drying equipment specifically designed for the tensionless drying - partial or complete - of woven or knitted fabrics. For this application STALAM purposely developed the Double Polarity Electrode, that has the ability to deliver high power values to thin (low thickness) products by creating a highly-concentrated electric field even when fed with low RF voltages.

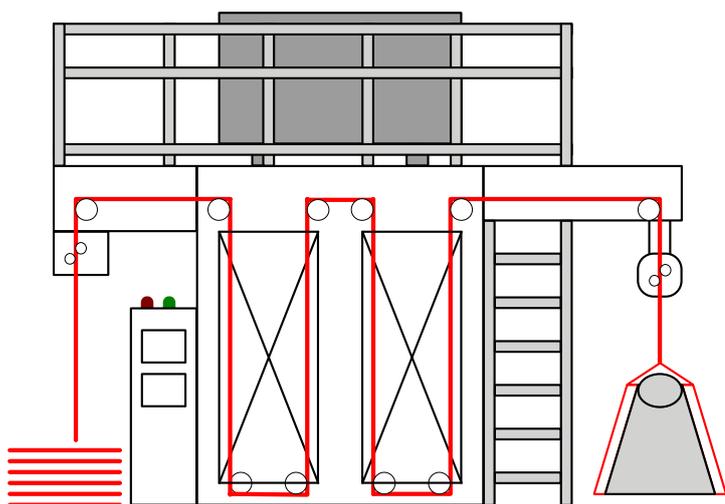
Thanks to this electrode, a great productivity can be obtained within a small space. The whole drying process only takes a few seconds at a low temperature (40-60°C). The residual moisture in the fabric is perfectly uniform and controlled by an in-line computerised system.

The "RF/T" series dryer can be used not only as a stand-alone drying unit, but also in combination with existing (old or new) equipment like conventional tensionless dryers, relaxation dryers, stenters, thermosetting equipment, and many other finishing machines, especially in the woollen industry (e.g. decating, pressing and steaming machines): the "RF/T" will increase the efficiency and throughput of existing equipment, in addition to improving the quality of the finished product in terms of dimensional stability, formability and shear rigidity.



**Double Polarity Electrode**  
**Patented Technology**  
( Patent n. 01266633 )





## How it works

The fabric is fed by a spreading and centring equipment to the drying chamber, where it passes through the patented Radio Frequency electrodes. The fabric conveying system is equipped with motorised rollers that prevent any tension on the fabric. The air circulating in the drying chamber comes from the RF generator cooling system (for heat recovery) and its temperature is suitably controlled. The water vapour released by the fabric is evacuated by an extraction fan. A sophisticated moisture detection and control system at the exit adjusts automatically both the conveying speed and the RF power delivery in order to maintain the residual moisture content of the fabric as set by the operator, with an accuracy of  $\pm 0.5\%$ .

## RF BENEFITS

- high productivity within a small space
- rapid process, it takes just a few seconds
- the fabric gets dried under low temperature conditions (40-60°C)
- the residual moisture content in the fabric is perfectly uniform
- the process is controlled by an in-line computerised system
- the construction is modular, to fit any production requirement
- it can be used as a stand-alone unit or to boost the performance of existing conventional equipment

## FEATURES

Work frequency of generators	(I.S.M.) 27.12 MHz $\pm$ 0.6%	Average drying temperatures	40 ÷ 60°C
Cooling system of generators	air cooling	Inlet and outlet systems	according to customer's specifications
Average evaporation rate	1.2 ÷ 1.3 kg (H <sub>2</sub> O)/kW(RF)h	Dimensions	4.2 m (L) x 4.2 m (W) x 4.2 m (H)
Available RF power values	60 kW, 85 kW	Residual moisture control	automatic by means of sensors and feed -back control of the dryer
Conveying system	with motorization for constant tension control of the fabric		

## CONTACT US

Via dell'Olmo, 7  
I - 36055 Nove (VI)

T. +39 0424 597400  
F. +39 0424 590722

E. [stalam@stalam.com](mailto:stalam@stalam.com)  
I. [www.stalam.com](http://www.stalam.com)