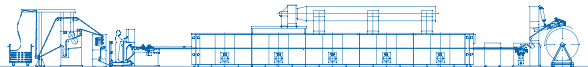


# Artos Unistar

Woven fabrics finishing line



Still the peak in finishing machinery

# Peak results because of outclass technology

## 1 Low-tension guiding of the fabric: the entry assembly

Starting with the entry assembly the gentle fabric treatment will be realized. The elements of the entry assembly take the fabric from the batch or in plaited form. The fabric will be guided centered and with low tension towards the machine. The proven Artos Uni-Flex padder with its stabilized cylindrical rollers provides excellent impregnation results.

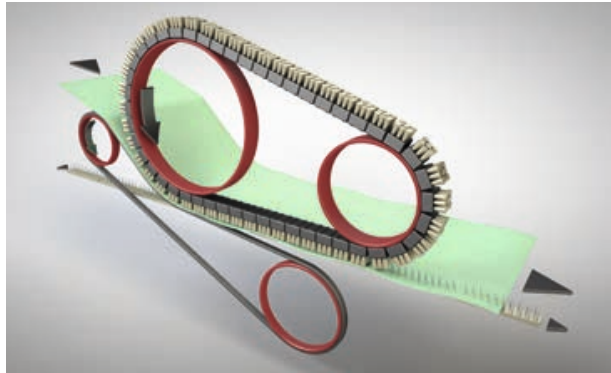
## 2 Excellent weft straightening: the straightening unit

The Artos Unistar does also not make any compromises concerning the straightening units but pays attention to the highest available quality. Only straightening units of well-known manufacturers will be integrated in the production line. This secures that best fabric qualities will be produced.

## 3 Safe pinning-on: the overfeed and pinning device

The engineers of the Artos Unistar had one goal above all: absolute precision. This is most realized in the overfeed and pinning device. The pneumatically liftable and lowerable overfeed device (also known as shrinkage unit) secures the accurate and constant deep and long pinning-on of the fabric because of its bristle belt.

The ideal cooperation between the support belt and the support scray assists the precise pin-on of the fabric selvages into the pins of the fabric transport chain. And of course the shrinkage roller is exchangeable by a quick die change equipment.



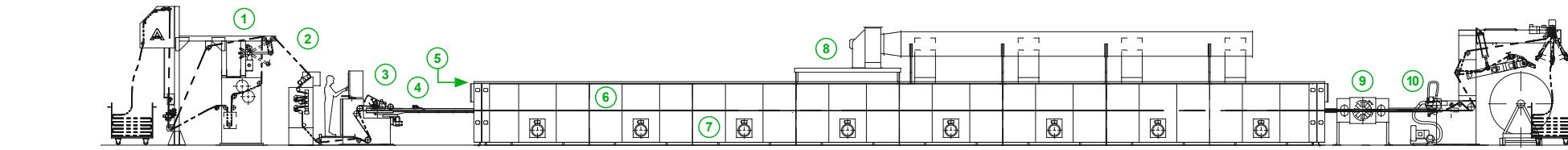
## 4 High-tension fabric transport without lubricants but with long running times: the horizontal Artos chain

The heart of the Artos Unistar is the legendary Artos horizontal chain. It is a lubrication-free sliding pieces chain with enormous capability of resistance. Especially in high transverse tension processes the chain proves its superiority. The chain is usable for high impacts and extreme cross tensions and exceeds with these characteristics the requirements of “coating” and “carpet”.

Because of the usage of synthetic sliding pieces and bushes there is no need of lubricants inside the chain rails and there are no wear parts inside the chain rails. It does also mean that there is no oil and grease - because of this special chain - which may get into the dryer.

Another advantage of the Artos horizontal chain is the very little down time period. During the exchange of parts of the chain it is not necessary to wait until the dryer has cooled down. The chain can be pulled out of the dryer, the chain parts can be exchanged and ideally an alternative chain can be inserted in the machine. Long running times and minimal costs are the advantages.

Of course you can expect from a chain of this quality that you can choose the configuration of the pin bars individually. Moreover we can offer a suitable clip according to each fabric construction. Naturally the combination pin and clip is also possible.

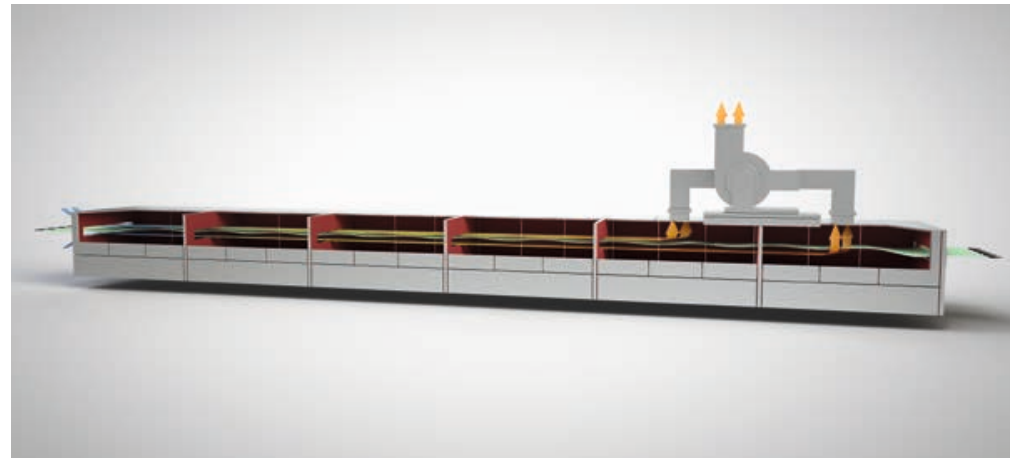


## 5 Patented air guiding: the Econ-Air air guiding system

The patented Econ-Air system fulfills the today's requirements for energy efficiency and sustainability already since many years. It utilizes the inserted thermal energy in an optimal way.

The fresh air will get centralized in the dryer via an entry slot and will be guided in parallel flow with the fabric through the dryer. A “blue competence process” which enriches also the quality of the fabric because the rising moisture content in the dryer supports the thermal transfer to the fabric and arranges the comfortable grip of each article.

The exhaust air measuring device regulates the amount of exhaust air and secures hereby the desired moisture content in the exhaust air. Because of this process the volume of exhaust air will be reduced and makes sustainable energy saving and a reduction of production costs possible.

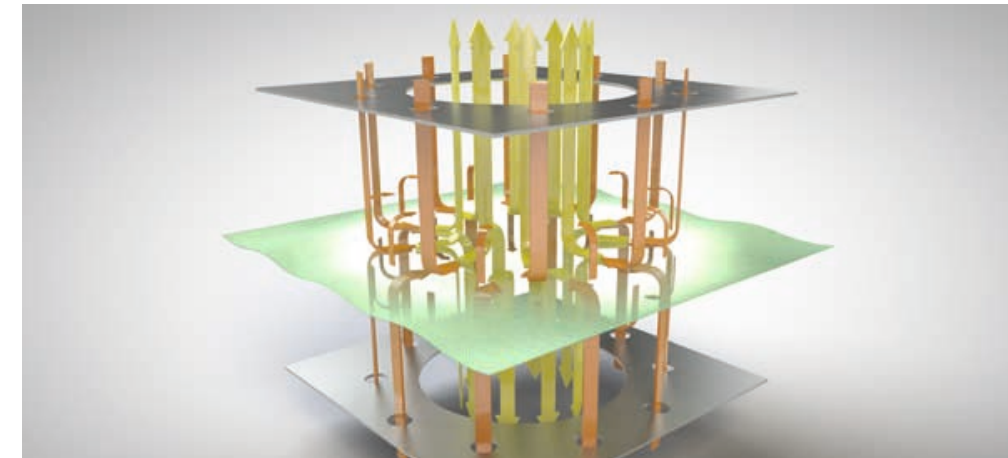


## 6 Optimal temperature distribution: the Star-Jet nozzles

The Star-Jet nozzle system combines an optimal distribution of the temperature with an even and powerful ventilation of the fabric. This allows a fabric quality achievement which meets highest requirements.

The shifted allocation of the nozzles is essential and provides the even trough flow of the fabric. The Star-Jet nozzle system guarantees an absolute homogeneous floating of the fabric so that it will be relaxed permanently and dried in a gentle way before the fixation process starts. Thereby the knitted fabric contains best fixation and residual shrinkage values as well as a voluminous and soft grip. The patented Star-Jet nozzle is an essential component of the Artos Unistar dryer concept.

For the treatment of pile fabric and dyeing processes on the stenter frame the Artos Unistar can be equipped with the Star-Line nozzle which has been developed especially for these requirements.



## 7 Regulated, reproducible air distribution: the circulation fans

Each compartment contains one fan. The motor has a high efficiency class, provides lowest electric power consumption and will be operated by a frequency inverter. These are the basics for the involvement of the circulation fans in the recipe management.

Optionally the upper and lower air distribution can be adjusted continuously and without steps.

## 8 Consequent maximal moisture in the air circulation: the exhaust air fan

The exhaust volume of the exhaust air fan will be defined according to the length of the dryer. A frequency controlled motor regulates the exhaust air volume stepless. In combination with an exhaust air measuring device the speed of the exhaust air fan will be regulated so that the exhaust air will automatically contain the maximal possible moisture.

This warrants that only exhaust air with maximal moisture content will leave the dryer.



## 9 High power cooling system: the cooling zone

Also the cooling zone contains the powerful Star-Jet nozzle. It can be engineered with 1.050 mm or 1.500 mm length according to each requirement. Selectively one or two fans can be installed.

## 10 Minimal waste during the cutting of selvages: the selvedge cutting device

A needle wheel with a frequency controlled motor takes the fabric from the needles of the base chain. Thus the working width and the initial tension of the fabric will remain.

Afterwards the needle wheel of the cutting device guides the fabric to the cutting knife. Minimal waste is guaranteed because the cutting knife is located above the pin bars. A high-performance suction device allows the trouble-free and uncomplicated evacuation of the cut selvages.



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# Economic and sustainable

## ○ **Perfect adaptation to the fabric:** the individual width adjusting device

All width adjusting spindles are individually motor-driven. The settings of the individual width adjusting devices can be saved as a presetting in a recipe and can be retrieved for recurrent productions.

The spindle and spindle nut do not need any lubricants. Consequently there is no additional oil which can get in the dryer and may pollute the fabric. Furthermore many costs will be saved.

## ○ **Energy efficiency to the finest detail:** the drive unit

The digital individual drive concept provides the harmonic transport of the fabric through the complete line. Energy efficient motors by Lenze or Siemens are regulated by frequency converters so that all gears drive automatically synchronous with the speed of the main drive.



## ○ **Variable for the utilization of different energy sources:** the heating systems

There are three different possibilities to heat the dryer: indirect by steam, indirect by oil circulation or direct by gas with areal burners. The heating radiators will be configured according to the desired steam pressure. The configuration of the oil circulation radiators corresponds to the constructive specifications. The Maxon burners are designed especially for the Artos Unistar dryer and have an adjustment range of 1 : 40. Thereby the Maxon burner lays the ideal foundations for energy efficient production workflows.

## ○ **Error-free production flow via library of data:** the automation system

The Artos Unistar stenter is equipped with a powerful automation system. It regulates the fabric-drives, the heating system, the temperature and the individual width adjustment. Furthermore there is a trouble indication device and a recipe management.

The handling is arranged in a very comfortable way because of modern touch screen technique. Per VPN-Router it is possible without difficulties to make remote diagnosis and to support technically via Internet. Latest hardware and software elements turn the production willingness of the machine into being even more reliable. Furthermore it reduces the fault liability of each element.

# Artos Unistar



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