



AERODYNAMIC WEBFORMING

AUTEFA Solutions leads the way



AUTEFA SOLUTIONS –

Experience, Know-How and Competence
in Nonwoven Technology

AUTEFA Solutions leads the way

As a system supplier, AUTEFA Solutions represents companies with a long tradition and a history of years of successful participation in the market. Combining the experience of the companies AUTEFA, Fehrer, FOR and Strahm the company stands for high quality, durability and performance made in Europe.

AUTEFA Solutions creates innovative technological concepts for nonwoven products by utilizing the skills and practical experience of its employees. The customers benefit from the dynamic flexibility and specialist know-how of AUTEFA Solutions key technology sites in Germany, Austria, Italy and Switzerland.



STRAHM

FIBER PREPARATION	fiber opening and blending			
WEB FORMING	carding	aerodynamic web forming airlay	airlaid	crosslapping
WEB BONDING	needling	chemical bonding	thermobonding	hydro-entanglement
WEB FINISHING	drying	impregnating/ coating	embossing/ perforating	scattering
WEB HANDLING	winding	cutting	stacking	festooning



AUTEFA Solutions is part of China Hi-Tech Group Corporation (CHTC).

AUTEFA Solutions leads the way in aerodynamic webforming

The aerodynamic web forming machines from AUTEFA Solutions utilize the aerodynamic principle which results in three-dimensional fiber orientation and total randomization, enabling isotropic web properties. Airly line solutions distinguish itself through maximum product quality, economical production and reliability.

Taking advantage of the long standing experience in carding and card feeding technology of F.O.R. and the worldwide acknowledged know-how in aerodynamic web forming of Fehrer K 12, AUTEFA Solutions provides the nonwoven industry with a proven and most efficient opportunity in web forming.

The Airly process stands for an improved MD:CD ratio and a three-dimensional web structure. During the process the fiber material could be opened up to a single fiber, this enables a high versatility regarding fiber choice.

The FUTURA design enables easy opening and quick access for cleaning and maintenance. The various line components are mounted on a linear guiding system. Due to the modular structure of the individual components, it allows a modular configuration of the machine, tailored to customer requirements. Completed with Needle Punching Machines Stylus and Thermobonding Oven HiPerTherm, AUTEFA Solutions provides aerodynamic web forming lines out of one hand.

ADVANTAGES

- Experience- over 500 system sold
- High production capacity
- Intensive fiber opening
- Total random 3D web structure and isotropic strength values
- Increased resilience of the web
- Random webs of up to 80 % greater volume, with "High-Loft" device
- Suitable for all kinds of bonding processes such as thermal-, chemical- or needle-bonding

ADVANTAGES NEW FUTURA DESIGN

- High flexibility with modular structure of the individual components mounted on a linear guiding system
- Electrical and recipe controlled adjustment of deflection tube for homogenous fiber blendings
- Easy opening for fast cleaning and efficient maintenance



Applications and Products

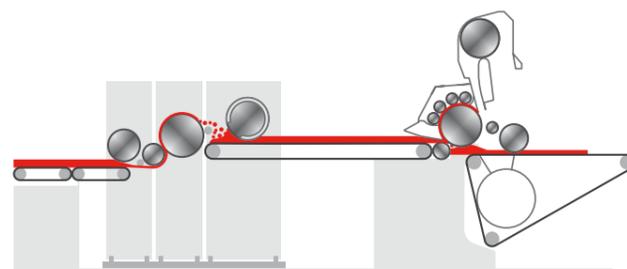
APPLICATIONS:

- Filter materials
- Automotive felts
- Automotive substrates
- Insulation materials for thermal and acoustic insulation
- Interlinings
- Mattress felts
- Medical and hygiene products
- Blankets (needled)
- Industrial wipes
- Waddings for upholstery and garments

MATERIALS AND QUALITY:

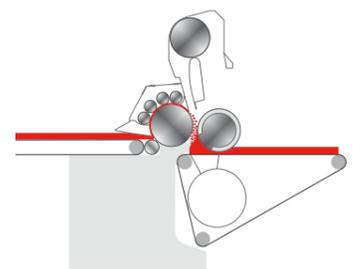
- All kind of man-made fibers
- Natural fibers (cotton, flax, hemp, sisal, jute etc.)
- Reclaimed textile waste and shoddy
- Carbon fibers
- Glass fibers
- Weight range 80 – 7000 g/m²
- Fiber properties: 1.7 – 200 dtex; up to 100 mm staple length



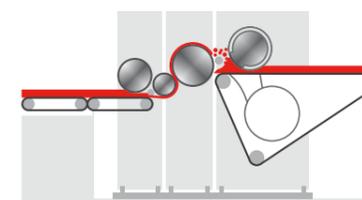


FUTURA V21/R

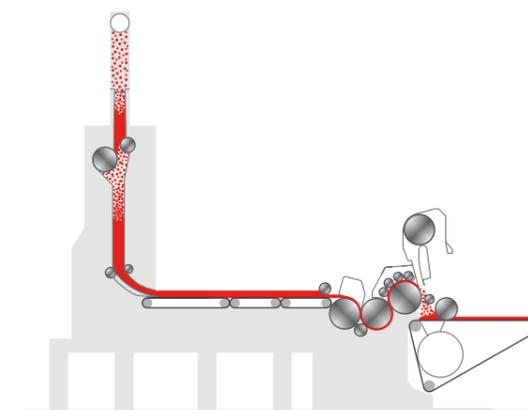
K12



K12 + High-Loft



FUTURA V12/R



Chute Feeder Weighing Belt K12-direct

Classic Aerodynamic Web Forming Line FUTURA V21/R – K12

EXCELLENT QUALITY AND FLEXIBILITY IN TWO STEPS

With over 500 units sold and installed worldwide the Fehrer V21/R – K12 is one of the success stories in the field of aerodynamic web forming. Fed by either a Chute Feeder or alternatively a Hopper Feeder the V21/R – K12 suits for a wide range of nonwoven products. Customers chose this proven assembly for certain products or standardized production processes.

This aerodynamic web forming line enables fiber opening and randomization in a two-step process. The pre-web forming machine FUTURA V21/R creates a uniform fiber batt from the material delivered by either chute feeder or hopper feeder. The following K12 provides opening to individual fibers and forms the three-dimensional fiber orientation typical for the aerodynamic process.

The FUTURA design enables easy opening and quick access for cleaning and maintenance. The delivery, carding and infeed components are mounted on a linear guiding system.

ADVANTAGES:

- Intensive fiber opening for improved material properties and regularity
- Electrical and recipe controlled adjustment of deflection tube for homogenous fiber blending
- Perfectly suitable for natural fiber blends
- High flexibility with modular structure of the individual components mounted on a linear guiding system
- Allround machine, wide range of applications
- Optional High-Loft Device

High-Loft Device for K12

INCREASES WEB VOLUME

The High-Loft device can be added to any Airlay K 12 in order to increase the degree of vertical fiber orientation. With the High-Loft device AUTEFA Solutions offers a system which enables the production of webs of higher volume.

The Airlay Card K12 with the High-Loft device is able to process a wide variety of fiber types and blends. The system is suitable for both thermal and spray bonding.

ADVANTAGES :

- Less web weight at the same web height, or increased web height at the same web weight
- Improved web resilience and compression resistance
- Enhanced web precision

Aerodynamic Web Forming Machine FUTURA V12/R

COMPACT AND ECONOMIC

The compact and economic solution for the processing of natural fibers such as coir, sisal, jute, hemp and cotton as well as animal hair and textile waste is the Aerodynamic Web Forming Machine FUTURA V12/R. Fed by a Hopper Feeder the FUTURA V12/R is capable of producing webs in the weight range of 400 – 7000 g/m using a minimal amount of space.

Especially for the production of materials from recycled textile waste and shoddy or natural fibers like coir this low-investment aerodynamic web forming machine is the key to provide reliable technology at reasonable costs.

The FUTURA design enables easy opening and quick access for cleaning and maintenance. The delivery, carding and infeed components are mounted on a linear guiding system.

ADVANTAGES:

- Space-saving design
- Low investment costs
- Economic production
- High capacity
- Special for recycling lines

Airlay K 12-direct

RELIABLE PRODUCT QUALITY AND ECONOMIC PRODUCTION

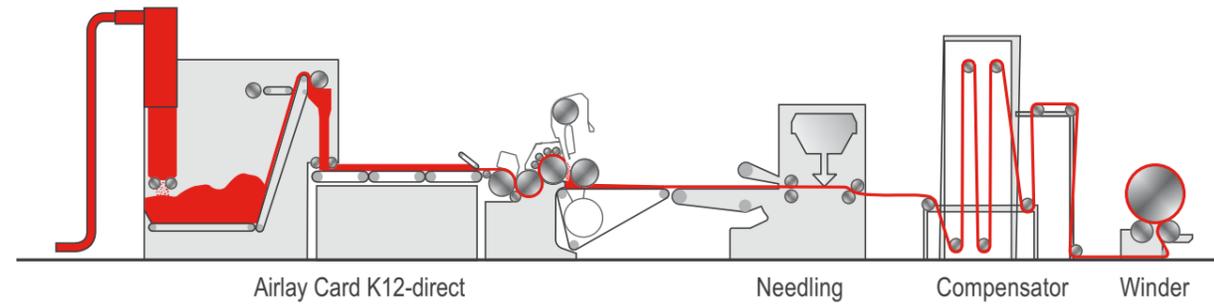
The infeed section of the Airlay Card K12-direct is a module taken from proven F.O.R. cards. It incorporates a large diameter feed roll with an overhead feed plate and licker-in. This section – replacing the V21/R – opens and drafts the mat and presents the fibers or fiber tufts to the main drum with workers and strippers. The fibers are released by centrifugal forces, supported by an airstream and are laid onto a sieve conveyor with suction fan.

ADVANTAGES :

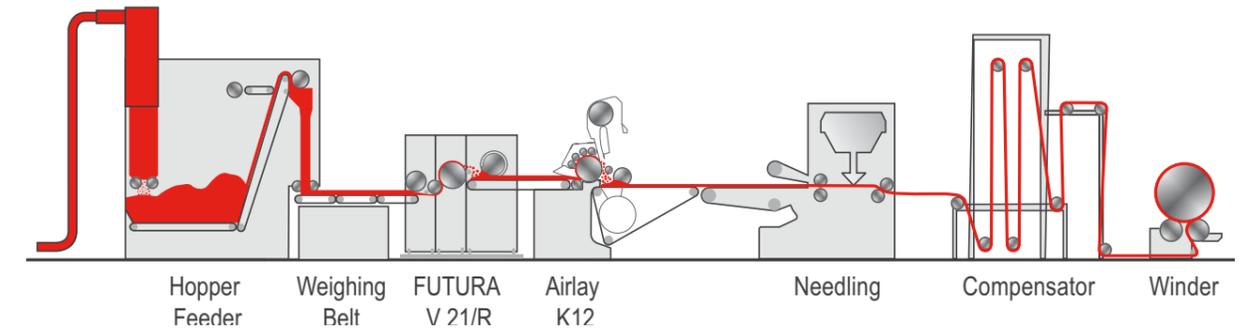
- Gentle fiber treatment due to overhead infeed leads to less fiber breakage and improved CV value
- Reduced space requirements due to compact design and omission of V21/R
- Optimized energy consumption (less installed power) due to reduced number of drives and suction devices
- Lower amount of out-going air requires smaller air filtration plant
- Optional High-Loft Device
- Alternative feeding possibilities

Line Configurations

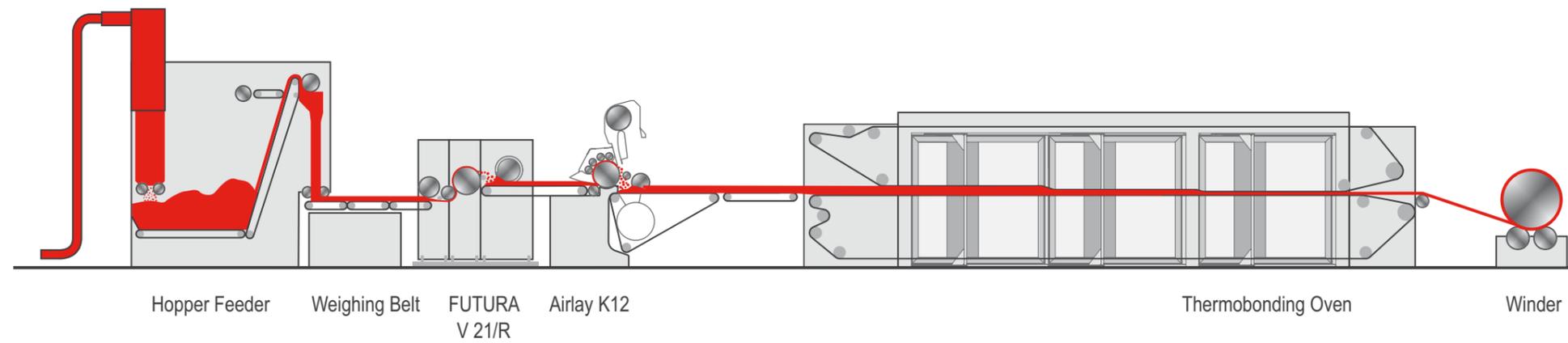
GLASS FIBER MATS



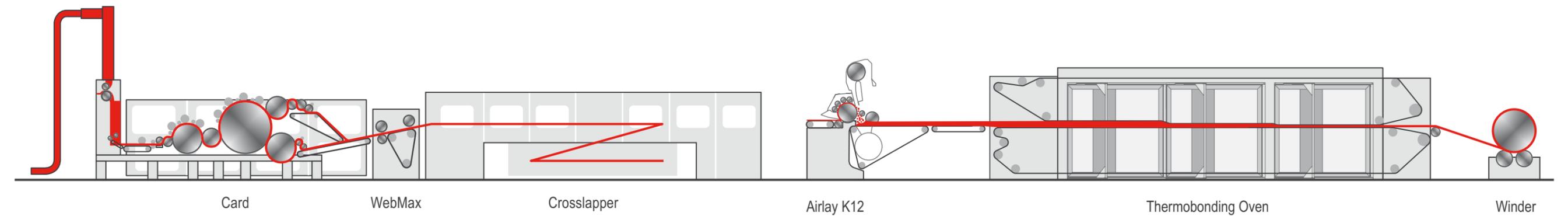
AUTOMOTIVE "SUBSTRATES" AND NOISE INSULATION FELTS



WADDINGS / HOME FURNISHING AND THERMAL INSULATION



HIGH-QUALITY AIRLAY APPLICATION



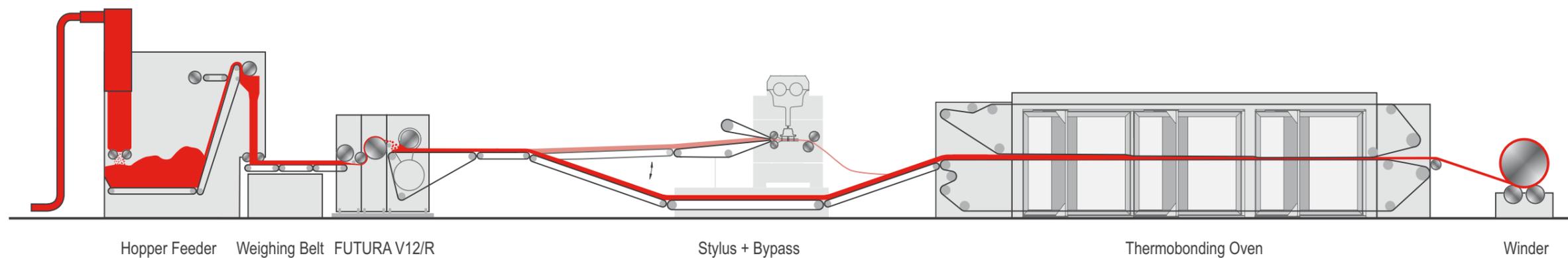
Specifications

OVERVIEW	V21/R – K12	K12 HIGH-LOFT	V12/R	K12-DIRECT
Weight range	80 – 3000 g/m ² 80 – 6000 g/m ² *	80 – 3000 g/m ² 80 – 6000 g/m ² *	400 – 7000 g/m ²	80 – 3000 g/m ² 80 – 6000 g/m ² *
Production capacity	up to 500 kg/h/m	up to 500 kg/h/m	up to 1000 kg/h/m	up to 500 kg/h/m
Production speed	up to 30 m/min	up to 30 m/min	up to 10 m/min	up to 30 m/min
Working widths	1200 – 4200 mm	1200 – 4200 mm	1200 – 4200 mm	1200 – 4200 mm
Fiber fineness	1.7 – 200 dtex	1.7 – 200 dtex	7 – 200 dtex	0.9 – 200 dtex
Fiber length	20 – 100 mm	20 – 100 mm	20 – 100 mm	20 – 100 mm
FIBER TYPES	V21/R – K12	K12 HIGH-LOFT	V12/R	K12-DIRECT
Synthetical	✓	✓	✓	✓
Natural	✓		✓	✓
Animal Hair	✓	✓	✓	
Textile Waste	✓	✓	✓	✓
Glass	✓		✓	✓
Carbon	✓		✓	✓
APPLICATIONS	V21/R – K12	K12 HIGH-LOFT	V12/R	K12-DIRECT
Insulation	✓	✓	✓	✓
Mattress	✓	✓	✓	✓
Waddings	✓	✓	✓	✓
Blankets	✓			
Interlinings	✓	✓		
Wipes	✓			
Substrates	✓			✓
Filtration	✓	✓		✓
Medical	✓	✓		✓
Hygiene	✓	✓		✓
Automotive	✓		✓	✓

All values depending on fiber specification and blends respectively web weight.
* In special configuration with selected fibers.



ECONOMIC AIRLAY APPLICATION





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