



AERODYNAMIC WEBFORMING

AUTEFA Solutions leads the way



AUTEFA SOLUTIONS –

Experience, Know-How and Competence
in Nonwoven Technology

AUTEFA Solutions leads the way

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

AUTEFA Solutions Nonwoven Technology

| | | | |
|------------------|----------------------------|------------------|-------------------------|
| OPENING/BLENDING | FIBER OPENING AND BLENDING | | |
| WEB FORMING | CARDING | CROSSLAPPING | AERODYNAMIC WEB FORMING |
| WEB BONDING | NEEDLING | CHEMICAL BONDING | THERMOBONDING |
| WEB FINISHING | DRYING | | IMPREGNATING |
| WINDING/CUTTING | WINDING | CUTTING | STACKING |



AUTEFA Solutions is part of China Hi-Tech Group Corporation (CHTC).
China Hi-Tech Group Corporation is the world biggest successful textile machinery supplier.

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. The aerodynamic principle results in 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, AUTEFA Solutions provides the nonwoven industry with a proven and most efficient opportunity in web forming.

The Airlay 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.

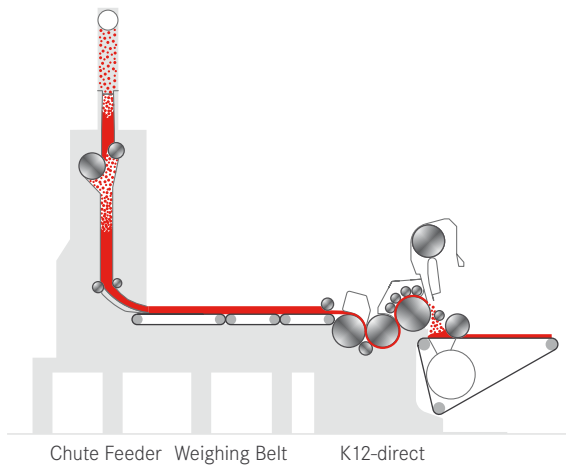
APPLICATIONS:

- 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

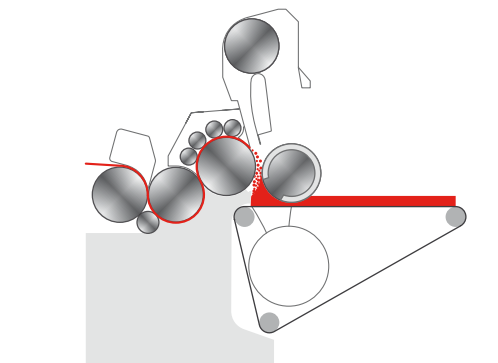
MATERIALS AND QUALITY:

- 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





Chute Feeder Weighing Belt K12-direct



K12-direct + High-Loft

K12-direct: The Random Card

FOR MAXIMUM PRODUCT QUALITY AND ECONOMIC PRODUCTION

The Random Card K12-direct is the state of the art web forming machine utilizing the aerodynamic principle. An excellent web quality and a wide range of applications characterize this machine. The Random Card K12-direct is ideally prepared for connection with a chute feeder, thus enabling furthermore better CV values and a gradually adapted fiber opening. The fiber material passes over a weighing belt which regulates the infeed rate to minimize weight variations. The aerodynamic principle results in maximum product quality, economical production and reliability.

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 opens and drafts the mat and presents the individual 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
→ 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
- Allround machine, wide range of application
- Optional High-Loft Device
- Alternative feeding possibilities

High-Loft Device for K12

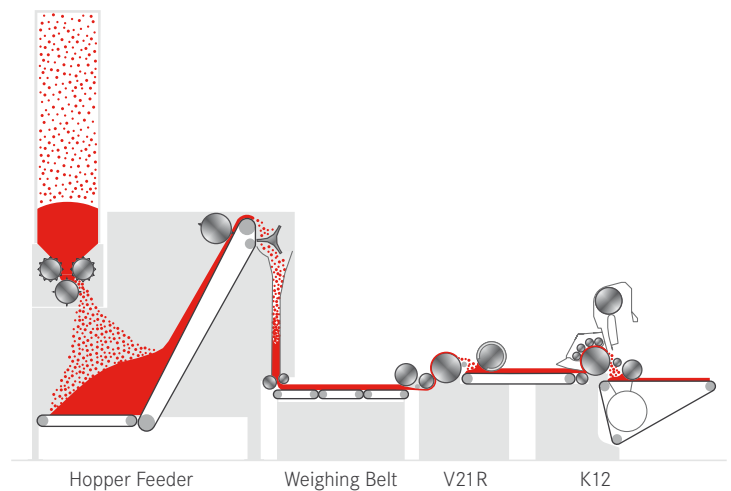
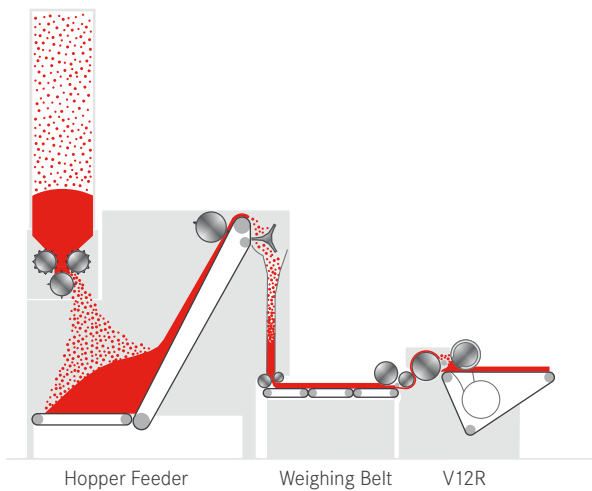
REDUCES WEB WEIGHT, INCREASES WEB VOLUME

The High-Loft device can be added both to the Random Cards K12-direct and K12 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 Random 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



V12/R: Aerodynamic Web Forming Machine

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 V12/R. Fed by a Hopper Feeder the V12/R is capable of producing webs in the weight range of 400 – 7000 g/m² 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.

ADVANTAGES:

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

V21/R – K12: Classic Aerodynamic Web Forming Assembly

MAXIMUM 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.

Other than the Random Card K12-direct this traditional aerodynamic web forming assembly enables fiber opening and randomization in a two-step process. The pre-web forming machine V21/R creates a uniform fiber batt from the material delivered by either chute feeder or hopper feeder. The following randomization unit K12 provides the three dimensional fiber orientation typical for the aerodynamic process.

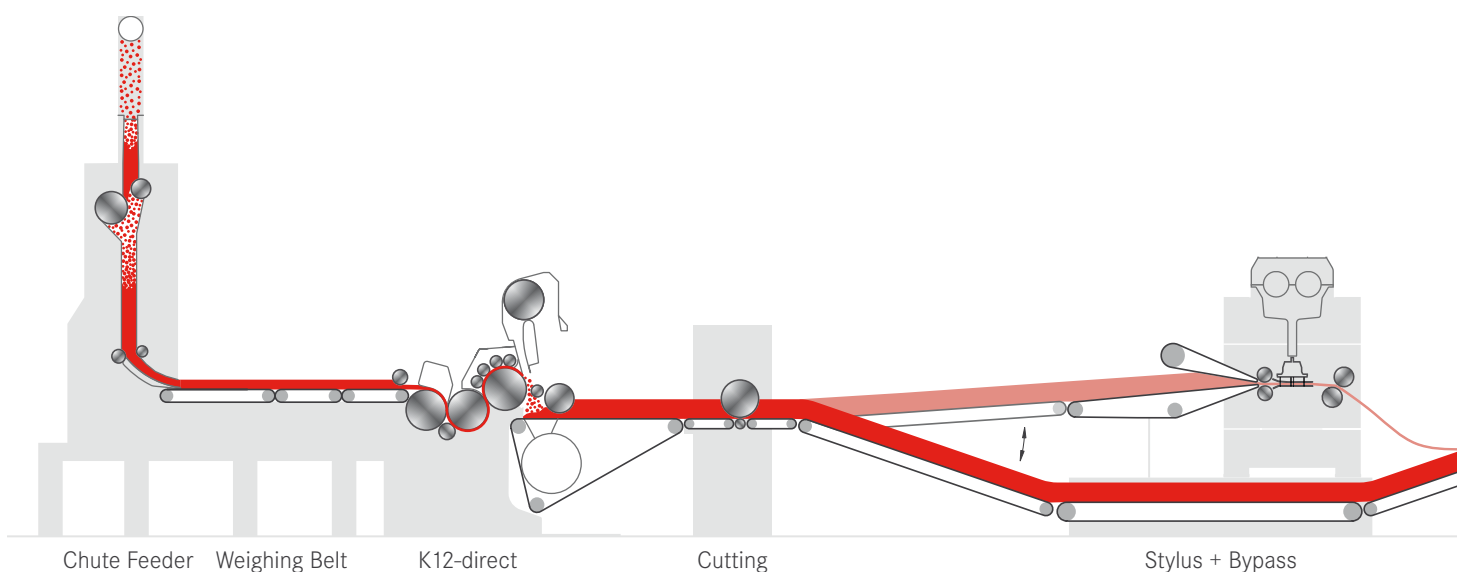
ADVANTAGES:

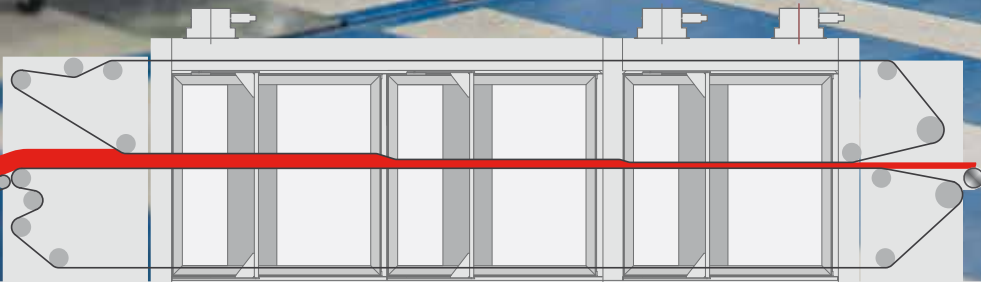
- Intensive fiber opening
- Perfectly suitable for natural fiber blends
- Allround machine, wide range of applications
- Optional working width adjustment
- Optional High-Loft Device
- Alternative feeding possibilities

Specifications


| OVERVIEW | K 12-DIRECT | V 12/R | V21/R – K12 | K 12 HIGH-LOFT |
|---------------------|--|-----------------------------|--|--|
| WEIGHT RANGE | 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 * | 80 – 3000 g/m ² 80 – 6000 g/m ² * |
| PRODUCTION CAPACITY | up to 500 kg/h/m | up to 1000 kg/h/m | up to 500 kg/h/m | up to 500 kg/h/m |
| PRODUCTION SPEED | up to 30 m/min | up to 10 m/min | up to 30 m/min | up to 30 m/min |
| WORKING WIDTHS | 1200 – 4200 mm | 1200 – 4200 mm | 1200 – 4200 mm | 1200 – 4200 mm |
| FIBER FINENESS | 0.9 – 200 dtex | 7 – 200 dtex | 1.7 – 200 dtex | 1.7 – 200 dtex |
| FIBER LENGTH | 20 – 100 mm | 20 – 100 mm | 20 – 100 mm | 20 – 100 mm |
| FIBER TYPES | K 12-DIRECT | V 12/R | V21/R – K12 | K 12 HIGH-LOFT |
| Synthetical | ✓ | ✓ | ✓ | ✓ |
| Natural | ✓ | ✓ | ✓ | |
| Animal Hair | ✓ | ✓ | ✓ | ✓ |
| Textile Waste | ✓ | ✓ | ✓ | ✓ |
| Glass | ✓ | ✓ | ✓ | |
| Carbon | ✓ | ✓ | ✓ | |
| APPLICATIONS | K 12-DIRECT | V 12/R | V21/R – K12 | K 12 HIGH-LOFT |
| 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.





Double Belt Thermobonding Oven

A large, solid red geometric shape, resembling a parallelogram or a trapezoid, positioned on the right side of the page. It overlaps with a background image of a pile of silver metal shavings.

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