

FECKEN **FK** KIRFEL

Always a cut above – since 1870

Bandknife Splitting Machine K
Profile Cutting Machine D

Type | **K 21**

Type | **K 31**

Type | **D 21**

Type | **D 31**



Helga Hoffmeister

Purchase

Michael Förster

Head of the Warehouse Department

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Fecken-Kirfel produces precise and efficient cutting machines to process a wide variety of different plastics, rubber and similar materials. Founded in 1870, this family-owned company today leads the way on technology and quality in its field worldwide. Using its large pool of engineering knowledge and expertise, Fecken-Kirfel works together with customers to keep on developing its range of machines further. We produce 100 % of our cutting machines at our main base in Aachen, Germany.

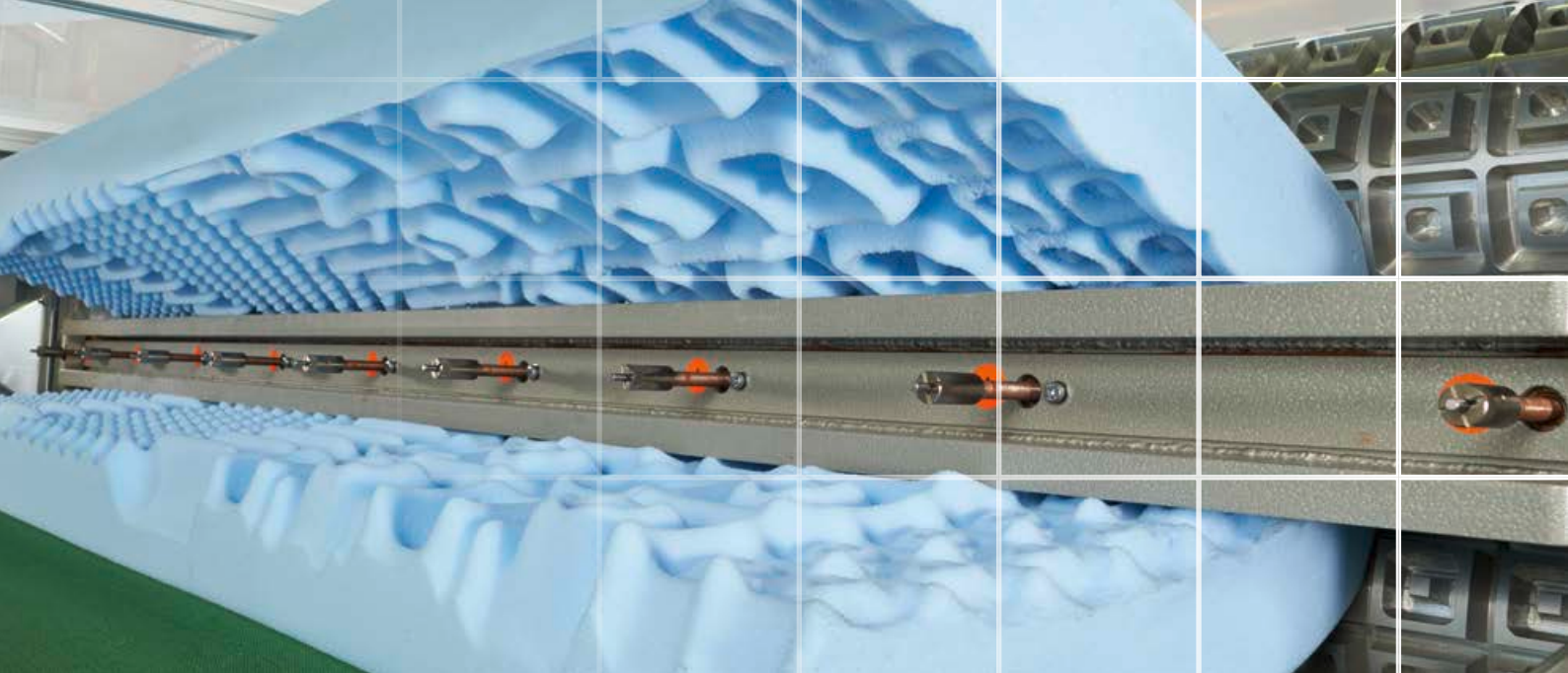
Founded in 1870

Independent
family-owned business

Cutting machines
“Made in Germany”

Machines process wide
variety of materials

Leading the way on technology
and quality worldwide



HELLO AND WELCOME!

The K and D machine series from Fecken-Kirfel offer the greatest possible flexibility for splitting and/or profiling slabs and rolls. The range of materials that can be cut or split is immense. It extends from PU foams to cellular rubber (neoprene), right through to reconstituted bonded rubber or PU mats with higher densities. The range of applications is just as wide. Types K and D can be used in the following areas: in the mattress, camping, and leisure industry; in the production of packaging materials; in the building industry, particularly for noise insulation and shock absorption; and also in the production of sports goods as well as in the shoe industry for the production of soles and rubber sandals.

To make your production even more flexible, these machines are also available as a K/D combination for splitting and profiling.

Very low tolerances
+/- 0.1 mm

Material is used
efficiently

No waste

All-purpose

Simple operation of the
machine

Simple maintenance



Martin Ring
Construction/Service technician



Due to the stable feed rollers, our K-types cut layers of up to 0.8 mm from the most wide-ranging materials.

BANDKNIFE SPLITTING MACHINE FOR LAYERS WITH TIGHT TOLERANCES

Three factors ensure compliance with tight tolerances. On the one hand, the bandknife is automatically adjusted in the production process and therefore, even when worn, always goes into the ideal knife position. On the other hand, the cast-iron construction and the specially-formed knife beam are particularly robust.

Application: The slabs are manually fed in and removed by two operators. In order to use the K 21 or K 31 for roll goods, the machines can be equipped with conveyor belts and winding devices.

Material: Cellular rubber/neoprene, expanded rubber, sponge rubber, rubber granulate, EVA, PE foams, PVC foam, cellular „Vulkollan“, felt, foam plastic, as well as harder materials and greater densities.



Type | **K 21 and K 31**

Feed roller with
knurled surface

Perfect feed even
with soft materials

Bandknife is
automatically adjusted



K 31 in standard execution



Axel Funcke
Construction/Service technician



The execution of the K/D combi-machine means that our customers gain lots of flexibility in production. In around half an hour, the profiled roller is replaced with a smooth roller and the machine can split smooth layers.

PROFILE CUTTING MACHINES: EFFICIENT AND ECONOMICAL PROFILING, EVEN WITH LARGE SLAB THICKNESSES

The following also applies here: Three factors ensure compliance with tight tolerances and allow the profiling of large slab thicknesses. On the one hand, the bandknife is automatically adjusted in the production process and therefore, even when worn, always goes into the ideal knife position. On the other hand, the cast-iron construction and the specially-formed knife beam are particularly robust.

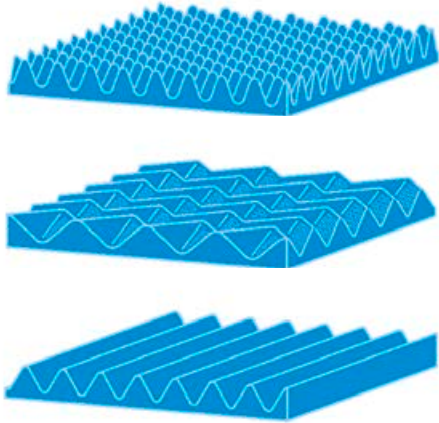
Application: The slabs are manually fed in and removed by two operators. In order to use the K 21 or K 31 for roll goods, the machines can be equipped with conveyor belts and winding devices.

Equipment: During cutting, the material to be cut exerts considerable pressure on the profile rollers. The profile rollers of the D 21 and D 31 are very stable and have a particularly large diameter. They withstand this pressure and do not buckle, which ensures a consistent cutting quality and a clean section.

Material: Cellular rubber/neoprene, expanded rubber, sponge rubber, rubber granulate, EVA, PE foams, PVC foam, cellular „Vulkollan“, felt, foam plastic, and harder materials and greater densities.



Type | **D 21 and D 31**



Bandknife is automatically adjusted

Slabs of up to 300 mm

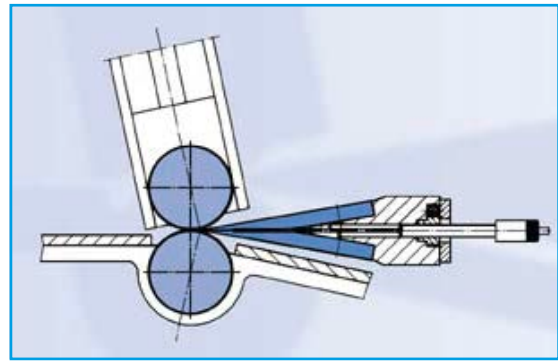
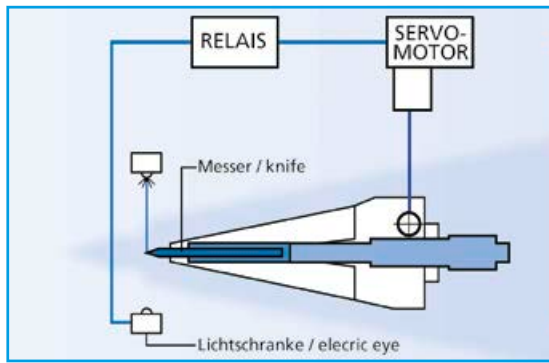
Even for high densities

As a combination machine for splitting and profiling

Particularly clean section



D 31 with conveyor belts and 7-zone profile roller



The following applies for all K and D types: The bandknife tip is automatically adjusted with the aid of a light barrier and a servomotor. The ratio between the material to be cut, the feed rollers, the knife tip, and the knife guide remains constant. This means that a consistent cut quality is achieved over the entire lifespan of the bandknife.

Technical data	K 21	K 31	D 21	D 31
Working widths	800 mm	1200 mm	1200 mm	1600 mm
	1200 mm	1400 mm	1600 mm	2000 mm
	1400 mm	1600 mm	2000 mm	2200 mm
	1600 mm	2000 mm	2200 mm	2400 mm
	2000 mm	2200 mm	2400 mm	
	2200 mm	2400 mm		
Material passage above the bandknife	110-120 mm	110-120 mm	-	-
Material passage below the bandknife	160-170 mm	160-170 mm	-	-
Material thickness	2 mm	2 mm	15-250 mm	15-300 mm
Bandknife speed	1.7 m/sec	1.7 m/sec	4.7 m/sec	1.7 - 4.7 m/sec
Bandknife width	85 mm	85 mm	85 mm	85 mm
Bandknife thickness	1 mm	1 mm	1 mm	1 mm
Lifespan of the bandknife	ca. 300-400 hrs depending on material	ca. 300-400 hrs depending on material	ca. 300-400 hrs depending on material	ca. 300-400 hrs depending on material
Feed speed	2-20 m/min	2-20 m/min	2-20 m/min depending on profile roller diameter	3-30 m/min depending on profile roller diameter
Grinding device	yes	reinforced	yes	reinforced
Roller drive	yes	reinforced	yes	reinforced
Bandknife drive	yes	reinforced	yes	reinforced
Bandknife adjustment	automatic	automatic	automatic	automatic

Type | **K and D**

Material is
used efficiently

All-purpose

Simple operation

Simple maintenance

OPTION FOR THE SHOE INDUSTRY

Device for wedge cutting: With this device it is possible to produce different height profiles in one splitting process on the K 21 and K 31. This is important for the production of soles for sandals or sports shoes, where the heel and sole are made from one piece, or for wedge strips which are used for repair.

To produce wedge strips, form elements are assembled at the appropriate wedge angles on the feed roller of a K 21 or K 31. This means that soles are cut without any waste.



Wedge cutting device

OPTION FOR THE SPLITTING OR PROFILING OF ROLL GOODS



K 21 with winder: In order to use the K or D machines for roll goods, they can be equipped with conveyor belts and winding devices.



Michael Pascher
Group leader Electrical Construction

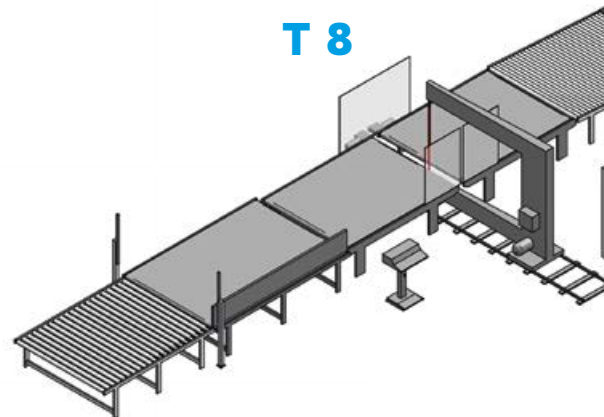


The adjacent example shows a very efficient route from the block to the prepared processed product on pallets-ready for packaging and delivery.

AUTOMATED PROCESSES INCREASE COST EFFECTIVENESS.

The Profile Cutting Machines D 21 and D 31 can be integrated perfectly into a cutting line operation.

1. The block is applied and aligned.
2. On a T 6 or T 8, the block is trimmed to get its exact production dimensions.
3. On the W 22, the block is split into the required layer thickness.
4. The slabs are taken by a single-sheet take-away and aligned on an air cushion station.
5. A D 21 or D 31 with infeed and outfeed conveyor carries out the profiling.
6. The flip-around turns the upper layer so that the profiled side is pointing upwards.
7. An A 7 stacks the profiled slabs.



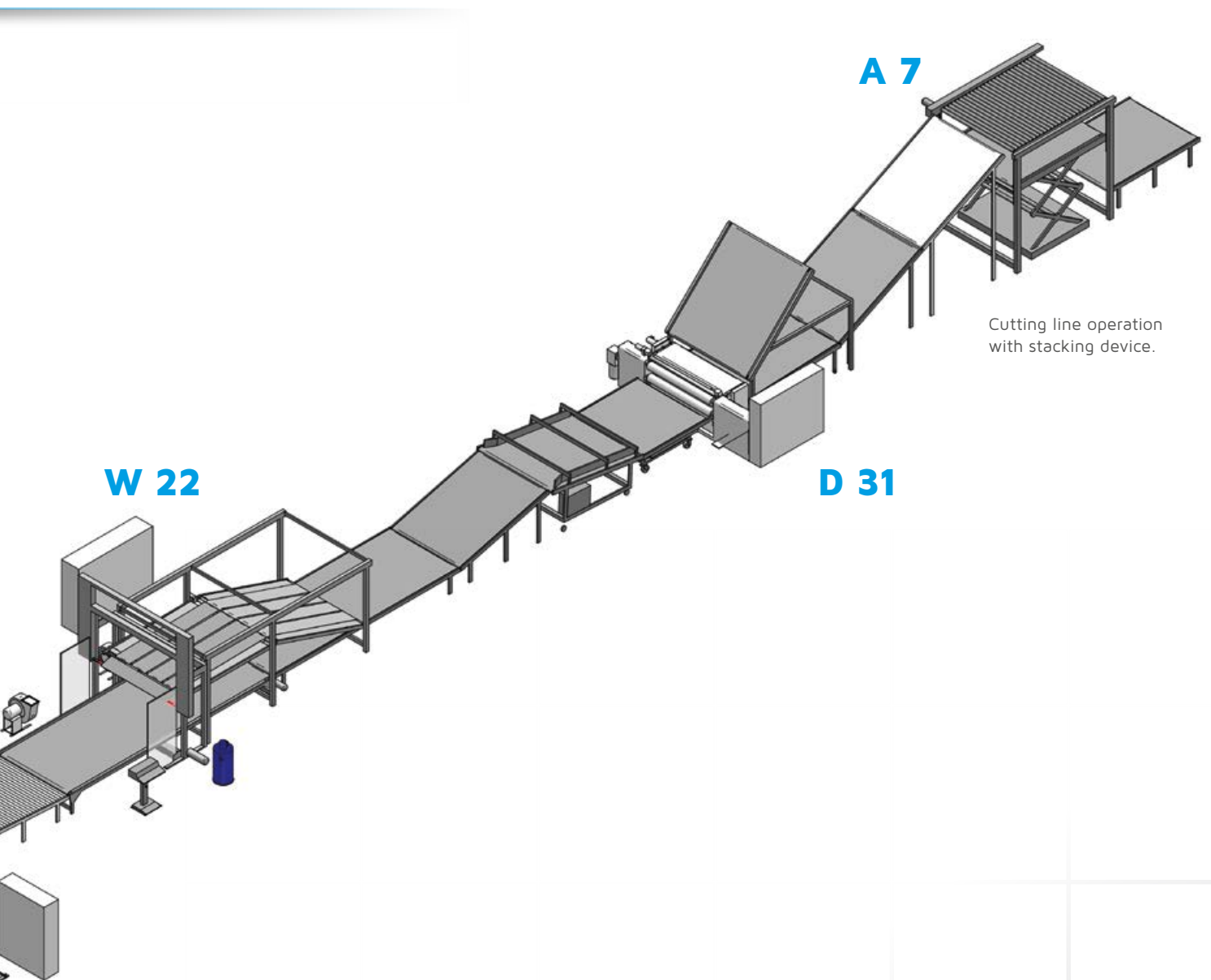
Type | **K and D**

Increases material throughput

Reduces downtime

Fully-automated process

Reduces input required by staff





Fecken-Kirfel GmbH & Co. KG | Prager Ring 1-15 | 52070 Aachen | Germany

Postfach 10 08 54 | 52008 Aachen | Germany | Tel. +49 241 18202-0 | Fax +49 241 18202-13 | info@fecken-kirfel.de | www.fecken-kirfel.de

Fecken-Kirfel America, Inc. affiliated to Fecken-Kirfel GmbH & Co. KG | Aachen | Germany

6 Leighton Place | Mahwah, N.J. 07430 | USA | Phone +1 201 891-5530 | Fax +1 201 891-0129 | info@fk-am.com