

FECKEN **FK** KIRFEL

Always a cut above – since 1870

Carousel splitting and stacking machines

Type | **S 20 to S 36**

Type | **S 41**





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.

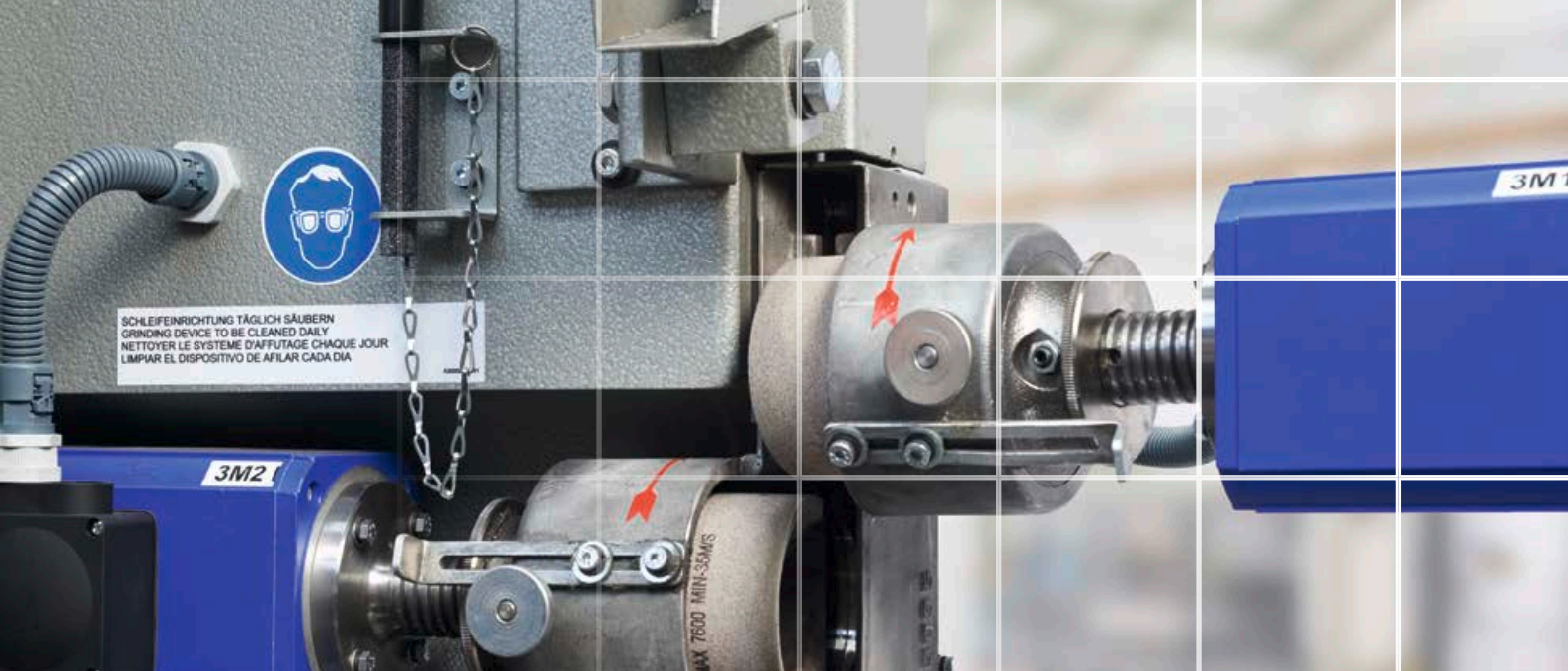
Founded in 1870

Independent
family-owned company

Cutting machines
„Made in Germany“

For processing
a wide variety of materials

World leader in technology
and quality



HELLO AND WELCOME

Carousel splitting and stacking machines from the S series cut foam blocks in a fully automatic process – even in ultra-thin layers. They are an ideal partner for high production volumes due to their high cutting speed and available table surface area. The S series has versatile fields of application such as for the upholstered furniture and mattress industry, as well as the packaging industry.

Various additional options make these machines especially high-performance and efficient: for example, using the air cushion system for loading and unloading, even extremely heavy blocks are easy to handle.

You can also get optimal use out of your material using the FK Opti-Sheet software tool. The S types can cut both ultra-light materials as well as extremely hard foams precisely. The optimized vacuum system fixes the blocks in place, and together with the angle setting of $+5^{\circ}$ to -5° ensures an exact cut.

Extra-stable
cutting unit

Easy to load
and unload

Fast cutting
speed

High capacity



Markus Frings
Manager parts department



Compared to horizontal table machines, the reverse motion of the cutting table is eliminated: thus increasing production capacity.

FULLY AUTOMATIC SPLITTING AND STACKING MACHINES WITH HIGH CAPACITY

Split PU foam into thin layers efficiently and economically. With the S line, Fecken-Kirfel offers you the right machine with the ideal table diameter for the highest possible capacity depending on density and the foam quality to be split.

Area of application: Cut blocks into thick and ultra-thin layers, e.g. for mattress toppers or the bag making and shoe industry, as well as for slicing cut-to-shape blanks.

Material: Flexible PU foams (polyether, polyester), latex and similar materials, bonded foam up to approx. 120 kg/m³. S 41: Foams containing melamine (CMHR), PU foams with high densities, bonded foams up to 150 kg/m³.

Service: We respond quickly to maintenance issues and provide a straightforward solution. A teleservice makes remote diagnosis possible.



Type | **S 20 to S 41**

Vacuum system for block fixing

Extremely low-friction bondstrip

Fully automatic splitting and stacking

Lower personnel deployment



S24 with technical PU foam.



Michael Greven
Customer Service Manager



Using the bandknife inclination, you can cut layers of any desired thickness.

ANGLE ADJUSTMENT FOR EVEN MORE PRECISE CUTS: S 20 TO S 36

The S type cutting unit enables you to set the angle of the knife from -5° to $+5^{\circ}$. In this way, you can easily cut layers of any desired thickness over the entire block height – without lifting the block.

The extremely low-friction coating of the bondstrip and its initial tension guarantees ultra-low cutting pressure.



Angle adjustment of the bandknife (S 20 to S 36)

Type | **S 20 to S 41**

Bandknife grinding device

Extra-stable cutting unit

Cutting of hard materials

Precision thanks to high knife clamping force

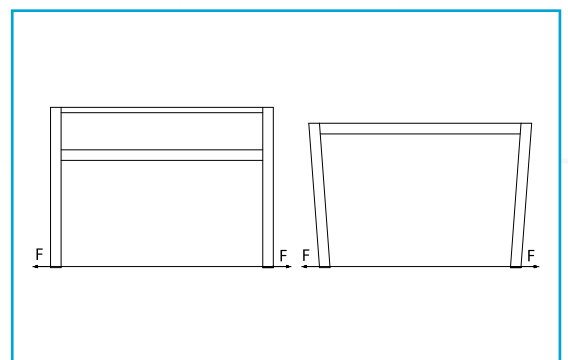
EXTREMELY STABLE – COMPLETELY TRAVERSABLE: S 41 CUTTING UNITS

The reinforced cutting unit of the S 41 carousel machine is completely traversable. The construction itself remains stable even under an extremely high bondstrip tension force of more than 11 tons so that the bandknife remains exactly guided.

The automatic bandknife grinding device, including automatic bandknife adjustment, always ensures a precise cut.



S 41 cutting unit



High forces act on the construction due to the high tension force of the knife bondstrip. The A-shaped, basic construction of all machines of the S series ensures the required stability to keep the bondstrip under tension.



Cesar Avila Castro
After-sales service engineer



With our additional options, we customize the machine to your production conditions.

ADDITIONAL OPTIONS – CUSTOMIZED TO YOUR REQUIREMENTS

Automatic loading/unloading via an air cushion system: The air cushion system automatically lifts blocks for loading and unloading and thus enables easy handling of even heavy blocks on the carousel. Blocks can be optimally positioned and thus the complete table can be utilized. In addition, this also reduces personnel deployment.

Upper roller for secure block fixing: One or two pressure rollers reliably fix in place light and hard foams by pressing down on the block (positioned either in front and/or behind the knife).

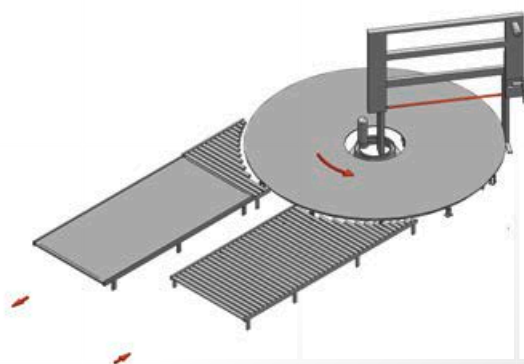
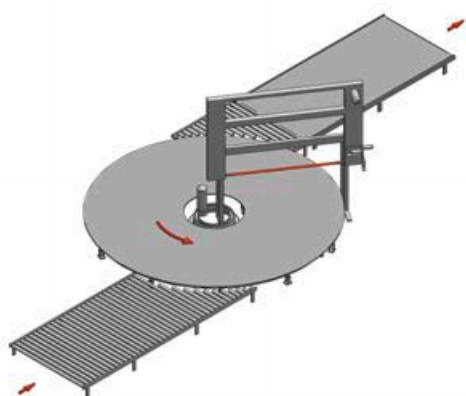
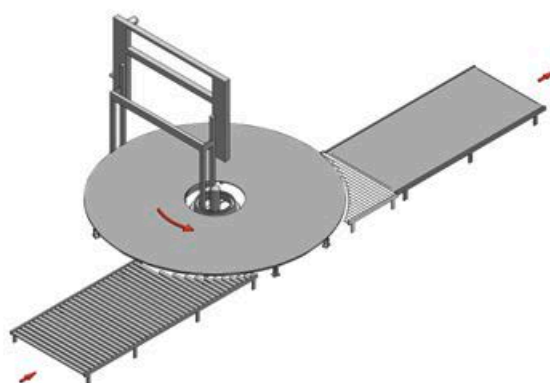
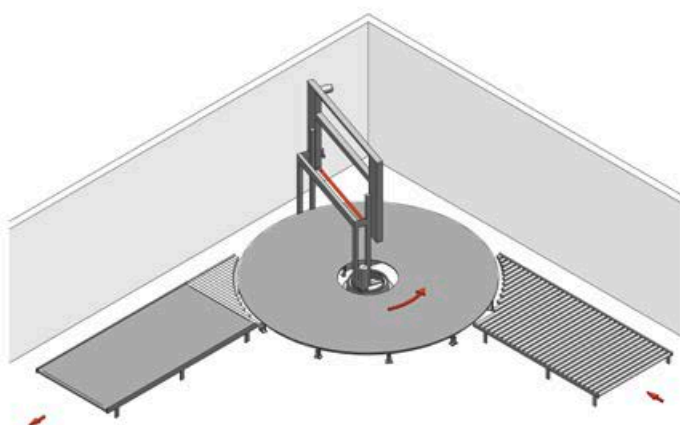
FK-Opti-Sheet: This software tool uses the extremely low cutting tolerances of the carousel machine to split the maximum number of layers from one block. Increase your production and save up to 10 % in material per block.

Type | **S 20 to S 41 options**

Flexible application options

Variable air cushion system arrangement

Save 10 % in material per block



Optimal for use in cutting lines: the carousel machine fits flexibly into the spacial conditions due to the transport conveyors for tangential loading and unloading.



Andreas Billmann
Project engineer



The table surface area can be utilized completely due to the free placement of the blocks using the air cushion system.

PRECISE CUTTING – INFINITELY ADJUSTABLE

You can control all S types easily via an industry PC with a separate control panel. The cutting speed can be adjusted infinitely between 10-100 m/min (depending on the table diameter).

Several blocks are placed on the rotating table. A special adhesive corundum coating and a vacuum system fixes the block in the cutting area.

The carousel design increases the capacity compared to horizontal table machines because the reverse motion of the cutting table is eliminated. This also enables you to cut ultra-thin layers.

Type | S 20 to S 41

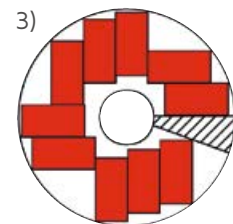
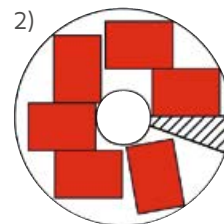
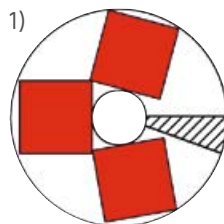
Cutting speed of 10-100 m/min

Ultra-thin layers possible

High usable area

Technical data	S 20	S 22	S 24	S 32	S 36	S 41
Working widths	1800 mm	2200 mm	2600 mm	2400 mm	3400 mm	2400 mm
Outside table diameter	4800 mm	5600 mm	6400 mm	7000 mm	9000 mm	7000 mm
Usable area of the table	approx. 17 m ²	approx. 24 m ²	approx. 32 m ²	approx. 34 m ²	approx. 59 m ²	approx. 34 m ²
Cutting speed infinitely adjustable between	10-85 m/min	10-100 m/min	10-100 m/min	10-100 m/min	10-100 m/min	10-100 m/min
Table rotations	max. 5.7 rpm	max. 5.7 rpm	max. 5 rpm	max. 4.5 rpm	max. 3.5 rpm	max. 4.5 rpm
Cutting and stacking heights	1300/1600 mm	1300/1600 mm	1300/1600 mm	1300/1600 mm	1300/1600 mm	1300/1500 mm
Block dimensions	Number of blocks	Number of blocks	Number of blocks	Number of blocks	Number of blocks	Number of blocks
1.00 x 2.00 m	4	7	9	10 ³⁾	18 ³⁾	10 ³⁾
1.25 x 2.00 m	3	5	7	8	15	8
1.40 x 2.00 m	3	5	6	7	13	7
1.60 x 2.00 m	2	4	5	6 ²⁾	11 ²⁾	6 ²⁾
2.00 x 2.00 m	-	2	4	4	7	4
2.00 x 2.20 m	-	2	3	4	7	4
2.15 x 2.15 m	-	-	3	3 ¹⁾	6 ¹⁾	3 ¹⁾

Examples of the number of blocks.





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