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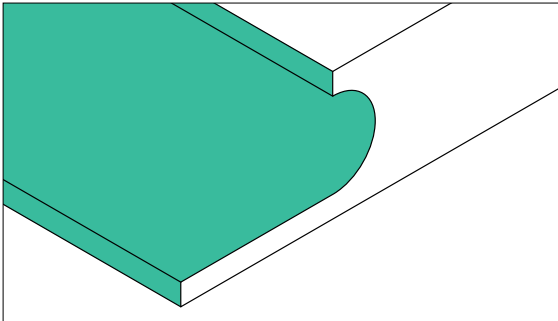
RAUKANTEX folding

Technical information

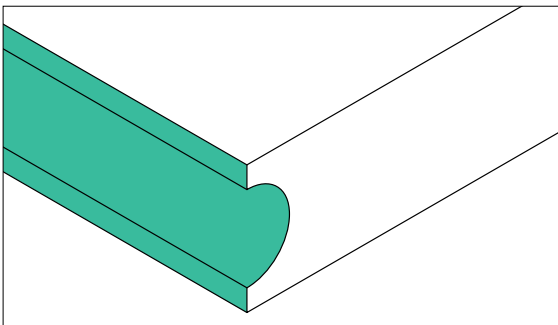


REHAU has developed RAUKANTEX folding for use in soft-forming of demanding geometries. The edgeband can be perfectly adapted to the respective component geometry and shaped accordingly.

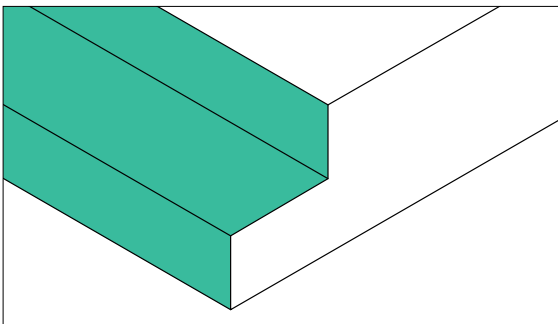
The following panel geometries are common in the industry using soft forming:



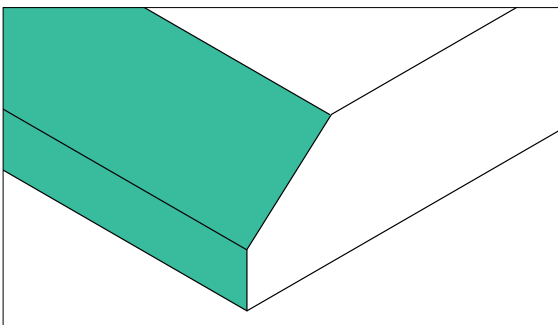
J shape



C shape



L shape/rolled shape



Roof shape

The technical challenge whilst soft-forming these geometries is to ensure that the edgeband surface is of high quality after the forming process. This is reflected in the following features:

- No lacquer or material cracks in the area of edgeband bending
- The edgeband surface shows no traces of the soft-forming process
- No stress whitening of the edgeband in the area of bending
- The edgeband material is characterized by sufficient flexibility—memory effect of the edgeband is low—easy shape forming is guaranteed
- Secure adhesion, long-term stability of the edgeband/panel in the folding area is also ensured

Rehau developed the RAUKANTEX Folding Edge to combine all these features into a single perfect product. This edgeband is characterized by the following features:

- Optimized surface structure of the edgeband
 - High scratch resistance
 - No lacquer or material cracks
- Optimized base material
 - No stress whitening thanks to special base material formula and coloring



In order to enlarge the processing window, and also to allow more complex geometries (e.g. J or C profiles) REHAU has further developed RAUKANTEX Folding and successfully tested the RAUKANTEX Folding premium quality.

The RAUKANTEX folding premium edgeband is characterized by a more flexible, and therefore more easily formed, base edgeband. To clearly distinguish the newly developed edgeband from standard edgebands, new PP base formula numbers are assigned for the new folding premium edgebands → PP6381 and PP6581 (depending on the tool).

In addition to the formula details, the following parameters are important for achieving high-quality soft-forming results:

- Special edgeband machines are required for the soft-forming process.
- As a soft-forming material, PP has generally proven to be better than ABS. PVC also exhibits very good folding behavior, but is usually no longer desired in Europe due to its material composition .
- REHAU only offers the Standard and Premium Folding Edge in PP; ABS requests must be evaluated on a case-by-case basis.
- An edgeband thickness of approx. 0.4 mm is generally recommended for the soft-forming process. This results in the following options:
 - The customer substitutes their existing material, e.g. paper or melamine edgeband, with a 0.4 mm polymer edgeband. This is the simplest case, and the customer can carry out a processing test with existing machine technology
 - The customer would like to use a polymer edgeband thicker than 0.4 mm—in this case, the edgeband material must be notched / scored on the adhesive side in the bend area. The scoring depth must be selected so that a polymer hinge of approx. 0.4 mm is created

- REHAU does not offer pre-scored edgebands. The reason for this is that creation of the groove depends on the component geometry, and the customer must adjust or optimize the depth and position on a case-by-case basis
- Edgeband thicknesses can be selected depending on the intended use. For example, 1mm and 2mm edgebands have become established as standard for doors in the kitchen area. The folding geometry determines the edgeband thickness (experience shows that the J or C profile is 0.8 to 1 mm)
- When it comes to processing technologies and the choice of adhesive, it should be noted that the bond must have a good heat resistance. This is because polymer edgebands have a memory effect and tend to reset when exposed to heat. The bond must prevent this resetting. This is why RAUKANTEX pro zero-joint edgebands have become established in for example the door area. In the kitchen area at least a polyolefin, or better a polyurethane adhesive should be used if moisture resistance is required. (EVA should be viewed critically in this application in terms of long-term / heat resistance behavior)

The customer is responsible for checking suitability of the edgeband for the respective component contour by carrying out processing tests.

REHAU Technology would be happy to provide technical support. If interested, please contact the following email address: edge-support@rehau.com

RAUKANTEX folding solutions at a glance:

	RAUKANTEX ABS	RAUKANTEX PP	RAUKANTEX PP folding	RAUKANTEX PP folding premium
Material properties	Standard formula	Standard formula	Lacquer and pigmentation optimized	Additionally optimized edgeband material
Folding properties	Not suitable	Suitable	Suitable	Highly suitable
Stress whitening tendency	Less suitable	Less suitable	Well suited	Highly suitable
Energy required	Less suitable	Well suited	Well suited	Highly suitable
Lacquer cracking tendency	Less suitable	Suitable	Well suited	Highly suitable
Processing window (PUR/EVA/PO)	Less suitable	Suitable	Well suited	Highly suitable

The need to use RAUKANTEX folding depends on the geometry, machine and adhesive.

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