

## Application example

### Cutting awning fabrics and sealing the edge

PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SCREENING



#### Task

Awning fabrics are woven as a wide web of material and have to be cut to the required width and length for their intended use. Using a purely mechanical method to cut the awning fabric crossways and lengthways would cause the cut edge to fray. This is not allowed and so an alternative tailoring method must be used to ensure the edge is sealed during the cutting process itself.

#### Solution

Ultrasonics, in conjunction with appropriately designed sonotrode and anvil cutting tools, offer a cost-effective method of cutting woven fabrics while simultaneously sealing the edge. Because the ultrasonic components remain in constant use, the sonotrode and converter have to be cooled. A frequency of 20 kHz is used for thicker fabrics and a frequency of 35 kHz for thinner ones.

#### Configuration advantages

The modular ultrasonic components can be integrated into an automatic tailoring system without any difficulty. The ultrasonic cutting process supports extremely high cutting speeds and the tools can be easily reground if required. The ultrasonic technology produces very neat cut edges and the heat that is generated at the same time seals the edges reliably, thereby preventing fraying.



This and similar applications rely on ultrasonic components for continuous operation such as actuators with a cooled converter, 35 or 20 kHz sonotrodes and MAG generator modules.