

## Separating Timber Panels with a Separation Vacuum Cup

Unlike materials that are completely impervious to air, the use of vacuum cups when separating plywood panels has until recently presented the material flow industry with a challenge that has been hard to come to grips with. The reason for this is that timber panels stacked on top of one another tend to cling together because of their surface properties; as they are also slightly permeable, a vacuum cup would lift both the top panel and the one underneath, which would then uncontrollably fall off a moment later.

This is not only a nuisance because of wasted time and energy, but it is also a health and work safety issue that should not be underestimated.

A solution has been implemented at the company of HOLZMA Plattenaufteiltechnik GmbH. The vacuum separation cup guarantees that plywood panels can be separated and stacked individually for the subsequent production process.

The principle: The suction plate has an eccentrically positioned vacuum connection and a centrally located compression air connection, and the two associated chambers on the underside of the vacuum cup are separated from one another by a thick lip.

Once the separation vacuum cup has been placed on the workpiece, the moment it is lifted, a precisely measured pulse of compressed air forms a layer of air between the top panel and the second one underneath. Thus, the lower panel remains in place. As the top panel is lifted by suction, the fact that the grip is to one side means that the retention force between the two panels is ultimately broken.

The precisely adjusted vacuum pressure generation and electronic control system mean that perfect individual separation is an easily guaranteed standard at HOLZMA.

The separation vacuum cup offers another economic benefit: When the suction lip is worn, there is no need to replace the entire vacuum cup including the special holding plate, but only the rubber cup, which means considerable savings of time and money in the sector that experiences substantial wear and tear.

**About the company:** FIPA GmbH offers a complete range of peripheral hardware for the generation and control of vacuums, hoses, fittings, vacuum cup supports, flow valves, flexible joints, ball-and-socket joints, and clamping plates in a variety of versions, and all components from vacuum generators and control instruments to vacuum stations, all from a single source--and also undertakes complete vacuum system projects. Visit them at [www.fipa.com](http://www.fipa.com).