



EcoCut Punching Machines

Plastics
Technologies
in Motion.

The FRIMO *EcoCut* is a punching machine that is ideally suited for trimming very complex and large plastic components such as instrument panels and door panels as well as armrests and other interior components. Product retainer and upper tool are integrated directly into the machine frame. Its high capacity makes the *EcoCut* the optimal choice for large-scale production.

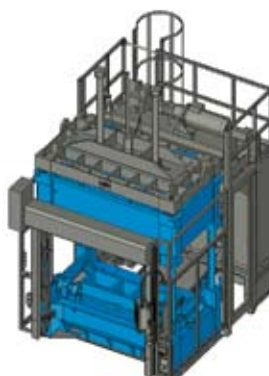
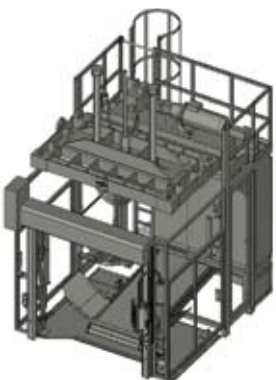


Operating cycle

The operator places the part e.g. an instrument panel on the pivoted-out product retainer. When the cycle begins, the product retainer swings back and the upper tool moves down vertically. By

design, the product is positioned in the tool in such a way, that as much of the cutting as possible can be completed with this vertical movement of the ram. The rest is cut by the hydraulic cutting

units while the tool is closed. In the basic version the machine can drive up to four independent punching circuits. The waste falls through the bottom dies and the product retainer onto a waste conveyor.



Economical and highly productive

Versatility of application

The *EcoCut* punching machine was developed especially for trimming in the ram and many additional punching directions and can be used for many different punching processes:

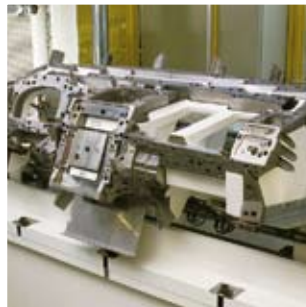
- Cut-through with cold knife and die
- Kiss cut with serrated knife into a rubber pocket
- Kiss cut steel knife to steel die
- Kiss cut against substrate
- Special applications: Hot knife cutting, Kiss cut in a recessed groove

The processes listed are suitable for hard plastics, such as Noryl, SMA, SMC, ABS, GMT, LFT, wood fiber/natural fiber composites or hybrids such as GMT with sheet metal, and equally for soft plastics such as PVC and TPO films, EPDM, PU foam, PU sprayed and RIM skins, textiles or decorative materials and carpets.

The selection and specification of the optimal punching process depends on the composition of the materials concerned and determined in a modern application center.

Technical data

Dimensions (WxDxH)	approx. 2.720 x 4.340 x 5.000 mm
Product retainer in the lower tool (optional)	pivots through 75°
Punching force of the upper tool punching modules	9 to 90 kN
Punching force in the direction of the ram	approx. 200 kN
Weight	approx. 18 t
Operating pressure (hydraulic)	250 bar max.
Operating pressure (pneumatic)	6 bar
Connected power	approx. 18,5 kW



Control features

- Manual or automatic operation
- Adjustable pump run-on time
- Part counter
- Error reports
- Operating status reports
- Data interface
- Entry and modification of machine data (password-protected)
- Display of pressure and quantity curves
- Activation of test functions (password-protected)
- Machine status display for the machine operator
- Display of current program step
- Language selection
- Remote access via modem



Product example

Benefits *EcoCut*

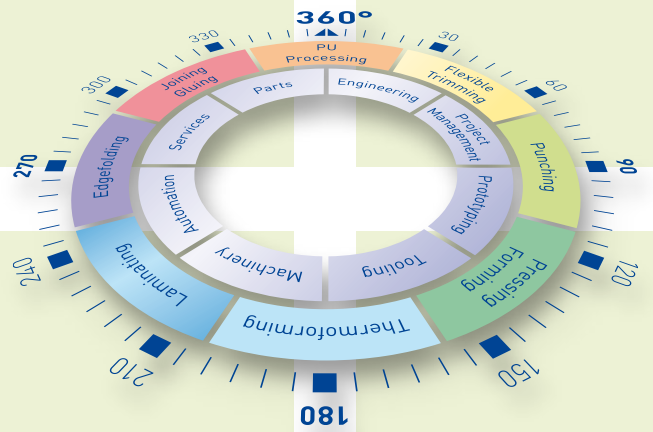
- Suitable for all punching processes
- Short cycle times
- Compact design
- Ergonomically optimized feed and operation
- Low total weight
- Integrated waste removal
- Comprehensive basic configuration
- Extensive safety features

Benefits punching technology

- High economic efficiency
- Short cycle times
- No soiling of the component
- 100% reproducible and highly precise cutting results
- Long tool life
- Maximum availability
- High level of process safety and reliability



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