

: essential combi

CNC programming for all your punch, profile and combination machines

Essential Combi is a machine-independent product developed by Radan to drive punch, profile and machines which incorporate both technologies. It provides your operators with the tools they require to reduce lead times and optimise your machinery efficiently and safely.

This formidable combination will expand with you to program all your current and future punch, profile and combination machine tool investments from one system.

Seamless programming

Essential Combi seamlessly integrates the whole programming process of tooling, nesting, sequencing, code generation and finally DNC connectivity to the machine tool controller.

The seamless integration delivered by Essential Combi provides an easy to use experience for your operators, whilst accuracy and consistency of programming is maintained with the collation of process-critical data in the Manufacturing Database (MDB).

Material, lead-ins, lead-outs, tagging, and machine tool specific cutting technology data are stored in the MDB in readiness for instantaneous distribution when required to assist an operator or automated process. Understanding the sophistication and the limits of each machine tool individually is the key to driving it efficiently. Essential Combi will assist your operators to optimise your manufacturing capacity to within those limits for all of your machines.

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Efficiency is everything

Essential Combi is a fast, modern programming application designed and written by Radan to assist a programmer in transferring data from CAD to NC code. The seamless interface and the automatic processes all assist the operator in this process.

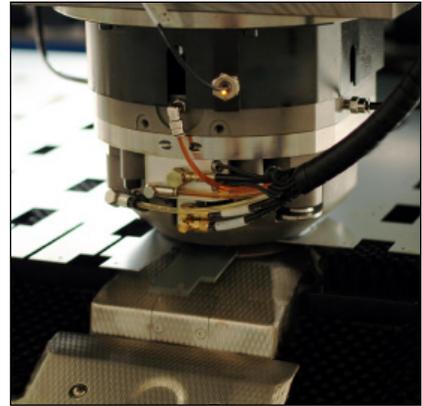
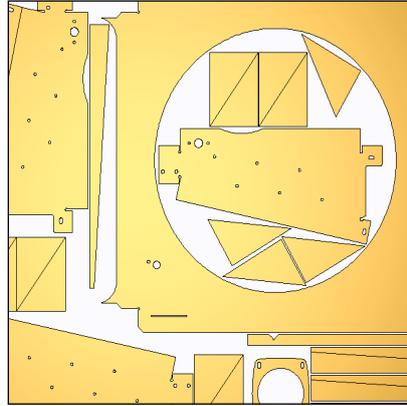
A machine tool is only as efficient as the software driving it, so that is why we personally install every Essential Combi post processor to ensure that it is commissioned to match your machine tool and controller. It is your production efficiency that it is going to be controlling; that's why your software is important to us.

Features include

- Drag and drop data input
- Batch processing of DXF/DWG, including healing
- Automatic tooling/sequencing
- Automatic part removal
- Graphical program verification
- Single part, true shaped nesting
- Project nesting incorporating user definable reports
- Automatic common line cutting
- Automatic remnants, sheet scrapping and off-cuts
- Simple, intuitive interface with clear simple icons
- Supporting machines' advanced features
- Improved machine/tooling efficiency
- Reduced lead times and increased production



Essential Combi intelligently applies the profile tool paths automatically at the nesting stage for profile machines to maintain the quality and integrity of your parts, whilst also optimising the cutting sequence and ensuring cutting head safety, thus enabling the machine tool to perform to its optimum potential



Power and control

The power of automation with the ability to control by your preferences. The Essential Combi programming solution provides your operators with easy-to-use software that can be educated to adopt your preferred practices and processes. Lead-in and lead-out preferences, tagging, preferred profiling sequences; all these and more can be defined relative to material type, thickness and machine tool in the Manufacturing Database. The MDB expands with your business. The introduction of new customers, new products or new machines brings into your manufacturing environment the need to control new material, strategies and new practices. The MDB ensures consistency of programming for these new criteria for all of your machines, which translates to fewer rejects, less rework and higher returns.

If manual control is your preference, this is in abundance with Essential Combi enabling an operator to take full control of the programming process at any stage. The ability to interact manually and override any of the automated processes gives an Essential Combi user the power to tackle the most difficult jobs with ease and confidence.

The fully-integrated Project Nester provides your operator with an instantaneous overview of your profiling demand. Automatic rectangular nesting, single part true shape nesting and manual drag and drop nesting techniques enable your operator to quickly, easily and efficiently meet your ever changing production and customer demands. If material utilisation is critical to your business, upgrading the nester to our true shape nester, Radnest, will raise your material utilisation whilst also providing further advanced nesting tools for your operator.

Tooling optimisation

Optimising the tooling used by a punch machine is paramount to the efficient programming of a punch machine and thus the reduction of the cost to manufacture a part. Simply optimising conventional tools on a part and their location in the turret or tool rail is no longer sufficient, as tooling suppliers are providing more sophisticated tooling, such as close to clamp slitters, wheel tooling, de-burring tools, scribes and flexible part marking tools. Essential Combi understands the constraints of tools and the necessary NC codes required to support them.

Orientation-specific tooling enables the appropriate part removal processes to be applied to complement the part orientation during nesting.

For your profiling requirements Essential Combi supports automatic common line cutting when profiling. This enables the downstream nesting process to fully optimise material utilisation, whilst also benefiting from reduced cutting times and assist gas costs. Parts identified for common cutting can be controlled to cut in clusters to maintain sheet rigidity and remove tolerance problems associated with common cutting in large quantities.

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