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FELDER

FORMAT-4

c-tech
Felder Group factory and head office in Hall in Tirol
THE FELDER GROUP AT A GLANCE

Managing director

KR Johann FELDER
Gertraud FELDER – (Finance)
Prof. hc. Ing. Hansjörg FELDER (Marketing)
KR Martin FELDER (Production)
Elisabeth FELDER (Human resources)

Legal form

Limited partnership

Foundation of the company

1956

Factory and Head office

Hall in Tirol, Austria

Production area in Hall

81,000 m²

Marketing

Over 250 sales and service centres in 72 countries

BIGGEST SHOWROOM OPENINGS 2017

Berlin, Lyon

NEW MARKETS 2017

Uzbekistan, Bosnia, Kosovo, Morocco

Brands

FELDER
FORMAT-4
Hammer
felder-components

Export percentage

95%

Investment plan through 2021 at the Hall location: 60 million € + 100 new jobs
From a specialist for combination machines
to a professional complete supplier

It was 60 years ago that Johann Felder, together with his wife Gertraud, founded the company Johann Felder junior in his workshop, in his parents' home. Strong, down-to-earth and always ahead of the times - with traditional values, pioneering machine concepts and high quality products, the machine engineering company developed in the following years from a specialist for combination machines to a complete supplier of professional woodworking machinery for workshops, business and industry.

The third generation have now joined the family company and the FELDER Group now has around 550 employees at the company’s headquarters in Hall and more than 250 sales and service centres in 72 countries worldwide. The company is now classed as one of the leading worldwide suppliers of woodworking machines.

The company management: Hansjörg, Johann, Elisabeth, Gertraud and Martin Felder

Our products have always stood for maximum quality, innovation and constant development. At one of our worldwide technology centres and showrooms we can carry out a systematic requirement
analysis, ensuring the correct configuration of tailor-made product solutions for the customer. By simulating the customer's production, our customers can test several different machine configurations ensuring that they find the perfect solution for their individual requirement.

In addition to our showrooms, we also have specially trained service personnel providing specialised on-site service. If the matter is urgent you can call our hotline centre for straightforward immediate help.

The quality of the product defines the success for the customer - for this reason we are always looking to work together and get feedback from woodworkers in workshops, business and industry. This close cooperation makes it possible for us to take into consideration the requirements of the end users when we are developing new machine concepts, ensuring the competitiveness of our customers.

New materials are being constantly developed and launched on the market and it is only with experience and continuous research that it is possible to process them economically and to a high quality. In order to always keep ahead of the times, trends need to be identified, products need to be developed that take into consideration multiple cross-sector industries and investments must be made in new technology. Regardless of which direction the market develops, we, the Felder Group, will be there.
WITH PASSION, CONVICTION
AND COURAGE TO SUCCEED

The founding year
In 1956 Johann Felder Jnr. together with his wife Gertraud founded the company from his workshop located at his parents’ house in Absam, Tyrol. In the same year they were already presenting the first Felder woodworking machines at trade fairs in Vienna and Innsbruck. Due to the insufficient supply of cast iron in 1958, the company set up its own foundry in the garden of the house.

The Breakthrough
The steady growth of the company required it to move premises in 1961. Salzbergstrasse 26 in Absam became the new location for the machine manufacturer. In 1962 the first machine was exported to Switzerland and just a year later came the breakthrough with the first series production, the legendary BU 4 combination machine.
In 1965 the production capacity was increased further with the purchase of Felder’s first milling centre. With the upgraded BU 5, Felder ventured successfully into the German market. The BU 6, BU 7 and BU 8 series became established in the international markets and the numerous patents ensured the developmental edge of Felder machines.
In 1970 Felder released the new heavy duty combination machine series FELDER HT onto the market, achieving outstanding results, especially amongst carpenters.
In 1975 an automatic furnace was incorporated into the 170 m² foundry, two years later, the machine assembly was moved to a new premises for the next expansion of the company.
In 1979 Felder took the step into CNC technology and invested in their first CNC milling centre. This was one of the last investments to be made in the Absam location.

Expansion and Internationalisation
Success requires expansion and at the location in Absam this was no longer possible. It was for this reason that in 1982 the company moved with its 65 employees to the new headquarters in Hall in Tirol, where the company is still present to this day.
In 1988 Johann Felder founded FELDER Scandinavia in Stockholm, the first Felder subsidiary of the now worldwide present Felder-Group. In Austria and Germany, the new Felder sales concept was introduced: only a few selected partners would be authorised to sell Felder products.
The BF 3 and BF 4 machine series proved to be very successful and in 1988 the next wave of investments were required: a new hall was built, with enough space for Felder’s first laser machines, welding robots and horizontal processing centres.

From a specialist for combination machines to a professional complete supplier
With the new production possibilities the next Felder milestone came in 1990. The world’s first combination machine with a sliding table "made by Felder" was presented. The position of market leader in combination machines was strengthened with the launch of the BF 6 range. Simultaneously Felder released the first solo machines for professional use in the industrial range. It was also in this segment that within a short period of time the K6 panel saw celebrated its breakthrough onto the international market.

The machine manufacturer Felder evolved from a combination machines specialist to complete provider of professional woodworking machinery for trade, business and industry.

In 1993 Felder opened its new EURO logistics centre which was pioneering in its branch and founded the first Felder branch office. The office in Upper Austria opened its doors in 1995.

Moving into the next millennium with Hammer and FORMAT-4
In 1997 Felder brought the new brand Hammer to life and it soon asserted itself with high quality yet affordable woodworking machines proving highly successful against cheap products from the Far East. The success enabled further expansion of production and assembly in 1999. The new assembly hall No.2 increased the capacity by 30 percent.

In 2001 a further brand was introduced: FORMAT-4, the premium brand for the highest requirements in business and industry completed the product range of the Felder-Group in the professional segment. In the years to follow the product range was expanded to include CNC processing centres, edgebanders, beam saws and heated veneer presses. The new FORMAT-4 models were awarded internationally recognised design awards such as the Adolf-Loos-Prize in 2004 and the IF-Design-Award in 2003 and 2009. In just a short time the machines were convincing professional users in business and industry.

The FELDER KG becomes a global player as a family company
In 2000 the company ‘Johann Felder’ changed from being a registered sole trader to a limited partnership with Johann’s wife Gertraud, daughter Elisabeth and sons Hansjörg and Martin Felder all having a share of the family company, FELDER KG.

With the beginning of the new millennium the new powder coating facility was built and brought into operation. Achieving the 80 percent export limit required renewed expansion of the logistics centre, which opened in 2005 - after just 8 months of construction. In 2007 with the extension of assembly hall 7 and of hall roof 4.5, the production area was increased by 11,300 m².
2009 saw the first CNC and edgebander developed and produced entirely in Hall in Tirol leave the production line and from 2010 they were displayed in the newly built Exhibition and Technology Centre Tirol.

In 2012 the Felder-Group caused a sensation in the planing machine market with the introduction of the revolutionary Silent-POWER® spiral cutterblock, underlining their innovative strength.

In 2013 and 2014 Felder took part at the LIGNA and Holz-Handwerk exhibition and with 1,000 m² floor space, presented around 100 machines, including many innovations such as the Format-4 CNC 5-axis technology.

With the expansion of Production Hall 1 in 2015, Felder increased its efficiency and was able to add a 1,300 m² apprentice workshop, a top quality training framework for its trainees with high quality standards.

The third Felder generation have now joined the family company and the Felder-Group, with around 550 employees with company headquarters in Hall, is one of the leading worldwide suppliers of woodworking machines for hobby, business and industrial use. More than 250 sales centres in 72 countries selling over 150 models from the Hammer, Felder and Format-4 brands.
BRAND POSITIONING IN THE FELDER GROUP

As the FELDER Group, FELDER KG combines several product groups, which are aimed at different target customers and are present in the market with individual brands, clearly differentiated from one another.

FELDER - Quality and precision in a nutshell

Felder woodworking machines have for decades been guarantors of perfect results accompanied by excellent ease of use. The extensive range of models offers the exact machine for every requirement. Optimised machine concepts and innovative detail solutions with first-class workmanship for regular professional use. Felder machines guarantee perfect woodworking results and decision making reliability for many years to come.

FELDER 900 series - EXCEPTIONAL

Machines in the Felder 900 series have been specially designed for heavy-duty use in trade and industry. Stability, precision and versatility with an optimised, intuitive operating concept for maximum productivity. The heavy-duty Felder line fulfils the highest demands that are required from woodworking machines.

FELDER 700 series - TREND-SETTING

The Felder series 700 machines are the 'golden mean' of the Felder range. They combine simple machine operation with maximum precision in regular professional use. An optimised machine concept and innovative detail solutions built to first class standards have convinced our customers for decades.
FELDER 500 series - STRAIGHTFORWARD
Felder 500 series woodworking machines offer reliable Felder quality and absolute precision to the passionate woodworker. Strict quality standards and tried and tested Felder system solutions, guarantee excellent operating results and customer satisfaction for years to come. More information can be found at www.felder.at

Format-4 – Expertise without compromise for the highest of requirements

The premium brand of the Felder Group has been meeting the highest demands of professional users in workshops, business and industry since 2001. Impressive detailed solutions, numerous innovations and patents, maximum operating comfort and perfect precision have ensured that Format-4 has become an unbelievable success story over the past few years. True to the guiding principle, to offer everything from a single supplier, the head office in Hall in Tirol have developed CNC machines together with corresponding software, providing a complete top class package. The simulation of the customer’s workshop in a Format-4 technology centre enables the individual configuration of product solutions tailor-made to customer requirements. Perfect consultation, customised machine configuration as well as delivery, installation and service complete a unique range of services. Countless woodworking companies worldwide already rely on profiting from maximum productivity perfection in woodworking. More information can be found at www.format-4.com

Hammer - Stability, functionality and reliability

Since 1997 Hammer have been producing high quality yet affordable woodworking machines for smaller workshops and businesses. The models have been specifically designed for this customer group and are now available in the winner and perform configuration, offering price optimised solutions for every requirement. From the passionate woodworker to the business user with high demands, with machines from Hammer you are guaranteed reliability and precise woodworking. More information can be found at www.hammer.at
2,000 m² woodworking in its purest form in the FELDER universe

OPENING IN BERLIN ON 31 MARCH
FELDER GROUP SOON TO BE EVEN CLOSER TO THE CUSTOMER

The new FELDER Group branch office in Berlin-Velten will be opening in late March 2017. The picture shows Felder Group Head of Sales Germany Jürgen Stebegg, architect Peter Lichterbeck, a representative from the contractor, and Ch. Willburger from Felder Group at the groundbreaking ceremony.

On 31 March 2017, Tyrolean woodworking machine manufacturer FELDER will open its new branch office in Berlin, so that FELDER is now present with 250+ sales and service locations.
worldwide. With its modern showrooms and technology centres, this family-owned company takes the world of woodworking directly to its woodworking customers. Berlin, too, will thus receive a new and interesting facet. The new Felder group branch-office-cum-showroom will add to the available solutions, presenting its first-class woodworking machines for all users.

Direct contact

Felder regards the Berlin branch office as a logical step in the corporate policy. "With this branch office, we want to ensure that our customers can get into an ideal direct contact with us, i.e. the manufacturer," as Managing Director Hansjörg Felder describes the motive for opening up this 2,000 square meter woodworking world in Berlin.

Visitors will get a first-hand experience of woodworking in its purest form and benefit from diverse special offers for new and used machines as well as numerous special promotions for tools and accessories.

Every visitor will be able to put the entire machine portfolio from the brands of FELDER, Format-4 and HAMMER to the test, and to experience numerous innovative new developments live. Competent specialist advisors will accompany them through the Felder world and help find the ideal solutions for individual demands in terms of perfect woodworking.

Everything under one roof

Felder, the top brand for professional demands, offering optimum value for money; Format-4, the new dimension for industrial-use machines; Hammer, the ideal machine series for do-it-yourselfers and first-time users; as well as the No.1 machine marketplace offering used machines across the entire price range – all of this will be united under one roof by Felder Group now in Berlin, too.

"Our top priority is keeping our customers happy for many years to come," that’s the motto of the sales team. For many years already, Felder has been ranking among the most reliable partners for woodworkers in the German market.

Great success

The Felder-Group with company headquarters in Hall in Tirol is one of the leading worldwide suppliers of woodworking machines for hobby, business and industrial use.

Via the Felder sales and service locations, the Felder employees take the passion for excellent woodworking machines to customers all over the world, according to the motto “Everything from one source”. Despite growing global challenges, the Felder Group remains committed to quality and precision from Austria. www.felder-gruppe.de
SOCIAL COMMITMENT | Hall in Tirol,

An investment in the future of woodworking

THE FELDER GROUP SUPPORTS YOUNG WOODWORKERS WORLDWIDE

Perfection in woodworking requires qualifications! In order to help provide these qualifications, the Felder Group has been supporting young woodworkers for many years throughout the world. Whether donating machines for training facilities and charity projects, as Skills Presenter at 'Worldskills', as a supporter of various national and international young carpenter competitions or as a sponsor of educational institutes - Felder Group invests in the future.

"The modern woodworker must offer their customers unique features, which can be used correctly and are ahead of the times. The high degree of innovation, the wide range of services and the quality of work and training are of key importance. This is what we need to convey to our apprentices and make it possible for them to achieve it", Hansjörg Felder, Managing Director of the Felder Group.

A goal, which the Felder Group, itself a state certified training institute many times over, has set for itself, and to which end has dedicated many years to youth training.

"Long-term success is only possible with products that are designed for the highest performance and quality. In order to use this first class technology in the best way possible, it is necessary to train the next generation to the highest level possible" explains the company owner. "We support youth competitions and training projects worldwide and we see it as an investment in the future of woodworking."
Highest dexterity and absolute precision for perfect woodworking: Furniture maker Thomas Lindner on the way to winning a bronze medal (Source: WorldSkills Leipzig 2013 GmbH)

Even at the "Best of Young Carpenters" junior-show competition, work is carried out on machines produced by the Felder Group (Source: WKO)

FELDER machine donation for the Tirol charity project "Kindern eine Chance" in Uganda (Source: Kindern eine Chance)

In the woodworking training centre Gloggnitz (Handwerklichen Ausbildungscenter Gloggnitz) training and work is carried out on Felder machines - just one example of the many. (Source: TischlerJournal)
ENTRY-LEVEL CNC MACHINING CENTRE
NEW 5 AXES CNC MACHINING CENTER
NEW EDGE BANDER IN THE GOLDEN CENTER
NEW

LIGNA 2017 | Hall in Tirol, 02/2017

PANEL SAW INNOVATIONS
The new Felder brushing machine structura 60.02

GIVE YOUR WORKPIECE A NEW FACE!

The solid machine chassis of the robust brushing machine structura offers maximum stability. With a working width of 650 mm and a variable adjustable infeed height of 3200 mm, the machine is also suitable for larger workpiece requirements. The single sided mounting of the aggregates enables the processing of extra wide workpieces.

The infeed with a table height of 900 mm and a continuous feeding belt with a web structure has an adjustable speed of 2.5 - 10 m/min.
The clearly structured and intuitive control panel provides maximum user comfort and maximum productivity. The electrical height adjustment and the manual fine adjustment of the 2 brushing aggregates make it possible to adjust to the required depth of cut quickly and accurately.

Both of the brushing units are powered by powerful 4 kW (5.5 hp) motors rotating in the opposite direction to the workpiece feed. The first aggregate is equipped as standard with a steel brush (D=200 mm). The second aggregate is equipped as standard with a Tynex brush (D=200mm K60).

The advantages at a glance:

- Machine chassis open to one side for extra wide workpieces
- 200 mm brush diameter for maximum useable life
- Variable feed speed adjustment for optimum working results
- Through feed height of 3-200 mm
PRESS RELEASE | Hall in Tirol, 02/2017

The new FELDER multi boring machine FD 21 professional

MULTI BORING HAS NEVER BEEN SO ACCURATE

Maximum precision when dowel boring - with the new Felder FD 21 professional it's easy. 21 high quality drilling spindles at a distance of 32 mm, for drill bits with a diameter of maximum 35 mm, exact dowel and line boring holes are guaranteed. The welded chassis in combination with the solid cast iron table, rigid side and longitudinal stops, as well as pneumatic workpiece holders and ergonomically designed operating elements ensure that the FD 21 professional, is a top class dowel boring machine.

FD 21 professional multi boring machine from Felder
The boring unit with 21 boring spindles (11 rotating clockwise and 10 anticlockwise) on the FD 21 professional is pneumatically tiltable from 0-90° and can be optionally equipped with a combination drilling segment for hinge bores. The bayonet locking system enables a tool free changeover of the drills which saves both time and money. Blum, Hettich or Grass - Accurate holes are always guaranteed. With an easy to read scale the fence depth can be adjusted up to 300 mm and set with ease. Two 1,500 mm fences each with two stops and solid side fences with a fence profile of 420 mm are already included in the standard equipment. Removable side fences with digital displays enable comfortable setting adjustment, accurate to within a tenth of a millimetre (optional). They are mounted using the tried and tested Felder coupling system.

Due to the 8mm automatic drilling depth compensation only one drilling depth setting for the dowel holes in the face and front side is required. The optional Felder grid system at the front of the machine with variably adjustable stops guarantees quick repeatability. The stops can also be used on the depth fence and on the linear fences.

The optional 90° angle and 45°mitre fence, a gauge for the transferring of the distances or additional pressure cylinder can all be used to further improve the effectiveness of the FD 21 professional. Even larger workpieces can be processed with ease with the table extensions that can be mounted to three sides of the machine.

The advantages at a glance:

> Motor power 2.0 HP (1.5 kW)
> 21 high quality drilling spindles (11 rotate clockwise and 10 anticlockwise)
> Distance between the axes of the drills: 32 mm
> Max. drilling depth: 70 mm
> Max. workpiece size: 850 x 3000 mm
> Max. workpiece height: 65 mm
> Two 1,500 mm linear fences each with 2 stops

The advantages for you:

> Massive support surface
> Jaw depth - 300 mm
> Complete reliability due to the grid system
Image material:

- Working table can be extended on 3 sides
- 45° mitre fence for frame components
- Locking system for efficient processing
- Fence depth up to 300 mm
- Side holders for the storage of the fences and tooling chucks
- Drilling depth compensation
The new FORMAT-4 - kappa automatic classic

THE COMPACT BEAM SAW FOR EFFICIENT CUTTING

The FORMAT-4 kappa automatic beam saw fulfils the individual requirements of the discerning woodworker with efficient panel sizing with an excellent price/performance ratio. Compared to saws with the same cutting length, the kappa automatic classic requires a total of two square meters less space.

The classic model convinces with the generous basic specification, with cutting lengths of 3200 mm and 4300 mm, two moveable support tables with air cushion function and a pressure device for an exact right angle cut when crosscutting. For perfect, chip free results, the main saw aggregate is equipped with a 7.5 kW motor, has a max. 320 mm saw blade diameter and 68 mm saw blade projection. The intuitive touchscreen control concept ensures a quick and simple control of the machine.
The details:

**Optimised saw carriage with extreme running smoothness**
The saw carriage with main and scoring blade is guided along a hardened and ground round bar guide system. A highly precise gear drive and gear rack drive system results in an extremely smooth movement of the saw carriage with cutting speeds from 1 to 40 m/min. This guarantees a constant cutting quality regardless of the material being processed. The cutting direction towards the fence ensures even more precision when making right angled cuts.

**Roller conveyor and workpiece transport**
Solid steel clamps, pneumatically controlled, guarantee a safe and damage-free clamping of panel stacks (opening height 80 mm) and individual small panels. The roller track supports the material pusher transport of panels and guarantees a precise feed of the panel material to the cutting line. The panel pusher, made from solid steel is guided on both sides and is equipped with a magnet measurement band system. The combination of a highly precise servomotor and solid material grips ensures maximum repeatability is achieved. The pressure device with rollers presses the workpiece against the fence and guarantees an exact 90° angle (for workpiece widths 50–1200 mm).

**New control panel and Format-4 software – everything from one source**
The new, even clearer control panel with a 15” touch panel fits perfectly with the machine design and guarantees ergonomic and stress free working. Alongside ARDIS as a modular structured cutting optimisation software, the simple and intuitively operable FORMAT-4 software supports the simple and precise operation with maximum productivity.

The advantages at a glance:
- Saw blade projection of 68 mm
- Cutting length 3,200 or 4,300 mm
- Cutting direction against the fence for perfect 90-degree cuts
- 15” touch panel for fatigue-free working
- Variable feed speed adjustment 1 - 40m/min
- ARDIS cutting optimisation software
- Motor power 10 HP
Image material:

Saw carriage with main and scoring unit

Pneumatically controlled, solid collet chucks made of steel

15" touch screen control panel

Double measuring system on the material pusher
CNC - complete package from FORMAT-4 SOLUTIONS

THE EXACT SOLUTION REQUIRED

BY THE CUSTOMER

In the modern workshop all of the machines are interconnected and even complicated CNC programming can be done quickly and simply. Significant increase in productivity is therefore guaranteed. That is why a perfectly coordinated complete package is required, that consists of excellent advice, individual machine configurations and software optimised to the requirements of the customer. Only then is the modern carpenter equipped to be able to deal with all of the challenges of modern woodworking.

Format-4 offers tailor made CNC complete packages for the highest requirements, and in doing so, is true to the company motto: "To offer the customer the exact solution, that meets their specific requirements."

Machines and software from one supplier

To optimise productivity and efficiency, the machine and software must work in perfect harmony. Numerous interfaces from various suppliers often make this interaction difficult. With the "everything from one provider" solution from Format-4, programming is easy: With the intuitive programs from Format-4 solutions, planning, programming and realisation of furniture,
windows, doors and 3D freeform pieces can be achieved in no time at all. The tried and tested software solutions with simple and efficient programming have been optimised for Felder machines and offer quick program creation and high automation options, a variety of nesting applications as well as barcode connection in networked workshops.

NEW: F4Design

With cabinet construction programs you normally have to choose between two different types of software. Common generators are intuitive, simple to use and require no CAD knowledge, however, they generally only have limited options. CAD solutions on the other hand offer numerous options for the display and processing of the individual components, they do, however, require advanced CAD knowledge.

Format-4 has now combined the advantages of both options to offer an innovative complete solution: F4Design. In the basic version (F4 Design) the input of the cabinet information is predominately in a generator style. As you move up to F4Design Gold and Platinum, CAD applications can also be used to adapt the cabinets generated by the generator. Here the requirements of woodworkers have been taken into consideration, to create a well laid out and clear visual appearance for the software. The CAD scope is sufficiently integrated and does not cause any confusion with options that are not required for kitchen/furniture cabinets or interior design.

> F4Design - Cabinet generator

- Display of cupboards in 3D - line and shaded representation (wood structure)
- Selection of different basic shapes
- Graphic construction display (easy to change)
- Large choice of fronts, handles, materials, decoration and fittings etc.
- Creation of cupboards in an attic roof
- Creation and saving of material and construction plans
- Simple operation - no CAD knowledge required
Selection and allocation of the fittings
- Export part list into Excel
- Export cutting list to Ardis

> F4Design - Gold (Expansion module 1)
- Creating panels
- Save created cupboards in the library
- Creating individual components (incl. cutouts)
- Designing of rooms (incl. windows, doors) for realistic presentation
- Creation of individual component designs
- Inserting dimensions (furniture, layout)
- Definition of views and section planes
- Diverse drawing commands
- Manual insertion of previously finished processes

> F4Design - Platinum (Expansion module 2)
- Rendering module for the photo realistic display of the drawing (presentation)
- Expansion of the design database (processes, profiles, decoration articles, etc.)
- Creating of individual processes (of individual components)
- Additional processing and drawing commands

NEW: F4Solid powered by alphacam
F4Solid is the 3D solution for all Format-4 machining centres. There are three basic models to choose between, for the export to 3, 4 or 5 axes. With the surface generator, the creation of rotation surfaces, TAB - or edge surfaces, extruded surfaces or surfaces from sections is simple. Simply load the 3D file, create the tool path, check the production of the finished workpiece by using the 3D-Simulation with preview, and you are finished.

NEW FUNCTIONS: Flash Frame
Available with 3D use from 2016! By entering just a few parameters you can design the frames and fillings of your doors and windows. Relevant parameters are for example: Size, corner connections with or without glass beads, fittings and much more. With the click of the mouse, the window will be broken down in seconds to individual CNC programs. Without any extra work, the machine operator can then load these files from the production planning and run them and can also create an automatically generated material and piece list.
NEW FUNCTIONS: FlashNest

> Material saving shape processing: Nesting with “FlashNest”

Shape processing, such as for example the cutting out of panels for upholstery components or kitchen components is known as nesting. The matrix table ensures the full surface support of the workpiece. "FlashNest", the Format-4 nesting software, calculates the maximum number of shapes that are possible to be nested from a panel and minimises the amount of scrap material produced. A new Macro makes it possible to select the roughing-finishing option, two different Z depths as well as an offset to the contour and the use of double tools when roughing/finishing.

OPTIMISED: WoodFlash

Woodflash is the software solution for simple and efficient CNC programming. Quick program creation and high automation options, a variety of nesting applications as well as barcode connection in networked workshops guarantee efficient programming for maximum productivity.

> 3D-Simulator with collision control

With the 3D-Simulator the movement of the axes, feed speed, passage height and equipment options, the chip deflector, all rotary tool changers and drilling heads, are accurately displayed and the exact total processing time can be calculated. The collision check tests whether any collisions could happen and guarantees the working safety on the machine. Through the allocation of the tool DXF profile, the contour of your router can be shown on the workpiece. Even when calibrating new tools, the DXF profile can be used which helps to reduce the amount of material usage.

> Woodflash module: Extruded surfaces with embossing and projection function

The routing in face 1 is generated using the predefined contour in the side surface. Pockets, free contours or DXF imports make it quick and easy to be able to project or engrave on to the routed surface. The defined tool moves precisely at a right angle to the predefined contour on the side.
> 5 axes programming, quick and simple!
With the easy to program Format-4 software, routers can also be used for bevelling. Get the most from your 5 axes machine and reduce your tooling costs.

> Additional features:
- Tooling archive
- Equipment - Machine tool management
- 2D simulator for fast calculation of machining times
- Simulation Board: 3D-Simulator/CNC Board
- CNC-Editor for intuitive data input. With Format-4, CNC comfort already starts at the planning phase. This saves time and money with every work process:
  - Individual customer macros (for Lamello Clamex-P or the sharpening of corners)
  - Programming of each component to its final size.
  - DXF-Import as a standard solution
  - Variable and parametric programming, quick and simple
  - Intuitive management of subprograms
  - A variety of macros facilitate the programming, even with complex workpiece designs
The new material handling systems from FELDER

MAXIMUM PRODUCTIVITY IN
SINGLE PERSON OPERATION

Highest productivity in single person operation is guaranteed with the new Felder material handling systems. We now offer a brand new return system for edgebanders, a loading unit for beam saws and CNC machining centres, a vacuum panel lifter and a panel warehousing system to increase the efficiency and reduce cycle times of your company significantly.
U-MOTION RETURN SYSTEM for edgebanders

The new edgebander return systems bring production maximisation for single person operation into every workshop. The adjustable feed speed of the material friendly conveyor belt ensures a constant material flow, free from interruption with minimum distance between the workpieces. With the impressive rate of 14 workpieces per minute, optimum efficiency is guaranteed and you maximise the production output of your edgebander.

With both the classic and professional systems, there are two different loading options to choose from.

- With the cross conveyor, the U-motion professional makes it possible to use the return system in the narrowest of spaces.

- Equipped with a rotating head the U-motion classic makes it possible to turn the workpiece before it is returned. Using a touch screen monitor the operation is simple and intuitive.

Optionally the system can be extended for a stacking position of finished workpieces.

<table>
<thead>
<tr>
<th>Technical specifications</th>
<th>U-motion professional</th>
<th>U-motion classic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. load</td>
<td>60 kg</td>
<td>60 kg</td>
</tr>
<tr>
<td>Panel size</td>
<td>max. 2800 x 1300 mm</td>
<td>max. 3000 x 1500 mm</td>
</tr>
<tr>
<td>Length of cycle</td>
<td>14 components/minute</td>
<td>14 components/minute</td>
</tr>
</tbody>
</table>

> Maximum productivity and reduced production costs with single person loading
> Perfect handling of materials - no more scratches!
> The healthy workshop: Fatigue-free working, puts no strain on your back - fewer sick days
L-MOTION LOADING UNIT for kappa automatic and CNC profit H08/H10

The Format-4 L-motion loading unit enables maximised production with single person operation. With cycle times of 15 seconds, the material flow in a linear system can be optimised and the full efficiency of the production capacity used to maximum advantage. The optional slewing gear positions the panels along and across the cutting direction, depending on the requirements of the user or the cutting optimisation software.

> Maximum productivity and reduced production costs with single person loading
> Surface neutral vacuum system - no more scratches!
> The healthy workshop: Fatigue-free working, puts no strain on your back - fewer sick days
> Maximum flexibility - Free choice of the number and position of the stacks of the material

THE C-MOTION PANEL STORAGE SYSTEM for L-motion loading unit
The C-motion panel storage system offers an endless range of equipment and extension options for professional material handling. We would be pleased to put together an individual offer for you.

V-MOTION VACUUM PANEL LIFTER
for kappa V60, kappa automatic and CNC machines

The Format-4 V-motion vacuum lifter is the perfect unit for transporting laminated chipboard panels quickly and efficiently. The large vacuum discs hold the panels of up to 150 kg in either a horizontal or vertical position leaving absolutely no marks. Using the vertical chain hoist, the panels can then be loaded safely onto the machine.

Regardless of whether it is used as a crane system mounted to the workshop wall (or the workshop floor), or as a track system with a crane trolley (mounted from the ceiling or from a bridge structure free standing), the V-motion unit can be extended to a total length of up to 16 metres (track system) or 6 metres as a crane system.

> Maximum productivity and reduced production costs with single person loading
> Perfect handling of materials - no more scratches!
> The healthy workshop: Fatigue-free working, puts no strain on your back - fewer sick days
> Numerous configuration options make it individually adaptable
c-tech - Individually tailored manufacturing solutions for the productive processing of plastic and composite materials

THE TOOL FOR YOUR CREATIVE SUCCESS

With the "c-tech" product series from Felder, we offer you a specially designed machine program for processing plastics and composite materials. Individually tailored to your production, new manufacturing processes with "c-tech" guarantee the highest level of productivity and increased profit. With machines and support service from Felder, we ensure first class quality, innovative new developments, optimum consultation, comprehensive training and reliable service.

LOTS OF INDIVIDUALITY from one source – machine, software and automation

The everything-from-a-single-supplier solutions from Format-4 provide the customer with a perfectly matched complete package for the toughest demands. Intuitive software solutions from F4 Solutions provide easy planning, programming and realisation of 3D free form parts in next to no time. Together with the customised automation levels around the machine they ensure top productivity.