



CNC

## profit 2, profit 3 – The Profit Making Centres

Profitable, versatile, precise – CNC-centres for every workshop.

Profitability, versatility and precision are three constant fundamentals in your production process which must not be absent.

With "profit 2" or "profit 3", the FORMAT-4 CNC-machining

centres, you will produce in the shortest possible time a maximum quantity of work-pieces in limitless forms – and variety

In just one clamping position you can produce all of your required (moulding), drilling and cutting work with the utmost precision and with not more than a maximum of one third of the total time normally required.

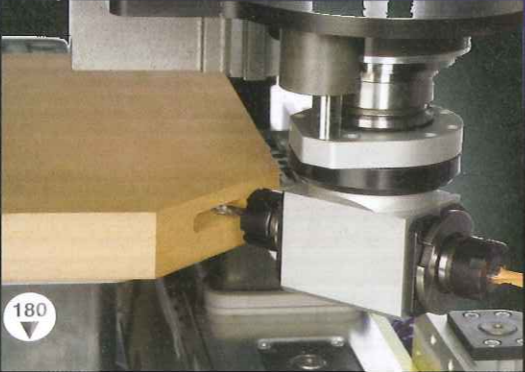
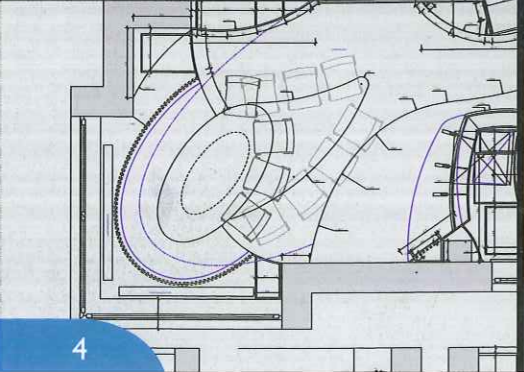
Of course programming of the

work for the CNC-machining centre must be done. With the FORMAT-4 "profit 3" self explaining windows software, this task is made simple.

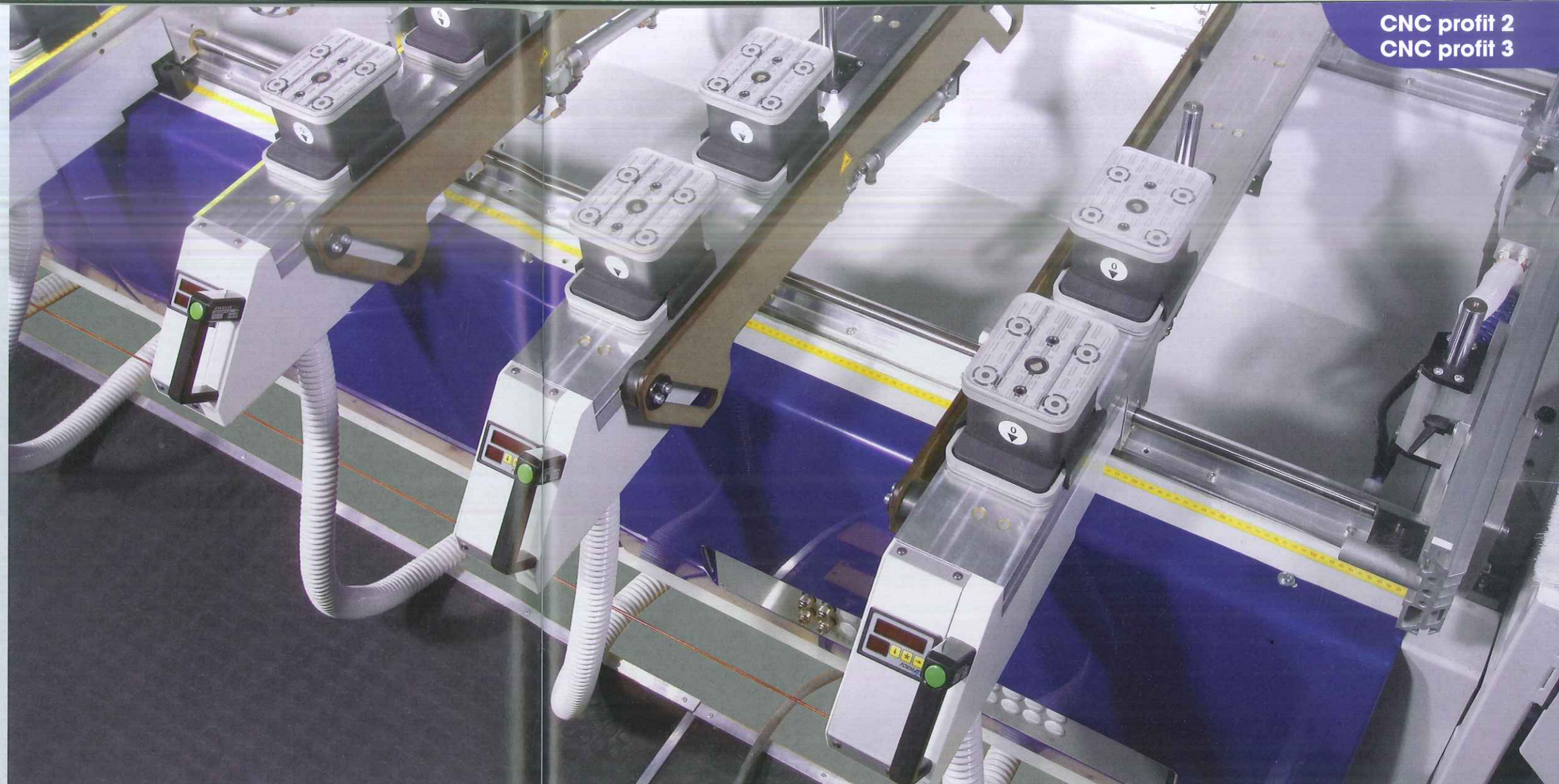
With this the convenience of a CAD function and 3D views are of course available and will increase your earnings.

The "informed" now choose a FORMAT-4 CNC-machining centre.

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## The Work Bed



Work bed highlights, important details:

- 4 working fields
- Pendulum configuration: While you are setting a new configuration for the left field the right field remains in operation.
- 4–12 retractable panel supports
- Digital displays for the panel support and vacuum suction pad positioning; exact positioning underneath of cut outs and for complex forms
- Comfortable panel support positioning with the air pressure push button
- Hose-free vacuum suction pad system for a huge variety of configurations, fast positioning, time saving.
- Double-sided clamping system for vacuum suction pad positioning. First, position the vacuum suction pad on the panel support and then the work-piece on the vacuum cup. The advantage: no repositioning of the vacuum suction pads for work piece positioning is required.
- Through the vacuum suction pad height (100 mm) work-piece edges can be optimally processed within the same working cycle.
- Feeding rails particularly help the “one man shop” to load large and or heavy work-pieces onto the work bed.
- Chip removal belt conveyor



**Panel support and Vacuum suction pads – fast positioning**  
The hose-free vacuum system is simple and quick to position, adapting it to the work-piece size and form. A huge number of various vacuum forms and sizes are available ensuring support for every conceivable work-piece form.  
LED-displays on the panel supports with the guidance of the software program help you to quickly position the vacuum cups suction pads to avoid risk of collision. Feeding rails ensure simple loading of large, heavy or awkward work-pieces – an extremely important advantage allowing the “one man shop” to benefit from the “profit 2” and “profit 3”.



**Secure Work-piece support – precise results**  
Various vacuum suction pad shapes guarantee secure clamping for every conceivable work-piece form.



**Clamping devices for frames**  
It's not just the vacuum suction pads which can be easily and safely positioned but also the clamping devices for frames. This allows different frame profiles to be processed with maximum precision.

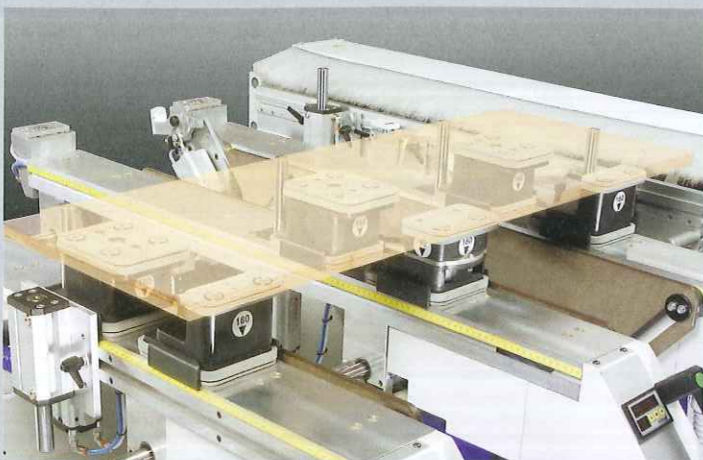
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Work-piece cylinder stops at "Standard- Zero point"  
Solid steel stop cylinders ensure exact work-piece positioning. On the X-axis you will find the cylinder stops on every panel support. On the Y-axis the cylinder stops can be variably positioned, depending on work-piece size.



Work-piece feeding rails  
Easy loading and removal of large, heavy or awkward work-pieces is guaranteed through the feeding rails, an important feature, allowing the "one man shop" to benefit from the "profit 2" and "profit 3".



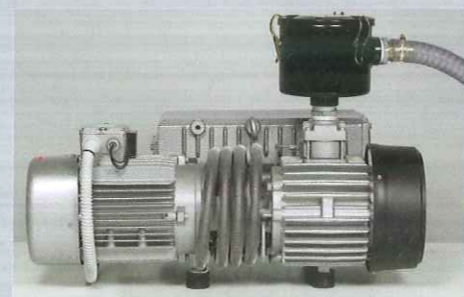
Work-piece cylinder stops at "Double-Zero point"  
(second row of stops)  
Additional to the work-piece cylinder stops for the "standard-zero point" is the second fence row found in the front part on every panel support, particularly useful for processing slim work-pieces.



Work-piece stops for veneered panels  
Further to the standard work-piece cylinder stops there are additional stops specifically developed for processing veneered panels with overhanging veneer or laminate.



Template-moulding  
4 individual connectors per working area are available for template molding. Template moulding can be complex; the individual connectors provide suction which would not be possible from normal vacuum suction pads.



Vacuum-Pump  
Depending on capacity requirements we will equip your CNC-machining centre with a vacuum pump which will perfectly meet your needs.

Quick positioning  
vacuum suction pads  
suitable for any work  
piece!

Quickly set in place, without the  
need for hose attachment. The suc-  
tion pads secure your work pieces  
with optimal force.



140 x 115 x 100 mm (L x B x H)  
600-05-00445



125 x 175 x 100 mm (L x B x H)  
600-05-X447  
600-05-Y506



120 x 50 x 100 mm (L x B x H)  
600-05-X126  
600-05-Y853



130 x 30 x 100 mm (L x B x H)  
600-05-X854  
600-05-Y855



pivoting 90°  
125 x 75 x 100 mm (L x B x H)  
600-05-00851



pivoting 90°  
120 x 50 x 100 mm (L x B x H)  
600-05-00994



pivoting 360°  
125 x 75 x 100 mm (L x B x H)  
600-05-01079



pivoting 360°  
125 x 50 x 100 mm (L x B x H)  
600-05-01020



Frame clamping device  
160 x 128 x 100 mm (L x B x H)  
600-05-00861



Adapter-disk  
200 x 200 x 28 mm (L x B x H)  
600-05-00029

Accessories for adapter-disk  
ISMB 80 x 80 x 42 mm  
600-05-00078  
ISCUP Cup 80 x 80 x 30 mm  
600-05-00003  
ISCUP Cup 80 x 40 x 30 mm  
600-05-00004  
ISCUP Cup 80 x 28 x 30 mm  
600-05-00005



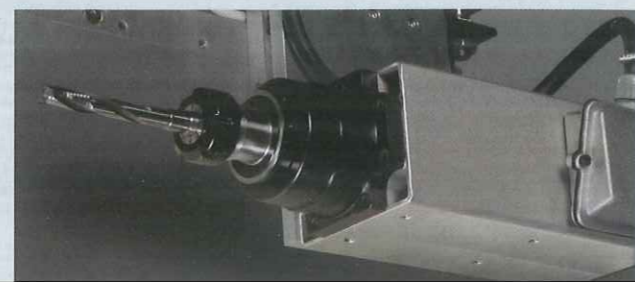
**The Spindle Motor**  
With up to 15 kW and up to 24000 rpm, the inverter driven motor is more than capable of performing every conceivable task with ease. The spindle motor power is transmitted directly to the working head through the Z-axis. Two guaranteed high precision lineal guides ensure accurate vertical guiding of the spindle motor. The Z-Hub operates pneumatically over two cylinders in two steps, the head-hub and the spindle hub. The tooling tension (HSK 63 or ISO 30) is carried out automatically. Sensors check and confirm the tooling tension and safety of the operation. The tool carrier is cleaned pneumatically.



**The Drilling Head (27 spindles)**

- 12 vertical drill spindles, 32 mm shaft: 7 in the X- and 5 in the Y-axis, always individually retrievable
- 6 horizontal drill spindles, 32 mm shaft: 4 in the X- and 2 in the Y-axis, always individually retrievable
- Integrated slot cutter in the X-axis
- 2.2 kW inverter driven motor with up to 6000 rpm
- Special steel cogs with beveled, hard ground cog segments

**The Horizontal-Spindle motor**  
Motor capacity from 5.5 kW and 18000 rpm. The spindle motor is inverter driven. The vertical movement is carried out pneumatically through double lineal guides made of hardened steel. Due to the array of various tools which can be used, for example a rebate head or drill bit, the number of various forms which can be achieved is almost limitless.

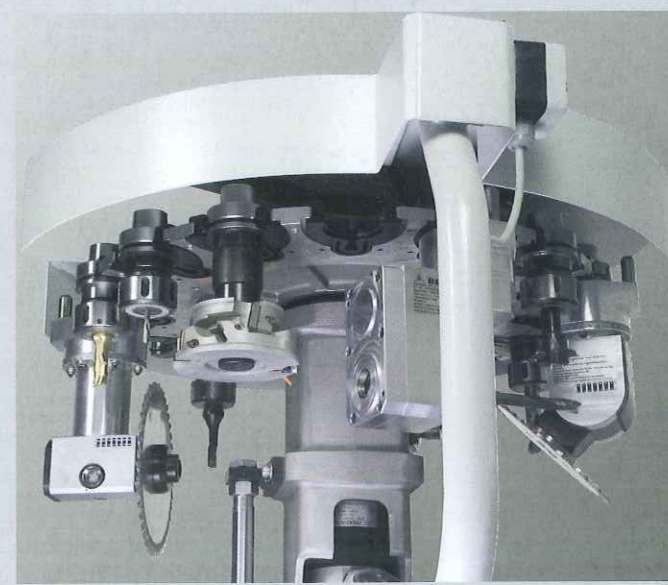
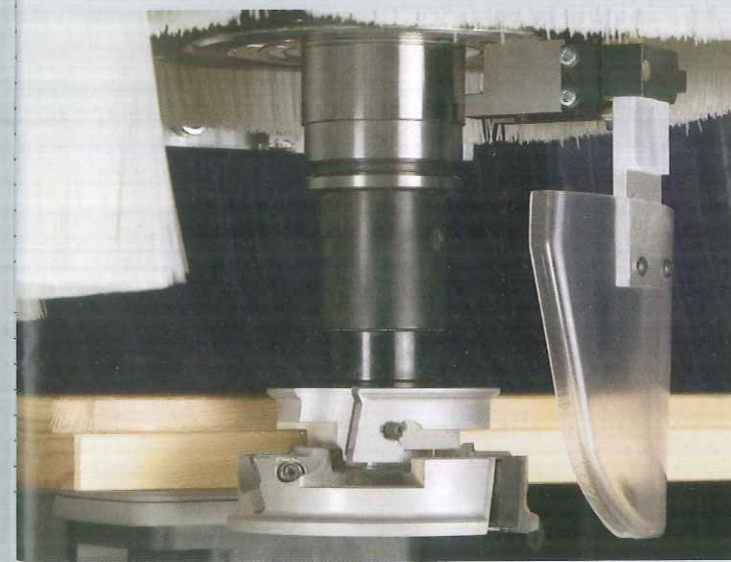


The head mounted tool changer magazine, turntable type, carries up to 10 different tools or working units for an almost limitless variety of applications (with or without the C-axis). Should a production process require different tools the working procedure will not be interrupted – With the turntable type tool changer you save precious production time and ensure maximum flexibility



### Head Mounted – Turntable type Tool Changer

When processing the edge of a work-piece dust and chips are routed in the direction of the extraction port through the deflector guard which is located directly next to the operational tool. And moves with the C-axis.



Optional: Head mounted – rotary tool changer with the facility for 15 tools. The tool changer moves with the head of the machine. This means breaks in machining time for tool changes are kept to an absolute minimum ensuring you get maximum value from your Format-4 CNC work centre.

Individual configurations ensure a variety of possible set-ups

#### The Spindle Motor

- It's your choice:
  - Chuck type HSK F63 or ISO 30
- Air and water cooling with enclosed circular cooling, low maintenance system
- Rotating speed up to 24000 rpm, inverter driven
- Up to 4-axis – interpolate C-axis 0°–360°

#### Rotary – Tool Changer

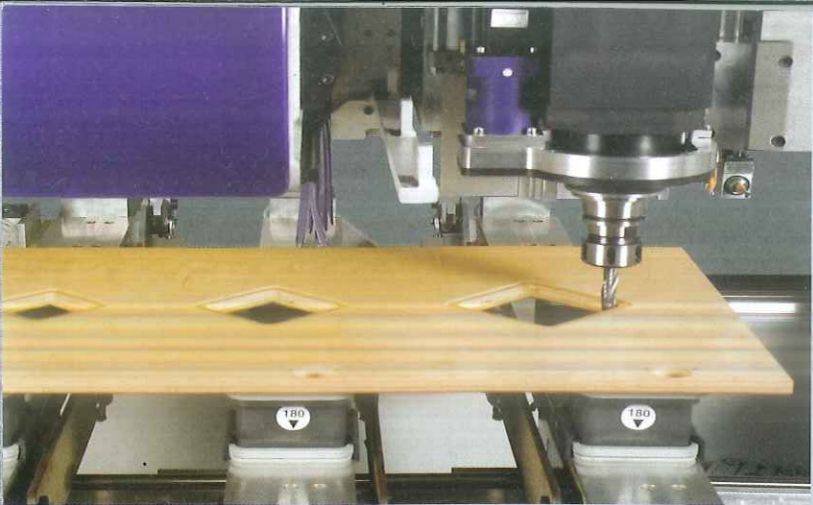
- Fast tool change due to the tool changer location - directly on the working head (thus following its movements)
- Up to 10 different tools or working units can be - head mounted
- Additional tool changer for up to 15 tools. The unit is mounted to the outrigger of the machine head and travels with the head in the X-axis.

#### Pick-Up Tool Changer

- An additional 6 tools can be placed in the Pick-Up changing area

#### The Drilling Head

- 12 vertical and 6 horizontal drilling units (Alternatively 19 vertical and 8 horizontal drilling units) 32 mm grid
- Individual drill bit selection
- Integrated slot cutter in the X-axis
- motor 2,2 kW
- Up to 6000 Rpm - inverter driven



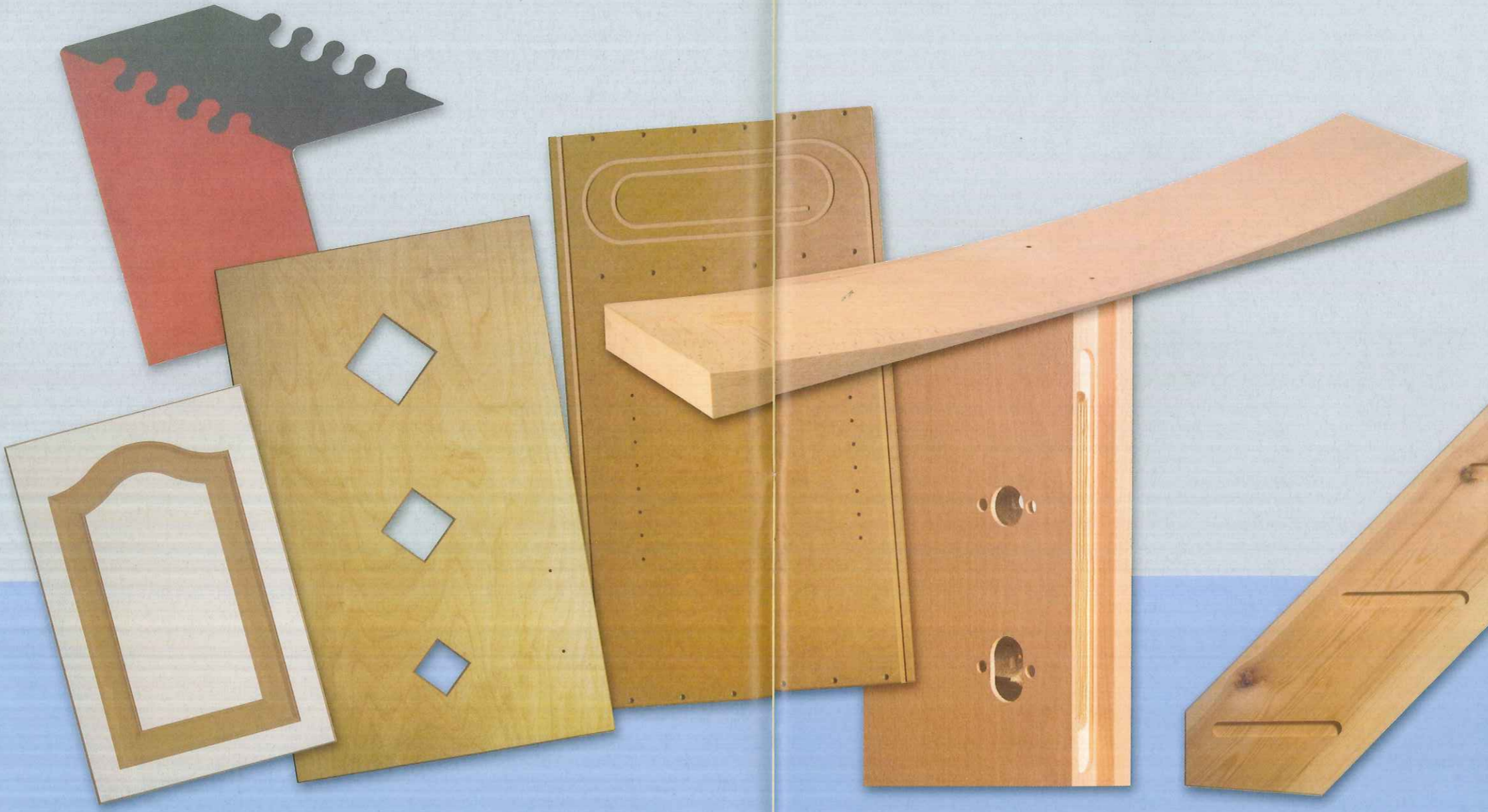
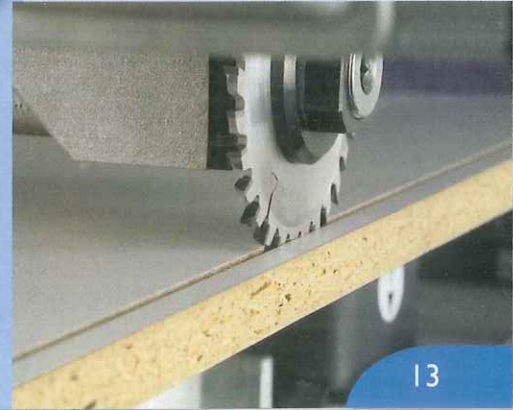
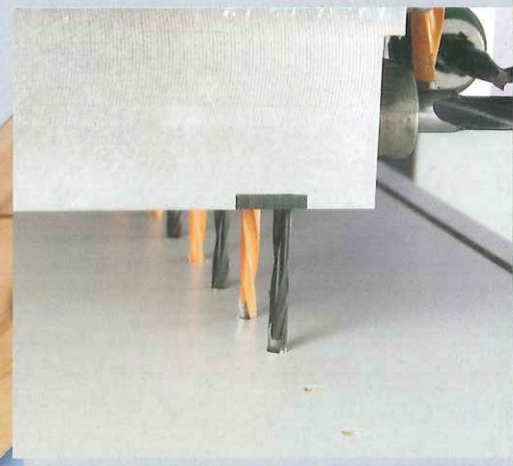
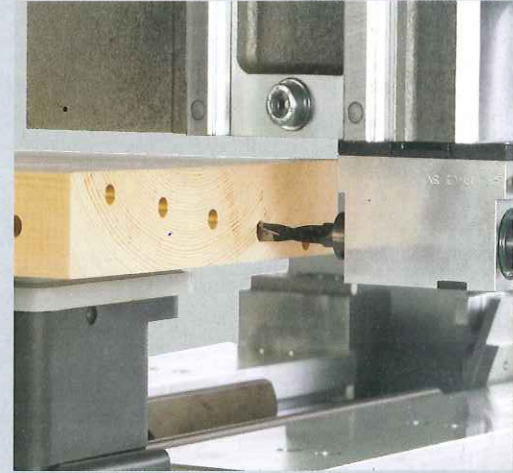
CNC profit 2  
CNC profit 3

Vertical processing

Horizontal processing



Drilling and  
grooving

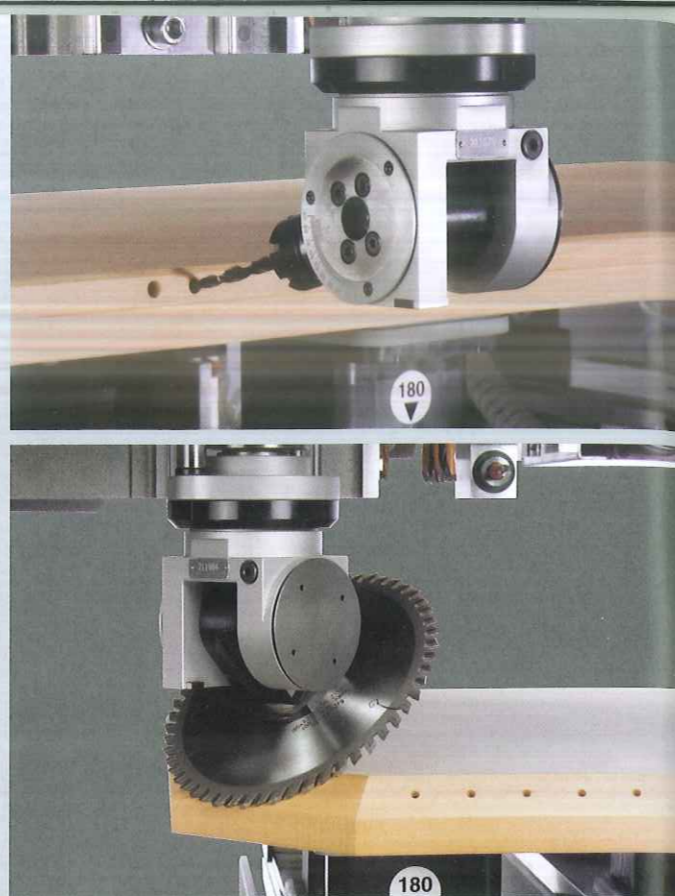


Endless possibilities! Frames, inside and outside doors, body finishing, steps and staircases...

## Tilting drilling unit Tilting bevelling unit

The angular head unit for moulding or sawing tooling is inserted with the tool-changer above the moulder spindle. The angular head can be rotated manually or automatically (using a C – axle) from 0° to 360°.

In the vertical plane the head may be tilted manually from 0° to 90°. Depending on the type of tool being used, drilling, shaping, grooving, and sawing operations may be executed in vertical and horizontal positions. With the use of collet chucks slotting saws up to max. 180 mm may be used. For the use of this head as a drilling unit, a typical working example is the drilling of the ANUBA-type hinge-drill.



## Routing unit with tracer

Tooling changes on the routing unit which accommodates router-shaper cutters is carried out through the tool changer unit from the moulder spindle.

When processing in the horizontal plane, the tracer will follow the exact profile required. The operational possibilities include curves, bevels and or profiles from solid wood, with just about every conceivable frame shape.

## Double-Spindle unit

Tool changes on the double spindle unit which accommodates drill, shaper and sawblade tooling is carried out through the tool changer unit from the moulder spindle, manually or automatically adjustable from 0°–360°. This enables drilling, slot cutting, bevelling and trimming in the vertical position.



## Cam box horizontal unit

The cam box unit enables horizontal drilling and moulding, like, for example the cam box unit would be used for horizontal mortising of a door lock. Tool changes on the cam box unit which accommodates drill or shaper cutters alike is carried out through the tool changer unit from the moulder spindle. The horizontal rotation of the cam box unit can be carried out manually, or automatically with the inclusion of the C-axis, both allow rotation from 0°–360°.



CNC profit 2  
CNC profit 3



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# Programming – couldn't be any simpler

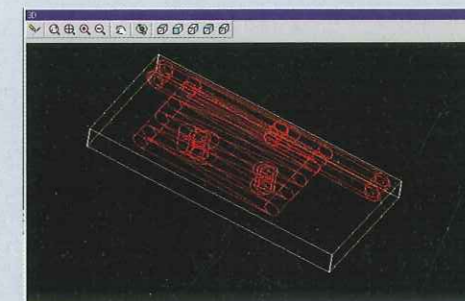
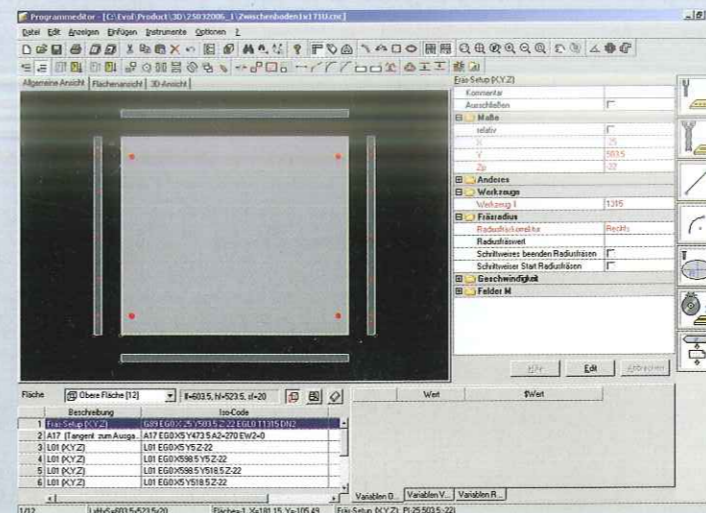
As a “beginner” after just three days training you will be able to programme your FORMAT-4 CNC-machining centre for every application!

The flexibility and fast set-up of your CNC-machining centre “profit 3/2” is ideally supported by the FORMAT-4 programming software. You can be assured that for even a one-off processing, be it a simple or complex work-piece, set-up is efficient, economical and profitable. The FORMAT-4 programming software is high-performing, multi functional and self explaining, putting maximum flexibility and accuracy at your fingertips!

- Import from .dxf and dwg-data files
- 3D-Views
- CAD/CAM Graphics
- Programming of virtual working surfaces
- Graphic programming of up to 5 surfaces
- Up to 299 programmable variables
- Time optimization and simulation for the working process
- Simple management of tooling data
- Traverse- and vacuum suction pad positioning
- Calculation of vacuum pod and traverse position
- Visual images of sensor condition (machine diagnosis)
- Tele-service
- Writing and Scribing spindle tools
- Macros for conventional adaptation



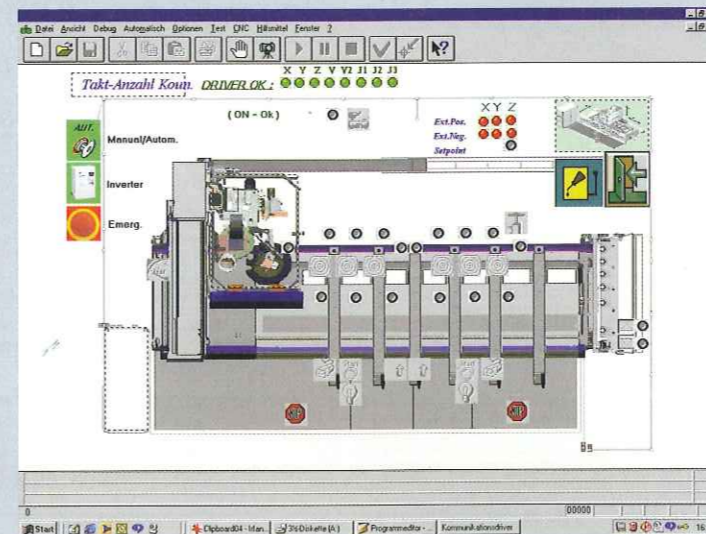
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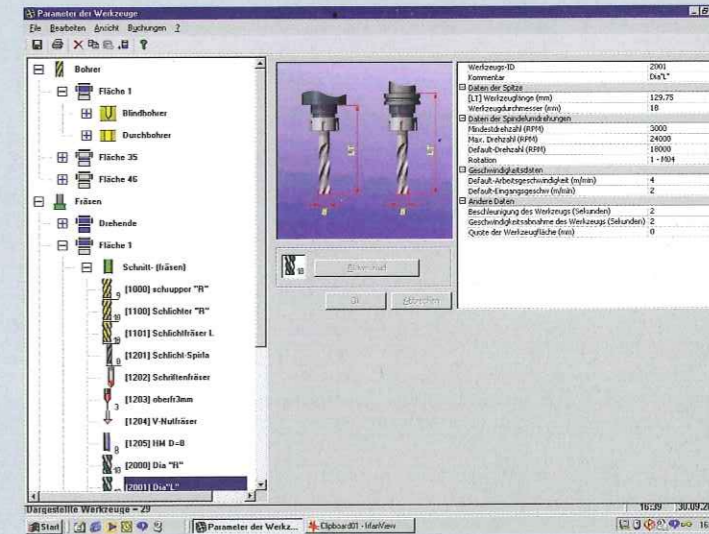
3D -View

The Programming Software

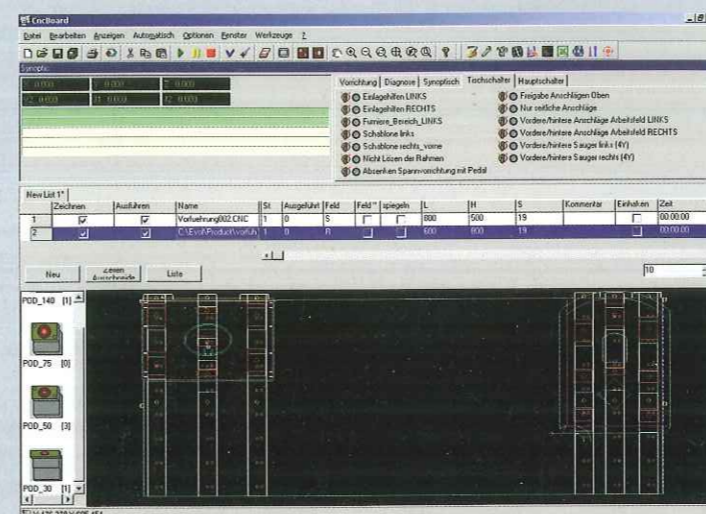
- CAD-Functions
- 3D-Views of the programmed work-piece
- Import from .dxf and dwg-data files
- Self explaining software



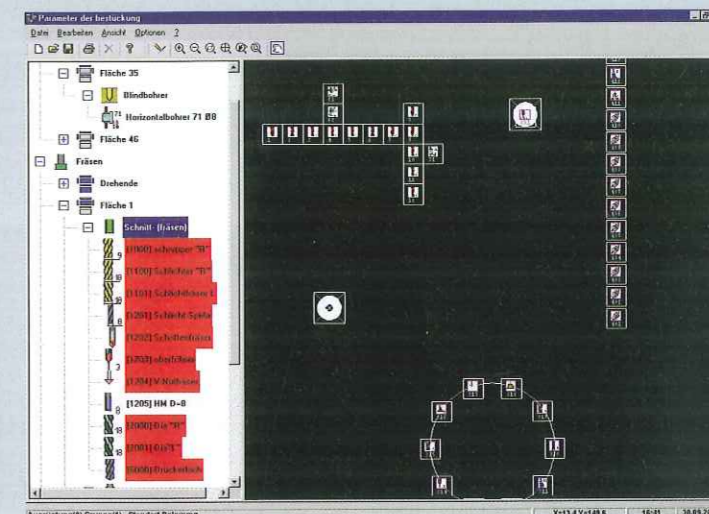
Machine diagnosis



Tooling-databank



Panel support and vacuum suction pad positioning



Head-equipping

## The Main Body Software

The Format-4 cabinet making software makes it possible to plan and construct furniture & kitchens in a new dimension. With the entry of a few parameters individual furniture frames can be called up in a matter of seconds. CNC Programming files for the production of the frames are automatically generated in the CNC program.



With FORMAT-4 CNC-technology you will always be one step ahead!

The FORMAT-4 CNC-machining centres "profit 2" and "profit 3" have been specifically developed for the craftsmen's workshop. With so many good reasons to invest in CNC-technology there are a few fundamentals which stand out from the rest:

- Quality of the finished product
- Flexibility
- Increased workshop capacity

5 Reasons to choose a CNC-machining centre  
With the FORMAT-4 CNC-machining centres you can take your business to a completely new level in performance and profitability. Below we outline the 5 most important reasons.

- The diversity of demand, reaching from staircase to stringers elaborations on (large) surfaces. With CNC-technology your processing possibilities are almost unlimited while also providing precision and accurate shapes.
- Jobbing orders. With FORMAT-4 you are in a position to do jobs for others in your region. This results in additional sales and perhaps even opens up new business opportunities.
- Investing in the technology of the future assures the future profitability of your business.
- The time factor. With a CNC-machining centre the time required from getting an order to delivery is very short.
- From the perspective of investment in tooling, CNC-technology offers also advantages. Several processes can be completed with the same tool and completion of the workpiece without further clamping adjustments.

You can produce a variety of products in the quickest possible time!  
With one and the same tool you can tackle various processing operations. Changes of the workpiece type can be performed very quickly.

For example have you recently worked on a door? Just think, three minutes after having finished, you may already work on body or frame parts!

The FORMAT-4 CNC-machining centres "profit 2" and "profit 3" have a hose-free vacuum clamping system for work-piece support. This enables fast and varied change-over without major effort, for example when you change from processing the body of a door to processing the frame. Fast and effortless change-over is one of the most important points to consider in the production of customized workpieces.

For optimal and efficient use, the program is simply and comfortably designed. The program also offers possibilities for future extensions and updates. The programmes prepared in your office can easily be transferred directly to the machining centre and can be implemented immediately to begin processing of the work-piece.

If you have a large variety of different workpieces or elements to be completed in a short time, than the FORMAT-4 CNC-machining centres "profit 2" and "profit 3" should be your first choice.

Don't hesitate to invest in CNC- machining!

The software and the outstanding technology provided by FORMAT-4 and the previous training make it easy to operate a CNC machine in an efficient way. That's why such an investment is to be recommended. After the first year of working with your FORMAT-4 CNC machining centre you would certainly consider that it is worth to venture such an investment

### Insertion of

- Inserted shelving units
- Shelves
- Glass shelves
- Drawers
- Flaps
- Out-feed
- Kitchen appliances
- etc.

### Designing in 2-D and 3-D

- Zooming of outline in overhead and elevation perspective
- Individual interior design
- Full, rotating 3-D-perspective
- Hiding of fronts
- Explosion diagrams

### Choose your material

- Structural elements
- Cover material (Laminate, melamine etc for every single base)

- Edge material (edges and definable ruggedness)

### Choose your fittings

- Data of fittings of all renowned manufacturers stored in memory
- Drilling pictures for simple definition of mounts
- Panel joining and construction method easily definable.

### Print-out of production papers

- Plane and 3-D-views for customer negotiations
- Data in excel format
- Material list
- Laminate top
- Edges
- Customised
- Finished parts

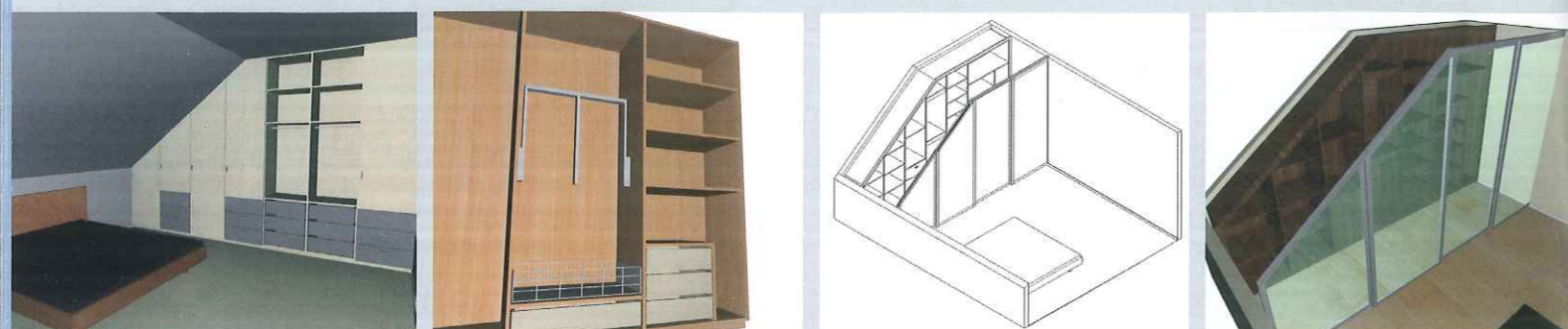
### CNC-Issues

- Automatic set-up of the CNC program

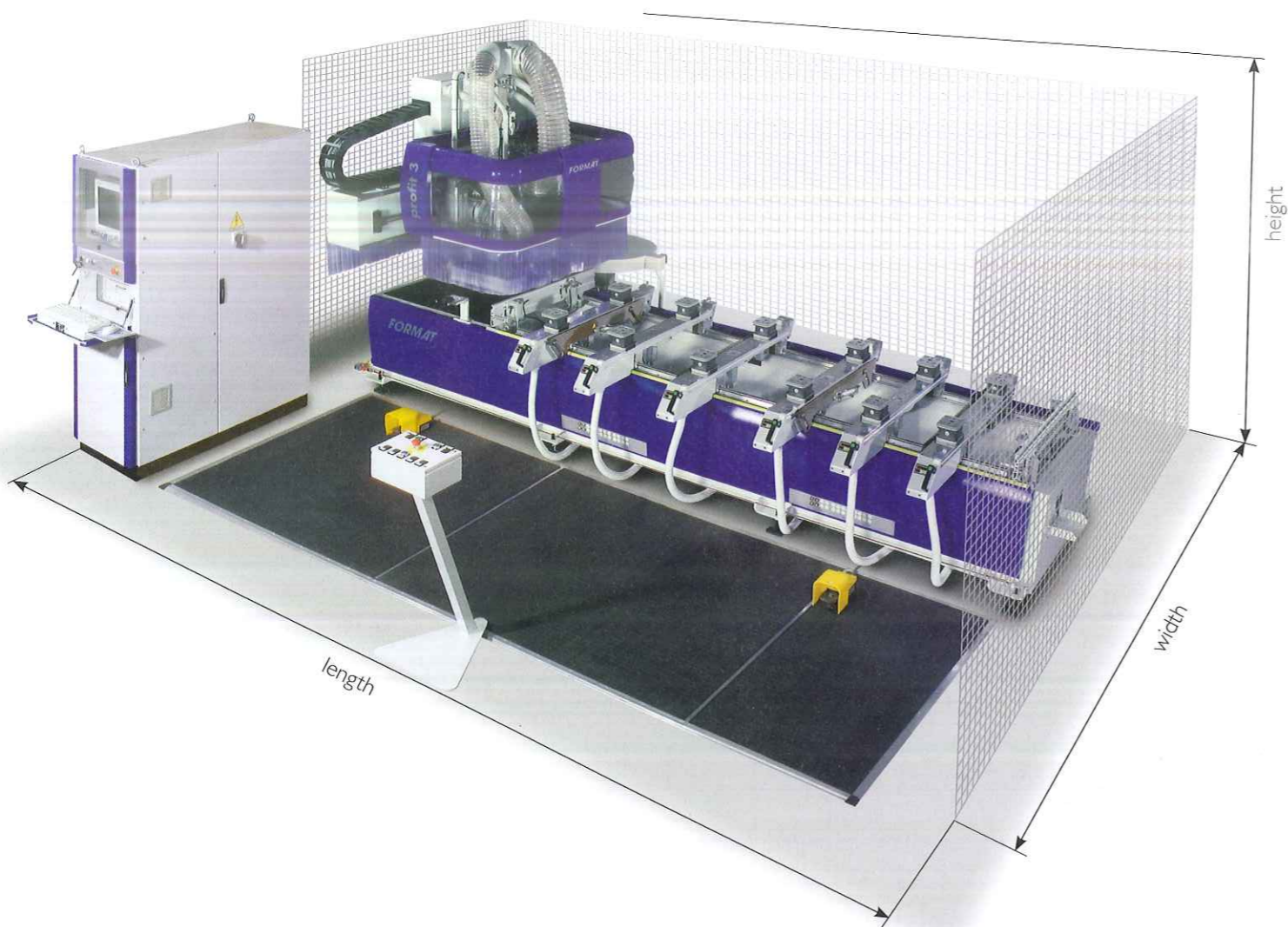
All projects and orders saved in the memory! Quick and easy access to already existing production data for repeat orders is guaranteed.

### Optional:

- Ceiling inclination  
Working of angled tops for cabinets
- Calculation  
Real time calculations
- Printing module  
Print out of individual unit dimensions
- Feng Shui  
Analysis of the furniture dimensions within Feng Shui parameters
- Bars/Corner seat  
Acceptance of 2D-DXF-cross cut







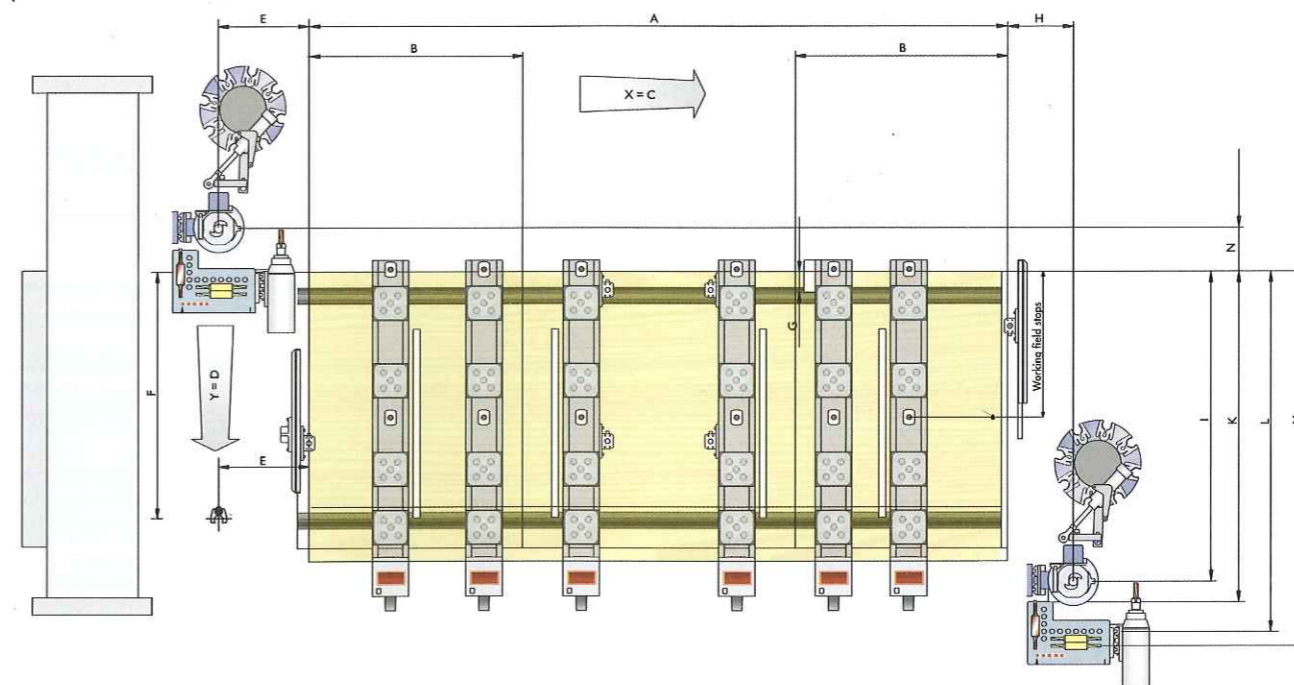
### Working area, travelling ways

	profit 2	profit 3 (3250)	profit 3 (4500)	profit 3 (6000)		profit 2	profit 3 (3250)	profit 3 (4500)	profit 3 (6000)
A mm	3005	3250	4500	6000	H mm	500	360	360	360
B mm	730	980	1650	2400	I mm	1285	1345	1345	1345
C mm	3950	4010	5260	6760	J mm	—	1355	1355	1355
D mm	1710	1690	1690	1690	K mm	1398	1458	1458	1458
E mm	150	400	400	400	L mm	1532	1592	1592	1592
F mm	—	1098	1098	1098	M mm	1599	1659	1659	1659
G mm	26	26	26	26	N mm	425	345	345	345

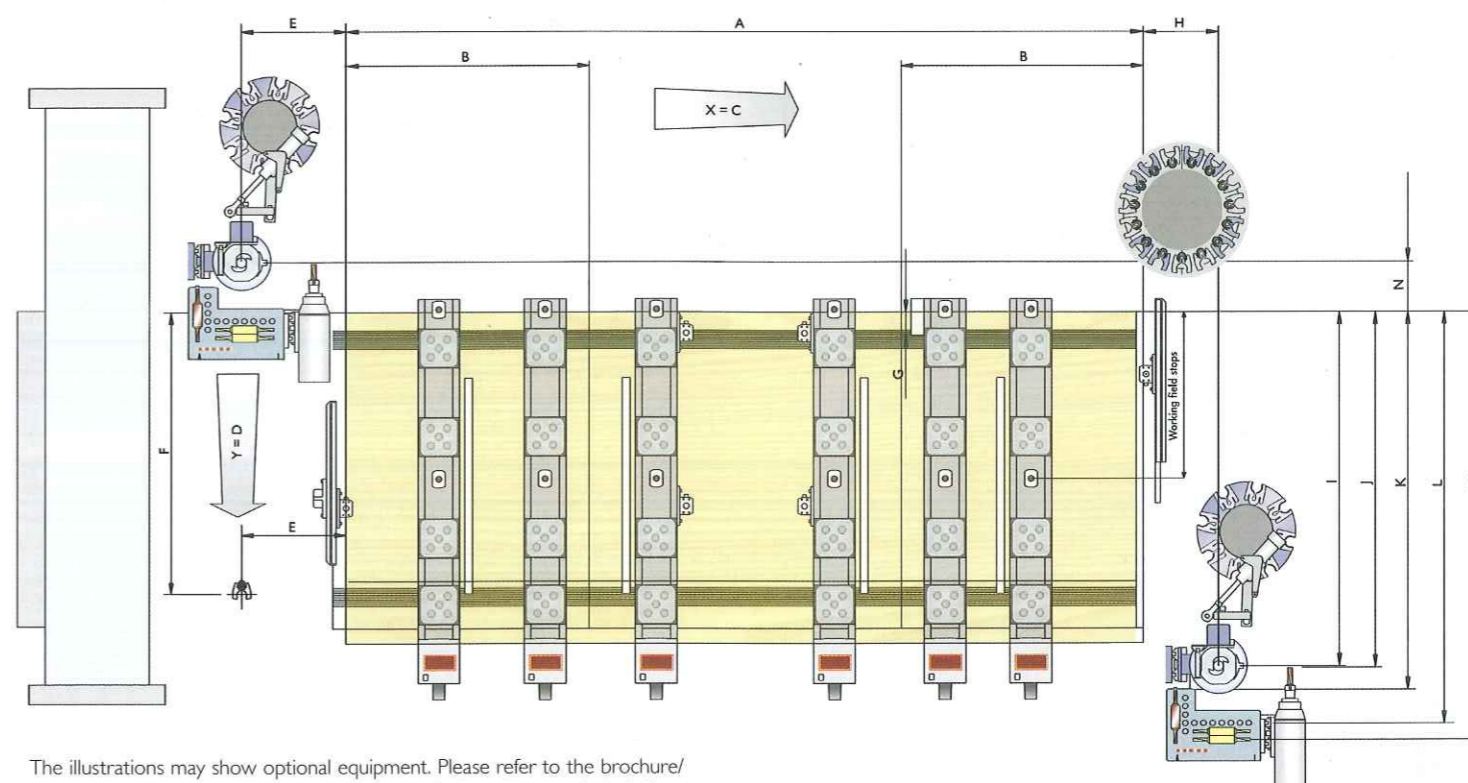
### Technical data

		profit 2	profit 3
Travel distance	X-axis	3445 mm	4010 / 5260 / 6760 mm
	Y-axis	1710 mm	1690 mm
	Z-axis	205 mm	225 / 350 mm
Speed	X-axis	70 m/min	70 m/min
	Y-axis	50 m/min	50 m/min
	Z-axis	15 m/min	15 m/min
Drill-head	Vertical drilling spindles	12	12 / 19
	Horizontal drilling spindles	6	6 / 8
	Slotting saw	Ø = 125 mm/max. Thickness 10 mm	Ø = 125 mm/max. Thickness 10 mm
	Variable speed	6000 rpm	6000 rpm
Moulder spindle motor	ISO 30	7,5 / 9,2 kW	7,5 / 9,2 kW
	HSK 63	7,5 / 9,2 kW	7,5 / 9,2 / 10,3 / 12,0 / 15,0 kW
	Variable speed	18000 / 24000 rpm	18000 / 24000 rpm
Pneumatic	Connection	½-Zoll	½-Zoll
	Pressure in supply pipe	6 bar	6 bar
	Air-consumption	approx 30 l/Min.	approx 30 l/Min.
Vacuum pump	Capacity	100 / 250 m³/h	100 / 250 m³/h
Dust extraction	Extraction cowling	S	S
	Total extraction capacity	3900 m³/h	5300 m³/h
	Air-speed	30 m/sec	30 m/sec
Electrics	Power supply	3 x 400 Volt	3 x 400 Volt
	Frequency	50 Hz	50 Hz
	Total power requirement	16,0 / 24,0 kW	16,0 / 24,0 kW
Space requirements	Length (L) approx	5900 mm	6200 mm
	Width (B) approx	3900 mm	3900 mm
	Height (H) approx	2650 mm	2700 mm
Weight	Machine (complete)	approx 3700 kg	approx 4200 kg

### profit 2



### profit 3



The illustrations may show optional equipment. Please refer to the brochure/specification you received in order to confirm which options are included.