

FORMAT[®]

CNC Machine Centers
Wide Belt Sanding Machines
Edge Banders



www.format-4.com



FORMAT⁴

History

400 years working with metal 50 years producing machinery for the woodworking industry

400 years of family tradition in metal forging, 50 years of experience in machine manufacturing, daily contact with woodworkers all over the world and continuous innovative development make FELDER-Group woodworking machines best sellers worldwide.

10 March 1998:

The company FORMAT-4 is founded. Prospective clients had very high expectations for the new product from the FELDER-Group, the world renowned woodworking machine manufacturer.

The revolutionary design, the ingenious features and the impeccable workmanship contribute to making a machine without comparison.

You will receive the highest precision, the best working convenience and value for money that, in the world of woodworking, you'll only find with FORMAT-4.



Visit our new web page!



- View the entire FORMAT-4 machine program online and take advantage of all the extra details it informs you of!
- Find tools and accessories and order them conveniently at our online-shop
- We keep you informed about advancements and activities at FORMAT-4 and the wood working industry

FORMAT-4. All round supplier for trade and industry

Our philosophy: 'Everything out of one hand'

- Complete machine program for both hobby workers and industry
- Highly accurate, precision built woodworking machines from Austria
- Innovative details to ensure the highest possible user comfort.
- Competent advice on all aspects of woodworking
- Extensive, tailored service offer

See for yourself

Deciding upon FORMAT-4 is never a mistake!

Competence

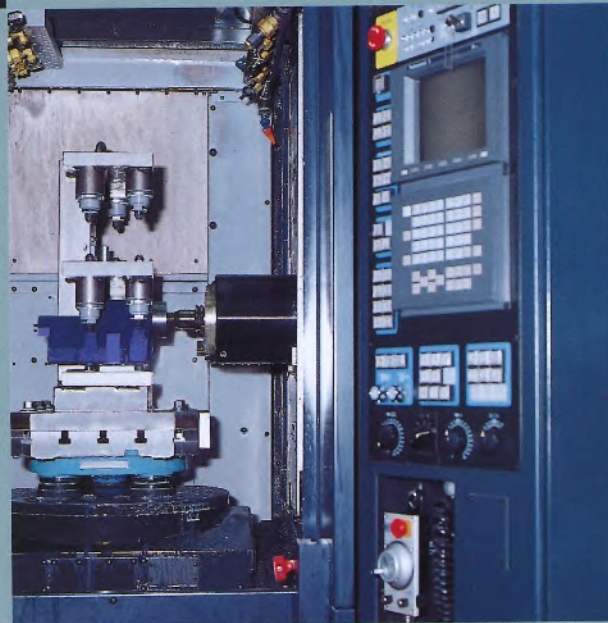


Advice

At FORMAT-4 you receive expert advice and care right from the start. Our successful advice team is available anytime for an obligation-free consultation.

Quality

FORMAT-4 woodworking machines are Austrian quality products. 100% of the production is carried out at the factory in Hall in Tirol. The most up-to-date mechanical engineering and production techniques combined with continuous quality control processes guarantee the quality, precision and the reliability of your new FORMAT-4.



Service

Our customer care and service staff are continuously brought up to date and trained by FORMAT-4 specialists. FORMAT-4 factory subsidiaries and representatives near you ensure ready to use panel saws in every situation.



profit perfect finish



4 profit 2, profit 3 – The Profit Making Centres



23 perfect – The Edgebanding Machine



35 finish – The Wide Belt Sanding Machine



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

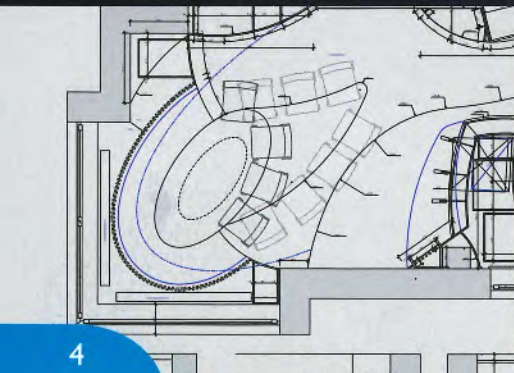
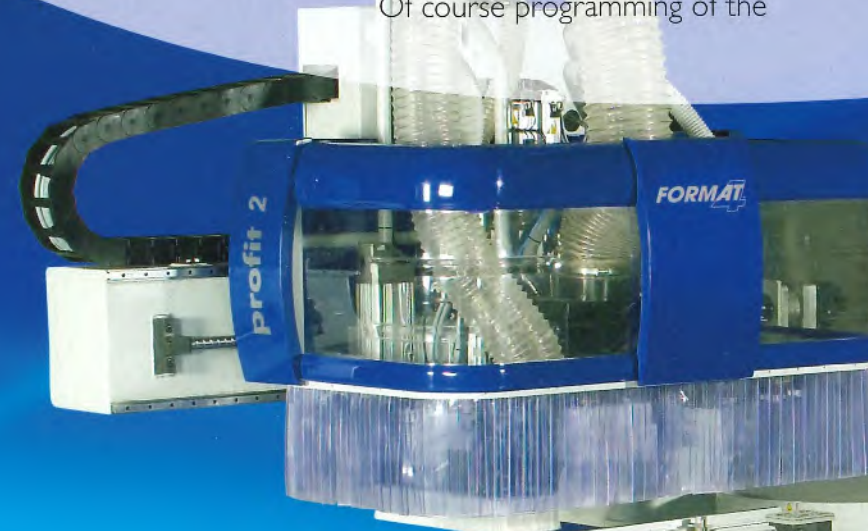
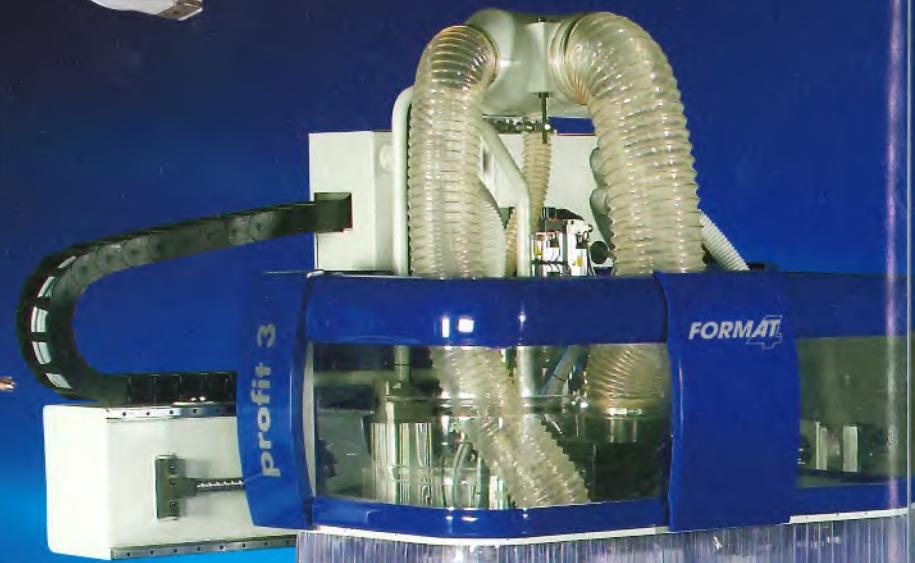
In just one clamping position you can produce all of your required (moulding), drilling and cutting work with the utmost precision and with not more than a maximum of one third of the total time normally required. Of course programming of the

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.

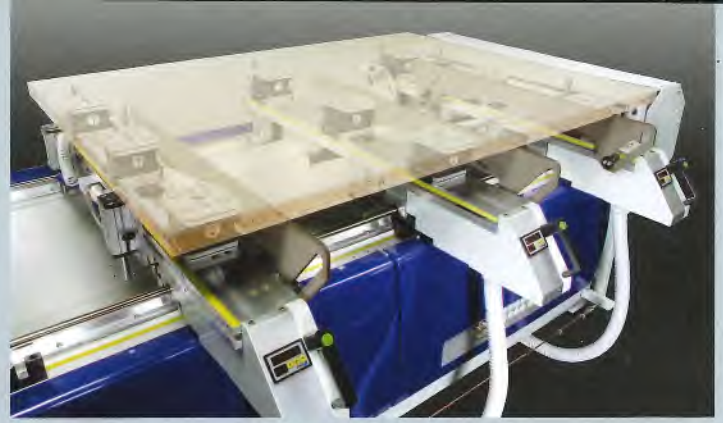


Clamping devices for frames
It's not just the vacuum suction pads which can be easily and safely positioned but also the clamping devices for frames. This allows different frame profiles to be processed with maximum precision.

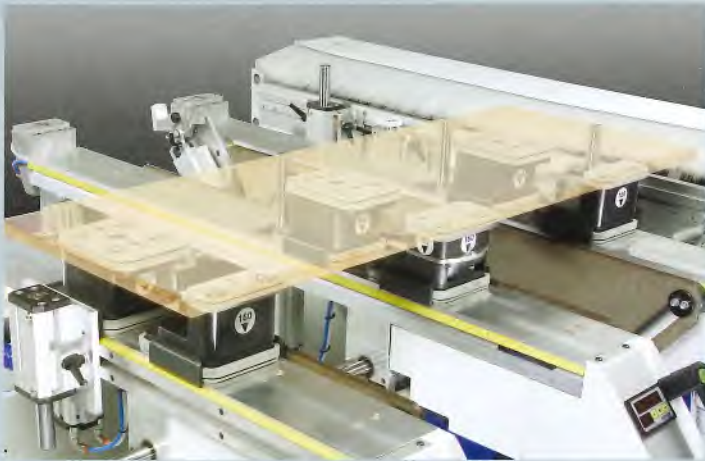




Work-piece cylinder stops at "Standard- Zero point"
 Solid steel stop cylinders ensure exact work-piece positioning. On the X-axis you will find the cylinder stops on every panel support. On the Y-axis the cylinder stops can be variably positioned, depending on work-piece size.



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".



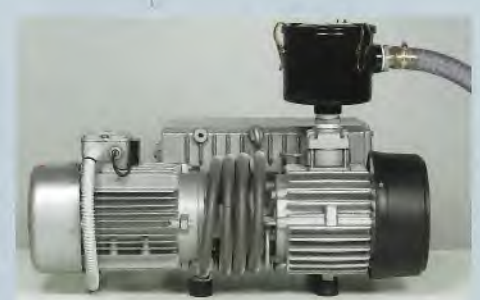
Work-piece cylinder stops at "Double-Zero point" (second row of stops)
 Additional to the work-piece cylinder stops for the "standard-zero point" is the second fence row found in the front part on every panel support, particularly useful for processing slim work-pieces.



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 moulding. 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



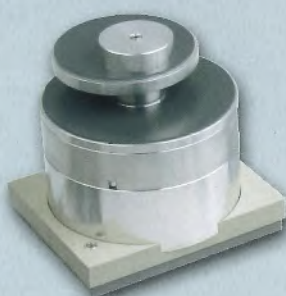
pivoting 90°
120 x 50 x 100 mm (L x B x H)
600-05-00994



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

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 out-rigger 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

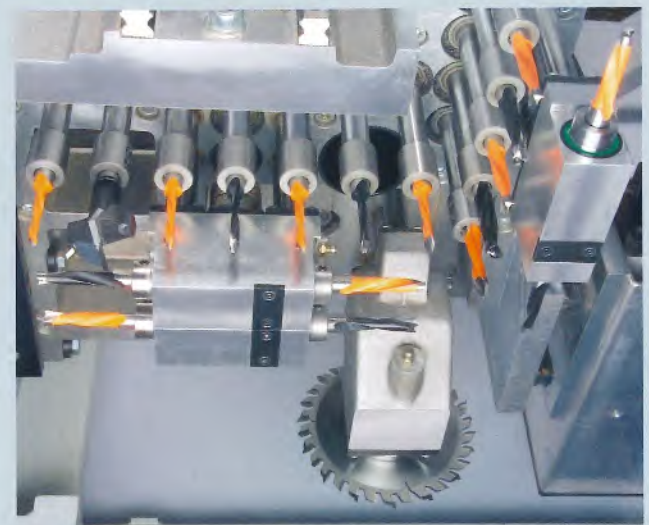
The Drilling Head

- 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



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.

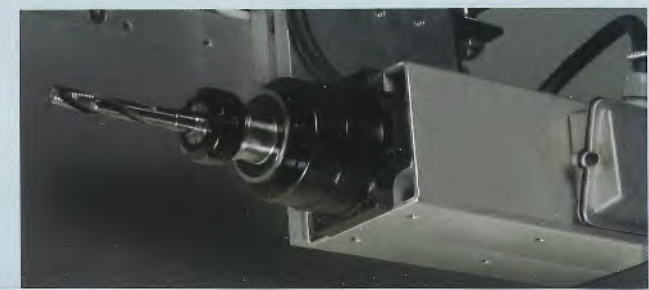


The Drilling Head (27 spindles)

- 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

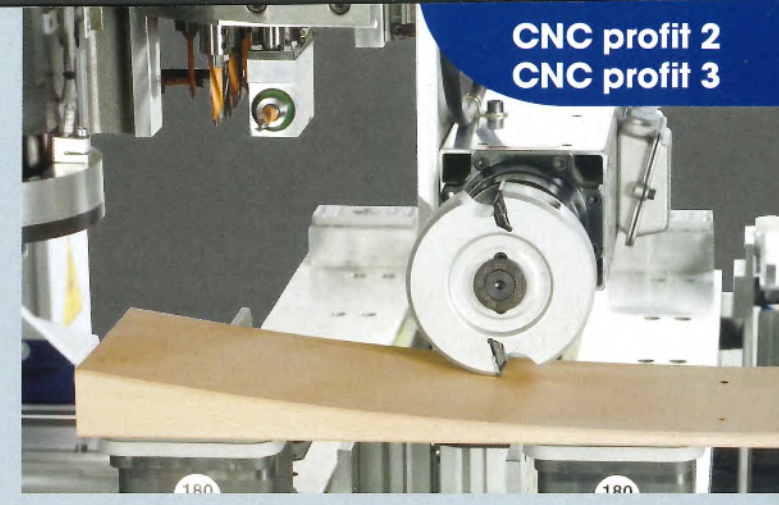
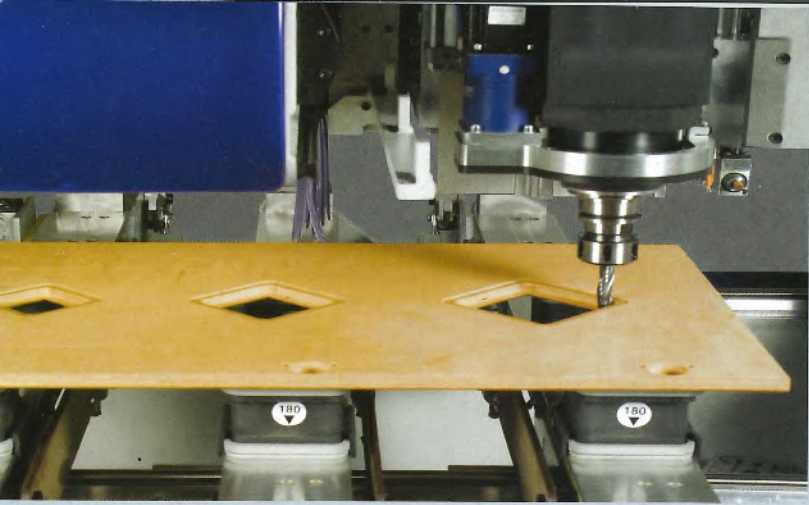


Head Mounted – Turntable type Tool Changer

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.

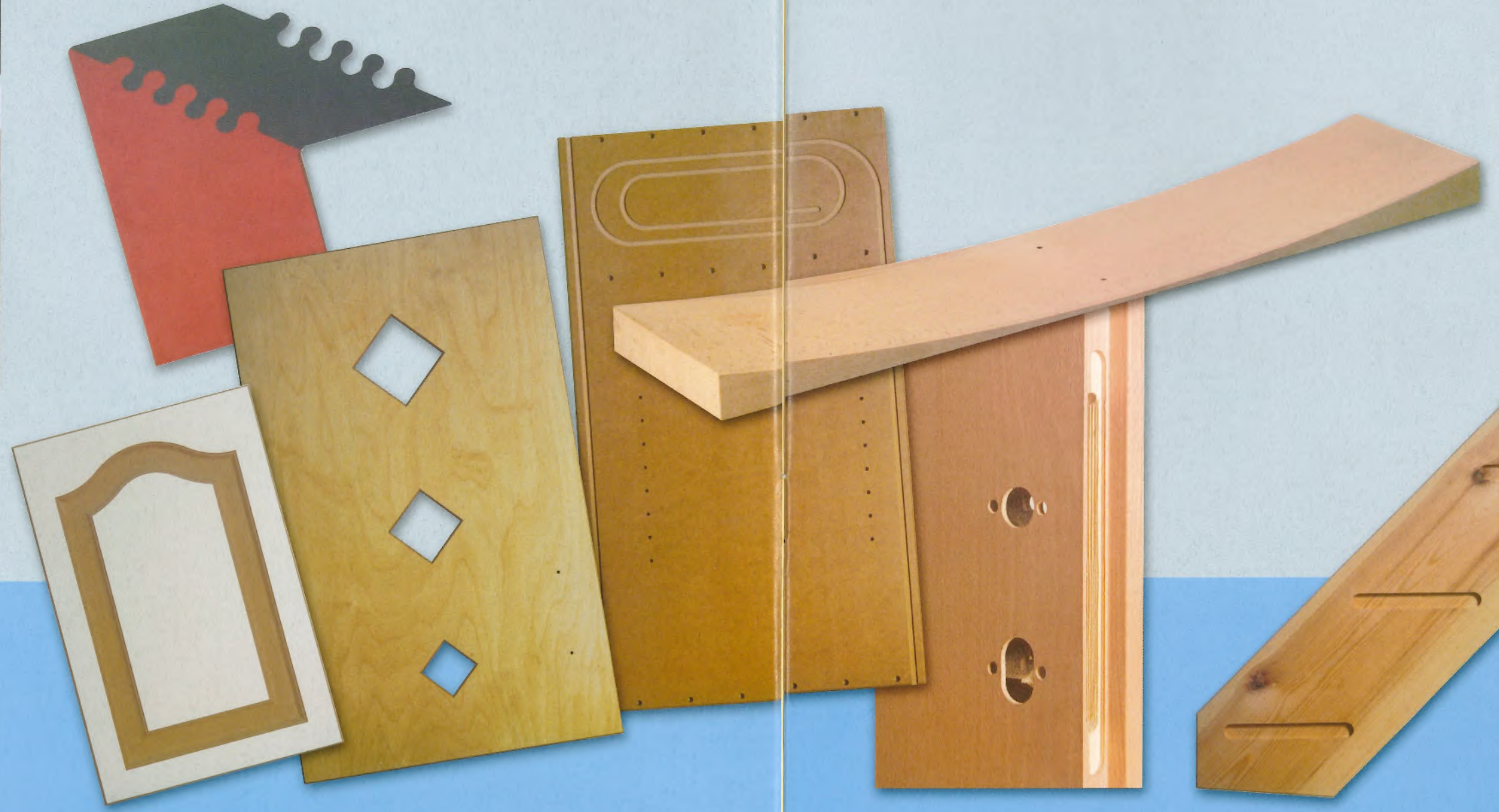
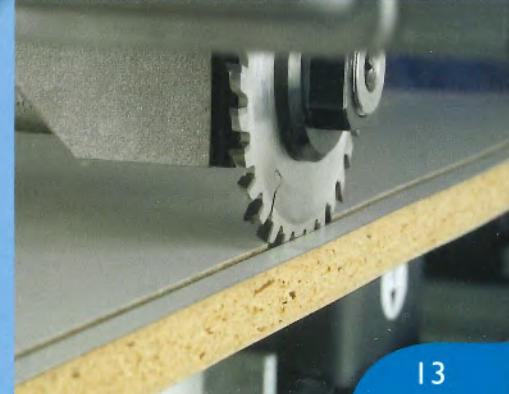
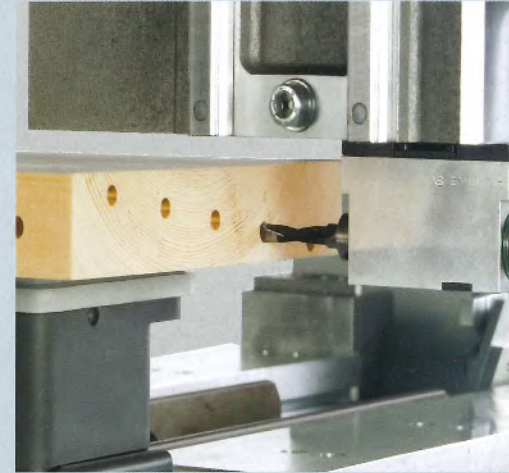


Vertical processing

Horizontal processing



Drilling and grooving

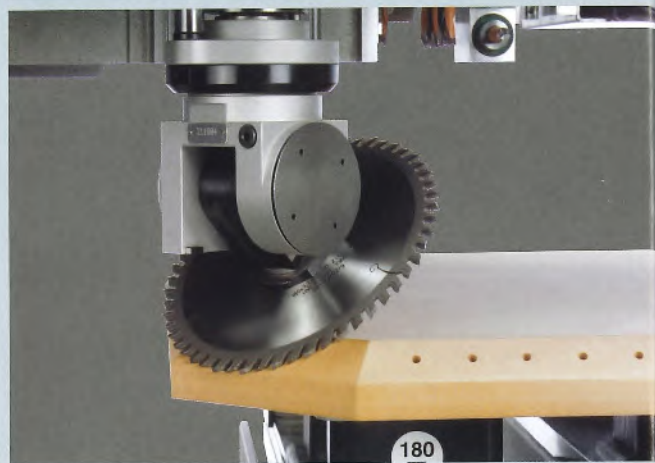
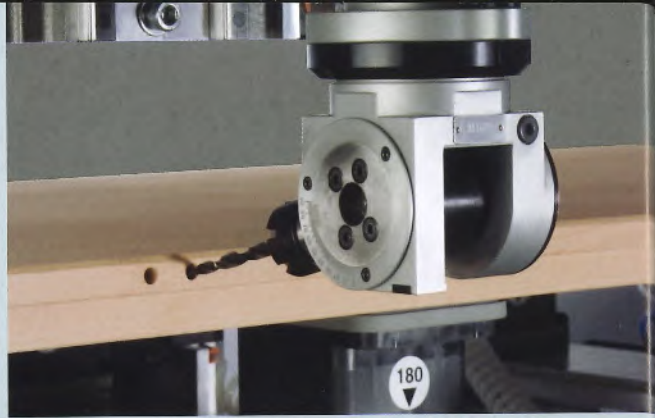


Endless possibilities! Frames, inside and outside doors, body finishing, steps and staircases...

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.



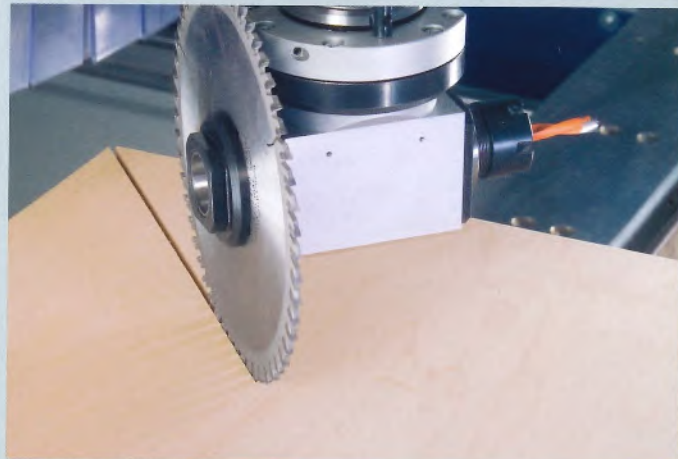
Routing unit with tracer

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, beveling and trimming in the vertical position.



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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°.



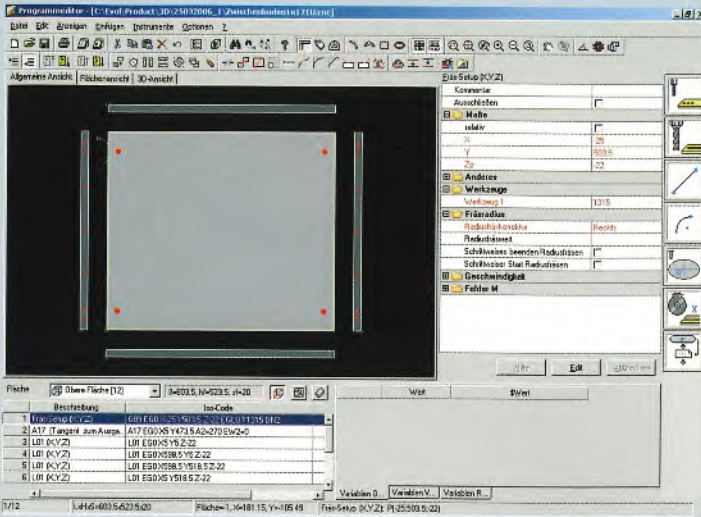
Programming – couldn't be any simpler

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!

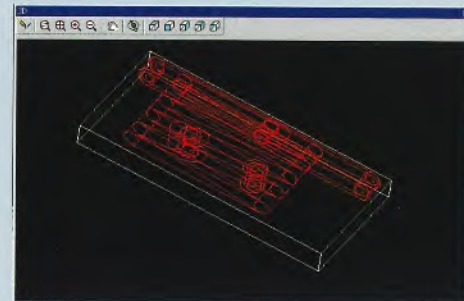
- Import from .dxf and dwg-data files
- 3D-Views
- CAD/CAM Graphics
- Programming of virtual working surfaces
- Graphic programming of up to 5 surfaces
- Up to 299 programmable variables
- Time optimization and simulation for the working process
- Simple management of tooling data
- Traverse- and vacuum 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



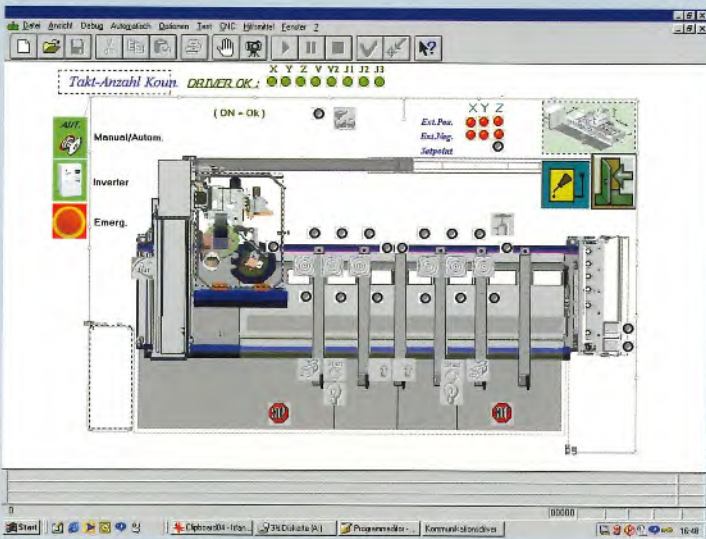


The Programming Software

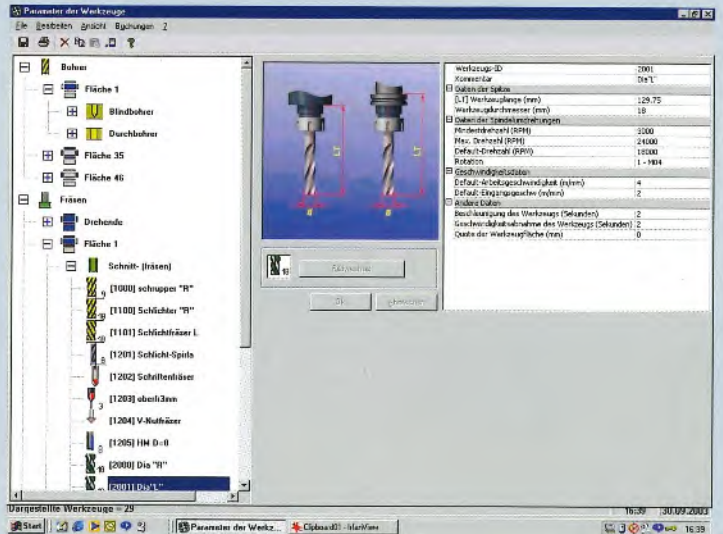
- CAD-Functions
- 3D-Views of the programmed work-piece
- Import from .dxf and dwg-data files
- Self explaining software



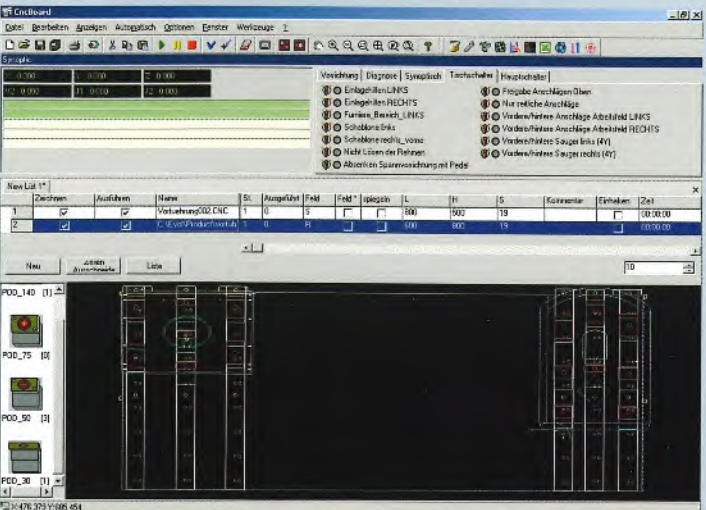
3D -View



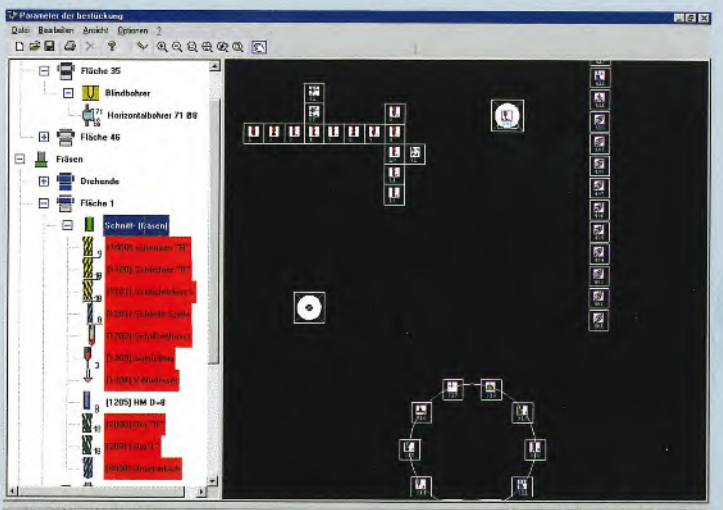
Machine diagnosis



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.



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

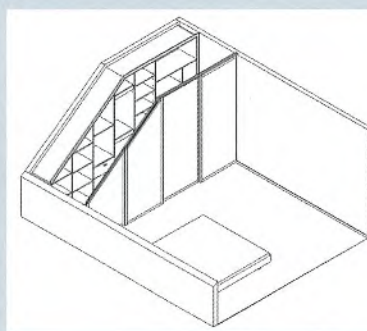
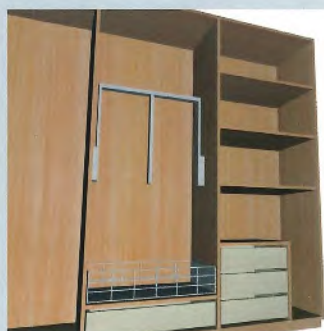
CNC-Issues

- 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





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!

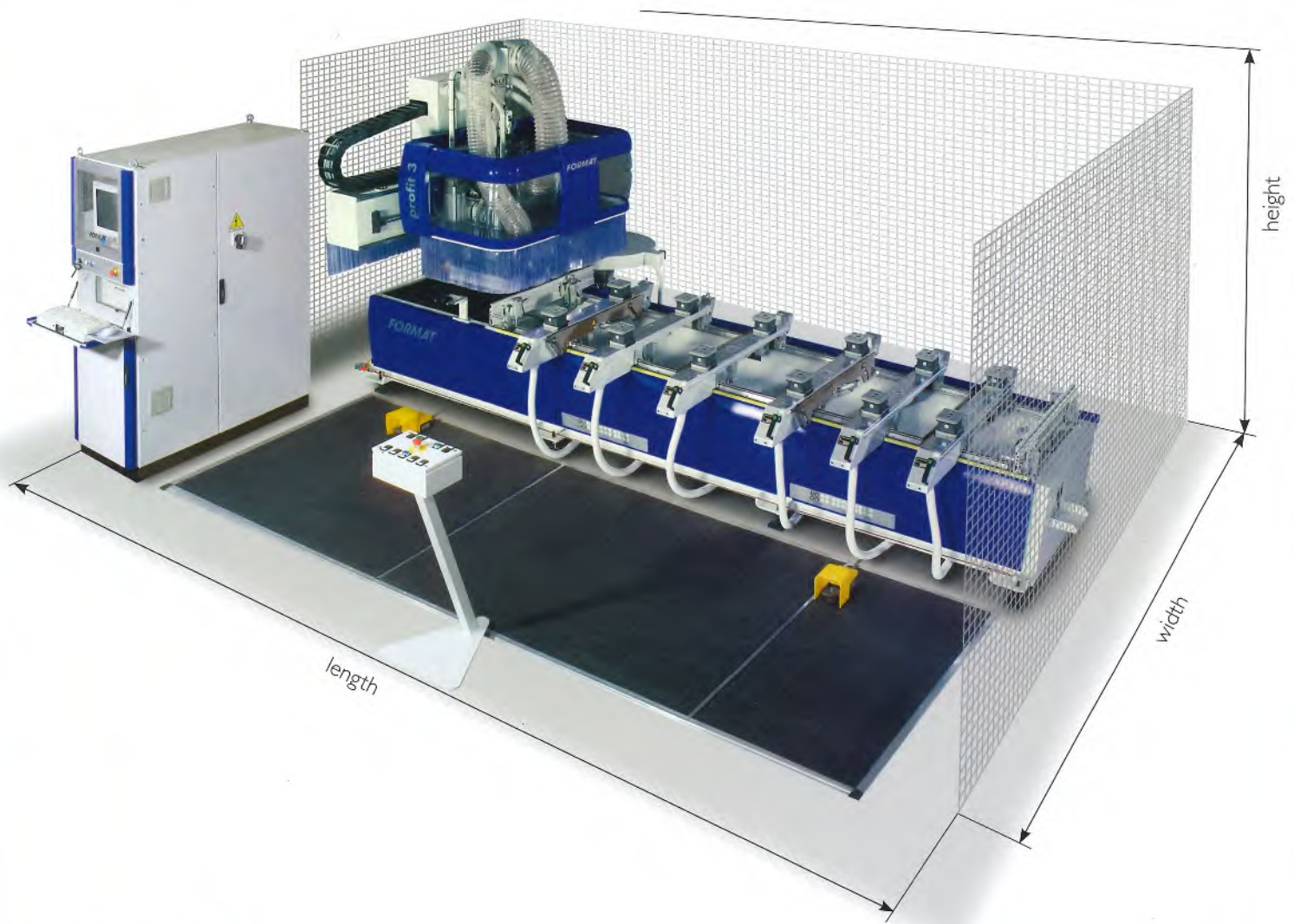
The FORMAT-4 CNC-machining centres "profit 2" and "profit 3" have a hose-free vacuum clamping system for work-piece support. This enables fast and varied change-over without major effort, for example when you change from processing the body of a door to processing the frame. Fast and effortless change-over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



Technical data

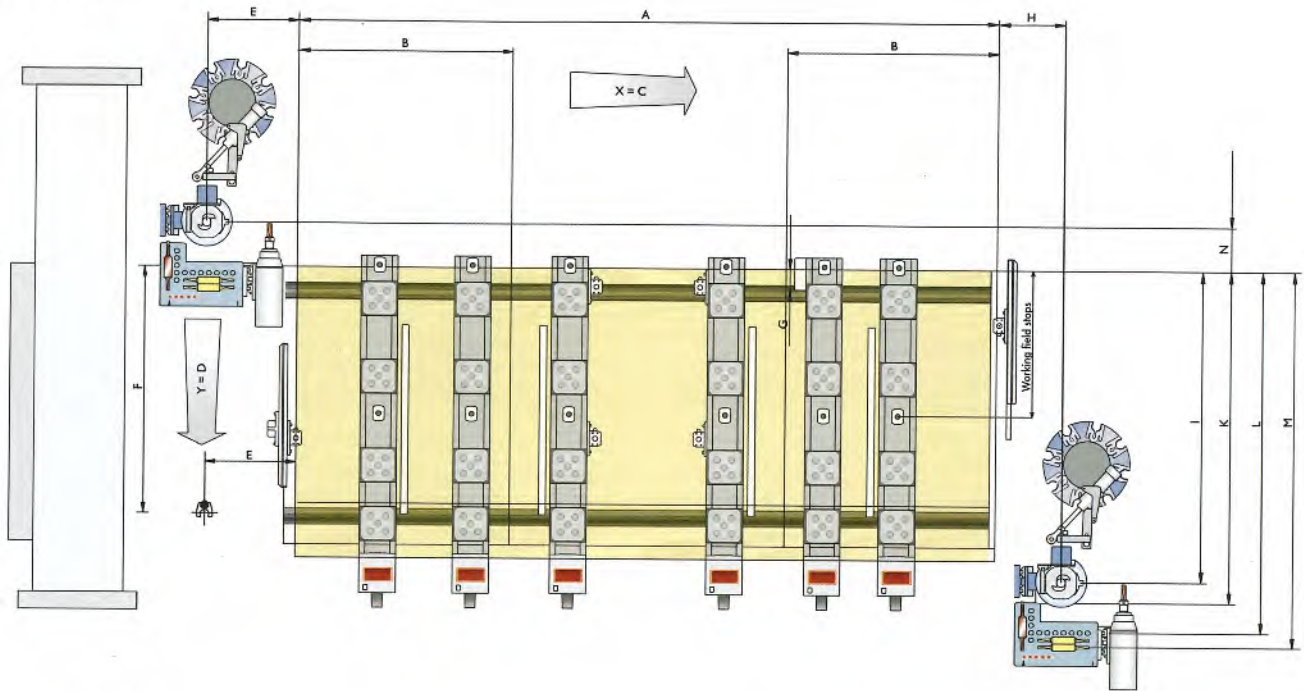
| | | profit 2 | profit 3 |
|-----------------------|------------------------------|---------------------------------|-----------------------------------|
| Travel distance | X-axis | 3445 mm | 4010 / 5260 / 6760 mm |
| | Y-axis | 1710 mm | 1690 mm |
| | Z-axis | 205 mm | 225 / 350 mm |
| Speed | X-axis | 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 |

Working area, travelling ways

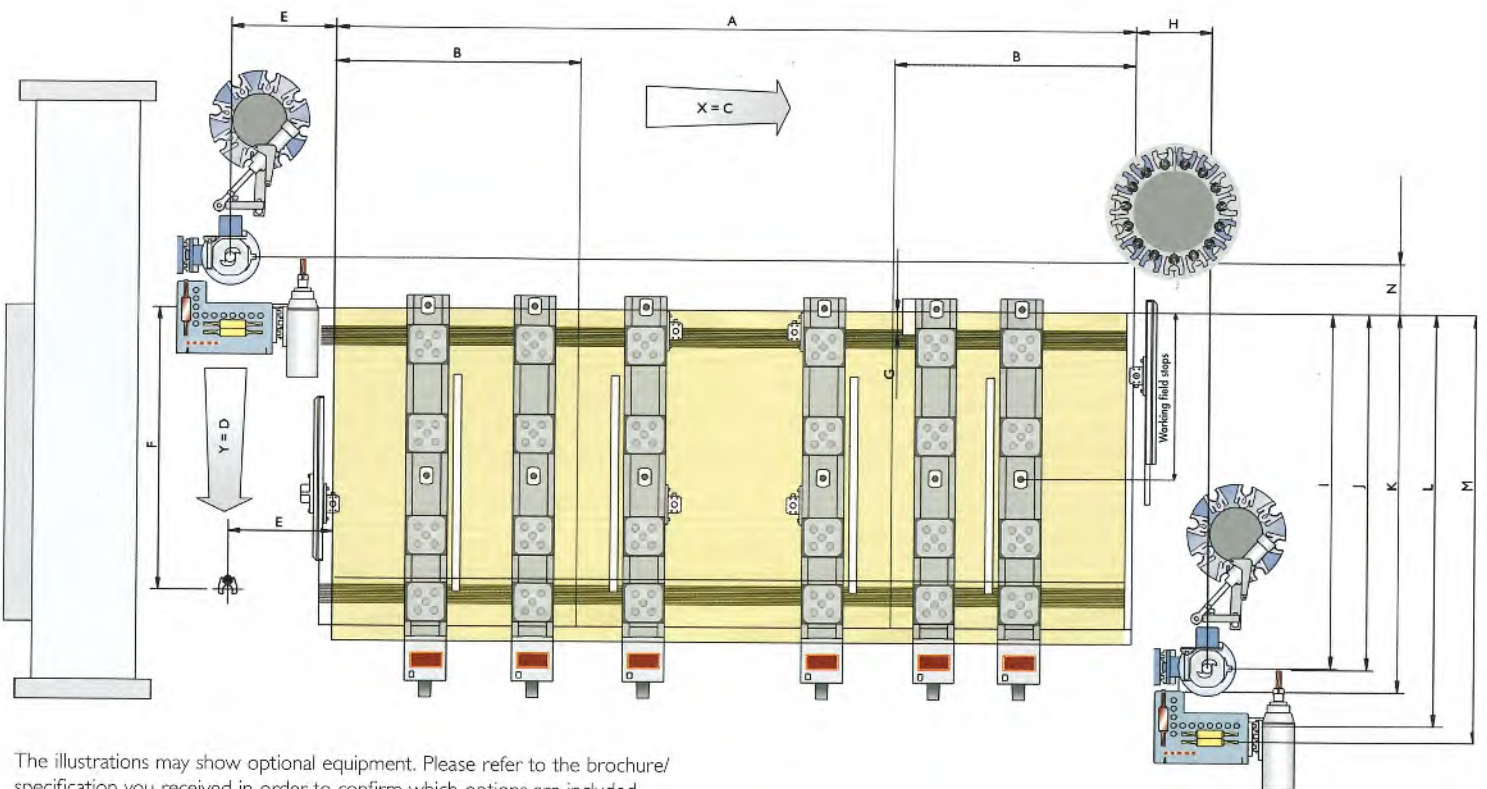
| | profit 2 | profit 3 (3250) | profit 3 (4500) | profit 3 (6000) |
|------|----------|-----------------|-----------------|-----------------|
| A mm | 3005 | 3250 | 4500 | 6000 |
| B mm | 730 | 980 | 1650 | 2400 |
| C mm | 3950 | 4010 | 5260 | 6760 |
| D mm | 1710 | 1690 | 1690 | 1690 |
| E mm | 150 | 400 | 400 | 400 |
| F mm | — | 1098 | 1098 | 1098 |
| G mm | 26 | 26 | 26 | 26 |

| | profit 2 | profit 3 (3250) | profit 3 (4500) | profit 3 (6000) |
|------|----------|-----------------|-----------------|-----------------|
| H mm | 500 | 360 | 360 | 360 |
| I mm | 1285 | 1345 | 1345 | 1345 |
| J mm | — | 1355 | 1355 | 1355 |
| K mm | 1398 | 1458 | 1458 | 1458 |
| L mm | 1532 | 1592 | 1592 | 1592 |
| M mm | 1599 | 1659 | 1659 | 1659 |
| N mm | 425 | 345 | 345 | 345 |

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.

perfect from FORMAT-4

Perfect performance, when dealing with corners!

High precision, fast conversion times and extremely flexible combined with the best possible price-performance ratio are offered by the FORMAT-4 edgebanding machines. Nowhere are the table width and deployment scenarios more demanding than with the edgebanding machine. FORMAT-4 offers you a wide range of machines, each with different production capacities- the choice is yours:

e.g. perfect 80, the 'Premium-Model' all included at the best possible price: If you are looking for the best, then the perfect 80 is the right choice for you. Thanks to the CNC controlled edge shaping and buffing technology, tedious finishing work is made history, as each workpiece is ready to go.

Technical brilliant design features allow for rapid adjustments and conversion of the machine, all at a very decent price to performance ratio



perfect

perfect 2, small but extremely capable' at an outstanding price:

The spaceage wonder for coiled edging material up to 3mm in thickness. The workpiece is transported via a chain feeder past a guillotine, two sawing modules and highly durable radius spindles. When it comes down to performance and accuracy, even the 'small' belongs to the greats.



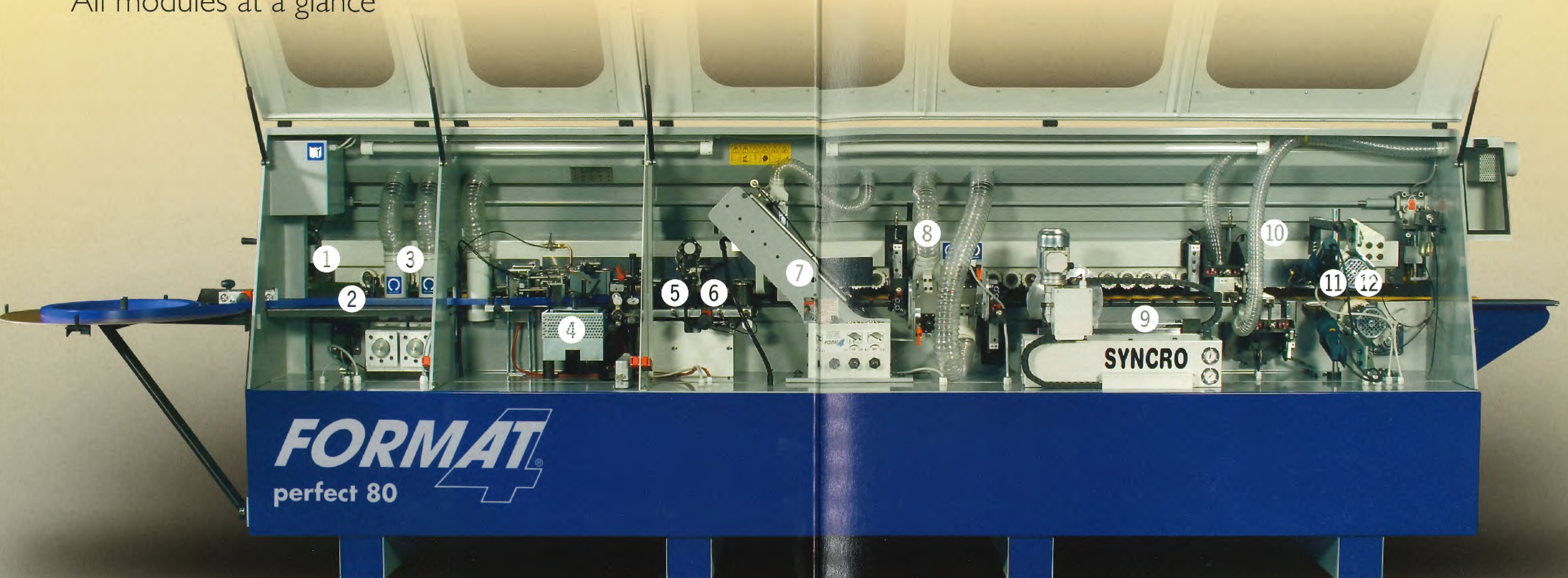
perfect 10, high standard' at the best possible price to performance ratio.

Small footprint, robust and durable construction and extremely userfriendly! If you are using coiled edgebanding material and solid wood strip material up to 8 mm, the perfect 10 is the ideal machine for you.



perfect 50, for those searching for the perfect middle Highly flexible as well as very quick calibration and setup times. The ideal edgebanding machine for coiled and strip edging material. Polishing, buffing and guillotine units come as standard on the perfect 50. Optional extras are available for even more user comfort.

All modules at a glance



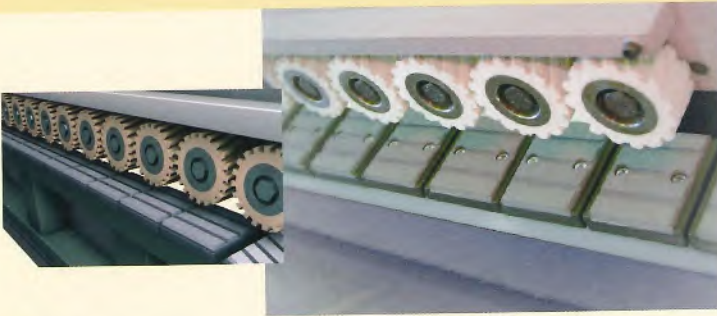
FORMAT
perfect 80

| | | | | | |
|-----------------------------------|---|------------------------------|-------------------------|---|----------------------------------|
| <p>1 Workpiece</p> | <p>2 Edgebanding material: - Coiled Edgebanding material - Strip material</p> | <p>3 Trimmer Unit</p> | <p>7 Trimming Units</p> | <p>8 Flush and Radius trimming module</p> | <p>9 Corner finishing module</p> |
| <p>4 Glue roller and glue pot</p> | <p>5 Pressure roller</p> | <p>6 Guillotine scissors</p> | <p>10 Scraping Unit</p> | <p>11 Blow dryer unit</p> | <p>12 Buffing unit</p> |

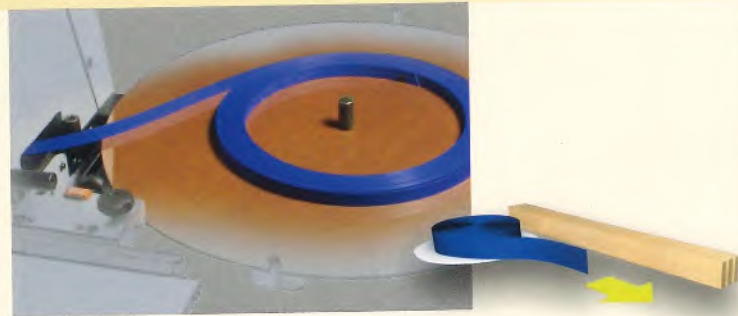


Simple machine operation

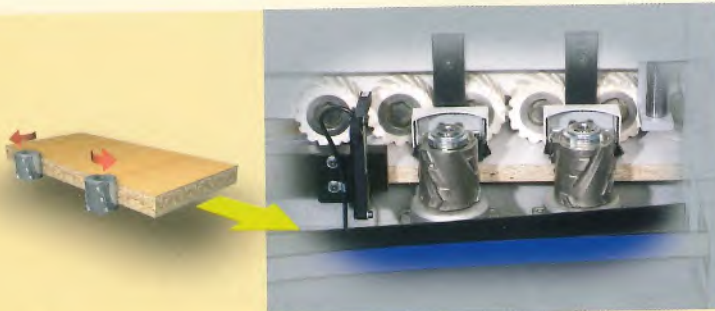
The multifunction touchscreen offers an excellent overview of machine functions which is both easy to use and simple. The machine vitals are also displayed such as glue temperature, odometer for total meters of material used and operation time counter.



- 1** Workpiece
Precise workpiece feeding with a chain and rollers in spiral formation, no scratch traces on the work piece surface.



- 2** Support
Edgebanding material coils



- 3** Trimmer Unit
Two diamond clad, opposed spindle heads ensure perfectly machined edges, before they are attached to the workpiece. With the trimmer unit, you achieve tear free edges, every time.

After inputting the exact dimensions, the trimmer unit takes over the precise finishing of your workpieces.



- 4** Glue roller and glue pot
Teflon coated glue pot for EVA edging glue. Heated glue roller on demand, along with a second turning direction and automatic glue pot temperature regulation.

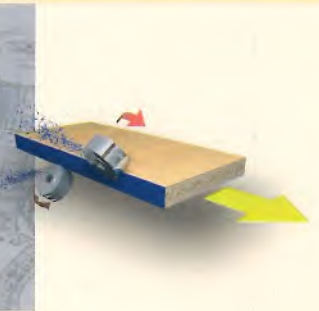
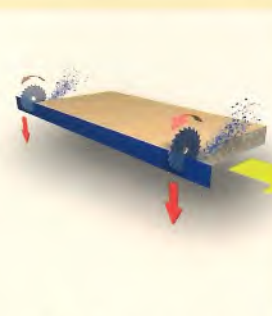
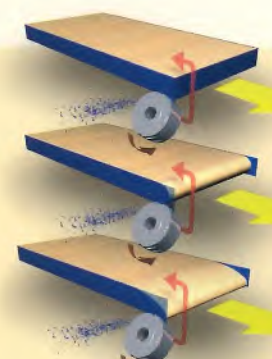
On request we can also fit your edbanding machine with a PUR - glue unit (cartridge system).

5 Pressure roller

A powered side pressure roller, as well as an above and below workpiece pressure roller ensure excellent contact between the edgbanding material and the workpiece. The pneumatic system allows the pressure to be regulated. (perfect 2 and 3 use spring loaded pressure rollers)

6 Guillotine scissors

For the trimming of coiled material up to 3 mm thick

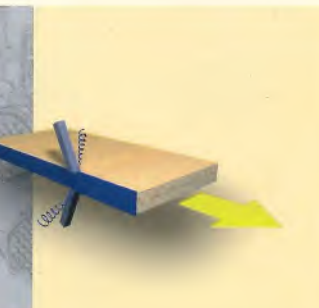
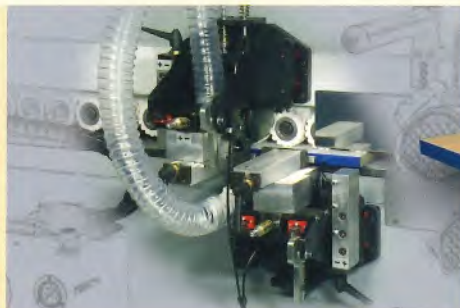
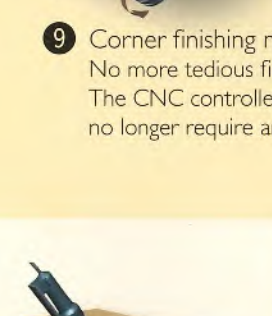


7 Trimming Units

Highly precise linear guides ensure perfect results from both the trimmer units. 12000 rpm and up to 0,68 HP (0,5 kW) engine power are responsible for the excellent finish. The prevent 'scratching' on 90 degree cuts, the trimmers are adjustable

8 Flush and Radius trimming module

The big advantage of the combination module is the significant reduction in length of the machine. The transfer between modules is both quick and easy, both of which are equipped with 2 mm radius heads as standard. On request the machine can also be equipped with a 3 mm head.

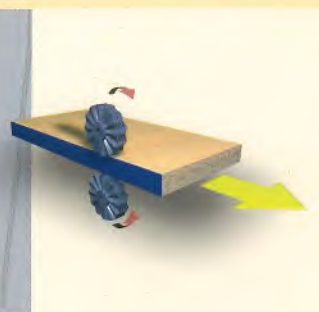


9 Corner finishing module

No more tedious finishing work on workpiece edges! The CNC controlled corner finishing module ensures that corners no longer require any attention in the post trimming stage

10 Scraping Unit

Fine tunes the edge radius as well as removing glue remains

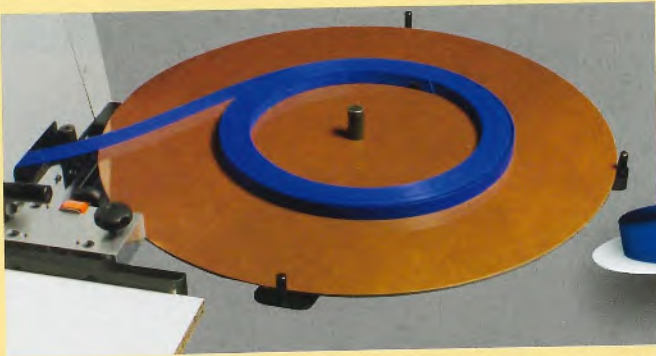


11 Blow dryer unit

Adds a glazed effect to ABS- and PVC edgbanding material, of particular relevance with dark material.

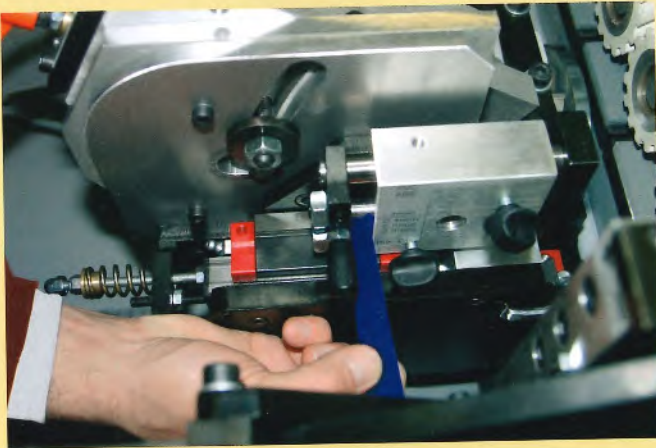
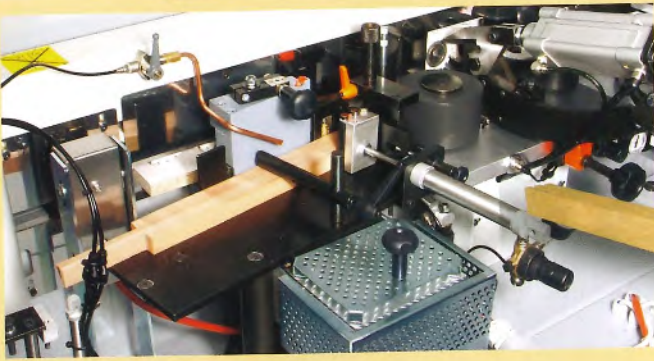
12 Buffing unit

Super-Finish for ABS- and PVC material. Optional installation of polishing solution applicator for the polishing heads.



Quickest possible swapping time of material

In just a few simple steps you are able to switch between coiled edgebanding material and solid wood strip material. The various calibration levers have been designed with user friendliness and comfort in mind.



Pre-adjustment of the banding material thickness perfect offers you a well-thought out system for the adjustment of edgebanding material thickness. Test pieces of the material are used to calibrate the settings on the entire machine.

Quick and accurate adjustment of the panel thickness



FORMAT

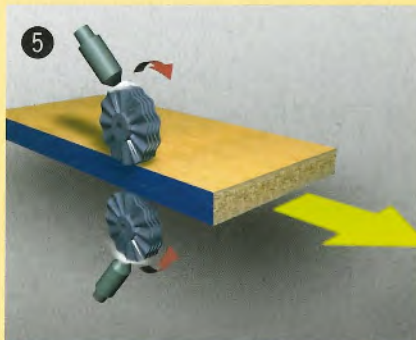
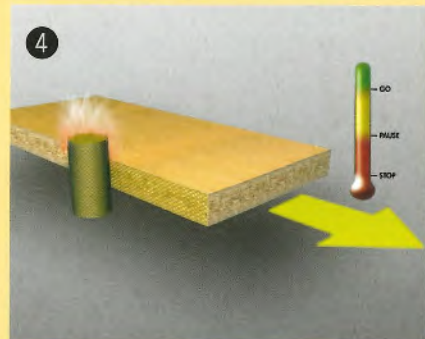
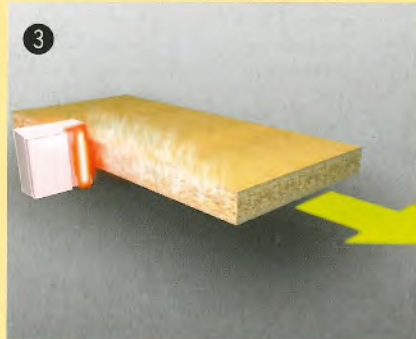
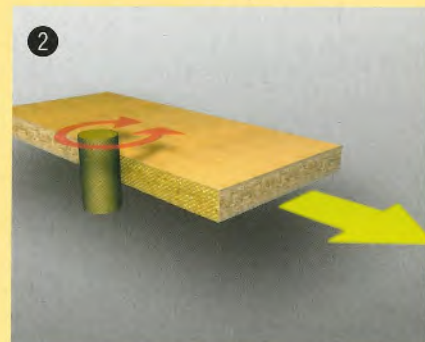
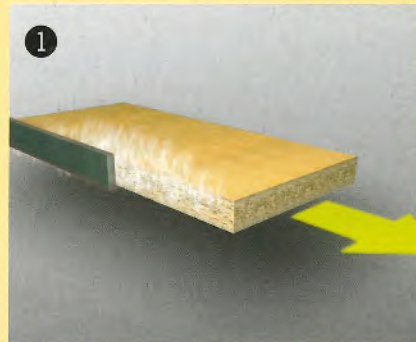
perfect

perfect - the right choice!

- Stable construction
- Occupies very little space
- Workpiece chain feeder
- Very simple to operate and calibrate settings
- Quick changeover times between the various edge banding materials
- Large range of modules
- Strong motors for all modules
- Highest possible precision

Optional extras

- 1 Heating element to heat the panel edge (up to 65°C)
- 2 Reverse mode for the glue application roller
- 3 Infrared lamp to heat the panel edge
- 4 Heated glue application roller
- 5 Automatic application of anti-stick solution to the buffing unit
- 6 Additional support stand





Technical data,
equipment to suit your personal needs:

| | perfect 2 | perfect 3 |
|---|-------------------|-----------------|
| POS Electrics | S | S |
| 001 3x 400 V motor voltage | S | S |
| 50 Hz motor frequency | 7,6 HP (5,6 kW) | 7,9 HP (5,8 kW) |
| Installed power | - | - |
| Machine operated via a colour touch screen display | - | - |
| Working dimensions | 0,4-3 | 0,4-3 |
| Tape thickness min.-max. mm | 10-55 | 10-55 |
| Workpiece thickness min./max. mm | 60 | 60 |
| Min. workpiece width mm | 140 | 140 |
| Min. workpiece length mm | - | - |
| Units | S | S |
| Coiled edge band feed, support plate Ø 800 mm, for PVC/ABS/solid-wood veneer edges | S | S |
| Jointing cutter unit, 2 plunge-controlled cutter units, 12000 rpm, 1,5 HP (1,1 kW), cutting depth adjustable to max. 1,5 mm, spiral planing cutterhead with diamond knives Ø 60 x 56 mm | - | - |
| Guillotine shears for cutting coiled edge bands up to 3 mm thick | S | S |
| Glue applicator unit for EVA pellets, teflon-coated glue pot with synchronised glue roller and quick-switch system | 1 kg | 1 kg |
| Pressure roller unit, spring loaded, 1 motor-driven and 2 conic rollers | S | S |
| Pressure roller unit, pneumatically loaded, 1 motor-driven and 2 conic rollers | - | - |
| End-trimming saw unit, 2 motors, 12000 rpm, 0,3 HP (0,22 kW), HW saw blades Z 24, Ø 100 x ø 20 x 3,2 mm, tiltable 0°-10° | S | S |
| End-trimming saw unit, 2 motors, 12000 rpm, 0,68 HP (0,5 kW), HW saw blades Z 24, Ø 100 x ø 20 x 3,2 mm, tiltable 0°-15° | - | - |
| Trimming and bevelling unit, 2 motors, 12000 rpm, 0,5 HP (0,37 kW), tiltable 30° with R= 3 mm | S | S |
| Trimming and bevelling unit, 2 motors, 12000 rpm, 0,5 HP (0,37 kW), tiltable 0°-15° with R= 3 mm | - | - |
| Corner-form shaping unit, 12000 rpm, CNC controlled for shaping workpiece corners, 0,3 HP (0,22 kW) | - | - |
| Scraping unit, mechanically connected for R= 3 mm | - | - |
| Hot-air blower unit, 2 blowers 0°-600°C | - | S |
| Buffing unit, 2 motors, 1400 rpm, 90 W, swivels | - | S |
| Feeder device | S | S |
| Workpiece transport with chain conveyor | 12,5 | 12,5 |
| Feeder drive | - | - |
| Optional equipment | O | O |
| Tool preparation R= 2 mm instead of R= 3 mm | - | - |
| Strip magazine with pin roller for automatic feeding of pre-cut solid-wood edge bands | O | O |
| Reverse function for the glue-applicator roller | - | O |
| Spray unit, automatically sprays polishing fluid onto the buffing unit | O | O |
| Automatic temperature reduction for the glue pot | O | O |
| Heating guide for pre-heating board edges (up to 65°C) | - | - |
| Infrared heat lamp for pre-heating board edges | O | O |
| Heated glue-applicator roller | - | - |
| Pneumatic selection for the scraping knife | - | - |
| Supporting roller extension for larger workpieces | O | O |
| General | 1x 120 | 1x 120 |
| Vacuum connector Ø mm | 900 | 900 |
| Airflow capacity m3/h | 6 | 6 |
| Min. air pressure | 16 | 16 |
| Air-consumption a/min | 2800 x 850 x 1570 | 2800 x 850 x |
| Machine packing dimensions (length x width x height) | 810 | 820 |
| Weight, kg (with average equipment) | 3510 | 3510 |
| Total length mm | - | - |

S= Standard equipment O= Option - with extra charge W= Optional equipment at no extra cost Z= Accessories- with extra charge



| | perfect 2 | perfect 3 | perfect 10 | perfect 20 | perfect 30 |
|------|-----------|-----------|------------|------------|------------|
| A mm | 1480 | 1480 | 1480 | 1480 | 1480 |
| B mm | 3512 | 3512 | 3512 | 3812 | 3812 |
| C mm | 750 | 750 | 750 | 750 | 750 |

| | perfect 40 | perfect 50 | perfect 60 | perfect 70 | perfect 80 |
|------|------------|------------|------------|------------|------------|
| A mm | 1480 | 1480 | 1480 | 1590 | 1590 |
| B mm | 4163 | 4163 | 4775 | 4775 | 5382 |
| C mm | 750 | 750 | 750 | 750 | 750 |

FORMAT-4 woodworking machines have been tested by leading European institutions and are supplied including safety equipment and protection means required in the country of destination.

The illustrations may sometimes show special equipment and accessories not included in standard machinery. We are not liable for any changes in technical data subsequent of going to print. For standard equipment and prices please see the latest pricelist.

| perfect 10 | perfect 20 | perfect 30 | perfect 40 | perfect 50 | perfect 60 | perfect 70 | perfect 80 |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| S | S | S | S | S | S | S | S |
| S | S | S | S | S | S | S | S |
| 10,6 HP (7,8 kW) | 10,9 HP (8 kW) | 10,6 HP (7,8 kW) | 10,9 HP (8 kW) | 16,3 HP (12 kW) | 18,2 HP (13,4 kW) | 22,0 HP (16,2 kW) | 22,3 HP (16,4 kW) |
| S | S | S | S | S | S | S | S |
| 0,4-8 | 0,4-8 | 0,4-8 | 0,4-8 | 0,4-8 | 0,4-8 | 0,4-8 | 0,4-8 |
| 10-55 | 10-55 | 10-55 | 10-55 | 10-55 | 10-55 | 10-55 | 10-55 |
| 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| 140 | 140 | 140 | 140 | 140 | 140 | 14 | 140 |
| S | S | S | S | S | S | S | S |
| - | - | - | - | - | - | S | S |
| S | S | S | S | S | S | S | S |
| 3 kg | 3 kg | 3 kg | 3 kg | 3 kg | 3 kg | 3 kg | 3 kg |
| - | - | - | - | - | - | - | - |
| - | S | S | S | S | S | S | S |
| - | - | - | - | - | - | - | - |
| S | S | S | S | S | S | S | S |
| - | - | - | - | - | - | - | - |
| S | S | S | S | S | S | S | S |
| - | - | - | - | - | S | - | S |
| - | - | S | S | S | S | S | S |
| - | - | - | - | S | S | S | S |
| - | S | - | S | S | S | S | S |
| S | S | S | S | S | S | S | S |
| 12,5 | 12,5 | 12,5 | 12,5 | 12,5 | 12,5 | 12,5 | 12,5 |
| O | O | O | O | O | O | O | O |
| O | O | O | O | O | O | O | O |
| O | O | O | O | O | O | O | O |
| - | O | - | O | O | O | O | O |
| O | O | O | O | O | O | O | O |
| - | - | - | - | - | - | - | - |
| O | O | O | O | O | O | O | O |
| - | - | O | O | O | O | O | O |
| O | O | O | O | O | O | O | O |
| 1x 120 | 1x 120 | 2x 120 | 2x 120 | 2x 120 | 2x 120 | 2x 120/1x 80 | 2x 120/1x 80 |
| 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| 2800 x 850 x 1570 | 3100 x 850 x 1570 | 3100 x 850 x 1570 | 3450 x 850 x 1570 | 3450 x 850 x 1570 | 4070 x 850 x 1570 | 4070 x 850 x 1660 | 4680 x 850 x 1660 |
| 810 | 920 | 1000 | 1080 | 1160 | 1500 | 1500 | 1770 |
| 3510 | 3810 | 3810 | 4160 | 4160 | 4775 | 4775 | 5380 |

finish 1100, finish 1300

The only choice when you are looking for a more than perfect finish on your workpiece!

Beneath a layer of perfectly varnished, waxed or oiled woodsurface is always a perfectly sanded surface. FORMAT-4 differentiate themselves based on their solid construction, ground breaking technology and optimal productivity.

At FORMAT-4 the choice is yours: 1100 mm or 1300 mm workable width, various sanding modules and much more. The expected FORMAT-4 quality, the precision and the user friendliness, remain present.

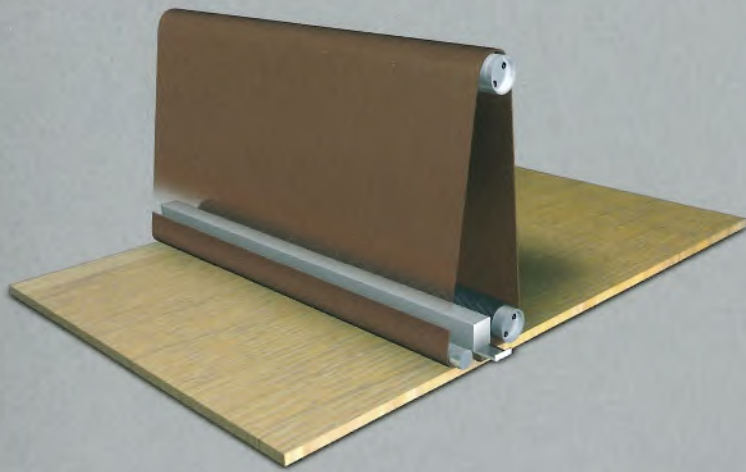


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finish 1302

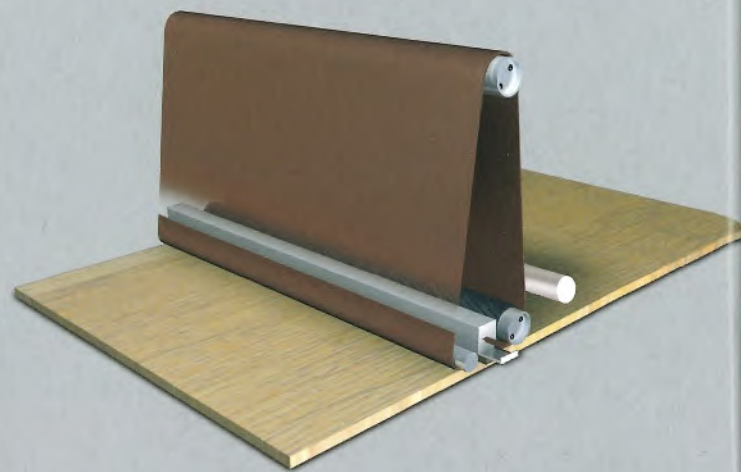


Combination module ,Standard'

- Rubber pressure bar (70 Shore) for calibrating the machine
- Sanding pad for fine work

Deployment area, working practice:

- The combination module ,standard' is generally used in the solid wood industry
- According to the sanding paper grade, engine power and in-feed speed you are able to control the finish
- After having calibrated the pressure bar, you are able to fine tune the sanding shoe for a perfect finish



Combination module with electro-pneumatic sanding pad

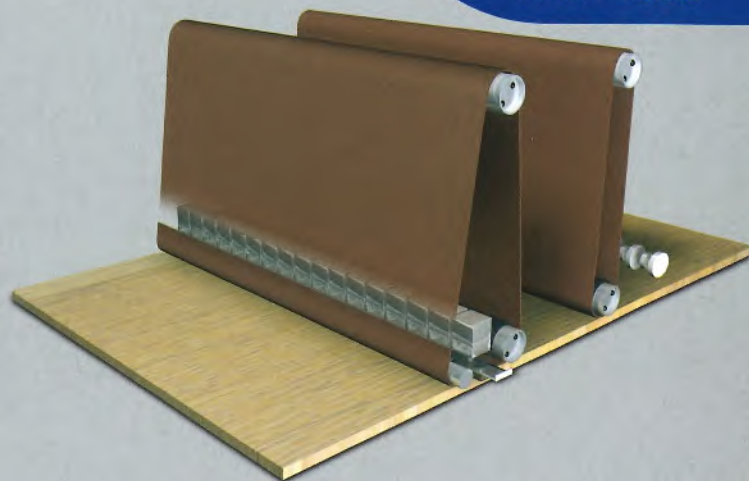
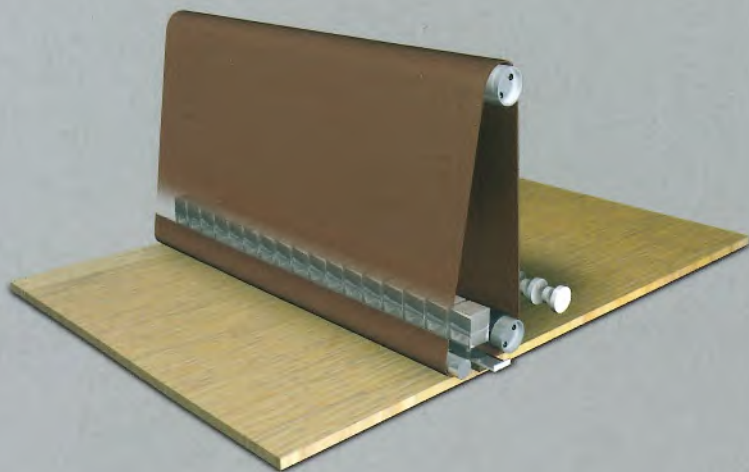
- Rubber pressure bar (70 Shore) for calibrating the machine
- Electro-pneumatic sanding shoe for fine work and veneer work

Deployment area, working practice:

- The combination module with electro-pneumatic sanding shoe is used mainly for massiv wood and veneer work
- According to the sanding paper grade, engine power and in-feed speed you are able to control the finish
- After having calibrated the pressure bar, you are able to fine tune the electro-pneumatic sanding shoe for a perfect finish
- Upon initiation of the sanding process, the electro-pneumatic sanding shoe is lowered 1/10 mm onto the workpiece. This avoids the risk of penetrating the veneer at the front and rear of the workpiece. The guidance system is steered by a distance trigger and impulse counter system. According to the infeed speed, the impulse counter regulates the movement of the sanding pad



All of our wide belt sanding machines are delivered along with an additional sanding pad. (idealy one should be kept for sanding smaller workpieces)



Combination module with segmented-electro-pneumatic sanding pad

- Rubber pressure bar (70 Shore) for calibrating the machine
- Segmented, electro-pneumatic sanding shoe for fine work and veneer work for various workpiece thicknesses

Deployment area, working practice:

- The combination module with segmented, electro-pneumatic sanding shoe is particularly useful when working with veneered surfaces of varying depths or shapes.
- According to the sanding paper grade, engine power and in-feed speed you are able to control the finish
- After having calibrated the pressure bar, you will be able to attain a perfectly sanded surface with the segmented, electro-magnetic sanding shoe, especially when working with workpieces of varying depths or shapes across the workpiece.
- Sensors assess the workpiece and lower pressurised segments (scale 45 mm) by exactly 1/10 mm onto the sanding shoe, thereby eliminating the risk of penetrating the veneer. The system guidance is carried out by a distance indicator and impulse counter. The impulse counter, corrects the sanding shoe movement according to the infeed speed.
- The segmented, electro-pneumatic sanding shoe can be turned on and off. When the segments are inactive, the sanding shoe works across the entire workpiece width.
- Individual segments can be deactivated and reactivated. You can hereby ensure that the machine only sands the width of the workpiece.

Contact-bars-module and combination module

- Pressure bar module with rubber contact bar (70 shore) for calibration work
- Combination module with rubber pressure bar (50 shore) for calibration work
- Sanding pad for fine sanding according to your desired standard, with electro-pneumatic sanding shoe or with segmented, electro pneumatic sanding shoe

Deployment area, working practice:

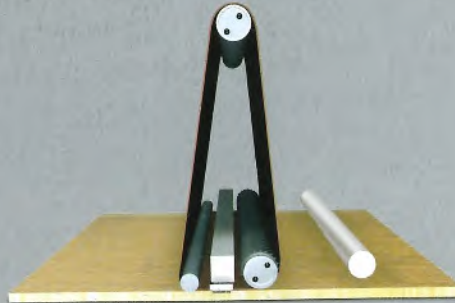
- The belt sander has two sanding modules and is therefore able to carry out pre- and fine sanding in the same process. Thus raising your productivity by 50%!

Module Combinations

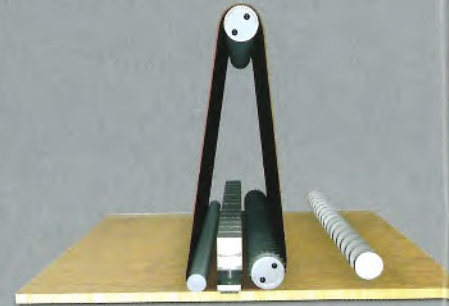
Combination module
'Standard'



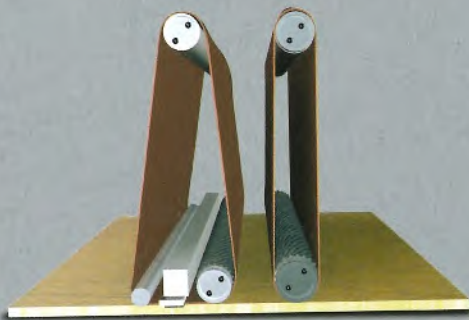
Combination module with electro-pneumatic sanding pad



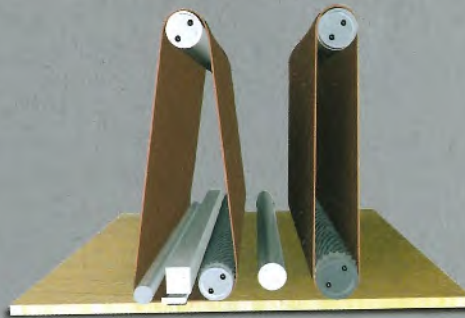
Combination module with segmented electro-pneumatic sanding pad



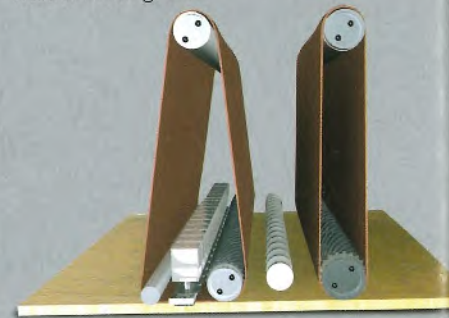
Pressure bars and combination module 'standard'



Pressure bar module and combination module with electro-pneumatic sanding shoe



Pressure bar module and combination module with segmented electro-pneumatic sanding shoe



Powerful motors ensure perfect sanding results. The constant power transfer is a significant factor for the high quality sanding finish.

The basics for working with a wide belt sander

Calibration

Sanding at the same height, the result is an even workpiece

Levelling

The result is a poorly finished, uneven work-surface.

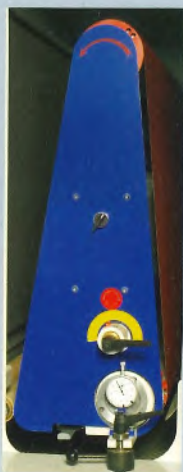
Pre-sanding

Scrubbing with rough sandpaper

Fine-sanding

Finishing the workpiece using a fine sanding paper to allow further treatment such as oiling, wax or laquer



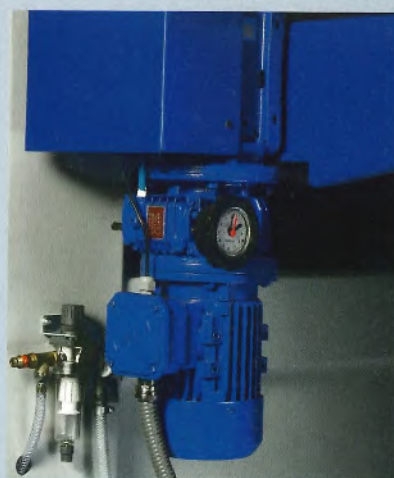
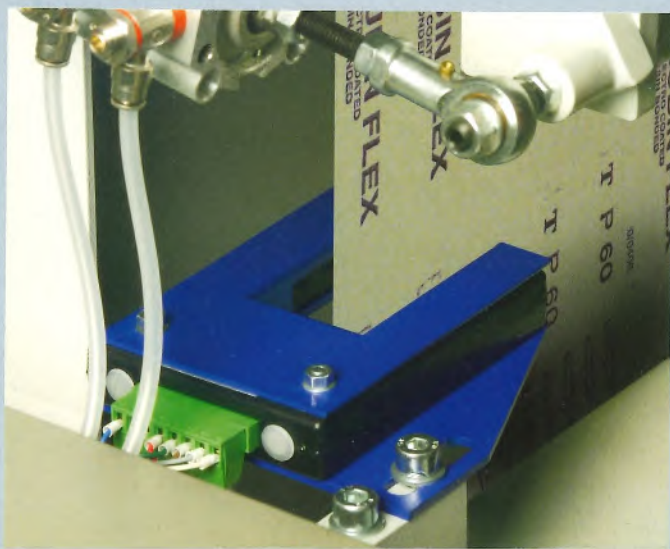


Adjustment of the sanding modules is quick, simple and exact. For combination modules, the pressure bar can be engaged as well as disengaged. The pressure bar height can also be adjusted in order to allow for grit compensation



The belt guidance system assesses the workpiece using a lightbeam and activates the electro-pneumatic belt guidance system, which adjusts the belt forwards and backwards.

The belt control system regulates the running of the belt with electronically guided photo cells. Should the belt be at risk of coming loose, the belt control system cuts the belt motor immediately.



The in-feed speed stands at 4.4 meters per minute. Per request, FORMAT-4 will equip your machine with a variable speed regulator capable of 4–15 m per minute. According to the type of wood and type of sanding paper the sanding depth decreases as the infeed speed increases.



If required we are able to equip your FORMAT-4 wide belt sander with roller extension tables both on the infeed and outfeed side



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| | finish 1101 | finish 1301 |
|------|-------------|-------------|
| A mm | 2007 | 2130 |
| B mm | 1726 | 1926 |
| C mm | 1158 | 1158 |

| | finish 1102 | finish 1302 |
|------|-------------|-------------|
| A mm | 2007 | 2130 |
| B mm | 1726 | 1926 |
| C mm | 1430 | 1430 |

Technical data,
equipment to suit your personal needs:

| POS | Electrics | finish 1101 | finish 1301 | finish 1102 | finish 1302 |
|-----|--|--------------------|--------------------|--------------------|--------------------|
| 001 | 3x 400 V motor voltage | S | S | S | S |
| 005 | 50 Hz motor frequency | S | S | S | S |
| 008 | 15.0 hp (11.0 kW) sanding-belt motor for the combination unit CU | S | S | — | — |
| 008 | 25.0 hp (18.5 kW) sanding-belt motor for the combination unit CU | — | — | S | S |
| 011 | 15.0 hp (11.0 kW) sanding-belt motor for the contact-roller unit C | — | — | O | O |
| 012 | 20.5 hp (15.0 kW) sanding-belt motor for the contact-roller unit C | — | — | O | O |
| | STAR-delta-START | S | S | S | S |
| | 0.35 hp (0.25 kW) height-adjusting motor | S | S | S | S |
| | 0.50 hp (0.37 kW) feeder motor | S | S | S | S |
| | Thermal overload and short-circuit protection for all motors | S | S | S | S |
| | Ammeter for monitoring the electrical load on the units | S | S | S | S |
| | Pressure monitor | S | S | S | S |
| | Automatic sanding-belt brake | S | S | S | S |
| | Sanding unit and sanding cushion | | | | |
| | Contact-roller unit C | — | — | S | S |
| | Combination unit CU (contact roller and sanding cushion) | S | S | S | S |
| | Hardness of the contact roller C 70° Shore | — | — | S | S |
| | Hardness of the contact roller C 70° Shore | S | S | — | — |
| | Hardness of the contact roller C 50° Shore | — | — | S | S |
| 300 | Electro-pneumatic sanding cushion EPS | O | O | O | O |
| 400 | Segmented sanding cushion SS | O | O | O | O |
| | The sanding cushion can be replaced quickly and easily | S | S | S | S |
| | Sanding width 1100 mm | S | — | S | — |
| | Sanding width 1300 mm | — | S | — | S |
| | Sanding height 150 mm | S | S | S | S |
| 070 | Sanding height 180 mm | O | O | O | O |
| | Sanding belt is oscillated electro-pneumatically | S | S | S | S |
| | Electronic run-off protection for the sanding belt | S | S | S | S |
| | Pneumatic tensioning of the sanding belt | S | S | S | S |
| | Sanding belt 1110 x 1900 mm (width x length) | S | — | S | — |
| | Sanding belt 1310 x 1900 mm (width x length) | — | S | — | S |
| | Feeder table | | | | |
| 019 | Electronic height control for the table | S | S | S | S |
| | Electronic positioning control for the table | O | O | O | O |
| | Digital display shows the height of the feeder table | S | S | S | S |
| | Tracer unit for work piece thickness on the feed table | S | S | S | S |
| | Feeder drive 4.4 m/min. | S | S | S | S |
| 016 | Feeder drive infinitely variable between 2.2 and 11 m/min. | O | O | O | O |
| | Mechanical vibration-absorbing rubber pressure rolls | S | S | S | S |
| | Hand guard and over-thicknessing protection for the workpiece | S | S | S | S |
| | Important Accessories | | | | |
| 085 | Roller-table extension 300 mm for workpiece infeed-side | Z | Z | Z | Z |
| 086 | Roller-table extension 300 mm for workpiece outfeed-side | Z | Z | Z | Z |
| 087 | Roller-table extension 700 mm for workpiece outfeed-side | Z | Z | Z | Z |
| | General | | | | |
| | Vacuum connector Ø 160 mm | S | S | — | — |
| | Vacuum connector Ø 200 mm | — | — | S | S |
| | Machine packing dimensions (length x width x height) | 1826 x 1258 x 2017 | 2026 x 1258 x 2140 | 1826 x 1530 x 2017 | 2026 x 1530 x 2140 |
| | Weight, kg (with average equipment) | 1125 | 1275 | 1500 | 1650 |

S= Standard equipment O= Option - with extra charge W= Optional equipment at no extra cost Z= Accessories- with extra charge

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