

PowerCut MC-15 Q2 CNC machine center with 2 cross beams

The MC-15 Q2 with 2 cross beams and a recessed pit enables the workpiece to also be machined from below. All rotating and swivelling axes can be interpolated, creating completely new dimensions for machining all 6 reference sides. The type Q2 can be equipped with up to 6 machining units.

UNIT TYPES WITH 2 CROSS BEAMS



SAW UNIT

- Rotating range from -280° to +100°
- Swivelling range from -90° to +90°
- Speed 0 - 2'400 RPM
- with circular saw blade Ø 600 mm mounted without flange



2-SPINDLE UNIT

- Rotating range from -280° to +100°
- Swivelling range from -360° to +360°
- Speed 0 - 5'000 RPM
- with rebate cutter or slitting disc, as well as drilling or milling tools



4-SPINDLE UNIT

- Rotating range from -280° to +100°
- Swivelling range from -360° to +360°
- Speed 0 - 7'000 RPM
- with drilling and milling tools

TECHNICAL DATA	MC-15 Q2 650	MC-15 Q2 1300
Working range	Passage 650 × 300 mm	Durchlass 1'300 × 300 mm
Cabin dimensions l × w × h	4'670 × 1'940 × 3'170 mm	5'550 × 1'940 × 3'170 mm
Height above the ground including panel arm	3'340 mm	3'340 mm
Length of loader and unloader	Customer-specific	Customer-specific
Machine weight depending on the design	max. 10'800 kg	max. 12'500 kg
Minimum wood passage w × h	55 × 20 mm	55 × 20 mm
Maximum wood passage w × h	650 × 300 mm	1'300 × 300 mm
Supply voltage	3 × 400 V / 50 Hz	3 × 400 V / 50 Hz
Pre-fuse provided by the customer at 400 volts	63 A	63 A
Pneumatic pressure	min. 8 bar	min. 8 bar
Air quantity	30 - 50 lt/s, duty cycle: 20 %	30 - 50 lt/s, duty cycle: 20 %
Number of units	2 - 6	2 - 6

Swiss premium woodworking machines

High tech meets wood. Our family business has been an international pioneer in the wood machining device sector for more than 60 years.

Our recipe for success entails combining tradition and innovation: With great respect for wood as a natural product, we use our wide range of expertise to drive the technical and creative possibilities and therefore the future of woodwork engineering. That's why our wood machining devices are in use around the world. That makes us proud and spurs us on to reach new heights every day.

Whether it's classic carpentry, timber frame work or highly complex CNC production of parts that are ready for assembly: we've got the right machines for you.

SWISS QUALITY

All Krüsi machines are 100% Swiss Made, designed and manufactured in Schönengrund in the Appenzell hinterlands. One of the many quality features is their long service life. Our new and used machines are often in use for many years. All without reduced precision, performance or efficiency. This means sustainability and enables your requirements to be met with our high quality systems.

All Krüsi systems comply with the strict applicable standards and guarantee safe handling for the user.



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PowerCut MC-15 The CNC machine center for innovative woodwork



swiss premium
woodworking machines

PowerCut MC-15 CNC machine center

For innovative woodwork

For efficient machining of rods, rafters and posts, sheets, ceiling/ floor elements, glued laminated timber elements, joinery and carpentry timber frames, beam construction, timeconsuming roof building, profile strips and free-form machining.

The PowerCut MC-15 CNC machine center is available in basic versions Q1 and Q2. It can be configured with 1 or 2 cross beams and with up to 6 units. The maximum wood passage can be selected to between 650x300 and 1300x300 mm. The system does not need a tool changing system, as the required tools are pre-installed on the units. The multifunctional timber frame center with freely equippable machining units has space for up to 21 tools that can be replaced quickly and easily. The speed for each tool can be determined individually.

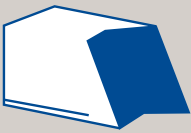
From a simple chop cut to complex contours, decorative strips and profile heads, the applications are virtually unlimited. Some of the many machining options are shown here. A complete overview is provided in the catalogue for BTL processes.

TIMBER JOINTS FOR WOODWORK

Cuts



Straight saw cut

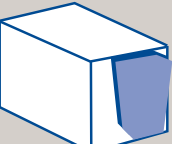


Double cuts

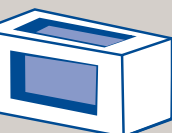


Saw cut

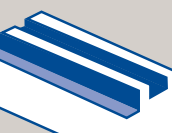
Connections



Dovetail tenons



Recess



Groove / notch

Contours



Profile convex



Profile head



Front head

User-friendly
Compact
Powerful
Precise

ZERO POINT LASER

A laser light barrier is installed in the machine to reference an X zero-point on the wood. The zero- point offset can be defined in plus (+) and minus (-) if required.

LUBRICATION SYSTEM

The machine is equipped with an automatic system or oil dispensers. Both systems provide lubricant continuously to the guide carriage. This therefore reduces the maintenance work for the machinists.

KRÜSI-PATENTED UNITS

Fixed equipment means that the tools do not have to be changed during the process. The multi-channel technology enables the unit to be changed quickly and therefore guarantees short machining times



AUTOMATIC UNLOADER

After all machining processes are completed, the workpiece is discharged on the unloader side of the machine. The push- out bar pushes the finished component to the unloader fully automatically, whilst simultaneously protecting the surface. New wood is inserted on the loader side at the same time. The length of the automatic unloader can be adapted individually to the customer's requirements.

BTL INTERFACE AND CONTROLLER

The CAM system reads in the geometry data in BTL format and sends it to the controller as an ISO code, which machines the component with the required strategy. Control via Lignocam enables an easy and user-friendly program set-up.

ROLLER BATTERIES AND RETAINERS

The cross section present is used to adjust the acceleration values and contact pressures for the high-strength belt. The retainers ensure an optimum contact pressure so that the component is always on the table. The measurement system located on the retainers and roller battery checks the dimensions of the wood piece.

HYDRAULIC CYLINDERS AND RACKS

The supporting hydraulic cylinders enable very dynamic cross beam movements despite the solid design. An integrated blow-out function minimises dust accumulations on racks and pinions.

AUTOMATIC LOADING WITH CHAIN CONVEYOR

The wood infeed is fully automated using a chain conveyor and is inserted into the roller battery in a way that protects the surface via pneumatic cylinders. The length of the automatic loader is adapted individually to the customer's requirement.

Our wood machining devices are
some of the best in the world –
PowerCut MC-15 Q1/Q2 CNC
machine center

OUR OPTIONS – YOUR ADDED VALUE

Thermal label printer

A label printer can be positioned on the control panel and triggered directly from the machine. Important component data is printed on the labels, meaning that the finished components do not have to be labelled manually. The thermal printer is resistant to fine dust.

Silencing mats

Silencing mats on the cabin roof reduce noise emissions and ensure a comfortable, quiet working environment at the production location. This is particularly desirable in residential or industrial areas, or if offices are located next to the machine.

Additional lighting

Additional lighting can be installed on the main frame to supplement the standard lighting in order to illuminate the machining space even better. A good view into the machine room from all sides.

Small part discharge device

A dish is attached below the loader and unloader to the right, and this conveys short workpieces out of the machine room for removal on the right.

Additional blow-out

When wood is being inserted into and discharged from the machine, several blow-out nozzles are positioned, which the machinist can switch on manually. In the event of longitudinal machining, this prevents wood chips being ejected from the machine, which keeps the space around the machine significantly cleaner. These nozzles are also used to blow out finished components in the machine room and to free them of chips.

Conveyor belt systems

Chips and wood residues occur in wood machining. We offer individual, integrated longitudinal and ascending conveyor belts to guarantee that residual material is transported away. This saves space, as they are installed between the machine frame. The conveyor belt system is integrated directly into our machine controller and switched on automatically when the program starts.

Chipper

Depending on the pit situation, chips and residual wood can be conveyed directly to a chipper. A conveyor belt system that is adapted to the customer's available space conveys the residual material to a central chipper.

Machining direction from left to right

The wood passage is adapted to your operation.

High speed

Increasing the tool feed from 7,000 RPM to 15,000 RPM reduces the throughput time and enables tools to be used more efficiently.

Laser length measurement system

Measures independently between each machining process, detects a shift and corrects this automatically. Measurement takes place on the front of the wood.

Central lubrication system

Supplies one or several lubrication points with lubricant. This is drawn from a central reservoir, dosed, distributed and conveyed to the lubrication point.

Rod optimisation

For rods and single components; the wood order list from the drawing program matches the wood required on the machine.

The switch and hydraulic cabinet can be ideally positioned even in small spaces.

Do you have an unusual application or challenge in your factory hall? Please contact us, we'll be happy to discuss your individual situation.

PowerCut MC-15 Q1 CNC machine
center with 1 cross beams

The MC-15 Q1 with 1 cross beam is our newest generation. It is equipped without a pit and set up directly on the ground. This removes the need for structural interventions and replacing the tools during the machining process. The type Q1 can be equipped with up to 3 units. 5 sides can be machined with just one setting.

UNIT TYPES WITH 1 CROSS BEAMS



SAW UNIT

- Rotating range from -280° to +100°
- Swivelling range from -90° to +90°
- Speed 0 – 2'400 RPM
- with circular saw bladeØ 600 mm mounted without flange



2-SPINDLE UNIT

- Rotating range from -280° to +100°
- Swivelling range from -360° to +360°
- Speed 0–5'000 RPM
- with rebate cutter or slitting disc, as well as drilling or milling tools



4-SPINDLE UNIT

- Rotating range from -280° to +100°
- Swivelling range from -360° to +360°
- Speed 0–7'000 RPM
- with drilling and milling tools

TECHNICAL DATA	MC-15 Q1 650	MC-15 Q1 1300
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Pre-fuse provided by the customer at 400 volts	63 A	63 A
Pneumatic pressure	mind. 8 bar	mind. 8 bar
Air quantity	30 – 50 lt/s, duty cycle: 20 %	30 – 50 lt/s, duty cycle: 20 %
Number of units	1 – 3	1 – 3

