VS-Maker-E_Rev16-05-23_01

The cool tool GmbH est. 1982 Education

Active and practice-oriented work - STEM activities with the safe and precise UNIMAT machines.
From simple sawing and turning pieces for beginners and children to CNC-controlled 4-axis milling, the *Cool Tool Makerspace* offers something for everyone. Due to the safe machines, large groups can work together, which guarantees great projects in a short amount of time.

MAKERSPACE

Makerspace Wood

The safe and innovative UNIMAT machines take woodworking to a new level, enabling turning, sawing, sanding and drilling with child-safe machines. Beginners and experienced makers of all ages can work together to realize great projects in wood.

Makerspace Wood + Metal

Entry into metalworking with UNIMAT. This package enables technical projects such as turning to size and milling grooves.
The comprehensive set includes machines for precise processing of metal, plastic and wood.

Makerspace CNC

This Makerspace package provides an introduction to the world of CNC-machining. The combination with manual machines for metal, plastic and wood enables a practical and technically advanced Makerspace. The safe and mobile CNC machines make the Makerspace even more flexible.

worlddidac Worlddidac Award

AUSTRIA

STEM didactic MINT

Silver medal Nuremberg · Silver medal Inventions Vienna · Médaille d'argent Inventions Genève

didacta

40 JAHRE 1982-2022 The cool tool GmbH est. 1982 QUALITY PRODUCT MADE IN AUSTRIA

Makerspace Wood

8+

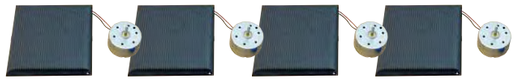
[art.no.: 160 MAKE1]

A woodworking workshop for all ages.
This set includes machines for every area of woodworking, project ideas/instructions, and comprehensive materials tailored to the makerspace. Child-safe turning, sawing, sanding and drilling - the powerful UNIMAT devices allow beginners and experienced makers to realize shared projects. Exemplary projects such as wind turbines, wooden pens and electric cars are included.
Technology is fun!

Projects, ideas and material included

These two models are examples of countless project possibilities that can be realized with the Makerspace package.

The solar set enables the construction of various models related to the topics of solar power, wind turbines, electric mobility and thus combines woodworking with mechanics and electronics for a hands on technical understanding.



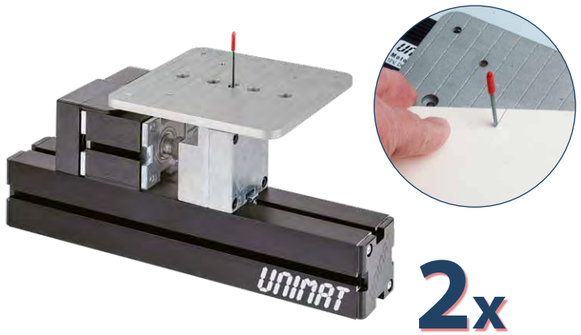
Included machines - [for 16 Makers]

Woodturning machine

With a center distance of 140 mm and a workpiece diameter of up to 50 mm, this machine offers many possibilities for use. Wood, wax and other round blanks can be easily fixed with the included 3-jaw chuck.

Grinding machine

For the final touch of models and sharpening of tools such as woodturning chisels, carving knives, scissors, etc.
It can also be used as a hand grinder for hard-to-reach areas.



Jigsaw

The powerful jigsaw for plywood, solid wood (up to 7 mm), balsa (up to 20 mm), plastics and thin sheets. No annoying clamping and unclamping of the saw blade when cutting openings.
Child-safe!

Drill press

Precise guidance of the Z-axis. Equipped with a large metal drilling lever and a return spring for easy and precise drilling in various diameters and materials.

Perfect self-made gift for Makerspace DIY lovers?
A creative example is the turned wooden pen. This way, makers can create a personalized gift themselves and let their creativity run wild.

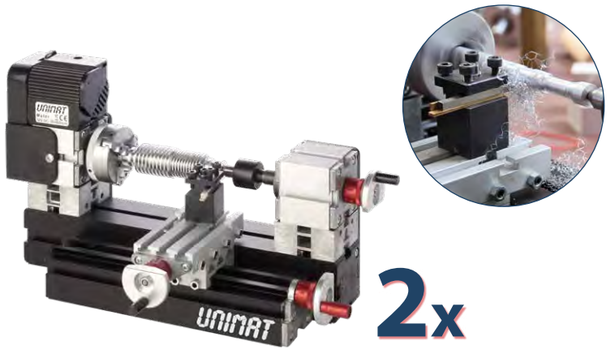
In the Makerspace, not only the machines are important, but also the raw materials for the implementation of creative projects. To ensure this, the *Makerspace Wood* package includes comprehensive materials as well as idea collections for a quick start.

Makerspace Wood + Metal 12+

[art.no.: 160 MAKE2]

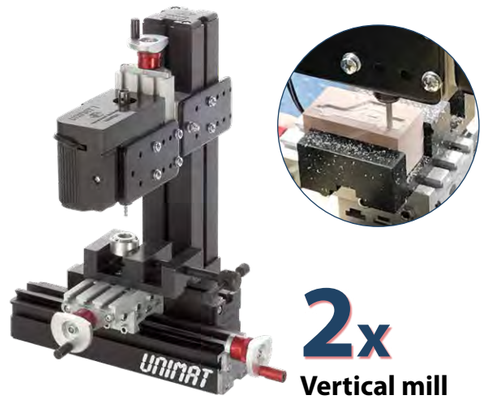
Technical Makerspace for the age group 12+.
The *Makerspace Wood + Metal* combines machines for metalworking, such as a lathe and milling machine, with woodworking machines. This enables an introduction to technical work with different materials. A combination of these UNIMAT devices allows for great models to be realized, even in large groups. At the same time, technical knowledge is conveyed. Didactic projects and materials round off the package and offer an exciting and educational Makerspace for beginners and experienced makers - the ideal STEM workshop.

Included machines - [for 16 Makers]



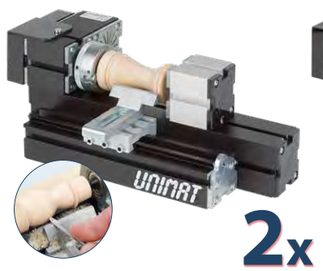
Metal lathe

Metalworking has never been so safe and easy - with the UNIMAT lathe, aluminum, copper, brass and other non-ferrous metals can be processed. The compact design allows for immediate work on the lathe without extensive pre-settings. With a center height of 50 mm, a center distance of 90 mm and a clamping range of up to ø 56 mm (65 mm for external clamping), this lathe offers versatility for small-scale metalworking projects.

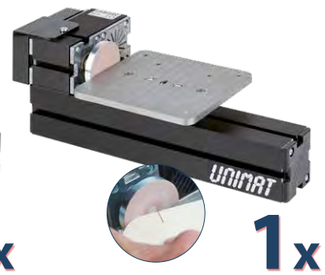


Vertical mill

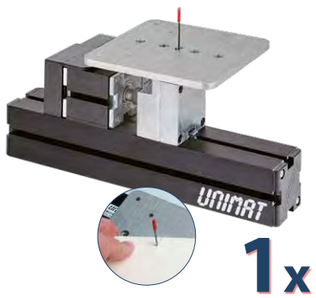
The UNIMAT vertical milling machine enables precise milling work in metals, plastics and wood. With three axes adjustable to 0.05 mm for precise work, this machine is suitable for detailed projects. The included milling vice allows for quick and easy fixing of workpieces, while the collets (1-6mm) can clamp various tools. It offers a [X,Y,Z] travel range of 145, 32, 32 mm, allowing for versatility in project size and scope.



Woodturning machine



Grinding machine



Jigsaw

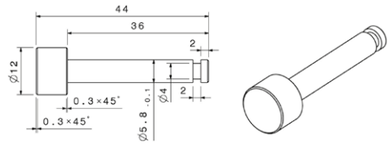
Drill press

More details about the woodworking machines, see *Makerspace Wood*.

Projects, ideas and material included

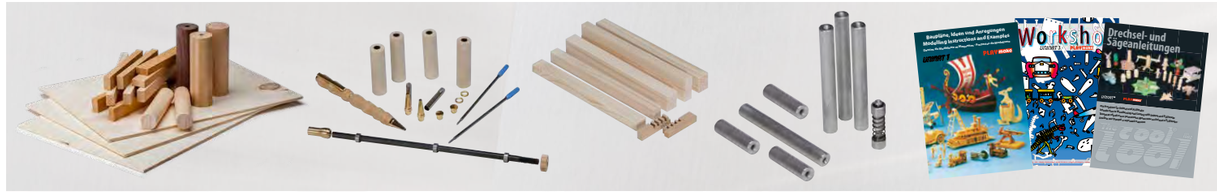
The *Makerspace Wood + Metal* makes it easy to create technical models on your own and to convey mathematical and technical learning content in a user-friendly way.

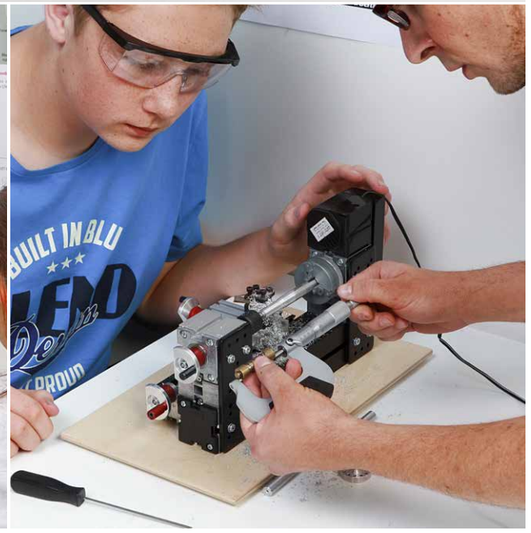
With the lathe, spring elements/jumpers can be made from aluminum blanks.



Another application example is milling grooves in wood for finger joints. The precisely produced parts can then be integrated into larger projects. This example teaches technical woodworking in a practical way.

The wide range of included construction plans and materials provides a selection of projects and processing methods with different machines. This allows for versatility in project selection and execution, as well as the opportunity to learn and develop skills with various machines.



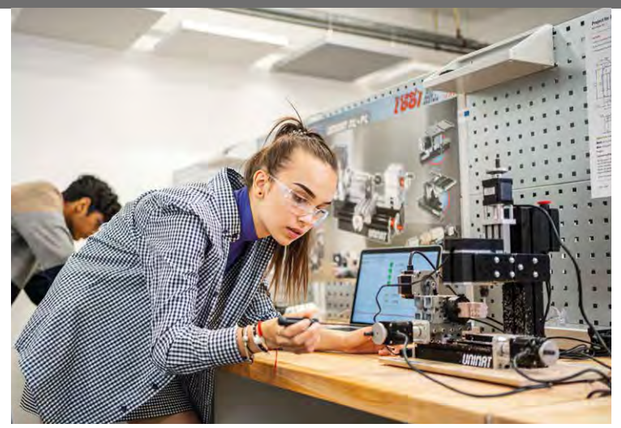


Makerspace CNC

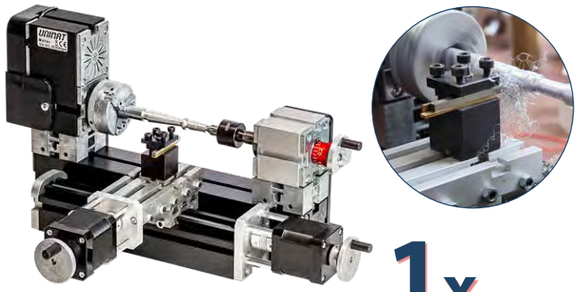
15+

[art.no.: 160 MAKE3]

The *Makerspace CNC* package specifically promotes STEM skills. With the UNIMAT CNC machines, makers can gain practical experience in the fields of mechanical engineering, electronics and computer science and improve their skills in programming CNC turning and milling machines. The slides can be moved manually or by means of stepper motors. The package includes templates and materials for projects.



Included machines - [for 16 Makers]



1x

Metal lathe CNC

The CNC-controlled version of the UNIMAT lathe. Center height of 50 mm, center distance of 90 mm, clamping range ø 56 mm (65 mm with external clamping)

1x

Vertical mill CNC

The extended working range [X, Y, Z] of 145, 80, 80 mm, as well as the controlled milling spindle (max. 15,000 rpm), enable professional CNC-controlled work.

1x

Laser engraver with housing

This vertical CNC milling machine is equipped with a laser module. The safety door of the housing allows for safe operation. With the 5.5 W laser module, materials such as wood, fabric, acrylic, plastics and anodized aluminum can be processed.

CNC Rotary table

As a 4th axis, it can be used with both the CNC Vertical Milling Machine and the Laser Engraver.

1x

2x

2x

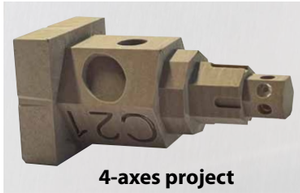
Vertical mill **Metal lathe**

More details about the manual machines see *Makerspace Wood + Metal*.

Projects, ideas and materials included

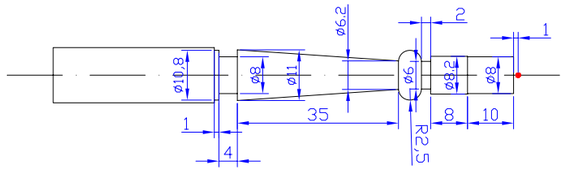
The *Makerspace CNC* is the combination between computer-aided design and manufacturing of selected components. Complex 3D models can be manufactured via computer control.

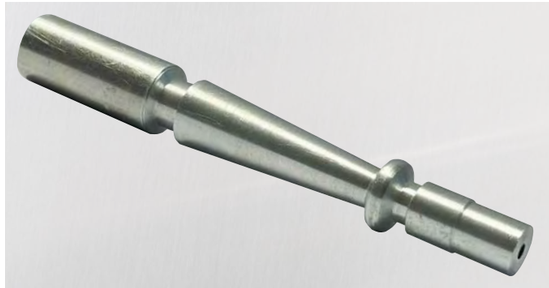
An example of the CNC milling machine is the production of a building block. This combines STEM applications such as measurement technology, design and computer science with actual manufacturing on the CNC machine.
The additional rotary table CNC transforms the 3-axis milling machine into a full-fledged 4-axis milling machine.



4-axes project

Complex turned parts with radius and tapered elements are difficult to produce on conventional lathes. This project demonstrates the advantages of computer-aided manufacturing.





A Makerspace with a focus on CNC/metalworking needs the right materials to make the most of the machines. With the included materials, a variety of CNC models can be produced.

The cool tool GmbH • Fabriksgasse 15, 2340 Mödling • Austria

	Makerspace machines	unit price	Maker-Set WOOD art.no.: 160 MAKE1	Maker-Set WOOD + METAL art.no.: 160 MAKE2	Maker-Set CNC art.no.: 160 MAKE3
166 023 MLE	Woodturning Machine ML • Drechselbank ML	------	4	2	------
	Mandrel Penmaker • Aufnahmedorn Penmaker	------	4	2	------
166 020 MLE	Jigsaw ML • Stichsäge ML	------	2	1	------
166 021 MLE	Sander ML • Schleifmaschine ML	------	1	1	------
166 025 MLE	Drill Press ML • Standbohrmaschine ML	------	1	1	------
166 022 ML	Metal Lathe ML • Metalldrehbank ML	------	(1 opt)	2	2
166 050 ML	Vertical Mill ML • Vertikalfräse ML	------	(1 opt)	2	2
TCTcont4	4-axis controller with control software • 4 -Achsen Kontroller inkl. Steuersoftware	------	------	(1 opt)	3
UNI-DREH	CNC metal lathe • CNC Drehbank	------	------	(1 opt)	1
UNI-FRAES3EXT	3-axis mill with speed controlled motorspindle • 3 Achsen CNC ext. mit steuerb. Frässpindel	------	------	------	1
UNI-FRAES3LAS	3-axis laser engraver • 3 Achsen Lasergravierer mit Gehäuse	------	------	------	1
164300CNC	4th axis upgrade for mill and laser • 4te Achse upgrade für Fräse und Laser	------	------	------	1

	Makerspace material				
163 100 LI3S	Bass wood • Drechselholz Linde Ø30x90 mm	------	300	150	------
163 300 A4S	Poplar plywood • Pappelsperrholz 30x21x4 mm	------	300	150	30
163 SAP	Salt/pepper shaker • Salz/Pfefferstreuer Ø40x60 mm	------	150	75	------
163 EIB	Eggcup • Eierbecher Ø44x60 mm	------	150	75	------
163 900 A	Wooden penmaking set • Holzkugelschreiber Set	------	150	75	------
163 600 PR	Pen press • Kugelschreiber Presse	------	1	1	------
163 355 ES	Solar models • Solarmodelle	------	75	75	------
166 ALU	Aluminum • Aluminium Ø12x100 mm	------	------	150	150
166 FED	Spring element • Federelement	------	------	75	75
166 LEI	Wood ledges • Holzleisten für Nuten	------	------	75	75
166 FOAM	Milling foam • Frässchaum 50x25x25 mm	------	------	------	75
166 PLEX	Acrylic • Acryl 50x50x3 mm	------	------	------	150

Spare and wearing parts such as saw blades, sandpaper, etc. are included, as are construction plans, etc. Supplied in impact-resistant storage boxes.