



**The fully automatic,
compact preparation system**



- High volume preparation
- Intuitive graphical user interface
- Space-saving design



EXTREME VERSATILITY

- For the preparation of both individual specimens and specimen holders
- With or without conveyor, for the uninterrupted preparation of larger series or the fully automatic preparation of individual holders
- Ideal for the preparation of materials requiring different preparation methods due to the automatic exchange of up to eight different preparation surfaces

Easy and flexible specimen handling

With Hexamatic we have brought fully automatic specimen preparation to a new level

Hexamatic can process both specimen holders and specimen mover plates for individual specimens

No matter if many similar specimens or a few individual specimens of a certain type have to be produced, Hexamatic is capable of handling that. Specimen holders that can hold differently shaped specimens are prepared using central force, whereas individual specimens in specimen mover plates have the force applied independently. This allows for the preparation of one to six specimens without the need for dummies.

Hexamatic with conveyor

When larger amounts of specimens have to be prepared, Hexamatic with conveyor is the ideal solution. With a capacity of eight specimen holders or specimen mover plates, Hexamatic can be loaded with many specimens to be prepared without requiring operator attention.

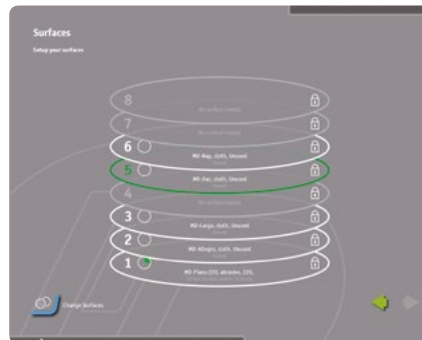
While the machine is running, already prepared specimens can be evaluated. The exceptional design of Hexamatic with the external conveyor allows removing prepared specimen holders or inserting unprepared holders without interrupting the preparation process.

Sensors automatically detect inserted holders

As soon as a specimen holder or specimen mover plate is inserted in the conveyor, built-in sensors automatically detect their presence. This is indicated on the graphical user interface, and a preparation method for each individual holder can easily be selected.

Hexamatic without conveyor

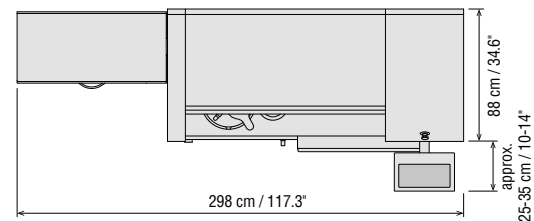
When space or the requirements to preparation quantity are limited, Hexamatic is also available without conveyor. The specimen holder or mover plate is inserted directly into the pick-up bowl inside the machine, and after selecting the appropriate method the entire preparation is carried out fully automatically.



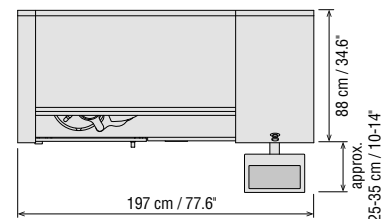
The configuration screen displays all eight MD-Consumables in one view and makes changes fast and easy.



External conveyor



With conveyor Hexamatic is 3 m long, with a capacity of eight specimen holders or mover plates.



Without conveyor Hexamatic is less than 2 m long, to fit in all laboratories.



Step 1: The centre piece of the MD-Disc lifts the MD-Consumable to be replaced.



Step 2: The transport arm takes over...

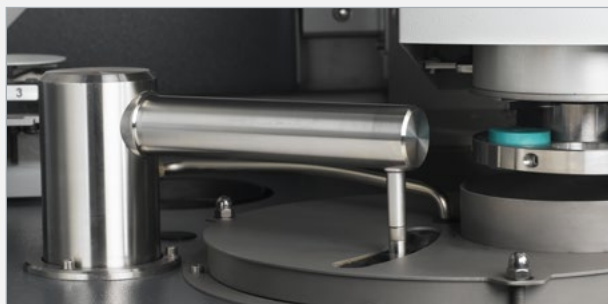


Step 3: ...and moves the MD-Consumable to the elevator.



Step 4: The following MD-Consumable is taken from the elevator and moved to the MD-Disc.

Fully automatic spe



Automatic dresser

On Hexamatic, the dresser operates fully automatically and dresses the grinding stone either in pre-defined intervals or whenever the removal rate decreases.



Conveyor with safety cover*

Up to 8 specimen holders or specimen mover plates can be placed in the conveyor and prepared automatically.



Plane grinding station

Hexamatic can be used either with a grinding stone or a diamond grinding disc, depending on the material to be prepared. High speed plane grinding allows for the shortest possible preparation times.



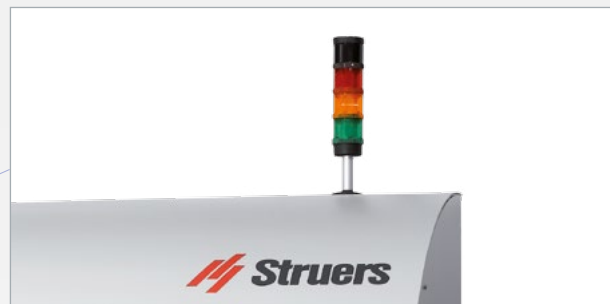
Recirculation cooling unit

For the plane grinding station a 50 litre recirculation cooling unit is used.



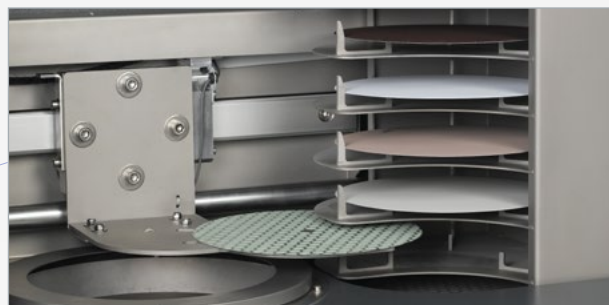
*Only on Hexamatic with conveyor

cimen preparation



Beacon

A beacon is mounted on top of Hexamatic to always show the current state of the machine.



Elevator for disc exchange

Hexamatic has a built-in, automatic disc exchange. Eight different preparation surfaces are stored in the elevator and exchanged according to the selected preparation method.



Touch screen

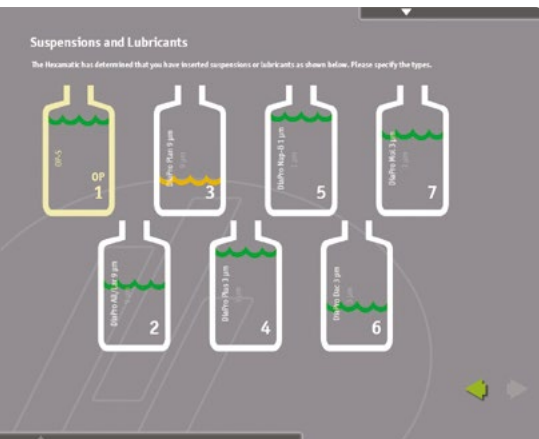
A large 17" touch screen is used to operate Hexamatic. All functions are operated from here, and the process flow can be monitored in detail.



Bottle compartment

In eight bottles all the necessary suspensions and lubricants are stored. The weight of the bottles is monitored continuously and the operator is informed if bottles are running low.

Advanced monitoring functions for consistent preparation results



The remaining content of the bottles is continuously monitored and displayed.

Bottle content is monitored

All bottles for the different suspensions and lubricants used during preparation are placed on weighing cells. The contents of the bottles is continuously monitored and displayed. As soon as a new specimen holder is inserted and the preparation method is selected, Hexamatic will calculate the amount of suspension and lubricant necessary. If the remaining amount is not sufficient to prepare all the specimens in the conveyor, the user will be informed to take appropriate action. This prevents unnecessary stops during preparation or insufficiently prepared specimens due to missing consumables.



When the same preparation method is used all the time and not all bottles are utilized, the same suspension can be filled into two bottles and Hexamatic will automatically start using the second bottle when the first is empty.

Monitoring of accumulated preparation time of discs and cloths

The accumulated actual preparation time of each individual grinding disc or polishing cloth is monitored and displayed in the configuration menu. Individual lifetimes can be set for all preparation discs, and Hexamatic will prompt the user for exchange when that time has been reached. This feature will also prevent insufficiently prepared specimens due to worn consumables.

Ultrasonic cleaning chamber with automatic liquid exchange

The ultrasonic cleaning chamber is equipped with an automatic exchange and refill function. The liquid level in the chamber is monitored continuously and refilled if necessary. At user-defined intervals, the entire content of the ultrasonic cleaning chamber is replaced and the correct ratio of clean water and cleaning liquid is added.



Remote diagnostics and software updates

Hexamatic can be connected to a Local Area Network and can thus be accessed via the Internet. This enables Struers service engineers to remotely check the condition of Hexamatic and detect any errors. Possible software updates can also be carried out remotely, reducing machine downtime to an absolute minimum.

Advanced cleaning and drying functions

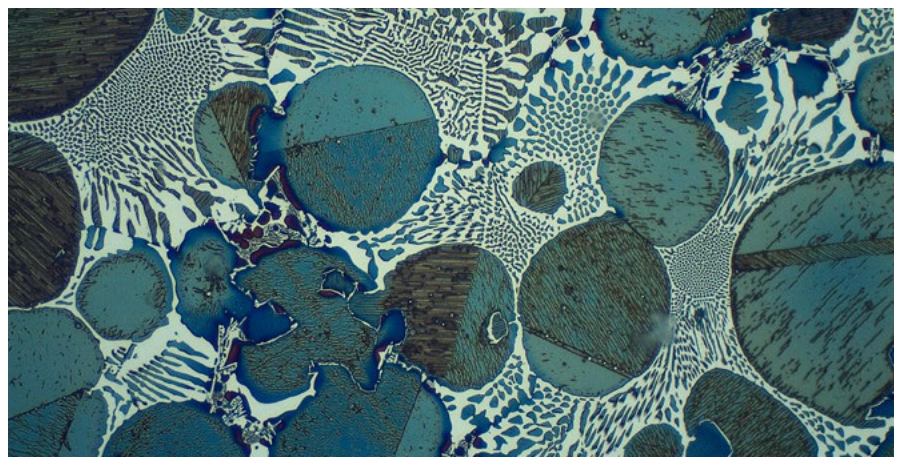
Two built-in cleaning stations: ultrasonic and traditional

Hexamatic features two independent cleaning stations: an ultrasonic cleaning chamber and a traditional cleaning station where water, soap, alcohol and compressed air are used. All cleaning steps can be combined at will, making it possible to clean specimens after any preparation step in the shortest possible time and to the best possible degree. For water-sensitive materials, only alcohol may be used to avoid corrosion.

Specimen drying after ended preparation

(Hexamatic with conveyor only)

When the specimens have been delivered back to the conveyor after the final cleaning, they are positioned in front of a hot air dryer and dried for a user-defined time. This makes it possible to have readily prepared, dry specimens waiting in the conveyor, ready for examination.



SPECIFICATIONS

Hexamatic with conveyor

Fully automatic preparation machine with one plane grinding station and one fine grinding/polishing station with eight exchangeable discs, conveyor for eight specimen holders/specimen mover plates, recirculation cooling unit, bottle unit with eight peristaltic pumps, stock removal unit and two built-in cleaning chambers. With built-in PC and touch-screen operation.

Cat. no:	Voltage
05946129	3 x 200-240 V / 50/60 Hz
05946146	3 x 380-415 V / 50/60 Hz
05946154	3 x 460-480 V / 60 Hz

Hexamatic without conveyor

Fully automatic preparation machine with one plane grinding station and one fine grinding/polishing station with eight exchangeable discs, recirculation cooling unit, bottle unit with eight peristaltic pumps, stock removal unit and two built-in cleaning chambers. With built-in PC and touch-screen operation.

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Struers' equipment conforms with the provisions of the applicable International Directives and their appurtenant Standards. (Please contact your local supplier for details)

Struers' products are subject to constant product development. Therefore, we reserve the right to introduce changes in our products without notice.

CONSUMABLES

Grinding stone 6A27 #150

Aluminium oxide grinding stone, for plane grinding of very hard steels / steels containing many carbides, on Hexamatic. Grit 150, 270 mm dia.

40800181

Grinding stone 4A27 #150

Aluminium oxide grinding stone, for plane grinding of metals >HV 250 on Hexamatic. Grit 150, 270 mm dia.

40800179

Grinding stone 3A27 #150

Aluminium oxide grinding stone, for plane grinding of nickel-based alloys (turbine blades) and stainless steels on Hexamatic. Grit 150, 270 mm dia.

40800182

Grinding stone 2S27 #150

Silicon carbide grinding stone, for plane grinding of nonferrous metals on Hexamatic. Grit 150, 270 mm dia.

40800180

Diamond grinding disc 8D27 #120

Resin bonded diamond grinding disc, for plane grinding of ceramics and sintered carbides on Hexamatic. Grit 120, 270 mm dia.

40800183



ACCESSORIES

Specimen holder for Hexamatic

140 mm dia. for clamping of six specimens 25-40 mm dia., stainless steel.

Cat.no

05946902

Specimen holder for Hexamatic

140 mm dia. for clamping of 3 round specimens 50-61 mm dia., 10-17 mm high, stainless steel.

05946903

Specimen holder for Hexamatic

140 mm dia. for clamping of 6 square specimens 25x36 mm, 3-10 mm high, stainless steel.

05946904

Specimen holder for Hexamatic

140 mm dia. for clamping of 5 specimens 19x45 mm, stainless steel.

05946905

Specimen holder for Hexamatic

140 mm dia. for clamping of 3 specimens 68x37 mm, stainless steel.

05946906

Specimen holder for Hexamatic

140 mm dia. for clamping of 3 specimens 50 mm / 2" dia, max. 27.5 mm / 1.1" high, stainless steel.

05946926

Levelling device, Uniforce

For levelling of specimens in specimen holders, for Hexamatic.

05946200

Levelling device for individual specimens, metric

Levelling device for pre-levelling of individual specimens for Hexamatic. For 25, 30 and 40 mm dia.

05946916

Levelling device for individual specimens, imperial

Levelling device for pre-levelling of individual specimens for Hexamatic. For 1", 1.5" and 2" dia.

05946917

Coupling. For specimen mover plates

For Hexamatic specimen mover plates.

05946901

Specimen mover plate, 4 mm. For 6 x 25 mm dia.

For single specimens. For Hexamatic and Tegramin-25. Coupling (05946901) is ordered separately.

06086902

Specimen mover plate, 4 mm. For 6 x 30 mm dia.

For single specimens. For Hexamatic and Tegramin-25. Coupling (05946901) is ordered separately.

06086903

Specimen mover plate, 4 mm. For 6 x 40 mm dia.

For single specimens. For Hexamatic and Tegramin-25. Coupling (05946901) is ordered separately.

06086904

Specimen mover plate, 4 mm. For 6 x 1" dia.

For single specimens. For Hexamatic and Tegramin-25. Coupling (05946901) is ordered separately.

06086909

Specimen mover plate, 4 mm. For 6 x 1 1/2" dia.

For single specimens. For Hexamatic and Tegramin-25. Coupling (05946901) is ordered separately.

06086910

Specimen mover plate, 4 mm. For 6 x 1 1/4" dia.

For single specimens. For Hexamatic and Tegramin-25. Coupling (05946901) is ordered separately.

06086911

Retention rings for the preparation of 25 mm / 1" dia.

single specimens on Hexamatic. To be used with specimen mover plate 06086902 and 06086909. Stainless Steel. 6 pcs.

05946921

Retention rings for the preparation of 30 mm dia.

single specimens on Hexamatic. To be used with specimen mover plate 06086903. Stainless Steel. 6 pcs.

05946922

Retention rings for the preparation of 1 1/4" dia.

single specimens on Hexamatic. To be used with specimen mover plate 06086910. Stainless Steel. 6 pcs.

05946923

Retention rings for the preparation of 1 1/2" dia.

single specimens on Hexamatic. To be used with specimen mover plate 06086911. Stainless Steel. 6 pcs.

05946924

Retention rings for the preparation of 40 mm dia.

single specimens on Hexamatic. To be used with specimen mover plate 06086904. Stainless Steel. 6 pcs.

05946925



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About Struers

Struers is the world leader in materialographic innovation. We develop, manufacture and distribute quality materialographic preparation solutions to help our customers realize maximum productivity and performance in laboratories and production facilities around the world. Struers is based in Copenhagen, Denmark with affiliates in 23 countries. We have employees globally, including experienced metallographers, qualified service personnel, and a worldwide network of dealers.

Learn more

Contact a Struers sales representative today or visit www.hexamatic.com