

ViaKit

Instruction Manual



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ViaKit
Instruction Manual

Always state Serial No if you have technical questions or when ordering spare parts. You will find the Serial No. on the type plate of the machine itself. We may also need the Date and Article No of the manual. This information is found on the front cover.

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ViaKit Safety Precaution Sheet

To be read carefully before use

1. Considerable force can be exerted by the piston of the VialInserter. Do not place fingers or other parts of the body under the piston of the VialInserter while pulling the lever down.
2. Handle the ViaHolder with care; it can cause injury if dropped.
3. In use, the VialInserter and ViaHolder must be placed on a flat, stable work surface that is rated to support the load, including the additional load resulting from use of the VialInserter lever.
4. Use of safety glasses or goggles is recommended when using the pointed cleaning tool. Flying resin particles can cause eye injury.

The equipment should only be used for its intended purpose and as detailed in the Instruction Manual.

The equipment is designed for use with consumables supplied by Struers. If subjected to misuse, improper installation, alteration, neglect, accident or improper repair, Struers will accept no responsibility for damage(s) to the user or the equipment.

Dismantling of any part of the equipment, during service or repair, should always be performed by a qualified technician.

Table of Contents	Page
1. Getting Started with ViaKit Basic	
Unpacking ViaKit Basic	3
Checking the Contents of the Packing Box	3
Getting Acquainted with ViaKit Basic	4
Divisions on ViaHolder Single Sample	4
Toolkit for ViaHolder Single Sample	5
Mount Removal Tool	5
Staircase for VialInserter	5
VialInserter	6
Mould for ViaKit Basic	7
About the Struers Coupon	7
2. Operating ViaKit Basic	
Sequence of Operations	8
Pinning the Coupons on the Positioning Pins	8
Checking the Fit and Spacing	11
Cleaning the Coupons	11
Cleaning the Mounting Rings	12
Using the Pointed Cleaning Tool	12
Using the Half-ring Cleaning Tool	12
Cleaning the ViaHolder Single Sample	13
Mounting the Sample	13
Oiling the Mounting Ring	13
Alternative Oiling Method	14
Placing the Pinned Coupons	14
Placing the End Cap	15
Pouring the Resin	16
Removing the End Cover	16
Removing the Mounting Ring	17
Setting up ViaHolder Single Sample	18
Checking the Positioning Pins	18
Placing the Mounts in ViaHolder Single Sample	19
Grinding and Polishing	20
Marking the Diamond Stops	20
Target Plane in Mounted Coupon	21
Material Removal in Grinding and Polishing Steps	22
Plane Grinding / Position A	23
Fine Grinding / Position B	24
Optional Additional Fine Grinding	24
Polishing / Position C	25
Coupon Preparation Methods	26
Standard Method	27
Advanced Method	27
Superior Method	27
Removing Mounts from ViaHolder Single Sample	28
Repositioning Mounts After Inspection	28

3. Maintenance and cleaning	
ViaHolder Single Sample Lubrication.....	29
Cleaning ViaHolder Single Sample	29
Cleaning the VialInserter and Staircase.....	29
Cleaning Mounting Rings	29
4. Trouble shooting	30
5. Consumables	33
6. Spare Parts	33
7. Technical Data	34

1. Getting Started with ViaKit

Unpacking ViaKit

ViaKit is supplied in a single packing box, which contains several storage boxes for protection of the precision components of ViaKit. The storage boxes have handles for easy portability. Struers recommends that the user continues to store precision parts of ViaKit, including the mounting rings, in the correct storage box.

- Open the packing box, taking care not to scratch the storage boxes inside with the knife used to open the packing tape seal on the top of the box.
- Remove the storage boxes and the other contents of the packing box.
- Open the storage boxes, and observe the storage positions of the Vialserter and the ViaHolder in their respective storage boxes. This will help when returning the components to the storage boxes.

Checking the Contents of the Packing Box

In the packing boxes you should find the following items:

- 1 Vialserter
- 1 Staircase
- 1 ViaHolder
- 1 Stand
- 1 Mount removal tool
- 6 Mounting rings (reusable) for ViaKit mould
- 1 Tool kit for ViaHolder including:
 - 1 Pointed cleaning tool
 - 1 Half-ring cleaning tool
 - 1 Bottle Silicon oil
- 250 End caps for ViaKit mould
- 500 Positioning Pins
- 1 Caran D'ache wax pencil
- 1 Instruction Manual Set

Getting Acquainted with ViaKit

ViaKit is an automated coupon preparation system, which can be used to simultaneously prepare up to 6 mounts with 6 coupons in each (total 36 coupons), with a system precision of $\pm 10 \mu\text{m}$.

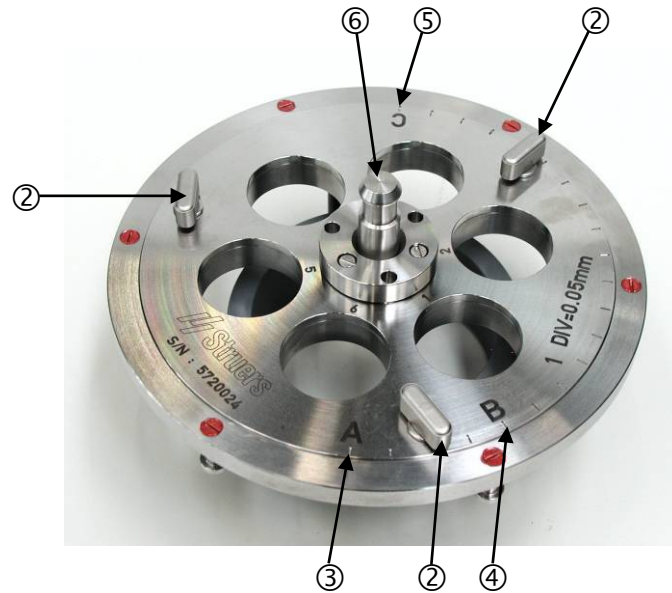
Take a moment to familiarise yourself with the names of all the ViaKit components:

ViaHolder – From Below



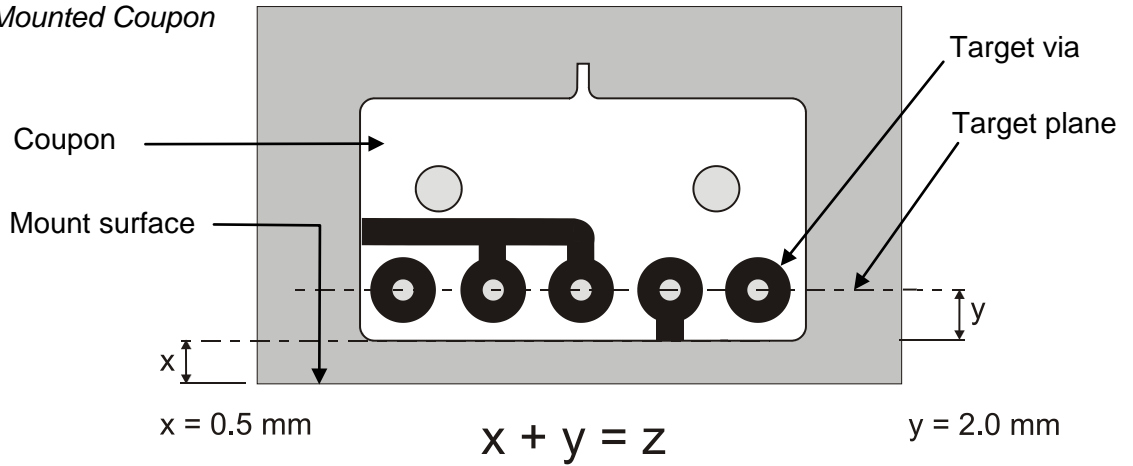
① Diamond stops

ViaHolder – From Above



- ② Locking screw
- ③ Position A mark
- ④ Position B mark
- ⑤ Position C mark
- ⑥ Spindle

Target Plane in Mounted Coupon



Material Removal in Grinding and Polishing Steps

The table below shows the relation between ViaHolder position (A-B-C) and coupon preparation steps.

Step	Position	Distance from mount surface to target plane	
		Distance at start of step	Distance at step completion
Plane grinding	A	<p>$z = 2500 \mu\text{m}$</p>	<p>$z = 200 \mu\text{m}$</p>
Fine grinding	B	<p>$z = 200 \mu\text{m}$</p>	<p>$z = 0 \mu\text{m}$ (rough target)</p>
Polishing	C	<p>$z = 0 \mu\text{m}$ (rough target)</p>	<p>$z = 0 \mu\text{m}$ (polished target)</p>

Divisions on ViaHolder



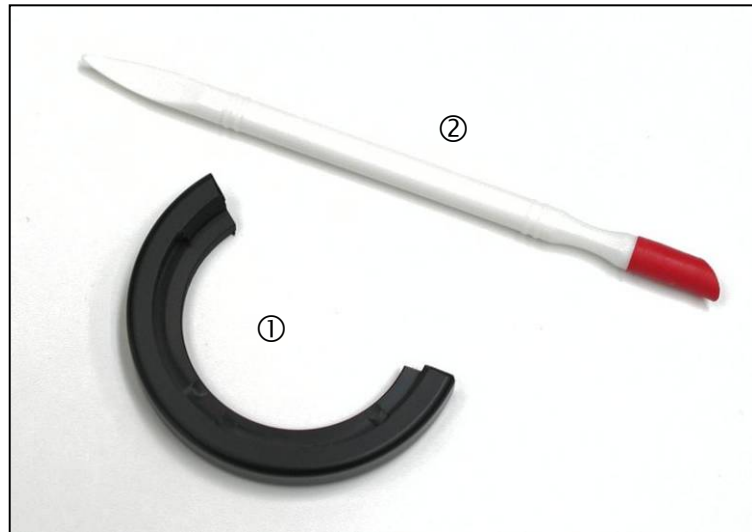
Rotary movement of the inner ring of ViaHolder causes the mounts to move vertically relative to the surface of the diamond stops. The following figures represent the vertical movement corresponding to the particular rotary movement.

Distance between divisions:	50 μm
Distance between positions A and B:	200 μm
Distance between positions B and C:	800 μm

Stand for ViaHolder



Toolkit for ViaHolder

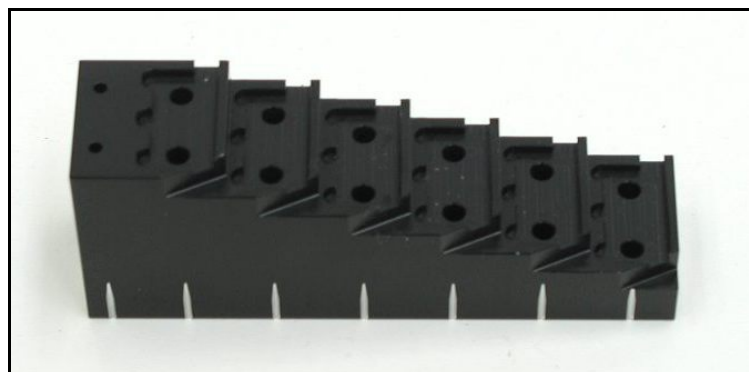


- ① Half-ring cleaning tool
- ② Pointed cleaning tool

Mount Removal Tool



Staircase for ViaInserter

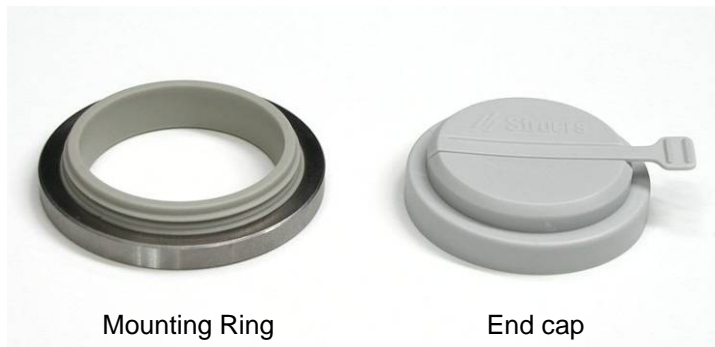


VialInserter



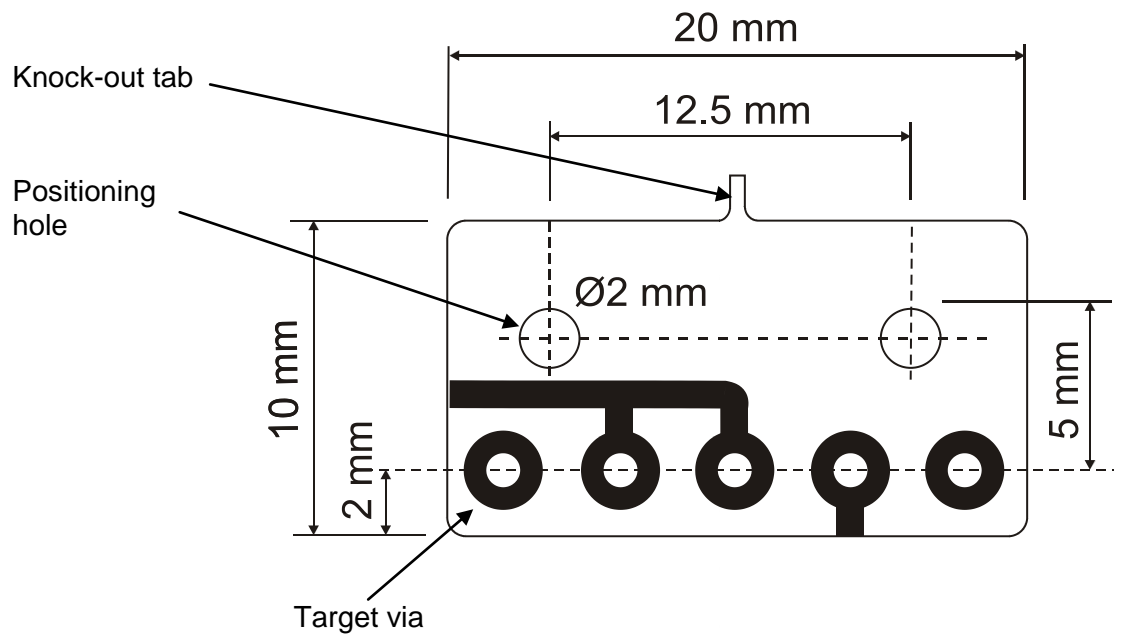
- ① Mount removal slot
- ② Handle
- ③ Piston and magnetic holder for pins
- ④ Slot for Staircase
- ⑤ Holes for (optional) affixing of VialInserter to workbench
- ⑥ Alignment notch for Staircase step

Mould for ViaKit



About the Struers Coupon

The coupons mounted using ViaKit must have the dimensions of the standard Struers Coupon:



Coupons routed using ViaSampler have a small knock-out tab. The tab helps with orientation of the coupon when pinning in Vialserter, and when positioning in the mould. The tab is on the edge that is most distant from the target vias, i.e. on the top edge of the coupon illustrated above.

2. Operating ViaKit

Sequence of Operations

The sequence of operations is as follows:

Pin the coupons
Clean the coupons
Clean the sample rings and ViaHolder
Oil the sample rings
Mount the samples
Remove the end caps
Remove the mounting rings
Place the mounts in the sample holder
Plane grind the mounts
Fine grind the mounts
Polish the mounts
Remove the samples from the sample holder

Pinning the Coupons on the Positioning Pins

Coupons are mounted on the positioning pins using the Vialserter tool and the Staircase. Up to 6 coupons can be mounted on a pair of positioning pins. Coupons from different board types and thickness can be used at the same time. One pair of positioning pins is used for each mould.

- Place up to 6 coupons on the Staircase, max. one per step. The tab left on the coupon after routing fits into a corresponding notch on the step.

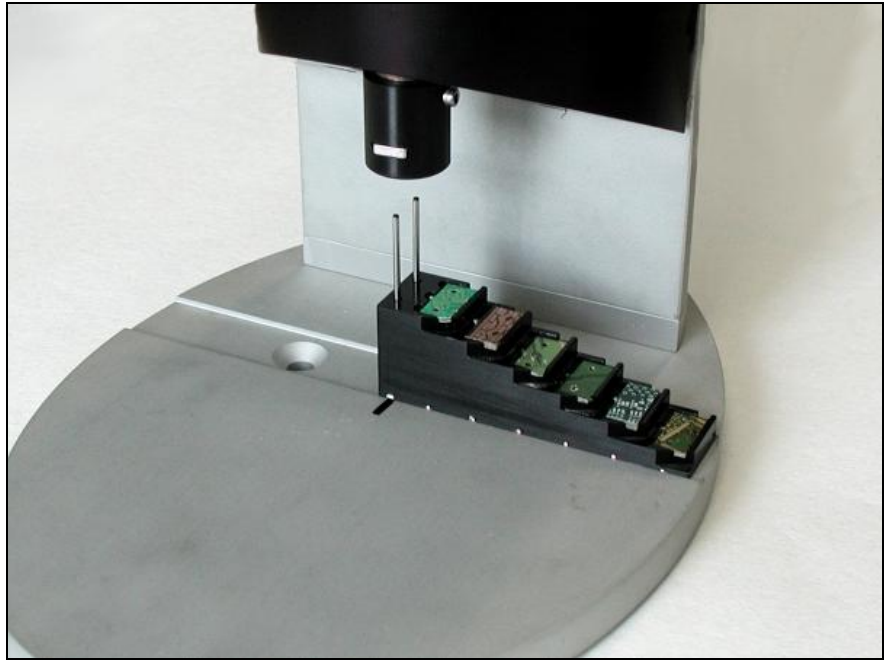
Note:

If less than 6 coupons are used, place the coupons in the central positions, e.g. with 3 coupons, use Staircase steps 2, 3 and 4. However if the board thickness of two adjacent coupons is 4mm or greater, a step must be skipped. See the box below.

Important

The board thickness of two adjacent coupons must not exceed 4mm. This is necessary to maintain at least 1mm between boards, so that resin can enter the space during mounting.

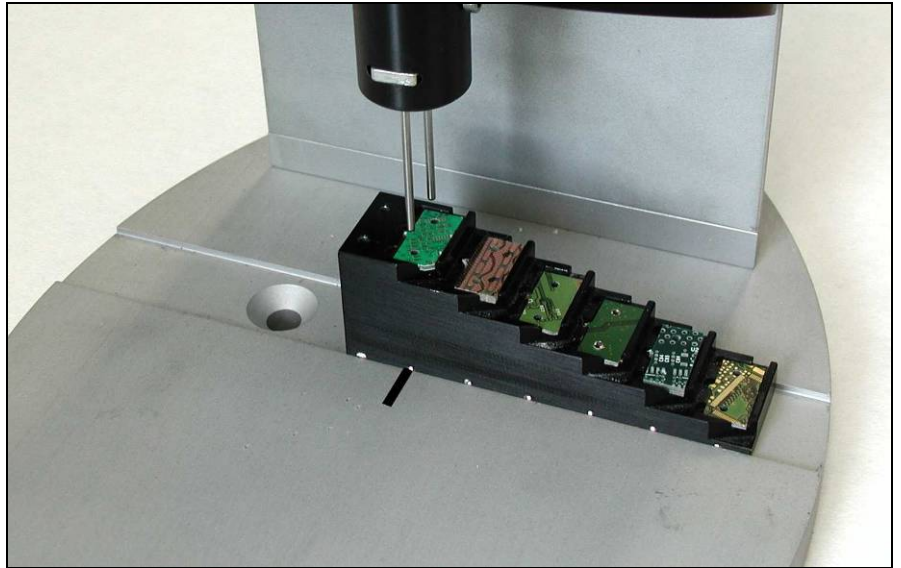
- Place two positioning pins in the holes on the top step of the Staircase.
- Place the Staircase in the groove in the base of the Vialserter, and align the reference mark under the pins with the alignment mark on the Vialserter.



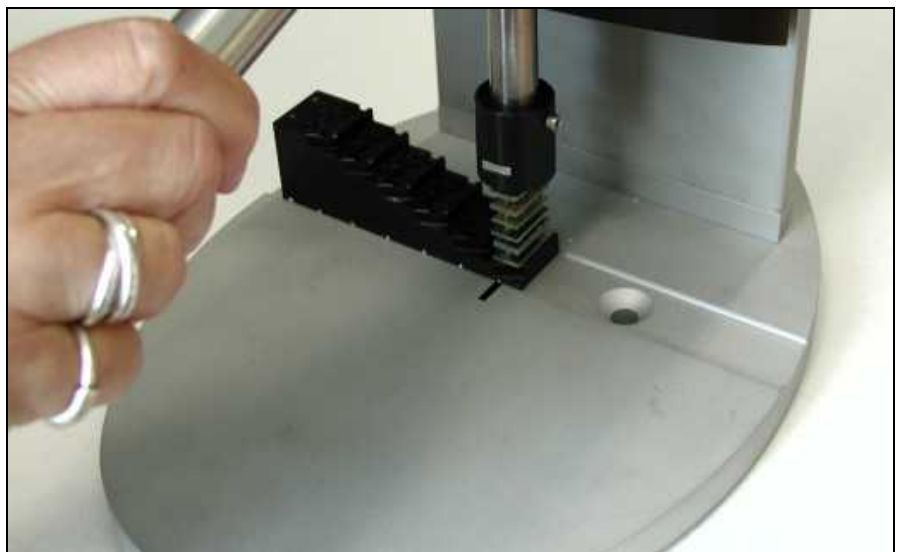
- Pull down the handle on the Vialserter until the pins click into place in the magnetic holder at the bottom of the Vialserter piston. Release the handle.



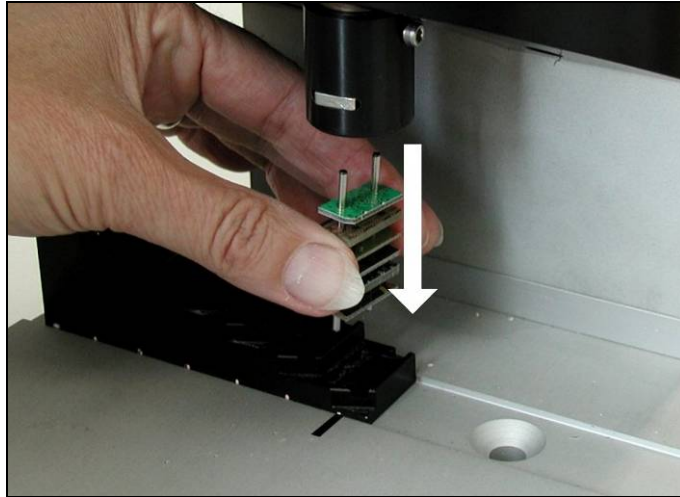
- Align the reference mark under the top coupon step of the Staircase with the alignment mark on the base of Vialserter.



- Press the handle of the Vialserter slowly downwards until the pins are just above the coupon, and make any small adjustment to the position of the Staircase in the groove necessary to align the pins precisely with the holes.
- Continue pressing the handle down until it can go no further
- Release the handle. The coupon remains on the pins.
- Align the reference mark under the next coupon with the alignment mark on the base of the Vialserter and pull the handle down.
- Move the staircase, align, pull and release the handle at each of the remaining coupons.

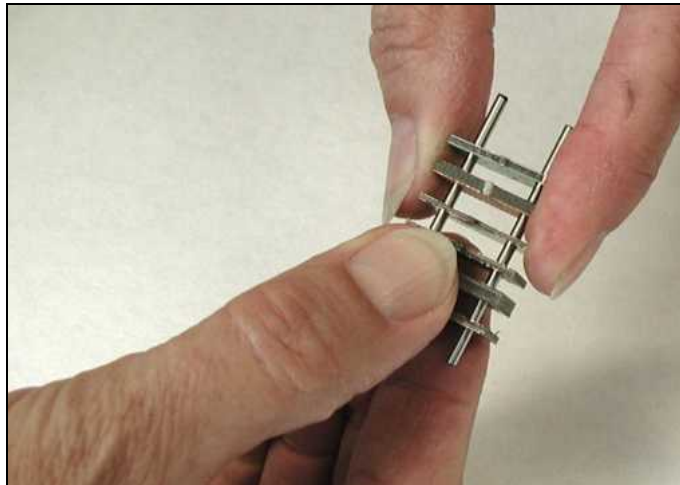


- Grip the coupons and pull gently downwards to remove the pins from the magnetic holder in the VialInserter.



Checking the Fit and Spacing

- Check that there is at least 1 mm between coupons, and grip and pull gently to check that no coupon is loose. This is a somewhat subjective assessment: what is important is that the coupons do not slide or wobble on the pins during mounting.



Cleaning the Coupons

After the coupons have been pinned on the VialInserter, they have to be cleaned and dried thoroughly, as otherwise the resin will not adhere properly. Struers recommends the use of ultrasound cleaning. To avoid gaps when the resin is poured around the coupons, thorough drying is essential.

Cleaning the Mounting Rings and ViaHolder

When the mounting rings are used for the first time, no cleaning is necessary. However, the rings must be very thoroughly oiled with the silicon oil.

On all subsequent usage, the mounting rings must be individually cleaned as described here, and then oiled.

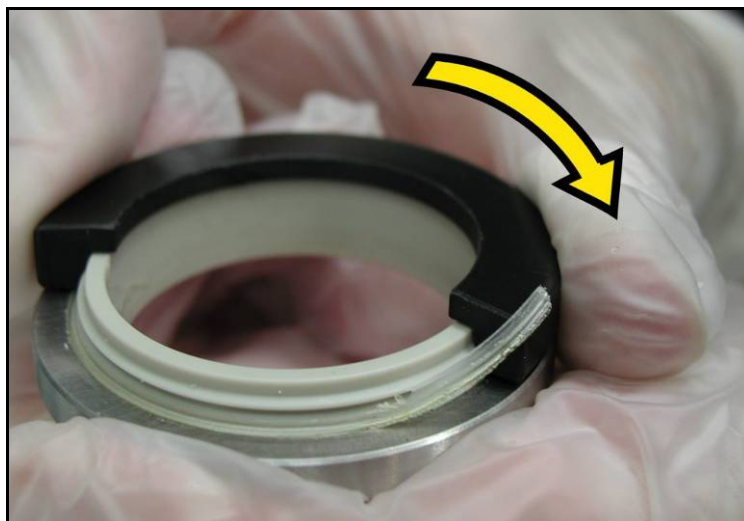
Using the Pointed Cleaning Tool

- If more than half of the circumference of the threads of the mounting ring has visible resin residue from previous usage (residue that makes it difficult to clip on the half-ring cleaning tool), first clean using the pointed cleaning tool, before using the half-ring cleaning tool. The pointed cleaning tool is also useful for removing resin residues at the join between the metal and plastic parts of the mounting ring.



Using the Half-ring Cleaning Tool

- Clip the half-ring cleaning tool onto the threads of the mounting ring.
- Hold the mounting ring in one hand and the cleaning tool in the other hand, and rotate the tool around the mounting ring. This cleans the threads and the flange of the mounting ring.



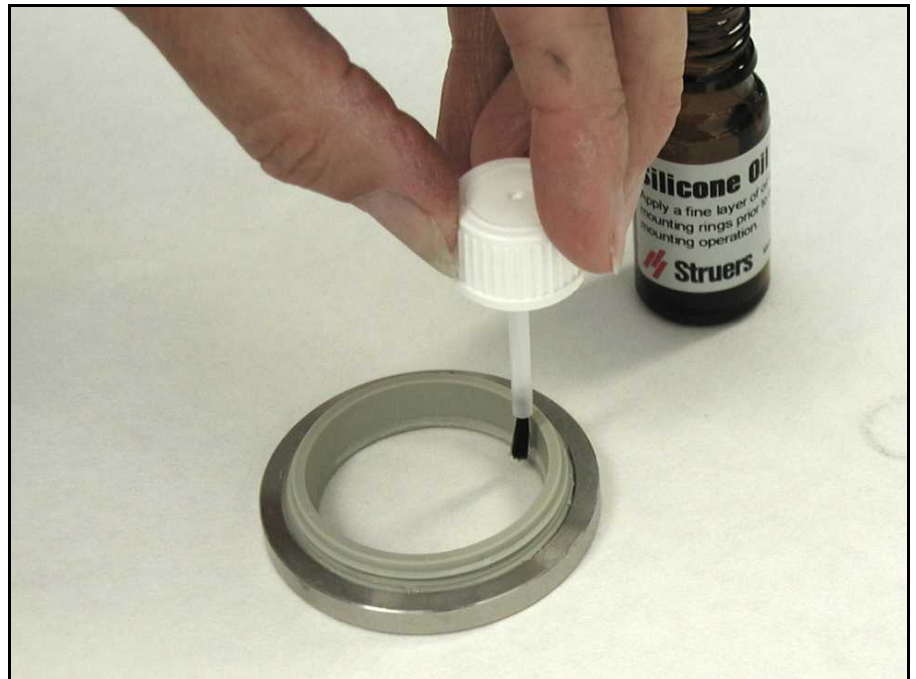
- Ensure that the edges of the holes for the sample holders in the ViaHolder are clean and free from any residues. Clean with the pointed cleaning tool if necessary.
- Clean the surface of the ViaHolder using a moist cloth.

Mounting the Sample

One mounting ring and one end cap are required for each positioning pins/coupon assembly. Silicone release agent must be used to minimize resin residues and to ensure clean removal from the mould.

- Ensure that the mounting ring is clean and free from any residues. If necessary, clean as described in [Cleaning ViaHolder](#) on page 30.
- Oil the mounting ring with silicone oil (Cat. Nr. 40300076), both on the inside surface as illustrated, and on the grooves on the outside:

Oiling the Mounting Ring



Alternative Oiling Method

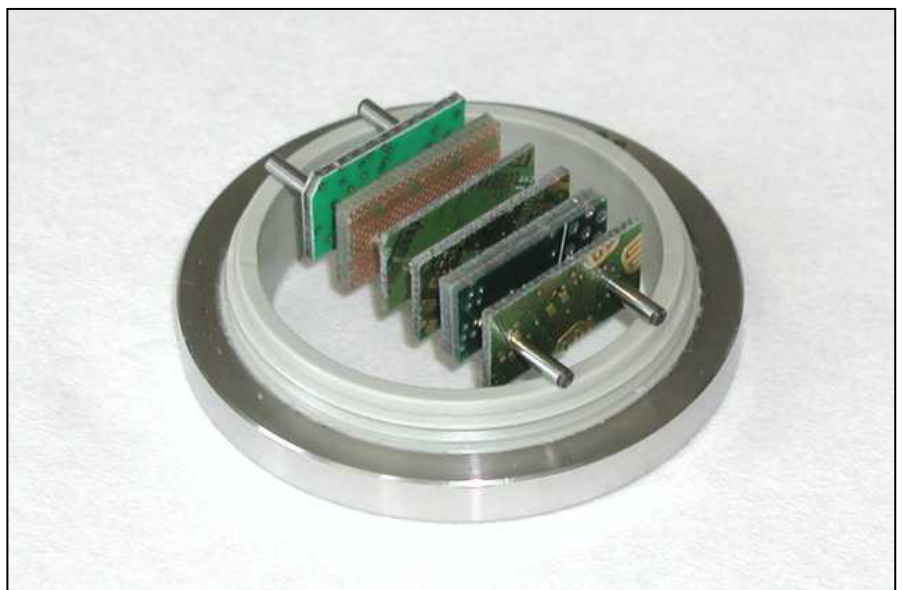
TIP

Instead of using the brush supplied with the silicone oil, a sponge can be used for faster application of the release agent.



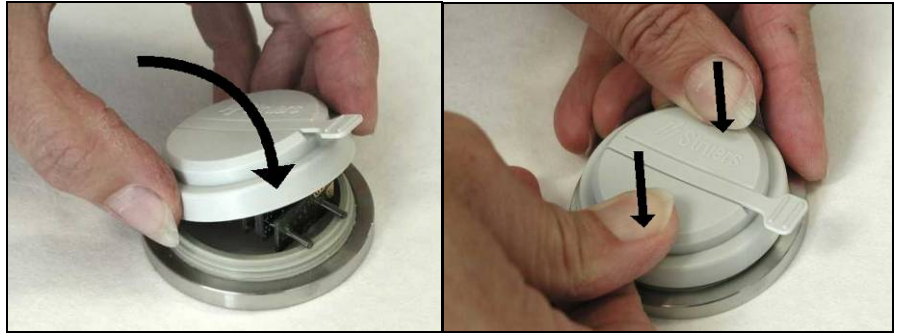
Placing the Pinned Coupons

- Place the pinned coupons on the mounting ring as shown, with the knock-out tabs facing downwards. This ensures that the inspection side of the coupons (target vias) is above the positioning pins.



Placing the End Cap

- Place an end cap on top and snap the end cap into position with a firm click.



- Double-check by squeezing at the edges.



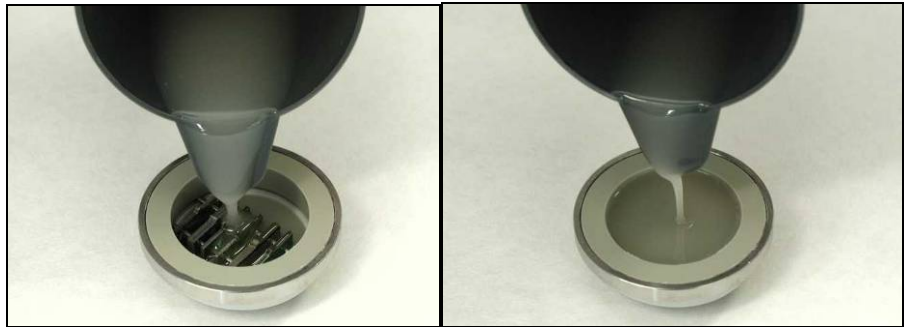
Tip

Use a second mounting ring to press end cap securely onto the mounting ring.

If the end cap sits too loosely, excess resin will cover the tips of the positioning pins, resulting in the target vias being overground.

Pouring the Resin

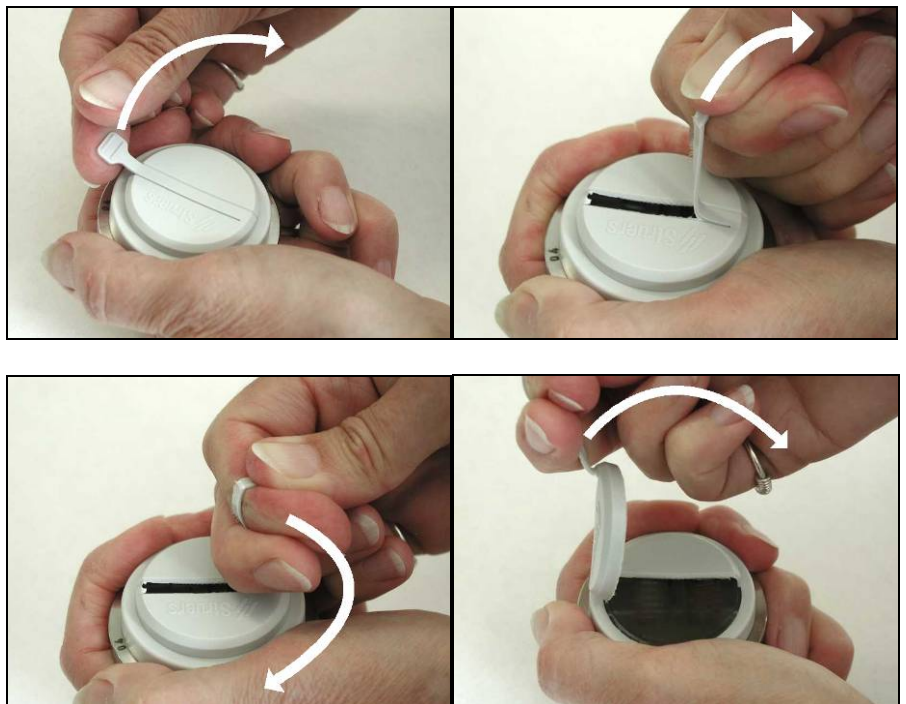
- Prepare a low-viscosity resin.
- Turn the mould over and pour the resin into the mould, completely covering the coupons, and filling the mould up to 2-3 mm below the top of the mounting ring.



- Wait until the resin has hardened.
- Turn the mounting ring over, and remove the top part of the end cap by tearing off as illustrated:

Removing the End Cap

Note:
Take care not to pull the tab off the tear-off strip as this will make it more difficult to remove the strip.



Removing the Mounting Ring

- Place the mounted sample/mounting ring in the slot on top of the VialInserter, as illustrated:



- Press the lever down and release. The mount is separated from the mounting ring. The bottom part of the end cap remains on the mount.



- Remove the mount and the mounting ring

Setting up ViaHolder

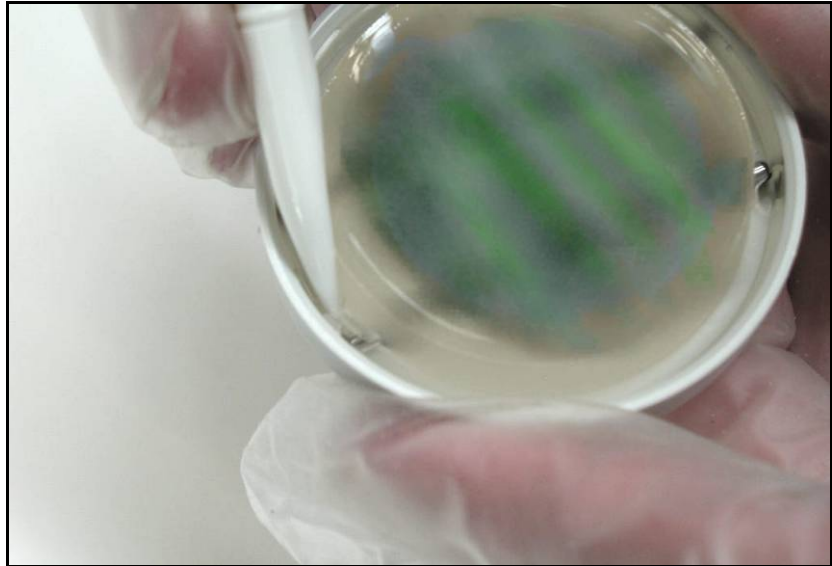
Mounts should be placed on the ViaHolder in a balanced, symmetrical, configuration (with the same distance between each mount and the closest adjacent mount). In practice, this means that 3, 4 or 6 mounts, arranged in a balanced geometry, can be prepared at the same time on the ViaHolder.

- Place the ViaHolder stand on the working surface.
- Place the ViaHolder upside-down (i.e. with the grinding stops up) on the stand, ensuring that all 3 rubber supports on the stand support the ViaHolder.



Checking the Positioning Pins

- Check that the mounts are clean and have no traces of cleaning oil or other material on the positioning pins at the edge of the mount – clean if necessary, using the pointed tip tool.



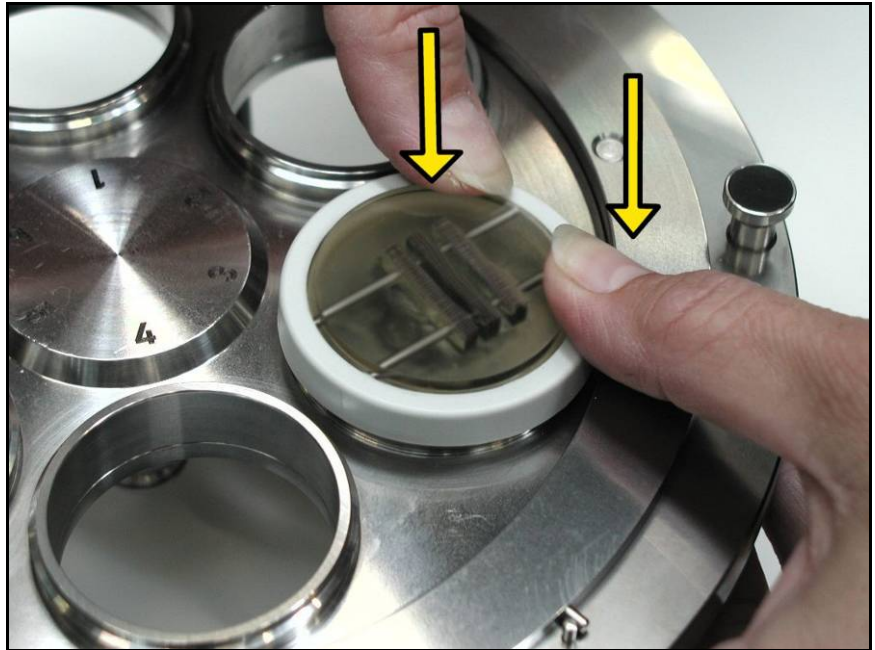
Important!

Any residue or coating on the positioning pins where the pins touch the surface of ViaHolder will introduce a preparation error. Resin residue must be removed from this area of the pins and from the mounting holes in ViaHolder before placing mounts in ViaHolder

- Check that the surface of ViaHolder around the mounting holes is clean and free from any residue.

Placing the Mounts in ViaHolder

- Place the mount in the ViaHolder, pressing on the remaining part of the end cap until it clicks into place:



Note

It is possible to remove the mounts from ViaHolder between preparation steps (for inspection or cleaning) and return the mounts to ViaHolder with no loss of precision.

Grinding and Polishing

Tip

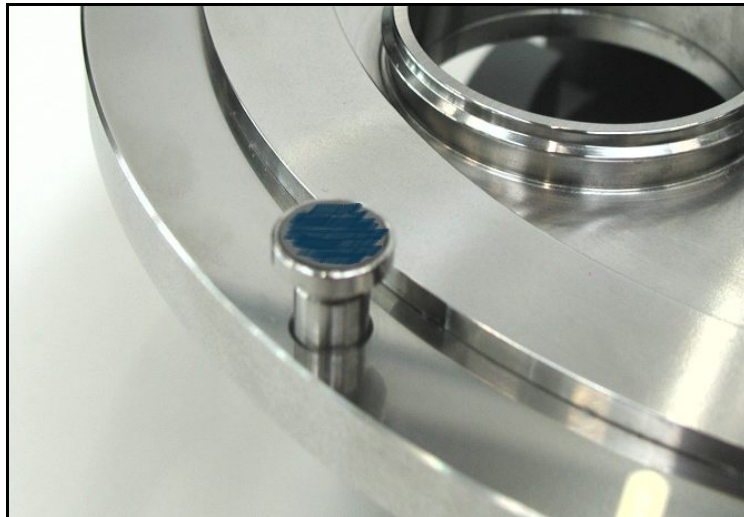
To safeguard the best possible planarity, replace the disc/platen of the grinder/polisher before using it with the ViaHolder.

Marking the Diamond Stops

When the mounts are ground to the point where the diamond stops are reached, no more removal takes place, and the particular grinding step is complete. For this reason, it is important to verify that this point has been reached. This can be done by marking the diamond stops on ViaHolder with the wax pencil.

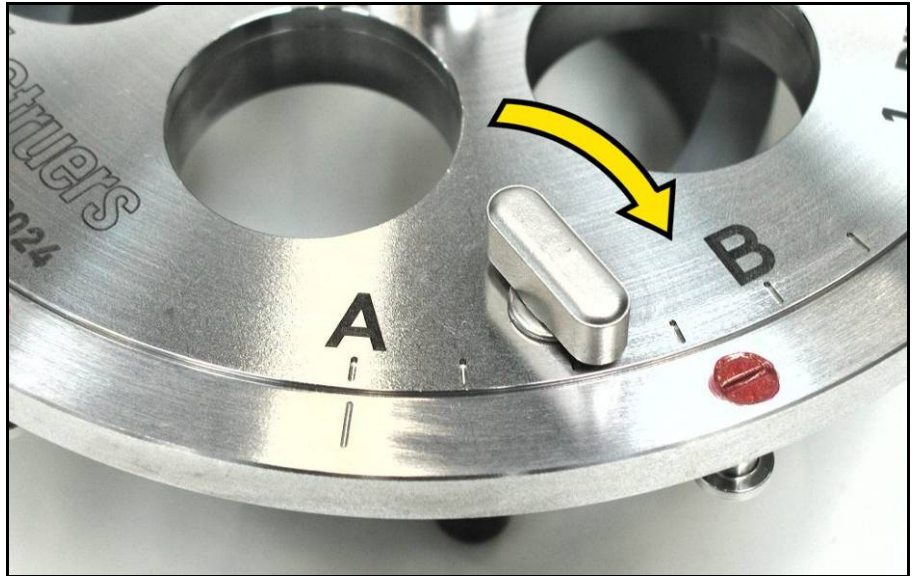
During the grinding process, the diamond stops are checked visually. When the marking has disappeared from all the diamond stops, the particular grinding step has been completed.

- Place the ViaHolder upside-down on the stand.
- Using a wax pencil, mark the surface of the diamond stops.



Plane Grinding / Position A

- Place the ViaHolder on the stand.
- Loosen the locking screws on the ViaHolder by three complete turns.
- Rotate the outer ring of the Via Holder to line up the reference mark with Position A
- Tighten the locking screws.



- Place the ViaHolder in a suitable grinding / polishing machine.
- Place an appropriate surface for the method chosen in the grinding / polishing machine.
- Grind until the diamond stops touch the grinding paper/ disc. Check the progress by visual inspection of the diamond stops: when the markings have been removed, this step is complete. Depending on the number of mounts and coupons per mould, it may be necessary to use more than one paper/ disc in the plane grinding step.

Note

The markings will disappear from some diamond stops before others. Continue grinding until the marking has disappeared from **all** the diamond stops.

- Remove the ViaHolder from the grinding / polishing machine and place it upside-down on the stand.
- Clean the mounts, temporarily removing the mounts from ViaHolder if necessary. See [Removing Mounts from ViaHolder](#) on page 29.
- Mark the diamond stops, using a wax pencil.

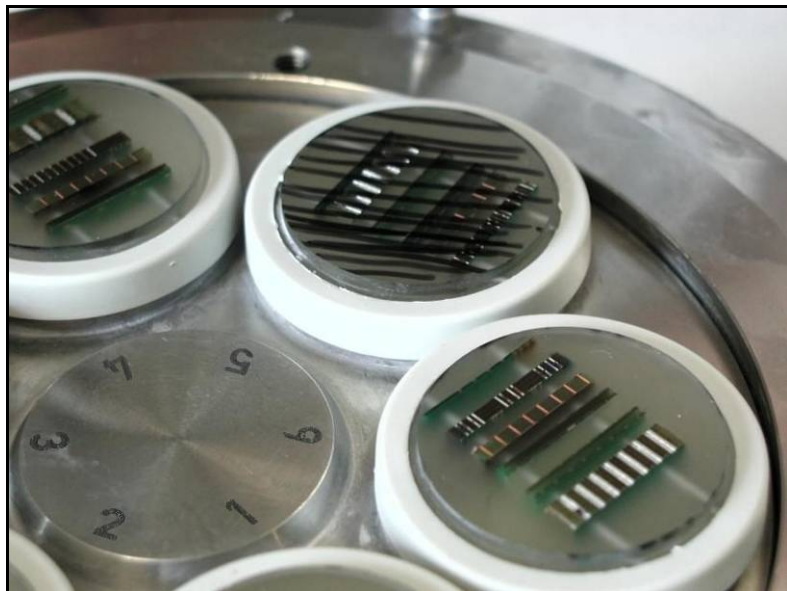
Fine Grinding / Position B

- Place the ViaHolder on the stand or in the grinding / polishing machine.
- Loosen the locking screws.
- Rotate the outer ring of the ViaHolder to line up the reference mark with Position B.
- Tighten the locking screws.
- Place an appropriate surface for the method chosen in the grinding / polishing machine.
- Grind until the diamond stops are in contact with the grinding paper/ disc. When the pencilled layer of graphite on the diamond stops has been removed, this step is complete.
- Remove the ViaHolder from the grinding / polishing machine and place it upside-down on the stand.
- Clean the mounts, temporarily removing the mounts from ViaHolder if necessary. See *Removing Mounts from ViaHolder* on page 29.
- Continue the preparation by polishing in position C.

Optional Additional Fine Grinding

In some cases, additional fine grinding is necessary to obtain a plane-parallel surface over the entire sample area. This can be done by fine grinding with MD-Largo in position B. The shading method is suitable for ensuring a plane-parallel surface:

- Using a dark permanent marker, mark the surface of all the mounts with a series of lines.



- Fine grind in position B.
- Examine the surface of the mounts: if the shading has been completely removed from some areas of the mounts, mark the mounts again and fine grind once more.
- Repeat until no more material is removed from the mounts by fine grinding, i.e. some shading remains over the entire surface of all the mounts.
- Continue the preparation by polishing in position C.

Polishing / Position C

Polishing removes very little material from the mounts, so fixed polishing times are used at this stage of the preparation process.

- Rotate the outer ring of the ViaHolder to Position C. In this position the diamond stops cannot come in contact with the polishing material, and marking the diamond stops with graphite is unnecessary.

Important!

Always ensure that ViaHolder is in Position C when polishing. Diamond polishing in Position A or B can damage the diamond stops!

- Place an appropriate surface for the method chosen in the grinding / polishing machine.
- Polish according to the chosen method.
- Optional fine polishing can be done with OP-S for 20 seconds.
- Remove the ViaHolder from the grinding / polishing machine.

Coupon Preparation Methods

Struers have developed three methods for coupon preparation: Standard, Advanced and Superior. Using any of these methods, it is possible to hit the exact centre of target vias as small as 100µm - on all of the coupons in the specimen holder.

All 3 methods are based on the following parameters:

- 36 coupons – 6 mounts with 6 coupons each.
- Acrylic mounting resin.
- Ø300mm surface.
- Co-rotation, except on the OP/Chem-step.

Fewer mounts and fewer coupons per mount can be used, but at least 3 mounts must be used in the ViaHolder, and the mounts must be distributed around the ViaHolder in a balanced way.

The following parameters should be taken into consideration when selecting a method:

- The requirements for the finished specimen
- Material properties (hardness, ductility etc.)
- Number of coupons
- Maximum turnaround time

Note

The mounts should be cleaned between each preparation step. To do this it may be necessary to temporarily remove the mounts from ViaHolder.
No loss of precision will occur if this is done.

Standard Method

	Holder position	Surface	Media / Lub.		Force	Speed	Time
Plane grinding	A	SiC	#180	Water	240 N	300 rpm	X x 2 min ¹
Fine grinding	B	SiC	#1200	Water	180 N	300 rpm	X x 2 min ¹
Polishing 1	C	MD-Dac	DiaPro Dac		180 N	150 rpm	5 min
Polishing 2	C	MD-Nap	OP-S ²		90 N	150 rpm	1½ min

Advanced Method

	Holder position	Surface	Media / Lub.		Force	Speed	Time
Plane grinding	A	SiC	#180	Water	240 N	300 rpm	X x 2 min ¹
Fine grinding 1	B	SiC	#1200	Water	180 N	300 rpm	X x 2 min ¹
Fine grinding 2	B	MD-Largo	DiaPro All./Largo		180 N	150 rpm	Y min ³
Polishing 1	C	MD-Dac	DiaPro Dac		180 N	150 rpm	5 min
Polishing 2	C	MD-Nap	OP-S ²		90 N	150 rpm	1½ min

- 1) Grinding until diamond stops are in contact with the grinding surface. The variable (X) depends on number of SiC-paper changes, which again depends on material properties and number of moulds/coupons. Typically X = 2
- 2) NH₄ or H₂O₂ may be added
- 3) Fine grinding until the desired plane parallelism is achieved on the entire mount surface

Superior Method

	Holder position	Surface	Media / Lub.		Force	Speed	Time
Plane grinding	A	SiC	#180	Water	240 N	300 rpm	X x 2 min ¹
Fine grinding 1	B	SiC	#1200	Water	180 N	300 rpm	X x 2 min ¹
Fine grinding 2	B	MD-Largo	DiaPro All./Largo		180 N	150 rpm	Y min ³
Polishing 1	C	MD-Dac	DiaPro Dac		180 N	150 rpm	5 min
Polishing 2	C	MD-Dur	DiaPro Dur		150 N	150 rpm	2 min
Polishing 3	C	MD-Nap	OP-S ²		90 N	150 rpm	1½ min

Removing Mounts from ViaHolder

- Place the ViaHolder upside-down on the stand. If the mount is to be reinserted in ViaHolder after inspection, make a note of its position number.
- Place two fingers under the mount and insert the mount removal tool under the rim of the mount (under the remaining part of the end cap).

Important

Do not press the Mount Removal Tool against the ring of the ViaHolder. Incorrect use of Mount Removal Tool may result in damage to the ViaHolder rings.

- Press up with the fingers and lever off the mount.



- Remove the remaining part of the end cap from the mount. The sample is now ready for examination.

Note

The remaining part of the end cap can be removed from the mount between preparation steps, and replaced after examination or cleaning, to continue the preparation with no loss of precision. The numbered markings on ViaHolder serve as a guide when returning the mount to the original position on ViaHolder

Repositioning Mounts After Inspection

Mounts can be repositioned in their original positions on ViaHolder for additional grinding/polishing:

- Clean the edge of the mounting hole in ViaHolder and the ends of the positioning pins
- Snap the mount back into its numbered position. The ring part or the end cap must have a perfect fit on ViaHolder to maintain precision.

3. Maintenance and Cleaning

ViaHolder Lubrication

The ViaHolder assembly is pre-lubricated and sealed in the factory. No user maintenance is needed for the moving parts of the ViaHolder. The internal threaded parts are self-cleaning.

Warning!

Do not attempt to adjust or loosen the three screws sealed with red paint. Any tampering will have a negative influence on the precision of the ViaKit system.

Cleaning ViaHolder

The ViaHolder must be cleaned prior to every preparation. Clean the surface of the ViaHolder using a moist cloth. Ultrasound cleaning can be used for further cleaning if necessary.

Cleaning the Vialserter and Staircase

No lubrication is necessary. Clean the surfaces using a moist cloth. A paintbrush or vacuum cleaner can be used to remove dust and particles from the recessed areas.

Cleaning Mounting Rings

Cleaning of the mounting rings must be done every time they are used. The cleaning procedure is described in the section on *Operating ViaKit*.

4. Trouble shooting

Problem	Explanation	Action
Vialserter		
Incorrect coupon positioning		When placed on the Vialserter staircase, make sure that the side of the coupon on which the via has been identified is pointing upwards. Marking the via(s) with a red pen before extraction is recommended.
Incorrect insertion		The positioning pins MUST be inserted at a straight angle. On some panels, the walls of the positioning holes are easily damaged. Push the pins into the coupons in a gentle, smooth movement. Assist the pins catching the hole by holding the coupon at a slight angle.
Positioning pins twisted	Positioning pins may become twisted if there are less than three coupons pinned at a time or if the coupons are very thin or flexible.	Always pin three or more coupons at a time. Place pinned coupons on the mounting ring to verify that the ends of both pins are in contact with the mounting ring. Dummy coupons may be used if there are insufficient sample coupons. Use rigid dummy coupons if the coupons are very thin or flexible.
Insufficient room for coupons		With very thick coupons, skip a step on the staircase to introduce additional space between the coupons.

ViaKit
Instruction Manual

Problem	Explanation	Action
ViaMount		
Insufficient cleaning of ViaMount parts	Resin residue can cause misalignment of the positioning pins.	Clean the mounting rings thoroughly after each use. Use the cleaning tools provided with ViaKit. Apply silicone to the mounting rings before each use.
	Resin residue on the pin tips may result in the pinned coupons being lifted up slightly, and the coupons will be overground.	Check the tips of the positioning pins are free from resin. If necessary, use a pocket magnifier and remove any resin with a scalpel.
Insufficient cleaning of coupons	Dirt and grease residue on the coupons may lead to inaccuracy. In particular when dealing with microvias.	Clean and degrease the coupons after pinning. Immerse the pinned coupons in an ultrasonic cleaner for 2-3 minutes. Use an air gun or a hot air drier.
Damaged nylon lining	The grey nylon lining of the mounting rings may have been damaged because tools other than those supplied by Struers have been used to separate the mount.	Before clicking on the end cover, check that the two pins are resting on an undamaged part.
Off-specification end cover	The pinned coupons must fit tightly between the end cover and the mounting ring. (It should be necessary to use force to twist the pinned coupons.) If not, this could either be caused by a damaged nylon lining of ViaMount, or by the end covers not meeting specifications.	Replace the ViaMount or the End Cap if necessary.
Insufficient mounting resin	To stabilize the coupons and to prevent twisting, the coupons must be fully covered with mounting resin.	Use sufficient resin to cover the coupons.

ViaKit
Instruction Manual

Problem	Explanation	Action
ViaHolder		
Incorrect positioning of mount	It is essential that the mount is clicked onto the entire perimeter of the base ring on ViaHolder.	Ensure that the mount is correctly placed onto the base ring of ViaHolder
	Mounts which are removed from ViaHolder for inspection must be returned to their original, numbered position.	Ensure that each mount is returned to the correct position.
Incorrect calibration	One or more of the diamond stops are out of calibration. This can happen if ViaHolder is dropped.	Contact your Struers supplier to arrange to have the ViaHolder re-calibrated.
Insufficient number of coupons	Positioning pins may become twisted if there are less than three coupons pinned at a time.	Always pin three or more coupons at a time. Place pinned coupons on the mounting ring to verify that the ends of both pins are in contact with the mounting ring. Dummies may be used if there are insufficient sample coupons.
Incorrect number of mounts	The holder must be balanced to provide precision.	Always use at least 3 or more mounts on the holder. Dummies may be used if there are insufficient sample mounts.
Loose coupling	Check that the 3 screws are tightened.	Tighten the 3 screws. If, this does not help, replace the ball and nylon washers under the coupling. If, this does not help, contact a Struers service technician.

5. Consumables

Specification	Cat. Nr.
<i>Mounting Rings</i> Metal rings, which form part of the moulds used in ViaHolder. 6 pcs.	40300055
<i>End caps</i> Plastic covers (consumables, once-only usage), which form part of the moulds used in ViaHolder. 250 pcs.	40300056
<i>Positioning Pins</i> One pair of positioning pins (consumables, once-only usage) is used for each mould. 500 pcs.	40300057
<i>Cleaning Toolkit</i> Set of two tools used to clean ViaHolder and mounting rings.	40300075
<i>Silicone Oil</i> A lubricant used on mounting rings to enable easy removal of the mounted sample.	40300076

6. Spare Parts

1 Vialserter	05726901
1 Staircase	15720211
1 ViaHolder	057269031 Stand
.....	15720035
1 Mount removal tool.....	15720110
1 Caran D'ache wax pencil.....	2LA00001

7. Technical Data

Subject		Specifications
ViaKit		
System accuracy		Better than 20 µm at 20° C / 68° F ± 2° C / 4° F
ViaHolder	Diameter	Ø183.5 mm / 7.22" Use with ø300 mm polisher (TegraPol/AbraPol)
	Capacity	6 x ø40 mm mounts Up to 36 coupons in one operation
	Positioning range	Distance between positions A and B: 200 µm Distance between positions B and C: 800 µm Distance between divisions: 50 µm
	Removal control	Factory calibrated diamond stops
	Weight	3.4 kg / 7.5 lb
ViaMount	2-part precision mould: ViaKit mounting ring	Ø40 mm stainless steel precision mould with non-stick polymer lining
	ViaKit end cap	Single-use, polymer end cap
	Weight	0.5 kg (rings, set of 6), 0.75 kg (end caps, 250 pcs)
Vialserter	Capacity	Loading of 6 coupons of up to 4mm* thickness *) Reduce no. of coupons if thickness >4mm Built-in mould extractor
	Loading media	2 pcs Positioning pins, 1.98 mm dia., 43 mm length
	Weight	9.2 kg / 20.3 lb
Working environment	Ambient temperature	20° C / 68° F ± 2° C / 4° F
	Non condensing humidity	35-50% RH



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