

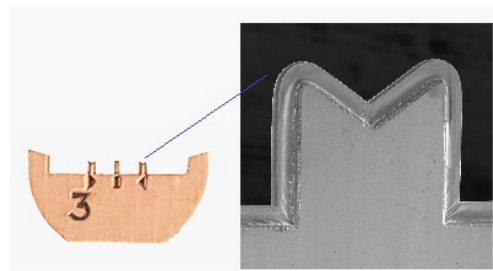
# TAAB FIB Supplies

## TAAB Distinctive FIB Lift-Out Grids

The TAAB Distinctive FIB grids have been devised for lift-out techniques with FIB or SEM/FIB systems. They offer a secure way to attach the TEM lamellae to the posts of the grid. The TEM lamella can then be easily imaged in the SEM/FIB, TEM or used for EBSD analysis. The TAAB Distinctive FIB grids offer high quality at a sensible price and are available in multiple post configurations. The shape of the FIB lift-out grid has been optimised for accessibility. These TAAB FIB lift-out grids are compatible with all standard 3mm TEM grid holders and all have a number etched into the left side of the grid to distinguish front and back. This number corresponds with the number of posts on the grid. For easy post identification, there are unique symbols beneath each post. Available both in [copper](#) and [molybdenum](#).

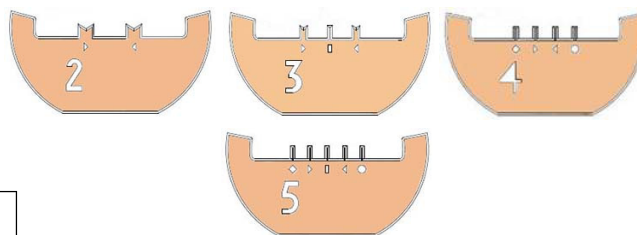
### Copper FIB Lift-Out Grids

The copper FIB lift-out grids are available with either 2, 3 or 5 posts. Thickness is 30-40µm, which makes them more rigid than standard TEM grids. TAAB FIB lift-out grids undergo a unique cleaning process to reduce contamination; this results in improved mounting and imaging of the TEM lamellas. Due to the manufacturing process, the copper FIB lift-out grids have a set-back ridge at the edge of the front side and exhibit smooth side walls. Packaging size is vial/100.



Cu 2 post FIB lift-out grid	Cu 3 post FIB lift-out grid	Cu 5 post FIB lift-out grid
post size 250 x 200µm	post sizes 125 x 200 & 80 x 200µm	post size 70 x 190µm
Use for attaching single lamellae per post	Use for attaching multiple TEM lamellae	Use for attaching many TEM lamellae

- G339** TAAB Cu FIB Lift-Out Grid 2 posts vial of 100
- G339/3** TAAB Cu FIB Lift-Out Grid 3 posts vial of 100
- G339/4** TAAB Cu FIB Lift-Out Grid 4 posts vial of 100
- G339/5** TAAB Cu FIB Lift-Out Grid 5 posts vial of 100



### Molybdenum FIB Lift-Out Grids

The molybdenum TAAB FIB lift-out grids are sturdier than the copper grids and they are also used where copper would interfere with investigation of the TEM lamella. The thickness of the standard Mo FIB lift-out grids is 45-55µm. Available with 2, 3 and 4 posts. Due to the material and the manufacturing process, the side walls of the Mo FIB lift-out grids are rougher than the those of the Cu FIB lift-out grids. Use of the FIB is therefore needed to make the sidewalls smoother.

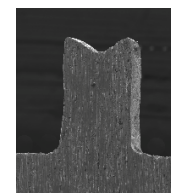
Mo 2 post FIB lift-out grid	Mo 3 post FIB lift-out grid	Mo 4 post FIB lift-out grid
post size 250 x 200µm	post sizes 125 x 200 & 80 x 200µm	post size 80 x 200µm
Use for attaching single lamellas per post	Use for attaching multiple TEM lamellas	Use for attaching many TEM lamellas

- G340** TAAB Mo FIB Lift-Out Grid 2 posts Vial of 25
- G340/3** TAAB Mo FIB Lift-Out Grid 3 posts Vial of 25
- G340/4** TAAB Mo FIB Lift-Out Grid 4 posts Vial of 25



### Unique Smooth Side-Wall Molybdenum FIB Lift-Out Grids

A common problem with Mo FIB lift-out grids is the roughness of the side wall. It takes valuable FIB time to smooth out the sidewall of the standard molybdenum FIB grids to enable secure mounting of the TEM lamellas. To solve this common problem and to reduce cost at the FIB, we offer smooth side wall Mo FIB lift-out grids. They are made by a unique manufacturing process with the result that smoothing with the FIB is eliminated or reduced to a fraction of the time previously needed. These unique Mo EM-Tec FIB lift-out grids have three posts and a thickness of 45-55µm. Packaging size is vial/25.



3 post FIB lift-out grid
post sizes 125 x 200 & 80 x 200µm
use for attaching multiple TEM lamellas

- G341** TAAB Mo Smooth-Sided FIB Lift-Out Grids vial of 25

# TAAB FIB Supplies

## FIB Grid Holders

The TAAB FIB grid holders are designed to hold FIB grids and provide easy access to the posts on the FIB grids to attach the milled FIB lift-out lamellae. The FIB grid holders can be used in the FIB/SEM systems but also for safe storage of the FIB grids with attached lamellae. The FIB grid and sample holders are compact holders which hold the FIB grids directly beside a standard SEM pin stub with a sample. The lift-out lamellae only need to be moved over a short distance to attach them to the FIB grids. The FIB grid holders are all precision machined from vacuum grade aluminium:



F336



F337



F338



F339



F340

**F336** A basic, practical, compact FIB grid holder with 3.2mm pin for 2 FIB grids. Based on the standard 12.7mm Ø pin stub and useful for storing valuable samples. The 10mm wide vice clamp includes a ledge for easy positioning of the FIB grids F337 F338

**F337** A larger FIB grid holder with 3.2mm pin to take up to 4 FIB grids of the same thickness. The 25mm wide vice include a ledge for easy positioning of the FIB grids and two brass thumb screws to operate the vice.

**F337/M** as above with M4 Hitachi thread

**F338** On 3.2mm pin accepts two F336 FIB grid holders with two standard 12.7mm pin stubs within a 27 x 27mm footprint. The F336 FIB grid holders and the pin stubs can be rotated independently in the holder for selecting the optimum orientation in the FIB/SEM system. This dual FIB grid and sample holder enables loading the samples and FIB grids close together. The FIB grid and the sample stubs are at the same level when using Si wafer samples.

**F338/M** As above with M4 thread

**F339** Accepts the F336 FIB grid holder with two standard 12.7mm pin stubs on 3.2mm pin. The FIB grid holder and the sample stubs can be rotated in the holder for selecting the optimum orientation in the FIB/SEM system. This FIB grid and sample holder enables loading the samples and FIB grids close together. The FIB grid and the sample stubs are at the same level when using Si wafer samples.

**F339/M** As above with Hitachi M4 thread

**F340** Accepts the wider FIB grid holder vice with a holder for samples on the 25.4mm Ø pin stubs in a single compact holder. This provides a single loading cycle for FIB grids and samples and short distances from form lift-out to lamellae mounting. Wafer type sample surface is at the same height as the FIB grid posts.

**F340/M** As above with M4 thread

## FIB Pre-Tilt Stub Holders

Pre-tilt stub holders are useful for FIB/SEM systems to get the sample perpendicular with the FIB column to allow for straight FIB milling into the surface of the sample. The pre-tilt angles are complementary to the angles between the FIB column and the electron beam column. When pre-tilt stub holders are used, there is no need to tilt the sample stage. Three types are available:



S686



S687



S688

**S686** Fixed 38° angle tilt holder for FEI pin stubs. Used to pre-tilt samples 38° for FEI Dual Beam FIB systems. Size w.o. pin is 12.7mm Ø x 17mm.

**S687** Fixed 36° angle tilt holder for Zeiss pin stubs. Used to pre-tilt samples 36° for Zeiss CrossBeam FIB systems. Size w.o. pin is 12.7mm Ø x 17mm.

**S688** Fixed 35° angle tilt holder for standard and Tescan pin stubs. Used to pre-tilt samples 35° for Tescan FIB x SEM systems. Size w.o. pin is 12.7 Ø x 17mm.

# TAAB FIB Supplies

## Low Profile Pin stubs for FIB Applications

The low profile pin mounts have been especially developed for FIB/SEM applications to bring samples close to the pole piece of the FIB/SEM systems to provide short working distances. They are available as flat, vertical and complementary tilt versions of the standard 12.7mm Ø pin stub. The complimentary tilt version allow positioning of the sample surface flat under the FIB column without the need to tilt the stage. The tilt angle is relative to the vertical electron beam column of the FIB/SEM systems. Made from vacuum grade aluminium and fully compatible with the standard pin stubs for storage and handling.

<b>S560</b>	Low profile SEM pin stub 12.7mm Ø with 1mm height, Al	pack of 5
<b>S560/1</b>	Low profile SEM pin stub 12.7mm Ø with 1mm height, Al	pack of 10
<b>S560/2</b>	Low profile SEM pin stub 12.7mm Ø with 1mm height, Al	pack of 50
<b>S561</b>	Low profile pin stub 12.7mm Ø with 35° for Tescan, FIB SEM	pack of 5
<b>S561/1</b>	Low profile pin stub 12.7mm Ø with 35° for Tescan, FIB SEM	pack of 10
<b>S561/2</b>	Low profile pin stub 12.7mm Ø with 35° for Tescan, FIB SEM	pack of 50
<b>S562</b>	Low profile pin stub 12.7mm Ø with 90° Al	pack of 5
<b>S562/1</b>	Low profile pin stub 12.7mm Ø with 90° Al	pack of 10
<b>S562/2</b>	Low profile pin stub 12.7mm Ø with 90° Al	pack of 50
<b>S669</b>	Low profile pin stub 12.7mm Ø with 38° for FEI FIB Al	pack of 5
<b>S669/1</b>	Low profile pin stub 12.7mm Ø with 38° for FEI FIB Al	pack of 10
<b>S669/2</b>	Low profile pin stub 12.7mm Ø with 38° for FEI FIB Al	pack of 50



## FIB Grid Storage Boxes

Storage box for four (4) FIB lift-out grids or half grids. Cavity depth is just 1.7mm, thus preventing grids from rotating. The diamond shaped cavities allow grids to be easily loaded or unloaded using fine tweezers.

**G277** FIB grid storage box for 4 FIB grids



**G342** This FIB lift-out grid storage box consists of an anti-static tray to hold up to 100 FIB lift-out grids or 100 x 3.05mm TEM grids. The grids are stored flat in the tray which is made from anti-static black conductive polypropylene and is complete with a clear polystyrene cover for easy location of the grids. The grids are stored in a 10 x 10 individual compartments with a flat on one corner to act as a reference. The tray and cover are held together with a [single piece slide-on clip](#) which holds the cover on two sides.



**G342/1** FIB lift-out grid storage box as above but the tray and cover are held together with a [pair of band clips](#) which asserts more pressure in the centre of the cover to reduce the possibility of a gap. Preferred for transport and shipping.



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