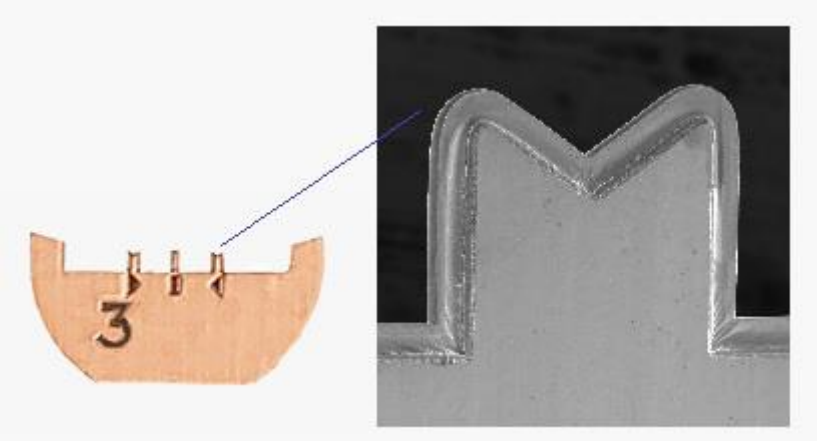
**General Description EM-Tec FIB Lift-Out Grids**

The EM-Tec FIB grids have been devised for lift-out techniques with FIB or SEM/FIB systems. They offer a secure way to attach the TEM lamellas 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 EM-Tec FIB grids are available in multiple post configurations. The shape of the EM-Tec FIB lift-out grid has been optimized for accessibility. The EM-Tec FIB lift-out grids are compatible with all standard 3mm TEM grid holders. All EM-Tec FIB lift-out grids have a number etched into the left side of the FIB lift-out 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 EM-Tec FIB lift out grids**

The copper EM-Tec FIB lift-out grids are available with 2, 3 or 5 posts. Thickness is 30-40µm, which makes them more rigid then standard TEM grids. EM-Tec FIB lift-out grids undergo a unique cleaning process to reduce contamination; this result 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.

| 2 post FIB lift-out grid | 3 post FIB lift-out grid | 5 post FIB lift-out grid |
|---|---|---|
| post size 250x200µm | post sizes 125x200 & 80x200µm | post size 70x190µm |
| use for attaching single lamellas per post | use for attaching multiple TEM lamellas | use for attaching many TEM lamellas. |

**Standard Molybdenum EM-Tec FIB lift-out grids**

The molybdenum EM-Tec FIB lift-out grids are sturdier than the copper grids; 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 those of the Cu FIB lift-out grids. Use of the FIB is therefore needed to make the sidewalls smoother. Packaging size is vial/25.

| 2 post FIB lift-out grid | 3 post FIB lift-out grid | 4 post FIB lift-out grid |
|---|---|---|
| post size 250x200µm | post sizes 125x200& 80x200µum | post size 80x200µm |
| use for attaching single lamellas per post | use for attaching multiple TEM lamellas | use for attaching many TEM lamellas |

**Smooth side wall Molybdenum EM-Tec 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 lift-out grids to enable secure mounting of the TEM lamellas. To solve this common problem and to reduce cost at the FIB, we have developed smooth side wall Mo EM-Tec FIB lift-out grids. They are made with a unique manufacturing process with the result that smoothing with the FIB is virtually eliminated or reduced to a faction 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 125x200 & 80x200µm |
| use for attaching multiple TEM lamella |