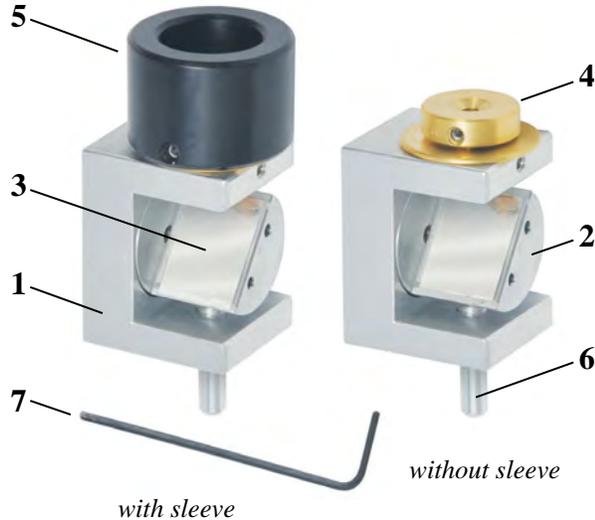


## PELCO® STEM Imaging Holder - Instructions

Product No. 16412 and 16412-4



### Components of the PELCO® STEM Imaging Holder

1. Aluminum frame
2. Adjustable aluminum conversion plate holder
3. Platinum conversion plate
4. TEM grid holder assembly with aperture
5. Anti-scatter sleeve (conductive plastic)
6. Optional pin (3.2 x 9.5mm)
7. Hex key for set screws

### Positioning and use of the PELCO® STEM Imaging Holder

Before using the PELCO® STEM Imaging Holder, the user has to determine if it will fit in the SEM chamber and can be moved without damaging any existing parts in the SEM chamber. It might be advisable to retract EDX and BSE detectors.

The PELCO® STEM Imaging Holder has to be aligned with the E-beam axis so that the E-beam can scan the TEM sample. The frame has to be rotated (use stage rotation) in such a way that the conversion plate faces towards the SE detector. The conversion plate angle can be adjusted by loosening the screw on base using a #1 Phillips screwdriver and adjusting to optimize SE detection. For most applications a 45° angle would be sufficient. If the SE detector is positioned lower than the conversion plate, a higher angle might be chosen.

An angle lower than 45° is not advisable; the frame might block part of the SE electrons. (Angle definition: conversion plate vertical is 90°, conversion plate horizontal is 0°).

It is strongly recommended to use the anti-scatter sleeve. This will prevent secondary electrons, generated at the surface (topside) being detected by the SE detector. When used, move the STEM imaging detector up to have the top of the anti-scatter sleeve as close as possible to the pole piece without touching the pole piece if any detector mounted on or close to the pole piece.

### Sample Loading (see next page)

## Loading a Sample in the PELCO® STEM Imaging Holder



1. Loosen set screw and remove anti-scatter sleeve.



2. Loosen set screw base and remove TEM grid holder with aperture.



3. Place grid holder, top side down on flat surface.
4. Loosen set screw on grid holder top and lift off bottom component of grid holder.



5. Place 3.05mm TEM grid into recess in grid holder top, sample side down (will be incident beam side up when installed in microscope).



6. TEM grid shown placed into recess in grid holder top.



7. Re-insert grid holder bottom into grid holder top and tighten set screw.



8. Replace grid holder unit into base and tighten set screw.



9. Replace anti-scatter sleeve onto base, over grid holder and tighten set screw.

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