

6.1.2 Nanohead Window Replacement

Parts list for window replacement:

Kapton Mylar window

Scraper/razor blade

Warning: If shutter open voltages or shutter closed voltages are unusual, do not proceed. Contact your AIS Gauging or Site Radiation Safety Officer.

It is important to replace the Kapton™ windows on the source and receiver heads promptly if they are damaged. The windows protect the basis weight assembly and ion chamber from accumulating debris. Debris can cause problems, including a drop in detected signal, an erratic signal, or interference with smooth shutter operation.

Only trained individuals should conduct this task. It is very important to follow each of the steps given in these instructions in order to avoid the possibility of direct exposure to the radiation beam. If you have been assigned a radiation badge(s), make sure you are wearing your badge(s). Do not proceed if your required badge(s) are unavailable.

Verify shutter closure: Observe the warning lights. Only the green "**Shutter Closed**" radiation warning lamps should be lighted. If possible, request background voltage and verify they are within the normal range for shutter closed. If there is any question of whether all shutters are closed, **DO NOT PROCEED. Contact the AIS Gauging Radiation Safety Office.**

Turn off power to the sensor heads.

1. Verify that power to the sensor heads has been disconnected by confirming that all radiation warning lights attached to the scanner are off.
2. Ensure the air supply to the shutter has been disconnected or locked-out using LOTO procedures
3. Tag the appropriate location to warn others that power must not be reconnected.
4. Keep hands out of the area directly below (or above) the Kapton™ window during the entire replacement process.
5. Caution: The -350 VDC may still be present for some time after the +24 VDC power has been off. Always assume the high voltage is present until you can confirm that it is not.

6. Remove cover. Loosen the two draw-latches holding the sheet guide to the head. Keep hands out of the area directly below (or above) the Kapton™ window while removing the cover. (That is hold the cover by the sheet guide "handles" and do not allow hands or arms below (or above) the sensor. Carefully remove cover.
7. Move the sheet guide to a safe distance from the heads. This should be a minimum of three (3) feet.
8. Using a scraper or razor blade, carefully remove the old Kapton™ window.
9. Once removed, peel the paper covering the adhesive ring from the new window. Attach the window to the underneath side (the side toward the head) of the sheet guide. The window must be installed so that the aluminum coating is touching the sheet guide.
10. Reinstall the cover. Keep hands out of the area directly below (or above) the Kapton™ window while reinstalling the cover. (That is hold the cover by the sheet guide "handles" and do not allow hands or arms below (or above) the sensor. Carefully slide the cover in place being certain to ensure the window lines up with the source/receiver opening.
11. Reconnect the two draw-latches to the sheet guide.
12. Turn power back on. Verify functioning of green and red light.