



## VACUUM CHAMBER PM TECHNIQUE

### TEL UNITY 2 DRM CHAMBER

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#### **OBJECTIVE:**

TO EFFECTIVELY REMOVE POLYMER ON ESC AND OXIDE RESIDUES ON CHAMBER WALL IN A TIMELY MANNER WHILE MINIMIZING PARTICLE ISSUES AND IMPROVING TOOL PERFORMANCE

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#### **Vacuum Chamber:**

TEL DRM ETCH TOOL WITH CERAMIC, ANODIZED ALUMINUM AND POLYAMIDE SURFACES

#### **Vacuum Chamber Process Residue:**

PROCESS INDUCED RESIDUE

#### **Vacuum Chamber Components:**

DRM CHAMBER, EXIT AND ENTRY PORTS, COMPONENTS

**Old Procedure:** Standard cleanroom polyester wipers and Scotch-Brite™  
**Solvent:** DI water, IPA

#### **Vacuum Chamber Products:**

- (1) [HT4754](#) UltraSOLV® Sponge
- (8) [HT4790-5](#) UltraSOLV® Wipers (40 Wipers)
- (2) [HT4540A-10](#) or [HT4580D-10](#) 400 Grit UltraSOLV® ScrubPAD
- (2) [HT174813PD](#) ScrubTIP®
- (2) [HT173280](#) ScrubTIP®
- (2) [HT179060](#) ScrubTIP®
- (5-10) [HT1700](#) UltraSOLV® Swabs
- (15-20) [HT1732](#) UltraSOLV® Swabs
- (2) [HT1790-5](#) UltraSOLV® Swabs

**TEL UNITY 2 DRM CHAMBER PM PROCEDURE:**

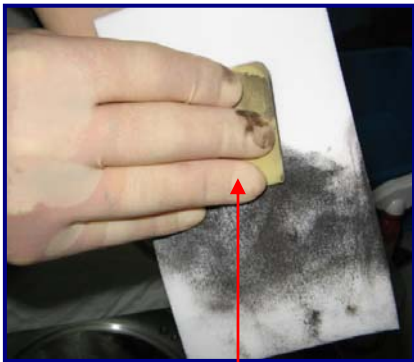
View "How to" instructional videos on <http://www.foamtecintlwcc.com/flash/>

**Step 1:** After the chamber has been vacuumed, clean the chamber with a lightly dampened [HT4754](#) UltraSOLV<sup>®</sup> Sponge in order to remove any loosely adhered residues

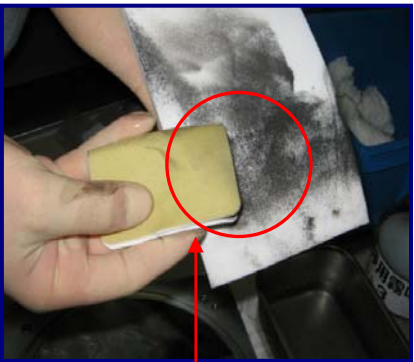
**Step 2:** Cover the ESC to prevent scratching. Lightly scrub the upper ceramic areas with the [HT4540A-10](#) UltraSOLV<sup>®</sup> ScrubPAD to remove residue. Occasionally wipe scrubbed areas with [HT4754](#) UltraSOLV<sup>®</sup> Sponge to remove loosened residue. The same sponge can also be used to "unload" the ScrubPAD for maximum effectiveness (See Fig 1, 2 & 3)



**Fig 1:** ScrubPAD loaded with deposition



**Fig 2:** Pull ScrubPAD across UltraSOLV<sup>®</sup> Sponge



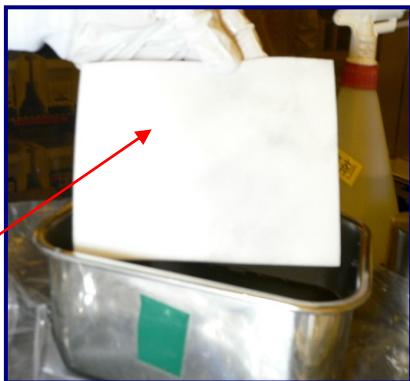
**Fig 3:** Unloaded ScrubPAD

**Step 3:** Unload UltraSOLV<sup>®</sup> as much as possible by placing it in container of DI water and **RINSE-OUT** thoroughly (See Fig 4 & 5)



**Fig 4:** Loaded-up UltraSOLV<sup>®</sup> Sponge

**Fig 5:** UltraSOLV<sup>®</sup> Sponge AFTER rinse



**TEL UNITY 2 DRM CHAMBER PM PROCEDURE:**

**Step 4:** Move the pedestal to process position to access areas below and around the ESC. Using a fresh UltraSOLV<sup>®</sup> ScrubPAD, lightly scrub the vertical walls of the pedestal to remove excess residue. As build-up is loosened, follow with Sponge wipe for maximum effectiveness. Remember to unload the UltraSOLV<sup>®</sup> ScrubPAD frequently to increase cleaning efficiency. Repeat above for remaining pedestal areas

**NOTE:** FOR PEDESTAL WALLS WITH EXTREMELY HARD RESIDUE, IT IS RECOMMENDED TO USE AN [HT4580D-10](#), 800 GRIT DIAMOND ULTRASOLV<sup>®</sup> SCRUBPAD. FOR HARD-TO-REACH AREAS AND SMALL VERTICAL SURFACES USE AN [HT174813PD](#) SCRUBTIP<sup>®</sup>. AN [HT179060](#) SCRUBTIP<sup>®</sup> SHOULD BE USED TO CLEAN VERTICAL SURFACES TO FINAL CLEAN THESE AREAS USE ENOUGH [HT1748](#) AND [HT1790](#) ULTRASOLV<sup>®</sup> SWABS UNTIL NO VISIBLE CONTAMINATION TRANSFERS OFF SURFACE TO THE SWAB

**Step 5:** Use an [HT173280](#) ScrubTIP<sup>®</sup> to clean areas where the bafflers are fastened to the chamber. [HT1732](#) UltraSOLV<sup>®</sup> Swabs should be used where residue has been deposited

**Step 6:** Vacuum the scrubbed areas to ensure final removal of loosened particles

**Step 7:** Finally, wipe down chamber with 25-40 [HT4790](#) UltraSOLV<sup>®</sup> Wipers and isopropyl alcohol

**NOTE:** IF THE BAFFLE AND CERAMIC RINGS NEED TO BE CLEANED IN PLACE, THE FOLLOWING PROCEDURE SHOULD BE USED

**Step A:** The ceramic focus ring can be cleaned with an [HT4536D-10](#) UltraSOLV<sup>®</sup> Diamond ScrubPAD. To final clean ceramic, wipe with [HT4790](#) UltraSOLV<sup>®</sup> Wipers until all residue is removed

**Step B:** The baffle is easily cleaned with [HT174813PD](#) ScrubTIP<sup>®</sup>s. The ScrubTIPs<sup>®</sup> are also effective at cleaning loose residues from the tight spaces in the "fan sector" area. Remember to clean both sides of the baffle with a fresh UltraSOLV<sup>®</sup> ScrubPAD

**TEL UNITY 2 DRM CHAMBER PM PROCEDURE (CONT'D):**