

From Eye to Insight



# CUSTOMIZED CONNECTIVITY FOR SAMPLE SAFETY AND PEACE OF MIND

EM VCT500 Vacuum Cryo Transfer System



# ONE PLATFORM TO CONNECT THEM ALL

The vacuum cryo transfer EM VCT500 combines connectivity and sample safety for streamlined sample preparation and accelerated research.

The EM VCT500 facilitates transfer between instruments, ensuring seamless connectivity within Leica Microsystems sample preparation portfolio, and linking to external hardware. You can rely on the EM VCT500 for contact and contamination free transfer in a controlled atmosphere, providing stable transport conditions for your workflow.

Seamlessly connect multiple instruments in the workflow with EM VCT500.

The EM VCT500 provides a customizable connection that ensures worry-free sample preparation work. Seamlessly connect multiple instruments through the standardized shuttle interface, eliminating compatibility concerns and providing an integrated workflow.

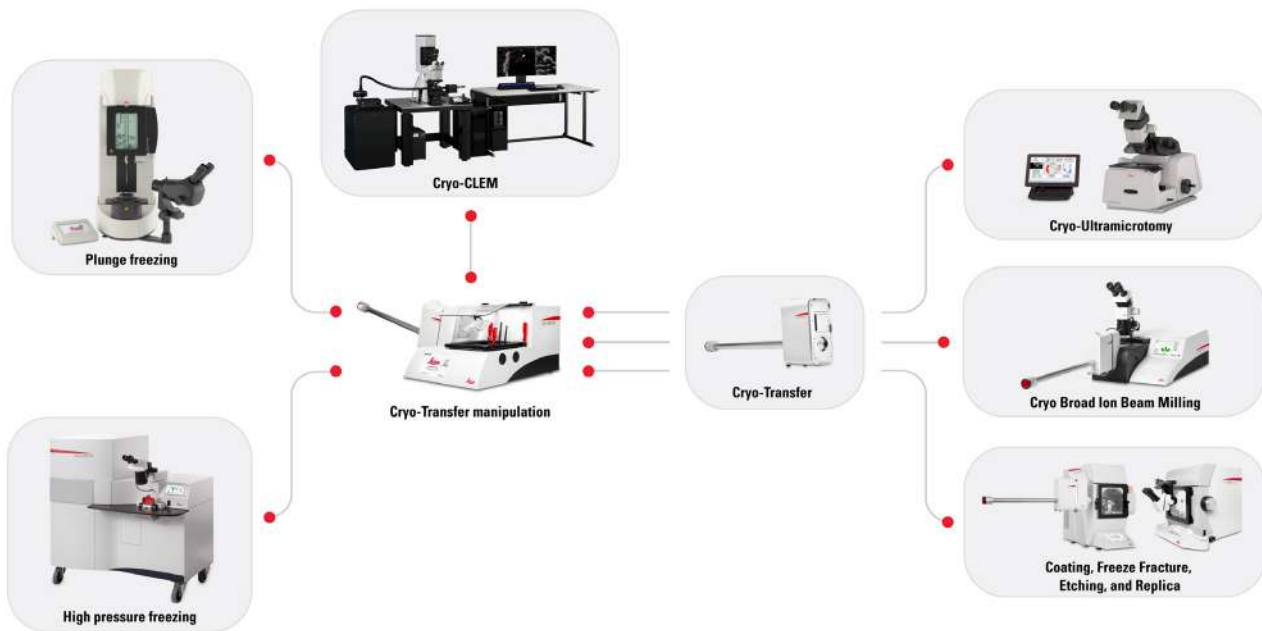


Figure 1

In parallel, benefit from flexibility – equip your instrument with customizable interface to retain critical sample conditions across all workflow steps. Customize your EM VCT500 to fulfill technical requirements of your applications.

## CONTAMINATION-FREE TRANSFER.

We understand the importance of sample integrity in scientific research. With the EM VCT500 you can keep your samples in a controlled environment from the moment of loading and move them between devices protected from contamination.

Prevent sample contamination and increase your experiment success rate thanks to:

- > intensity controlled LED illumination, magnifying lens, and an integrated tool dryer are all part of the EM VCM,
- > vacuum pressure and temperature check at any time when docked,
- > no time constraints when the EM VCT500 Dewar is connected to an automated liquid nitrogen refilling system.

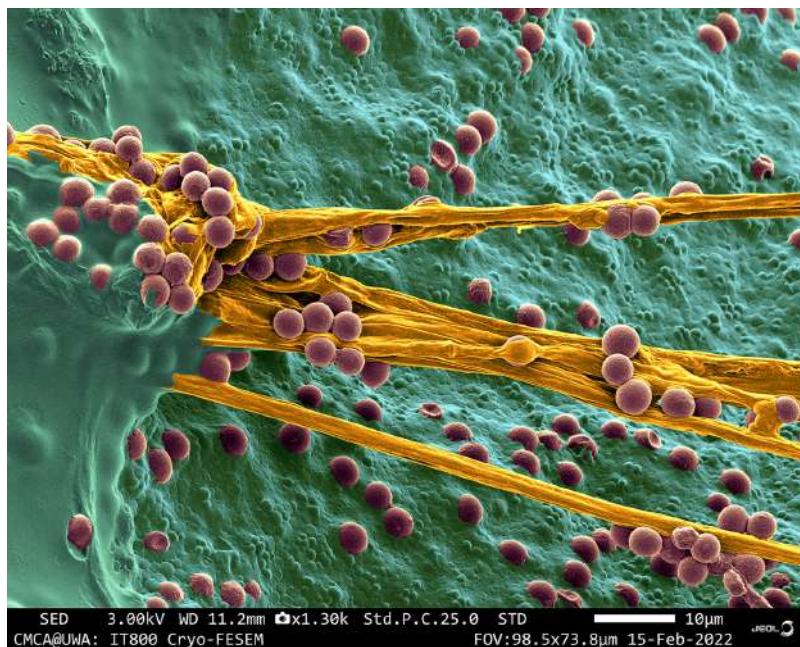


Figure 2: Cryo-FESEM image of blue cheese. Image courtesy Prof Peta Clode, University of Western Australia.

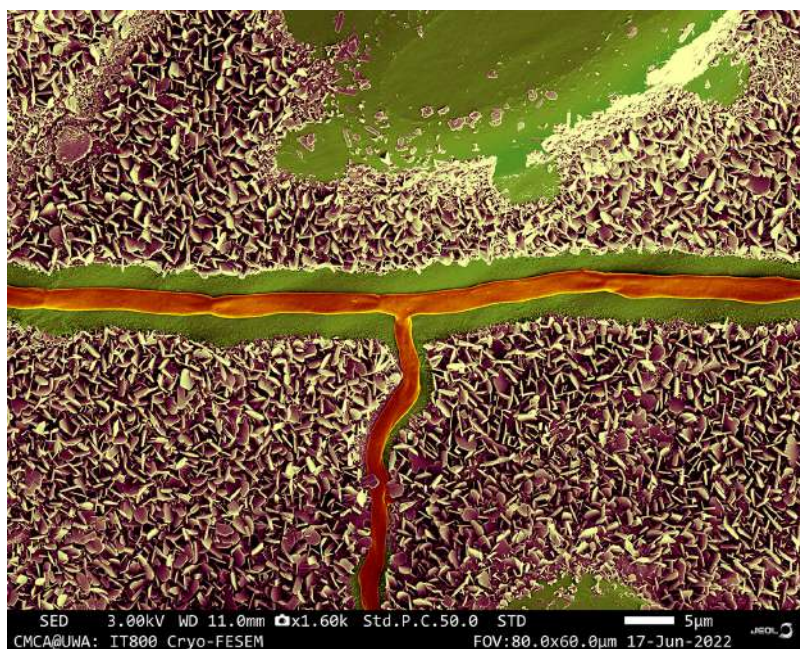


Figure 3: Cryo-FESEM image of Sedge with hyphae growing across the surface and dissolving the wax. Image courtesy Prof Peta Clode, University of Western Australia. Contact-free sample handling transfer system reduces probability of user error.

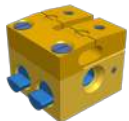
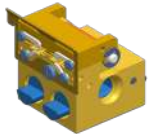



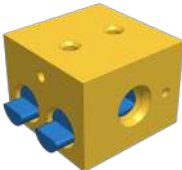
Contact-free sample handling transfer system reduces probability of user error.

Leverage the EM VCM sample loading station to simplify the connection between sample preparation and imaging methods including Cryo-SEM, Cryo-FIB and Cryo-TEM.

Three sample holder spaces built into EM VCM enable inter workflow connectivity and minimize manual handling steps. By loading, reloading, and transferring your sample between the holders inside the EM VCM you can reduce the risk of user errors.



Choose from a variety of sample holders::

Application		Chosen sample holders	Description
Cryo-SEM	Freeze Fracture and Replica		Sample holder for universal freeze fracturing. Clamp holder for 3.0 mm specimen carriers and for various specimen shapes.
			Sample holder for double replica technique (mirror fracturing). Spring loaded mirror fracturing holder for two 4.6 mm x 0.6 mm specimen carrier sandwiches.
Cryo-FIB-SEM	On-grid lamella without and with an intermediate cryo-LM step. Both holders are designed for SEM-FIB systems, which require high tilt angles for the sample. The holders are equipped with a protective shutter which remain closed during transfer. Additional cold trap walls are located under the shutter.		Pre-tilted holder with shutter for Autogrids™.
			Pre-tilted holder with shutter for Cryo-CLEM cartridge.
Cryo-BIB-SEM	Cryogenic Broad-Ion Beam milling combined with Cryo-SEM		EM TIC 3X - EM VCT500 cryo sample holder for a 10 mm x 7 mm sample with a clamping range of 2-4 mm.
Cryo-SEM	Cross-sectional surfaces over wide areas using a cryo-ultramicrotome		EM VCT500 holder to support specimen pin carrier.

Customized holders supporting your specific requirements are available on request.

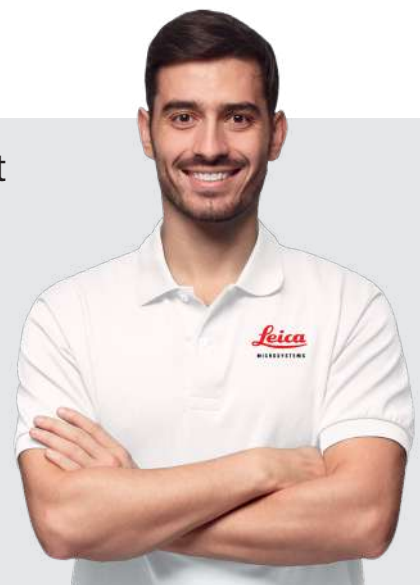
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