

CryoFlow 1.27

Release Notes

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Technical Publications

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Document History

Rev A, January 2025

Introduction

Purpose

This document provides a description of the Thermo Scientific CryoFlow software package.

Audience and Scope

These release notes are intended for:

- Those who manage the configuration of Thermo Scientific CryoFlow installations.
- Users of the Thermo Scientific CryoFlow software.

This document describes the content and dependencies of the most recent and historic CryoFlow releases.

This document does not describe the installation, licensing, or use of the CryoFlow software.

System, Software and Configuration Compatibility

Although CryoFlow software is backward compatible with a limited set of microscope software versions, it is preferred to update the microscope to the most recent compatible release to make use of all the latest features and improvements.

The tables below show the compatible and preferred software versions, and the system configuration compatibility.

Compatibility Matrix Between LS Applications

CryoFlow	EPU	Tomography	EQM	Tomo Live	eCL	SDP
1.27.0	3.11	5.21	1.20.0	1.11.0	4.6.0	2.12+, 3.1, 3.2
1.26.0	3.10	5.20	1.19.0	1.10.0	4.6.0	2.12+, 3.1, 3.2
1.25.0	3.9	5.19	1.18.0	1.9.0	4.6.0	2.12+, 3.1, 3.2

CryoFlow	EPU	Tomography	EQM	Tomo Live	eCL	SDP
1.24.0	3.8	5.18	1.17.0	1.8.0	4.5.0	2.7+
1.23.0	3.7	5.17	1.16.0	1.7.0	4.5.0	2.7+
1.22.0	3.6	5.16	1.15.0	1.6.0	4.3.0	2.7+
1.21.0	3.5	5.15	1.14.0	1.5.0	4.3.0	2.7+
1.20.0	3.4	5.14	1.13.0	1.4.0		2.6+
1.19.0	3.3	5.13	1.12.0	1.3.0		2.6+
1.18.0	3.2	5.12	1.11.0	1.2.0		2.6+
1.17.0	3.1	5.11	1.10.0	1.1.0		
1.16.0	3.0		1.9.0			
1.15.0	2.14		1.8.0			
1.14.0	2.13		1.7.0			
1.13.0	2.12		1.6.0			
1.12.0	2.11		1.5.0			
1.11.0	2.10		1.4.0			
1.10.0	2.10		1.4.0			
1.9.2	2.9		1.3.0			
1.9.1	2.9		1.2.0			
1.9.0	2.9		1.2.0			
1.8.2-1.8.4	2.7		1.2.0			

CryoFlow	EPU	Tomography	EQM	Tomo Live	eCL	SDP
1.8.0-1.8.1	2.7		1.1.0			
1.7.0	2.6		1.0.0			

CryoFlow Portal Browsers Compatibility

- Chrome up to 120 (minimum required version 98)
- Edge up to 126 (minimum required version 98)
- Safari 16.5 (18615.2.9.11.4)

CryoFlow 1.27 - EQM 1.20 - Tomo Live 1.11 - eCL 4.6.0


Mandatory and Breaking Changes

Core
Description
There are no mandatory and breaking changes for this release.

New Features

Tomo Live

Devitrification detection: Tomo Live is now able to detect the devitrification patterns that can appear when the ice layer is not crystalline. This new metric is visible in the Tomo Run dataviz as "Devitrification To Surface Ratio". This metric corresponds to the percentage of the field of view covered by devitrified patterns. If a few positions have values greater than 0.5%, we recommend to carefully check the entire set of positions on the grid.

 **Note:** The detection algorithm is optimized to minimize false positives, ensuring that any positive detection has a high confidence of success. However, false negatives may still occur.

Solved Issues

The following table lists the main issues this release fixes. Smaller corrections might have been excluded from this text to keep this detail as complete and useful as possible.

This list might also include problems that had been listed as Known Issues in preceding releases.

CryoFlow Platform

Description

When using Single Particle Analysis workflows, the explorer was not click-able when visualizing micrographs under certain conditions.

Cleanup and delete actions have been made more robust. These actions can take a few hours to be finalized depending on the amount of data to be deleted.

Tomo Live

Description

The 3D volumetric viewer fails and the message "Network error: Connection aborted" is displaying recurrently.

The 3D volumetric viewer fails with the message "Data Size bigger than hardware can support" and get stuck randomly.

Cleanup and delete actions have been made more robust. These actions can take a few hours to be finalized depending on the amount of data to be deleted.

Sometimes the Tomo Live aligned stack does not include the last tilt angle.

Deprecated Features

This section lists features and capabilities that have been marked as deprecated.

Summary

There are no deprecated features for this release.