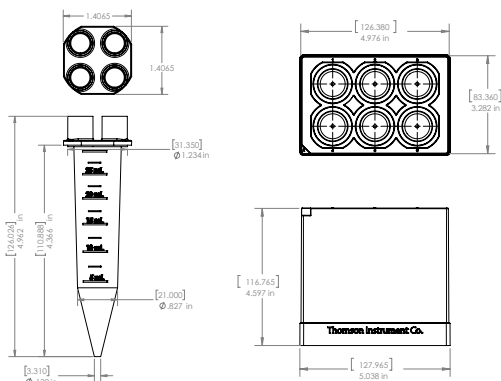


Mammoth™ 30 mL Automation Tip Technical Data Sheet

Product Description	Part #	Sterility
Mammoth™ 30 mL Automation Tip	9453030	10 ⁻⁶

Mammoth™
Automation Tips



Introduction

The Thomson Mammoth 30mL Automation tips are the first-ever high-capacity automation tips, these tips are designed to transform mid-scale liquid handling workflows by enabling reliable, single-stroke pipetting for large volumes. These innovative tips eliminate the need for repeated aspiration cycles, which reduce run times and improve reproducibility. Additionally, the Mammoth tips are optimized for standard mid-scale vessels (e.g., 6-well and 24-well plates, 50mL conical tubes) and feature a wide-bore tip for reliable high-volume flow while staying gentle on cells.

Specifications

Platform Compatibility	Dynamic Devices Lynx LM-series with 24-channel head with Super Stroke
Body Material	Polypropylene
Working Volume Range	1.5–20 mL per tip (30mL Nominal)
Graduation marks	5 mL increments
Total Tip Height	126.026mm
Filtered	Filtered Tips
Sterility (SAL)	10 ⁻⁶
Autoclavable	No (Product comes sterilized)
Rack/Box Dimensions	83.360 x 127.965mm
Packaging quantity	6 Mammoth Tips per Rack; 10 racks per case
Box Adapter Required	Thomson Deck Plate Adapter (PN 1212633-399)

Storage

Keep out of sunlight. Store at ambient temperature in a dry place.

FAQ's

What do I do if my Tips cannot clear the tip box after the loading step?

This is likely due to the Z-height being too low. Please reattach the deck/labware definitions and increase the Z-roaming heights. Be sure to use the Thomson 30mL Tip Tray adapter for Lynx Robots for tip loading locations.

Why does the Tip box require the Adapter?

The Deck Plate Adapter allows for an additional ~6.5 mm of height so the Tips can load and clear the Z-height required for large volume pipetting on the LM-series Lynx platforms.

What do I do if the tips leak after leaving the liquid surface?

This is likely due to too much volume being used for the existing stroke length capacity on the head. To prevent leaking, decrease the volume selection of PAG or TAG – column has exceeded the capacity of the plunger. If needed to increase the volume, contact the OEM.

Certain instrument configurations may not require the deck plate adapter. Please contact FAS@htslabs.com to discuss.

What do I do if the tips fall off shortly after loading?

Likely, the Z-height for the tip loading depth is too shallow. Increase or decrease the tip loading height variable to just above the Mammoth 30mL Automation Tip filter.

Can the tips be reused?

We recommend single use for the tips for each individual culture.

What do I do if the tips are not ejecting during “Eject Tip” step?

The ejection plate is likely not engaging and fully eclipsing the mandrel tip. To resolve, contact OEM.

What volume range can the 30 mL automation tip accurately handle?

The 30mL tip is designed for single-stroke transfers from ~1.5mL up to 20 mL, with optimal performance typically observed in the 3-20mL range, where it eliminates the need for multi-aspiration cycles. Volume is limited by the current capacity of the mandrels (5mL). Please reach out to our team if you desire to aspirate above 20mL.

What platforms are the Mammoth 30 mL Automation Tips compatible with?

The tip is currently optimized for use with the Dynamic Devices Lynx LM-series platforms, including compatibility with 24-channel long-stroke heads. Please reach out to (FAS@htslabs.com) about additional platform compatibility may be evaluated based on demand.

How does the 30 mL tip improve workflow efficiency compared to standard tips?

By enabling large-volume transfers in a single aspiration, the tips reduce cycle time vs. 1–5mL tips which require multiple strokes, minimize process variability from repeated aspirate/dispense steps and can decrease tip

consumption and plastic waste. Additionally, typical workflows (e.g., 10-40mL transfers) can see significant time reduction due to fewer aspiration and dispensing cycles.

What applications are best suited for the 30 mL tip?

The tip is ideal for mid-scale automated workflows (3 - 45mL total handling), including: Cell harvest and media exchange, mixing and resuspension in 6-well and 24-well plates, bulk reagent dispensing, transfers from reservoirs or 50mL conical tubes to other vessels. The tips are particularly valuable where cell settling, foaming, or long cycle times are concerns.

What are key considerations for optimal performance?

For best results, users should:

- Optimize aspiration/dispense speeds based on liquid type (e.g., viscous or protein-rich media)
- Validate labware offsets and deck alignment for large-volume positioning
- Use appropriate liquid level sensing and air-gap strategies to avoid over-aspiration or dripping
- Confirm compatibility with target labware (e.g., deep wells, 6-well plates, reservoirs, 50 ml conical tubes, etc.)
- Please contact (FAS@htslabs.com) for assistance in the setup of the Mammoth tips, or if you have any questions.