

MYRA 4-CHANNEL PIPETTE HEAD – TECHNICAL OVERVIEW

PRODUCT SUMMARY

The Myra 4-channel pipette head is designed to increase throughput by enabling parallel liquid handling while maintaining the precision and performance of the single-channel system.

PERFORMANCE

Volume (µL)	Accuracy (%)	Precision (% CV)
1	5	10
5	2.5	1
50	1	0.5

- Comparable performance to single-channel head
- Liquid level sensing unchanged
- Supports all mixing modes, including vortex

KEY FEATURES

- Parallel pipetting (1 - 4 channels)
- Flexible tip usage (1, 2, 3, or 4 tips per transfer)
- Foil piercing capability

DYNAMIC RETRACT TECHNOLOGY

Dynamic Retract uses pressure sensing to detect when a tip contacts the bottom of a well or tube. The system:

- Prevents tip-bottom contact issues
- Automatically retracts slightly to relieve pressure
- Prevents over-aspiration or bead carryover
- Improves accuracy during low-volume pipetting and wash steps

TIP COMPATIBILITY

Compatible with:

- 50 μ L black rack tips (MYRA-TIPS384-50BLK)
- Not compatible with:
 - 20 μ L tips (MYRA-TIPS384-20BLK)
 - 50 μ L blue rack tips (MYRA-TIPS384-50)



HARDWARE REQUIREMENTS

MANDATORY COMPONENTS

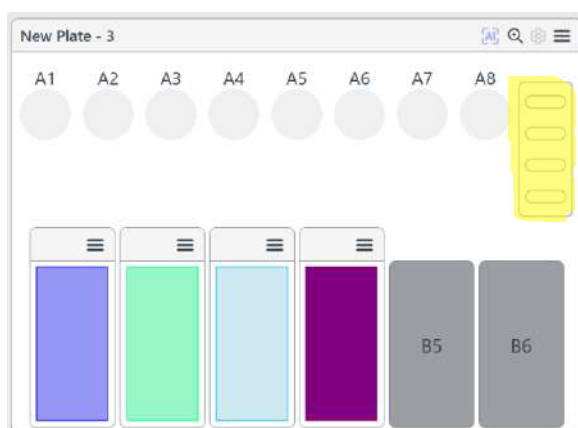
VECTOR DRIVE

Vector Drive reduces tip pick-up force and noise and is required for 4-channel head operation.

- Requires a firmware update, followed by:
 - Axis calibration (X, Y, Z)
 - Tip position recalibration

RESERVOIR BLOCK: MYRA-LBRESERVOIR-6

- Supports multiple BMS reservoir formats
- Includes **Precision Tip Alignment Tool**
 - Ensure optimal tip loading of all four tips
- Holds 8 \times 1.5 / 2.0 mL tubes (spring-loaded positions)



RESERVOIR OPTIONS

- 18 mL reservoir (MYRA-RESERVOIR-18, pack of 30)
- Additional formats (coming)

WASTE TUB COMPATIBILITY

MYRA-WASTETUB-MC (Myra LHS)

MYRA-WASTETUB-DS (Myra9)

MYRAPLUS-WASTETUB (Myra+)

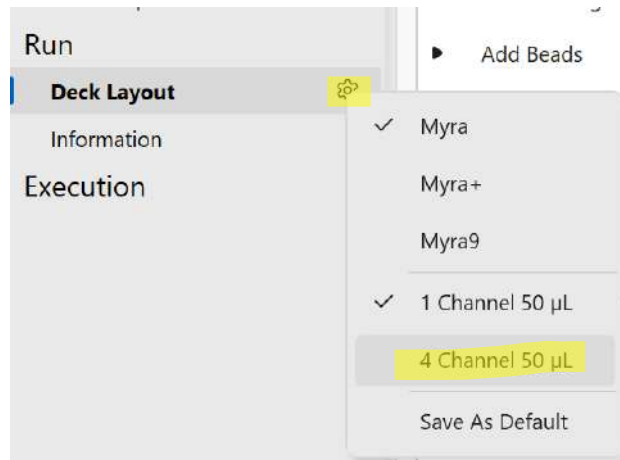


DECK & LAYOUT CONSTRAINTS

- Reservoir block cannot be placed in A1 position
- 4-channel head compatible with row C only of multi-purpose block
- Requires 4-channel compatible waste tub and lid
- Collision detection enforced via software

SOFTWARE REQUIREMENTS

- Workbench version 2.2 is required to run the 4-channel head
- 4-channel head selectable via Deck Layout → Robot Configuration



- Updated software includes:
 - Real-time collision detection
 - Run prevention until conflicts are resolved

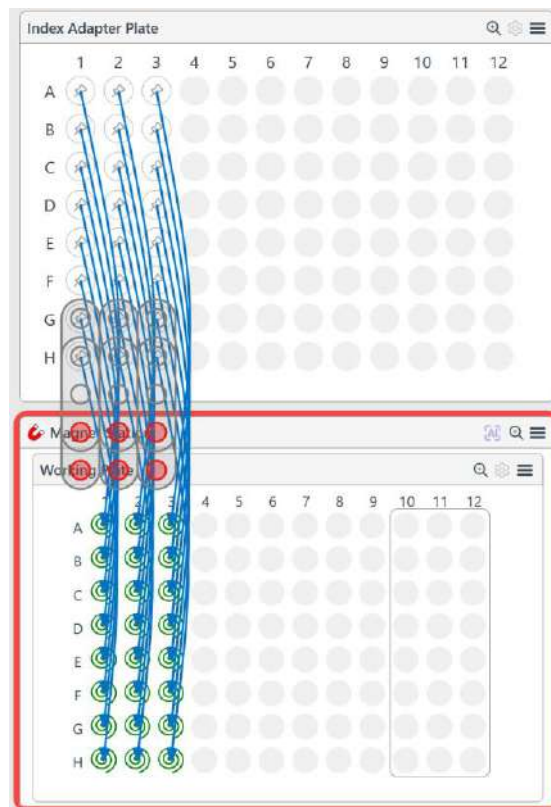


Image shows a run collision warning of the 4-channel head between the low height 96 well plate and the higher magnet station.

MYRASCRIPT COMPATIBILITY

- MyraScripts™ must be updated
- Core scripts are being progressively converted

FIRMWARE & CALIBRATION

- Requires firmware update (Vector Drive enabled)
- Post-update calibration required:
 - Axis calibration (X, Y, Z)
 - Tip position calibration

ORDERING REQUIREMENTS

EXISTING SYSTEMS

REQUIRED:

- 4-channel head
- Myra 6x Reservoir Loading Block with Precision Tip Alignment Tool (MYRA-LBRESERVOIR-6)
- 50 µL black rack tips (MYRA-TIPS384-50BLK)
- Compatible waste tub

OPTIONAL:

- 18 mL reservoirs

NEW SYSTEMS

- Myra 6x Reservoir Loading Block with Precision Tip Alignment Tool (MYRA-LBRESERVOIR-6)
- Compatible waste tub and black rack tips included with Myra
- Reservoirs (optional)

APPLICATIONS

- NGS library preparation
- Bead-based cleanups
- Dilution series
- Normalisation, pooling and transfer workflows
- General multi-channel liquid handling
 - Not currently available with qPCR Setup
 - Not available with Reaction Driven qPCR Setup