

Triton XYZ

FEATURES

- > Cap piercing force capability of over 10 lb [4.536 kg]
- > Fully adjustable liquid level detection with high degree of sensitivity
- > Tube stripper mechanism for cap piercing applications
- > Scalability of all axes
- > Full quadrature encoders provide high-resolution error detection

CUSTOMER REQUIREMENTS

- > Power Requirement Input voltages = 24 VDC at 2 A (4 A for dual-arm)
- > Environmental
 - Storage Temperature 0°C to 50°C (32°F to 122°F)
 - Operating Temperature 15°C to 40°C (59°F to 104°F)
 - Operating Humidity 85% RH at 31°C (87.8°F) decreasing linearly to 50% RH at 40%
 - Altitude Up to 2,000 meters

CONFIGURED OPTIONS

- Accessories
 - CCU for Tecan® RSP Emulation
 - Probe collet
 - Liquid level detection (capacitive)
 - Proprietary tube stripper design
 - Z-axis gripper bracket
 - System legs
 - Z-axis mounted pipette pump (no external tubing required)

BASE MODEL

- Single Arm
- Dual Arm



(Shown with optional Z-Series Pump)

SPECIFICATIONS	
Mechanical Drive System X & Y-axis Z-axis	Timing Belt/Pulley - Precision Linear Guideway Rack/Pinion - Precision Linear Guideway
Max. Speed X & Y-axis Z-axis	36 in./second [914.4 mm/second] 15.5 in./second [393.7 mm/second]
Step Resolution X-axis Y-axis Z-axis	0.005 in. [0.127]/half-step resolution, 30.0 in. [.762] travel in 6000 half-steps 0.005 in. [0.127]/half-step resolution, 12.5 in. [317.5] travel in 2500 half-steps 0.002 in. [0.051]/half-step resolution, 7.0 in. [177.8] travel in 3500 half-steps
Z-axis Force	10 lb minimum
Typical Travel Ranges	X - 9 in. to 32 in. [228.6 to 812.8] (single-arm) X - 9 in. to 29 in. [22.8.6 to 736.6] (dual-arm) Y - 10 in. to 14 in. [254 to 355.6] Z - 2 in. to 8 in. [50.8 to 203.2]
Dimensions	Depends on travel
Weight	Depends on travel
Motors X-axis Y-axis Z-axis	1.8° Hybrid Stepper, NEMA size 23 1.8° Hybrid Stepper, NEMA size 17 1.8° Hybrid Stepper, NEMA size 17
Motor Drivers	24 VDC at 1.5 A, micro-stepping drive, position and hold at half-step increments Max step rate = 8000 half-steps/second or 4000 steps/second
Sensors and I/O	Limit opto sensors (X, Y, Z) Lost step detection (X, Y, Z) Full quadrature encoders on all axis motors Auxiliary I/O, Interlock Interface, USB

ROBOTIC XYZ AUTOMATION

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TRICONTINENT
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