

## JANUS Automated Workstation



### Key Applications

- Cellular Assays
- Molecular Biology and Genomics
- Drug Discovery
- Environmental
- Food, Feed, and Veterinary Medicine
- Forensics
- Immunoassays
- Sample Preparation
- Molecular Diagnostics
- Toxicology

### Description

The JANUS® Automated Workstation offers multiple pipetting technologies on a single instrument platform with options to automate labware movement. The instrument consists of a modular platform that expands and combines the flexibility of a 4- or 8-tip Varispan™ arm with the speed of a 96- or 384-channel Modular Dispense Technology™ (MDT) dispense head. The JANUS provides an automated liquid handling solution that provides flexibility in throughput, plate capacity, and dynamic volume range

### Product Features

- Four standard platforms including the Mini, Standard, Integrator, and Expanded, allows you to select the workstation that is best suited for your application and deck capacity requirements.
- Unique platform design allows you to add up to two (2) pipetting arm(s) and a plate movement arm to enhance your workstation's overall functionality. Pipetting volumes range from 20 nL – 10 mL.
- MDT arm provides interchangeable and automated head functionality for 96- and 384-channel dispense heads in less than 25 seconds using a powerful and fail-safe interlocking mechanism. With 'on the fly' head swapping you can easily dispense into 96-, 384- and 1536-well shallow and deep well microplates, without user intervention.
- Ability to automate plate movement and access off-deck plates without the need for an additional robotic arm.
- VersaTip® is a unique sampling tip designed to deliver the benefits of both a fixed washable tip and disposable tip adapter.
- Varispan 4- or 8-tip arm provides independent motion and liquid level sensing in Z direction to access test tubes, microplates, deep well plates, and vials. Sampling probes offer variable spacing from 9 mm to 20 mm for 4-tip arm or 9 mm to 40 mm for 8-tip arm.
- Accusense™ our patented independent liquid level sensing technology efficiently monitors your sample volumes, with the ability to detect samples as low as 50 µL in microplates and 100 µL in test tubes. Low or non-ionic polar solutions and organic solvents such as DMSO or methanol are also detectable.
- Computer-controlled Cartesian X-Y-Z robotic liquid handling platform with options to upgrade various pipetting and labware movement arms.
- Active Identification provides automatic recognition of the MDT head type.
- Carry-over elimination via a peristaltic pump for high volume/high throughput sample tip washing for carry-over to less than 1:1,000,000 with appropriate washing or use of disposable tips for improved elimination of carry-over.

## Software

- WinPREP® software with JANUS® Application Assistant features an intuitive user interface and simplified protocol setup to support users of all levels.
- Robust software allows users to easily monitor research protocols, track sample preparation processing and integrate ancillary devices for fully automated application solutions.
- Predefined labware definitions simplify assay set-up and enable labware definitions to remain independent of the position on the instrument.
- Performance file library offers optimized pipetting performance and ability to modify pump speeds, air gaps, waste and blowout volumes, and liquid delays.
- Maintenance and clean-up prompts ensure top performance from your instrument.

- 21 CFR Part 11 Software Compliant.
- Compatible with major operating systems including Windows® XP.



WinPREP software screen shot highlighting the intuitive user interface with advanced labware features to provide precise deck set-up and reagent sourcing.

### Varispan Arm

- Tip Types: Fixed, Low Volume Fixed, Septa-piercing, and VersaTip.
- Disposable Tips: 20 ul, 50 ul, 200 ul, 1000 ul, and 25 ul and 175 ul filter tips. Various tips are available in liquid sensing (conductive), non-sensing (non-conductive), and sterile formats.
- Syringe options: 250 ul, 500 ul, 1000 ul, 2500 ul, 5000 ul and 10000 ul.

### MDT Arm

- Head types: 96-tip P235, 96-tip P50, 384-tip P30, 384-tip Protein NanoHead, 384-tip NanoHead, I200RC Serial Dilution Tool, I50R Serial Dilution Tool, I50C Serial Dilution Tools, I30RC Serial Dilution Tool
- 96-channel P235, P50, P20 and 384-channel P30, P10 tips. Various tips are available in clear, black, filter, and sterile formats, as well as liquid sensing (conductive), non-sensing (non-conductive), sterile, and filter formats.

## SPECIFICATIONS

### Precision Pipetting

Pipetting arm	Volume	% CV	Tip/Head	Condition
Varispan	5 ul	< 2%	20 ul disposable tip	Distilled water, 500 ul syringe
	50 ul	< 1%	Fixed tip	Distilled water, 500 ul syringe
MDT	1 ul	< 2%	P20 disposable tip on P50 96-tip Head	
	1 ul	< 5%	P30 or P10 disposable tips on P30 384-tip Head	
	5 ul	< 1%	P50 disposable tips on P50 96-tip Head	
	50 ul	< 1%	P235 disposable tips on P235 96-tip Head	



JANUS Mini



JANUS Standard



JANUS Integrator



JANUS Expanded

## Microplate Deck Capacity

Platform	Mini	Standard	Integrator	Expanded
<b>Configuration</b>				
Varispan	12	24	24 (32)*	32
MDT	9	15	15 (21)*	21
Varispan + MDT	NA	18	18 (24)*	29

\* with optional deck expansion module

## Dimensions

### Height x Width x Depth

Platform	Mini	Standard	Integrator	Expanded
<b>Configuration</b>				
Varispan 8-tip	34" (864 mm) x	34" (864 mm) x	34" (864 mm) x	34" (864 mm) x
	30" (762 mm) x	47" (1194 mm) x	62" (1575 mm) x	62" (1575 mm) x
	32" (813 mm)	32" (813 mm)	32" (813 mm)	32" (813 mm)
MDT	44" (1118 mm) x	44" (1118 mm) x	44" (1118 mm) x	44" (1118 mm) x
	30" (762 mm) x	47" (1194 mm) x	62" (1575 mm) x	62" (1575 mm) x
	32" (813 mm)	32" (813 mm)	32" (813 mm)	32" (813 mm)
Varispan 8-tip + Gripper arm		43" (1092 mm) x	43" (1092 mm) x	43" (1092 mm) x
	NA	47" (1194 mm) x	62" (1575 mm) x	62" (1575 mm) x
		32" (813 mm)	32" (813 mm)	32" (813 mm)
Varispan + MDT		44" (1118 mm) x	44" (1118 mm) x	44" (1118 mm) x
	NA	47" (1194 mm) x	62" (1575 mm) x	62" (1575 mm) x
		32" (813 mm)	32" (813 mm)	32" (813 mm)

## Weights (approximate)

### Net weight/Shipping weight

Platform	Mini	Standard	Integrator	Expanded
<b>Configuration</b>				
Varispan 8-tip	190 lb (86 kg)/	245 lb (111 kg)/	265 lb (120 kg)/	285 lb (129 kg)/
	350 lb (159 kg)	415 lb (188 kg)	545 lb (247 kg)	565 lb (256 kg)
MDT	195 lb (88 kg)/	235 lb (107 kg)/	255 lb (116 kg)/	275 lb (125 kg)/
	330 lb (150 kg)	415 lb (188 kg)	545 lb (247 kg)	565 lb (256 kg)
Varispan + MDT	NA	315 lb (143 kg)/	335 lb (152 kg)/	355 lb (161 kg)/
		425 lb (193 kg)	560 lb (254 kg)	580 lb (263 kg)

### Electrical Requirements

- 100, 120 VAC 50/60 Hz, 200, 230 VAC 50Hz, 525 VA
- Certifications CE, CSA

### Environmental Requirements

- Operating ambient temperature: 59-95 °F (15-35 °C)
- Operating relative humidity: 60%-80% at 85 °F (30 °C) non-condensing
- Recommended compressed air requirement for MDT arm: 110-145 psi (8-10 bar) at 2.0 cubic feet (56.6 L) per minute

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