



ORTHO VISION[®] *Swift* Analyzer Technical Specifications

FOR ORTHO BIOVUE[®] SYSTEM



SPECIALLY DESIGNED FOR YOUR LAB. BECAUSE EVERY TEST IS A LIFE.™

INTENDED USE

ORTHO VISION® *Swift* Analyzer automates in vitro Immunohematology testing of human blood utilizing ORTHO BioVue® System technology.

ORTHO VISION® *Swift* Analyzer:

- Automates test processing functions including liquid pipetting, reagent handling, incubation, centrifugation, reaction grading and interpretation, and data management requirements using ORTHO BioVue® System Cassettes and digital image processing.
- Standalone instrument or interfaced to the Laboratory Information System (LIS).
- Fully compatible with ORTHO CONNECT™ to maximize the efficiency of your data, workflow, and resources for integration across your lab or network.

INSTALLATION AND SITE SPECIFICATIONS

Although trained service personnel install the ORTHO VISION® *Swift* Analyzer at the laboratory site, the site must be prepared according to site specifications.

ANALYZER SPECIFICATIONS

Physical Dimensions

■ ORTHO VISION® *Swift* Analyzer

Width: 107.4 cm (42.3 in.)
Depth: 77 cm (30.3 in.)
Height: 88.9 cm (35 in.)
Height with maintenance door open: 137 cm (54 in.)

■ ORTHO VISION® *Swift* Analyzer Table Dimensions (highly recommended)

Table without shelf:
121.9 cm (48 in.) x 76.2 cm (30 in.) x 76.2 cm (30 in.)

Table with shelf at the front:
121.9 cm (48 in.) x 106.7 cm (42 in.) x 76.2 cm (30 in.)
Occupies 61 cm (24 in.) in depth on left front of table.

Table with the shelf on the side:
152.4 cm (60 in.) x 76.2 cm (30 in.) x 76.2 cm (30 in.)
Occupies 61 cm (24 in.) in width on left side of table.



ANALYZER
ORTHO VISION®
Swift

1. Monitor
2. Sample and Reagent Load Door
3. Dual Purpose Drawer
4. Cassette Waste Drawer
5. Supply Drawer
6. Liquid System
7. Shelf Attachment Positions

Electrical Data

- Data voltage: 100–240 V AC
- Transient overvoltage: Category II
- Frequency: 50/60 Hz
- Power consumption: 1,000 VA
- Power requirement: One dedicated (3-wired single phase; line-neutral and single circuit) AC power line for connection to facility power.

Hardware

16 GB RAM, 1 TB Solid State Hard Drive

Software

- Operating system: Windows 10 IoT Enterprise
- Antivirus system: Cylance Artificial Intelligence Platform (in development)

Weights

ORTHO VISION® *Swift* Analyzer: 190 Kg (419 lbs)

ORTHO VISION® *Swift* Analyzer Table: 92 kg (202 lbs)

Environmental Specifications

- Operating temperature: 18–30° C (64.4–86.0° F)
- Site relative humidity: 15–85% RH (non-condensing)
- Maximum altitude: 2438.0 m (8000 ft.)
- Heat output: 3412 BTU/hr
- Noise level: Average 51 dB(A)

System Performance

- **Samples:** Up to 42 samples can be loaded, 6 Sample Racks holding 7 tubes each
- **ORTHO BioVue® System Supply Drawer:** 148 ORTHO BioVue® System Cassettes (7 sleeves of 20 + 8 in dual purpose rack)
- **Reagent Red Blood Cell Supply:** Supports 3 independent RBC racks, each can hold 11-3 mL vials or 6-10 mL vials, including various combinations. The 10 mL rack can accommodate reverse grouping and antibody detection (screen) RRBC. The 3 mL rack can accommodate reverse group, antibody detection and antibody identification RRBC.
- **Diluent:** 6 bottles (ORTHO BioVue® System)
 - 1 x 50 mL position for ORTHO BLISS
 - 1 x 50 mL position for red cell diluent
 - 4 x 10 mL positions for red cell diluents
 - Onboard liquid reagent capacity of 4.7 L of saline and 1 L of deionized water
- **Heated Incubator:** 12 ORTHO BioVue® System Cassettes
- **Room Temperature Incubator:** 24 ORTHO BioVue® System Cassettes
- **Centrifuge:** 2 centrifuges; 10 ORTHO BioVue® System Cassettes per centrifuge; 5 minute centrifugation time

- **Waste:** 5.2 liters; 100 ORTHO BioVue® System Cassettes; External 10 L liquid waste drain kit available; Optional off-board plumbing draining available.

SAMPLE SPECIFICATIONS

Supported Sample Types

- Centrifuged whole blood
- Plasma and Serum
- Packed red blood cells
- 3-5% Red cell suspension (Pre-diluted Patient/Donor)
- 0.8% Red cell suspension (Pre-diluted Patient/Donor)

Supported Sample Tube Sizes

- 16 x 100 mm, 16 x 75 mm
- 2-13 x 100 mm, 12-13 x 75 mm
- 10.25 x 75 mm, 10.25 x 64 mm
- 15 x 92 mm Sarstedt
- 13 x 90 mm Sarstedt
- 2.0 mL and 1.5 mL micro-collection containers
- Wide variety of Pediatric Tubes

For additional sample tubes supported please refer to the sample rack selection guide.

Sample and Test Processing

Continuous, random, STAT access, and batch

Sample Handling

- Automatic cap detection without workflow interruption
- Automatic clot detection
- Automatic liquid level detection

Sample and Test Performance Characteristics

Column Agglutination Technology using ORTHO BioVue® System Cassettes

Testing

ABO/Rh	Direct Antiglobulin
Rh	Antigen Testing
Rh/K	QC Testing
Antibody Screen	Selected Cell Panels
Antibody Identification	User defined protocols
Crossmatch	
Serial Dilutions for Titration Studies	

Reagent Types

Diluents	User Defined Reagents
Quality Control	User Defined Quality Control
ORTHO BioVue® System Cassettes	
ORTHO Reagent Red Blood Cells	

CONNECTIVITY

e-Connectivity® Remote Connectivity

Provides the ability to connect your system to Ortho Clinical Diagnostics in a way that enables remote diagnostics, as well as monitor and review system configuration, data, and performance.

e-Connectivity® Technology Ready Network Connection Requirements:

- Category 5e cable with male RJ45 connector for SSL connection included.
- Continuous broadband connection or direct connection to the site LAN with access to the Internet at a speed greater than or equal to 128 kbps.
- Support local area network port speeds of automatic, 10/100 Mbps with half and full duplex.
- Dynamic or Static IP Address, Subnet Mask, and Default Gateway IP Address assigned by the IT department and provided to Ortho.
- Female RJ45 connector on network port within 20 feet of system center.

Broadband Internet

A broadband internet connection is required.

System Computer and Interface Specifications

- **Interface Specification:** Bidirectional protocols for a Laboratory Information System (LIS).
- **Remote Review Capable:** An external computer on the laboratory's network where Authorized personnel on an external computer can review results.

LIS Specifications

- **LIS Interface:** Interface via one of three user configurable physical interfaces.
 - ASTM over RS-232
 - ASTM over TCP/IP
 - Network shared folders (similar to ORTHO AutoVue® Innova System)
- **ASTM Protocol:** Configurable to one of three options.
 - Basic ASTM (no 'M' record)
 - Enhanced ASTM (similar/backward compatible to ORTHO AutoVue Innova System)
 - Vision ASTM, which adds in addition to Enhanced ASTM: Error upload message if the order could not be processed; The LIS can download multi-tube orders; The LIS can send QC orders that specify the cassette reagent lots to use as well as the expected results
- **Barcode Symbolologies**

NW7 (Codabar)	Code 3 of 9 (Code 39)
ISBT 128	Code 2 of 5 (Interleaved)
Code 128 (A, B, & C subtypes)	

Communication Ports

- I/O ports include:
 - 1 DB-9 serial port (RS-232 port for LIS support)
 - 1 RJ45 LAN port supports port speeds of automatic, 10/100 Mbps with half and full duplex.
- 5 V 2.0/V 1.1 USB ports are available for printer, handheld barcode reader, other devices

Printer Specifications

ORTHO VISION® *Swift* Analyzer can be connected either to a network printer or to a local printer.



Ortho Clinical Diagnostics

Because Every Test is a Life™