TECHNICAL SPECIFICATIONS

ORTHO VISION® MAX *SWIFT* ANALYZER

FOR ID-MTS™ GEL CARDS

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

INTENDED USE

ORTHO VISION® Max *Swift* Analyzer automates in vitro Immunohematology testing of human blood utilizing ID-MTS™ Gel Card technology.

ORTHO VISION Max *Swift* Analyzer:

- Automates test processing functions including liquid pipetting, reagent handling, incubation, centrifugation, reaction grading and interpretation, and data management requirements using ID-MTS Gel Cards 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 Max *Swift* Analyzer at the laboratory site, the site must be prepared according to site specifications.

ANALYZER SPECIFICATIONS

Physical Dimensions

- ORTHO VISION Max *Swift* Analyzer

  Width: 169 cm (66.5 in.)
  Depth: 77 cm (30.3 in.)
  Height: 93.9 cm (37 in.)
  Height with maintenance door open: 133.8 cm (52.7 in.)

- ORTHO VISION Max *Swift* Analyzer Table Dimensions (highly recommended)

  Table without shelf:
  182.8 cm (72 in.) x 76.2 cm (30 in.) x 76.2 cm (30 in.)

  Table with shelf at the front:
  182.8 cm (72 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:
  243.8 cm (96 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.

MAX ANALYZER
ORTHO**VISION**® *Swift*

1. **Monitor**

2. **Dual Load Station for Samples and Reagents**

3. **Dual Purpose Drawer**

4. **ID-MTS Gel Card 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 Max *Swift* Analyzer: 330 Kg (727.5 lbs)
ORTHO VISION Max *Swift* Analyzer Table: 113.4 kg (250 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 52 dB(A)

System Performance

- Samples: Up to 84 samples can be loaded, 12 Sample Racks holding 7 tubes each

- ID-MTS Gel Card Supply Drawer: 200 ID-MTS Gel Cards (10 sleeves of 20)

- Reagent Red Blood Cell Supply: Supports 6 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: 4 100 mL positions to accommodate MTS™ Diluent 2 and MTS™ Diluent 2 Plus; 4 10 mL positions to accommodate Titer diluent; Onboard liquid reagent capacity of 4.7 L of saline and 1 L of deionized water; Extended walkaway kit with additional 5.2 L saline capacity available

- Probes: 4 pipetting probes to maximize efficiency

- Heated Incubator: 12 ID-MTS Gel Cards

- Room Temperature Incubator: 24 ID-MTS Gel Cards

- Centrifuge: 2 centrifuges; 10 ID-MTS Gel Cards per centrifuge

- Waste: 140 ID-MTS Gel Cards; 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

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, 10.25 x 47 mm
- Wide variety of Sarstedt Tubes
- 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 ID-MTS Gel Cards

- Testing

ABO/Rh	Direct Antiglobulin
Monoclonal Rh Phenotyping	Antigen Testing
Antibody Screen	QC Testing
Antibody Identification	Selected Cell Panels
Crossmatch	
Serial Dilutions for Titration Studies	

- Reagent Types

ID-MTS Gel Cards	Diluents
Reagent Red Blood Cells	Quality Control

- Specimen Types

Plasma
Packed Red Blood Cells
Serum

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

- ASTM Protocol: Configurable to one of three options.
  - Basic ASTM (no 'M' record)
  - Enhanced ASTM
  - 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 card reagent lots to use as well as the expected results

- Barcode Symbologies

  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 Max *Swift* Analyzer can be connected either to a network printer or to a local printer.

Because **Every** Test is a **Life**™

Ortho Clinical Diagnostics