



## IH-500 Fully Automated System for ID-Cards



# IH-500

## Innovation Driven by Experience

Bio-Rad is one of the world's most respected suppliers of blood screening systems.

We have been serving blood banks and transfusion centers across the world for more than 30 years, consistently developing and delivering high-performance and reliable systems designed to satisfy your needs.

We know our future – and that of our customers – depends on our ability to search beyond today's solutions.

We will continue to invest in innovation that lies at the heart of our commitment: helping you to provide your services as efficiently and effectively as possible.



**IH-500** is a highly innovative instrument setting new standards in immunohematology testing.

**IH-500** combines functionality and design to satisfy the changing needs of a modern immunohematology laboratory.

Designed as a compact bench-top system to fit in any laboratory environment, **IH-500** requires minimal workspace whilst providing maximum workflow optimization.

In combination with the optional stand-alone table, **IH-500** becomes a stand-alone system - ultimate flexibility for the modern laboratory environment.

**IH-500** our latest generation of fully automated systems developed together with our customers.



ID-Diluent piercing

# Innovation Meets Design

The 6-axis industrial robot provides new possibilities for managing resources.

This technology allows a very compact design of the instrument and optimal use of space.

The innovative motor technology inside the arm provides a maintenance free transport component and increases the reliability of the entire instrument.

Bio-Rad is proud to be the first to incorporate this revolutionary technology in immunohematology automation.



Additional module  
available:  
**IH-Com**

# Innovation Led by Expertise

- Fully automated QC Monitoring system
  - ↳ Increased result reliability
- Optimized scheduling of emergency samples (STAT)
  - ↳ Faster time to result
- 7 day on-board reagent stability
  - ↳ 24/7 availability
- Automated antibody titration
  - ↳ Increased productivity/test panel
- Intelligent reagent identification system
  - ↳ Improved traceability
- Well by well processing of ID-Cards
  - ↳ Wastage reduced/less costs
- Waste management
  - ↳ Operator safety



6-axis industrial robot

## Innovation

- 6-axis industrial robot
- Maintenance free transport technology

## Improved Traceability

- Internal storage for up to 170 ID-Cards
- Single ID-Card tracking for more flexibility during ID-Card loading
- 100% traceability

## Continuous Loading

- Continuous sample and reagent vials loading
- Independent loading and pipetting areas

## Flexibility

- Stand-alone table (optional) with customizable configuration
- Flexible multi-purpose loading dock

## Reduced Hands-on Time

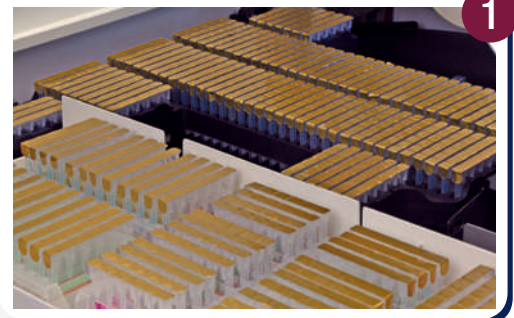
- Automated workflow
- Automatic waste management system

## Safety & Reliability

- Intelligent liquid identification system
- Well by well processing for less ID-Card waste

## Easy to Use

- Integrated keyboard for convenient data input
- Integrated PC and 19" touchscreen monitor



Internal storage of ID-Cards



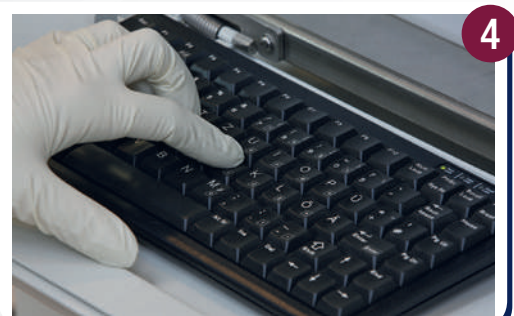
Drawer for flexible loading



Tray for reagent vials



Internal solid waste container



Keyboard for manual data entry



1

7

IH-500

2<sup>a</sup>  
b

4

3



5

6

8

1 2 3 4 5

9

LIQUID BASKET

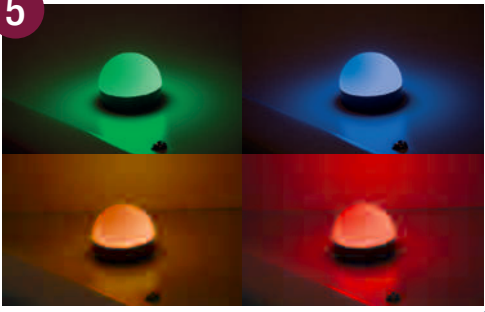
LIQUID BASKET

LIQUID BASKET

LIQUID BASKET



5



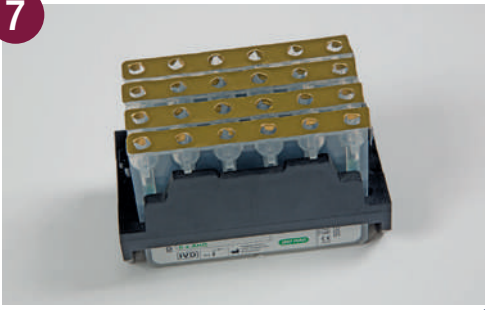
4-color status light

6



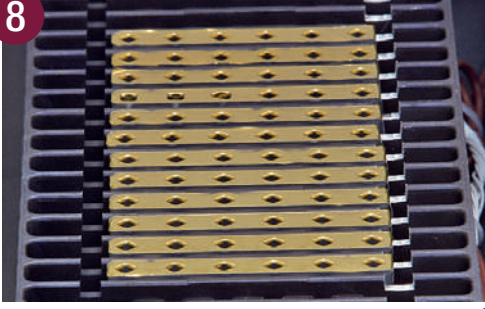
Reagent storage and pipetting area

7



ID-Card transport holder

8



Incubator at 37°C

9



Fluidic area

## 24/7 Ready to Start Availability

- 4-color status light
- More than 200 tests available

## 7 Day On-Board Reagent Stability

- Temperature controlled storage area
- New active cooling technology

## Throughput Optimization

- Faster time to result
- Optimized scheduling of emergency samples (STAT)
- On-board priority updates
- Flexible ID-Card management for optimized throughput

## Walk-Away

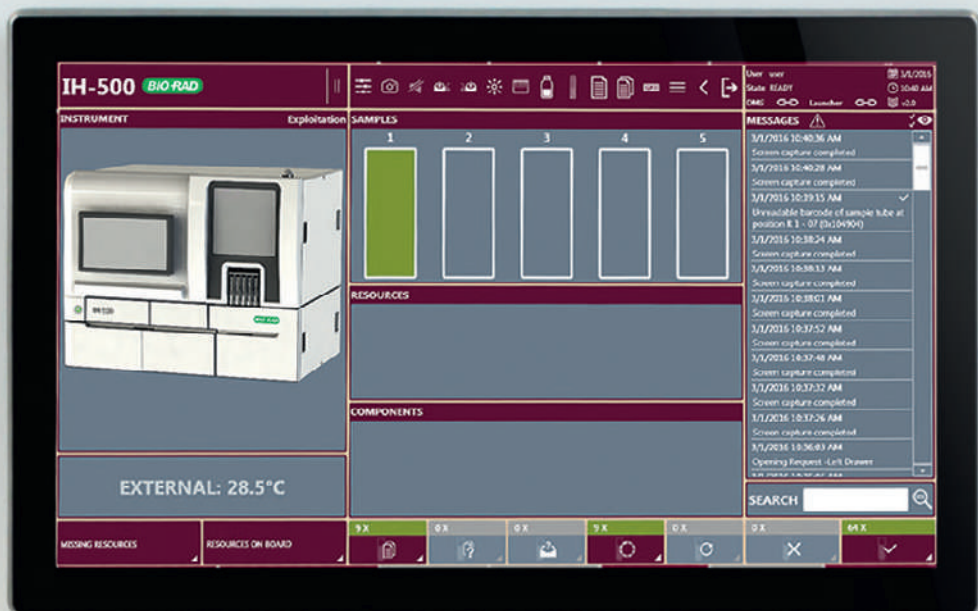
- Loading capacity for 50 samples
- Internal storage for 34 liquid reagent vials
- Management of 4 ID-Diluent racks in parallel

## Active QC Monitoring

- Automatic check for reagent lot QC status during the loading process
- Automatic check for instrument QC status prior to each sample processing

## Reduced Training & Maintenance

- Easy to learn standardized Bio-Rad user interface
- No daily maintenance (only weekly)
- No-interruption process for system liquid refilling and liquid waste emptying
- Optional direct connection to laboratory drainage



IH-500





**BIO-RAD**



## Immediate STAT Handling

A designated STAT sample will be pipetted and processed immediately.

## Well by Well Processing

**IH-500** is able to handle single wells. This feature reduces the waste of partially used ID-Cards.

## Assay and Sample oriented Mode

Perform the tests sample by sample or prioritize a specific test which result will be delivered first throughout a multitude of samples.

## Automated Antibody Titration

Perform two-fold dilutions up to 1/2048 and titrate using any reagent registered on the machine.

## Single ID-Card Tracking

Properly load the ID-Cards in any direction and any order. **IH-500** adapts, stores and indexes.

## Instrument QC

**IH-500** dedicates an additional QC to the instrument. This is useful when one lot of reagents is used between different systems.

## Carry over Prevention greater than 1:32,000

One of the highest carry-over prevention in the Immunhematology automation.

## 7 Day On-Board Reagent Stability

Through active cooling of the reagent storage area, **IH-500** can ensure a 7 day on-board stability for reagents.

## On-Board Reagent Management

Ensures the correct on-board time even when a reagent is interchanged between different systems.



ID-Card piercing



IH-500 stand-alone system

Flexibility

Security

Modularity

Innovation



IH-500 compact bench-top system

## Specifications

### Electrical Data

Voltage	110-230 V
Frequency	50/60 Hz
Power consumption	1,550 VA

### Environmental Conditions

Operating temperature	18°C to 28°C
Storage temperature	-20°C to 55°C
Operating humidity	5% to 80% rh
Storage humidity	5% to 80% rh
Altitude maximum	2,000 m

### Dimensions

Width	115 cm
Height	98 cm
Depth	85 cm
Weight	213 kg
Minimal installation depth	60 cm

### Capacity

Samples	50
ID-Cards	170
Reagent vials	34
ID-Diluents	4

### Emissions

Heat emission	1,000 W
Noise level	max. 65 dB(A)
Pollution level	2

## Performance\*

A, B, AB, D, CDE, ctl	60 samples/h
A, B, AB, D, CDE, ctl + A <sub>1</sub> , A <sub>2</sub> , B + C, c, E, e, K, ctl + Ab screening I, II, III	24 samples/h
A, B, DVI-, ctl/A <sub>1</sub> , B + Ab screening I, II, III	32 samples/h
A, B, DVI-, ctl/A <sub>1</sub> , B	48 samples/h
Ab screening I, II, III	82 samples/h
Ab screening I, II, III + Autocontrol (AC)	42 samples/h
Ab screening with pooled cells	96 samples/h
A, B, DVI-, ctl/A <sub>1</sub> , B + Ab screening I, II	36 samples/h
A, B, DVI-, ctl/A <sub>1</sub> , B + C, c, E, e, K, ctl	48 samples/h
A, B, AB, DVI+, DVI-, ctl + A <sub>1</sub> , A <sub>2</sub> , B, O + C, c, E, e, K, ctl + Ab screening I, II, III	24 samples/h

\* Performance data may vary depending from the loading sequences and requested sample profiles.

## Main Features

- Walk-away
- Continuous loading
- 7 day on-board reagent stability
- Immediate STAT handling
- Active QC monitoring
- Well by well processing
- Only one connection to the LIS through **IH-Com**
- CE compliant according to IVD Directive 98/79/EC

## Test Methods

- Blood Grouping ABO/D
- Phenotyping Rh/K
- Antibody Screening
- Direct Antiglobulin Test (DAT)
- Antibody Titration
- Reverse Grouping
- Compatibility Tests
- Antibody Identification
- Single Antigen Testing

## Ordering Information

Catalog #	Description
001500	<b>IH-500</b>
0595002	<b>Stand-alone table</b> (optional)
009000	<b>IH-Com Kit Fullversion</b> , Data Management Software
12009844	<b>IH-A<sup>bi</sup>ID</b> , Integrated Antibody Identification Software
009030	<b>IH-Web</b> , Remote Result Management Software
2000050	<b>BRIcCare</b> , Remote Service and Support Software

Visit [www.bio-rad.com/immunohematology](http://www.bio-rad.com/immunohematology) for more information.



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