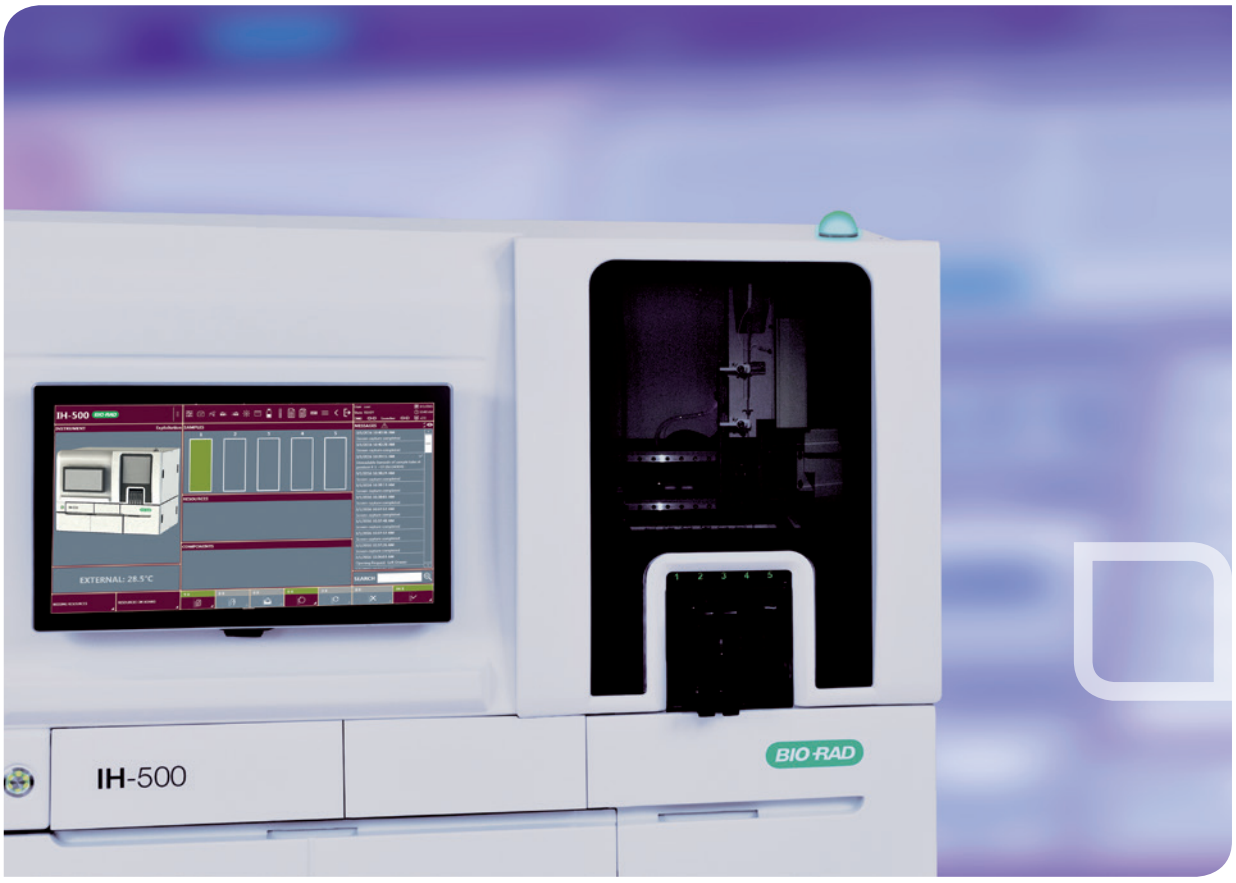
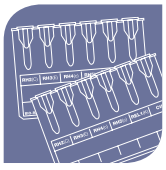




IH-500 Fully Automated System for ID-Cards

BIO-RAD

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.

This is why we developed together with our customers our next generation fully automated system, **IH**-500.

ID-Diluent piercing

Innovation Meets Design

Additional module available:
IH-Com

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.

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
- Maintenance free transport technology
  ↳ Higher reliability by reduced manual working steps
- 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

** In development*

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

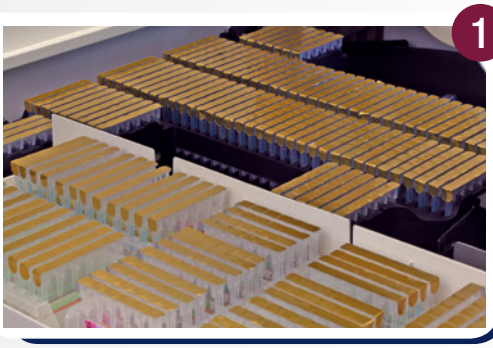
- Automated workflow
- Automatic waste management system

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

IH-500
1
2a
b
3
4
7

5
6
8
1 2 3 4 5
9
SYSTEM LIQUID
SYSTEM LIQUID
LIQUID WASTE
LIQUID WASTE

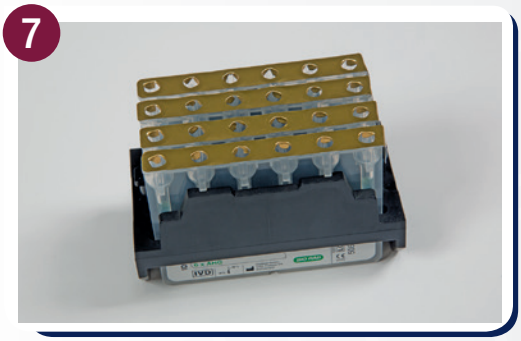
5

4-color status light

6

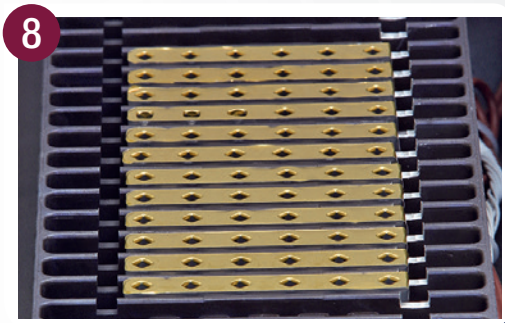
Reagent storage and pipetting area

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*

** In development*

Reduced Training & Maintenance

- Easy to learn standardized Bio-Rad user interface
- No daily maintenance (only weekly)
- No-interruption process for refilling system liquid (2 x 2 l) and emptying liquid waste (2 x 2 l)
- Optional direct connection to laboratory drainage

IH-500
BIO-RAD
INSTRUMENT
Exploitation
SAMPLES
1
2
3
4
5
MESSAGES
3/1/2016 10:40:36 AM
Screen capture completed
3/1/2016 10:40:28 AM
Screen capture completed
3/1/2016 10:39:15 AM
Unreadable barcode of sample tube at position R 1 - 07 (0x104904)
3/1/2016 10:38:24 AM
Screen capture completed
3/1/2016 10:38:13 AM
Screen capture completed
3/1/2016 10:38:01 AM
Screen capture completed
3/1/2016 10:37:52 AM
Screen capture completed
3/1/2016 10:37:48 AM
Screen capture completed
3/1/2016 10:37:32 AM
Screen capture completed
3/1/2016 10:37:26 AM
Screen capture completed
3/1/2016 10:36:03 AM
Opening Request -Left Drawer
RESOURCES
COMPONENTS
EXTERNAL: 28.5°C
SEARCH
MISSING RESOURCES
RESOURCES ON BOARD
IH-500

1 2 3 4 5
BIO-RAD

Innovation & Improvement

The development of this most innovative automated system is a result of more than 30 years of experience in immunohematology testing and a close partnership with our customers.

Single ID-Card Tracking

IH-500 tracks every single ID-Card and offers an improved level of traceability.

Enhanced Pipette Needle Washing Process

Prevents carry-over from high-titer samples and reagents (greater than 1:32,000).

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 red blood cells.

On-Board Reagent Management

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

Instrument QC

In addition to the reagent lot QC, **IH**-500 (in combination with **IH**-Com) offers the possibility to define system specific QC samples.*

Immediate STAT Handling

The further segmentation of a pipetting group allows an improved handling of emergency samples and a faster time to result.

Active QC Monitoring

The active monitoring of QC status before each processed sample ensures valid results and reduces repeat testing.*

Intelligent Identification System

A new intelligent technology applied during the identification of samples and liquid reagent vials prevents errors and interruptions caused when insufficient samples are loaded.

New Test Method

IH-500 provides the possibility to perform automated titration of antibodies.*

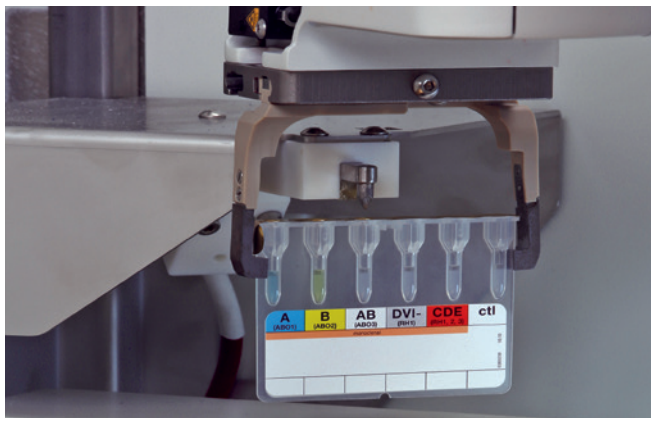
Well by Well Processing

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

Waste Management

The intelligent waste management of **IH**-500 avoids the time-consuming step of unloading empty reagents.

** In development*



ID-Card piercing

IH-500 stand-alone system

Flexibility

Security

Modularity

Innovation

IH-500 compact bench-top system

Specifications

Electrical Data	
Voltage	100-120 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_1, A_2, B + C, c, E, e, K, ctl + Ab screening I, II, III	24 samples/h
A, B, DVI-, ctl/A_1, B + Ab screening I, II, III	32 samples/h
A, B, DVI-, ctl/A_1, 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_1, B + Ab screening I, II	36 samples/h
A, B, DVI-, ctl/A_1, B + C, c, E, e, K, ctl	48 samples/h
A, B, AB, DVI+, DVI-, ctl + A_1, A_2, 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
- User friendly touchscreen
- Compact bench-top system
- Active QC monitoring*
- Waste management
- Random access
- Immediate STAT handling
- 7 day on-board reagent stability
- Stand-alone table (optional)
- Well by well processing
- Intelligent identification system
- 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 AHG test (DAT)
- Antibody titration*
- Reverse grouping
- Crossmatching
- Antibody identification
- Single antigen testing

** In development*

Ordering Information

Catalog #	Description
001500	**IH-500**
0595002	**Stand-alone table** (optional)
009000	**IH-Com Kit Fullversion**, Data Management Software
009980	**IH-Com PC,** Win 7
009030	**IH-Web**, Remote Result Management Software
2000050	**BRiCare**, Remote Service and Support Software

Visit **www.bio-rad.com/immunohematology** for more information.

BRiCare is a trademark of Bio-Rad Laboratories in some jurisdictions.

BIO-RAD

Bio-Rad Laboratories

Clinical Diagnostics Group

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