

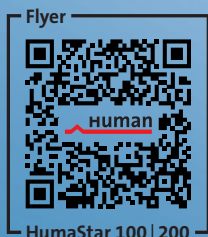
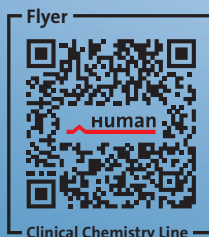
HumaStar 100 | 200

**HUMAN's Unique Random-Access Analyzers
for Small to Medium Size Laboratories**

- > Unique design
- > Unique software architecture
- > Unique features

CLINICAL CHEMISTRY

NEW



HumaStar 100/200

Experience the out of the Ordinary



HumaStar 100

REF 16890

- › Constant throughput of 100 tests per hour



HumaStar 200

REF 16895

- › Up to 200 tests per hour throughput

One concept – two instruments

- › Identical software
- › Identical spare parts, consumables and accessories
- › Identical operation

Unique extent of features included

- › Open random-access analyzer
- › Less than 1L/h water consumption (HS 100)
- › 80 reusable Bionex® cuvettes
- › 8-step wash station
- › Primary tubes and sample cups
- › Reagent cooling
- › 30 reagent and 60 sample positions
- › Internal sample barcode reader
- › Capacitive liquid level detector
- › Needle shock detector
- › Large liquid containers with level sensors
- › Windows 7®, USB compatible
- › LIS via ethernet, ASTM, bidirectional
- › Software designed for touch screen

Safety first

- › Intelligent flagging system and extensive error log
- › Counter for components life cycle and maintenance
- › Two types of systemic and special washing solution
- › Routine check and blank for each individual cuvette
- › Validity limits for methods and reactions programmable
- › Reagent integrity check
- › UPS 230V included in standard delivery

Easy and efficient

- › Human methods pre-installed and validated
- › Automatic pre- and post-dilution
- › Extensive QC monitor
- › Minimal water and energy consumption
- › Minimal user maintenance
- › Removable sample tray
- › Choice of two different sample trays
- › Primary tubes up to 16 x 100 mm and sample cups
- › Removable reagent tray
- › 50 ml or 20 ml reagent bottles available
- › Continuous reagent cooling independent from main power switch



User software – versatile and easy to use

- Software designed for touch screen use
- Intuitive user interface
- Numerous features to ease daily routine

Unique software design and architecture

- Smart graphical user interface for convenient operation
- Continuous loading of samples and reagents
- Random-access and STAT
- Free choice of execution order
- Extended walk-away capability
- Results archive with cumulative charts
- Programmable automatic start up routine
- Multiple work lists
- Multi-language software (English, French, Spanish; other languages can be added)

QC options

- Levey-Jennings plots and Westgard multi rules
- Up to 3 QC levels per test
- QC monitor and reports
- Method statistics: including test counter, CV%, mean, graphical trend analysis

Calibration

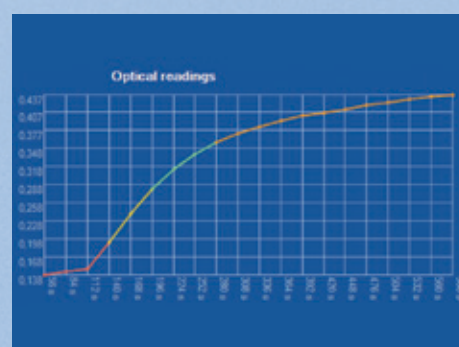
- Method and reagent monitor (volumes, available tests, calibration, QC status)
- Automatic pre-dilution for calibrators
- Up to 8 calibrators per method

Economical operation

- Bi-directional LIS, ASTM, over ethernet port of the external PC
- Positive identification of samples with internal barcode reader
- Printing on any Windows 7® compatible printer
- Method defined washing programmes



User Interface: Reagents



Absorbance Chart



User Interface: Samples

Technical Data

HumaStar 100

REF 16890

HumaStar 200

REF 16895

Mode	Open, random-access, STAT
Throughput	HumaStar 100: 100 t/h constant throughput* for single- and double-shot reagents also in mix HumaStar 200: 200 t/h throughput for single-shot reagents* 100 t/h for double shot reagents*
Analysis	Endpoint (bichromatic), Differential endpoint (with sample blank), Fixed time, Kinetic (bichromatic) Multi-standard (up to 8), factor, linear, non linear (cubic-spline, poly-linear and logit-log four parameters)
Samples	Removable sample tray 60 positions: primary tubes 12–12.5 x 100 mm and 10 mm cups Optional: sample tray for 20 primary tubes 12–16 x 100 mm and 20 cups 3.5 ml Sample volume: 2–300 µl Internal barcode reader Automatic pre- and post-dilution Test profiles and replicates
Reagents	Removable reagent tray 30 reagent positions 50 and 20 ml bottles, adapter for tubes and cups Reagent volumes: 5–350 µl Refrigeration to ~12 °C below ambient Substrates, Enzymatic, Turbidimetric
Reaction	Reaction volume: 210–350 µl 80 reusable Bionex® cuvettes 6 mm optical path Heat transfer by air
Pipetting	Needle shock detector Capacitive liquid level detector

*for INC1 preheat time 180 sec.

Wash station	8-step cuvette wash station Systemic and special washing solution HumaStar 100: 4 dispensing needles Water consumption < 1 l/h HumaStar 200: 6 dispensing needles Water consumption < 1.6 l/h
Optical system	9 discrete wavelengths (340, 405, 505, 546, 578, 600, 650, 700 nm, one free position) Band pass: +/– 5 nm Photometric linearity: 0–2.5 Abs Stability: < 1 % drift per day
Data	External computer required (Pentium IV, 2 GHz,
Management	20 GB HDD, 512 MB RAM, CD/R, USB) Windows 7® with .NET framework 4.0 LIS: Bi-directional, polling mode, ASTM, ethernet Designed for touch screen (1280 x 1024 pixel)
Languages	English, French, Spanish Software (other languages can be added)
Printouts	By patient, single test, complete sample, work sheet, method and QCs, calibration curves, kinetics, continuous printing
Power	220–240 or 110–120 Vac, 50/60 Hz, < 200 VA Online UPS 230V included in Standard delivery
Dimensions	69 x 76 x 52 cm (W x D x H)
Weight	51 kg
Environment	16–30°C, humidity < 80 % non-condensing

Human

Diagnostics Worldwide