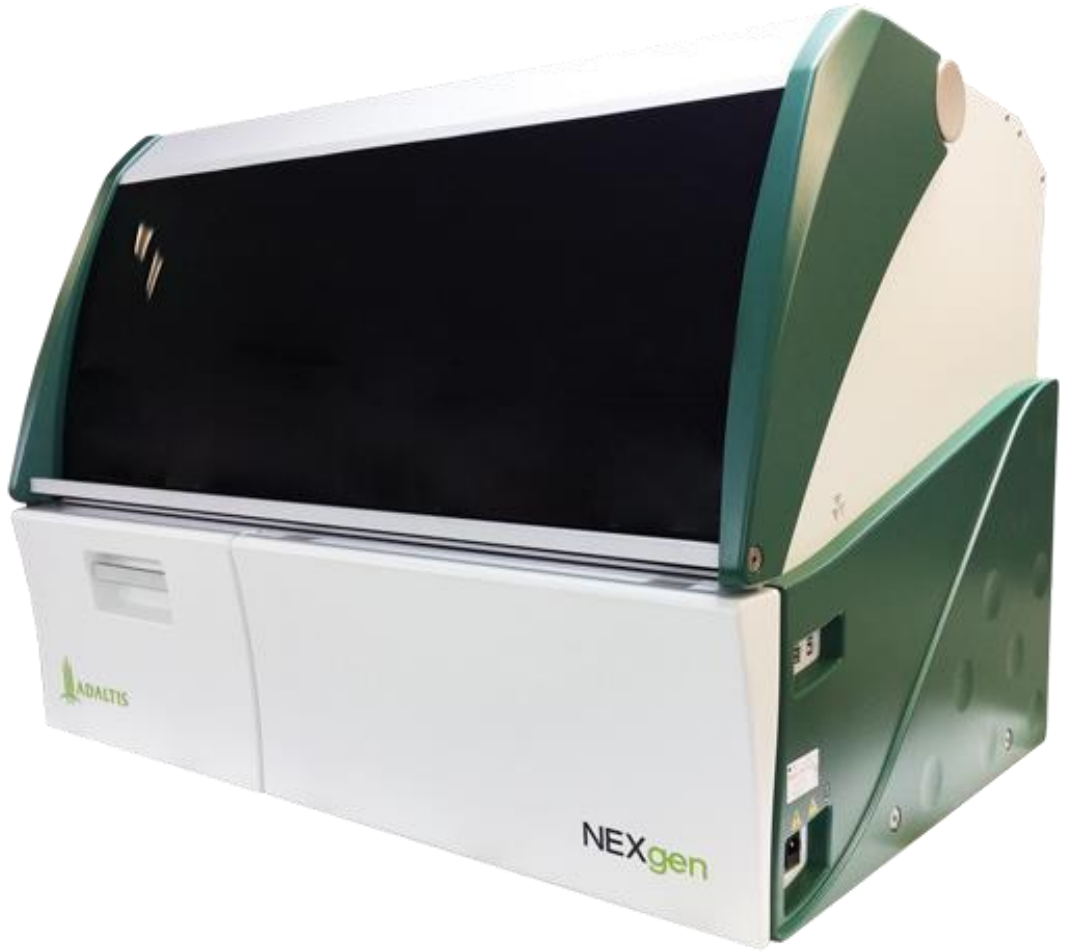
ADALTIS

RELIABILITY & INNOVATION



NEXgen

Fully automated

7 Microplate **ELISA** and **IFA** Analyser – Open System

The NEW Generation in Powerful Microplate Automation

NEXgen

Advantages

- **High-throughput ELISA and IFA platform can process up to 7 different plates, up to 12 assays per plate or 28 IFA slides simultaneously.**
- **The breakthrough technology and unique features of the NEXgen with EIAgen ELISA kits offer higher throughput and labor-saving advantages.**
- **Direct loading from reagents bottles/vials according 'Kit-to-Instrument' could be modified on request.**
- **Remote on line maintenance.**

NEXgen

Principles

- **Flexibility**
  - microELISA *and* IFA
  - Open concept loading area for varying needs
  - Maximum flexibility with modular work area
- **Latest Technology for Hardware**
  - Reduced maintenance
  - Increased precision and reliability
- **Uses latest of our software concepts (*NEXgen operational software*)**
  - Reduced clutter and straight forward setup steps
  - Modular format allows easier updates to specific functionality
  - Remote Diagnostics of SFWR and FRWR

NEXgen

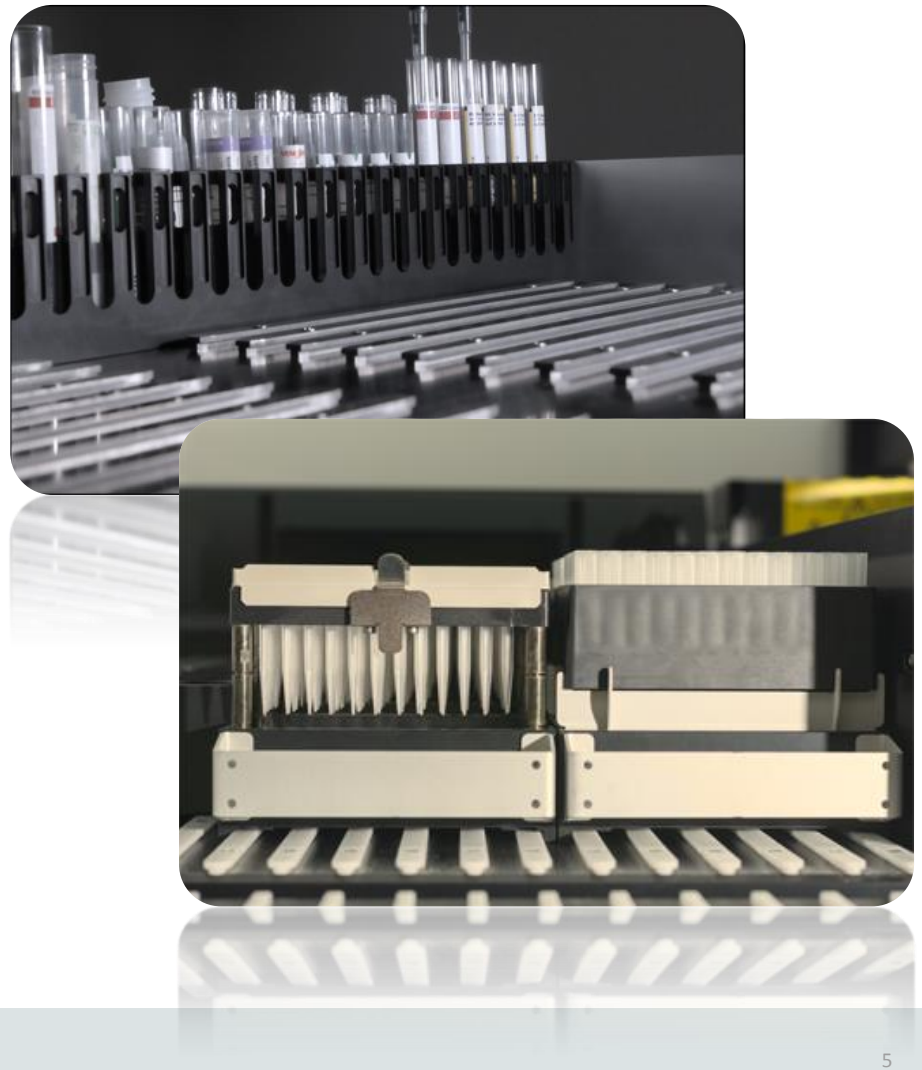
Key differentiating features

- Allow a full microplate pipetting in approximately **less than 10** minutes, faster time than of most any other analyser
- Direct loading of EIAgen reagents bottles/vials ‘Kit-to-Instrument’
- Could be customized to other vials
- Incorporate incubation options that include:
  - Heating: Room to 45°C
  - Programmable speed orbital shaking
  - Use 2 size disposable tips: sample/reagents
  - Clot detection
  - Bubble detection from 50-200ml
  - Positive sample ID reagents , sample, tips barcoded
  - Communication with LIS software
- The NEXgen uses a state-of-the-art LED microplate reading system that allows precision, reduced maintenance and a 3.5 OD dynamic range

NEXgen

Working Area

- Different barcode labels are available for all reagents and samples.
- Flexible loading area with “open rack concept”. The racks can house different vials and samples automatically defined.
- The instrument is able to process all the samples and the reagents needed to completely fill the 7 plates. Full walk away system.



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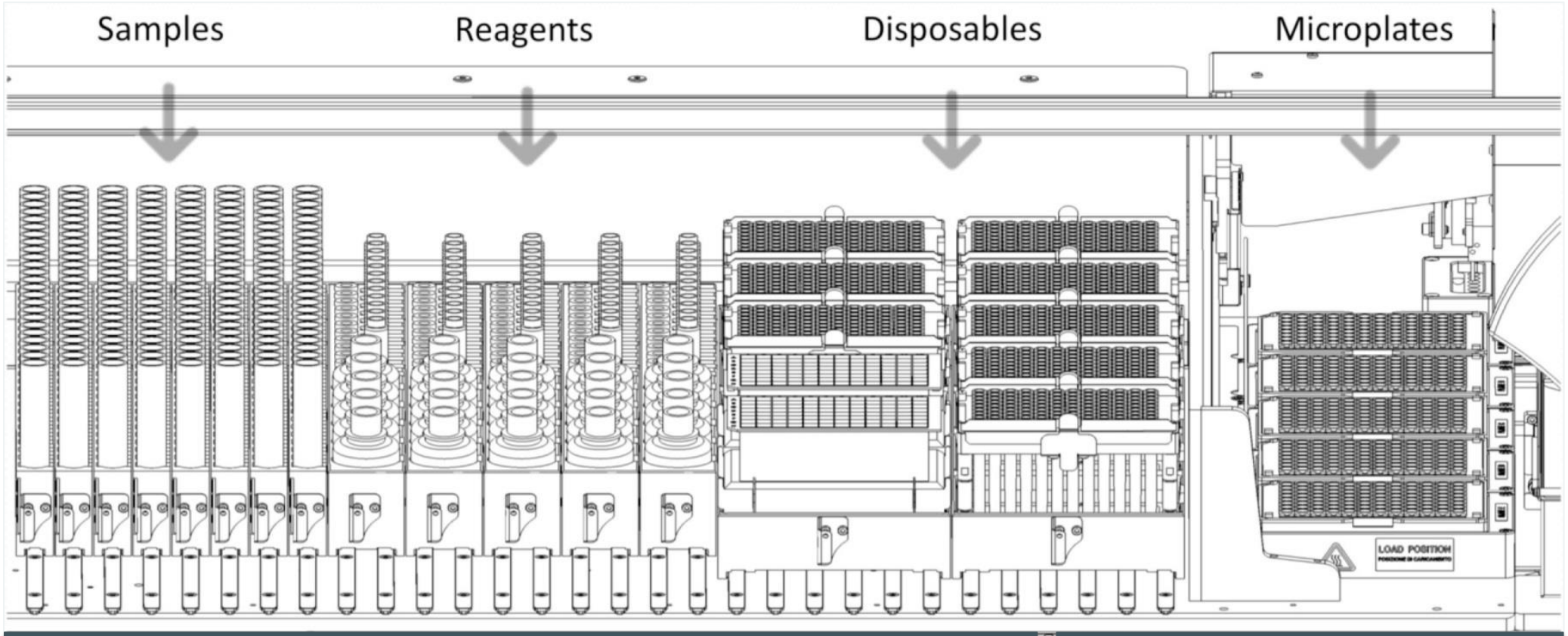
Working Platform Layout



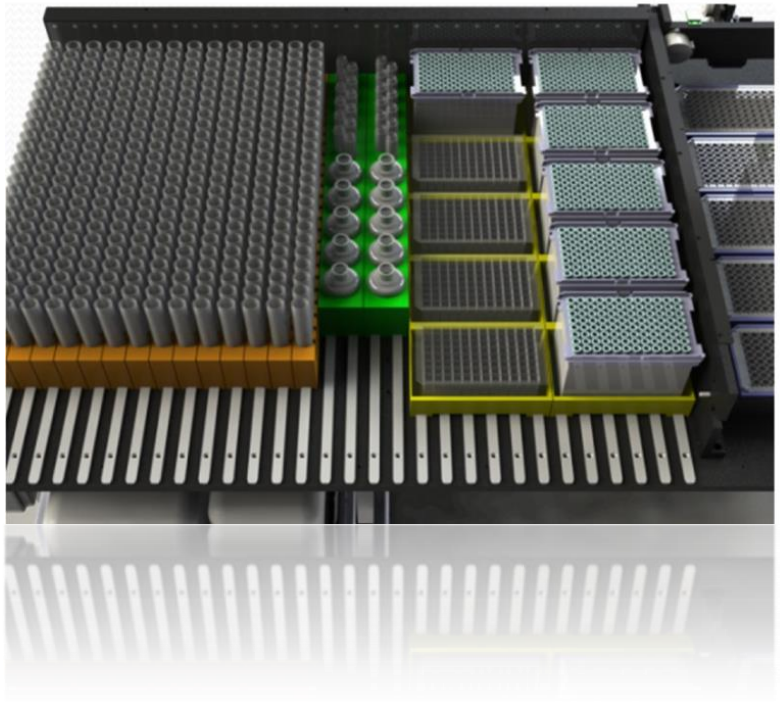
Loading area is flexible with open rack concept fits samples, reagents and disposables in varying quantities dependent on need.

Up to five easily accessible test plates in loading area

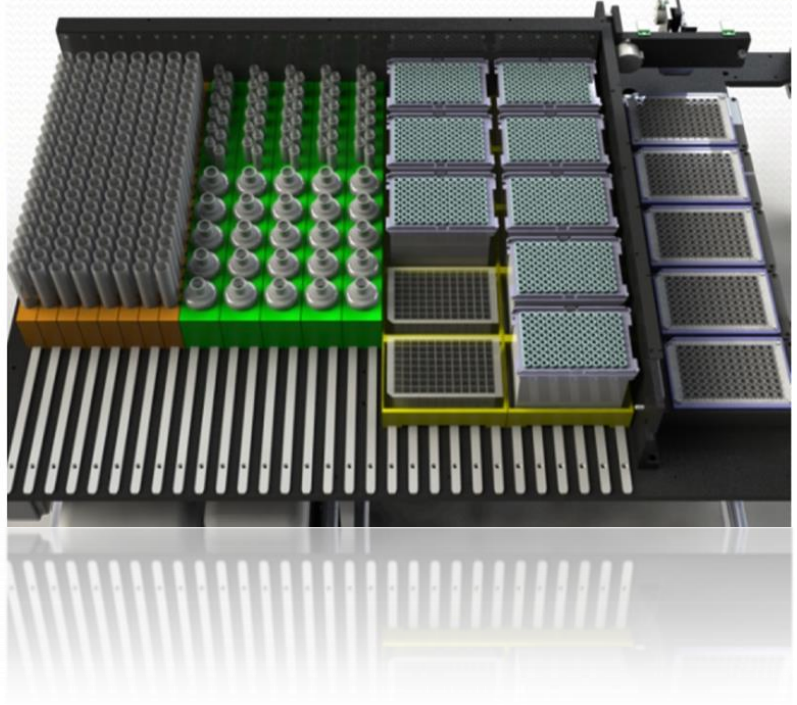
NEXgen

Samples & Assays Loading

Loaded with 300 Samples for One Assay



Loaded with 160 Samples for up to Five Assays



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Assays Loading

Reagents

- NEXgen is using bar coded reagents to validated test routine from the assay.
- All bottles are accommodated in the reagent sliding tray. The loading capacity for each rack is 5 reagents and 12 controls.
- Reagents bottles volume is programmable. The SFWR allows combining more than one assay per reagent tray for maximum flexibility.

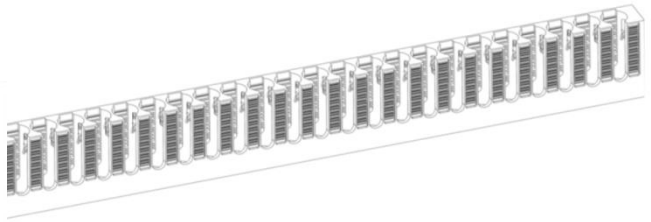
Microplates

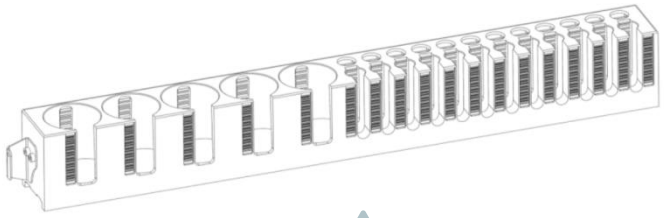
- The working platform has 7 positions, and can accommodate bottom shaped 96-well microplates from the main manufacturers.
- On-board is standard one orbital shaker. The configuration could be upgradable with up to 4-shakers.

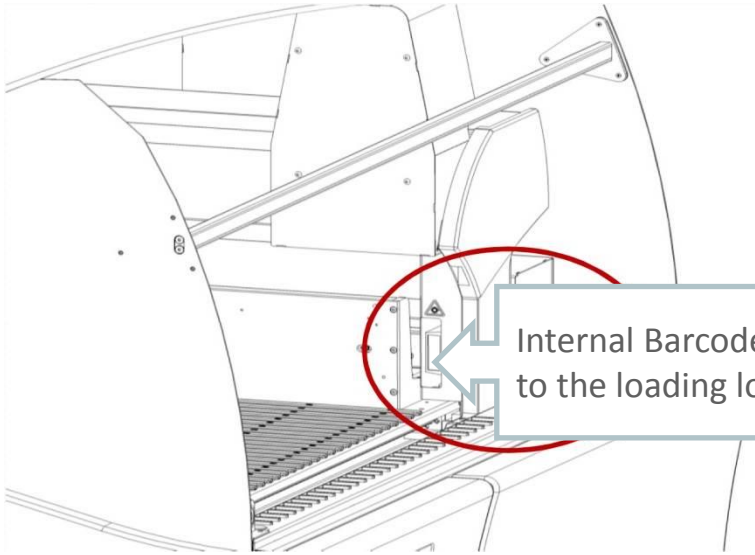
NEXgen

Sample Racks & Barcode Reader

Sample racks hold 24-28 primary tubes
Bar-coding optional







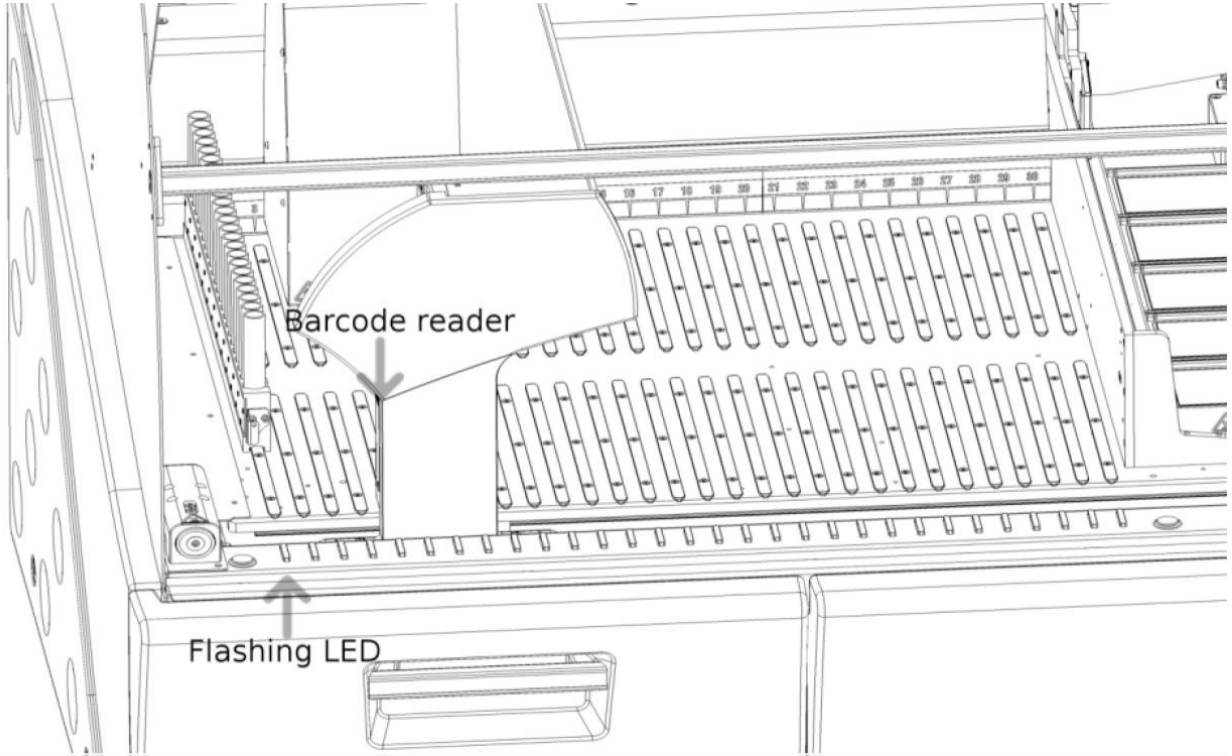
Internal Barcode reader moves
to the loading location of the current rack

Reagents Racks offer flexibility
Bar-coded reagent capability 5-12

NEXgen

Sample Racks & Barcode Reader

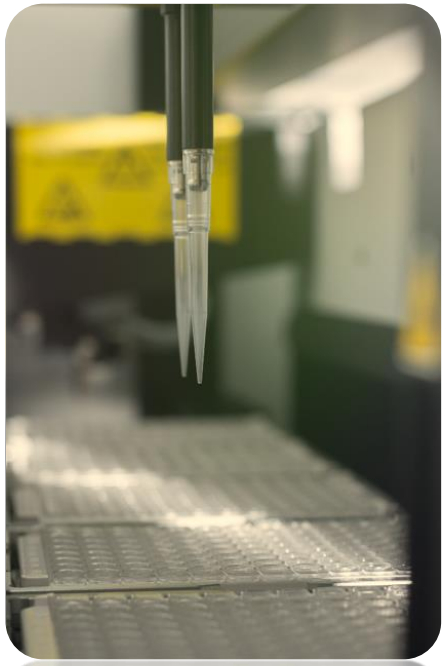
- NEXgen flashes LED to identify location of identified rack.
- Barcode Reader confirms presence of samples and barcode if used.

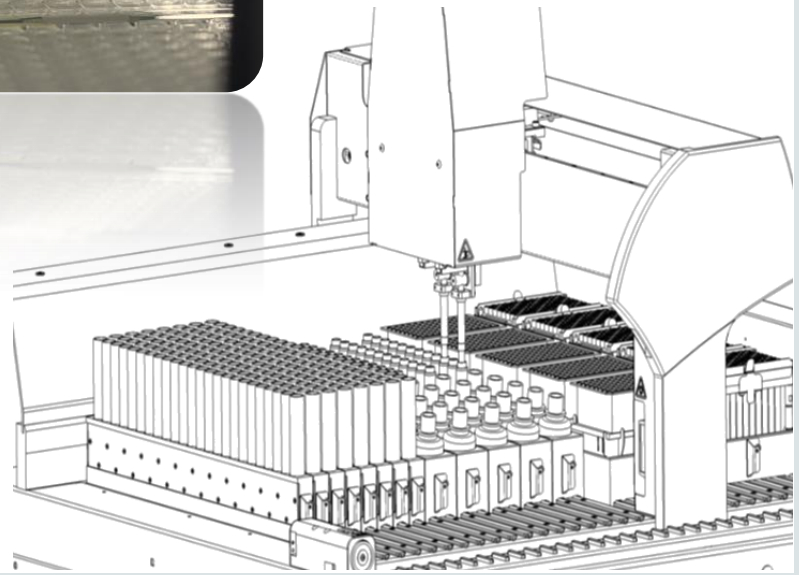


NEXgen

Pipetting Station

- NEXgen is equipped with 2 innovative flow sensors dispensing that allows working simultaneously and independently (min 5ml).
- This enables the instrument to pipette the entire microplate in less then 10 mts.
- Zero carryover by using standard disposable tips.
- The technology secures precision and accuracy, in addition to identification and protection from clots and bubbles during the dispensing and sampling process.





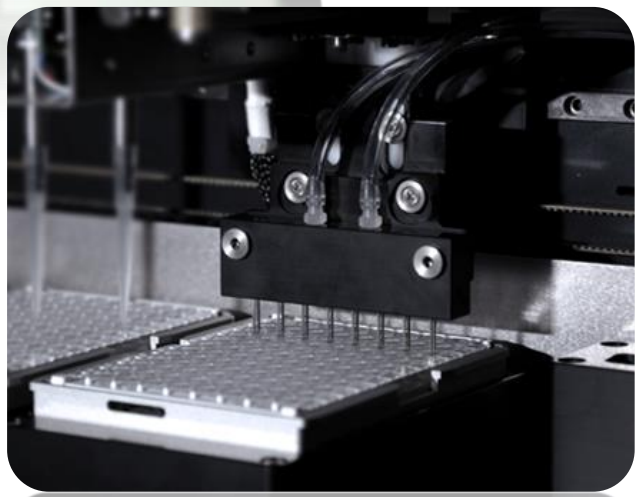
NEXgen

Washing Station

- The washing station washes microplates in the working area, while simultaneously allowing pipetting of the next microplates.

- The SFWR enables the washer
  to maintain correct incubation of each strip of the microplate.

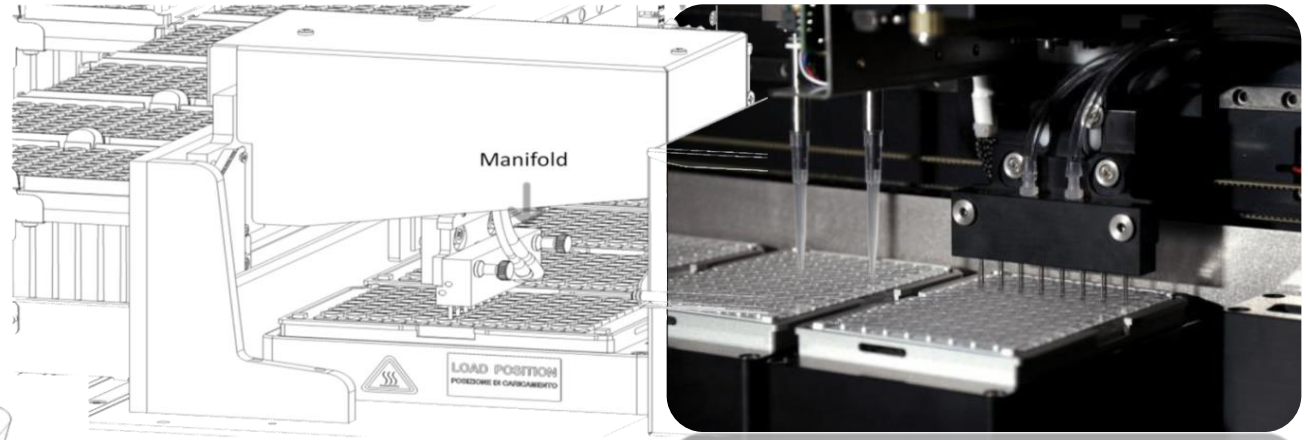
- The washer has the following features:
  - Up to **6** different washing buffers and 1 distilled water.
  - **8** liter capacity waste tank.
  - Ability to control up to 10 levels of the washing flow, which makes the washer extremely flexible and adaptable to any assay.
  - Up to 5 aspiration points.

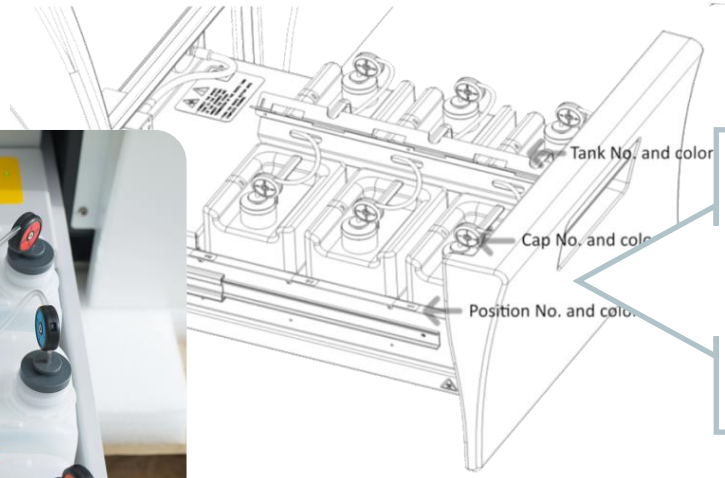


NEXgen

Washing Station

Independent wash Manifold washes plates directly at the incubation stations minimizing plate movements and timing conflicts.

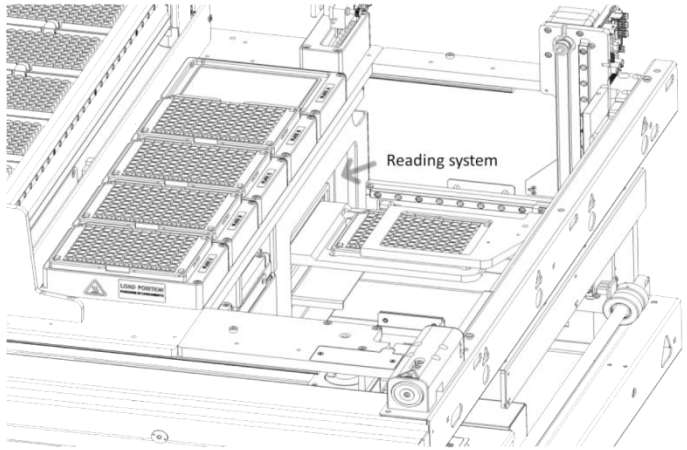




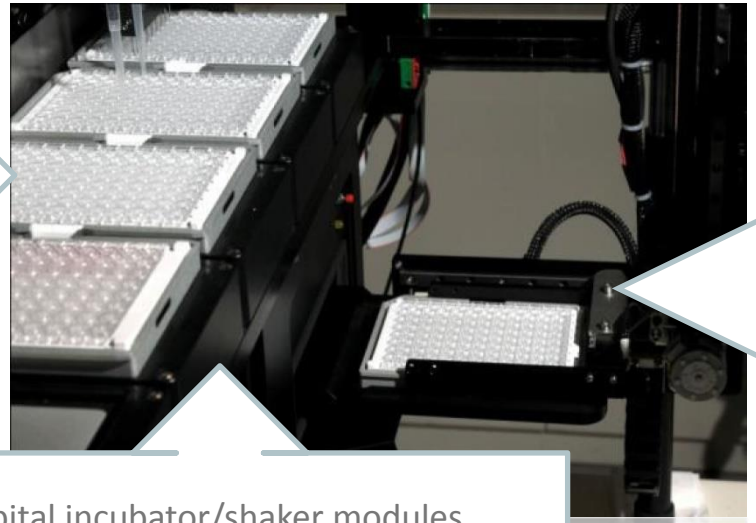
- Six wash buffer bottles (and/or DI H2O) allow assay flexibility.
- Weight sensors relay precise volume information.
- Waste tank has user cotrol draining capability for ease of emptying.

NEXgen

Incubation and Reading



- 5 plates on upper level to be incubated directly on the loading area.
- Allows easy access for both pipettes and wash head.
- 2 further positions under the working area with incubator.



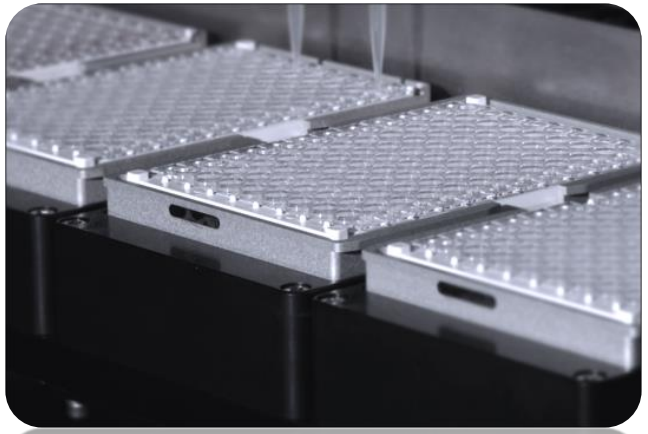
- Microplate elevator arm moves plates as required to incubators, loading positions or reader.

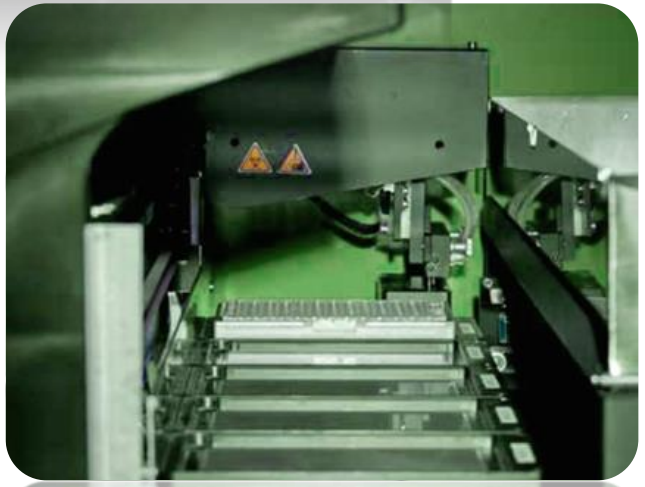
- Orbital incubator/shaker modules available under loading area.
- Up to four shakers are available.

NEXgen

Incubation and Reading

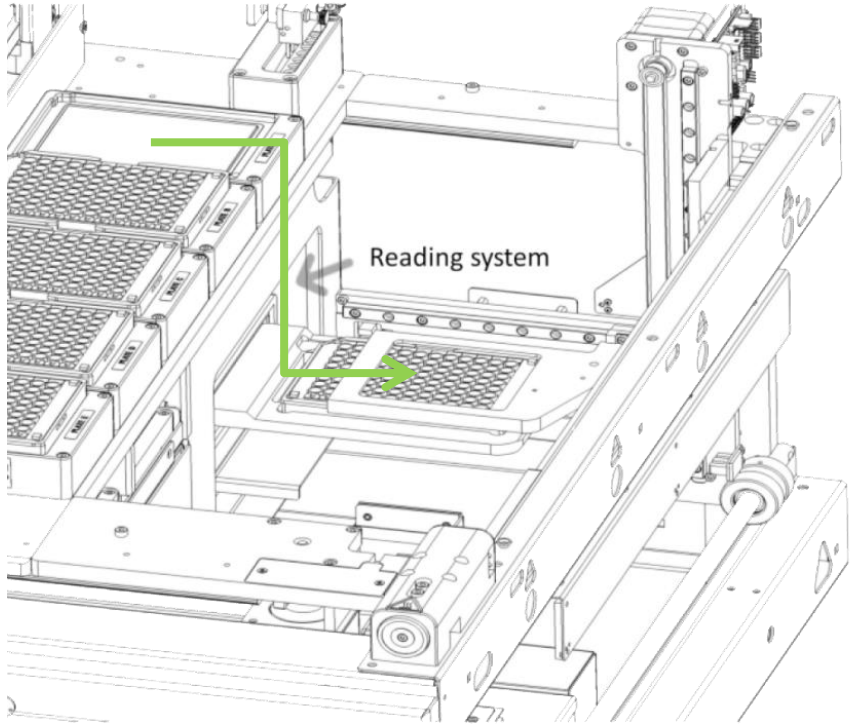
- No movements of the plate from the housing are necessary in order to perform incubation steps.
- The microplates always accessible by the washer and the pipettes.
- This unique approach allows to minimize the drift effect.
- Programmable wash for different assay in the same plate.





NEXgen

The Reading Station



Using a LED microplate allows:

- Precision , linearity of up to 3.5 OD dynamic range.
- Using 2 different LED's to cover the entire spectrum.
- Minimum maintenance - LED has very long life.
- Large measurement range from 340-720.
- Complete plate reading in < 5 sec.
- High resolution scanning: each well is measured at a resolution of 0.2 mm providing 29 measurement values across each well.

NEXgen

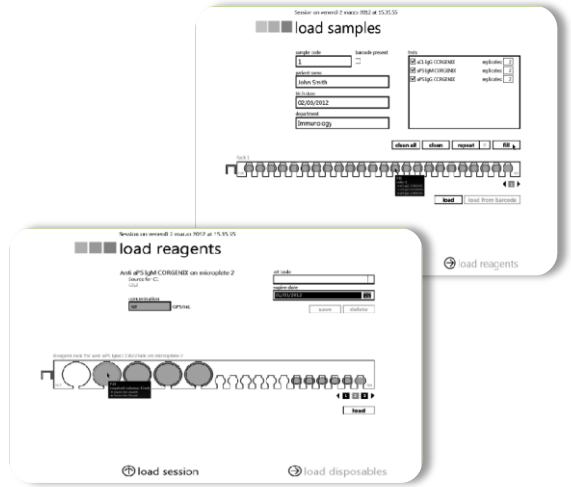
Software - Easy of Use

- Uses embedded dedicated controller.
- State of the art user interface that guides the operator stepwise and hassle free through all operations.
- Easy operations enable the application specialist, technician or operator, to implement in easy way any application protocol on the NEXgen analyser.
- Dedicated software module for communication support will ease your management of the connected LIS/LIMS systems and pre-analytical systems.
- Allows in a single file, the storage of all the data produced by the instrument during a test run. This software module is created to meet regulatory requirements such as 21 CFR Part 11.

One PC can operate multiple NEXgen units.

Designed with a simple stepwise interface. Helps reduce errors and minimizes training time.

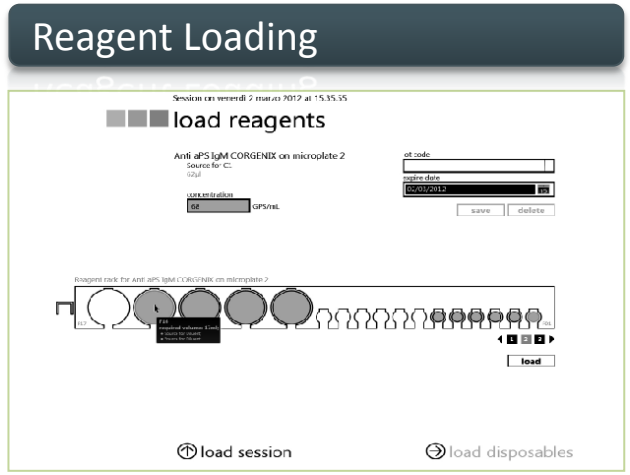
Remote net connection allows for trouble shooting, assay design assistance and technical support.



NEXgen

Software - Easy of Use

- Instrument calculates all reagents, disposables, buffers and micro-strips required for the volume of tests.
- Software takes the user through a step wise process of loading each of these components.
- Reagent Lot numbers, calibrator concentrations, etc. are all recorded for process verification.



NEXgen

Software - Easy of Use

NEXgen operator software enables a ‘true open system’ experience, and gives maximum flexibility for programming a vast variety of assays. If it is a single program, protocol or dedicated profiles, the possibilities are near to unlimited.

- Cut-off (threshold) method for qualitative analysis.
- Interpolation according to calibration curve using the following methods:
  - Cubic Spline
  - Point-to-point
  - 4 parameters
  - Lin/Log
  - Single point
  - Linear regression
  - Log/Log
- Qualitative and Quantitative applications with dedicated controls and calibrators.

NEXgen

Software - Easy of Use

In addition to automatic management of different application protocols in a single session, creation of work lists, customized reports:

- tests/applications
- job lists
- test result
- results by sample
- history of performed testing

* Adaltis Service engineers can provide remote services and modify the instrument calibration, load and assay protocols. As an option trouble shooting may be done almost in real time.

NEXgen

Maintenance

Daily

- End of run cleaning procedure – fully automated.

Weekly

- General cleaning of work area of any liquids, spills.
- Empting of the tanks to remove residual buffers and rinsing with DI-water.

Monthly

- Wipe down of work area, racks and tip disposal bin with hypochlorite solution.
- Inspect tanks for possible leaks.

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NEXgen

Technical Specifications

General Specifications

Number of plates	**Standard 7**
Number of IFA slides	**Standard 28 (7 holders x 4)**
Sample capacity	**Up to 616 primary tubes against a variety of assays**
Continuous sample and tips loading	**Yes**
Sample tube size	**Diameter: max 16 mm / Height: max 100 mm**
Number of reagents	**From 5 to 40**
Number of controls	**From 12 to 96**
Assays per plate	**6-12 assays (depending on tests compatibility)**
Reagent fluid capacity	**Up to 60 mL bottles**
Self-test at start-up	**Yes**

Other Specifications

Number of reagent tips	**96**
Reagent pipetting volume	**Up to 1000 µL**
Number of sample tips loaded	**Up to 9 tip racks (864 in total). No tip number limits in continuous loading mode**
Dilution Range	**1 part in 200 one stage dilution 1 part in 40000 two stages dilution**
Direct in-plate pre-dilution	**Yes**
Barcode reader for samples and resources identification	**Yes, with capability of reading EAN/UPC, Code 39, Interleave 2 of 5, Code 93 and Code 128 barcode formats**

Dimensions

Size	**Width 130 cm, Depth 94 cm, Height 98 cm**
Weight (net)	**220 kg**

NEXgen
Technical Specifications

Pipetting Station

Number of pipettes	**2 independent channels using disposable tips for sample and reagents**
Sample tip type	**Standard disposable tips**
Sample tip size	**200 -1000 µL**
Sample pipetting volume	**1-200 µL (with large tips up to 1000 µL)**
Estimated transfer time	**< 9 seconds per sample**
Time to dispense	**< 14 minutes (for 96 samples with volume of 100 µL)**
Precision	**Reagents: ≤ 3% CV (10 Replicates) for any operating volume above 25 µL Samples: ≤ 3 % CV (10 replicates) for any operating volume above 10 µL**
Accuracy	**Reagents: ± 3% CV (10 replicates) for any operating volume above 25 µL Samples: ± 3% CV (10 replicates) for any operating volume above 10 µL**
Adding reagent to full 96 plate	**From 3 to 7 minutes depending on reagent volume (50 to 200 µL)**

Incubation Station

Number of incubators	**Standard 7, with following configuration: 5 independent under plates on the working area and 1 under plate below the working area 1 shaker-incubator unit below the working area 1 to 3 optional extra shaker-incubator units below the working area**
Temperature range	**RT (+ 7°C) to + 50°C**
Accuracy	**± 1°C**
Temperature uniformity	**± 1°C**
Shaking	**Yes (optional up 4 plates) 200-1000 rpm**

NEXgen
Technical Specifications

Reading Station

Photometric range	**0 - 3.3 OD**
Spectral range	**400 nm to 700 nm**
Filter slots	**8**
Precision	**0.01 SD (at 0.000 to 0.500 OD)** **≤ 1% CV (at 0.501 to 2.000 OD)** **≤ 1.5% CV (at 2.001 to 2.500 OD)** **≤ 5:2.0% CV (at > 2.501 OD)**
Accuracy	**±0.01 OD or 2.5%** **(at 0.000 to 3.300 OD)** **whichever is greater**
Read time	**5 seconds, single wavelength** **8 seconds, dual wavelength**
Read time	**< 5 seconds**

Washing Station

Manifold configuration	**1 (8-way wash head)**
Programmable volume	**-50 - 2000 µL**
Residual wash volume	**< 3 µL per well in a flat bottom plate**
Wash containers	**6 tanks at 2.0 L, 5 washing buffer** **+ 1 distilled water or washing buffer**
Buffer level alarm	**Yes (with continuous level sensing)**
Waste container	**8 L with continuous level sensing**
Dispense precision	**≤5% CV (with 300 µL H2O in 96 well)**
Liquid level sensing	**Gravimetric for all tanks and waste container**

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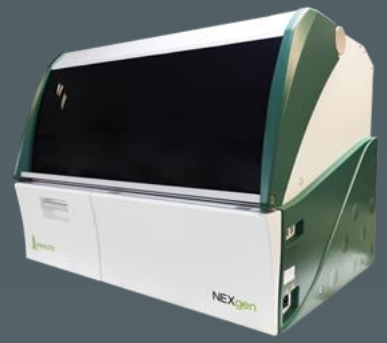

Additional information for NEXgen at:

http://www.adaltis.net/products/ivd-instruments/microelisa/nexgen/

Adaltis is dedicated to customer satisfaction and will do the utmost to respond quickly to your needs.

We look forward to an exciting and jointly profitable future with partners like you.

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