

Genetic Screening Processor

Newborn screening



The instrument is controlled from the touch-screen of the GSP User Interface.

Reagent storage compartments are temperature controlled.

GSP™ instrument for measurement of neonatal screening samples

Description

The GSP™ instrument is a high throughput batch analyzer intended for quantitative or qualitative measurement of neonatal screening samples on 96-well microplates.

Operated by means of a touch-screen, the instrument is fully automated, performing every stage of an assay from retrieval of the sample plate from the stacker to measurement and reporting of results.

System Specifications

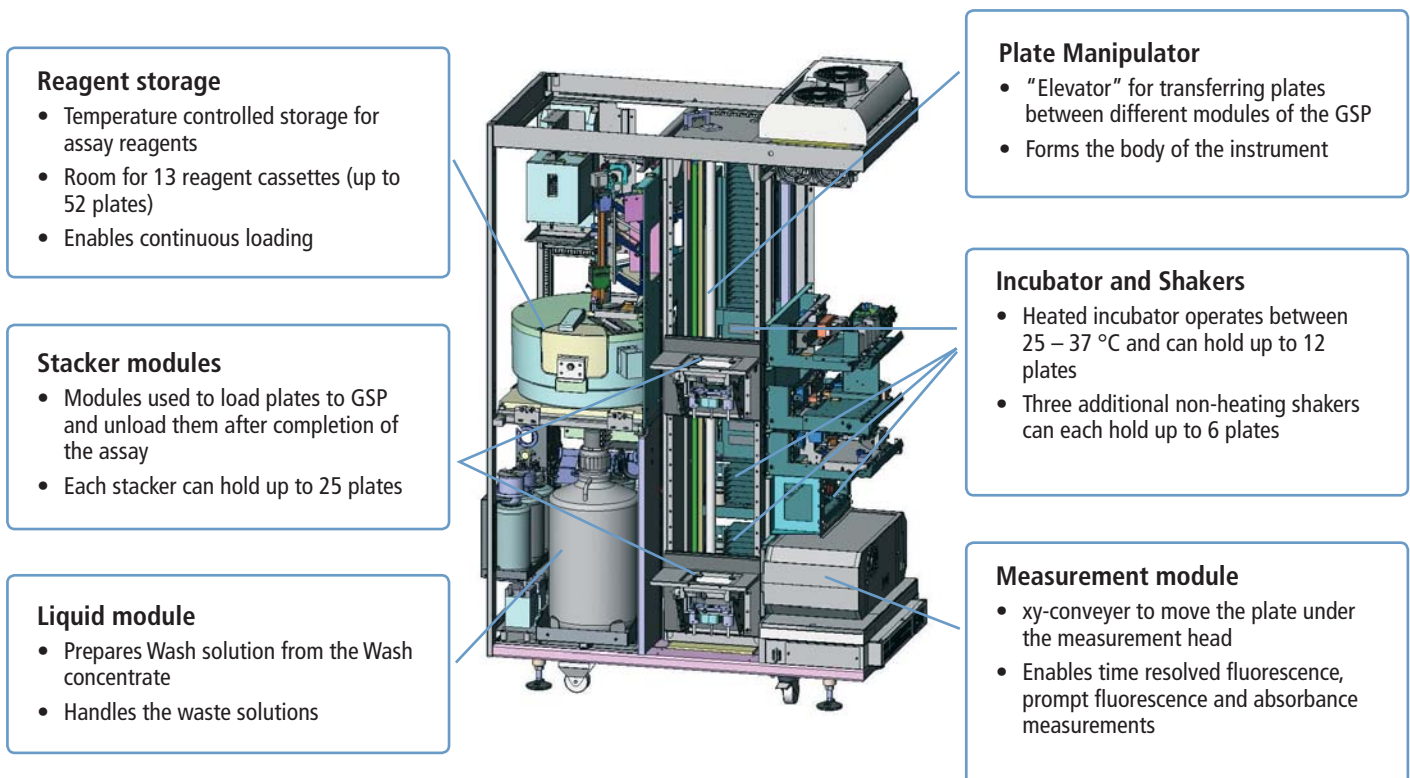
Physical dimensions	Height	1960 mm (77.2")		
	Width	1310 mm (51.6")		
	Depth	760 mm (30.0")		
	Weight	610 kg (1345 lb)		
Power requirements	Power consumption	1000 VA		
	Mains voltage	100 V or 240 V, 50/60 Hz		
Environmental conditions	Operating Temperature	18 – 30 °C		
	Temperature range	18 – 27 °C	Relative humidity	10 – 80 %
	Temperature range	28 – 30 °C	Relative humidity	10 – 65 %
Noise	< 60 dB			
The water used for preparing wash solution and for rinsing has to be deionized.				
Samples	Sample type	Blood disks from dried blood spots punched into 96-well plates		
	Sample identification	Barcode reader or keyboard input		
Loading	Continuous sample loading Continuous reagent loading Continuous bulk reagent loading			
Bulk Reagents				
Washing and rinsing	Wash solution	Automatic dilution of Wash concentrate from a mains water line (deionized) or from an external bottle outside the instrument		
	Rinse water	Automatic filling from a mains water line (deionized) or from an external bottle outside the instrument		
Liquid waste	Waste capacity	Automatic disposal if connected to a waste line OR manual disposal 16 L (15 plates)		

Performance Specifications

Capacity	Sample capacity	26 plates (2496 wells)		
	Reagent capacity	52 plates (up to 13 reagent cassettes)		
	Heated incubator module	12 plates		
	Shaking module	3 x 6 plates		
	Wash concentrate capacity	2 liters		
	Manual water filling or waste emptying	11 plates before user intervention required		
	Automatic water filling and waste emptying	No restrictions		

Low volume reagent pipette	Volume range	5 – 50 μ l
	Precision (CV%)	< 1.5 %
	Accuracy	within \pm 8 %
High volume reagent pipette	Volume range	25 – 200 μ l
	Precision (CV%)	< 1.5 %
	Accuracy	within \pm 4 %
Measurement unit	Measurement modes	TRF, FI, Abs
	Signal with 1 nM Eu	1 000 000 cps \pm 17%
Humidity	Plate storage area	< 60 %
Temperature	Temperature inside the instrument	25 \pm 2 $^{\circ}$ C
	Reagent storage temperature	10 \pm 2 $^{\circ}$ C
	Heated incubator module	25 - 37 $^{\circ}$ C (\pm 2 $^{\circ}$ C)
Analytes	Maximum number of different analytes	13 simultaneously

The functional modules contained within the GSP™ instrument



Safety Requirements & Conformance to Directives

The GSP instrument meets the following safety standards: IEC 61010-1:2001, CAN/CSA-C22.2 No. 1010.1-92 + A2:97 and UL 61010A-1:2002 R12.02. The processor conforms to EU directives 89/336/EEC, 73/23/EEC and 98/79/EEC.

Ordering information

2021-0010 Genetic Screening Processor

The Genetic Screening Processor includes GSP instrument and GSP Workstation.

The GSP instrument includes:

High volume reagent tips (960)

Low volume reagent tips (1440)

Cassette pack (3x) for tips and reagents, each containing:

- Reagent cassette (6x)
- Low volume tip cassette (1x)
- High volume tip cassette (1x)
- Waste tip cassette (1x)

Anti-evaporation caps (3 x 10)

Magazine for 25 plates, input / output (2x)

External barcode reader

External keyboard with touchpad

Installation kit containing necessary cables and tubing

Service kit containing parts for routine maintenance of the GSP instrument

User manual (English paper version and other available language versions on a CD)

Instrument manual (English)

2021-3010 GSP Workstation includes:

Computer with GSP Workstation software

GSP Workstation Quality Control manual (English paper version and other available language versions on a CD)

GSP Workstation Result Viewer, Kitlot Editor and Plate Generator manual
(English paper version and other available language versions on a CD)

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