VELA DIAGNOSTICS

SENTOSA SX101

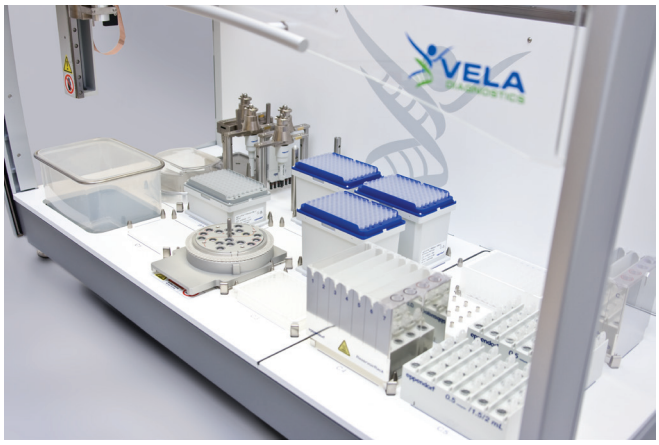
One Instrument. Endless Possibilities.

Automated sample preparation, nucleic acid extraction, PCR set-up and NGS library preparation

www.veladx.com

Flexible Solutions with Open Channel Capabilities

The *Sentosa*® SX101 is a multi-purpose liquid handling platform with open channel capabilities that automates various liquid handling steps including clinical sample extraction, PCR set-up, NGS library preparation, Sanger sequencing cleanup and many more.



Sentosa® SX101 Instrument Features and Benefits

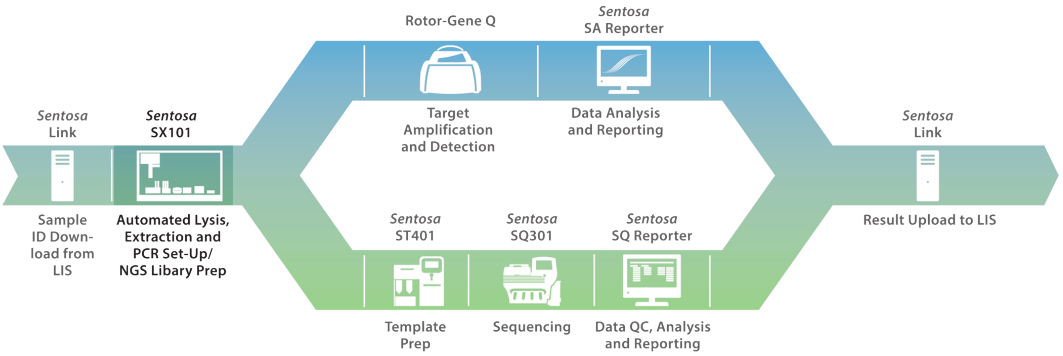
- Easy-to-implement walk away automation with pre-defined pipetting protocols for e.g. sample extraction, PCR setup and NGS library preparation
- Open channel option for customized pipetting protocols providing endless possibilities for laboratory automation
- Primary tube handling capabilities for seamless workflow integration
- Supports extraction of 21 validated clinical sample types covering a broad spectrum of sample prep requirements
- Random Access: allows assignment of different assay combinations to each sample for maximum flexibility
- Intuitive graphical user interface with easy to use touchscreen monitor
- Sample ID tracking functionality to ensures sample traceability
- Bi-directional LIS connectivity for seamless integration into existing IT infrastructure
- Continuous audit trail with user specific digital signatures in compliance to CFR 21 Part 11
- CE-IVD marked for the development of diagnostic workflows

21 Clinical Sample Types Validated on *Sentosa*® SX101

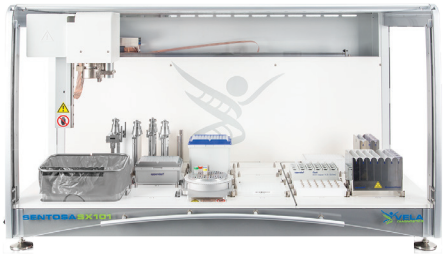
Sample Types (all validated)	PCR Validated Assays	NGS Validated Assays
FFPE	KRAS, NRAS, BRAF	Melanoma, NSCLC, CRC, Thyroid
Cell-Free DNA*	KRAS, NRAS, BRAF	Melanoma, NSCLC, CRC, Thyroid
Whole Blood	CMV, EBV, HSV1/2, VZV, BKV, HHV6	Leukemia*
Plasma and Serum	CMV, EBV, HSV1/2, VZV, BKV, HHV6, HBV, HCV*, ZIKV	HIV*, HCV
Cerebral Spinal Fluid	CMV, EBV, HSV1/2, VZV, BKV, HHV6	-
Urine	BKV, CMV, ZIKV	-
Stool	Rotavirus, C.Diff, Norovirus, Salmonella	-
Total RNA (Blood)	BCR-ABL m/M	-
Nasopharyngeal Swab	Flu A/B & RSV, H7N9, MERS-CoV	-
Nasal Swab	MRSA/SA, Flu A/B, RSV, H7N9, MERS-CoV	-
Genital and Oral Swab	HSV1/2	-
Sputum	MTC	-
Rectal and Perianal Swab	vanA/vanB	-
Throat and Wound Swab	Strep A	-
Lesion Swab	VZV	-
Groin, Axilla and Throat Swab	MRSA/SA	-

*in development

PCR



NGS



Real-Time PCR Workflow

In the PCR set-up, the *Sentosa*® SX101 effortlessly sample extraction and proceeds to set up samples for downstream real-time PCR in various output formats (rotor disk or 96-well).

Feature	Specifications
Throughput	8, 24 or 48 samples/ run (192 reactions/day#) 72 samples/ run (360 reactions/day#)
Time to result	~ 4 hours/run
Runs/day	4 (last run with PCR o/n)
Assay combinations	1 - 4 assays/run
Assays/day	Up to 16 different tests
Open channel capability	Yes
Reduction of system complexity	Up to 66%
Reduction of time to result by combination testing	Up to 75%
Reduction of hands-on time due to automation	20 - 30%
Reduction of service and training requirements	1 service contract
Reduction of hands-on time due to automated sample reporting	90% vs manual
Primary tube handling capability (non IVD)	Yes

Next-Generation Sequencing (NGS) Workflow

In the NGS workflow the *Sentosa*® SX101 executes the sample extraction and NGS library preparation with ease, reducing technician hands-on time.

Feature	Specifications
Throughput	Virology: Up to 15 samples/run Oncology: Up to 7 samples/run
Time to result	~ 2 days
Open channel capability	Yes
Reduction of hands-on time due to automation	80%
Reduction of service and training requirements	1 service contract
Reduction of hands-on time due to automated sample reporting	90% vs manual

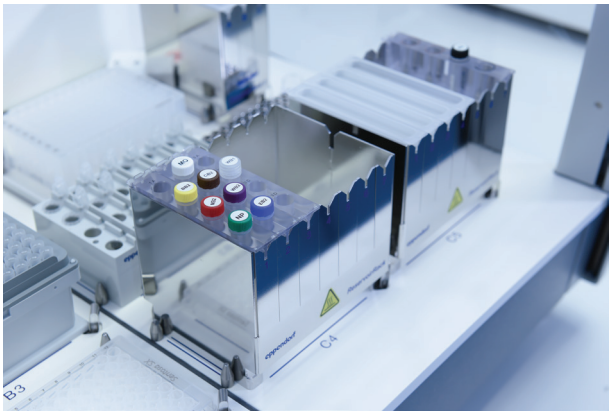
based on 8 hour shift and assay dependant
o/n= overnight

Ordering Information

Equipment / Software	Description	Item Number
Sentosa® SX101 Instrument	Automated sample processing system	400089

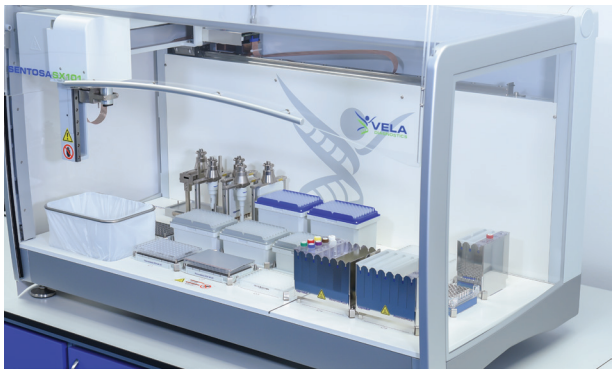
DIMENSIONS

Width : 107 cm (42 inches)
Height : 67 cm (26 inches)
Depth : 61 cm (24 inches)
Weight : 95 kg (209 lb)



ELECTRICAL REQUIREMENTS

Voltage : 100 V to 240 V +/-10%
Fuses : T 10 AL/250 V
Frequency : 50 Hz to 60 Hz +/-5%
Power Consumption : 245W
Overvoltage Category : II (IEC 610 10-1)
Interfaces : USB 2.0, Ethernet 100Mbit/s



ENVIRONMENTAL REQUIREMENTS

Noise Output : 56 dB (A)
Heat Emission : 572 kJ/h
Operating Conditions : +15 °C to + 35 °C (59 °F to 95 °F)
55% to 75% relative humidity
up to 2000 m NN
Storage Conditions : -20 °C to + 70 °C (-4 °F to 158 °F)
10% to 80% relative humidity

GENERAL

Protection Class : 1
Degree of Contamination : 2
Detector : Optical Confocal Infrared Sensor

IVD: For *in-vitro* diagnostic use. Not for distribution in US.
Inclusive of all requisite licenses.

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