



-196°C (LN₂)


STV
Series

BiO.Li.X!

STV-SERIES - AUTOMATED BIO-LIBRARIES

Collections and use of biosamples requiring cryopreservation are rapidly growing as well as the requirements to manage these samples. Interest in automation at cryo level temperatures ($<-185^{\circ}\text{C}$) is unprecedented. LiCONiC, industry leader in automated sample handling solutions for 25 years has responded with a truly capacity scalable, fully automated, vapor phase LN2 cryo storage solution. The STV series was implemented in 2013 for a large scale population cohort study, with daily sample input in the thousands. The technology is scalable down to applications of $<50,000$ samples.

LiCONiC once again applies the BiOLiX! Bio-Library Storage Systems principle of 'built fit-for-purpose' to provide an industry leading solution for a dynamically changing automated storage application requirement.

MAIN FEATURES

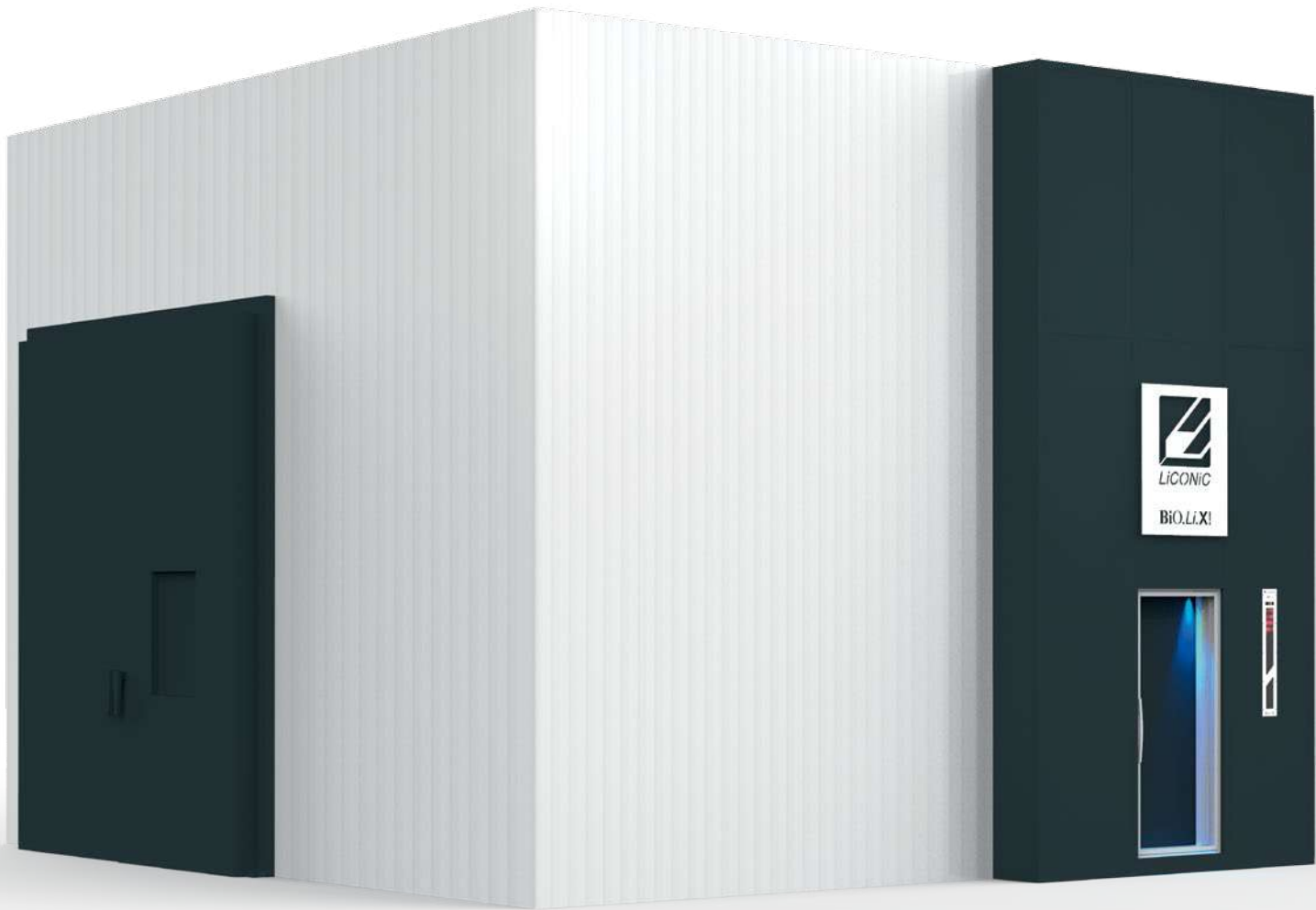
- Vapor phase nitrogen (dry storage) provides an optimal sample safety
- High density and energy efficient cryogenic vessels
- Proven, reliable LiCONiC overhead trolley rack transport
- Simple, effective robotics
- Uses Liconic feature rich Plate Explorer to track and create sample orders
- Integration to LIMS database

STV-SERIES PRODUCT OVERVIEW

The STV-Series is the first to market capacity configurable automated cryogenic (-185°C) storage system. These systems employ LiCONiC's unique high density, motorized, vapor phase LN2 cryogenic vessels. Samples are retrieved from storage in rack format or an option for sample picking provides a fully automated retrieval process.

LiCONiC offers a truly scalable automated cryogenic storage solution providing data precision, high density, and sample integrity, all challenges in a manual access cryogenic process. The STV-Series provides the benefits of automation plus the features of LiCONiC's unique cryogenic storage tanks.

- The only configurable capacity automated cryogenic (-185°C) storage system available in the market
- Small to large scale systems available
- LiCONiC's proprietary high density storage vessel design
- For cell lines, cord blood, stem cells, tissues, etc.
- Full rack or picked individual sample retrieval options available
- Sample capacities of 50k to > 20 Million



AUTOMATION BENEFITS

- Efficient sample storage and retrieval 100% access safety
- Samples not exposed to room temperature during retrieval
- Precise data management and sample tracking
- Assurance of long term sample integrity

LICONIC CRYOGENIC VESSEL

- Extremely high density storage
- Storage capacity configurable for variety of container types and racks
- System dimension fit to room size
- Contamination - free dry storage
- Long temperature hold time



STV CAPACITIES

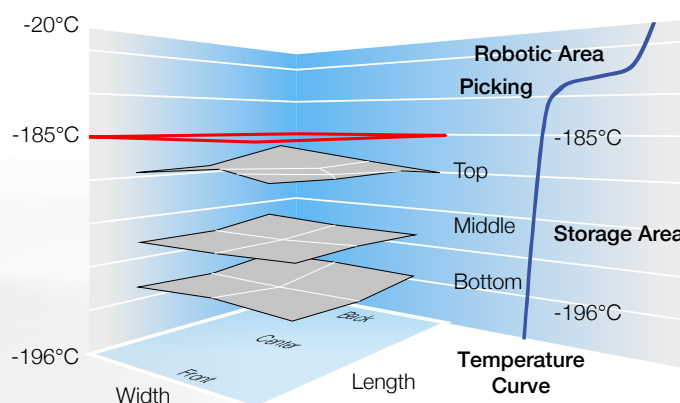
BiO.LiX! STV-Series examples			STV1k8-CT		STV73k5-CT		STV337k9-CT	
Labware	Plate height	Pitch	Levels	Samples	Levels	Samples	Levels	Samples
FluidX 0.3 ml Screw Cap	19.1 mm	25 mm	40	161'280	60	6'508'800	60	29'940'480
Micronic 0.5 ml Screw Cap	28.5 mm	35 mm	28	112'896	43	4'664'640	43	21'457'344
LVL LX1000	45.6 mm	52 mm	19	76'608	29	3'145'920	29	14'471'232
Thermo Matrix 1.0ml Screw Cap	54.6 mm	61 mm	16	64'512	24	2'603'520	24	11'976'192
Greiner Bio One 2 ml	48.0 mm	54 mm	18	36'288	28	1'518'720	28	6'986'112

STV STORAGE CONDITIONS

The safety of samples in the STV system is built around the proprietary storage tank and system design. Extremely efficient insulation design ensures a small temperature gradient from the bottom to the top of the tank and long temperature hold times in case of LN2 supply disruption. Storage tanks can be moved in and out of the system safely and efficiently (depending on ordered config.).

The STV-Series ensures the safety and viability of your precious cell stocks and tissue specimens by limiting transfer for any

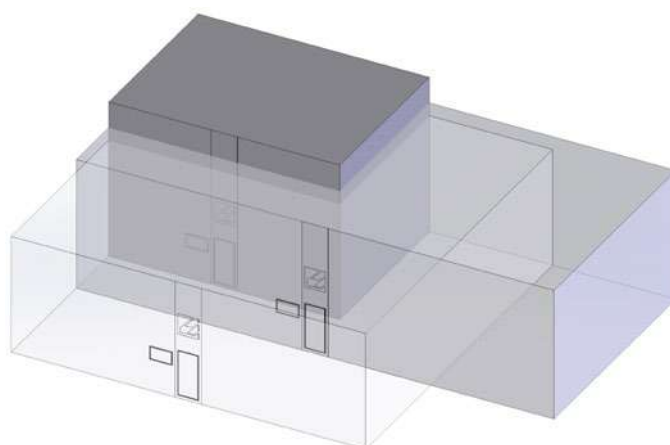
sample movements within the automation envelope. Robotic transfers between critical temperature zones (storage locations and the sample picking platform) are done very quickly through ultra-dry refrigerated climate. LiCONiC is the only store where samples are never exposed to room temperature. The unique refrigeration layout keeps the robotics absolutely free of frost. LiCONiC's unique chest freezer design naturally creates numerous benefits two of the most important are:



1. Three climate zones, one for buffer and picking at -80°C, second for the robotics at -20°C and third for the samples at -185°C.
2. Proven Stable horizontal temperature layers within the cryo storage area.

SPACE EFFICIENCY

The STV-Series Automated BioLibraries make best use of given room constraints by its "built to space" modular design. System dimensions, layout are optimised to the individual application's needs and workflow requirements.



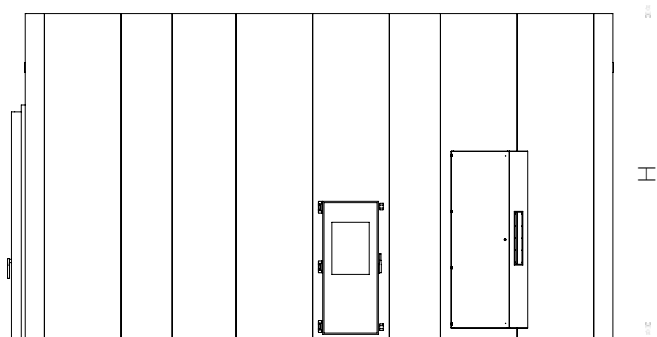
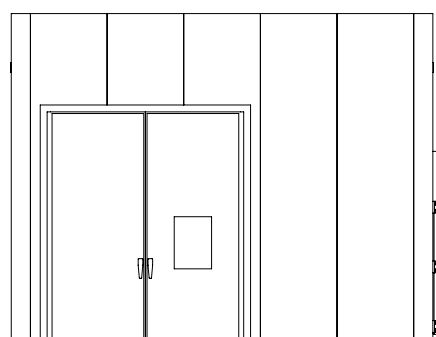
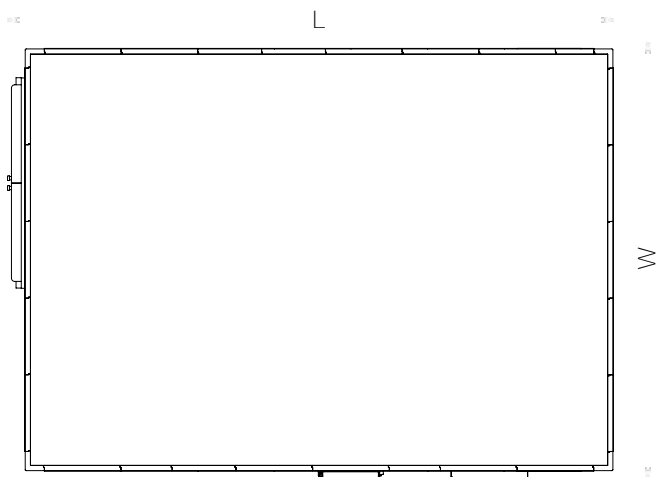
INTUITIVE SOFTWARE

Graphical Job Creation for Import/Export of Samples
 Easy Search of Samples by Barcode, Name, Data etc.
 Complete Audit Trail
 Automatic Inventory Defragmentation
 Automatic Data Backup
 Integration to LIMS Database
 Remote Support
 Mobile Device Control
 User Access Security

OPTIONS & ACCESSORIES

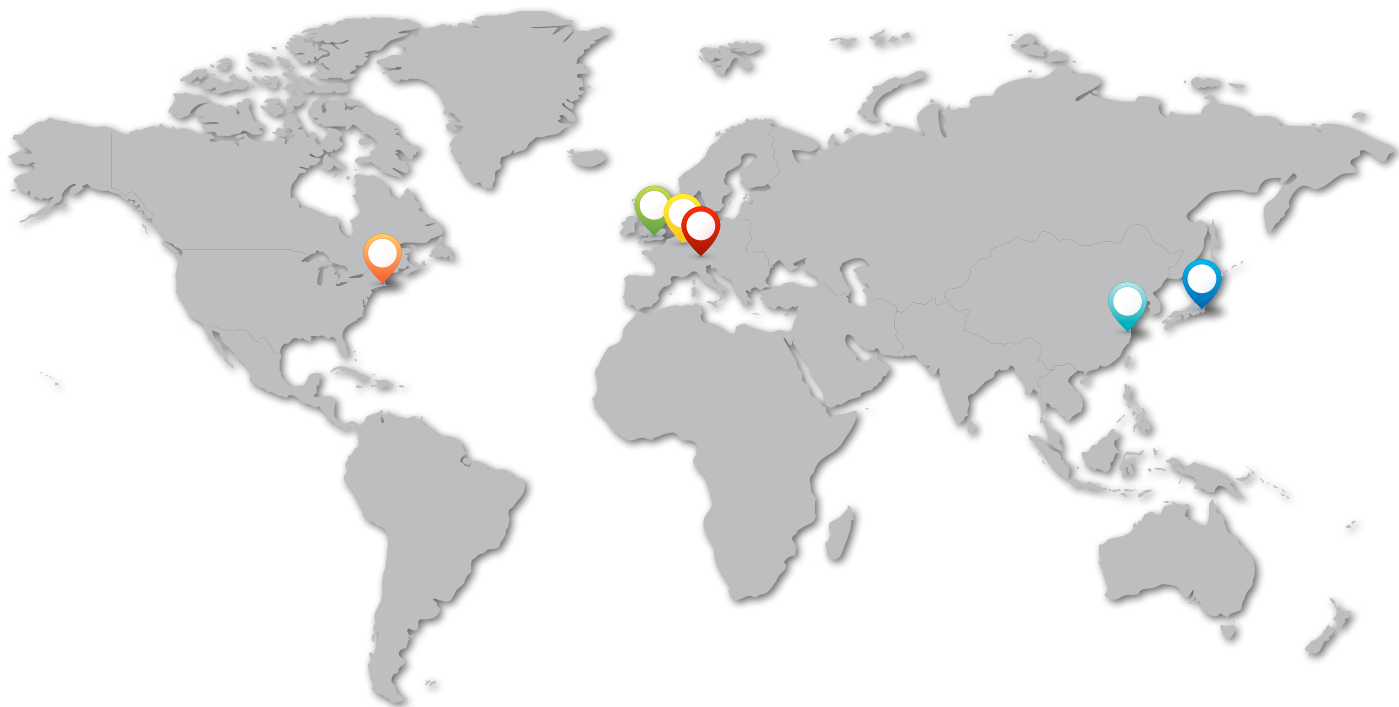
Barcode Reader
 Flexible Labware Support
 Configurable to Room Constraints
 Tablet Interface
 External Database Integration
 Remote Monitoring
 Internal Vision System
 Multi - Tube / Vial Picker
 Online and Offline Movable storage tanks
 2D - BCR Rack Scanner
 Redundant Refrigeration
 Dynamically Configurable Storage Cassettes
 External Interface Station

STV DIMENSIONS



 STV Dimensions examples			
Type	L= length	W= wight	H= hight
STV1k8-CT	1700 mm	1560 mm	2300 mm
STV73k5-CT	8970 mm	6435 mm	5000 mm
STV337k9-CT	34515 mm	8970 mm	5000 mm

WORLDWIDE PRESENCE



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