

Stores, Tracks, Preserves

Fully-automated and secure storage system adapted to any cryogenic biorepository



integrating automation to cryogenic biobanks

Stores Tracks Preserves



- All manual operations are managed by the automated system
- Platform is closed by partitions
- Entrance of the platform is controlled



All sample traceability

- Each sample is controlled with barcode reader
- Complete history of each sample is recorded
- Full inventory is easily performed



Sample

- Samples are prevented from warming above -135°C
- All critical areas are cooled with vapor nitrogen
- Transfer time at room temperature is shortened and monitored



Biobank management efficiency

- The robot takes over time consuming and delicate manipulations
- Technicians can fully concentrate on their lab work
- Operations can be performed in hidden time



INLANDYS integrates with existing tanks and LIMS, for any size of biorepository



INLANDYS[®] compact

Standalone automated platform

On the shelf technology

Up to 4 cryogenic tanks



INLANDYS[®] extended

Custom automated platform

- Adapted to specific environment and constraints
- Unlimited number of tanks

Technical data

Main features

Storage	Vapor or liquid phase cryogenic storage			
Safety	Physical barrier with PLC			
	Oxygen detector interfaced with safety PLC			
	Interfaces for GN2 extraction			
Cold chain	Sample temperature maintained below -135°C			
management	Sample transfer station cooled down with LN2			
Tracability	100% control			
Traceability	100% control			
Пасеаршту	100% control			
Human-machine	Access drawer for sample deposit			
	Access drawer for sample deposit			
	Access drawer for sample deposit and retrieval (in shuttle box)			
	Access drawer for sample deposit and retrieval (in shuttle box) Local IHM with touchscreen			
	Access drawer for sample deposit and retrieval (in shuttle box) Local IHM with touchscreen			

Distinctive features

	compact-2	compact-4	extended		
Dimensions (w \times d \times h)	$2.80\times2.85\times2.95~m$	$3.90 \times 2.85 \times 2.95$ m	-		
Weight	1 700 kg	2 500 kg	-		
Cryogenic tanks	Up to 2 tanks	Up to 4 tanks	Not limited		
Standard configuration	Tanks with full opening lid ø 700 mm max.				
On-demand configuration	All kind of tank				
Power supply	400 V / 32 A (robot Controller)		TBD		
	230 V / 16 A (PLC)				
LN2 supply	Nominal / Minimal pressure: 3 bars / 1 bar				
Compressed air	Min. 6 bars; 5 l/min; 10 µm filtering				
			5		
Communication	Communication via FTP and/or				
with LIMS	Remote access via web application				
IP	Patented Technologies				



An improved user's experience

The user programs retrieval and storage operation directly on his database software

The user prepares and puts a shuttle box (with ready to store samples or empty) on transfer drawer

The automated system INLANDYS manages completely the retrieval or the storage operation

INLANDYS system informs user when operation is finished and provides shuttle box as soon as user agrees

The user takes back the shuttle box (empty or with retrieved samples)

What our customers say

Pr Pascal MOSSUZ

(CHU Grenoble / Head of Hematology department)

Philippe LORIMIER (CHU Grenoble / biologist)

The sample retrieval process from nitrogen tanks is time-consuming and involves no technical added value. That's why we've brought in IRELEC's robotic sample management system, which frees up technicians to concentrate fully on their lab work.

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The robotic system is something our in-house technicians really supported. It's a piece of modern technology that complements and facilitates their work on a day-to-day basis and with external teams. It means we can deliver faster, given that we're often called upon to deal with an increasing number of samples.

The issue for us was providing in a solution to improve user safety and sample quality. "



Since 1985, IRELEC has been designing and producing high performance optomechanical equipment, biomedical robotic systems and precision instrumentation, enhancing the innovation capabilities and operational efficiency of its customers' applications in the scientific and biomedical fields.

Located in a highly dynamic European research and innovation area, IRELEC brings together multi-disciplinary expertise in reliable high technology, easy-to-use and finely tuneable equipment for the maximum benefit of a worldwide user community.

IRELEC

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