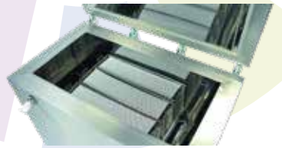
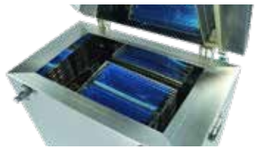
DIGITCOOL RANGE

Digitcool: a complete range of controlled-rate freezers to fulfill your cryopreservation needs in CBS™ High Security straws, cryogenic vials, glass ampoules and blood bags.



Digitcool

- Ideal for large cryopreservation centers
- Straws, Tubes and Bags

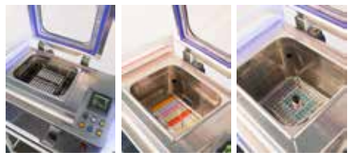


Mini-Digitcool

- Suits every user with moderate freezing needs (tissue banks, cellular therapy)
- Straws, Tubes and Bags

Micro-Digitcool

- The preferred compact freezer for tissue and cord blood banks, cellular culture, clinical trial
- Straws, Tubes and Bags



Nano-Digitcool

- The best compact freezer for day-to-day use in Assisted Reproductive Technology centers

TECHNICAL FEATURES

• Temperature range	-150°C to +50°C
• Cooling rate	0.1°C to 60°C per minute
• Structure	100% 304L stainless steel
• Insulation	Strong stainless steel lid with gas tight seal. 95 mm polyurethane foam insulated walls.
• Security control	Chamber alert when temperature is ready for loading and unloading. Maintain -140°C at end of freeze until straws are accessed by user.
• Low pressure	From 1.3 to 2 bars (18.9 to 29 psi)
• Warming of the chamber	100% dry after warming cycle < 30 minutes
• Controller	High-end 2704 Eurotherm 20 programs – 99 cooling rates 450 segments

	Digitcool	Mini-Digitcool	Micro-Digitcool	Nano-Digitcool
External dimension	1170x800x1000mm	770x510x730mm	600x380x520mm	722x475x472mm
Weight	130 kg	58 kg	38 kg	55 kg
Internal dimension	960x470x320mm	640x320x420mm	490x325x230mm	238x178x200mm
Volume	150 L	90 L	26 L	11.5 L
Sample capacity	3 000 CBS™ straws 2304 CBS™ tubes 32 DF200 bags / 32 DF700 bags	1 392 CBS™ straws 576 CBS™ tubes 32 DF200 bags / 16 DF700 bags	240 CBS™ straws 192 CBS™ straws 15 DF200 bags / 9 DF700 bags	33 CBS™ straws 192 CBS™ straws 15 DF200 bags
Power	2500 W	2000 W	1000 W	1200 W
Voltage	220V/50Hz/16A	220V/50Hz/10A	220V/50Hz/6A	220V/50Hz/6A

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Cryo Bio System

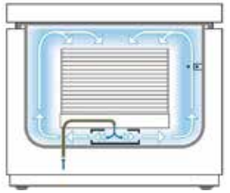
DIGITCOOL

CONTROLLED-RATE FREEZERS

AUTOMATED CRYOPRESERVATION SOLUTION
FOR BIOLOGICAL SAMPLES

State-of-the-art solution based on sealed cryogenic containers

THERMODYNAMICS UNDER CONTROL



To maximize the viability of preserved cells, the critical temperature lowering stages must be carefully controlled. The initiation of ice crystal formation – nucleation or seeding – must be strictly controlled to ensure optimal crystal size and shape.

The Digitcool's perfect airtightness and insulation, its power and constant regulation of data parameters, allow the user to determine optimal freezing curves, and provide for simple and accurate repetition.
Temperatures are constantly and precisely monitored by two separate probes (chamber and product) to ensure that the main freezing stages are perfectly controlled.

LIQUID TO CRYSTALLINE STATE

During the liquid stage (prior to reaching the crystallization point) the cooling rate must be regular to avoid any thermal shock affecting the cell membranes. Here, the Digitcool freezers demonstrate their precision and flexibility: ultra insulated cabinet, controlled nitrogen inflow, and fine temperature control – as low as -0.1°C per minute.

The crystal formation stage, characterized by a sudden rise in temperature, is the most critical stage of the freezing process. The control software anticipates nucleation by instantaneously adapting the freezing curve with a powerful, strictly controlled temperature reduction. The Digitcool units thus provide maximal protection of the cell membrane.

QUALITY CRYOPRESERVATION

- All CBS™ containers are developed to **optimize cryopreservation** of precious samples.
- CBS™ High Security straws benefit from a **high surface-to-volume ratio** for improved and **homogenous heat exchange** through the **entire volume** of the straw.
- Thermal seal of CBS™ straws, CBS™ High Security Vitrification straws, and CBS™ tubes enables **direct and complete immersion** in liquid nitrogen.
- **Color and bar code identification** without compromising the quality of the samples through temperature changes.

DIGITCOOL RANGE

RELIABILITY

- Designed and manufactured by IMV Technologies
- Eurotherm temperature controllers with quick-release probes
- Nitrogen connectors, aeronautics-type technology
- Totally insulated container (304L polished stainless steel casing with high-density expanded polyurethane foam insulation): zero frigorie loss from the sample and controlled nitrogen consumption

EASY & PRACTICAL USE

- Racks are easy to stack and remove
- Easy to clean and disinfect
- Vapor exhaust at the rear of unit
- Ergonomic design to facilitate the manipulation of straws (loading / unloading)

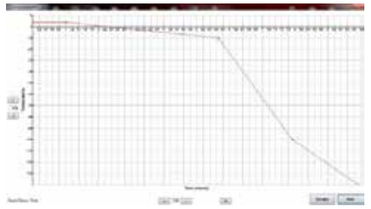
TRACEABILITY

- Automated recording of freezing curves for each cycle
- Uniform and repeatable freezing cycles
- Process isolated from any possible human or external environmental influence
- Printed traceability of the freezing process, as required for GLP and SOP qualification

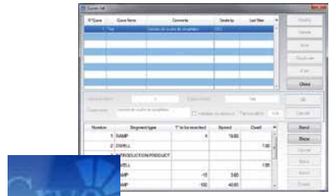
RELIABLE
ACCURATE
PROGRAMMABLE
DURABLE
EFFICIENT
EASY TO USE
SAFE
TRACEABLE

SAFETY · BIOCOMPATIBILITY · TRACEABILITY · OPTIMIZATION

CRYOBIOSOFT SOFTWARE



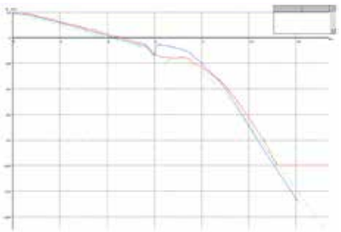
Easy monitoring of temperature curve



User-friendly interface

ADVANCED CONTROL SOFTWARE

- Secure user traceability by user password and profiles according to FDA regulation (21 CRF part 11).
- Simple and fast programming of freezing protocols
- Save all freezing protocols
- Display on the screen instantaneous temperatures of the tank and the sample under freezing process
- Display graphical representation of freezing and enlarge specific points



- Memorizing of all deep-freezing processes carried out, to ensure complete traceability in accordance with Good Laboratory Practice requirements and Standard Operating Procedures (GLP and SOP)
- Print all deep-freezing curves produced
- Export to multiple file formats all of the time points and freezing temperatures.