



# Sylab Icecube series 14



Based on the approved concept of the IceCube Series 15 the new and smaller IceCube Series 14 enhances the possibilities of our users by various PC configurations. The freezing chamber has a volume of 16 l (IceCube 14 S) and takes up several hundred of straws or ampoules or up to 11 blood bags in metal cassettes. Liquid Nitrogen (LIN) is delivered from a self pressurizing supply dewar via a metal hose into the instrument. The IceCube Series 14 freezer can be supported by almost any up-to-date PC with no limitation in size/capability or operating system (NT4, W2000, XP) which can be purchased as a complete system from SY-LAB or from any other local source. Data can be transferred through a LAN and printed out on every Windows® compatible color printer.

The exceptional software together with the integrated touch monitor or a separate stand-alone PC with standard monitor can be used for data input, storage and operation.

The concept of the 14 S is so flexible that any budget will be adequate to integrate this high quality and sophisticated Controlled Rate Freezer in your laboratory.

The 14 S is offered in 4 possible option models from any regular stand-alone PC, two compact design variations to finally a wall mounting rack for PC and touch monitor. The successful hardware concept has been widely transferred from the IceCube Series 15. For example: control is performed by an independent RISC microcontroller exchanging data with the PC. All peripheral equipment like printers or a LAN can be selected individually.

## PRODUCT SPECIFICATIONS

Freezing Chamber		Electronics
Dimensions	217 x 217 x 348 mm (W x D x H), 16.4 l stainless steel, hinged transparent glass chamber lid, safety switch, gas turbulence via turbine, second solenoid valve (option) for auto seeding.	Operated by an independent RISC microcontroller, data collection and subsequent processing carried out by an attached PC, LAN card, 12" touch monitor with fingertip text and graphical input (versions B-D) or through separate PC keyboard (version A).
Temperature range:	+40 to -180°C	<b>Electronics</b>
Freezing rates:	0,01 – 60°C/min	MS Windows operating system 2000 or XPP, data entry on touch monitor, storage of programs and processed files (unlimited), color graphic display of all temperature curves, zoom, editor, wide possibilities of parameter settings, facilitate operation and monitoring in multi tasking mode, rapid optimization of chilling and re-thawing processes, intelligent restart after power failure or UPS backup. IQ, OQ services and 21 CFR Part 11 environment available.
Heating rates:	0,01 – 15°C/min	<b>Dimensions, Weight, Power Supply</b>
Capacity options:	1080 straws 0.25 or 0.5 ml or 480 ampoules 2 ml or 240 ampoules 5 ml, or several blood bags, depending on size and fill volume (i.e. 11 metal cassettes).	540 x 420 x 520/820 mm (W x D x H/H with open lid), ~29 kg, all dimensions/weights without PC+ mounting and LIN supply container. 220-240 V (100-120 V) please specify line voltage at order, power consumption 800 VA.
Temperature measurement	via 2 Pt-100 (optional up to 4) resistance thermometers in shielded 4-wire measuring technology, diameter 1.5 mm, steel shaft length 65 mm, other lengths on request, 750 W heating element, thermo fuse overheating protection, variable start temperature, pause, jump function.	

Specifications are subject to change without notice.