



# IceCube 14M and 14S



## Compact, computer-controlled biological freezers for semen and embryos

The IceCube is a computer-controlled freezer with an intuitive interface for controlling and programming of multi-step freezing curves. Color-coded temperature curves are displayed during freezing and recorded for later review. This allows crystallization temperature to be determined and the freezing program to be optimized. The operator is free to use the included standard freezing curves for semen and embryos of different species, or to create custom freezing programs.

The IceCube is available in different sizes and versions to meet the specific needs of the user. The freezer software and control is performed via a connected PC, laptop or tablet computer and can be equipped with a convenient touch display. Embryo and oocyte freezing can be performed in the IceCube with the autoseeding module and rack.

### + Your benefits

- + Programming of multi-stage freezing curves
- + Variable start temperature
- + Data recording for each individual freezing cycle
- + Different sizes (M + S), functions (+/- autoseeding for embryos) and technical setups (+/- touch screen, with PC, laptop or tablet) to meet the specific needs of the user
- + Temperature curves and crystallization inside the straws can be observed during the freezing process
- + Compact design
- + Easy to use



IceCube 14M with Tablet PC



IceCube 14S with Tablet PC



## ★ Product features

- Operated by independent RISC microcontroller
- Options include: Tablet PC with touchscreen, Windows® or 12" color touch screen LCD monitor
- Temperature measurement via 2 Pt-100 resistance thermometers in shielded 4-wire measuring technology
- Hinged transparent glass door
- Turbine fan for gas turbulence
- Pressure sensor for LN supply
- Thermal fuse for overheating protection
- Safety interlock and open chamber warning light
- Power supply: 115 V / 11 A or 230 V / 5.5 A



		IceCube 14S	IceCube 14M
Freezing chamber size	(mm; L x T x H)	217 x 217 x 348	297 x 317 x 378
	Liter	16.4	36
Temperature range		+40°C to -180°C (104°F to 292°F)	
Cooling rates		0.01°C bis 60°C/min	
Heating rates		0.01°C/min to max. 20°C/min from -180°C to -50°C	
		0.01°C/min bis max. 15°C/min from -50°C to +20°C	
Display accuracy		0.01°C	
Capacity (max.)		1080 straws 0.25 ml or 0.5 ml*	3450 straws 0.25 ml**
			2300 straws 0.5 ml**
Outer dimensions (mm; W x D x H)		540 x 420 x 520 (820 H with open lid)	630 x 510 x 550 (860 H with open lid)
Weight		29 kg	39 kg

\* Varies depending on whether handling rack for IceCube 14S is used or not.

\*\* Varies depending on the rack used.

## Order information

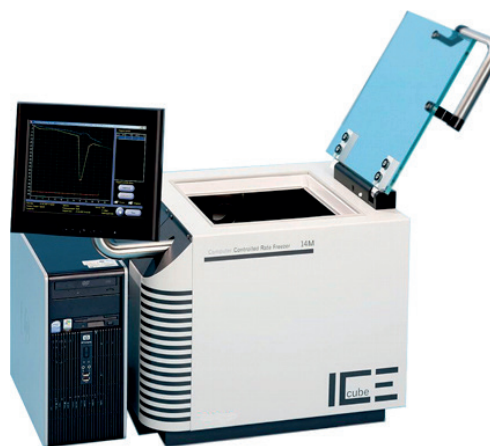
Main unit	12" touch screen	IceCube 14S		IceCube 14M	
		230 V	115 V	230 V	115 V
Without PC (requires PC/laptop*)	-	16821/1000	16821/1001	16820/6000	16820/6001
	+	① 16821/2000	16821/2001	② 16820/7000	16820/7001
With Tablet PC and touch monitor	not required	16821/3000	16821/3001	16820/8000	16820/8001

\*PC for IceCube 14

[16821/5010](#)



① IceCube 14S with PC and touch display monitor



② IceCube 14M with PC and touch display monitor

## Accessories

- Pressure container for liquid nitrogen, with manometer, security valves, liquid and gas phase withdrawal
- Freezing racks for 0.25/0.5 ml straws
- Loading devices for loading the racks
- Spacer to flatten the freezing chamber when freezing small quantities of straws
- Autoseeding module and autoseeding racks

### Pressure container

60 l	<a href="#">16820/1900</a>
120 l	<a href="#">16150/0120</a>
189 l	<a href="#">16150/0180</a>

## Spare parts

Software-Upgrade of IceCube s/w to Windows 7, 8, 8.1, 10	<a href="#">16821/5012</a>
Connector kit for LN2 pressure container	<a href="#">16820/5100</a>
Temperature sensor	<a href="#">16821/5025</a>



Accessory		IceCube 14S	IceCube 14M
Racks	0.25 ml straws	---	16820/1616 <i>(for 138 straws)</i>
	0.5 + 0.25 ml straws	1 16821/5036 <i>(for 36 straws)</i>	2 16820/1614 <i>(for 92 straws)</i>
Loading device for racks	0.25 ml racks	---	16820/1617
	0.5 + 0.25 ml racks	3 16821/5037	16820/1618
Handling rack		4 16821/5030	16820/1610
Pliers for handling of individual racks		5 16821/5031	---
Spacer		6 16821/5018	16820/1621
Preparation for autoseeding		16821/5019	7 16820/1619
Autoseeding rack	0.25 ml straws	8 16821/5021 <i>(for 43 straws)</i>	16820/1623 <i>(for 58 straws)</i>
	0.5 ml straws	16821/5020 <i>(for 35 straws)</i>	16820/1620 <i>(for 46 straws)</i>
	0.5 + 0.25 ml straws	16821/5022 <i>(for 43 0.25 ml straws and 35 0.5 ml straws)</i>	---

