Planer Kryo 360 – 1.7 / 3.3

Fully featured biological freezer for cryopreservation of Human Embryos, Oocytes and Sperm

The Kryo 360 incorporates all of the critical features expected from a high class biological freezer. The system is specifically designed and specified for Human work, with full system safety protection. The -180oC end temperature ensures sample integrity during transfer to storage whilst the flexibility of the system is ideal for the more complex and demanding protocols associated with the most advanced cryopreservation techniques.

The high capacity LNP4 active nitrogen pump offers both faster cooling rates and a large reservoir, offering the reassurance of an extended hold time at the protocol end temperature. The system sample capacity is sufficient for the busiest laboratory and the state of the art compact design will enhance the most modern facility.

The MRV controller system has been created to offer multiple protocols whilst remaining simple to programme and operate, and both during and after a run offers the widest range of displayed information, alphanumerically and graphically via the easy view display and as a print out on the integral full view printer.

Validation is a high priority and the MRV offers password controlled access on multiple user levels, time and date stamping, programme preview and verification before running and data storage for the last 5 runs for subsequent printing.

User calibration with associated hard copy is featured and PC connection compatible with the comprehensive Delta TTM software application is standard.

In line with the specification for human use, the system has been fitted with numerous safety features. These help protect against power failure and PC failure when running with software. Processor or system problems are controlled and the system restarts to protect samples - for example all control and data systems are separated, the controller can be removed from the operating freezer with no loss of programme integrity; data storage and run processing are completed on isolated electronic systems.

PRODUCT SPECIFICATIONS

Chamber volume	1.7 or 3.3 litres
Straw capacity	60 or 120 x 0.25ml straws / 45 or 90 x 0.5ml straws
Ampoule capacity	30 or 60 x 2ml ampoule
Lower temperature limit	-180ºC
Cooling rates	-0.01 to -50ºC/Min
System Pump	LNP4-P
System Dewar	LAB20
PC Software	Delta T™

- Designed for freezing of embryos and sperm in straws and ampoules
- Controller displays demand, sample and chamber temperatures, programme stage and current temperature graphic
- Menu driven controller, simple to programme and operate
- Horizontal or vertical operation
- Compact design

Standard operating features
1. Start above ambient
2. Controlled heating
3. Data Printing (integral printer)
4. Comms port for PC connection
5. Fast cooling rates
6. Multiple safety features

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Range	+40ºC to -180ºC
Heating Rates	0.01ºC/min to 10ºC/min
Cooling Rates	-0.01ºC/min to -50ºC
Controller accuracy	±0.3ºC measured on a hold at 0ºC
Storage temperature	-10ºC to +50ºC
Storage humidity	5% to 95% relative humidity non-condensing
Operating temperature	5ºC to 40ºC
Operating humidity	5% to 90% relative humidity non-condensing
Controller Specifications	
Dimensions	80mm high x 220mm wide x 350mm deep
Weight	2.6 kg approx.
Display	240 x 64 LCD with CCFL backlight
Printer	320/640 dot thermal printer
Keypad	20 key membrane keypad
Programmable Cooling Rate Range	-0.01ºC/min to -99.9ºC/min
Number of profiles	10
Steps per profile	32
Number of stored runs	10
Chamber Specifications	
Weight (kg)	14.4 or 14.7
Capacity (Litres)	1.7 or 3.3
Chamber dimensions (mm)	1.7L Chamber: Int. 200mm x 150mm diameter
	Ext. 450mm high x 300mm wide x 420mm deep1.7L
	Chamber: Int. 200mm x 150mm diameter
	Ext. 450mm high x 300mm wide x 420mm deep
0.25ml straws	16 (upgrades to 60)
0.5ml straws	12 (upgrades to 45)
2ml ampoules (or vials)	8 (upgrades to 30)
50cc blood bags	-
250cc blood bags	-
500cc blood bags	-
Power requirements (inc. MRV Controller)	115V ~ 50/60Hz 600VA / 230V ~ 50/60Hz 600VA