

CO₂ backup



This system is designed to enable the Low or Ultra-Low Temperature Freezer to maintain a safe sample storage temperature in the event of power cut or freezer fault.

An electronic measurement system continuously monitors the freezer's internal temperature. If this temperature rises above a certain level (determined by the user), the system will inject liquid CO₂ at a controlled rate to keep the cabinet cold.

This action will continue until either the liquid CO₂ supply is empty or the internal battery of the CO₂ back up is discharged, giving time to restore power or move samples to an alternative location.

The system is powered by electric mains under normal conditions. Should the main power fail, the internal battery will continue to operate the system for several days (72 hours), providing continuous sample protection.

FEATURES

- Fits almost all types of Low and Ultra Low Temperature freezers (-50°C to -70°C)
- Simple installation
- Display of actual temperature and setpoint for injection
- Stainless steel case
- Safety door switch stop liquid CO₂ injection, when freezer door opens
- Battery charging and CO₂ injection active indicators
- CO₂ inject test funktion
- 2m flexible high-quality 2m hose included

MODEL	CO ₂ back up system
Power supply required	100-240V - 50/60Hz
Power connection	Via integral power cord
Dimensions (mm)	130x240x340
Cabinet material	Stainless steel
Weight (kg)	15kg
Liquid CO ₂ connection (supplied form cylinder with dip tube)	3/8"
Min/Max pressure	5/70 bar
Liquid CO ₂ injection	Via integral solenoid valve and capillary tube Estimated life of single 10kg cylinder
Liquid CO ₂ consumption (when back up active)	7 hours at -70°C inject setpoint and 20°C ambient temperature Multiple cylinders can be connected
Backup battery	12V / 7 AH
Battery life (no main power)	Typically minimum 72hrs with -70°C inject setpoint
Injection set point	User adjustable in 1°C increments > -76°C
Temperature probe	PT 1000
Temperature measurement uncertainty	-/+ 2°C of displayed temperature at -70°C
CO ₂ injection hysteresis	2°C

