MD SERIES
Medical Refrigerators

MD 120

N-smart

MD Series Medical Refrigerators are designed for the safe storage of products that are used in hospitals, laboratories, pharmacies, blood banks, research centers and universities and need to be stored in cold environment under the most ideal conditions.

MD Series Medical Refrigerators provide the highest safety and traceability features provided by the N-Smart control system and ensure that medicines, vaccines, pharmacological and medical products are safely stored under ideal ambient conditions.

FUNCTIONAL AND ROBUST STRUCTURE

- Easy to clean stainless steel chamber
- Electrostatic powder coated stainless steel housing
- Door window consisting of three layers of glass to view the items easily and provides excellent insulation
- Inner glass that prevents condensation in the door window and outer glass that prevents UV rays
- Magnetic door gasket for sealing and insulation
- Flicker-free operation
- Stainless steel shelves that provide proper air circulation
- Button controlled inner lighting
- Standard temperature control and calibration port

EXCELLENT TEMPERATURE CONTROL

- Excellent temperature distribution and stability at all rack levels thanks to powerful air circulation system
- Very fast temperature recovery after door opening and closing thanks to directed air flow
- Fully automatic defrost system that maintains cooling efficiency
- High efficiency with high density injected polyurethane insulation
- Temperature control from blood liquid

PERFECT TEMPERATURE CONTROL

- Excellent temperature uniformity and stability at all shelf levels with powerful air circulation system
- Quick recovery after door opening by means of directional air flow
- Full automatic defrost system to maintain refrigeration efficiency
- Efficient insulation by means of high density injected polyurethane
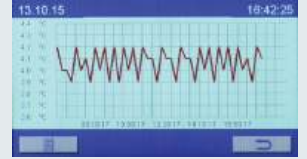
POWERFUL AND RELIABLE CONTROL SYSTEM: N-Smart™

- Easy monitoring of operating parameters with high resolution 4.3" color TFT LCD screen
- Four function keys are versatile and easy to use
- Work and memory data secured by the password-protected menu
- Icons that make operations easier
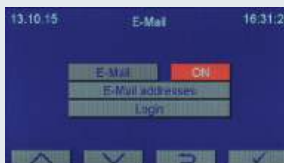- Standard 5 language options
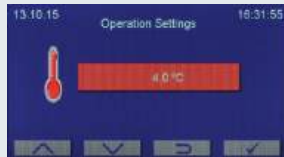- Screen saver (1-300 minutes)

FULL TRACEABILITY AND REMOTE ACCESS

• Numerical and graphical tracking of temperature data against time

• Large memory that can store temperature measurements made at one-hour intervals for up to 10 years in numerical and graphic form

• Possibility to record in periods of 10 or 30 seconds or 1-5-30-60 minutes with the help of external memory via USB port

• USB port for computer connection

• Remote access via internet with Ethernet port and optional NüveCloser™ software

• Remote diagnostics with optional NüveCloser™ software

• Ability to monitor 15 different devices with optional NüveCloser™ Multi software

• With the optional NüveCloser™ software, remote operating parameters, data in memory, error history and other technical data can be accessed

• Optional battery-powered and high-precision optional weekly circular temperature logger

• Optional Wi-Fi connection for N-Mobile™ phone app

• With N-Smart™ communication unit;

   1.Data transfer and software update via USB port

   2.Computer connection via USB port

   Computer connection with Ethernet port and sending e-mail to 5 different e-mail addresses in case of errors

MAXIMUM SAFETY FOR VALUABLE SAMPLES

• Menu access with 4-digit password

• Lockable door to prevent unauthorized use

• Locked power switch

• Alarm system for high and low temperature, power outage, temperature sensor failure and open door

• Screen that turns red in case of any alarm and warns the user with the audible alarm

• Battery that feeds the alarm system and charges automatically

• Display of actual cell temperature even in case of power failure

• On-screen tracking of data for the last 50 errors on the device

•Ability to send e-mails to 5 different addresses with detailed information in case of errors and malfunctions with Ethernet output

• Remote and central alarm outputs offered as standard

• Optional AlerText™ GSM alarm module, it is possible to provide fast intervention by sending text messages to 5 different phone numbers in case of error and malfunction

• Optional NüveWarn™ remote alarm system

TECHNICAL SPECIFICATIONS

	MD 120
Gross Chamber Volume, liters	304
Net Chamber Volume, liters	269
Display	4.3'' color TFT LCD display
Control System	N-Smart™ with programmable microprocessor
Internal Memory	10 years
Temperature Range	0°C / 10°C
Temperature Reading and Adjustment Sensitivity	0,1°C
Temperature Sensor	Pt-100
Temperature Distribution (+4°C)	±1°C
Temperature Control	Measurement from liquid in blood characteristics
Temperature Alarm	Setting temperature ±2°C (Audible and visual)
Power Failure and Door Alarm	Audio and visual
Remote Alarm Output	For all alarm situations
Alarm Feeding	12-Hour battery that charges automatically
Door structure	With insulated steel frame, triple glazing and lockable
Number of Shelves (Standard/Maximum) (pcs)	5/14
Noise Level	<60 db
Insulation (CFC-free)	High density injected polyurethane
Seal Structure	Magnetic seal
Refrigerant Gas (CFC-free)	R 134a
Calibration Channel	Ø25 mm sensor input on the sidewall
Interior Lighting (Fluorescent)	18 W
Internal Surface Structure	Stainless steel
External Surface Structure	Electrostatic powder coated stainless steel sheet
Wheel System	4 wheels, 2 of which are lockable, 2 of which are fixing feet
Installed Power	330 W
Operating Voltage	230 V - 50 Hz
Cell Dimensions (WxDxH) mm	478x545x1168
Net Inner Dimensions (WxDxH) mm	478x545x1033
External Dimensions (WxDxH) mm	610x805x1855
Package Dimensions (WxDxH) mm	700x860x2040
Net / Packed Weight, kg	164 / 189

FACTORY FITTED OPTIONS
MD XXX Y Battery operated 7-day chart

OPTIONS

A 08 195	NuveCloser™ Software CD with 3 m. RS 232 cable
A 08 191	AlerText™ GSM alarm module
K 13 009	NuveWarn™ remote alarm system with 10 m cable
A 08 070	Pen for chart recorder
A 08 073	Diagram paper for chart recorder (pack of 100)