



LABORATORY DEEP FREEZER



Quality, Management, Environment, Health & Safety Standards



CDSCO MD 5 License



USFDA Listed



European CE



ISO 9001: 2015
IAF



ISO 13485:2016
NABCB/IAF



ISO 45001 : 2018
IAF



7 Electric Safety Certifications
IEC 60335-1 and IEC 60335-2-24, IEC 61010-1,
IEC 61010-2-020 and 61010-2-101, IEC 61326-1,
IEC 61326-2-6

INTRODUCTION

MarkEn Laboratory Deep Freezer -20°C set the gold standard for safe, reliable, and energy-efficient preservation of the most sensitive biological materials, including stem cells, plasma, semen, viruses, bone grafts, and other irreplaceable samples. Operating within a precisely controlled temperature range of -10°C to -20°C, these advanced units are engineered to meet the uncompromising demands of life science research institutes, hospitals, blood banks, pharmaceutical and biotech companies, and high-precision industrial applications. With robust performance, cutting-edge technology, and meticulous quality standards.



TECHNICAL EXCELLENCE



Wide Temperature Range: Offering precise cooling from -10°C to -20°C.



Tropical Climate Adaptation: Engineered to maintain peak performance even in high-temperature environments.



Heavy-Duty Weight Capacity: Uniformly distributed load-bearing trays for maximum efficiency.



Advanced Freezing Technology: Compression cycle system ensuring rapid, frost-free freezing.



Eco-Consistent Design: SNAP & F-GAS compliant HC refrigerant and PUF insulation for a greener planet.



Premium-Grade Tubing: Constructed with 99.97% pure copper for superior durability and efficiency.

CUTTING-EDGE FEATURES



Anti-Condensation Innovation: Hot line at the cabinet mouth prevents moisture buildup, safeguarding stored samples.



Intelligent Data Management: Internal memory captures temperature and alarm records, easily transferable to a PC.



Effortless Defrosting: Convenient defrosting provision simplifies maintenance.



Auto Door Closure: Ensures consistent internal temperatures by preventing accidental exposure.



Unmatched Longevity: Designed for a minimum 10-year lifespan with guaranteed spare parts availability.

ESSENTIAL ACCESSORIES



Precision Stem Alcohol Thermometer: Delivers accurate temperature monitoring for optimal sample preservation.



Advanced Voltage Stabilizer: Supplied with a suitable Servo-controlled with high-low voltage cut-off, time delay restart, and protection against voltage fluctuations for uninterrupted performance.



Heavy-Duty Door Hinges



Secure Internal Door Locking



Inner Door with Thermal Protection



Optimized Storage Racking (Optional)

TECHNICAL SPECIFICATIONS	
Make	MarkEn
Cabinet Type	Vertical/ Upright
Capacity	400 Litres
Cabinet Exterior	Pre-coated steel exterior
Cabinet Interior	White painted interior
Inner Liner Material	Stainless Steel SS304
Dimensions (W × D × H)	650 × 800 × 2200 mm
Insulation Thickness	Cabinet: 75 mm Door : 80 mm
Ground Clearance	100 mm adjustable leveling feet with heavy-duty castor wheels (2 lockable, unlockable)
Insulation	High-density CFC-free PUF insulation
Door	Lockable full-height double-walled doors with double gasket sealing, featuring soft-touch full-length handles, integrated key lock, and provision for additional padlock security
Shelves	5 adjustable SS304 shelves, 45 kg capacity each.
Cooling System	Positive Force Air Cooling
Compressor	Hermetically sealed compressor
Refrigerants	SNAP & F-GAS compliant HC refrigerant
Condensing	Skin-condensing inner with air-cooled grooved aluminum fins and forced air circulation for uniform temperature maintenance
Pull down time	04 Hours
Temperature Range	–10°C to –20°C with ±0.1°C accuracy
Temperature Uniformity	±1°C
Temperature Resolution	0.1°C
Temperature Recovery	Max. 8 minutes after 1-minute door opening
Environmental Condition	Maximum +45°C with Humidity 5% to 95% RH
Control System	Fully programmable microprocessor-based electronic temperature controller with membrane keypad and password-protected eye-level control panel
Defrost System	Automatic Defrost System
Display	Microprocessor-based electronic controller with 7-segment LED temperature display in °C
Alarms	High/Low temperature, power failure, probe failure, instrument failure, door ajar, low battery, service alert with icon indication, adjustable warm/cold alarm settings, and remote alarm terminal
Battery Backup	24/48/72 Hrs battery backup for digital display, alarm & temperature recording system with auto-recharging facility during power failure
Lighting	Mercury-free LED interior lighting with externally mounted light switch
Pressure Equalization	Integrated pressure equalization port for effortless door reopening
Heat Output	Low heat output design for improved laboratory environment comfort and energy efficiency
Noise level	<50 db
Voltage Stabilizer	Servo-controlled stabilizer with high/low voltage cut-off protection
Power supply	230V ±10%, 50/60 Hz AC, Rodent-proof power cord

ALL-IN-ONE SOLUTION FOR

Cold Chain Solution
Medical Equipment
Blood Bank Equipment

Hospital & Scientific Equipment
Hospital Furniture & Infrastructure
Commercial Refrigeration



25+

Years of Excellence



400+

Product Range



500+

Service center



1000+

Committed Engineers



1,00,000+

Satisfied Users

CERTIFICATION



10 products tested by a
WHO-PQS accredited
laboratory



ISO 14001: IAF



WHO GMP



BIFMA Certified,
BIFMA Level 3



ASTM- Corrosion
Free Products



ISO 2409

EN 13523-26,
ISO 13849-1,
IP 69, IP 65

& MANY OTHER...

OUR ESTEEMED CUSTOMERS



& MANY MORE...



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