



# KN SERIES

Blood Bank Refrigerators



**N-smart**



*KN Series Blood Bank Refrigerators are designed for the storage of whole blood and blood components providing maximum protection and traceability for the stored products by means of their advanced technology and N-Smart™ control system.*

## ROBUST BODY

- Easy to clean stainless steel chamber
- Humidity and solvent resistant epoxy-polyester powder coated stainless steel outer body
- Large triple glass door window for perfect insulation and easy observation of blood bags
- Antifogging inner glass to avoid condensation and outer glass blocks UV light
- Prevention of air leakage from the chamber and ambient air ingress with magnetic gasket
- Vibration free operation

## OPTIMIZED FUNCTIONALITY

- Stainless steel drawers with perforated bottom for proper air circulation
- Easily drawn drawers
- Plexiglass cover in the front of the drawers to prevent warm air entry and easy control of the blood bags
- Plexiglass separators holding the blood bags in angled position for easy label reading
- Chamber illumination with switch control
- Temperature calibration port as standard

## PERFECT TEMPERATURE CONTROL

- Excellent temperature uniformity and stability at all drawer 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
- Temperature measurement from a bottle containing a liquid which has similar thermal specifications as blood for controlling and monitoring the real temperature of the stored blood
- Efficient insulation by means of high density injected polyurethane

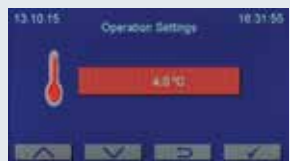
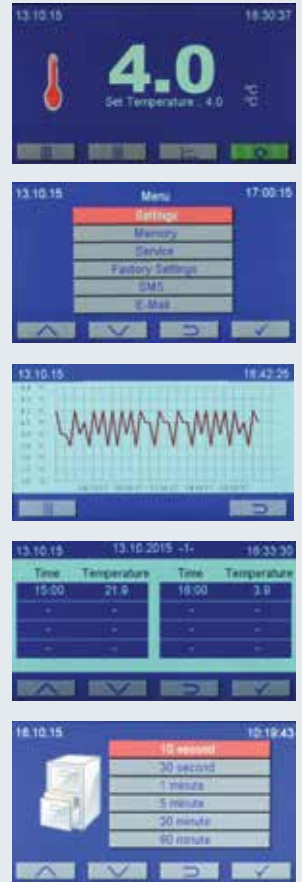


## RELIABLE AND POWERFUL CONTROL SYSTEM: N-Smart™

- Maximum information with highly visible 4,3" colourful LCD display
- Four context-sensitive function keys for versatile & easy use
- Password protected menu to secure run parameters and data
- With 5 Language options: Turkish, English, French, Russian, Spanish
- Icons make the operations easier for immediate understanding

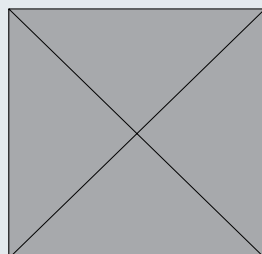
## FULL TRACEABILITY AND REMOTE ACCESS

- Operating parameters tracked digitally or graphically against time
- Massive data storage with internal memory which stores the records up to ten years with one hour intervals, digitally and graphically
- Selectable recording frequency for storing the temperature data on memory stick: 10 or 30 seconds, 1, 5, 30 or 60 minutes
- PC Connection through USB port
- Ethernet port for remote access through internet by means of optional NuveCloser™ software
- NuveCloser™ allows to access operating parameters, memory, failure history and other technical parameters
- Optional battery operated weekly chart recorder with key lock providing permanent record of storage conditions with its high resolution



## SAFETY OVER STANDARDS

- Password protected control system
- Door with key lock
- Key operated mains power switch to protect the samples
- Audible and visual alarm system for :
  - High and low temperature conditions
  - Power failure
  - Temperature sensor failure
  - Open door
- Color of the display changes to red in case of any alarm condition
- Automatically rechargeable battery for alarm system
- Display of the actual temperature even at power failure
- Memory for the last 50 failures for easy servicing
- Remote failure diagnostics by means of NuveCloser™ software
- Sending e-mails up to five e-mail addresses with the details of failure
- Standard remote and central alarm ports
- Optional AlerText™ SMS alarm system for ultimate security
- Optional NuveWarn™ remote alarm system



## TECHNICAL SPECIFICATIONS

	KN 72	KN 120	KN 294	KN 504
Nominal Storage Capacity, Blood Bags*	72 pcs.	120 pcs.	294 pcs.	504 pcs.
Chamber Capacity, Liters	200	303	630	1090
Display	4,3" Colorful LCD Display			
Control System	N-Smart™ Control System			
Temperature Range	0°C / 10°C			
Temperature Set And Display Sensitivity	0,1°C			
Temperature Sensor	Pt 100			
Temperature Uniformity @+4°C	±1°C			±1,5°C
Temperature Alarm	Set Temperature ±2°C / Audible and Visual			
Power Failure Alarm	Audible and Visual			
Door Alarm	Audible and Visual			
Remote Alarm Contact	For All Alarm Conditions			
Alarm Back-Up	Automatic Re-chargable Battery For 12-Hours			
Door	Insulated Steel Frame With Triple Glass Window and Key Lock			
No. of Drawers	3	5	6	12
Insulation	High Density Injected Polyurethane			
Internal Material	Stainless Steel			
External Material	Epoxy-Polyester Powder Coated Stainless Steel			
Power Consumption	330 W	330 W	800 W	1000 W
Power Supply	230 V, 50/60 Hz			
Internal Dimensions (WxDxH) mm	480x545x770	480x545x1170	735x635x1350	1274x635x1350
External Dimensions (WxDxH) mm	610x805x1255	610x805x1855	917x895x1985	1544x900x1985
Packing Dimensions (WxDxH) mm	700x860x1430	700x860x2040	1030x1020x2140	1740x1050x2180
Net / Packed Weight kg.	120 / 136	180 / 205	275 / 305	445 / 680

\* Nominal storage capacity may vary according to the loading method and preferences.

### FACTORY FITTED OPTIONS

KN XXX Y Battery operated 7-day chart recorder

### 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)



**NUVE SANAYİ MALZEMELERİ İMALAT VE TİCARET A.Ş.**

Saracalar Mah. Saracalar Kümeevleri No: 4/2 Akyurt 06750 ANKARA / TURKEY t. +90 312 399 28 30 f. +90 312 399 21 97  
[nuve.com.tr](http://nuve.com.tr) [sales@nuve.com.tr](mailto:sales@nuve.com.tr)

ISO 9001: 2008  
 ISO 13485: 2003 