

# ak98

YOUR PATH TO TARGET





# CREATING THE PATH TO BALANCED CARE

THE AK 98 SYSTEM AIMS TO IMPROVE PATIENT CARE AND OPERATIONAL EFFICIENCY WITH EVERY TREATMENT.

The AK 98 system has been designed to help you find the balance between improving patient care and managing operational efficiency. This hemodialysis monitor has numerous features and functions that when integrated with our therapy options allow you to deliver high-quality treatments, consistently and efficiently.



### GRAPHICAL USER INTERFACE (GUI) TOUCHSCREEN

A user-friendly GUI reflects the normal treatment delivery process with fewer buttons required to set-up, monitor, manage and report treatments that may improve efficiency.



### DIASCAN

The DIASCAN function provides a real-time measurement of treatment adequacy, facilitating the reach of treatment targets.



### IT CONNECTIVITY

Connectivity between the AK 98 system and your central IT network allows seamless integration, safety and easy management of your patient data.



### NEW ONSCREEN GRAPHS

Treatment supervision can be achieved easily with on screen graphs displaying Venous & Arterial pressure, UF rate and Clearance (Kt/V).

CONSISTENTLY HIGH TREATMENT QUALITY		
Diascan quality control tool	✓	
Actual/forecast Kt/V display on main screen	✓	
Conductivity-based and concentrate dosing	✓	
Disinfection log	✓	
BICART cartridge holder	✓	
Syringe pump	✓	
U9000 Ultrafilter	✓	
BPM	✓	
Treatment history	✓	
Alarm history	✓	
SoftPac Citrate	✓	

OPERATIONAL EFFICIENCY		
Automatic self-test	✓	
Stand-by mode	✓	
Profiling modules	✓	
Assisted priming	✓	
Dialysis fluid flow	✓	
Fluid path obstruction alarms during priming	✓	
Automated heat disinfection processes	✓	
Time between treatment 32 min incl. citric heat	✓	
Intuitive user-interface	✓	
New functional check without removing concentrates	✓	
IT-Connectivity: HL7 based bi directional communication with data encryption	✓	

EASE OF USE AND STAFF SATISFACTION		
Single and double needle mode	✓	
Automatic switch from isolated UF to diffusion	✓	
Decalcification and cleaning with CleanCart disinfectant	✓	
Pre-settable for different CleanCart disinfectants	✓	
Pre-configuration options (start-up values, limits)	✓	
Battery back-up time 30 min.	✓	
SoftPac concentrate	✓	
Remote panel (optional)	✓	
Pre-set disinfection start time (7 day pre-set cycle possible)	✓	
Permanently connected Citric-acid from back intake	✓	
Alarm light bar, 360 degrees visibility	✓	
Infusion pole (higher weight limit, 4 hooks)	✓	
Pre-set audio sound level	✓	
Top tray	✓	

DESIGNED FOR SAFETY COMPLIANCE		
EC 60601-1	General requirements for basic safety and essential performance	
IEC 60601-1-2	Electromagnetic disturbances – Requirements and tests	
IEC 60601-1-6	Usability	
IEC 60601-1-8	General requirements, tests and guidance for alarm systems in medical electrical equipment and medical electrical systems	
IEC 60601-1-11	Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment	
IEC 60601-2-16	Particular requirements for basic safety and essential performance of haemodialysis, haemodiafiltration and haemofiltration equipment	
IEC 80601-2-30	Particular requirements for basic safety and essential performance of automated non-invasive sphygmomanometers	
IEC 62304	Medical device software – Software life cycle processes	
IEC 62353	Medical electrical equipment – Recurrent test and test after repair of medical electrical equipment	

For further information and operating instructions, please refer to the operator manuals.



### ONE FULLY INTEGRATED TREATMENT OPTION

Reaching your targets is highly dependent on how well your dialysis monitor integrates with your consumables (dialyzers, blood lines etc.), procedures and other systems in your clinic. By fully integrating your AK 98 system with our portfolio of products you may be able to maximize your treatment potential and maintain operational efficiency.



### BLOOD LINES

Biocompatible and ergonomic blood tubing systems

High-quality blood tubing sets available in different sizes can facilitate simple blood control and help you meet your individual clinic and patient needs both big and small.



### THE SOFTPAC CITRATE

Acetate-free solution

The SoftPac Citrate is an acid-concentrate dialysis solution giving clinics a closed hygienic system, free from bacterial endotoxin for the AK 98 system.



### THE BICART CARTRIDGE

The multi-purpose bicarbonate cartridge

BiCart cartridge is designed to provide sufficient bicarbonate for the majority of your in-center treatment needs.



### HDX THERAPY

Enabled by the THERANOVA dialyzer

HDx (Expanded hemodialysis therapy) is allowed by the AK 98 system and the THERANOVA dialyzer to give you HDF performance as simple as HD.

\*Do not use THERANOVA dialyzers for HDF or HF due to higher permeability of larger molecular weight proteins such as albumin.

TECHNICAL SPECIFICATIONS	
Blood flow control	Flow rate, double needle: 0 and 20 to 500 mL/min Flow rate, single needle: 0 and 20 to 500 mL/min, pressure-controlled
Blood circuit pressure supervision	Arterial pressure: -700 to +750 mmHg Venous pressure*: -700 to +750 mmHg
Air detection	Method: Ultrasonic detector
Heparin syringe pump	Flow rate: 0 to 10 mL/h Heparin bolus function Bolus volume: 0 to 10 mL Programmable stop time, accumulated volume read-out
Water supply	Inlet pressure: 0.12 to 0.6 MPa (1.2 to 6 bar) Inlet water temperature during treatment: 5 to 30 °C Inlet water quality: Fluid must comply with appropriate regulations and as minimum ISO 13959
Dialysis fluid preparation and monitoring	Flow rate: 300-700 mL/min (by step of 20 mL/min) Bicarbonate range: Na <sup>+</sup> 130 to 150 mmol/L, HCO <sub>3</sub> <sup>-</sup> 20 to 40 mmol/L Profiling (Na <sup>+</sup> , HCO <sub>3</sub> <sup>-</sup> , UF) Concentrate standby mode
Ultrafiltration control	±50 mL or ±50 mL/h x passed treatment time (h) or ±2.5 % of the accumulated UF volume, whichever is largest.
Blood leakage detection	Method: Infrared light
Disinfection and cleaning	Automated disinfection process with water treatment systems Heat, liquid citric acid or <b>CleanCart</b> disinfectant Short heat citric disinfection Chemical: Peracetic acid, sodium hypochlorite Disinfection log
Power supply	Mains voltage: 115, 230V Frequency: 50 to 60 Hz Power consumption: Max 2025 W at 230 V, 1575 W at 115 V
Dimensions and weight	Width: Machine 345 mm, stand 585 mm Depth: Machine 600 mm, stand 620 mm Height: 1305 mm Weight: Approx. 70 kg (without options)
Operating environment	Ambient temperature: 18 to 35 °C Relative humidity: 15 to 85% RH Air pressure: Up to approx. 2500 meters above sea level (70 to 106 kpa)
IT-connectivity	HL7 based bi directional communication with data encryption

\* An event of venous needle disconnection is not guaranteed to be detected by most dialysis machines.  
International standards recommend additional venous access monitoring is used to safeguard patient safety.

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