

AK 98 SIMPLY VERSATILE

Designed to simplify operation
Suitable for the majority of HD patients



A critical requirement in today's complex and demanding healthcare environment is a simple-to-operate HD device that may provide you with the capabilities to effectively meet the needs of the vast majority of your renal patients.

SIMPLY



SIMPLE WORKFLOWS AND DATA HANDLING CONNECTIVITY¹

Between the **AK 98** machine and your central IT network allows seamless management of your clinic and patient information, with data encryption (optional). Staff can effortlessly access patient data and files eliminating time traditionally spent manually handling documents and may reduce the risk of human errors.¹



SIMPLE TREATMENT MANAGEMENT AN INTUITIVE, TOUCHSCREEN

That has been designed to be easy-to-use for a wide range of operators – from the novice patient to skilled practitioners – with few buttons required to set-up, monitor, manage and report treatments. Key treatment parameters are all displayed on the home screen for instant treatment visibility and prescription management. Common clinical settings can be pre-set to simplify treatment programming.¹

- > Intuitive graphical user interface
- > **Diascan** monitoring system
- > Black Box Data Mining
- > Treatment History
- > Alarm History
- > Alarm light bar with 360 degree visibility
- > Battery backup 30 mins
- > Pre-set audio sound level
- > Automatic self-test
- > Assisted priming
- > Auto switch from isolated UF to diffusion

* Dependant on voltage

1. AK 98 Machine Operators Manual HV05164400.
2. McIntyre CW, et al. *Assessment of haemodialysis adequacy by ionic dialysance: intra-patient variability of delivered treatment*. Nephrol Dial Transplant. 2003;18:559-562
3. Nystrand R. *Long Time follow up of microbial quality in a Gambro CWP WRO H system 1(5) BT 130501 S. Bio-teq Nystrand Consulting*.
4. Nystrand R. *Long time follow-up of microbiological quality in a Gambro CWP WRO 100 ROHH system 130502 S. Bio-teq Nystrand Consulting*.
5. European renal Association, A. Ragon et al. *Microbiological evaluation of the efficiency of hot RO water only used to disinfect hemodialysis water distribution loop in operation for 5 years, EDTA(1).pdf*. Clin Kidney J 2011, 4, Suppl 2 Abstracts of the ERA-EDTA Prague.



SIMPLE TREATMENT MONITORING²

The **Diascan** function provides a real-time measurement of treatment delivery, with proactive alerts that provide all the relevant information for dialysis dose tracking and the opportunity to adjust the settings during the treatment, where prescription targets are at risk.



SIMPLE TREATMENT DELIVERY

The **AK 98** machine allows **HDx** therapy enabled by the **Theranova*** dialyzer, providing expanded HD whilst retaining HD simplicity in the removal of large middle molecules (25 kDa to <60 kDa).

* Do not use **Theranova** dialyzers for HDF or HF



A CENTRALLY POSITIONED EXTERNAL ALARM

Provides visible indicators for simple session monitoring and timely intervention. Alarms are easy-to-prioritise and specific alarms are self-restoring when the alarm condition is removed, and may reduce operator workload.

- > Disinfection log
- > Decalcification and cleaning with **Cleancart** cartridges
- > Pre-set disinfection start time (7 day pre-set cycle possible)
- > Automated heat disinfection processes
- > Time between treatment short heat citric acid 25 mins plus function check*
- > New function check without removing concentrates
- > Infusion pole (higher weight limit, 4 hooks)
- > Fluid path obstruction alarms during priming
- > Top tray

6. Susantitaphong P, et al. Effect of ultrapure dialysate on markers of inflammation, oxidative stress, nutrition and anemia parameters: a meta-analysis. Nephrol Dial Transplant. 2013; 28:438-446.
7. Glorieux G, et al. *Dialysis water and fluid purity: more than endotoxin*. Nephrol Dial Transplant 2012;27:4010-4021.
8. Lederer S, R, et al. *Ultrapure Dialysis fluid lowers the cardiovascular morbidity in patients on maintenance Hemodialysis by reducing continuous microinflammation*. Nephron 2002 Jul;91(3):452-455.
9. Schiffli H, et al. *Effects of ultrapure dialysis fluid on nutritional status and inflammatory parameters*. Nephrol Dial Transplant 2001; 16:1863-1869.

The **AK 98** machine is simply designed to provide you with the versatility to help clinicians meet the needs of a diverse renal patient group in a range of treatment settings, while controlling operational costs and improving clinical workflow. Inspired by user needs, the **AK 98** machine is purposefully designed to simplify operation and help minimise nursing workload – from treatment setup to monitoring and disinfection.¹

VERSATILE



VERSATILE IN ANY TREATMENT SETTING

Small, easy-to-manoeuvre and intuitive, the **AK 98** machine is the system of choice for hospital, self-care and home settings.



VERSATILE TREATMENT OPTIONS

The versatility of the **AK 98** machine makes it suitable for the majority of HD patients, including those requiring HDF performance with **Theranova** dialyzer in the removal of large molecules; adults and patients upwards of 25 kg; short daily or nocturnal dialysis.¹ The **AK 98** machine offers personalised therapy with multiple, configurable presets and downloadable prescriptions. These are retrieved from the EMR/CIS and require the patient ID to access them. The **AK 98** machine allows treatment individualisation through **Diascan** monitoring system. The **AK 98** machine also supports sodium and bicarbonate profiling and isolated UF, access to most concentrate delivery choices, including citrate, with flexible dialysis fluid and blood flow rates.



VERSATILE HYGIENIC CHAIN CONCEPT

Maintaining fluid purity requires the versatility to take care of the entire chain of components and processes involved within HD – from tap to needle. We ensure this through our Hygienic Chain concept.³⁻¹¹

THE SOFTPAC CITRATE CONCENTRATE

The **SoftPac** Citrate concentrate is an acetate-free solution, which may help promote patient well-being with all the beneficial properties of citrate.¹²⁻¹⁴ The **SoftPac** container provides a closed hygienic connection to the **AK 98** machine.

THE BICART CARTRIDGE

The multi-purpose bicarbonate **BiCart** cartridge is designed to provide sufficient bicarbonate for the majority of your in-center treatment needs.¹⁵⁻¹⁹

BLOOD LINES

Biocompatible and ergonomic blood tubing sets available in different sizes can facilitate simple blood control and help you meet your individual clinic and patient needs.²⁰

- > **Bicart** Holder
- > Syringe pump
- > **U9000** Plus Ultrafilter
- > Pre-configuration options (start-up values, limits)
- > Remote Panel as an option
- > Profiling modules

- > IT-Connectivity: HL7 based bi directional communication with data encryption (optional)
- > Concentrate Stand-by mode
- > Variable dialysis fluid and blood flow rates
- > **SoftPac** Citrate Concentrate
- > SN and DN modes
- > BPM

10. Oka Y, et al. Lowering of oxidative stress in hemodialysis patients by dialysate cleaning: in relation to arteriosclerosis. *Ther Apher Dial.* 2004; 8:313-319.
11. Bolasco P, et al. The evolution of technological strategies in the prevention of dialysis water pollution: *Blood Purif.* 2012;34:238-245.
12. Grundström G, et al. Replacement of acetate with citrate in dialysis fluid: a randomized clinical trial of short term safety and fluid biocompatibility. *BMC Nephrology* 2013; 14:216.
13. Molina Nuñez M, et al. Citrate versus Acetate-Based Dialysate in On-Line Haemodiafiltration A Prospective Cross-Over Study. *Blood Purif.* 2015; 39:181-187.
14. De Segura Ortiz P, et al. Acute effect of citrate bath on postdialysis alkalaemia. *Nefrologia.* 2015; 35:164-171.
15. Bicart Cartridge 650 Sales Sheet. GBU-RC9-220001.
16. Bicart Cartridge 720 1150 Combi Sales Sheet. GBU-RC9-220003.
17. Bicart Cartridge 720 Sales Sheet. GBU-RC9-220002.
18. Bicart Cartridge 1150 Sales Sheet. GBU-RC9-20001.
19. Bicart Cartridge 1250 Sales Sheet. GBU-RC9-200005.
20. Vantive Bloodlines and Accessories Bloodlines Brochure. GBU-RC60-250002.

TECHNICAL SPECIFICATIONS

Blood flow control	Flow rate, double needle: 0 and 20 to 600 mL/min Flow rate, single needle: 0 and 20 to 600 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 23500-3
Dialysis fluid preparation and monitoring	Flow rate: 300-800 mL/min (by step of 20 mL/min) Sodium and Bicarbonate range: Na+ 130 to 150 mmol/L, HCO3- 20 to 40 mmol/L Profiling (Na+, HCO3-, 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: Light detector
Disinfection and cleaning	Automated disinfection process with water treatment systems Heat, Heat with liquid citric or CleanCart cartridge Short heat citric disinfection Chemical: Peracetic acid, sodium hypochlorite Disinfection log Descaling
Power supply	Mains voltage: 115-120V, 220-240V 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 106kPa)
IT-connectivity	HL7 based bi directional communication with data encryption (optional)

* 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.

Vantive offers fully integrated solutions

When combined with the extended Vantive HD offering, the **AK 98** machine has the versatility to simply and effectively meet the clinical needs of the majority of your HD patients. Supported by Vantive's Technical, Clinical and Educational services the **AK 98** machine can be seamlessly introduced and maintained within your programme. Discover the benefits of a simply versatile HD machine Discover the Vantive **AK 98** machine.

For safe and proper use, please refer to the Operator's Manual of the device or appropriate disposables' Instructions for use.

CE 0123