



Dialysis System

DBB-07

The flexible solution





Times are changing, we have the solution.

DBB-07 Dialysis System

The challenge

The demand of dialysis treatment methods should consider the growing number of patients and aging patients worldwide. Furthermore, the patients often suffer from several concomitant diseases. Considering this and the limited resources available to the health care, modern dialysis treatment methods have to be offered at a reasonable price.

The general situation in the European health care is subject to constant pressure to reduce expenses and this also affects you as a nephrologist and the dialysis treatments you are performing.

The DBB-07 Dialysis system has the advantages of a maximised operating life and minimum maintenance and repair requirements.

The uniformed designed disposables for the DBB-0X series gives you purchasing and logistical advantages.

All those benefits help you to reduce your treatment costs.

Nikkiso's approach

The DBB-07 is the next step in our customer focused development program to fulfil your requirements for performing HD and Online HDF in an economical way.

The proven hydraulic system of the DBB-05 Dialysis system guarantees the reliability of the dialysis system and minimization of the follow-up costs. For the DBB-07 Dialysis system, the hydraulic system has been upgraded with an additional EF-02D dialysis fluid filter. Both integrated EF-02D dialysis fluid filters ensure a quality of dialysis fluid and substitution fluid complying with international standards*.

The user interface, which is identical to the ones of DBB-05 and DBB-06, ensures a quick and easy learning of the system, less need for training, and a seamless integration into an existing NIKKISO machine fleet.

The reliability of our machines is enhanced through our network of selected co-operation partners which guarantee comprehensive service and excellent support. Therefore, your machine fleet works reliably with minimal costs.

DBB-07 Series

- Flexible for all treatment modes
- High dialysis standard with Online HDF
- Cost-effective
- Level adjustment via touch screen
- Rotatable touch screen
- Optional modules

DBB-07, Type E

Flexible double pump system with two connections to the central concentrate system

Type E fits perfectly in dialysis centres equipped with central concentrate systems and allows an easy and comfortable selection between two different types of concentrates directly via touch screen. The option for acetate-free biofiltration (AFBF) is also available for type E.

DBB-07, Type D

Flexible double pump system for advanced treatment modes

Type D enables effective single-needle treatments in double pump mode. The option for acetate-free biofiltration (AFBF) is available for type D.



DBB-07 Dialysis system

A flexible dialysis system to drive advanced treatments

The modules of the DBB-07

Active blood pressure measurement



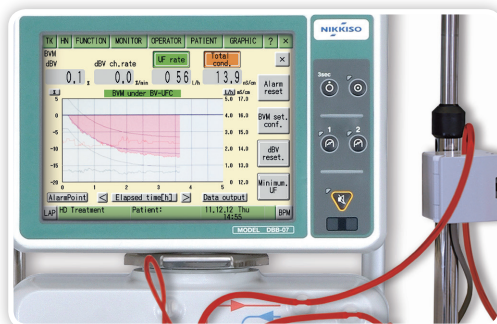
Active blood pressure measurement

Safety ensured by continuous measurement

If desired, continuous blood pressure measurement (BPM) can be carried out during the treatment.

On the screen, you can follow the blood pressure course chronologically. An automatic deactivation of the UF rate also occurs when the selected pressure limits are reached.

Haemo-Master



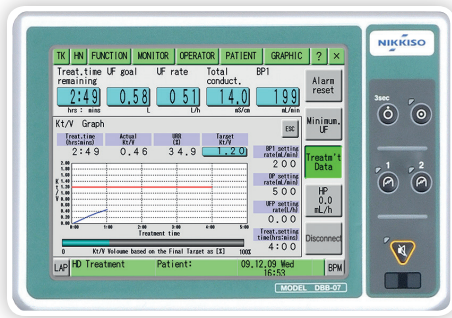
Haemo-Master

Fewer complications during treatment

Unforeseen complications during the dialysis session occur in up to 30% of all treatments. Roughly half of all episodes are caused by hypotensions.

Haemo-Master, the advanced blood volume measurement (BVM) option, measures the relative plasma volume during the treatment. The UF rate and sodium concentration in the dialysis fluid are regulated as a feedback system. Thus, hypotensive episodes are either reduced or prevented altogether.

Display of the current Kt/V value



Dialysis Dose Monitor

Reaching treatment goals through Kt/V measurement

Kt/V is seen as a central quality parameter for the quantification of the delivered dialysis dose. In some countries Kt/V is used as a parameter for the evaluation of dialysis quality as well as for the reimbursement. The main objective is to optimise the delivered dialysis dose and to enable you to create a complete documentation of the dialysis efficiency. The optional Dialysis Dose Monitor (DDM), with the real continuous measurement of blood urea nitrogen (BUN) correlated substances, can help you achieve your treatment goals.

External scale



External scale for HDF/HF/AFBF with solution bags

Be flexible for the right treatment

The external scale offers at the moment the most flexible system in the market. The DBB-07 with external scale can perform online treatments but also HDF, HF and AFBF treatments with solution bags. The acetate-free biofiltration (AFBF) is a special kind of treatment without acetate and bicarbonate in the dialysate. The patient blood level of bicarbonate will be exactly controlled by the external scale. This ensures an optimal correction of the metabolic acidosis. The AFBF therapy is accepted to be biocompatible.

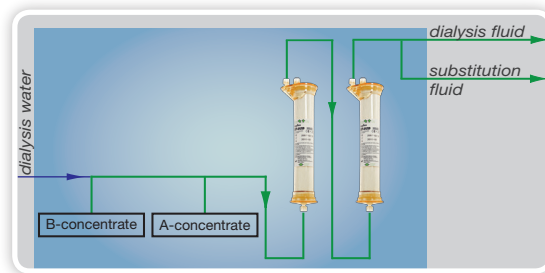


Network connection

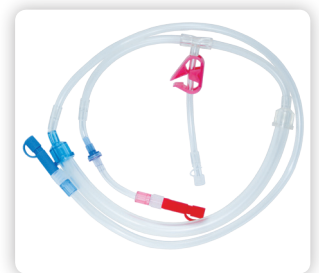
Be connected

The DBB-07 offers all common interface formats for connection of medical information systems. Data and information from the treatment procedure are sent easily and conveniently to your office via the clinic network. NIKKISO is cooperating with MedVision AG, a specialist in medical IT-solutions. Please contact your NIKKISO representative.

Hydraulic system of DBB-07 with two dialysis fluid filters EF-02D



Cost-effective steam sterilized substitution line C07J-P



DBB-07 Dialysis System

Resource-saving appliance management

- Auto-Flow-Reduction in standby mode
- Maximum possible reduction of dead spaces in the hydraulic system (total volume only 1.7 litres)
- Optimised energy use as standard via integrated heat exchangers between in- and out-flow
- Appropriately sized user display with selectable screensaver and movement notification
- Eco-friendly concentrate-, water- and energy-saving mode



Standard features

Safety

- Dialysis fluid leakage sensor
- Dialyzer inlet blood pressure monitoring
- Level adjustment via touch screen
- Battery backup of extracorporeal circuit

Hygiene

- Double filter (cascade) for dialysis fluid and substitution fluid
- Patented Clean coupling® to optimise dialysate purification
- Holder for standard bicarbonate cartridges
- Disinfectable concentrate suction nozzles

Treatment quality

- Online HDF / HF in pre- and post-dilution mode
- Online Kt/V calculation

Usability

- Saline-free online priming of the extracorporeal circuit
- Serial data interface / Connection to nurse call
- Integrated service mode for function analysis
- Clearly visible status display
- Central concentrate system for two concentrate connections (CCS)*

Options

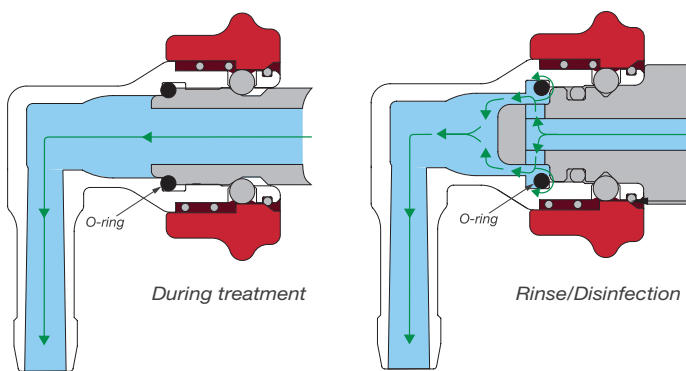
Treatment quality

- External scale - HDF / HF / AFBF (Acetate-Free Bio Filtration) with solution bags
- Haemo-Master (BV-UFC/COC) - Blood volume measurement with active regulation of the UF rate and conductivity in the dialysis fluid
- Blood pressure monitor (BPM) - Continuous measurement with display of the blood pressure course on the monitor, automatic deactivation of the UF rate when the selected limits are reached
- Dialysis Dose Monitor (Kt/V)

Usability

- Network – Integration of the dialysis system into the clinic network

* only type E



Purification of dialysate Clean coupling®

This special design cleans and disinfects the sealed part of the dialyzer coupling, optimising the cleaning of the dialysate.

Technical information

General information

Dimensions	146 x 39 x 48 (HxWxD in cm) basis: 49 x 75 (WxD in cm)
Weight	approx. 95 kg standard system (approx. 100 kg with optional extras)
Power supply	220/230/240 V AC, $\pm 10\%$ (≈ 10 A) 50/60 Hz, ± 1 Hz
Back-up battery	Ni-MH battery 24 V, 1.9 Ah
Water supply	Pressure : 1 to 7 bar at 800 mL/min Temperature: 5 to 30 °C
Drain	max. 800 mL/min Connection height: max. 50 cm
Concentrate	Central concentrate supply Inflow pressure 0 to 0.5 bar
External connections	Status display (External status monitor display) Alarm output (Staff call) Alarm input (for connection to an external device) Nurse call (for external pushbutton switch) Output (for external auxiliary equipment) RS-232 interface 1 (BVM data and service interface) RS-232 interface 2 (treatment data interface)

Treatment modes

- Acetate dialysis
- Bicarbonate dialysis with powder or fluid bicarbonate concentrate
- Single-needle (double pump or single pump)
- ISO-UF program (sequential UF)
- Online haemo(dia)filtration
- Haemo(dia)filtration with scale
- Acetate-free biofiltration
- UF, sodium and bicarbonate profiles

Extracorporeal circuit

Arterial pressure	Measurement range: -300 to +300 mmHg Measurement accuracy: ± 10 mmHg
Venous pressure	Measurement range: -200 to +500 mmHg Measurement accuracy: ± 10 mmHg
Dialyzer inlet blood pressure	Measurement range: -200 to +735 mmHg Measurement accuracy: ± 10 mmHg
Arterial blood pump (pump 1)	Setting range: 40 to 600 mL/min Flow rate accuracy: $\pm 10\%$
Heparin pump	Setting range: 0.0 to 9.9 mL/h Output rate accuracy: $\pm 5\%$ Bolus amount: 0.0 to 9.9 mL Syringe type: 30/20mL, 10mL (optional)
Air detector	Method: ultrasonic waves Sensitivity: 0.02 mL (normal air bubble) Blood flow rate: 250 mL/min; 0.0003 mL (microbubbles: blood/air mixture) Blood flow rate: 250 mL/min
Online HDF/HF Substitution fluid pump (pump 2)	Setting range: 0.00; 0.10 to 18.00 L/h (Online HDF) 0.00; 0.10 to 30.00 L/h (Online HF)

Hydraulic circuit

Dialysis fluid	Setting range: 300 to 700 mL/min Temperature: 34.0 to 40.0 °C
Acetate dialysis	Setting range: 12.5 to 15.5 mS/cm
Bicarbonate dialysis	Setting range: 2.3 to 7.0 mS/cm
Ultrafiltration	Setting range: 0.00; 0.10 to 4.00 L/h Accuracy: ± 30 mL/h (at dialysate flow rate 300 to 500 mL/min) $\pm 0.1\%$ of the dialysate flow rate (at dialysate flow rate 501 to 700 mL/min)
Blood leak detector	Method: optical detector Sensitivity: 0.5 mL blood/1L dialysate (blood: haematocrit 20 %; dialysate temperature: 37 °C) 0.40 mL blood/min (max. flow rate: 700 mL/min)

Cleaning and disinfection

- Rinsing
- Sodium hypochlorite, acetic acid, peracetic acid
- Heat cleaning > 85 °C
- Citro-thermal disinfection > 85 °C



Always close to you

Competent partners

For all questions concerning dialysis and our products, please contact us or our local partner:

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