

# 4008 B Dialysis System



# 4008 B Dialysis System: Caring for the Patient

4008 B is a dialysis machine generation that combines perfected, proven processing techniques with future-oriented technology.

The clear design and the unmistakable allocation of alarms, displays and operating functions permit an easy handling. The intelligent monitoring of the set alarm limits ensures an operation free from false alarm.

## The features of the 4008 B such as:

- Bicarbonate or acetate dialysis
- Single-needle or SN- Click-Clack
- Ultrafiltration and sodium profiles
- ISO-UF program

ensure attention to special needs of the patient in every dialysis treatment.

## Safety first

The closed volumetric fluid balancing system separates the waste from the fresh dialysate while ensuring accurate flow rates through the dialyser. The volumetric ultrafiltration and proportioning of the dialysis fluid also ensure accuracy in weight control and mixing therefore guaranteeing the safety of the patient.

## Preparation

The widely automated handling of the machine is innovative. The self test, the automated filling program, the automated threading of the blood pump and the operator guidance permit quick preparation of the treatment.

## Modularity

The modular design allows the user to customise the unit to suit individual treatment requirements. The new blood pumps offer greater operator comfort and can also accept paediatric blood line systems. The air detector is equipped with ultrasonic sensors for the safe detection of air and blood foam, along with an optical sensor, which detects the presence of blood or saline in the venous line.

## Ultrafiltration and Sodium profiles

The 4008 B provides a set of predefined profiles for dialysate sodium and ultrafiltration rate.

Additionally in case of power failure the built-in battery operates the extracorporeal blood circuit for at least 15 minutes



# Modularity: The perfect choice



## SN - Single-needle

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By means of an optional second blood pump, Single-Needle dialysis using the double pump procedure is possible, in addition to the click-clack procedure.



## BTM - Blood Temperature Management

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The Blood Temperature Monitor controls the intradialytic body temperature and measures fistula recirculation by thermodilution, in a completely automated and non-invasive procedure.



## BPM - Blood Pressure Management

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The BPM is a fully automated, non-invasive blood pressure meter, operating on the principles of oscillometry. It records the systolic and diastolic blood pressure, the mean arterial pressure (MAP) and the pulse.



## bibag® - Bicarbonate Dry Concentrate

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Is an online dry bicarbonate concentrate, which reduces the risk of micro-biological dialysate contamination in bicarbonate dialysis; is small and light-weight and can be automatically emptied at the end of the treatment.



## Finesse - Data Management System

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4008 B machines can be also connected to the Finesse dialysis data acquisition and management system, for the continuous quality assurance and process analysis providing the basis for an effective and efficient organisation of the dialysis operation.



## Service & Support

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The integrated software allows the calibration of sensors and pumps and makes troubleshooting quick and easy. Throughout the development of the 4008 B serviceability has been a prime consideration to reduce maintenance and repair time to a minimum.

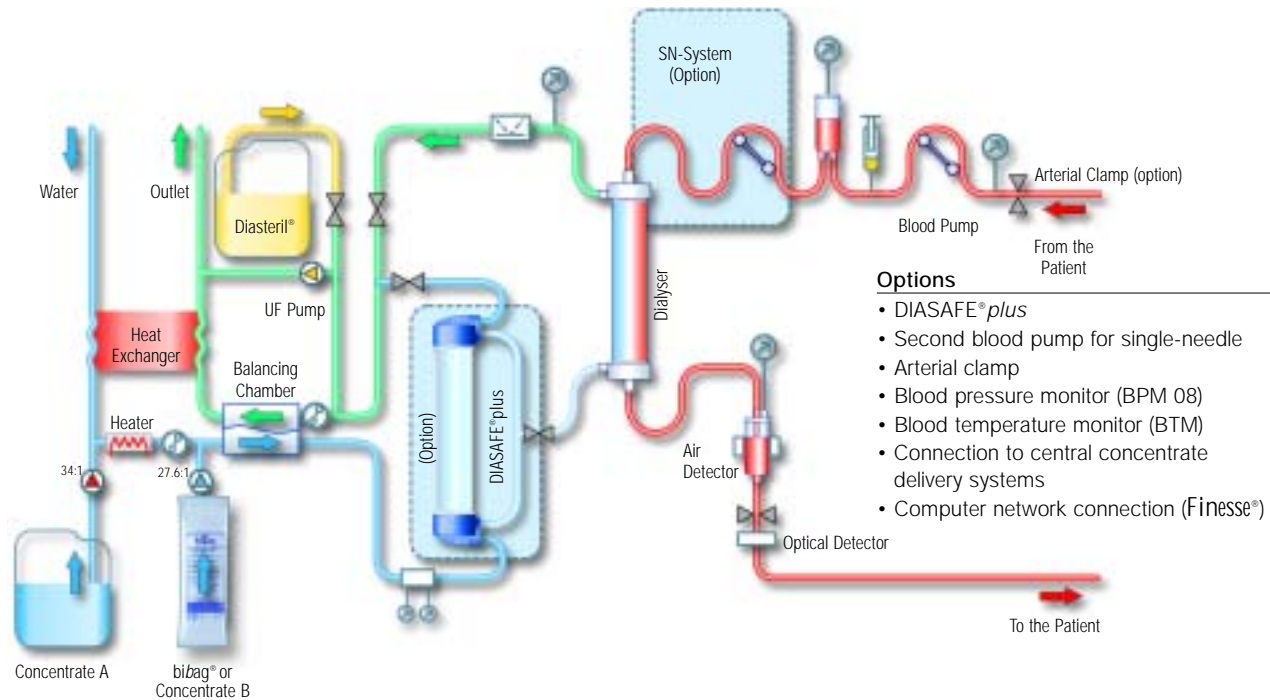


## Disinfection

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Special programmes are offered for different disinfectants including the environmentally friendly and highly efficient hot Diasteril® and cold Puristeril®.

## Flow Chart 4008 B



## Technical Data 4008 B

### Dimensions • Weight

|             |               |
|-------------|---------------|
| Floor space | 63 cm x 48 cm |
| Height      | 133 cm        |
| Weight      | 80 kg approx. |

### Power Supply

|                     |   |
|---------------------|---|
| Main power          | Standard Model<br>230V – 240V AC, –10% to +6%,<br>50Hz, 16A |
| Current consumption | max. 5A for dialysis<br>max. 9A for hot rinse               |

### Water Supply

|                         |                |
|-------------------------|----------------|
| Water inlet pressure    | 1.5 to 6.0 bar |
| Water inlet temperature | 5 °C to 30 °C  |
| Drain height            | max. 1 m       |

### Concentrate Supply

|                 |                         |
|-----------------|-------------------------|
| Supply pressure | max. suction height 1 m |
|-----------------|-------------------------|

### Arterial Blood Pump

|                                     |  |
|-------------------------------------|--|
| Blood flow range                    | 15 to 600 ml/min digital display   |
| Pump segment inner ø                | adjustable 2 to 10 mm  |
| Single needle blood pump (optional) | with 2 blood pump modules<br>internal pressure-pressure control,<br>variable stroke volume |

### Heparin Pump

|                      |                     |
|----------------------|---------------------|
| Administration rate  | 0.1 to 10 ml/h      |
| Syringe size         | 20 – 30 – 50 ml     |
| Bolus administration | max. 5 ml per bolus |

### Dialysis Fluid System

|                       |   |
|-----------------------|---|
| Dialysate flow        | 0/300/500/800 ml/min<br>Push key „Flow OFF“ for ultrafiltration<br>only (sequential UF) |
| Dialysate temperature | selectable 35 °C to 39 °C   |

### Ultrafiltration

|                       |  |
|-----------------------|--|
| UF rate (selectable)  | 0 and 4000 ml/h                        |
| UF factor of dialyser | no limitation, high and low flux range |
| Display parameters    | goal, time, rate, volume               |

### Cleaning/Disinfection

|   |                      |
|---|----------------------|
| Rinsing                                 |                      |
| Temperature                             | 37 °C                |
| Flow                                    | 600 ml/min (recirc.) |
| Hot cleaning                            |                      |
| Temperature                             | 85 °C                |
| Flow                                    | 450 ml/min           |
| Hot disinfection                        |                      |
| Temperature                             | 85 °C                |
| Flow                                    | 450 ml/min           |
| Disinfection/Cleaning                   |                      |
| Temperature                             | 37 °C                |
| Flow                                    | 600 ml/min           |
| Various programme combinations possible |                      |

### Safety Systems

|                           |  |
|---------------------------|--|
| Venous pressure monitor   | Display range<br>–60 mmHg to 520 mmHg  |
| Arterial pressure monitor | Display range<br>–300 mmHg to 280 mmHg   |
| Blood leak detector       | Colour sensitive detector<br>Sensitivity 0.5 ml/min (Hct 25%)                  |
| Air detector              | Ultrasonic and capacitive air detector<br>for different drip chamber diameters |

Products and technical specifications may change without notice.



Fresenius Medical Care