

4008 S

The next generation



Outstanding Value

The 4008 series from Fresenius Medical Care is the world's most trusted dialysis machine platform. The next generation 4008 S is the latest addition to the 4008 family and continues our heritage of quality and safety.

The 4008 series offers industry leading lifetime ownership costs* through its proven track record for durability and reliability.

With its ergonomic new design, the next generation 4008 S is easy to use with all functions centrally located.

The next generation 4008 S ensures standards of care are achieved for all patients. The OCM® and the DIASAFE®*plus* are standard features delivering assured adequacy and ultrapure dialysate with every treatment.

* Lifetime Ownership Costs = Purchase Price + Running Costs



Modern ergonomic design with

Highest Standards of Patient Care



Assured adequacy with the
OCM[®]

Dialysate ultrafiltration with
DIASAFE^{®plus}

Compatible with all types of
HD disposables

Integrated **PatientCard** *

Multilanguage capability *

Proven reliability

Backed by Fresenius Medical
Care service excellence

*Available from 2011

central allocation of all functions

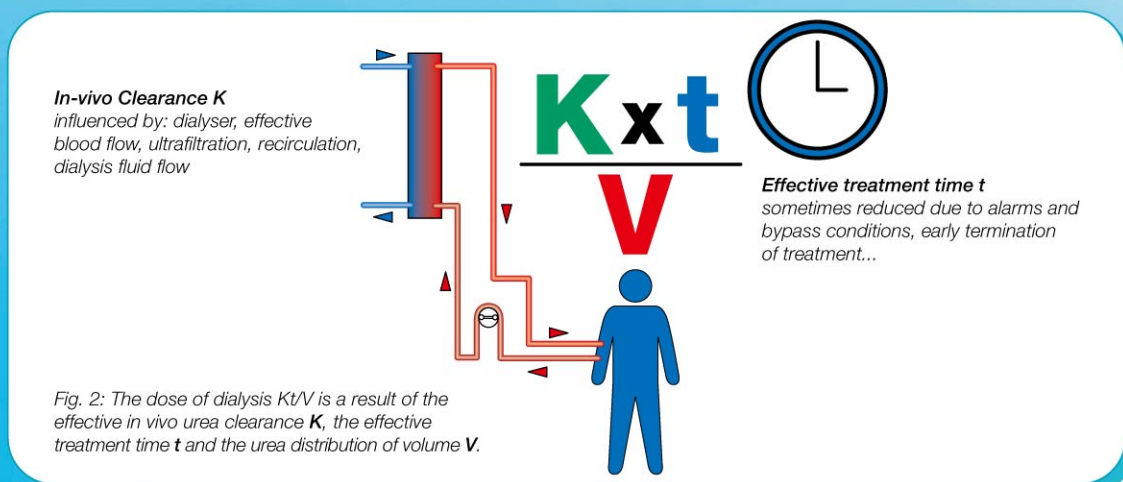
Adequacy Assured



The next generation 4008 S optimizes dialysis outcomes through the use of its revolutionary Online Clearance Monitor (OCM®). Numerous studies have demonstrated that morbidity and mortality rates are closely correlated to the delivered dialysis dose^{1,2} (Kt/V).

The OCM® enables continuous monitoring of the:

- Real time values for the effective in-vivo urea clearance (K)
- Effective dialysis treatment time
- Accumulated cleared plasma (Kt)
- Plasma sodium concentration
- Current dialysis dose administered (Kt/V)



- > **Non-invasive and completely automatic**
- > **Requires no additional disposable, laboratory or staff effort**
- > **An effective quality assurance tool to monitor the delivery of dialysis dose**
- > **No extra costs per treatment**

An accurate assessment of the urea distribution volume (V) with the Body Composition Monitor (BCM) assures a precise target for dialysis dose prescription. Validated in renal patients, the BCM provides a convenient assessment to help deliver adequate dialysis. The BCM is available separately. Visit www.bcm-fresenius.com for more details.



1. Hakim R, Breyer J, Ismail N, Schulmann G: Effects of dose of dialysis on morbidity and mortality. Am J Kidney Dis (1994); 23:661-669

2. Port F, Ashby Vm, Dhingra R, Roys E, Wolfe R: Dialysis dose and body mass index are strongly associated with survival in hemodialysis patients. J Am Soc Nephrol (2002); 12:1061-1066

Ease of Operation

The next generation 4008 S dialysis machine is designed for ease of use while providing the highest standards of patient safety and treatment hygiene.

- Central allocation of all functions for easy handling of treatment parameters
- Traffic light clearly indicates the treatment status
- Built-in tray for user convenience
- Multi-colour graphical display viewable from any angle
- Easy cleaning of all surfaces



The integrated **PatientCard** provides easily accessible, automated data management.

- Helps avoid uncertainties in patient data collection
- Allows rapid retrieval of recent treatment prescriptions
- Ensures patient safety due to reduced input errors



The **PatientCard** facilitates long-term patient surveillance and can be used in conjunction with Therapy Data Management System (TDMS). For more details please contact your local representative.

Safety, Convenience and Reliability

DIASAFE[®]plus – ensures ultrapure dialysate

- Quality and purity of dialysis fluid are critical to successful dialysis
- HD patients are typically exposed to 12,000 – 19,000 litres of dialysate per year
- Micro-contaminants such as endotoxin fragments can enter the blood compartment with undesirable consequences such as inflammation and other acute complications such as hypotension
- Ultrafiltration of fresh dialysate by the DIASAFE[®]plus is performed immediately upstream of the dialyzer: this removes the risk of patient exposure to bacterial microcontaminants
- Whether performing high-flux or low-flux dialysis, the risk of endotoxin transfer can be minimized by using the DIASAFE[®]plus



**AVAILABLE
as
STANDARD**



Blood Pressure Monitoring using the BPM (optional feature)

- Fully automated and non-invasive, operating on the principles of oscillometry
- Programmable measurement interval of 5 - 15 - 30 - 60 minutes and quick measurement
- Measurement of Systolic and Diastolic blood pressure, Mean Arterial Pressure (MAP) and Pulse rate

Volumetrically controlled ultrafiltration and closed-system hydraulics

- Fresenius Medical Care innovation for precise control of fluid removal

UF and Sodium profiling

- Six pre-programmed ultrafiltration profiles and/or balance-neutral sodium profiles may improve tolerance to fluid removal while minimizing intradialytic complications and preventing intradialytic sodium loading

Service Excellence

Fresenius Medical Care recognizes that the finest technology is only as good as the attention it receives in service and maintenance.

When choosing Fresenius Medical Care as your partner, you are assured of ongoing support essential to meeting the demands of caring for your equipment and for your patients. This is our commitment.



Leading Technologies
Local Expertise



Technical Data Haemodialysis Machine 4008 S

Technical Data (4008 S version V10, Article number M204001)

General data

Dimensions	1370 x 480 x 480 mm (H x W x D) (depth of pedestal 630 mm) Weight approx. 86kg
Water supply	
Water inlet pressure	1.5 – 6.0 bar
Water inlet temperature	5 °C – 30 °C
Max. drain height	1 m
Concentrate supply	
Supply pressure	1 m suction height
Electrical data	
Power supply	230 V ± 10 %, 47 – 63 Hz
Current consumption	max. 9 A
Power supply	110 V ± 10%, 47 – 63 Hz
Current consumption	max. 15 A
External connections	"Alarm in": zero potential alarm inlet "Alarm out": zero potential alarm outlet

Extracorporeal circuit

Arterial pressure monitoring	
Display range	-300 mmHg to + 280 mmHg
Accuracy	±10 mmHg
Resolution	20 mmHg
Venous pressure monitoring	
Display range	-60 mmHg to + 520 mmHg
Accuracy	± 10 mmHg
Resolution	20 mmHg
Transmembrane pressure monitoring	
Display range	-60 mmHg to + 520 mmHg
Resolution	20 mmHg
Arterial blood pump	
Blood flow range	15 to 600 mL/min in 8 mm bloodline systems
Accuracy	±10%
Air bubble detector	by ultrasound transmission, additional optical monitoring in venous clamp
Heparin pump	
Delivery range	0 to 10 mL/h
Bolus function	max. 5 mL per bolus
Syringe size	20 mL

Dialysis fluid circuit

Dialysis fluid flow range	
Selectable	0 – 300 – 500 – 800 mL/min

Dialysis fluid temperature

Selectable	35 °C to 39 °C
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Dialysis fluid conductivity

Range	12.8 to 15.7 mS/cm (25 °C)
Accuracy	± 0.1 mS/cm

Acid concentration dialysis fluid

Default mixing ratio	1 + 34 (others possible)
Range	125 to 150 mmol/L

Bicarbonate concentration dialysis fluid

Default mixing ratio	1 + 27.6 (others possible)
Range	- 8 to + 8 mmol/L bicarbonate

Bicarbonate dry concentrate

bibag® 5008

Ultrafiltration

UF rate	0 to 4.00 / h
Accuracy	±1 %
Allowed dialyser UF factor	unlimited
Parameters displayed	UF goal, UF time, UF rate, UF volume

Blood leak detector

Sensitivity	≤ 0.5 mL blood/min (Hct = 25) at max. flow 800 mL/min
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DIASAFE® plus – Dialysis fluid filter system

Balancing accuracy	± 0.1 % of dialysate flow
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OCM® – Online Clearance Monitor

Accuracy Clearance K	±5 %
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Disinfection and cleaning programmes*

Rinse	
Temperature/flow	37 °C / 600 mL/min

Hot rinse (recirculation)	
Temperature/flow	84 °C / 450 mL/min

Integrated hot rinse	
Temperature/flow	84 °C / 450 mL/min

Cleaning Sporotal® (recirculation)	
Temperature/flow	37 °C / 600 mL/min

Hot disinfection Diasteril® (recirculation)	
Temperature/flow	84 °C / 450 mL/min

Disinfection Puristerial® 340 (recirculation)	
Temperature/flow	37 °C / 600 mL/min

* Various programme combinations selectable.

Technical Data - Options

Single-Needle	With 2 blood pumps. Internal pressure/pressure control with variable stroke volume
Article no. M408641	

Blood Pressure Monitor (BPM) Article no. M409281

Display range	Systole: 30 – 280 mmHg Diastole: 10 – 240 mmHg MAP: 20 – 255 mmHg Accuracy: 1 mmHg
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Central Delivery System for acid conc. Article no. M417651

Supply pressure	0 to 100 mbar; 1 m suction height with Central Delivery System: 0 – 500 mbar
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Network	RJ45/Ethernet for data exchange with Therapy Data Management System/Finesse®
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Fresenius Medical Care