

UNIMED

# UDIA-HDF2

On-line Hemodiafiltration Equipment



# On-line HDF

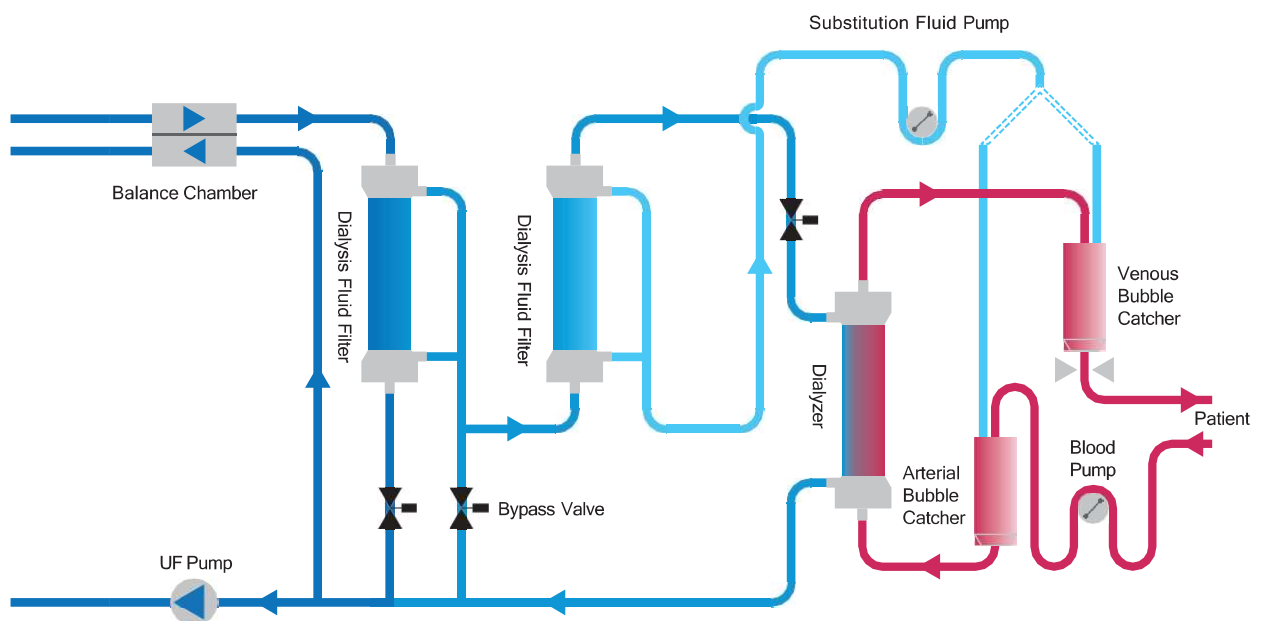
Improve the Quality of Life for Dialysis Patients

## UDIA-HDF2

On-line HDF is a treatment much closer to kidney metabolism, studies shown that all-cause mortality is reduced by one third compared with HD, improving patient survival rate and life quality.

On-line HDF can produce high quality sterile substitution fluid online...

- Wider removal coverage of large, medium and small toxin molecules
- Mitigate microinflammation
- Create stable hemodynamics
- Improve the nutritional status
- Increase patient survival rate and reduce cardiovascular damage
- Enhance erythropoietin reaction



# New Generation HDF Machine

## Keep Dialysis Safe

### Treatment Safety is Guaranteed

- Use integrated design of the air detector, the venous clamp and blood identification. Adopt the ultrasonic and optical sensors, can monitor continuous microbubbles and identify the blood.
- \* Online noninvasive BPM to monitor heart rate and blood pressure changes of patients, allow real-time communication with the machine, and ensure patient safety during the treatment.
- Advanced balance volume feedback and control system ensures the precision of the UF.
- The dialysate mixing feedback and control system guarantees the accuracy of the dialysate ion.

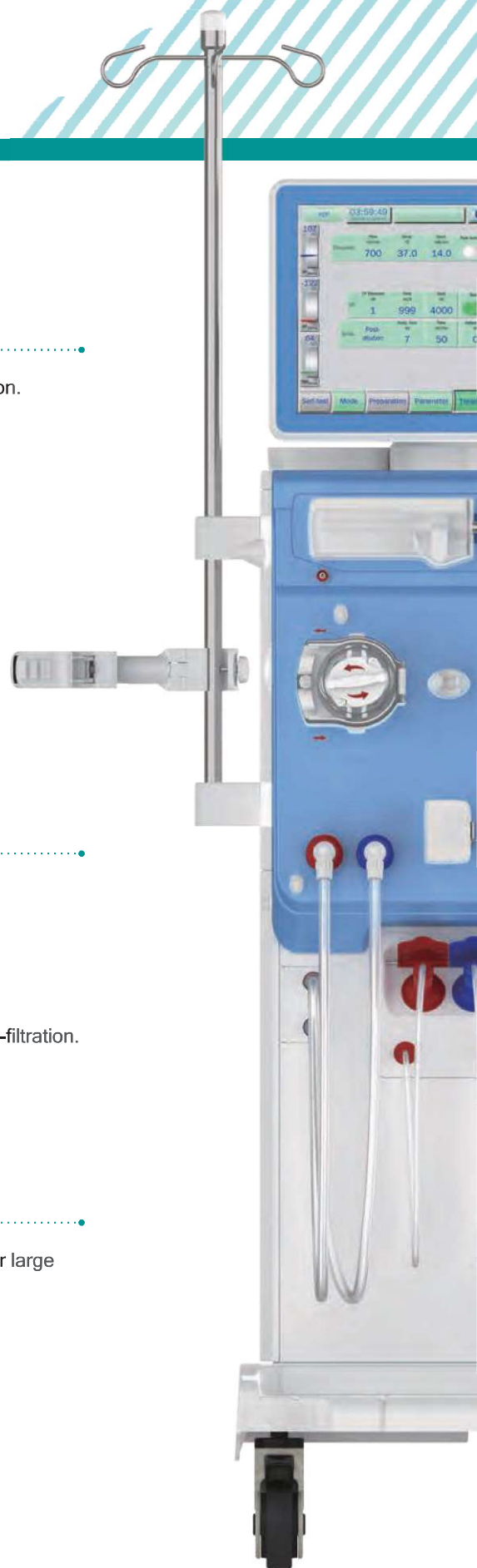
### Safe Self-test

- Independent control of the hydraulic, blood and monitoring systems to guarantee treatment safety.
- More than ten mandatory self-tests:  
Balance system, fluid mixing system, UF system, blood circuit system...
- Balance system performs real-time leak detection to ensure accuracy of ultra-filtration.

### Cost-effective

- \* • Centralized supply of concentrate fluid: Centralized control is always preferred for large dialysis centers to avoid manual operation and eliminate secondary pollution of concentrate, which increases efficiency and ensures quality.
- On-line priming and reinfusion: Use online substitution fluid to prime and reinfuse, without bag-type saline, fully automatic operation.

Note: The \* indicates optional features



# Intelligent Design

## User-friendly

- The user guide, self-test, parameter setting, treatment, cleaning and disinfection functions are clearly displayed for easy operation.
- Multi-level authorization: Different setting permissions are assigned to doctors, nurses and engineers to ensure correct operation and treatment safety.
- Rotatable screen provides a large field of vision. It's quick to collect items from the tray.



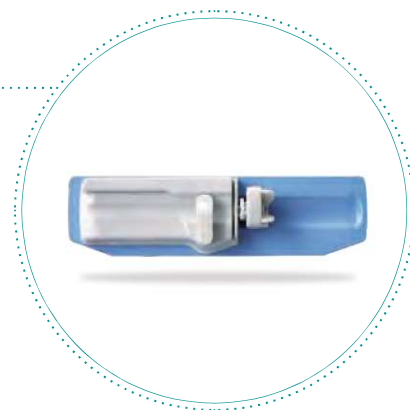
## Easy Maintenance

- The auto-locking design of the front cabinet cover makes it quick to open and save maintenance time.
- The other cabinet covers adopt knobs and screws, which can be disassembled easily without instruments.
- The modular, card-style design electronic circuit board is simple to disassemble and maintain.
- Magnetic lock, French door design makes it easy to replace the dual-stage endotoxin filters.



## Functional Upgrade

- Compatible with all brands of dialysis consumables, a variety of dialysate formula + customized formula, adaptable to various concentrate and disinfectant.
- Multi-functional Heparin Pump: Automatic identification of syringe model (10ml, 20ml, 30ml, 50ml), support heparin profile.



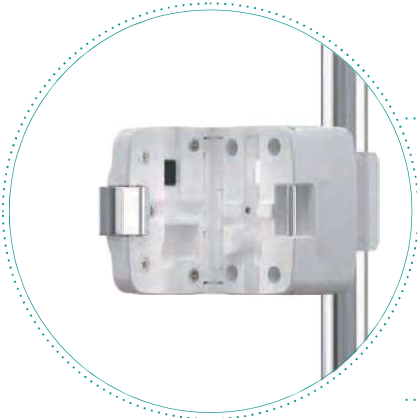


# Clinical Treatment



## Multiple Profiles, Tailored Treatment

- Various Sodium Profile
- UF Rate Profile
- Bicarbonate Profile
- Heparin Flow Profile
- Dialysate Flow Profile
- Dialysate Temperature Profile



### \* BVM

- Blood volume changes can be accurately detected during the treatment, effectively preventing hypotension caused by excessive water removal.

### \* RCM

- Real-time monitoring of clearance efficiency of urea to ensure treatment sufficiency.



### \* Bicart Holder

- Isolation of microbial contamination of B concentrate to ensure the purity of the dialysate and improve the quality of treatment.

# Professional Technical Services

- Professional Technical Services: Professional technical services team provides real-time response to hospital enquiries and requirements, and can provide solutions in 24 hours, ensuring a carefree user experience with reliable technical support.
- Free Regular Training: UNIMED offers periodical trainings to medical staff for free to help them familiarize with machine operations and raise sensitivity to emergency response.



## Key Feature

- ❑ **Dialysate flow from 100 to 1000 mL/min** -> while many other machines are limited to a maximum value of 700-800 mL/min.
- ❑ **Dialysate conductivity range from 12.0 to 18.0 mS/cm** -> which exceeds the range typically set in the majority of other machines.
- ❑ **Display** -> Flat, rotating 15-inch touch screen for increased readability and convenience.
- ❑ **Battery Back up** -> 40min back-up battery in the event of power outage.
- ❑ **Possibility to set specific profiles for UF, sodium (Na+), combined (UF and Na+), bicarbonate (HCO<sub>3</sub>-), dialysate temperature, dialysate flow and heparin.** Not all machines have the capability to manage all these profiles, providing **UDIA-HD1 & UDIA-HDF2** with a greater degree of flexibility.
- ❑ **Heparin syringe size 10, 20, 30, 40 and 50 mL** -> Providing greater flexibility compared to other machines that can only accommodate 10, 20, and 30 mL syringes.
- ❑ **UF rate from 0 to 6000 mL/h** -> surpassing the maximum values of 4000-5000 mL/h commonly set in many other machines.
- ❑ **Leakage sensor** -> **UDIA-HD1 & UDIA-HDF2** machines are equipped with this sensor by default, which is not present in all other machines.
- ❑ **Blood flow rate 0 – 650 mL/min** -> Surpassing the maximum value of 600 mL/min typically set as maximum value in many other machines.
- ❑ **AP/VP/TMP sensors range from -700 to 800 mmHg ±5 mmHg** -> which surpasses the narrower range typically provided by many other machines.
- ❑ **Kt/V calculated by a direct estimation of the urea using an UV sensor providing accurate measurements of urea levels.** In comparison, some other machines calculate Kt/V based on conductivity measurements.

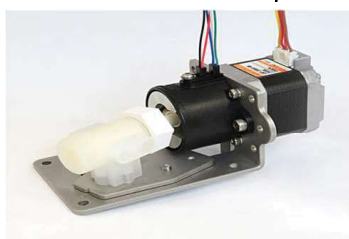
### Major Components:

Balancing Chamber & Two Way Solenoid Valve



Made in Germany

Concentrate Pump



Made in Germany

Gear Flow Pump



Made in Italy



# Technical Data

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<b>Blood pump</b>	
Blood Flow Rate	0, 30 to 650 ml/min; Accuracy: $\pm 10\%$ ml/min or $\pm 10\%$ of whichever is greater
Substitution Flow Rate	0, 30 to 650 ml/min; Accuracy: $\pm 10\%$ ml/min or $\pm 10\%$ of whichever is greater
<b>Heparin pump</b>	
Heparin Pump Flow	0 to 10 ml/h; Accuracy: $\pm 0.2\text{ml/h}$ or 5% of whichever is greater
Heparin Pump Flow Resolution	0.1 ml/h
Syringe Size	10 ml , 20 ml , 30 ml , 50 ml
<b>Dialysis Fluid and Conductivity</b>	
Dialysate Flow	0, 100 to 1000 ml/min; Accuracy: $\pm 5\%$
Dialysate Flow Resolution	1 ml/min
Dialysate Temperature	33°C to 40°C; Accuracy: 0.5°C
Dialysate Conductivity	12.0 to 18.0 mS/cm; Accuracy: $\pm 0.1\text{mS/cm}$
<b>Ultrafiltration Control</b>	
UF Rate	0 to 6000ml/h
<b>Monitoring System</b>	
Venus Pressure	-700 to 800mmHg; Accuracy: $\pm 5$ mmHg
Arterial Pressure	-700 to 800mmHg; Accuracy: $\pm 5$ mmHg
TMP	-700 to 800mmHg; Accuracy: $\pm 5$ mmHg
Blood Leakage Monitor	$\geq 0.35$ ml/min Blood at HCT of 32%
Air Detector	$\geq 0.02$ ml Bubbles or $\geq 0.0003$ ml continuous small bubbles
<b>Disinfection and Cleaning</b>	
Rinse	Water / 37°C
Hot Rinse	Water / 93°C
Decalcification	20% - 30% - 50% Citric Acid / 37°C
Thermal Disinfection	20% - 30% - 50% Citric Acid / 93°C
Chemical Disinfection	5% - 10% Sodium Hypochlorite / Room Temperature
<b>Blood Pressure Monitoring</b>	
Blood Pressure	0 to 300 mmHg
Resolution	1 mmHg
Pulse Monitoring Range	30 to 220 bpm
Pulse Monitoring Accuracy	$\pm 3$ bpm or $\pm 2\%$ of whichever is greater
<b>Dimensions and Weight</b>	
Dimensions	1515 x 465 x 785 mm
Weight	Approx. 87 kg
<b>Water Supply</b>	
Pressure	0.5 to 8.0 bar
Temperature	5 to 30°C
<b>Power Supply</b>	
Main Voltage	100 to 240V AC
Frequency	50 / 60 Hz
Back-up Battery	40 min
<b>Running Environment</b>	
Temperature	10°C to 40°C
Humidity	$\leq 85\%$
Atmospheric Pressure	70 kPa to 106 kPa (700 to 1060mbar)
Protective grade	IP X 1
Heater Power	1800W

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