

*“Technology to Prepare Ultrapure Dialysate for Hemodialysis”*

# CleanFlow CIP™

## Advanced Clean-in-Place Technology for Dialysis Water Systems

- Delivers Ultrapure dialysate
- Complete removal of biofilm
- Simple retrofit
- Cost-effective
- Less time and labor
- Safe cleaning chemistry
- Improved clinical outcomes
- Compatible with all existing dialysis water systems
- Exceeds current AAMI recommended levels



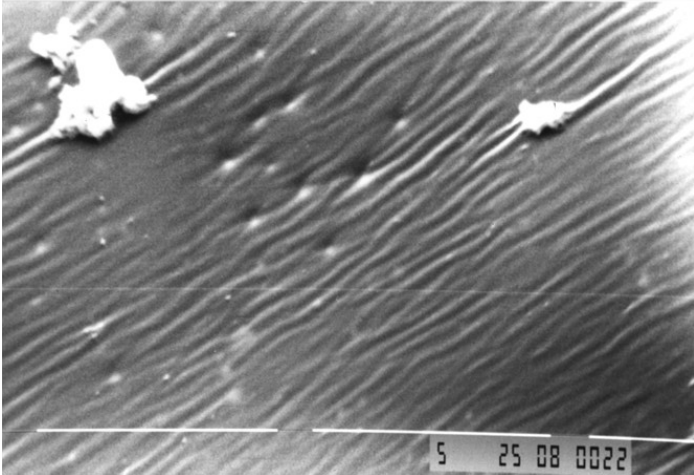
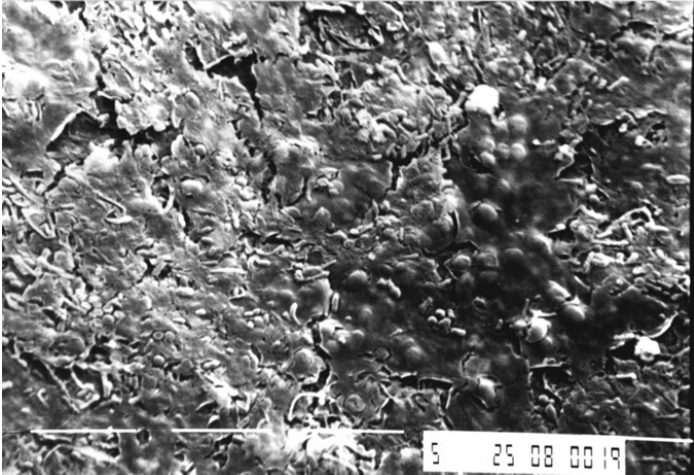
The **CleanFlow CIP™** device is a mobile, automated and multifunctional cleaning equipment that delivers the patented turbulent *two-phase flow* to perform the cleaning and disinfection of dialysis water systems, including distribution loops, storage tanks and dialysis machine connection tubing. The **CleanFlow CIP™** will streamline the maintenance of dialysis water systems and will ensure the delivery of ultrapure dialysate needed for safe hemodialysis.



Eradicating and controlling biofilm in the distribution loops and connection tubing of dialysis machines are critical to the overall success of consistently achieving ultrapure dialysate. Current maintenance practices are tedious, expensive, time-consuming and often deficient in achieving acceptable results to comply with strict AAMI recommendations. The NovaFlux **CleanFlow CIP™** mobile cleaning equipment solves the biofilm and endotoxin problem of central dialysis water systems. The technology has been validated to remove over 99% of mature biofilm from dialysis water system piping in dialysis clinics.

SEM of a biofilm-contaminated pipe section **before** NovaFlux *two-phase* cleaning.

SEM of the same pipe **after** NovaFlux *two-phase* cleaning.



Biofilm Density =  $2.8 \times 10^6$  cfu/cm<sup>2</sup>

Biofilm density = 0

## Equipment Specifications

**Dimensions**

Height: 50 inches  
 Depth: 32 inches  
 Width: 40 inches

**Water Requirements**

Pressure: 60 psi  
 Quality: RO Water

**Electrical Requirements**

Electrical Supply: 110 & 220 VAC  
 Amperage: 20 & 30 Amps

**Air Requirements**

Pressure: 50 SCFM @ 50 psi  
 Quality: HEPA Filter

**Drain Requirements**

Demister: Liquid discharged in std. drain  
 Air: Vented to outside

