**Indications for Use:** Optiflux F160NRe, F180NRe, F200NRe and F250NRe dialyzers are intended for patients with acute or chronic renal failure when conservative therapy is judged to be inadequate. Optiflux F16NRe, F18NRe, and F180NR, and Hemoflow F3 and F4 dialyzers are designed for single use in acute and chronic hemodialysis. The Hemoflow F40S is designed for single use in chronic hemodialysis or hemodiafiltration.

The applicability of a dialyzer for a particular treatment is the responsibility of the physician.

**Caution:** Federal (US) law restricts these devices to sale by or on order of a physician.

**Note:** Read the Instructions for Use for safe and proper use of these devices. For a complete description of hazards, contraindications, side effects and precautions, see full package labeling at www.fmcna.com.

In rare cases, thrombocytopenia or hypersensitivity reactions including anaphylactic or anaphylactoid reactions to the dialyzer, or other elements in the extracorporeal circuit may occur during hemodialysis.

## Dialyzer Quick Reference Guide

**Fresenius Polysulfone®** 

## NOW OFFERING 100% SINGLE-USE DIALYZERS



RENAL TECHNOLOGIES

Fresenius Renal Technologies, a division of Fresenius Medical Care North America 920 Winter Street, Waltham, MA 02451 1.800.662.1237 www.fmcna-dialyzers.com

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RENAL TECHNOLOGIES

## #I PRESCRIBED DIALYZER BRAND IN THE USA

## DIALYZER QUICK REFERENCE

With over 20 years of exacting science, Fresenius Renal Technologies manufactures and distributes dialysis products and equipment throughout North America, including the most prescribed dialyzer brand, Optiflux<sup>®</sup>.

With our full family of dialyzers, customers have the additional benefit of working with a single source for hemodialysis equipment and products. The potential for shipping, billing, supply and distribution complications that often arise when coordinating with multiple vendors is essentially eliminated.

At Fresenius Renal Technologies quality is our credo. It's the very essence of what we do. It's the quality of ideas, quality of innovative approach and the quality of the products we manufacture as we continually pursue perfection. Stringent production standards and dedication to consistent performance characteristics combine to demonstrate our commitment to quality.

## HIGH FLUX SINGLE-USE

The proven technology of Advanced Fresenius Polysulfone quality, biocompatibility and performance provide the foundation upon which Optiflux dialyzer technology is built.

Our asymmetric membrane structure provides a unique barrier that adsorbs endotoxins. Other advances in fiber and dialyzer technology enable more disruptive flow to improve solute removal. The resulting steeper sieving curve enhances small and middle molecule clearance without increasing albumin loss.

Optiflux high flux ebeam-sterilized dialyzers have the flexibility to be used in the traditional arterial end upright and also the arterial inverted position.





## **HIGH FLUX SINGLE-USE**

	F160NRe	F180NRe	FI80NR	F200NRe	F250NRe
Therapy	SU	SU	SU	SU	SU
Surface Area (m²)	1.5	1.7	1.7	1.9	2.5
Prime Volume (mL)	87	102	105	113	142
Kuf (in vitro bovine 32%)	61	76	58	74	111
Sterilant	E beam	E beam	EtO	E beam	E beam
KoA Urea (at QB300/QD500 mL/min)	1167	1321	1145	1415	1714
Lysozyme* (mL/min)	74	87	60	83	113
Product Code	0500316E	0500318E	0500318N	0500320E	0500325E
Clearance QB 300, QD 500 mL/min					
Urea	271	277	274	280	287
Creatinine	242	253	251	259	273
Phosphate	241	253	238	254	274
Vitamin BI2	153	169	168	177	205
Clearance QB 400, QD 500 mL/min					
Urea	317	328	323	333	349
Creatinine	274	290	285	298	321
Phosphate	279	297	289	298	328
Vitamin BI2	162	181	178	189	226
Clearance QB 400, QD 600 mL/min					
Urea	332	344	NA	348	366
Creatinine	288	304	NA	311	338
Phosphate	290	307	NA	309	341
Vitamin BI2	167	189	NA	195	235
Clearance QB 400, QD 800 mL/min					
Urea	349	360	358	365	381
Creatinine	302	320	316	328	357
Phosphate	304	321	314	324	356
Vitamin BI2	173	195	209	203	248

Membrane Advanced Fresenius Polysulfone (Optiflux) Housing–Polycarbonate Potting Compound–Polyurethane Clearance data is in vitro with UFR=0mL/min. Data on file. In vivo performance may differ. Sodium used as a marker for urea.

\*MW 14,300, surrogate for middle molecule clearance measured with lysozyme.

## **LOW FLUX**



## LOW FLUX

Low Flux dialyzers allow patients with a smaller surface area to achieve desired Kt/V adequacy goals with the same reliability in performance and biocompatibility as our high flux dialyzers.

Additionally, our variety of available low flux dialyzers provides the clinician with options to individualize patient care.



## LOW FLUX

	F3	F4	FI6NRe	F18NRe
Surface Area (m²)	0.4	0.7	1.5	1.8
Prime Volume (mL)	24	42	84	103
Kuf (in vitro bovine 32%)	1.7	2.8	10.0	12.0
Sterilant	EtO	EtO	E beam	E beam
KoA Urea (at QB300/QD500 mL/min)	231	374	977	1321
Product Code	0520165A	0520161A	0500306E	0500308E
Clearance OB 200. OD 500 mL/min				
Urea	125	155	193	194
Creatinine	95	128	180	183
Phosphate	47	76	146	156
Vitamin BI2	20	32	80	91
Clearance QB 300, QD 500 mL/min Urea	NA	183	262	265
Creatinine	NA	145	262	236
Phosphate	NA	88	175	188
Vitamin B12	NA	34	100	3
Clearance OB 400. OD 500 mL/min				
Urea	NA	NA	309	317
Creatinine	NA	NA	261	273
Phosphate	NA	NA	191	209
Vitamin B12	NA	NA	94	113
Clearance <b>QB</b> 400, <b>QD</b> 800 mL/min				
Urea	NA	NA	340	349
Creatinine	NA	NA	286	303
Phosphate	NA	NA	214	235
Vitamin BI2	NA	NA	105	123

Membrane–Fresenius Polysulfone (Hemoflow) or Advanced Fresenius Polysulfone (Optiflux) Housing–Polycarbonate Potting Compound–Polyurethane Clearance data is in vitro with UFR=0mL/min. Data on file. In vivo performance may differ. Sodium used as a marker for urea.

## LOW VOLUME



## LOW VOLUME

Fresenius Renal Technologies' low volume dialyzers are a viable option for small patients and those with low blood volume.

Using a low volume dialyzer in conjunction with a low volume blood tubing set may help to minimize the amount of blood outside the patient's body during therapy.



## LOW VOLUME

	F3	F4	F40S
Therapy	SU	SU	SU
Surface Area (m <sup>2</sup> )	0.4	0.7	0.7
Prime Volume (mL)	24	42	42
Kuf (in vitro bovine 32%)	1.7	2.8	20
Sterilant	EtO	EtO	Steam
KoA urea (at QB200/QD500 mL/min)	231	374	445
Product Code	0520165A	0520161A	0500714S

## Clearance QB 200, QD 500 mL/min

Urea	125	155	165
Creatinine	95	128	140
Phosphate	47	76	138
Vitamin BI2	20	32	80

## Clearance QB 300, QD 500 mL/min

Urea	NA	183	NA
Creatinine	NA	145	NA
Phosphate	NA	88	NA
Vitamin BI2	NA	34	NA

Membrane–Fresenius Polysulfone (Hemoflow) Housing–Polycarbonate Potting Compound–Polyurethane Clearance data is in vitro with UFR=0mL/min. Data on file. In vivo performance may differ. Sodium used as a marker for urea.

# **STERILIZATION OPTIONS**



## STERILIZATION OPTIONS

Fresenius Renal Technologies offers other sterilization options. These dialyzers are a good choice for patients with known hypersensitivity to other sterilization methods.



## **STERILIZATION OPTIONS**

	F3	F4	F40S	FI80NR
Therapy	SU	SU	SU	SU
Surface Area (m <sup>2</sup> )	0.4	0.7	0.7	1.7
Prime Volume (mL)	24	42	42	105
Kuf (in vitro bovine 32%)	1.7	2.8	20	58
Sterilant	EtO	EtO	Steam	EtO
KoA Urea (at QB200/QD500 mL/min for	F3,			
F4, F40S; F180NR: QB300/QD500 mL/mir	n) 23 l	374	445	1145
Lysozyme* (mL/min)	NA	NA	NA	60
Product Code	0520165A	0520161A	0500714S	0500318N
Clearance OB 200 OD 500 ml /min				
Urea	25	155	65	197
Creatinine	95	128	140	187
Phosphate	47	76	138	185
Vitamin BI2	20	32	80	4
	NA	183	NA	274
Creatinine	NA	145	NA	151
Phosphate	NA	88	NA	238
Vitamin B12	NA	34	NA	168
Clearance QB 400, QD 500 mL/min				
Urea	NA	NA	NA	323
Creatinine	NA	NA	NA	285
Phosphate	NA	NA	NA	289
Vitamin B12	NA	NA	NA	178
Clearance QB 400, QD 800 mL/min				
Urea	NA	NA	NA	358
Creatinine	NA	NA	NA	316
Phosphate	NA	NA	NA	314
Vitamin BI2	NA	NA	NA	209

Membrane–Fresenius Polysulfone (Hemoflow) or Advanced Fresenius Polysulfone (Optiflux) Housing–Polycarbonate Potting Compound–Polyurethane Clearance data is in vitro with UFR=0mL/min. Data on file. In vivo performance may differ. Sodium used as a marker for urea.

\*MW 14,300, surrogate for middle molecule clearance measured with lysozyme.