

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT2892349

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
NXSTAGE MEDICAL, INC.	06/09/2014

RECEIVING PARTY DATA

Name:	GENERAL ELECTRIC CAPITAL CORPORATION, AS ADMINISTRATIVE AGENT
Street Address:	TWO BETHESDA METRO CENTER
Internal Address:	SUITE 600
City:	BETHESDA
State/Country:	MARYLAND
Postal Code:	20814

PROPERTY NUMBERS Total: 145

Property Type	Number
Patent Number:	6979309
Patent Number:	7004924
Patent Number:	6572641
Patent Number:	7771379
Patent Number:	7776001
Patent Number:	7147613
Patent Number:	7300413
Patent Number:	7338460
Patent Number:	7267658
Patent Number:	7347849
Patent Number:	7780619
Patent Number:	6955655
Patent Number:	6572576
Patent Number:	7087033
Patent Number:	7776219
Patent Number:	7040142
Patent Number:	8608658
Patent Number:	8641615
Application Number:	14156901

PATENT

Property Type	Number
Patent Number:	6673314
Patent Number:	6702561
Patent Number:	6649063
Patent Number:	7214312
Patent Number:	7419597
Patent Number:	6743193
Patent Number:	6830553
Patent Number:	6579253
Patent Number:	6852090
Patent Number:	6638477
Patent Number:	6589482
Patent Number:	6554789
Patent Number:	6595943
Patent Number:	6582385
Patent Number:	6638478
Patent Number:	7226538
Patent Number:	7588684
Patent Number:	7790043
Patent Number:	7473238
Patent Number:	8192387
Application Number:	13465128
Patent Number:	7112273
Patent Number:	7470265
Patent Number:	8002727
Patent Number:	8480608
Application Number:	13928622
Patent Number:	7337674
Patent Number:	7686778
Patent Number:	8235931
Application Number:	13545022
Patent Number:	7544300
Patent Number:	7749393
Patent Number:	7976711
Patent Number:	8202420
Patent Number:	8460558
Application Number:	13909990
Application Number:	14269076
Patent Number:	7901579
Patent Number:	8679348

PATENT

Property Type	Number
Patent Number:	8545428
Application Number:	13968430
Application Number:	13618716
Application Number:	11813472
Application Number:	12296415
Application Number:	13861172
Patent Number:	7758082
Patent Number:	8042838
Patent Number:	8585096
Application Number:	14052808
Patent Number:	8210049
Application Number:	14238434
Application Number:	14006763
Application Number:	14348533
Patent Number:	8190651
Application Number:	13467553
Application Number:	12903171
Application Number:	12912714
Patent Number:	8496625
Application Number:	13939150
Application Number:	13825310
Application Number:	13879988
Application Number:	14115807
Application Number:	14115924
Patent Number:	5951870
Patent Number:	6187198
Patent Number:	6344139
Patent Number:	6464878
Patent Number:	6695807
Patent Number:	6206954
Patent Number:	5895368
Patent Number:	6290665
Patent Number:	6387069
Patent Number:	7166084
Patent Number:	7025744
Patent Number:	8377039
Patent Number:	7056308
Patent Number:	7569047
Patent Number:	8647312

PATENT

Property Type	Number
Application Number:	14139439
Patent Number:	8506536
Patent Number:	8251973
Patent Number:	7892208
Application Number:	11431137
Patent Number:	6042570
Patent Number:	6193694
Patent Number:	5562636
Patent Number:	5562637
Patent Number:	5951529
Patent Number:	6595965
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Patent Number:	6440095
Patent Number:	5772624
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Patent Number:	6620119
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Patent Number:	6177049
Patent Number:	6596234
Patent Number:	6319465
Patent Number:	6051134
Patent Number:	6117342
Patent Number:	5980741
Patent Number:	8641684
Patent Number:	6755801
Patent Number:	8092414
Patent Number:	8491518
Application Number:	13928454
Patent Number:	5983947
Patent Number:	5704924
Patent Number:	5643190
Patent Number:	5817043
Patent Number:	6299589
Patent Number:	5824213
Patent Number:	5895571
Application Number:	14123066
Application Number:	14123008
Patent Number:	6517508
Patent Number:	7025750

PATENT

Property Type	Number
Patent Number:	7591804
Patent Number:	6113062
Patent Number:	6089527
Patent Number:	6196519
Patent Number:	6685680
Patent Number:	6517522
Patent Number:	6616635
Application Number:	13713767
Application Number:	14348509

CORRESPONDENCE DATA

Fax Number: (404)572-5100

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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ATTORNEY DOCKET NUMBER:	NXSTAGE-09642.015063
NAME OF SUBMITTER:	CAROL FRASER
SIGNATURE:	//Carol Fraser//
DATE SIGNED:	06/10/2014

Total Attachments: 12

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PATENT SECURITY AGREEMENT

THIS PATENT SECURITY AGREEMENT, dated as of June 9, 2014, is made by each of the entities listed on the signature pages hereof (each a "Grantor" and, collectively, the "Grantors"), in favor of General Electric Capital Corporation ("GE Capital"), as administrative agent (in such capacity, together with its successors and permitted assigns, "Agent") for the Secured Parties (as defined in the Credit Agreement referred to below).

WITNESSETH:

WHEREAS, pursuant to the Credit Agreement, dated as of June 9, 2014 (as the same may be amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement"), by and among NxStage Medical, Inc., a Delaware corporation ("NxStage"), Medisystems Corporation, a Washington corporation ("Medisystems"), NxStage Kidney Care, Inc., a Delaware corporation ("NKC"), NxStage Jacksonville, LLC, a Delaware limited liability company ("Jacksonville"), NKC Boca Raton, LLC, a Delaware limited liability company ("Boca Raton"), NxStage Oak Brook, LLC, a Delaware limited liability company ("Oak Brook"), NxStage Cincinnati, LLC, a Delaware limited liability company ("Cincinnati"), NxStage Cleveland, LLC, a Delaware limited liability company ("Cleveland"), NxStage Columbus, LLC, a Delaware limited liability company ("Columbus"), NxStage Toledo, LLC, a Delaware limited liability company ("Toledo"), NKC Cincinnati West, LLC, a Delaware limited liability company ("Cincinnati West"), NxStage St Louis, LLC, a Delaware limited liability company ("St Louis"), NxStage Omaha, LLC, a Delaware limited liability company ("Omaha"), NxStage Greenbelt, LLC, a Delaware limited liability company ("Greenbelt"), NKC Baltimore North, LLC, a Delaware limited liability company ("Baltimore North"), NKC Baltimore West, LLC, a Delaware limited liability company ("Baltimore West"), NxStage Boston North, LLC, a Delaware limited liability company ("Boston North"), NxStage Boston South, LLC, a Delaware limited liability company ("Boston South"), NxStage Newark, LLC, a Delaware limited liability company ("Newark"), NKC New Brunswick, LLC, a Delaware limited liability company ("New Brunswick"), NxStage Pittsburgh East, LLC, a Delaware limited liability company ("Pittsburgh East") and NKC Lehigh County, LLC ("Lehigh", and Lehigh, together with NxStage, Medisystems, NKC, Jacksonville, Boca Raton, Oak Brook, Cincinnati, Cleveland, Columbus, Toledo, Cincinnati West, St Louis, Omaha, Greenbelt, Baltimore North, Baltimore West, Boston North, Boston South, Newark, New Brunswick and Pittsburgh East, collectively as the "Borrowers" and individually as a "Borrower"), the Borrower Representative, the other Credit Parties, the Lenders and the L/C Issuers from time to time party thereto and GE Capital, as Agent, the Lenders and the L/C Issuers have severally agreed to make extensions of credit to the Borrower upon the terms and subject to the conditions set forth therein;

WHEREAS, all of the Grantors are party to the Guaranty and Security Agreement dated June 9, 2014 in favor of Agent (as such agreement may be amended, restated, supplemented or otherwise modified from time to time, the "Guaranty and Security"),

Agreement”) pursuant to which the Grantors are required to execute and deliver this Patent Security Agreement;

NOW, THEREFORE, in consideration of the premises and to induce the Lenders, the L/C Issuers and Agent to enter into the Credit Agreement and to induce the Lenders and the L/C Issuers to make their respective extensions of credit to the Borrowers thereunder, each Grantor hereby agrees with Agent as follows:

Section 1. Defined Terms. Capitalized terms used herein without definition are used as defined in the Guaranty and Security Agreement.

Section 2. Grant of Security Interest in Patent Collateral. Each Grantor, as collateral security for the prompt and complete payment and performance when due (whether at stated maturity, by acceleration or otherwise) of the Secured Obligations of such Grantor, hereby mortgages, pledges and hypothecates to Agent for the benefit of the Secured Parties, and grants to Agent for the benefit of the Secured Parties a Lien on and security interest in, all of its right, title and interest in, to and under the following Collateral of such Grantor (the “Patent Collateral”):

(a) all of its Patents and all IP Licenses providing for the grant by or to such Grantor of any right under any Patent, including, without limitation, those referred to on Schedule 1 hereto;

(b) all reissues, reexaminations, continuations, continuations-in-part, divisionals, renewals and extensions of the foregoing; and

(c) all income, royalties, proceeds and Liabilities at any time due or payable or asserted under and with respect to any of the foregoing, including, without limitation, all rights to sue and recover at law or in equity for any past, present and future infringement, misappropriation, dilution, violation or other impairment thereof.

Section 3. Guaranty and Security Agreement. The security interest granted pursuant to this Patent Security Agreement is granted in conjunction with the security interest granted to Agent pursuant to the Guaranty and Security Agreement and each Grantor hereby acknowledges and agrees that the rights and remedies of Agent with respect to the security interest in the Patent Collateral made and granted hereby are more fully set forth in the Guaranty and Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein. In the event that any provision of this Patent Security Agreement conflicts with any provision of the Guaranty and Security Agreement, the Guaranty and Security Agreement shall govern.

Section 4. Grantor Remains Liable. Each Grantor hereby agrees that, subject to the limitations set forth in the Guaranty and Security Agreement, such Grantor shall assume full and complete responsibility for the prosecution, defense, enforcement or any other necessary or desirable actions in connection with their Patents and IP Licenses subject to a security interest hereunder.

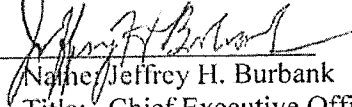
Section 5. Counterparts. This Patent Security Agreement may be executed in any number of counterparts and by different parties in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement. Signature pages may be detached from multiple separate counterparts and attached to a single counterpart.

Section 6. Governing Law. This Patent Security Agreement and the rights and obligations of the parties hereto shall be governed by, and construed and interpreted in accordance with, the law of the State of New York.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, each Grantor has caused this Patent Security Agreement to be executed and delivered by its duly authorized officer as of the date first set forth above.

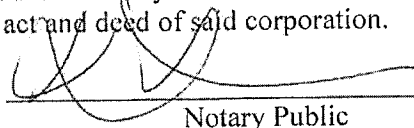
NXSTAGE MEDICAL, INC.,
as Grantor

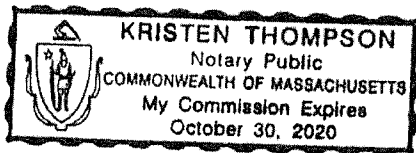
By: 
Name: Jeffrey H. Burbank
Title: Chief Executive Officer

ACKNOWLEDGMENT OF GRANTOR

State of MASSACHUSETTS)
County of ESSEX) ss.

On this 2nd day of JUNE, 2014 before me personally appeared Jeffrey H. Burbank, proved to me on the basis of satisfactory evidence to be the person who executed the foregoing instrument on behalf of NxStage Medical, Inc., who being by me duly sworn did depose and say that he is an authorized officer of said corporation, that the said instrument was signed on behalf of said corporation as authorized by its Board of Directors and that he acknowledged said instrument to be the free act and deed of said corporation.


Notary Public



[Signature Page to Patent Security Agreement]

ACCEPTED AND AGREED
as of the date first above written:

GENERAL ELECTRIC CAPITAL CORPORATION
as Agent

By: Verleria King Jones
Name: Verleria King-Jones
Title: Its Duly Authorized Signatory

[Signature Page to Patent Security Agreement]

Reference #	Title	Status	Serial #	Publication #	Patent #	Priority Date	Filed Date	Issue Date	Expiration Date
T4342-14198US32	SYSTEMS AND METHODS FOR PERFORMING BLOOD PROCESSING AND/OR FLUID EXCHANGE PROCEDURES	ISSUED	10/041,949	US 2002-0147423 A1	6,979,309	11/29/1999	1/7/2002	12/27/2005	6/19/2017
T4342-14517US01	METHODS, SYSTEMS, AND KITS FOR THE EXTRACORPOREAL PROCESSING OF BLOOD	ISSUED	09/174,721		7,004,924	2/11/1998	10/19/1998	2/28/2006	10/19/2018
T4342-14506US01	DEVICES FOR WARMING FLUID AND METHODS OF USE	ISSUED	09/829,670	2003-0147481	6,572,641	4/9/2001	4/9/2001	6/3/2003	4/9/2021
T4342-14521US01	FUNCTIONAL ISOLATION OF UPGRADEABLE COMPONENTS TO REDUCE RISK IN MEDICAL TREATMENT DEVICES	ISSUED	10/699,921	US 2004-0249330 A1	7,771,379	11/1/2002	11/3/2003	8/10/2010	7/16/2025
T4342-14198US18	REGISTRATION OF FLUID CIRCUIT COMPONENTS IN A BLOOD TREATMENT DEVICE	ISSUED	10/796,913	US-2009-0012442-A9	7,776,001	11/29/1999	3/8/2004	8/17/2010	10/28/2023
T4342-14198US22	MEASUREMENT OF FLUID PRESSURE IN A BLOOD TREATMENT DEVICE	ISSUED	10/796,787	US 2004-0267184 A1	7,147,613	2/25/2000	3/8/2004	12/12/2006	8/29/2020
T4342-14198US24	BLOOD PROCESSING MACHINE AND SYSTEM USING FLUID CIRCUIT CARTRIDGE	ISSUED	10/807,906	US 2004-0249331 A1	7,300,413	2/25/2000	3/23/2004	11/27/2007	5/4/2021
T4342-14198US25	BLOOD PROCESSING MACHINE FLUID CIRCUIT CARTRIDGE	ISSUED	10/808,207	US-2004-0238416-A1	7,338,460	2/25/2000	3/23/2004	3/4/2008	6/19/2021
T4342-14198US28	Renal replacement therapy device for controlling fluid balance of treated patient.	ISSUED	10/808,213	US 2004-0243050 A1	7,267,658	2/25/2000	3/23/2004	9/11/2007	3/6/2021
T4342-14198US05	MODULAR MEDICAL TREATMENT REPLACEABLE COMPONENT	ISSUED	10/913,815	US-2005-0020959-A1	7,347,849	5/24/2001	8/6/2004	3/25/2008	10/7/2022
T4342-14198US06	BLOOD TREATMENT APPARATUS	ISSUED	12/021,872	US-2008-0149551-A1	7,780,619	11/29/1999	1/29/2008	8/24/2010	11/29/2019
T4342-14198US34	HEMOFILTRATION SYSTEM	ISSUED	09/894,236	US 2001-0037079 A1	6,955,655	2/14/1997	6/27/2001	10/18/2005	10/7/2017
T4342-14514US01	METHOD AND APPARATUS FOR LEAK DETECTION IN A FLUID LINE	ISSUED	09/900,362	2003-0009123	6,572,576	7/7/2001	7/7/2001	6/3/2003	7/7/2021
T4342-14514US02	METHOD AND APPARATUS FOR LEAK DETECTION IN A FLUID LINE	ISSUED	10/483,142	US 2004-0243046 A1	7,087,033	7/7/2001	7/9/2004	8/8/2006	8/23/2022
T4342-14599US03	METHODS, DEVICES, AND SYSTEMS FOR HEMODILUTION	ISSUED	12/015,420	US-2008-0177215-A1	7,776,219	7/12/2001	1/16/2008	8/17/2010	8/11/2021
T4342-14515US01	METHOD AND APPARATUS FOR LEAK DETECTION IN BLOOD CIRCUITS COMBINING EXTERNAL FLUID DETECTION AND AIR INFILTRATION DETECTION	ISSUED	10/037,429	US 2003-0126910 A1	7,040,142	1/4/2002	1/4/2002	5/9/2006	2/9/2022
T4342-14516US02	METHOD AND APPARATUS FOR MACHINE ERROR DETECTION BY COMBINING MULTIPLE SENSOR INPUTS	ISSUED	13/406,332	US-2012-0194335-A1	8,608,658	1/4/2002	2/27/2012	12/17/2013	1/4/2022
T4342-14516US03	METHOD AND APPARATUS FOR MACHINE ERROR DETECTION BY COMBINING MULTIPLE SENSOR INPUTS	ISSUED	13/921,115	US-2013-0281799-A1	8,641,615	1/4/2002	6/18/2013	2/4/2014	1/4/2022
T4342-14516US04	METHOD AND APPARATUS FOR MACHINE ERROR DETECTION BY COMBINING MULTIPLE SENSOR INPUTS	PENDING	14/156,901			1/4/2002	1/16/2014		1/4/2022

Reference #	Title	Status	Serial #	Publication #	Patent #	Priority Date	Filed Date	Issue Date	Expiration Date
T4342-14198US12	INTERACTIVE SYSTEMS AND METHODS FOR SUPPORTING HEMOFILTRATION THERAPIES	ISSUED	09/513,771		6,673,314	11/29/1999	2/25/2000	1/6/2004	2/14/2017
T4342-14495US01	DEVICES AND METHODS FOR POTTING A FILTER FOR BLOOD PROCESSING	ISSUED	09/904,712	2003-0010702	6,702,561	7/12/2001	7/12/2001	3/9/2004	9/8/2021
T4342-14504US04	METHOD FOR PERFORMING RENAL REPLACEMENT THERAPY INCLUDING PRODUCING STERILE REPLACEMENT FLUID IN A RENAL REPLACEMENT THERAPY UNIT	ISSUED	09/905,246	US 2003-0010719 A1	6,649,063	7/12/2001	7/12/2001	11/18/2003	10/7/2021
T4342-14504US01	FLUID CIRCUITS, SYSTEMS, AND PROCESSES FOR EXTRACORPOREAL BLOOD PROCESSING	ISSUED	10/650,935	US 2004-0069709 A1	7,214,312	7/12/2001	8/27/2003	5/8/2007	7/8/2022
T4342-14504US02	FLUID, CIRCUITS, SYSTEMS, AND PROCESSES FOR EXTRACORPOREAL BLOOD PROCESSING	ISSUED	11/695,739	US-2007-0185430-A1	7,419,597	7/12/2001	4/3/2007	9/2/2008	7/12/2021
T4342-14511US01	HERMETIC FLOW SELECTOR VALVE	ISSUED	09/907,872	US 2003-0018290 A1	6,743,193	7/17/2001	7/17/2001	6/1/2004	7/17/2021
T4342-14198US02	BLOOD TREATMENT SYSTEMS AND METHODS THAT MAINTAIN STERILE EXTRACORPOREAL PROCESSING CONDITIONS	ISSUED	09/513,910		6,830,553	2/14/1997	2/25/2000	12/14/2004	2/14/2017
T4342-14198US03	FLUID PROCESSING SYSTEMS AND METHODS USING EXTRACORPOREAL FLUID FLOW PANELS ORIENTED WITHIN A CARTRIDGE	ISSUED	09/513,775		6,579,253	2/14/1997	2/25/2000	6/17/2003	2/14/2017
T4342-14198US04	FLUID PROCESSING SYSTEMS AND METHODS USING EXTRACORPOREAL FLUID FLOW	ISSUED	09/865,905	US 2002-0103453 A1	6,852,090	2/25/2000	5/24/2001	2/8/2005	12/10/2017
T4342-14198US14	FLUID REPLACEMENT SYSTEMS AND METHODS FOR USE IN HEMOFILTRATION	ISSUED	09/512,929		6,638,477	11/29/1999	2/25/2000	10/28/2003	2/14/2017
T4342-14198US13	EXTRACORPOREAL CIRCUITS FOR PERFORMING HEMOFILTRATION EMPLOYING PRESSURE SENSING WITHOUT AN AIR INTERFACE	ISSUED	09/512,927		6,589,482	11/29/1999	2/25/2000	7/8/2003	2/14/2017
T4342-14198US11	LAYERED FLUID CIRCUIT ASSEMBLIES AND METHODS FOR MAKING THEM	ISSUED	09/513,902		6,554,789	11/29/1999	2/25/2000	4/29/2003	2/14/2017
T4342-14198US16	SYSTEMS AND METHODS FOR CONTROLLING BLOOD FLOW AND WASTE FLUID REMOVAL DURING HEMOFILTRATION	ISSUED	09/513,915		6,595,943	2/14/1997	2/25/2000	7/22/2003	2/14/2017
T4342-14508US01	HEMOFILTRATION SYSTEM INCLUDING ULTRAFILTRATE PURIFICATION AND RE-INFUSION SYSTEM	ISSUED	09/027,301	2001-0041892	6,582,385	2/20/1998	2/20/1998	6/24/2003	2/20/2018
T4342-14198US09	SYNCHRONIZED VOLUMETRIC FLUID BALANCING SYSTEMS AND METHODS	ISSUED	09/513,911		6,638,478	11/29/1999	2/25/2000	10/28/2003	2/14/2017
T4342-14518US02	FLUID PROCESSING APPARATUS	ISSUED	10/772,888	US 2004-0222139 A1	7,236,538	7/13/2001	2/4/2004	6/5/2007	1/21/2022
T4342-14518US03	SYSTEMS AND METHODS FOR HANDLING AIR AND/OR FLUSHING FLUIDS IN A FLUID CIRCUIT	ISSUED	11/742,715	US-2007-0260168-A1	7,588,684	7/13/2001	5/1/2007	9/15/2009	7/13/2021
T4342-14518US04	SYSTEMS AND METHODS FOR HANDLING AIR AND/OR FLUSHING FLUIDS IN A FLUID CIRCUIT	ISSUED	12/508,900	US-2010-0022938-A1	7,790,043	7/13/2001	7/24/2009	9/7/2010	7/13/2021
T4342-14198US17	Hemofiltration systems and methods that maintain sterile extracorporeal processing conditions	ISSUED	10/649,582	US 2005-0045548 A1	7,473,238	11/29/1999	8/27/2003	1/6/2009	8/11/2020
T4342-14512US02	LAST-CHANGE QUALITY CHECK AND/OR AIR/PATHOGEN FILTER FOR INFUSION SYSTEMS	ISSUED	12/040,748	US-2008-0203023-A1	8,192,387	6/6/2002	2/29/2008	6/5/2012	10/29/2024

Reference #	Title	Status	Serial #	Publication #	Patent #	Priority Date	Filed Date	Issue Date	Expiration Date
T4342-14312US03	LAST-CHANCE QUALITY CHECK AND/OR AIR/PATHOGEN FILTER FOR INFUSION SYSTEMS	PUBLISHED	13/463,128	US-2013-0032537-A1		6/6/2002	5/7/2012		6/5/2023
T4342-14519US01	Volumetric fluid balance control for extracorporeal blood treatment	ISSUED	10/672,242	US-2005-0000868-A1	7,112,273	9/27/2002	9/26/2003	9/26/2006	10/2/2024
T4342-14501US01	DUAL ACCESS SPIKE FOR INFUSATE BAGS	ISSUED	10/593,185	US-2005-0277906-A1	7,470,265	3/20/2003	3/20/2003	12/30/2008	1/11/2024
T4342-14501US02	METHODS AND APPARATUS FOR LEAK DETECTION IN BLOOD PROCESSING SYSTEMS	ISSUED	10/578,600	US-2008-0214979-A1	8,002,727	11/7/2003	3/31/2008	8/23/2011	9/24/2026
T4342-14501US03	METHODS AND APPARATUS FOR LEAK DETECTION IN BLOOD PROCESSING SYSTEMS	ISSUED	13/075,454	US-2011-0218475-A1	8,480,608	11/7/2003	3/30/2011	7/9/2013	1/16/2025
T4342-14501US04	METHODS AND APPARATUS FOR LEAK DETECTION IN BLOOD PROCESSING SYSTEMS	PUBLISHED	13/928,622	US-2013-0283891-A1		11/7/2003	6/27/2013		11/5/2024
T4342-14522US01	PRESSURE DETECTOR FOR FLUID CIRCUITS	ISSUED	11/160,586	US-2007-0000333-A1	7,337,674	12/30/2002	6/29/2005	3/4/2008	12/13/2025
T4342-14264US01	WASTE BALANCING FOR EXTRACORPOREAL BLOOD TREATMENT SYSTEMS	ISSUED	10/544,124	US-2007-0038191-A1	7,686,778	1/15/2003	8/7/2006	3/30/2010	7/7/2026
T4342-14264US02	WASTE BALANCING FOR EXTRACORPOREAL BLOOD TREATMENT SYSTEMS	ISSUED	12/536,412	US-2010-0016777-A1	8,235,931	1/15/2003	8/5/2009	8/7/2012	2/10/2025
T4342-14264US03	WASTE BALANCING FOR EXTRACORPOREAL BLOOD TREATMENT SYSTEMS	PUBLISHED	13/545,022	US-2013-0012914-A1		1/15/2003	7/10/2012		1/14/2024
T4342-14498US03	BATCH FILTRATION SYSTEM FOR PREPARATION OF STERILE FLUID FOR RENAL REPLACEMENT THERAPY	ISSUED	11/160,764	US-2008-0053905-A9	7,544,300	1/7/2003	7/7/2005	6/9/2009	1/7/2024
T4342-14498US04	BATCH FILTRATION SYSTEM FOR PREPARATION OF STERILE FLUID FOR RENAL REPLACEMENT THERAPY	ISSUED	12/434,246	US-2009-0211975-A1	7,749,393	1/7/2003	5/1/2009	7/6/2010	1/7/2024
T4342-14498US05	BATCH FILTRATION SYSTEM FOR PREPARATION OF STERILE FLUID FOR RENAL REPLACEMENT THERAPY	ISSUED	12/786,255	US-2010-0228177-A1	7,976,711	1/7/2003	5/24/2010	7/12/2011	1/7/2024
T4342-14498US07	BATCH FILTRATION SYSTEM FOR PREPARATION OF STERILE FLUID FOR RENAL REPLACEMENT THERAPY	ISSUED	13/159,045	US-2011-0240547-A1	8,202,420	1/7/2003	6/13/2011	6/19/2012	1/7/2024
T4342-14498US08	BATCH FILTRATION SYSTEM FOR PREPARATION OF STERILE FLUID FOR RENAL REPLACEMENT THERAPY	ISSUED	13/526,145	US-2012-0305481-A1	8,460,558	1/7/2003	6/18/2012	6/11/2013	1/7/2024
T4342-14498US10	BATCH FILTRATION SYSTEM FOR PREPARATION OF STERILE FLUID FOR RENAL REPLACEMENT THERAPY	PUBLISHED	13/909,990	US-2013-0264250-A1		1/7/2003	6/4/2013		1/7/2024
T4342-14498US12	BATCH FILTRATION SYSTEM FOR PREPARATION OF STERILE FLUID FOR RENAL REPLACEMENT THERAPY	PENDING	14/269,076			1/7/2003	5/2/2014		1/7/2024
T4342-14494US06	BLOOD TREATMENT DIALYZER/FILTER FOR PERMITTING GAS REMOVAL	ISSUED	12/432,507	US-2009-0229466-A1	7,901,579	10/28/2004	4/29/2009	3/8/2011	3/1/2026
T4342-14498US06	FILTRATION SYSTEM FOR PREPARATION OF FLUIDS FOR MEDICAL APPLICATIONS	ISSUED	13/083,915	US-2011-0186521-A1	8,679,348	1/7/2003	4/11/2011	3/25/2014	1/28/2024
T4342-14498US09	FILTRATION SYSTEM FOR PREPARATION OF FLUIDS FOR MEDICAL APPLICATIONS	ISSUED	13/603,505	US-2012-0325696-A1	8,545,428	1/7/2003	9/5/2012	10/1/2013	1/7/2024

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T4342-14498US11	FILTRATION SYSTEM FOR PREPARATION OF FLUIDS FOR MEDICAL APPLICATIONS	PUBLISHED	13/968,430	US-2013-0327691-A1		1/7/2003	8/16/2013		1/7/2024
T4342-14510US02	SAFETY FEATURES FOR MEDICAL DEVICES REQUIRING ASSISTANCE AND SUPERVISION	PUBLISHED	13/618,716	US-2013-0069778-A1		10/25/2005	9/14/2012		10/25/2026
T4342-14498US02	FILTRATION SYSTEM FOR PREPARATION OF FLUIDS FOR MEDICAL APPLICATIONS	PUBLISHED	11/813,472	US-2008-0230450-A1		1/7/2005	5/12/2008		5/12/2028
T4342-14505US01	FILTRATION SYSTEM FOR PREPARATION OF FLUIDS FOR MEDICAL APPLICATIONS	ISSUED	12/296,415	US-2009-0182263-A1	8,469,331	4/7/2006	10/28/2008	6/25/2013	5/21/2030
T4342-14505US02	FILTRATION SYSTEM FOR PREPARATION OF FLUIDS FOR MEDICAL APPLICATIONS	PUBLISHED	13/861,172	US-2013-0228505-A1		4/7/2006	4/11/2013		4/9/2027
T4342-14123US01	FLUID LINE CONNECTOR SAFETY DEVICE	ISSUED	11/951,142	US-2008-0129042-A1	7,758,082	12/5/2006	12/5/2007	7/20/2010	5/5/2028
T4342-14123US02	FLUID LINE CONNECTOR SAFETY DEVICE	ISSUED	12/782,557	US-2010-0228231-A1	8,042,838	12/5/2006	5/18/2010	10/25/2011	12/5/2027
T4342-14123US03	FLUID LINE SAFETY DEVICE	ISSUED	13/503,734	US-2012-0214337-A1	8,585,096	10/27/2009	4/24/2012	11/19/2013	10/26/2030
T4342-14123US04	FLUID LINE SAFETY DEVICE	PUBLISHED	14/052,808	US-2014-0035273-A1		10/27/2009	10/14/2013		10/26/2030
T4342-14401US01	PRESSURE MEASUREMENT DEVICE	ISSUED	12/049,903	US-2008-0228087-A1	8,210,049	3/15/2007	3/17/2008	7/3/2012	5/4/2031
T4342-16045US01	MEDICAL DEVICE LEAK SENSING DEVICES, METHODS, AND SYSTEMS	PENDING	14/238,434			8/15/2011	2/11/2014		8/15/2032
T4342-16049US01	PERITONEAL DIALYSIS SYSTEMS, DEVICES, AND METHODS	PUBLISHED	14/006,763	US-2014-0018727-A1		3/23/2011	10/2/2013		3/23/2032
T4342-16049US02	PERITONEAL DIALYSIS SYSTEMS, DEVICES, AND METHODS	PENDING	14/348,533			3/23/2012	3/28/2014		3/23/2032
T4342-17218US01	SYSTEM AND METHOD FOR IDENTIFYING AND PAIRING DEVICES	ISSUED	12/815,030	US-2010-0318578-A1	8,190,651	6/15/2009	6/14/2010	5/29/2012	12/4/2029
T4342-17218US02	SYSTEM AND METHOD FOR IDENTIFYING AND PAIRING DEVICES	PUBLISHED	13/467,553	US-2012-0221634-A1		6/15/2009	5/9/2012		6/14/2030
T4342-17332US01	DIALYSIS TREATMENT PLANNING AND COST OPTIMIZATION	PUBLISHED	12/903,171	US-2011-0087499-A1		10/13/2009	10/12/2010		10/12/2030
T4342-17494US01	METHODS, DEVICES, AND SYSTEMS FOR PARALLEL CONTROL OF INFUSION DEVICE	ISSUED	12/912,714	US-2011-0106047-A1	8,460,228	10/27/2009	10/26/2010	6/11/2013	1/9/2031
T4342-17802US01	SAFE NEEDLE METHODS, APPARATUS, AND SYSTEMS	ISSUED	13/116,597	US-2011-0295207-A1	8,496,625	5/26/2010	5/26/2011	7/30/2013	10/20/2031
T4342-17802US02	SAFE NEEDLE METHODS, APPARATUS, AND SYSTEMS	PUBLISHED	13/939,150	US-2013-0304025-A1		5/26/2010	7/10/2013		5/26/2031
T4342-17972US01	PRESSURE SENSING METHODS, DEVICES, AND SYSTEMS	PUBLISHED	13/825,310	US-2013-0180339-A1		9/23/2010	3/20/2013		9/23/2031
T4342-18021US01	FLUID CONVEYANCE SAFETY DEVICES, METHODS, AND SYSTEMS	PUBLISHED	13/879,988	US-2013-0199722-A1		10/26/2010	4/17/2013		10/25/2031
T4342-18311US01	FLUID HEATING APPARATUS, SYSTEMS, AND METHODS	PUBLISHED	14/115,807	US-2014-0072288-A1		5/12/2011	11/5/2013		5/14/2032
T4342-18383US01	PRESSURE MEASUREMENT DEVICES, METHODS, AND SYSTEMS	PUBLISHED	14/115,924	US-2014-0076058-A1		5/31/2011	11/6/2013		5/31/2032

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T6858-18387US01	AUTOMATIC PRIMING OF BLOOD SETS	ISSUED	08/954,804		5,951,870	10/21/1997	10/21/1997	9/14/1999	10/21/2017
T6858-18387US02	AUTOMATIC PRIMING OF BLOOD SETS	ISSUED	09/359,366		6,187,198	10/21/1997	7/22/1999	2/13/2001	10/21/2017
T6858-18387US03	AUTOMATIC PRIMING OF BLOOD SETS	ISSUED	09/619,448		6,344,139	10/21/1997	7/19/2000	2/5/2002	10/21/2017
T6858-18387US04	AUTOMATIC PRIMING OF BLOOD SETS	ISSUED	09/977,711		6,464,878	10/21/1997	10/15/2001	10/15/2002	10/21/2017
T6858-18390US01	BLOOD FLOW REVERSING SYSTEM	ISSUED	10/051,465		6,695,807	1/18/2002	1/18/2002	2/24/2004	1/18/2022
T6858-18391US01	BLOOD SET AND CHAMBER	ISSUED	09/472,316		6,206,954	5/13/1998	12/22/1999	3/27/2001	5/13/2018
T6858-18391US02	BLOOD SET PRIMING METHOD AND APPARATUS	ISSUED	08/717,849		5,895,368	9/23/1996	9/23/1996	4/20/1999	9/23/2016
T6858-18391US03	BLOOD SET PRIMING METHOD AND APPARATUS	ISSUED	09/038,616		6,290,665	9/23/1996	3/11/1998	9/18/2001	9/23/2016
T6858-18391US04	BLOOD SET PRIMING METHOD AND APPARATUS	ISSUED	09/378,977		6,387,069	9/23/1996	8/23/1999	5/14/2002	9/23/2016
T6858-18392US01	BLOOD SET PRIMING METHOD AND APPARATUS	ISSUED	10/062,570		7,166,084	9/23/1996	2/5/2002	1/23/2007	7/22/2017
T6858-18392US02	INJECTION SITE FOR MALE LUER OR OTHER TUBULAR CONNECTOR	ISSUED	10/264,863	US 2004-0068238 A1	7,025,744	10/4/2002	10/4/2002	4/11/2006	8/12/2023
T6858-18392US03	INJECTION SITE FOR MALE LUER OR OTHER TUBULAR CONNECTOR	ISSUED	10/423,484	US 2004-0068239 A1	8,377,039	10/4/2002	4/25/2003	2/19/2013	9/9/2028
T6858-18392US04	MEDICAL DEVICE WITH ELASTOMERIC PENETRABLE WALL	ISSUED	10/613,922	US 2004-0073176 A1	7,056,308	10/4/2002	7/3/2003	6/6/2006	11/1/2022
T6858-18392US05	MEDICAL DEVICE WITH ELASTOMERIC PENETRABLE WALL	ISSUED	11/081,484	US 2005-0159710 A1	7,569,047	7/3/2003	3/16/2005	8/4/2009	11/11/2024
T6858-18392US06	INJECTION SITE FOR MALE LUER OR OTHER TUBULAR CONNECTOR	PENDING	13/738,842	US 2013-0123713-A1	8,647,312	10/4/2002	1/10/2013	2/11/2014	10/4/2022
T6858-18394US01	MEDICAL DEVICES AND METHODS FOR ASSISTING IN SUB-SCAB ACCESS	ISSUED	12/590,180	US 2010-0217210 A1	8,506,536	2/20/2009	2/20/2009	8/13/2013	12/12/2030
T6858-18394US02	MEDICAL DEVICES AND METHODS FOR ASSISTING IN SUB-SCAB ACCESS	ISSUED	12/945,485	US 2011-0060263 A1	8,251,973	2/20/2009	11/12/2010	8/28/2012	2/20/2029
T6858-18395US01	MEDICAL TUBING SET SHEATH	ISSUED	11/495,046	US 2008-0082052 A1	7,892,208	7/28/2006	7/28/2006	2/22/2011	6/12/2028
T6858-18398US01	NEEDLE ALIGNMENT, NEEDLE SECUREMENT AND VESSEL STABILIZATION DEVICE	PUBLISHED	11/431,137	US 2007-0265571 A1		5/9/2006	5/9/2006		5/9/2026
T6858-18399US01	NEEDLE POINT PROTECTION SHEATH	ISSUED	09/248,654		6,042,570	2/11/1999	2/11/1999	3/28/2000	2/11/2019
T6858-18399US02	NEEDLE POINT PROTECTION SHEATH	ISSUED	09/500,567		6,193,694	2/11/1999	2/9/2000	2/27/2001	2/11/2019
T6858-18400US01	NEEDLE PROTECTOR SHEATH	ISSUED	08/275,880		5,562,636	7/15/1994	7/15/1994	10/8/1996	7/15/2014

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T6858-18400US02	NEEDLE PROTECTOR SHEATH	ISSUED	08/420,700		5,562,637	7/15/1994	4/11/1995	10/8/1996	7/15/2014
T6858-18400US03	NEEDLE PROTECTOR SHEATH	ISSUED	08/662,685		5,951,529	7/15/1994	6/13/1996	9/14/1999	7/15/2014
T6858-18400US04	NEEDLE PROTECTOR SHEATH	ISSUED	09/321,374		6,595,965	7/15/1994	5/27/1999	7/22/2003	7/15/2014
T6858-18401US01	PROTECTOR FOR NEEDLE	ISSUED	08/714,959		5,772,638	9/17/1996	9/17/1996	6/30/1998	9/17/2016
T6858-18402US03	PUMP SEGMENT HAVING CONNECTED, PARRALLEL BRANCE LINE	ISSUED	08/850,277		6,440,095	12/20/1993	5/5/1997	8/27/2002	12/31/2015
T6858-18405US01	REUSABLE BLOOD LINES	ISSUED	08/504,437		5,772,624	7/20/1995	7/20/1995	6/30/1998	7/20/2015
T6858-18405US02	REUSABLE BLOOD LINES	ISSUED	08/892,685		6,165,149	7/20/1995	7/14/1997	12/26/2000	7/20/2015
T6858-18405US03	REUSABLE BLOOD LINES	ISSUED	09,664,432		6,620,119	7/20/1995	9/18/2000	9/16/2003	11/12/2015
T6858-18405US04	REUSABLE BLOOD LINES	ISSUED	10/313,695	US 2003-0100858 A1	6,666,839	7/20/1995	12/6/2002	12/23/2003	7/20/2015
T6858-18406US01	REVERSING FLOW BLOOD PROCESSING SYSTEM	ISSUED	09/095,873		6,177,049	6/10/1998	6/10/1998	1/23/2001	6/10/2018
T6858-18406US02	REVERSING FLOW BLOOD PROCESSING SYSTEM	ISSUED	09/627,821		6,596,234	6/10/1998	7/28/2000	7/22/2003	3/14/2019
T6858-18407US01	REVERSING FLOW BLOOD PROCESSING SYSTEM HAVING REDUCED CLOTTING POTENTIAL	ISSUED	09/325,219		6,319,465	6/3/1999	6/3/1999	11/20/2001	6/5/2019
T6858-18427US01	BUBBLE TRAP HAVING COMMON INLET/OUTLET TUBE	ISSUED	09/320,295		6,051,134	3/28/1997	5/26/1999	4/18/2000	3/28/2017
T6858-18428US01	BUBBLE TRAP WITH DIRECTED HORIZONTAL FLOW AND METHOD OF USING	ISSUED	09/207,229		6,117,342	11/26/1996	12/8/1998	9/12/2000	11/26/2016
T6858-18429US02	BUBBLE TRAP WITH FLAT SIDE HAVING MULTIPURPOSE SUPPLEMENTAL PORTS	ISSUED	09/203,013		5,980,741	8/1/1997	12/1/1998	11/9/1999	8/1/2017
T6858-18432US01	CLOSURE FOR TUBULAR ACCESS PORT	ISSUED	11/247,931	US-2007-0093762	8,641,684	10/11/2005	10/11/2005	2/4/2014	5/15/2029
T6858-18433US01	DIALYSIS PRESSURE MONITORING WITH CLOT SUPPRESSION	ISSUED	09/957,990		6,755,801	12/1/1998	9/21/2001	6/29/2004	11/8/2019
T6858-18434US01	DIAPHRAGM PRESSURE POD FOR MEDICAL FLUIDS	ISSUED	11/270,080	US-2007-0179422-A1	8,092,414	11/9/2005	11/9/2005	1/10/2012	12/12/2029
T6858-18434US02	DIAPHRAGM PRESSURE POD FOR MEDICAL FLUIDS	ISSUED	13/299,868	US-2012-0130338-A1	8,491,518	11/9/2005	11/18/2011	7/23/2013	1/9/2026
T6858-18434US03	DIAPHRAGM PRESSURE POD FOR MEDICAL FLUIDS	PUBLISHED	13/928,454	US-2013-0291970-A1		11/9/2005	6/27/2013		11/9/2025
T6858-18435US01	DOCKING PORTS FOR MEDICAL FLUID SETS	ISSUED	08/810,361		5,983,947	3/3/1997	3/5/1997	11/16/1999	3/3/2017
T6858-18450US01	EASY USE NEEDLE PROTECTOR SHEATH	ISSUED	08/584,451		5,704,924	1/11/1996	1/11/1996	1/6/1998	1/11/2016
T6858-18453US01	FLOW-THROUGH TREATMENT DEVICE	ISSUED	08/373,598		5,643,190	1/17/1995	1/17/1995	7/1/1997	1/17/2015

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T6858-18453US02	FLOW-THROUGH TREATMENT DEVICE	ISSUED	08/771,246		5,817,043	1/17/1995	12/20/1996	10/6/1998	1/17/2015
T6858-18453US03	FLOW-THROUGH TREATMENT DEVICE	ISSUED	09/038,375		6,299,589	1/17/1995	3/11/1998	10/9/2001	1/17/2015
T6858-18459US01	SEPARABLE HEMODIALYSIS SYSTEM	ISSUED	08/937,121		5,824,213	9/7/1994	9/24/1997	10/20/1998	9/7/2014
T6858-18459US02	SEPARABLE HEMODIALYSIS SYSTEM CONNECTED BY A MOVABLE ARM	ISSUED	08/941,729		5,895,571	9/7/1994	10/1/1997	4/20/1999	9/7/2014
T4342-18473US01	ELECTRICAL SAFETY METHODS, DEVICES, AND SYSTEMS FOR MEDICAL TREATMENT DEVICES	PENDING	14/123,066			6/8/2011	4/21/2014		6/8/2032
T4342-18474US01	METHODS, DEVICES, AND SYSTEMS FOR COUPLING FLUID LINES	PENDING	14/123,008			6/8/2011	2/26/2014		6/8/2032
T6858-18478US01	SET FOR BLOOD PROCESSING	ISSUED	09/432,555		6,517,508	11/3/1999	11/3/1999	2/11/2003	11/3/2019
T6858-18479US01	SET FOR BLOOD PROCESSING	ISSUED	10/076,192		7,025,750	11/3/1999	2/13/2002	4/11/2006	11/3/2019
T6858-18480US01	SHORT WINGED NEEDLE AND GUARD	ISSUED	11/407,716		7,591,804	4/20/2006	4/20/2006	9/22/2009	12/20/2026
T6858-18481US01	SQUEEZE CLAMP	ISSUED	09/238,767		6,113,062	1/28/1999	1/28/1999	9/5/2000	1/28/2019
T6858-18481US02	SQUEEZE CLAMP FOR FLEXIBLE TUBING	ISSUED	08/943,672		6,089,527	10/3/1997	10/3/1997	7/18/2000	10/3/2017
T6858-18483US01	SQUEEZE CLAMP FOR FLEXIBLE TUBING	ISSUED	09/396,837		6,196,519	10/3/1997	9/15/1999	3/6/2001	10/3/2017
T6858-18484US01	TAPERED INTRAVENOUS CANNULA	ISSUED	09/906,539		6,685,680	4/20/1999	7/16/2001	2/3/2004	4/20/2019
T6858-18484US02	TUBULAR INTRAVENOUS SET	ISSUED	09/541,282		6,517,522	4/3/2000	4/3/2000	2/11/2003	4/3/2020
T4342-18689US01	TUBULAR INTRAVENOUS SET	ISSUED	09/680,821		6,616,635	4/3/2000	10/10/2000	9/9/2003	4/3/2020
T4342-18904US01	FLUID PURIFICATION METHODS, DEVICES, AND SYSTEMS	PUBLISHED	13/713,767	US-2013-0146541-A1		12/13/2011	12/13/2012		12/13/2032
	CLAMP DEVICE AND METHODS FOR MAKING AND USING	PENDING	14/548,509			5/25/2012	3/28/2014		5/24/2033