

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5027495

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
PAUL F. MULLER	05/15/2015
KEIF M. FITZGERALD	05/12/2015
RICHARD L. KEENAN	05/12/2015
VERONICA J. NEIMAN	05/12/2015
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	THORATEC CORPORATION
<b>Street Address:</b>	6101 STONERIDGE DRIVE
<b>City:</b>	PLEASANTON
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	94588
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16020674
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(314)612-2307
<i>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.</i>	
<b>Phone:</b>	314-621-5070
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<b>Address Line 4:</b>	ST. LOUIS, MISSOURI 63105
<b>ATTORNEY DOCKET NUMBER:</b>	P04022USC1 (35398-548)
<b>NAME OF SUBMITTER:</b>	ZACHARY J. BLOCK
<b>SIGNATURE:</b>	/Zachary J. Block/
<b>DATE SIGNED:</b>	06/27/2018
<b>Total Attachments: 5</b>	
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**PATENT**

**REEL: 046220 FRAME: 0790**

**COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e))**

*Application Data Sheet filed previously or concurrently*

Docket No.: THOR.102A

Page 1 of 5

Title: SENSORS FOR CATHETER PUMPS

Inventors: Paul F. Muller, Keif M. Fitzgerald, Richard L. Keenan and Veronica J. Neiman

***Declaration***

This Declaration is directed to the application identified above that:

Was filed **April 15, 2015** as U.S. or International Application No. **14/687,493** and incorporating any amendments made thereto prior to the signature date of this Declaration.

As a named inventor, I declare that:

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

***Assignment from Inventors***

WHEREAS, **above-identified inventors** (individual(s) hereinafter "ASSIGNOR") invented certain new and useful improvements, technology, inventions, developments, ideas, ornamental designs, or discoveries, and hereby assign or are under an obligation to assign to the below identified Assignee the above-titled application (collectively hereinafter referred to as the "Work") for which an application for Letters Patent in the United States (identified above) has been prepared for filing with the United States Patent and Trademark Office (hereinafter the "Application").

AND WHEREAS, **THORATEC CORPORATION**, with its principal place of business at 6101 Stoneridge Drive, Pleasanton, CA 94588 (hereinafter the "ASSIGNEE"), desires to acquire the entire right, title, and interest in and to the Application and the Work.

NOW, THEREFORE, for good and valuable consideration of which receipt is hereby acknowledged, ASSIGNOR hereby acknowledges that ASSIGNOR has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title, and interest throughout the world in the Application and the Work, including all patent properties filed or issued upon the Application and the Work; where "Patent Properties" include, but are not limited to:

all provisional applications relating thereto (including but not limited to U.S. Provisional Application No. **61/979,920**, filed **April 15, 2014**);

all nonprovisional applications claiming priority to aforementioned provisional(s) and/or the present Application, including, all divisions, continuations, continuations-in-part, and reissues, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof; and

all rights of priority under International Conventions and any related Letters Patent which may hereafter be granted or filed in any country or countries foreign to the United States, all extensions, renewals and reissues thereof.

**COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e))***Application Data Sheet filed previously or concurrently*

Docket No.: THOR.102A

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Title: SENSORS FOR CATHETER PUMPS


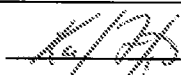
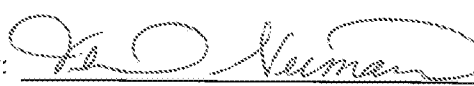
Inventors: Paul F. Muller, Keif M. Fitzgerald, Richard L. Keenan and Veronica J. Neiman

ASSIGNOR hereby acknowledges the ASSIGNEE as the Applicant for all aforementioned patent properties, and authorizes and requests the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all related Letters Patent to the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND ASSIGNOR DOES HEREBY sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past infringements of said Letters Patent before or after issuance.

AND ASSIGNOR DOES HEREBY covenant and agree that ASSIGNOR will communicate to said ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR respecting the Work, and testify in any legal proceeding, assist in the preparation of any other Patent Property relating to the Application and the Work or any improvements made thereto, sign/execute all lawful papers, authorize the filing of and execute and make all rightful oaths and/or declarations in connection with the Application and the Work including any improvements made thereto, any patent applications filed therefrom, and any continuing application filed from any of the aforementioned applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for the Work in all countries.

Legal Name of inventor: Paul. F. Muller

Signature: Date: 5/15/15Witnessed by: Witness Name (printed): KEIF FITZGERALDWitnessed by: Witness Name (printed): Veronica Neiman**PATENT****REEL: 046220 FRAME: 0792**

**COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e))**

*Application Data Sheet filed previously or concurrently*

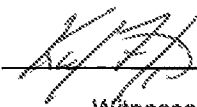
Docket No.: THOR.102A

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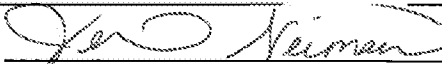
Title: SENSORS FOR CATHETER PUMPS

Inventors: Paul F. Muller, Kelf M. Fitzgerald, Richard L. Keenan and Veronica J. Neiman

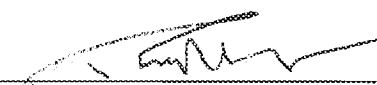
Legal Name of inventor: Kelf M. Fitzgerald

Signature: 

Date: 5/2/15

Witnessed by: 

Witness Name (printed): Veronica Neiman

Witnessed by: 

Witness Name (printed): Phyllis Guen

**PATENT**

**REEL: 046220 FRAME: 0793**

**COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e))**

*Application Data Sheet filed previously or concurrently*

Docket No.: THOR.102A

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Title: SENSORS FOR CATHETER PUMPS

Inventors: Paul F. Muller, Keif M. Fitzgerald, Richard L. Keenan and Veronica J. Neiman

**Legal Name of inventor:** Richard L. Keenan

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Witnessed by: \_\_\_\_\_

Witness Name (printed): \_\_\_\_\_

Witnessed by: \_\_\_\_\_

Witness Name (printed): \_\_\_\_\_

**PATENT**

**REEL: 046220 FRAME: 0794**

**COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e))**

*Application Data Sheet filed previously or concurrently*

Docket No.: THOR.102A

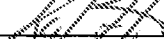
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Title: SENSORS FOR CATHETER PUMPS

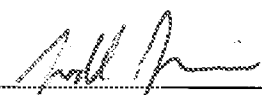
Inventors: Paul F. Muller, Keif M. Fitzgerald, Richard L. Keenan and Veronica J. Neiman

**Legal Name of Inventor:** Veronica J. Neiman

Signature:  Date: 5/12/15

Witnessed by: 

Witness Name (printed): KEIF FITZGERALD

Witnessed by: 

Witness Name (printed): TODD JENKINS

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