504732874 01/17/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ALAN SCHENCK	03/28/2014
MICHAEL L. GREEN	06/04/2014
KEIF M. FITZGERALD	04/01/2014
PAUL F. MULLER	03/28/2014
JOSEPH P. SULLIVAN	04/10/2014
KEITH SCHUBERT	04/14/2014
PETER W. BRISTOL	04/10/2014
JEFFREY PAUL MILLS	04/09/2014
PAUL C. LEONARD	04/19/2014
RICHARD L. KEENAN	03/26/2014

RECEIVING PARTY DATA

Name:	THORATEC CORPORATION
Street Address:	6035 STONERIDGE DRIVE
City:	PLEASANTON
State/Country:	CALIFORNIA
Postal Code:	94588

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15198342

CORRESPONDENCE DATA

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Email: uspatents@armstrongteasdale.com PATENT DOCKET DEPARTMENT Correspondent Name: Address Line 1: ARMSTRONG TEASDALE LLP 7700 FORSYTH BLVD., SUITE 1800 Address Line 2:

Address Line 4: ST. LOUIS, MISSOURI 63105

ATTORNEY DOCKET NUMBER: P04012D

NAME OF SUBMITTER:	CHRISTOPHER M. GOFF
SIGNATURE:	/Christopher M. Goff/
DATE SIGNED:	01/17/2018

Total Attachments: 11

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

Application Data Sheet filed previously or concurrently

Docket No.: THOR.084A Page 1 of 11

Title: FLUID HANDLING SYSTEM

Inventors: Alan Schenck, Michael L. Green, Keif M. Fitzgerald, Paul F. Muller, Joseph P. Sullivan, Keith Schubert, Peter W. Bristol, Jeffrey Paul Mills, Paul C. Leonard, and Richard L. Keenan

Declaration

This Declaration is directed to the application identified above that:

Was filed **March 11, 2014** as U.S. or International Application No. **14/203,978** 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(s). 61/780,656, filed March 13, 2013);

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.084A Page 2 of 11

Title: FLUID HANDLING SYSTEM

Inventors: Alan Schenck, Michael L. Green, Keif M. Fitzgerald, Paul F. Muller, Joseph P. Sullivan, Keith

Schubert, Peter W. Bristol, Jeffrey Paul Mills, Paul C. Leonard, and Richard L. Keenan

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: Alan Schenck	-1 /l		
Signature:	M	Date:	3/28/14
Witnessed by:	1212	NAME OF THE PARTY	
Witness Name (printed):	PAUL MU	11.6-	
Signature:	Allen	Date:	3/28/14
Witnessed by:	- HU -		
Witness Name (printed):	PAUL	mile	witter-1 con

Docket No.: THOR.084A	Page 3 of 11
Title: FLUID HANDLING SYSTEM	
Inventors: Alan Schenck, Michael L. Green, Keif M. Fitzgerald, P. Schubert, Peter W. Bristol, Jeffrey Paul Mills, Paul C. Leo	
Legal Name of inventor: Michael L. Green	
Signature:	Date: 6/4/14
Witnessed by: Key Truck	SISIO
Witness Name (printed):	
Signature:	Date:
Witnessed by: Kessitz	266244
Witness Name (printed):)

Docket No.: THOR.084A		Page 4 of 11
Title: FLUID HANDLING SYSTEM		
Inventors: Alan Schenck, Michael L. Green, Keif M. Fitzgerald, Paul F. Schubert, Peter W. Bristol, Jeffrey Paul Mills, Paul C. Leonard,		
Legal Name of inventor: Keif M. Fitzgerald	1786 (1881 1881 1881 1884 1884 1884 1884 188	
Signature:	Date: _	4/1/14
Witnessed by: Witness Name (printed): Pau Mulk		
Signature: Witnessed by:	Date: _	4/, /14
Witness Name (printed):		

Docket No.: THOR.084A	Page 5 of 11
Title: FLUID HANDLING SYSTEM	
Inventors: Alan Schenck, Michael L. Green, Keif M. Fit Schubert, Peter W. Bristol, Jeffrey Paul Mills, F	
Legal Name of inventor: Paul F. Muller	
Signature:	
Witnessed by:	un tellen
Witness Name (printed):	las Schenck
Signature:	
Witnessed by:	Mrs Hiller
Witness Name (printed)	las Esharele

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

Application Data Sheet filed previously or concurrently

Docket No.: THOR.084A

Page 6 of 11

Title: FLUID HANDLING SYSTEM

Inventors: Alan Schenck, Michael L. Green, Keif M. Fitzgerald, Paul F. Muller, Joseph P. Sullivan, Keith Schubert, Peter W. Bristol, Jeffrey Paul Mills, Paul C. Leonard, and Richard L. Keenan

Signature:

Witnessed by:

Witness Name (printed):

Witness Name (printed):

Witness Name (printed):

BEN ROGOZA

Docket No.: THOR.084A	Page 7 of 11
Title: FLUID HANDLING SYSTEM	
Inventors: Alan Schenck, Michael L. Green, Keif M. Fitzgerald, Paul F Schubert, Peter W. Bristol, Jeffrey Paul Mills, Paul C. Leonard	
Legal Name of inventor: Keith Schubert	
Signature: hatt Suited	Date: 14/April 2014
Witnessed by:	
Witness Name (printed): Mike Bland	
· ·	
Signature:	Date:
Witnessed by:	y Y
Witness Name (printed):	

Docket No.: THOR.084A	Page 8 of 11
Title: FLUID HANDLING SYSTEM	
Inventors: Alan Schenck, Michael L. Green, Keif M. Fitzgerald, Paul F. Muller, Joseph P. S Schubert, Peter W. Bristol, Jeffrey Paul Mills, Paul C. Leonard, and Richard L. Kee	

Legal Name of inventor: Peter W. Bristol		
Signature:	Date: _	4/10/2014
Witnessed by: Mix pu		<i>] i</i>
Witness Name (printed):		
Signature:	Date: _	4/10/2014
Witnessed by: Rd Mile		*/
Witness Name (printed): Robin Milla		

Docket No.: THOR.084A	Page 9 of 11
Title: FLUID HANDLING SYSTEM	
Inventors: Alan Schenck, Michael L. Green, Keif M. Fitzgerald, Paul F. M Schubert, Peter W. Bristol, Jeffrey Paul Mills, Paul C. Leonard, ar	
Legal Name of inventor: Jeffrey Paul Mills	
Signature:	Date: 4/9/14
Witnessed by: Whi plus	
Witness Name (printed): Mike Blan∧	
Signature:	Date; 4/9/14
Witnessed by: SHARVIL TALATI	Talah
Witness Name (printed): SHARVIL TALAT	

Docket No.: THOR.084A	Page 10 of 11
Title: FLUID HANDLING SYSTEM	
Inventors: Alan Schenck, Michael L. Green, Keif M. Fitzge Schubert, Peter W. Bristol, Jeffrey Paul Mills, Pau	
Legal Name of inventor: Paul C. Leonard	
Signature: Parl C. Lund Witnessed by:	Date: 4/19/14
Witness Name (printed):	Schaeperkootter
Signature:	Date:
Witnessed by:	<u> </u>
Witness Name (printed):	

Docket No.: THOR.084A	Page 11 of 11
Title: FLUID HANDLING SYSTEM	
Inventors: Alan Schenck, Michael L. Green, Keif M. Fitzgerald, Paul Schubert, Peter W. Bristol, Jeffrey Paul Mills, Paul C. Leonar	
Legal Name of inventor: Richard L. Keenan Signature:	Date: 3/2/2/4
Witnessed by:	
Witness Name (printed): Veronica	Niman
Signature:	Date:
Witnessed by:	***
Witness Name (printed):	

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> **PATENT REEL: 044639 FRAME: 0586**

RECORDED: 01/17/2018