## 504321315 04/13/2017

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4367997

		NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT	
CONVEYING PARTY D	ΑΤΑ			
		Name	Execution Date	
MATTHEW BIESTERVE	LD		04/07/2017	
NAGAPPAN CHIDAMBA	RAM		04/06/2017	
MANOJ KUMAR PULI			04/13/2017	
SCOTT J. DELO			04/07/2017	
RECEIVING PARTY DA	ТА			
Name:	TRANE	INTERNATIONAL INC.		
Street Address:	800-E B	800-E BEATY STREET		
City:	DAVIDS	DAVIDSON		
State/Country:	NORTH	NORTH CAROLINA		
Postal Code:	28036			
PROPERTY NUMBERS Property Type	Total: 1	Number		
Application Number:	1	5487207		
CORRESPONDENCE D				
CORRESPONDENCE D Fax Number:	(6	631)488-0842 the e-mail address first: if that is unsuc	cessful, it will be sent	
CORRESPONDENCE D Fax Number: <i>Correspondence will b</i>	(e sent to i	631)488-0842 the e-mail address first; if that is unsuc if that is unsuccessful, it will be sent v		
CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone:	(6 <b>e sent to t</b> provided; 6	<i>the e-mail address first; if that is unsuc</i> <i>if that is unsuccessful, it will be sent v</i> 314880840		
CORRESPONDENCE D Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email:	(6 <b>e sent to t</b> b <b>rovided;</b> 6 d	<i>the e-mail address first; if that is unsuc</i> <i>if that is unsuccessful, it will be sent v</i> 314880840 ocketing@salernolaw.com		
CORRESPONDENCE D Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name:	(6 <b>e sent to t</b> brovided; 6 d T	<i>the e-mail address first; if that is unsuc</i> <i>if that is unsuccessful, it will be sent v</i> 314880840 ocketing@salernolaw.com HE SALERNO LAW FIRM, P.C.		
CORRESPONDENCE D Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1:	(6 <b>e sent to t</b> brovided; 6 d T 1	the e-mail address first; if that is unsuc if that is unsuccessful, it will be sent v 314880840 ocketing@salernolaw.com THE SALERNO LAW FIRM, P.C. 955 DEER PARK AVENUE		
CORRESPONDENCE D Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	(6 e sent to a brovided; 6 d T 1 D	the e-mail address first; if that is unsuc if that is unsuccessful, it will be sent v 314880840 ocketing@salernolaw.com THE SALERNO LAW FIRM, P.C. 955 DEER PARK AVENUE DEER PARK, NEW YORK 11729		
CORRESPONDENCE D Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	(6 e sent to a brovided; 6 d T 1 D	the e-mail address first; if that is unsuc if that is unsuccessful, it will be sent v 314880840 ocketing@salernolaw.com HE SALERNO LAW FIRM, P.C. 955 DEER PARK AVENUE DEER PARK, NEW YORK 11729 32932US02 (INGE-082)		
CORRESPONDENCE D Fax Number: <i>Correspondence will bu using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUNAME OF SUBMITTER:	(6 e sent to a brovided; 6 d T 1 D	the e-mail address first; if that is unsuc if that is unsuccessful, it will be sent v 314880840 ocketing@salernolaw.com THE SALERNO LAW FIRM, P.C. 955 DEER PARK AVENUE DEER PARK, NEW YORK 11729 32932US02 (INGE-082) RUSSELL S. SALERNO		
CORRESPONDENCE D Fax Number: <i>Correspondence will bu using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUNAME OF SUBMITTER: SIGNATURE:	(6 e sent to a brovided; 6 d T 1 D	the e-mail address first; if that is unsuc if that is unsuccessful, it will be sent v 314880840 ocketing@salernolaw.com THE SALERNO LAW FIRM, P.C. 955 DEER PARK AVENUE DEER PARK, NEW YORK 11729 32932US02 (INGE-082) RUSSELL S. SALERNO /Russell S. Salerno/		
CORRESPONDENCE D Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1:	(6 e sent to a brovided; 6 d T 1 D	the e-mail address first; if that is unsuc if that is unsuccessful, it will be sent v 314880840 ocketing@salernolaw.com THE SALERNO LAW FIRM, P.C. 955 DEER PARK AVENUE DEER PARK, NEW YORK 11729 32932US02 (INGE-082) RUSSELL S. SALERNO		
CORRESPONDENCE D Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUNAME OF SUBMITTER: SIGNATURE: DATE SIGNED: Total Attachments: 5	(6 e sent to a forovided; 6 d T 1 JMBER:	the e-mail address first; if that is unsuc if that is unsuccessful, it will be sent v 314880840 ocketing@salernolaw.com THE SALERNO LAW FIRM, P.C. 955 DEER PARK AVENUE DEER PARK, NEW YORK 11729 32932US02 (INGE-082) RUSSELL S. SALERNO /Russell S. Salerno/ 04/13/2017		
CORRESPONDENCE D Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUNAME OF SUBMITTER: SIGNATURE: DATE SIGNED: Total Attachments: 5 source=INGE-082-329320	(6 e sent to a 6 d T 1 D JMBER:	the e-mail address first; if that is unsuc if that is unsuccessful, it will be sent v 314880840 ocketing@salernolaw.com THE SALERNO LAW FIRM, P.C. 955 DEER PARK AVENUE DEER PARK, NEW YORK 11729 32932US02 (INGE-082) RUSSELL S. SALERNO /Russell S. Salerno/		

# source=INGE-082-32932US02-Assignment-signed#page4.tif source=INGE-082-32932US02-Assignment-signed#page5.tif

#### ASSIGNMENT

WHEREAS, we, Matthew Biesterveld, of Holmen, WI; Nagappan Chidambaram, of West Salem, WI; Manoj Kumar Puli, of Chennai, India; and Scott J. Delo, of Braddock, PA, have made certain new and useful inventions and improvements for which was executed concurrently herewith a U.S. Utility Patent Application, having Attorney Docket No. 32932US02 (INGE-082) and which is entitled HVAC SYSTEM CONFIGURATION AND ZONE MANAGEMENT;

AND WHEREAS, Trane International Inc., a corporation having an office and place of business at 800-E Beaty Street, Davidson, North Carolina, United States of America (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to any applications which have been or shall be filed, including all nonprovisionals, applications filed under the Patent Cooperation Treaty, divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the Assignee, its successors and assigns;

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be;

Assignment to Trane International Inc. Attorney Docket: 32932US02 (INGE-082) Page 1 of 2

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by each of us.

IN TESTIMONY WHEREOF, I have hereunto set my hand this <u>746</u> day of <u>Apr, 1</u>, 20<u>17</u>.

Matthu

Inventor: Matthew Biesterveld

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_\_ day of

\_\_\_\_\_, 20\_\_\_\_\_.

Inventor: Nagappan Chidambaram

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_\_ day of

\_\_\_\_\_, 20\_\_\_\_.

Inventor: Manoj Kumar Puli

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_\_ day of

\_\_\_\_\_, 20\_\_\_\_.

Inventor: Scott J. Delo

\* \* \* \* \*

Assignment to Trane International Inc. Attorney Docket: 32932US02 (INGE-082) Page 2 of 2

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by each of us.

IN TESTIMONY WHEREOF, I have hereunto set my hand this	day of
, 20,	

Inventor: Matthew Biesterveld

Nagang

Inventor: Nagappan Chidambaram

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_\_ day of

, 20\_\_\_\_.

Inventor: Manoj Kumar Puli

.....

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_\_ day of

, 20 .

Inventor: Scott J. Delo

Assignment to Trane International Inc. Attorney Docket: 32932US02 (INGE-082) Page 2 of 2

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by each of us.

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_\_\_ day of

20

20

Inventor: Matthew Biesterveld

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_\_ day of

Inventor: Nagappan Chidambaram

Inventor: Manoj Kuman Puli

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_\_\_ day of

Inventor: Scott J. Delo



APAI

Assignment to Trane International Inc. Attorney Docket: 32932US02 (INGE-082) Page 2 of 2

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by each of us.

, 20	F, I have hereunto set my hand this day of
	Inventor: Matthew Biesterveld
IN TESTIMONY WHEREO	F, I have hereunto set my hand this day of
	Inventor: Nagappan Chidambaram
IN TESTIMONY WHEREO	F, I have hereunto set my hand this day of
	Inventor: Manoj Kumar Puli
IN TESTIMONY WHEREO	F, I have hereunto set my hand this <u>7</u> <sup>m</sup> day of
	Joto Oulo
	Inventor: Scott J. Delo
*	* * * *

Assignment to Trane International Inc. Attorney Docket: 32932US02 (INGE-082) Page 2 of 2

> PATENT REEL: 042005 FRAME: 0165

**RECORDED: 04/13/2017**