# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION
**WASHINGTON, DC 20549**

# FORM 8-K

**CURRENT REPORT**
**Pursuant to Section 13 or 15(d) of the**
**Securities Exchange Act of 1934**

Date of report (Date of earliest event reported): March 21, 2019

# INGERSOLL-RAND PUBLIC LIMITED COMPANY
(Exact Name of Registrant as Specified in Its Charter)

| **Ireland** | **001-34400** | **98-0626632** |
|---|---|---|
| (State or Other Jurisdiction of Incorporation) | (Commission File Number) | (IRS Employer Identification No.) |

**170/175 Lakeview Dr.**
**Airside Business Park**
**Swords, Co. Dublin**
**Ireland**
(Address of principal executive offices, including zip code)

**+(353) (0) 18707400**
(Registrant's Telephone Number, Including Area Code)

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR §230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR §240.12b-2).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

**Item 1.01. Entry into a Material Definitive Agreement.**

On March 21, 2019, Ingersoll-Rand Luxembourg Finance S.A. (the "Issuer"), a wholly-owned subsidiary of Ingersoll-Rand plc ("IR Parent"), issued $400 million aggregate principal amount of 3.500% Senior Notes due 2026 (the "2026 Notes"), $750 million aggregate principal amount of 3.800% Senior Notes due 2029 (the "2029 Notes") and $350 million aggregate principal amount of 4.500% Senior Notes due 2049 (the "2049 Notes" and, together with the 2026 Notes and the 2029 Notes, the "Notes") pursuant to an Indenture, dated as of February 21, 2018 (the "Base Indenture"), as supplemented by the Fourth Supplemental Indenture, dated as of March 21, 2019 (the "Fourth Supplemental Indenture"), relating to the 2026 Notes, and as further supplemented by the Fifth Supplemental Indenture, dated as of March 21, 2019 (the "Fifth Supplemental Indenture"), relating to the 2029 Notes, and as further supplemented by the Sixth Supplemental Indenture, dated as of March 21, 2019 (the "Sixth Supplemental Indenture" and, together with the Base Indenture, the Fourth Supplemental Indenture and the Fifth Supplemental Indenture, the "Indenture"), each among the Issuer, IR Parent, Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Lux International Holding Company S.à r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company, as guarantors (the "Guarantors") and Wells Fargo Bank, National Association, as trustee. The Issuer intends to use the net proceeds from the offering to finance the proposed acquisition of Precision Flow Systems (the "Acquisition"), to pay expenses related to the offering and for general corporate purposes.

The Notes and the related guarantees have been registered under the Securities Act of 1933, as amended (the "Securities Act"), pursuant to a shelf registration statement on Form S-3ASR (File No. 333-221265) previously filed with the Securities and Exchange Commission under the Securities Act.

The Notes are senior unsecured obligations of the Issuer and rank equally with all of the Issuer's existing and future senior unsecured indebtedness. The guarantees of the Notes are senior unsecured obligations of each Guarantor and rank equally with all of such Guarantor's existing and future senior unsecured indebtedness.

The Issuer will pay interest on the Notes semi-annually on March 21 and September 21, beginning September 21, 2019, to holders of record on the preceding March 6 and September 6. Interest will be calculated on the basis of a 360-day year of twelve 30-day months. The 2026 Notes will mature on March 21, 2026, the 2029 Notes will mature on March 21, 2029 and the 2049 Notes will mature on March 21, 2049. The Issuer may redeem the 2026 Notes, the 2029 Notes and the 2049 Notes, respectively, in whole or in part at any time prior to January 21, 2026 (two months prior to the maturity date of the 2026 Notes), December 21, 2028 (three months prior to the maturity date of the 2029 Notes) and September 21, 2048 (six months prior to the maturity date of the 2049 Notes), respectively, at a redemption price equal to the greater of 100% of the principal amount of such notes to be redeemed and a "make-whole" redemption price. In addition, the Issuer may redeem the 2026 Notes, the 2029 Notes and the 2049 Notes, respectively, in whole or in part at any time on or after January 21, 2026 (two months prior to the maturity date of the 2026 Notes), December 21, 2028 (three months prior to the maturity date of the 2029 Notes) and September 21, 2048 (six months prior to the maturity date of the 2049 Notes), respectively, at par plus accrued and unpaid interest thereon up to, but not including, the redemption date. In the event of a change of control triggering event (as defined in the Indenture), the holders of the Notes may require the Issuer to purchase for cash all or a portion of their Notes at a purchase price equal to 101% of the principal amount of such Notes, plus accrued and unpaid interest, if any, to the date of purchase. In the event that IR Parent does not complete the proposed Acquisition on or prior to January 31, 2020, or the offer to acquire Precision Flow Systems is terminated at any time prior thereto, the Issuer would be obligated to redeem all of the Notes at a redemption price equal to 101% of the aggregate principal amount of each series of the Notes, plus accrued and unpaid interest from the date of initial issuance or the most recent interest payment date to but excluding the special mandatory redemption date. If, as a result of certain tax law changes, the Issuer or any Guarantor (other than Ingersoll-Rand Global Holding Company Limited and Ingersoll-Rand Company) would be obligated to pay additional amounts in respect of withholding taxes or certain other tax indemnification payments with respect to any series of the Notes, and such obligation cannot be avoided by taking reasonable measures available to the Issuer or such Guarantor, the Issuer or such Guarantor may redeem the Notes of such series in whole, but not in part, at par plus accrued and unpaid interest, and all additional amounts, if any, then due or becoming due on the redemption date. The Notes are subject to certain customary covenants, including limitations on IR Parent's and its restricted subsidiaries' ability to incur indebtedness secured by certain liens and to engage in certain sale and leaseback transactions, and on each of the Issuer's and the Guarantors' ability to consolidate or merge with or into, or sell substantially all of its assets to, another person. These covenants are subject to important limitations and exceptions.

Copies of the Fourth Supplemental Indenture, the Fifth Supplemental Indenture and the Sixth Supplemental Indenture are included with this current report on Form 8-K as Exhibits 4.1, 4.3 and 4.5, respectively, and are incorporated by reference as though fully set forth herein. The foregoing descriptions of the Fourth Supplemental Indenture, the Fifth Supplemental Indenture and the Sixth Supplemental Indenture are summaries only and are qualified in their entirety by the complete text of each of such documents.

**Item 2.03 Creation of a Direct Financial Obligation or an Obligation Under an Off-Balance Sheet Arrangement of the Registrant.**

The disclosures set forth in Item 1.01 pertaining to the Notes are incorporated by reference herein.

**Item 7.01 Regulation FD Disclosure.**

In connection with the Offering, the Company expects to increase its interest expense on an annualized basis by approximately $60 million per year (before tax costs). Since the financing occurred in March, interest expense for 2019 is expected to increase by approximately $47 million.

**Item 9.01. Financial Statements and Exhibits.**

(d) Exhibits

| Exhibit No. | Description |
|---|---|
| 1.1 | Underwriting Agreement, dated as of March 19, 2019, by and among Ingersoll-Rand Luxembourg Finance S.A., as issuer, Ingersoll-Rand plc, Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Lux International Holding Company S.à r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company, as guarantors, and Citigroup Global Markets Inc., Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representatives of the several underwriters. |
| 4.1 | Fourth Supplemental Indenture, dated as of March 21, 2019, by and among Ingersoll-Rand Luxembourg Finance S.A., as issuer, Ingersoll-Rand plc, Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Lux International Holding Company S.à r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company, as guarantors, and Wells Fargo Bank, National Association, as Trustee, relating to the 3.500% Senior Notes due 2026. |
| 4.2 | Form of Global Note representing the 3.500% Senior Notes due 2026 (included in Exhibit 4.1). |
| 4.3 | Fifth Supplemental Indenture, dated as of March 21, 2019, by and among Ingersoll-Rand Luxembourg Finance S.A., as issuer, Ingersoll-Rand plc, Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Lux International Holding Company S.à r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company, as guarantors, and Wells Fargo Bank, National Association, as Trustee, relating to the 3.800% Senior Notes due 2029. |
| 4.4 | Form of Global Note representing the 3.800% Senior Notes due 2029 (included in Exhibit 4.3). |
| 4.5 | Sixth Supplemental Indenture, dated as of March 21, 2019, by and among Ingersoll-Rand Luxembourg Finance S.A., as issuer, Ingersoll-Rand plc, Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Lux International Holding Company S.à r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company, as guarantors, and Wells Fargo Bank, National Association, as Trustee, relating to the 4.500% Senior Notes due 2049. |
| 4.6 | Form of Global Note representing the 4.500% Senior Notes due 2049 (included in Exhibit 4.5). |
| 5.1 | Opinion of Simpson Thacher & Bartlett LLP. |
| 5.2 | Opinion of Arthur Cox, Solicitors. |
| 5.3 | Opinion of Loyens & Loeff Luxembourg SARL |
| 5.4 | Opinion of McCarter & English, LLP. |

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

**INGERSOLL-RAND PUBLIC LIMITED COMPANY**
(Registrant)

Date: March 26, 2019

/s/ Evan M. Turtz
Evan M. Turtz
Secretary

**Exhibit 1.1**

**INGERSOLL-RAND LUXEMBOURG FINANCE S.A.**

**$1,500,000,000**

**$400,000,000 3.500% Senior Notes due 2026**
**$750,000,000 3.800% Senior Notes due 2029**
**$350,000,000 4.500% Senior Notes due 2049**

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***Underwriting Agreement***

March 19, 2019

Citigroup Global Markets Inc.
388 Greenwich Street
New York, New York 10013

Goldman Sachs & Co. LLC
200 West Street,
New York, New York 10282-2198

J.P. Morgan Securities LLC
383 Madison Avenue
New York, New York 10179

Merrill Lynch, Pierce, Fenner & Smith
Incorporated
One Bryant Park
New York, New York 10036

As representatives of the several Underwriters
named in Schedule I hereto
Ladies and Gentlemen:

Ingersoll-Rand Luxembourg Finance S.A., a Luxembourg public company limited by shares ( *société anonyme* ) with registered office at 1, avenue du Bois, L - 1251 Luxembourg, Grand Duchy
of Luxembourg ("Luxembourg"), registered with the Luxembourg Register of Commerce and Companies under number B189791, (the "Company"), proposes, subject to the terms and conditions stated herein, to issue and sell to the Underwriters named in Schedule I hereto (the " Underwriters "), for whom Citigroup Global Markets Inc., Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated are acting as representatives (the "Representatives" or "you"), an aggregate of $400,000,000 principal amount of 3.500% Senior Notes due 2026 (the "2026 Notes"), an aggregate of $750,000,000 principal amount of 3.800% Senior Notes due 2029 (the "2029 Notes") and an aggregate of $350,000,000 principal amount of 4.500% Senior Notes due 2049 (the "2049 Notes" and, together with the 2026 Notes and the 2029 Notes, the "Notes"). The Notes will be guaranteed (the "Guarantees") on a senior, unsecured basis by Ingersoll-Rand public limited company ("IR plc"), an Irish public limited company and the ultimate parent of the Company, Ingersoll-Rand Global Holding

Company Limited, a Delaware corporation ("IR Global"), Ingersoll-Rand Lux International Holding Company S.à r.l., a private limited liability company incorporated and existing under the laws of Luxembourg and registered ("Lux International") with the Luxembourg Register of Commerce and Companies under number B182971, Ingersoll-Rand Irish Holdings Unlimited Company, an Irish private unlimited company ("Irish Holdings") and Ingersoll-Rand Company, a New Jersey corporation ("IR Company" and, together with IR plc, IR Global, Lux International, Irish Holdings and IR Company the "Guarantors"), pursuant to the terms of the Indenture (as defined below). The Notes and the Guarantees are hereinafter collectively called the "Securities."

The Securities will be issued pursuant to an Indenture (the "Base Indenture") dated as of February 21, 2018 among the Company, the Guarantors and Wells Fargo Bank, National Association, as trustee (the "Trustee"), as supplemented by the Fourth Supplemental Indenture to be dated as of March 21, 2019 among the Company, the Guarantors and the Trustee, related to the 2026 Notes (the "2026 Notes Supplemental Indenture"), by the Fifth Supplemental Indenture to be dated as of March 21, 2019 among the Company, the Guarantors and the Trustee, related to the 2029 Notes (the "2029 Notes Supplemental Indenture"), and the Sixth Supplemental Indenture to be dated as of March 21, 2019 among the Company, the Guarantors and the Trustee, related to the 2049 Notes (the "2049 Notes Supplemental Indenture" and, together with the 2026 Notes Supplemental Indenture and the 2029 Notes Supplemental Indenture, the "Supplemental Indentures"). The Base Indenture together with the Supplemental Indentures are referred to herein as the "Indenture."

1. Each of the Company and the Guarantors, jointly and severally, represents and warrants to, and agrees with, each of the Underwriters that:

(a) IR plc meets the requirements for use of Form S-3 under the Securities Act of 1933, as amended (the "Act"). An "automatic shelf registration statement" as defined under Rule 405 under the Act on Form S-3 (File No. 333-221265) in respect of the Securities has been filed with the Securities and Exchange Commission (the "Commission") not earlier than three years prior to the date hereof; such registration statement, and any post-effective amendment thereto, became effective on filing; and no stop order suspending the effectiveness of such registration statement or any part thereof has been issued and no proceeding for that purpose has been initiated or threatened by the Commission, and no notice of objection of the Commission to the use of such registration statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act has been received by IR plc (the base prospectus filed as part of such registration statement, in the form in which it has most recently been filed with the Commission on or prior to the date of this Agreement, is hereinafter called the "Basic Prospectus"; any preliminary prospectus (including any preliminary prospectus supplement) relating to the Securities filed with the Commission pursuant to Rule 424(b) under the Act is hereinafter called a "Preliminary Prospectus"; the various parts of such registration statement, including all exhibits thereto but excluding Form T-1 and including any prospectus supplement relating to the Securities that is filed with the Commission and deemed by virtue of Rule 430B to be part of such registration statement, each as amended at the time such part of the registration statement became effective, are hereinafter collectively called the "Registration Statement"; the Basic Prospectus, as amended and supplemented immediately prior to the Applicable Time (as defined in Section 1(c) hereof), is hereinafter called the "Pricing Prospectus"; the form of the final prospectus relating to the Securities filed with the Commission pursuant to Rule 424(b) under the Act in accordance with Section 5(a) hereof is hereinafter called the "Prospectus"; any reference herein to the Basic Prospectus, the Pricing Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Act, as of the date of such prospectus; any reference to any amendment or supplement to the Basic Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include any post-effective amendment to the Registration Statement, any prospectus supplement relating to the Securities filed with the Commission pursuant to Rule 424(b) under the Act and any documents filed under the Securities Exchange Act of 1934, as amended (the

"Exchange Act"), and incorporated therein, in each case after the date of the Basic Prospectus, such Preliminary Prospectus, or the Prospectus, as the case may be; any reference to any amendment to the Registration Statement shall be deemed to refer to and include any annual report of IR plc filed pursuant to Section 13(a) or 15(d) of the Exchange Act after the effective date of the Registration Statement that is incorporated by reference in the Registration Statement; and any "issuer free writing prospectus" as defined in Rule 433 under the Act relating to the Securities is hereinafter called an "Issuer Free Writing Prospectus");

(b) No order preventing or suspending the use of any Preliminary Prospectus or any Issuer Free Writing Prospectus has been issued by the Commission, and each Preliminary Prospectus, at the time of filing thereof, conformed in all material respects to the requirements of the Act and the Trust Indenture Act of 1939, as amended (the "Trust Indenture Act") and the rules and regulations of the Commission thereunder, and did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company or a Guarantor by an Underwriter through the Representatives expressly for use therein, it being understood and agreed that the only such information consists of the following in the Preliminary Prospectus and the Prospectus under the captions "Underwriting": the fourth sentence of the second paragraph, the second sentence of the fifth paragraph, and the sixth, seventh and eighth paragraphs ;

(c) For the purposes of this Agreement, the "Applicable Time" is 4:15 p.m. (Eastern time) on the date of this Agreement; the Pricing Prospectus as supplemented by the final term sheet prepared and filed pursuant to Section 5(a) hereof, taken together (collectively, the "Pricing Disclosure Package") as of the Applicable Time and (ii) any investor presentation or electronic road show listed on Schedule IV (the "Additional Issuer Information"), when taken together with the Pricing Disclosure Package, did not include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and each Issuer Free Writing Prospectus listed on Schedule II(a) hereto does not conflict with the information contained in the Registration Statement, the Pricing Prospectus or the Prospectus and each such Issuer Free Writing Prospectus, as supplemented by and taken together with the Pricing Disclosure Package as of the Applicable Time, did not include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to statements or omissions made in an Issuer Free Writing Prospectus in reliance upon and in conformity with information furnished in writing to the Company or a Guarantor by an Underwriter through the Representatives expressly for use therein;

(d) The documents incorporated by reference in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus, when they became effective or were filed with the Commission, as the case may be, conformed in all material respects to the requirements of the Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder, and none of such documents contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading; any further documents so filed and incorporated by reference in the Registration Statement, the Pricing Disclosure Package or the Prospectus or any further amendment or supplement thereto, when such documents become effective or are filed with the Commission, as the case may be, will conform in all material respects to the requirements of the Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder and will not contain an untrue statement of a material fact or omit to state a material fact required to be

stated therein or necessary to make the statements therein not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company or a Guarantor by an Underwriter through the Representatives expressly for use therein; and no such documents were filed with the Commission since the Commission's close of business on the business day immediately prior to the date of this Agreement and prior to the execution of this Agreement, except as set forth on Schedule II(b) hereto;

(e) The Registration Statement conforms, and the Prospectus and any further amendments or supplements to the Registration Statement and the Prospectus will conform, in all material respects to the requirements of the Act and the Trust Indenture Act and the rules and regulations of the Commission thereunder and do not and will not, as of the applicable effective date as to each part of the Registration Statement and as of the applicable filing date as to the Prospectus and any amendment or supplement thereto, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company or a Guarantor by an Underwriter through the Representatives expressly for use therein;

(f) Since the date as of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus, there has not been any material adverse change or any development involving a prospective material adverse change in or affecting the business and operations, financial position, stockholders' equity or results of operations of IR plc and its subsidiaries taken as a whole, except as disclosed in the Pricing Prospectus and the Prospectus;

(g) The Company is duly incorporated and validly existing as a public company under the laws of its jurisdiction of incorporation, with corporate power and authority to own its properties and conduct its business as described in the Pricing Disclosure Package and the Prospectus, and has been duly qualified as a foreign corporation for the transaction of business under the laws of each other jurisdiction in which the nature of the business it transacts or the properties it owns or leases requires such qualification except where such failures to be so qualified would not, individually or in the aggregate, have a material adverse effect on the Company and its subsidiaries taken as a whole;

(h) Each Guarantor is duly incorporated and validly existing as a company under the laws of its jurisdiction of incorporation, with corporate power and authority to own its properties and conduct its business as described in the Pricing Disclosure Package and the Prospectus, and has been duly qualified as a foreign corporation for the transaction of business under the laws of each other jurisdiction in which the nature of the business it transacts or the properties it owns or leases requires such qualification except where such failures to be so qualified would not, individually or in the aggregate, have a material adverse effect on the Guarantor and its subsidiaries taken as a whole;

(i) The Base Indenture and each Supplemental Indenture have been duly authorized by the Company and each Guarantor, and as of the Time of Delivery (as defined herein) the Base Indenture and each Supplemental Indenture will have been validly executed and delivered by the Company and each Guarantor. When the Indenture has been duly executed and delivered by the Company and each Guarantor, assuming due authorization, execution and delivery thereof by the Trustee, the Indenture will constitute a valid and legally binding instrument of the Company and each Guarantor, enforceable against the Company and each Guarantor in accordance with its terms, subject, as to enforcement, to bankruptcy, insolvency, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally and to general equity principles;

(j) The Notes have been duly authorized by the Company, and, when issued and delivered pursuant to this Agreement and duly authenticated by the Trustee in accordance with the Indenture, the Notes will have been duly executed, issued and delivered by the Company and will constitute valid and legally binding obligations of the Company, enforceable against the Company in accordance with their terms and entitled to the benefits provided by the Indenture, subject, as to enforcement, to bankruptcy, insolvency, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally and to general equity principles; this Agreement has been duly authorized, executed and delivered by the Company; and the Notes, this Agreement and the Indenture will conform in all material respects to the descriptions thereof in the Pricing Disclosure Package and the Prospectus;

(k) Each of the Guarantees has been duly authorized by the applicable Guarantor, and, when such Guarantees endorsed on the Securities are executed by such Guarantors, and when the Notes are issued, executed and delivered pursuant to this Agreement and duly authenticated by the Trustee in accordance with the Indenture and delivered and paid for by the Underwriters, such Guarantees will have been duly executed and issued by such Guarantors and will constitute valid and legally binding obligations of the Guarantors, enforceable against the Guarantors in accordance with their terms and entitled to the benefits provided by the Indenture, subject, as to enforcement, to bankruptcy, insolvency, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally and to general equity principles; this Agreement has been duly authorized, executed and delivered by the Guarantors; and the Guarantees will conform in all material respects to the descriptions thereof in the Pricing Disclosure Package and the Prospectus;

(l) The execution, delivery and performance by the Company and the Guarantors of the Notes, the Indenture, the Guarantees and this Agreement, as applicable, the issue and sale of the Securities, the compliance by the Company and the Guarantors with all of the provisions of the Notes, the Indenture, the Guarantees and this Agreement, as applicable, with respect thereto, and the consummation of the transactions herein and therein contemplated will not conflict with or result in a breach of any of the terms or provisions of, result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company or the Guarantors pursuant to, or constitute a default under, any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any Guarantor is a party, or by which the Company or any Guarantor is bound, or to which any of the property or assets of the Company or the Guarantors is subject, nor will such action result in any violation of the provisions of the articles of association of the Company or the certificate of incorporation, memorandum of association, by-laws or any other constitutional document, as the case may be, of any Guarantor or any statute, order, rule, judgment or regulation (except for state securities or Blue Sky laws, rules and regulations, as to which neither the Company nor the Guarantors make any representation) of any court or governmental agency or body having jurisdiction over the Company or the Guarantors, or any of the properties of the Company or the Guarantors; and no consent, approval, authorization, order, registration or qualification of or with any such court or governmental agency or body is required for the issue and sale of the Notes or the issue of the Guarantees or the consummation by the Company or the Guarantors of the other transactions contemplated by this Agreement or the Indenture except such as have been, or will have been prior to the Time of Delivery, obtained under Luxembourg and Irish law and such consents, approvals, authorizations, registrations and qualifications as may be required under (i) state securities or Blue Sky laws in connection with the purchase and distribution of the Securities by the Underwriters and (ii) the Trust Indenture Act of 1939 (the "Trust Indenture Act");

(m) Other than as set forth or contemplated in the Pricing Disclosure Package and the Prospectus, there are no legal or governmental proceedings pending or, to the best of the Company's or the Guarantors' knowledge, threatened to which the Company, the Guarantors or any of their respective subsidiaries, is a party or of which any property of the Company, the Guarantors or any of their respective subsidiaries is the subject, which if determined adversely to the Company or the Guarantors or any of their respective

subsidiaries, as the case may be, individually or in the aggregate would reasonably be expected to have a material adverse effect on the consolidated financial position, shareholders' equity or results of operations of IR plc and its subsidiaries taken as a whole ;

(n) In order to ensure the legality, validity, enforceability and admissibility into evidence of this Agreement in Luxembourg or Ireland, as the case may be, it is not, except as disclosed in the Prospectus regarding enforceability in Luxembourg, necessary that this Agreement or any other ancillary instrument or document be filed or recorded with any court or other authority in Luxembourg or Ireland, as the case may be, or that any stamp, registration or similar tax be paid in Luxembourg or Ireland, as the case may be, on or in respect of this Agreement or any such other ancillary document. Except as disclosed in the Pricing Disclosure Package and the Prospectus, under current laws and regulations of Luxembourg and Ireland, all interest, principal, premium, if any, and other payments due or made on the Securities made to holders thereof will not be subject to withholding or other similar taxes under laws and regulations of Luxembourg or Ireland, as the case may be, including any taxing authority thereof or therein, and such payments will otherwise be free and clear of any other tax, duty, withholding or deduction in Luxembourg or Ireland, as the case may be, including any taxing authority thereof or therein, and may be made without the necessity of obtaining any governmental authorization in Luxembourg or Ireland, as the case may be, including any taxing authority thereof or therein;

(o) Neither the Company nor the Guarantors, nor any of the subsidiaries of IR plc listed in Annex I hereto (collectively, the "Significant Subsidiaries"), is (i) in violation of its articles of association, charter or by-laws or similar organizational documents; (ii) in default, and no event has occurred that, with notice or lapse of time or both, would constitute such a default, in the due performance or observance of any term, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any Guarantor is a party or by which the Company or any Guarantor is bound or to which any of the property or assets of the Company or any Guarantor is subject; or (iii) in violation of any law or statute or any judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority, except, in the case of clauses (ii) and (iii) above, for any such default or violation that would not, individually or in the aggregate, have a material adverse effect on the consolidated financial position, shareholders' equity or results of operations of IR plc and its subsidiaries taken as a whole.

(p) IR plc maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that complies with the requirements of the Exchange Act and has been designed by IR plc's principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles; IR plc has carried out evaluations of the effectiveness of its internal control over financial reporting as required by Rule 13a-15 under the Exchange Act and, as of date of the latest audited financial statements included or incorporated by reference in the Pricing Disclosure Package and the Prospectus, such internal control over financial reporting is effective, and IR plc is not aware of any material weaknesses in its internal control over financial reporting;

(q) Since the date of the latest audited financial statements included or incorporated by reference in the Pricing Disclosure Package and the Prospectus, there has been no change in IR plc's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, IR plc's internal control over financial reporting;

(r) IR plc maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the requirements of the Exchange Act; such disclosure controls and procedures have been designed to ensure that material information relating to IR plc and its subsidiaries is made known to IR plc's principal executive officer and principal financial officer by others within

those entities; such disclosure controls and procedures are effective as of the date of the latest audited financial statements included or incorporated by reference in the Pricing Disclosure Package and the Prospectus; and since such date, there has been no change to IR plc's disclosure controls and procedures that has materially affected, or is reasonably likely to materially affect IR plc's disclosure controls and procedures;

(s) There is and has been no failure on the part of IR plc or any of its directors or officers, in their capacities as such, to comply in all material respects with the provisions of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated in connection therewith (the "Sarbanes-Oxley Act");

(t) Except as set forth in the Pricing Disclosure Package and the Prospectus, (i) neither the Company nor the Guarantors nor any of their respective subsidiaries nor, to the knowledge of the Company and the Guarantors, any director, officer, agent, manager, employee or affiliate of the Company, the Guarantors or any of their respective subsidiaries, respectively, is aware of or has taken any action, directly or indirectly, that would result in a violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the "FCPA"), including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the payment of any money, or other property, gift, promise to give, or authorization of the giving of anything of value to any "foreign official" (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of the FCPA, and (ii) the Company, the Guarantors and their respective subsidiaries, and, to the knowledge of the Company and the Guarantors, their respective affiliates, have each conducted their businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith, except in the case of each of (i) and (ii) above as would not reasonably be expected to have a material adverse effect on the Company and its subsidiaries taken as a whole;

(u) The operations of each of the Company, the Guarantors and their respective subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping in all material respects and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "Money Laundering Laws") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company, the Guarantors or any of their subsidiaries with respect to the Money Laundering Laws is pending or, to the best knowledge of the Company and the Guarantors, threatened;

(v) Neither the Company nor the Guarantors nor any of their respective subsidiaries nor, to the knowledge of the Company and the Guarantors, any respective director, officer, agent, employee or affiliate of the Company, the Guarantors or any of their respective subsidiaries, is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC"); neither the Company nor the Guarantors or their respective subsidiaries will directly or indirectly use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC;

(w) (A) (i) At the time of filing the Registration Statement, (ii) at the time of the most recent amendment thereto for the purposes of complying with Section 10(a)(3) of the Act (whether such amendment was by post-effective amendment, incorporated report filed pursuant to Section 13 or 15(d) of the Exchange Act or form of prospectus), and (iii) at the time IR plc or any person acting on its behalf (within the meaning, for this clause only, of Rule 163(c) under the Act) made any offer relating to the Securities in reliance on the exemption of Rule 163 under the Act, IR plc was a "well-known seasoned issuer" as

defined in Rule 405 under the Act; and (B) (i) at the time of filing the Registration Statement and (ii) at the earliest time after the filing of the Registration Statement that IR plc or another offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) under the Act) of the Securities, IR plc was not an "ineligible issuer" as defined in Rule 405 under the Act;

(x) PricewaterhouseCoopers LLP, who has certified certain financial statements of IR plc and its subsidiaries, is an independent registered public accounting firm with respect to IR plc and its subsidiaries, within the applicable rules and regulations adopted by the Commission and the Public Company Accounting Oversight Board (United States) and as required by the Act;

(y) The financial statements and the related notes thereto included or incorporated by reference in the Pricing Disclosure Package and the Prospectus comply in all material respects with the applicable requirements of the Act, the Exchange Act and the applicable rules and regulations of the Commission thereunder, as applicable, and present fairly in all material respects (A) the financial position of IR plc and its subsidiaries, taken as a whole, as of the dates indicated, and (B) the results of operations and cash flows for the periods specified; in each case, such financial statements have been prepared in conformity with U.S. generally accepted accounting principles applied on a consistent basis throughout the periods covered thereby; and the assumptions underlying the pro forma financial information and the related notes thereto included in the Pricing Disclosure Package and the Prospectus are reasonable and are set forth in the Pricing Disclosure Package and the Prospectus;

(z) Prior to the date hereof, none of the Company, the Guarantors or any of their respective affiliates has taken any action which is designed to or which has constituted or which might have been expected to cause or result in stabilization or manipulation of the price of any of the Securities;

(aa) IR plc is subject to Section 13 or 15(d) of the Exchange Act;

(bb) Each of the Company and the Guarantors is not, and after giving effect to the offering and sale of the Securities and the application of the proceeds thereof, will not be an "investment company", as such term is defined in the United States Investment Company Act of 1940, as amended (the "Investment Company Act");

(cc) Neither the Company nor any person acting on its behalf (other than the Underwriters, as to which no representation is made) has offered or sold the Securities by means of any general solicitation or general advertising within the meaning of Rule 502(c) under the Act or, with respect to Securities sold outside the United States to non-U.S. persons (as defined in Rule 902 under the Act), by means of any directed selling efforts within the meaning of Rule 902 under the Act and the Company, any affiliate of the Company and any person acting on its or their behalf has complied with and will implement the "offering restriction" within the meaning of such Rule 902;

(dd) IR plc and each of its subsidiaries have filed all federal, state, local and foreign tax returns required to be filed through the date of this Agreement or have requested extensions thereof (except where the failure to file would not reasonably be expected to have a material adverse effect with respect to IR plc and its consolidated subsidiaries, taken as a whole) and have paid all taxes required to be paid thereon (except for cases in which the failure to pay would not reasonably be expected to have a material adverse effect with respect to IR plc and its consolidated subsidiaries, taken as a whole, or except as currently being contested in good faith and for which reserves required by U.S. generally accepted accounting principles have been created), and the Company has no knowledge of any tax deficiency which has been or is reasonably likely to be asserted against the Company which would reasonably be expected to have a material adverse effect with respect to IR plc and its consolidated subsidiaries, taken as a whole, other than those for which reserves required by U.S. generally accepted accounting principles have been created;

(ee) The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Pricing Disclosure Package and the Prospectus fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto; and

(ff) There are no stamp or other issuance or transfer taxes or duties or other similar fees or charges required to be paid in Luxembourg or Ireland, including any taxing authority thereof or therein, in connection with the execution and delivery of this Agreement or the issuance or sale of the Securities by the Company to the Underwriters as contemplated herein or the sale and delivery of the Securities by the Underwriters as contemplated herein except in Luxembourg for any fixed or ad valorem registration duty in Luxembourg (i) upon voluntary registration (présentation à l'enregistrement) of the Agreement and any related documents before the Registration and Estates Department (Administration de l'enregistrement, des domains et de la TVA) in Luxembourg, or (ii) if the Agreement and any related documents are (a) enclosed to a compulsory registrable deed under Luxembourg law (acte obligatoirement enregistrable) or (b) deposited with the official records of a notary (déposé au rang des minutes d'un notaire).

2. Subject to the terms and conditions herein set forth, the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, (i) at a purchase price of 99.270% of the principal amount thereof, plus accrued interest, if any, from March 21, 2019 to the Time of Delivery hereunder, the principal amount of the 2026 Notes set forth opposite the name of such Underwriter in Schedule I hereto, (ii) at a purchase price of 99.251% of the principal amount thereof, plus accrued interest, if any, from March 21, 2019 to the Time of Delivery hereunder, the principal amount of the 2029 Notes set forth opposite the name of such Underwriter in Schedule I hereto, and (iii) at a purchase price of 98.863% of the principal amount thereof, plus accrued interest, if any, from March 21, 2019 to the Time of Delivery hereunder, the principal amount of the 2049 Notes set forth opposite the name of such Underwriter in Schedule I hereto.

3. Upon the authorization by the Representatives of the release of the Securities, the several Underwriters propose to offer the Securities for sale upon the terms and conditions set forth in this Agreement and the Prospectus.

4. (a) The Securities to be purchased by each Underwriter hereunder will be represented by one or more definitive global notes in book-entry form which will be deposited by or on behalf of the Company with The Depository Trust Company ("DTC") or its designated custodian. The Company will deliver the Securities to the Representatives, for the account of each Underwriter, against payment by or on behalf of such Underwriter of the purchase price therefor by wire transfer in Federal (same day) funds, by causing DTC to credit the Securities to the account of the Representatives at DTC. The Company will cause the certificates representing the Securities to be made available to the Representatives for checking at least twenty-four hours prior to the Time of Delivery (as defined below) at the office of Davis Polk & Wardwell LLP, 450 Lexington Avenue, New York, New York 10017 (the "Closing Location"). The time and date of such delivery and payment shall be at or prior to 2:00 p.m., New York City time, on March 21, 2019 or such other time and date as the Representatives and the Company may agree upon in writing. Such time and date are herein called the "Time of Delivery".

(b) The documents to be delivered at the Time of Delivery by or on behalf of the parties hereto pursuant to Section 8 hereof, including the cross-receipt for the Securities and any additional documents requested by the Underwriters pursuant to Section 8(k) hereof, will be delivered at such time and date at the Closing Location, and the Securities will be delivered at DTC or its designated custodian, all at the Time of Delivery. A meeting will be held at the Closing Location at 5:00 p.m., New York City time, on the New York Business Day next preceding the Time of Delivery, at which meeting the final drafts of the documents to be delivered pursuant to the preceding sentence will be available for review by the parties hereto. For

the purposes of this Section 4, "New York Business Day" shall mean each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which banking institutions in New York are generally authorized or obligated by law or executive order to close.

5. The Company agrees with each of the Underwriters:

(a) To prepare the Prospectus in a form approved by you and to file such Prospectus pursuant to Rule 424(b) under the Act not later than the Commission's close of business on the second business day following the date of this Agreement; to make no further amendment or any supplement to the Registration Statement, the Basic Prospectus or the Prospectus prior to the Time of Delivery which shall be disapproved by you promptly after reasonable notice thereof; to advise you, promptly after it receives notice thereof, of the time when any amendment to the Registration Statement has been filed or becomes effective or any amendment or supplement to the Prospectus has been filed and to furnish you with copies thereof; to prepare a final term sheet, containing solely a description of the Securities, in the form provided in Schedule III hereto and to file such term sheet pursuant to Rule 433(d) under the Act within the time required by such Rule; to file promptly all other material required to be filed by the Company with the Commission pursuant to Rule 433(d) under the Act; to file promptly all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date of the Prospectus and for so long as the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required in connection with the offering or sale of the Securities; to advise you, promptly after it receives notice thereof, of the issuance by the Commission of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus in respect of the Securities, of any notice of objection of the Commission to the use of the Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act, of the suspension of the qualification of the Securities for offering or sale in any jurisdiction, of the initiation or threatening of any proceeding for any such purpose, or of any request by the Commission for the amending or supplementing of the Registration Statement or the Prospectus or for additional information; and, in the event of the issuance of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus or suspending any such qualification, to promptly use its best efforts to obtain the withdrawal of such order; and in the event of any such issuance of a notice of objection, promptly to take such steps including, without limitation, amending the Registration Statement or filing a new registration statement, at its own expense, as may be necessary to permit offers and sales of the Securities by the Underwriters (references herein to the Registration Statement shall include any such amendment or new registration statement);

(b) If required by Rule 430B(h) under the Act, to prepare a form of prospectus in a form approved by you and to file such form of prospectus pursuant to Rule 424(b) under the Act not later than may be required by Rule 424(b) under the Act; and to make no further amendment or supplement to such form of prospectus which shall be disapproved by you promptly after reasonable notice thereof;

(c) Promptly from time to time to take such action as you may reasonably request to qualify the Securities for offering and sale under the securities laws of such jurisdictions as you may request and to comply with such laws so as to permit the continuance of sales and dealings therein in such jurisdictions for as long as may be necessary to complete the distribution of the Securities, provided that in connection therewith none of the Company or any Guarantor shall be required to qualify as a foreign corporation, to file a general consent to service of process or to subject itself to taxation in any jurisdiction;

(d) To furnish the Underwriters with written and electronic copies of the Prospectus in New York City in such quantities as you may reasonably request, and, if the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required at any time prior to the expiration of nine months after the time of issue of the Prospectus in connection with the offering or sale of the Securities

and if at such time any event shall have occurred as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when such Prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is delivered, not misleading, or, if for any other reason it shall be necessary during such same period to amend or supplement the Prospectus or to file under the Exchange Act any document incorporated by reference in the Prospectus in order to comply with the Act, the Exchange Act or the Trust Indenture Act, to notify you and upon your request to file such document and to prepare and furnish without charge to each Underwriter and to any dealer in securities as many written and electronic copies as you may from time to time reasonably request of an amended Prospectus or a supplement to the Prospectus which will correct such statement or omission or effect such compliance; and in case any Underwriter is required to deliver a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) in connection with sales of any of the Securities at any time nine months or more after the time of issue of the Prospectus, upon your request but at the expense of such Underwriter, to prepare and deliver to such Underwriter as many written and electronic copies as you may request of an amended or supplemented Prospectus complying with Section 10(a)(3) of the Act;

(e) To make generally available to its securityholders as soon as practicable, but in any event not later than sixteen months after the effective date of the Registration Statement (as defined in Rule 158(c) under the Act), an earnings statement of the Company and its subsidiaries (which need not be audited) complying with Section 11(a) of the Act and the rules and regulations of the Commission thereunder (including, at the option of the Company, Rule 158);

(f) During the period beginning from the date hereof and continuing until the Time of Delivery, not to offer, sell contract to sell, pledge, grant any option to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, or file with the Commission a registration statement under the Act relating to any securities of the Company that are substantially similar to any series of the Securities, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing without the Representatives prior written consent;

(g) To pay the required Commission filing fees relating to the Securities within the time required by Rule 456(b)(1) under the Act without regard to the proviso therein and otherwise in accordance with Rules 456(b) and 457(r) under the Act;

(h) Unless such documents are publicly available on EDGAR, to furnish to the holders of the Securities as soon as practicable after the end of each fiscal year an annual report (including a balance sheet and statements of income, stockholders' equity and cash flows of the Company and its consolidated subsidiaries certified by independent public accountants) and, as soon as practicable after the end of each of the first three quarters of each fiscal year (beginning with the fiscal quarter ending after the date of the Prospectus), to make available to its stockholders consolidated summary financial information of the Company and its subsidiaries for such quarter in reasonable detail;

(i) To use the net proceeds received by it from the sale of the Securities pursuant to this Agreement in the manner specified in the Pricing Prospectus under the caption "Use of Proceeds"; and

(j) That all amounts payable hereunder shall be paid in U.S. dollars and shall be free and clear of, and without any deduction or withholding for or on account of, any current or future taxes, levies, imposts, duties, charges or other deductions or withholdings levied in Luxembourg, Ireland or any other jurisdiction in which the Company is organized or otherwise resident for tax purposes and any political subdivision therein or thereof, and any jurisdiction from or through which a payment is made (each, a "Tax Jurisdiction"), unless such deduction or withholding is required by applicable law, in which event the Company will pay such additional amounts as are necessary so that the persons entitled to such payments

will receive the amount that such persons would otherwise have received but for such deduction or withholding after allowing for deductions or withholding attributable to additional amounts payable under this Section; except that no additional amounts shall be paid by the Company in respect of (i) any taxes that would not have been imposed but for an Underwriter having some connection with the Tax Jurisdiction imposing such tax beyond solely entering into this Agreement, the performance by the Underwriters of their obligations thereunder or the receipt of payments thereunder, (ii) any income, franchise or similar tax on the overall net income of any Underwriter or (iii) any taxes which would not have been imposed but for the failure of an Underwriter to comply with any applicable certification, identification or reporting requirement upon the reasonable written request of the Company.

6. (a)(i) The Company represents and agrees that, other than the final term sheet prepared and filed pursuant to Section 5(a) hereof, without the prior consent of the Representatives, it has not made and will not make any offer relating to the Securities that would constitute a "free writing prospectus" as defined in Rule 405 under the Act;

(ii) each Underwriter represents and agrees that, without the prior consent of the Company and the Representatives, other than one or more term sheets relating to the Securities containing customary information and conveyed to purchasers of Securities, it has not made and will not make any offer relating to the Securities that would constitute a free writing prospectus; and

(iii) any such free writing prospectus the use of which has been consented to by the Company and the Representatives (including the final term sheet prepared and filed pursuant to Section 5(a) hereof) is listed on Schedule II(a) hereto.

(b) The Company has complied and will comply with the requirements of Rule 433 under the Act applicable to any Issuer Free Writing Prospectus, including timely filing with the Commission or retention where required and legending; and

(c) The Company agrees that if at any time following issuance of an Issuer Free Writing Prospectus any event occurred or occurs as a result of which such Issuer Free Writing Prospectus would conflict with the information in the Registration Statement, the Pricing Prospectus or the Prospectus or would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances then prevailing, not misleading, the Company will give prompt notice thereof to the Representatives and, if requested by the Representatives, will prepare and furnish without charge to each Underwriter an Issuer Free Writing Prospectus or other document which will correct such conflict, statement or omission; provided, however, that this representation and warranty shall not apply to any statements or omissions in an Issuer Free Writing Prospectus made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through the Representatives expressly for use therein.

7. Each of the Company and the Guarantors jointly and severally covenants and agrees with the several Underwriters that the Company and the Guarantors will jointly and severally pay or cause to be paid the following: (i) the fees, disbursements and expenses of the Company's and the Guarantors' counsel and accountants in connection with the issue of the Notes and the Guarantees and all other expenses in connection with the preparation, printing, reproduction and filing of the Registration Statement, the Basic Prospectus, any Preliminary Prospectus, any Issuer Free Writing Prospectus and the Prospectus and amendments and supplements thereto and the mailing and delivering of copies thereof to the Underwriters and dealers; (ii) the cost of printing or producing this Agreement, the Indenture, the Blue Sky Memorandum, closing documents and any other documents in connection with the offering, purchase, sale and delivery of the Securities; (iii) all expenses in connection with the qualification of the Securities

for offering and sale under state securities laws as provided in Section 5(b) hereof, including the reasonable and documented fees and disbursements of external counsel for the Underwriters in connection with such qualification and in connection with the Blue Sky surveys; (iv) any fees charged by securities rating services for rating the Securities; (v) the cost of preparing the Notes and the Guarantees; (vi) the fees and expenses of the Trustee and any agent of the Trustee and the fees and disbursements of counsel for the Trustee in connection with the Indenture and the Securities; (vii) any stamp or transfer taxes in connection with the original issuance and sale of the securities; and (viii) all other costs and expenses incident to the performance of its obligations hereunder which are not otherwise specifically provided for in this Section. It is understood, however, that, except as provided in this Section, and Sections 9 and 12 hereof, the Underwriters will pay all of their own costs and expenses, including the fees of their counsel, transfer taxes on resale of any of the Securities by them, and any advertising expenses connected with any offers they may make.

8. The obligations of the Underwriters hereunder shall be subject, in their discretion, to the condition that all representations and warranties and other statements of the Company and the Guarantors herein are, at and as of the Time of Delivery, true and correct, the condition that the Company and the Guarantors shall have performed in all material respects all of their respective obligations hereunder theretofore to be performed, and the following additional conditions:

(a) The Prospectus shall have been filed with the Commission pursuant to Rule 424(b) under the Act within the applicable time period prescribed for such filing by the rules and regulations under the Act and in accordance with Section 5(a) hereof; the final term sheet contemplated by Section 5(a) hereof, and any other material required to be filed by the Company pursuant to Rule 433(d) under the Act, shall have been filed with the Commission within the applicable time periods prescribed for such filings by Rule 433; no stop order suspending the effectiveness of the Registration Statement or any part thereof shall have been issued and no proceeding for that purpose shall have been initiated or threatened by the Commission and no notice of objection of the Commission to the use of the Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act shall have been received; no stop order suspending or preventing the use of the Prospectus or any Issuer Free Writing Prospectus shall have been initiated or threatened by the Commission; and all requests for additional information on the part of the Commission shall have been complied with to your reasonable satisfaction;

(b) Davis Polk & Wardwell LLP, counsel for the Underwriters, shall have furnished to you such opinion or opinions, dated the Time of Delivery, with respect to such matters as you may reasonably request, and such counsel shall have received such papers and information as they may reasonably request to enable them to pass upon such matters;

(c) Simpson Thacher & Bartlett LLP, counsel for IR Global, shall have furnished to you their written opinion and negative assurance letter, dated the Time of Delivery, substantially to the effect set forth in Exhibit A.

(d) Loyens & Loeff Luxembourg S.à r.l., Luxembourg counsel for the Company and Lux International, shall have furnished to the Representatives their written opinion, dated the Time of Delivery, substantially to the effect set forth in Exhibit B.

(e) (f) Arthur Cox, Irish counsel for IR plc and Irish Holdings, shall have furnished to you their written opinion, dated the Time of Delivery, substantially to the effect set forth in Exhibit D.

(g) McCarter & English LLP, New Jersey counsel for IR Company, shall have furnished to you their written opinion, dated the Time of Delivery, substantially to the effect set forth in Exhibit E.

(h) Evan M. Turtz, Vice President and Secretary of IR plc shall have furnished to the Representatives his written opinion, dated the Time of Delivery, substantially to the effect set forth in Exhibit F.

(i) On the date of the Prospectus prior to the execution of this Agreement and also at the Time of Delivery, PricewaterhouseCoopers LLP shall have furnished to you a letter or letters, dated the respective dates of delivery thereof, in form and substance satisfactory to you;

(j) Since the respective dates as of which information is given in the Pricing Prospectus there shall not have been any change or any development involving a prospective change in or affecting the business and operations, financial position, stockholders' equity or results of operations of IR plc and its subsidiaries, taken as a whole, otherwise than as set forth or contemplated in the Pricing Prospectus, the effect of which is, in the judgment of the Representatives, so material and adverse as to make it impracticable or inadvisable to proceed with the offering or the delivery of the Securities on the terms and in the manner contemplated in this Agreement and in the Prospectus;

(k) On or after the Applicable Time (i) no downgrading shall have occurred in the rating accorded the Company's debt securities by any "nationally recognized statistical rating organization", as that term is defined under Section 3(a)(62) under the Exchange Act, and (ii) no such organization shall have publicly announced that it has under surveillance or review, with possible negative implications, its rating of any of the Company's debt securities;

(l) On or after the Applicable Time there shall not have occurred any of the following: (i) a suspension or material limitation in trading in securities generally on the New York Stock Exchange; (ii) a suspension or material limitation in trading in the Company's securities on the New York Stock Exchange; (iii) a general moratorium on commercial banking activities declared by either Federal or New York State authorities or a material disruption in commercial banking or securities settlement or clearance services in the United States; (iv) the outbreak or escalation of hostilities involving the United States or the declaration by the United States of a national emergency or war or (v) the occurrence of any other calamity or crisis or any change in financial, political or economic conditions in the United States or elsewhere, if the effect of any such event specified in clause (iv) or (v) in the judgment of the Representatives makes it impracticable or inadvisable to proceed with the offering or the delivery of the Securities on the terms and in the manner contemplated in the Prospectus;

(m) The Company shall have complied with the provisions of Section 5(e) hereof with respect to the furnishing of prospectuses on the New York Business Day next succeeding the date of this Agreement; and

(n) The Company and the Guarantors shall have furnished or caused to be furnished to you at the Time of Delivery certificates of officers of the Company and the Guarantors satisfactory to you as to the accuracy of the representations and warranties of the Company and the Guarantors herein at and as of such Time of Delivery, as to the performance by the Company and the Guarantors of all of their respective obligations hereunder to be performed at or prior to such Time of Delivery, as to the matters set forth in subsections (a) and (i) of this Section and as to such other matters as you may reasonably request.

9. (a) Each of the Company and the Guarantors will indemnify and hold harmless each Underwriter against any losses, claims, damages or liabilities, joint or several, to which such Underwriter may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, the Basic Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, any Additional Issuer Information, any Issuer Free Writing Prospectus or any "issuer information" filed or required to be filed pursuant to Rule 433(d) under the Act, or arise out of or are based upon the omission or alleged omission to state therein a material fact necessary to make the statements therein not misleading, and will reimburse each Underwriter for any legal or other expenses reasonably incurred by such Underwriter in connection with investigating or defending any such action or claim as such expenses are incurred; *provided* , *however* , that neither the Company nor any Guarantor shall be liable in any such case to the extent that any such

loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, the Basic Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, in reliance upon and in conformity with written information furnished to the Company by any Underwriter through the Representatives expressly for use therein.

(b) Each Underwriter will indemnify and hold harmless each of the Company and the Guarantors against any losses, claims, damages or liabilities to which the Company and the Guarantors may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, the Basic Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or arise out of or are based upon the omission or alleged omission to state therein a material fact necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, the Basic Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus in reliance upon and in conformity with written information furnished to the Company by such Underwriter through the Representatives expressly for use therein; and will reimburse the Company and the Guarantors for any legal or other expenses reasonably incurred by the Company and any Guarantor in connection with investigating or defending any such action or claim as such expenses are incurred.

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) above of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; but the omission so to notify the indemnifying party shall not relieve it from any liability which it may have to any indemnified party otherwise than under such subsection, except to the extent that the indemnifying party has been materially prejudiced (through the forfeiture of substantive rights or defenses) by such failure. In case any such action shall be brought against any indemnified party and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel satisfactory to such indemnified party, provided, however, that if the defendants in any such action include both the indemnified party and the indemnifying party and the indemnified party shall have been advised by its counsel that representation of such indemnified party and the indemnifying party by the same counsel would be inappropriate (whether or not such representation by the same counsel has been proposed) under applicable standards of professional conduct due to actual or potential differing interests or defenses between them, the indemnified party or parties shall have the right to select separate counsel or participate in the defense of such action on behalf of such indemnified party or parties, and, upon receipt of notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal expenses of other counsel or any other expenses, in each case subsequently incurred by such indemnified party in connection with the defense thereof unless the indemnified party shall have employed separate counsel in accordance with the preceding proviso (it being understood, however, that the indemnifying party shall not be liable for the expenses of more than one separate counsel, approved by the Representatives in the case of paragraph (a) of this Section 9, representing the indemnified parties under such paragraph (a) who are parties to such action, unless the indemnified parties shall have been advised in writing by its counsel that representation of such indemnified parties by the same counsel would be inappropriate (whether or not such representation by the same counsel has been proposed) under applicable standards of professional conduct due to actual or potential differing interests or defenses

between them). No indemnifying party will (i) without the prior written consent of each of the indemnified parties, settle or compromise or consent to the entry of any judgment with respect to any pending or threatened claim, action, suit or proceeding in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified parties are actual or potential parties to such claim or action), unless such settlement, compromise or consent (A) includes an unconditional release of each indemnified party from all liability arising out of such claim, action, suit or proceeding and (B) does not include a statement as to, or an admission of, fault, culpability or a failure to act, by or on behalf of any indemnified party, or (ii) be liable for any settlement of any such action effected without its written consent, but if settled with the consent of the indemnifying party or if there be a final judgment of the plaintiff in any such action, the indemnifying party agrees to indemnify and hold harmless any indemnified party from and against any loss or liability by reason of such settlement or judgment.

(d) If the indemnification provided for in this Section 9 is unavailable to or insufficient to hold harmless an indemnified party under subsection (a) or (b) above in respect of any losses, claims, damages or liabilities (or actions in respect thereof) referred to therein, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (or actions in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company and the Guarantors on the one hand and the Underwriters on the other from the offering of the Securities. If, however, the allocation provided by the immediately preceding sentence is not permitted by applicable law or if the indemnified party failed to give the notice required under subsection (c) above, then each indemnifying party shall contribute to such amount paid or payable by such indemnified party in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company and the Guarantors on the one hand and the Underwriters on the other in connection with the statements or omissions which resulted in such losses, claims, damages or liabilities (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company and the Guarantors on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company and the Guarantors bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or the Underwriters on the other and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company, the Guarantors and the Underwriters agree that it would not be just and equitable if contribution pursuant to this subsection (d) were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this subsection (d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities (or actions in respect thereof) referred to above in this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Securities underwritten by it and distributed to investors were offered to investors exceeds the amount of any damages which such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. The Underwriters' obligations in this subsection (d) to contribute are several in proportion to their respective underwriting obligations and not joint.

(e) The obligations of the Company and the Guarantors under this Section 9 shall be in addition to any liability which the Company and the Guarantors may otherwise have and shall extend, upon the same terms and conditions, to any affiliate of each Underwriter and each person, if any, who controls any

Underwriter within the meaning of the Act; and the obligations of the Underwriters under this Section 9 shall be in addition to any liability which the respective Underwriters may otherwise have and shall extend, upon the same terms and conditions, to each officer and director of the Company (including any person who, with his or her consent, is named in the Registration Statement as about to become a director of the Company) and the Guarantors and to each person, if any, who controls the Company or any Guarantor within the meaning of the Act.

10. (a) If any Underwriter shall default in its obligation to purchase the Securities which it has agreed to purchase hereunder, the Representatives may in their discretion arrange for the Representatives or another party or other parties to purchase such Securities on the terms contained herein. If within thirty-six hours after such default by any Underwriter the Representatives do not arrange for the purchase of such Securities, then the Company shall be entitled to a further period of thirty-six hours within which to procure another party or other parties satisfactory to the Representatives to purchase such Securities on such terms. In the event that, within the respective prescribed periods, the Representatives notify the Company that they have so arranged for the purchase of such Securities, or the Company notifies the Representatives that it has so arranged for the purchase of such Securities, the Representatives or the Company shall have the right to postpone the Time of Delivery for a period of not more than seven days, in order to effect whatever changes may thereby be made necessary in the Prospectus, or in any other documents or arrangements, and the Company agrees to prepare promptly any amendments to the Prospectus which in the opinion of the Representatives may thereby be made necessary. The term "Underwriter" as used in this Agreement shall include any person substituted under this Section with like effect as if such person had originally been a party to this Agreement with respect to such Securities.

(b) If, after giving effect to any arrangements for the purchase of the Securities of a defaulting Underwriter or Underwriters by the Representatives and the Company as provided in subsection (a) above, the aggregate principal amount of such Securities which remains unpurchased does not exceed one-tenth of the aggregate principal amount of all the Securities, then the Company shall have the right to require each non-defaulting Underwriter to purchase the principal amount of Securities which such Underwriter agreed to purchase hereunder and, in addition, to require each non-defaulting Underwriter to purchase its pro rata share (based on the principal amount of Securities which such Underwriter agreed to purchase hereunder) of the Securities of such defaulting Underwriter or Underwriters for which such arrangements have not been made; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

(c) If, after giving effect to any arrangements for the purchase of the Securities of a defaulting Underwriter or Underwriters by the Representatives and the Company as provided in subsection (a) above, the aggregate principal amount of Securities which remains unpurchased exceeds one-tenth of the aggregate principal amount of all the Securities, or if the Company shall not exercise the right described in subsection (b) above to require non-defaulting Underwriters to purchase Securities of a defaulting Underwriter or Underwriters, then this Agreement shall thereupon terminate, without liability on the part of any non-defaulting Underwriter or the Company or any Guarantor, except for the expenses to be borne by the Company and the Underwriter as provided in Section 7 hereof and the indemnity and contribution agreements in Section 9 hereof; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

11. The respective indemnities, agreements, representations, warranties and other statements of the Company, the Guarantors and the several Underwriters, as set forth in this Agreement or made by or on behalf of them, respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation (or any statement as to the results thereof) made by or on behalf of any Underwriter or any controlling person of any Underwriter, or the Company or any Guarantor, or any officer or director or controlling person of the Company or any Guarantor, and shall survive delivery of and payment for the Securities.

12. If this Agreement shall be terminated pursuant to Section 10 hereof, the Company and the Guarantors shall not then be under any liability to any Underwriter except as provided in Sections 7 and 9 hereof; but, if for any other reason, the Securities are not delivered by or on behalf of the Company as provided herein, the Company will reimburse the Underwriters through the Representatives for all out-of-pocket expenses approved in writing by the Representatives, including fees and disbursements of counsel, reasonably incurred by the Underwriters in making preparations for the purchase, sale and delivery of the Securities, but the Company and the Guarantors shall then be under no further liability to any Underwriter except as provided in Sections 7 and 9 hereof.

13. In all dealings hereunder, the Representatives shall act on behalf of each of the Underwriters, and the parties hereto shall be entitled to act and rely upon any statement, request, notice or agreement on behalf of any Underwriter made or given by the Representatives.

    All statements, requests, notices and agreements hereunder shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to you as the representatives at (i) in care of Citigroup Global Markets Inc., 388 Greenwich Street, New York, New York 10013, Attention: General Counsel, Facsimile: (646) 291-1469; (ii) Goldman Sachs & Co. LLC, 200 West Street, New York, New York 10282-2198, Attention: Registration Department, (iii) J.P. Morgan Securities LLC, 383 Madison Avenue, New York, New York 10179, fax: 212 834 6081; Attention: Investment Grade Syndicate Desk, and (iv) Merrill Lynch, Pierce, Fenner & Smith Incorporated, 50 Rockefeller Plaza, NY 1-050-12-02, New York, New York 10020, Facsimile: (646) 855-5958, Attention: High Grade Transaction Management/Legal, and if to the Company shall be delivered or sent by mail, telex or facsimile transmission to the address of the Company set forth in the Prospectus, Attention: Vice President and Treasurer, with a copy to: Senior Vice President and General Counsel; if to a Guarantor shall be sufficient in all respects if delivered or sent by registered mail to the address of such Guarantor set forth in the Prospectus, Attention: Vice President and Treasurer, with a copy to: Senior Vice President and General Counsel.

    In accordance with the requirements of the USA Patriot Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)), the Underwriters are required to obtain, verify and record information that identifies their respective clients, including the Company, which information may include the name and address of their respective clients, as well as other information that will allow the underwriters to properly identify their respective clients.

14. This Agreement shall be binding upon, and inure solely to the benefit of, the Underwriters, the Company, the Guarantors and, to the extent provided in Sections 9 and 11 hereof, the officers and directors of the Company and the Guarantors and each person who controls the Company, any Guarantor or any Underwriter, and their respective heirs, executors, administrators, successors and assigns, and no other person shall acquire or have any right under or by virtue of this Agreement. No purchaser of any of the Securities from any Underwriter shall be deemed a successor or assign by reason merely of such purchase.

15. Time shall be of the essence of this Agreement.

16. Each of the Company and the Guarantors acknowledges and agrees that (i) the purchase and sale of the Securities pursuant to this Agreement is an arm's-length commercial transaction between the Company and the Guarantors, on the one hand, and the several Underwriters, on the other, (ii) in connection therewith and with the process leading to such transaction each Underwriter is acting solely as a principal and not the agent or fiduciary of the Company or any Guarantor, (iii) no Underwriter has assumed an advisory or fiduciary responsibility in favor of the Company or any Guarantor with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company or any Guarantor on other matters) or any other obligation to the Company or any Guarantor except the obligations expressly set forth in this Agreement and (iv) each of the Company and the Guarantors has consulted its own legal and financial advisors to the extent it deemed appropriate. Each of the Company and the Guarantors agrees that it will not claim that the Underwriters, or any of them, has rendered advisory services of any nature

or respect, or owes a fiduciary or similar duty to the Company or any Guarantor, in connection with such transaction or the process leading thereto.

17. This Agreement supersedes all prior agreements and understandings (whether written or oral) among the Company, the Guarantors and the Underwriters, or any of them, with respect to the subject matter hereof.

18. This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York applicable to contracts made and to be performed therein. Each of the Company and the Guarantors agrees that any suit, action or proceeding against it brought by any Underwriter, the affiliates, directors, officers and employees of any Underwriter, or by any person who controls any Underwriter, arising out of or based upon this Agreement or the transactions contemplated hereby may be instituted in any federal or state court located in the State of New York, County of New York (each a "New York Court"), and waives, to the full extent permitted by law, any objection that it may now or hereafter have to the laying of venue of any such proceeding, and irrevocably submits to the exclusive jurisdiction of such courts in any suit, action or proceeding. Each Underwriter agrees that any suit, action or proceeding against it brought by the Company, any Guarantor, or the affiliates, directors, officers and employees of the Company or any Guarantor, or by any person who controls the Company or any Guarantor, arising out of or based upon this Agreement or the transactions contemplated hereby may be instituted in any New York Court, and waives, to the full extent permitted by law, any objection that it may now or hereafter have to the laying of venue of any such proceeding, and irrevocably submits to the exclusive jurisdiction of such courts in any suit, action or proceeding. Each of the Company and the Guarantors has appointed Ingersoll-Rand Company as its authorized agent (the "Authorized Agent") upon whom process may be served in any suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated herein which may be instituted in any New York Court, by any Underwriter, the affiliates, directors, officers and employees of any Underwriter, or by any person who controls any Underwriter, and expressly accepts the exclusive jurisdiction of any such court in respect of any such suit, action or proceeding. Each of the Company and the Guarantors hereby represents and warrants that the Authorized Agent has accepted such appointment and has agreed to act as said agent for service of process, and each of the Company and the Guarantors agrees to take any and all action, including the filing of any and all documents that may be necessary to continue such appointment in full force and effect as aforesaid. Service of process upon the Authorized Agent shall be deemed, in every respect, effective service of process upon the Company or any Guarantor, as applicable. To the extent that the Company or any Guarantor has or hereafter may acquire any immunity from jurisdiction of any court (including, without limitation, any court in the United States, the State of New York, Luxembourg, Ireland or any political subdivision thereof) or from any legal process (whether through service of notice, attachment prior to judgment, attachment in aid of execution, execution or otherwise) with respect to itself or its property or assets, this Agreement, or any other documents or actions to enforce judgments in respect of any thereof, it hereby irrevocably waives such immunity, and any defense based on such immunity, in respect of its obligations under the above-referenced documents and the transactions contemplated thereby, to the full extent permitted by law. The provisions of this Section 18 shall survive any termination of this Agreement, in whole or in part.

19. Each of the Company, the Guarantors and the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

20. This Agreement may be executed by any one or more of the parties hereto in any number of counterparts, each of which shall be deemed to be an original, but all such respective counterparts shall together constitute one and the same instrument.

21. Notwithstanding anything herein to the contrary, the Company (and the Company's employees, representatives, and other agents) are authorized to disclose to any and all persons, the tax treatment and tax structure of the potential transaction and all materials of any kind (including tax opinions and other tax analyses) provided to the Company relating to that treatment and structure, without the Underwriters' imposing any limitation of any

kind. However, any information relating to the tax treatment and tax structure shall remain confidential (and the foregoing sentence shall not apply) to the extent necessary to enable any person to comply with securities laws. For this purpose, "tax treatment" means US federal and state income tax treatment, and "tax structure" is limited to any facts that may be relevant to that treatment.

22. a) In the event that any Underwriter that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such Underwriter of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(b) In the event that any Underwriter that is a Covered Entity or a BHC Act Affiliate of such Underwriter becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such Underwriter are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

As used in this Section 22:

"BHC Act Affiliate" has the meaning assigned to the term "affiliate" in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k).

"Covered Entity" means any of the following:

(i) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b);

(ii) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or

(iii) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b).

"Default Right" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable.

"U.S. Special Resolution Regime" means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

If the foregoing is in accordance with your understanding, please sign and return to us five counterparts hereof, and upon the acceptance hereof by you, on behalf of each of the Underwriters, this letter and such acceptance hereof shall constitute a binding agreement among each of the Underwriters, the Company and the Guarantors. It is understood that your acceptance of this letter on behalf of each of the Underwriter is pursuant to the authority set forth in a form of Agreement among Underwriters, the form of which shall be submitted to the Company for examination upon request, but without warranty on your part as to the authority of the signers thereof.

[ *Signature page follows* ]

Very truly yours,

INGERSOLL-RAND LUXEMBOURG FINANCE S.A., as Issuer

By: /s/ Jeffrey Tallyen
Name: Jeffrey Tallyen
Title: Class A Director

By: /s/ Timea Orosz
Name: Timea Orosz
Title: Class B Director

INGERSOLL-RAND GLOBAL HOLDING COMPANY LIMITED, as Guarantor

By: /s/ Scott R. Williams
Name: Scott R. Williams
Title: Assistant Treasurer

INGERSOLL-RAND PUBLIC LIMITED COMPANY, as Guarantor

By: /s/ Richard E. Daudelin
Name: Richard E. Daudelin
Title: Treasurer

INGERSOLL-RAND LUX INTERNATIONAL HOLDING COMPANY S.À R.L., as Guarantor

By: /s/ Jeffrey Tallyen
Name: Jeffrey Tallyen
Title: Class A Manager

By: /s/ Mark Lee
Name: Mark Lee
Title: Class B Manager

INGERSOLL-RAND IRISH HOLDINGS UNLIMITED COMPANY, as Guarantor

By: /s/ Christopher Donohoe
Name: Christopher Donohoe
Title: Director

INGERSOLL-RAND COMPANY, as Guarantor

By: /s/ Scott R. Williams
Name: Scott R. Williams
Title: Assistant Treasurer

[ *Signature page to Underwriting Agreement* ]

Accepted as of the date hereof:

Citigroup Global Markets Inc.
Goldman Sachs & Co. LLC
J.P. Morgan Securities LLC
Merrill Lynch, Pierce, Fenner & Smith
Incorporated

On behalf of themselves as Representatives
and each of the Underwriters

By: Citigroup Global Markets Inc.

By: /s/ Adam D. Bordner
Name: Adam D. Bordner
Title: Director

By: Goldman Sachs & Co. LLC

By: /s/ Adam Greene
Name: Adam Greene
Title: Managing Director

By: J.P. Morgan Securities LLC

By: /s/ Som Bhattacharyya
Name: Som Bhattacharyya
Title: Executive Director

By: Merrill Lynch, Pierce, Fenner & Smith
Incorporated

By: /s/ Laurie Campbell
Name: Laurie Campbell
Title: Managing Director

| Underwriter | Principal Amount of 2026 Notes to be Purchased | Principal Amount of 2029 Notes to be Purchased | Principal Amount of 2049 Notes to be Purchased |
|---|---|---|---|
| Citigroup Global Markets Inc. | $80,000,000 | $150,000,000 | $70,000,000 |
| Goldman Sachs & Co. LLC | $80,000,000 | $150,000,000 | $70,000,000 |
| J.P. Morgan Securities LLC | $80,000,000 | $150,000,000 | $70,000,000 |
| Merrill Lynch, Pierce, Fenner & Smith Incorporated | $80,000,000 | $150,000,000 | $70,000,000 |
| BNP Paribas Securities Corp. | $16,000,000 | $30,000,000 | $14,000,000 |
| Credit Suisse Securities (USA) LLC | $16,000,000 | $30,000,000 | $14,000,000 |
| Deutsche Bank Securities Inc. | $16,000,000 | $30,000,000 | $14,000,000 |
| Mizuho Securities USA LLC | $16,000,000 | $30,000,000 | $14,000,000 |
| MUFG Securities Americas Inc. | $16,000,000 | $30,000,000 | $14,000,000 |
| Total | $400,000,000 | $750,000,000 | $350,000,000 |

## SCHEDULE II

(a) Additional Documents Incorporated by Reference:

None.

(b) Approved Supplemental Disclosure Documents:

None.

# SCHEDULE III

**Filed pursuant to Rule 433**

**Issuer Free Writing Prospectus supplementing the**

**Preliminary Prospectus Supplement**

**dated March 19, 2019 and the**

**Prospectus dated November 1, 2017**

**Registration No. 333-221265**

Pricing Term Sheet

to Preliminary Prospectus Supplement Dated: March 19, 2019

**Ingersoll-Rand Luxembourg Finance S.A.**

| | | | |
|---|---|---|---|
| **Issuer:** | Ingersoll-Rand Luxembourg Finance S.A. | Ingersoll-Rand Luxembourg Finance S.A. | Ingersoll-Rand Luxembourg Finance S.A. |
| **Guarantors:** | Ingersoll-Rand plc | Ingersoll-Rand plc | Ingersoll-Rand plc |
| | Ingersoll-Rand Global Holding Company Limited | Ingersoll-Rand Global Holding Company Limited | Ingersoll-Rand Global Holding Company Limited |
| | Ingersoll-Rand Lux International Holding Company S.à r.l. | Ingersoll-Rand Lux International Holding Company S.à r.l. | Ingersoll-Rand Lux International Holding Company S.à r.l. |
| | Ingersoll-Rand Irish Holdings Unlimited Company | Ingersoll-Rand Irish Holdings Unlimited Company | Ingersoll-Rand Irish Holdings Unlimited Company |
| | Ingersoll-Rand Company | Ingersoll-Rand Company | Ingersoll-Rand Company |
| **Security Description:** | Unsecured Senior Notes Due 2026 | Unsecured Senior Notes Due 2029 | Unsecured Senior Notes Due 2049 |
| **Principal Amount:** | $400,000,000 | $750,000,000 | $350,000,000 |
| **Gross Proceeds:** | $399,580,000 | $749,257,500 | $349,083,000 |
| **Coupon:** | 3.500% | 3.800% | 4.500% |
| **Maturity:** | March 21, 2026 | March 21, 2029 | March 21, 2049 |
| **Offering Price:** | 99.895% | 99.901% | 99.738% |
| **Yield to Maturity:** | 3.517% | 3.812% | 4.516% |
| **Spread to Treasury:** | +100 basis points | +120 basis points | +150 basis points |
| **Benchmark Treasury:** | UST 2.500% due February 28, 2026 | UST 2.625% due February 15, 2029 | UST 3.375% due November 15, 2048 |
| **Benchmark Treasury Yield:** | 2.517% | 2.612% | 3.016% |

| | | | |
|---|---|---|---|
| **Expected Ratings(*):** | Baa2 / BBB (stable/stable) | Baa2 / BBB (stable/stable) | Baa2 / BBB (stable/stable) |

| | | | |
|---|---|---|---|
| **Interest Payment Dates:** | March 21 and September 21 | March 21 and September 21 | March 21 and September 21 |
| **First Interest Payment Date:** | September 21, 2019 | September 21, 2019 | September 21, 2019 |
| **Record Dates:** | March 6 and September 6 | March 6 and September 6 | March 6 and September 6 |
| **Optional Redemption:** | Callable at greater of 100% of principal and make-whole price of T+15 bps | Callable at greater of 100% of principal and make-whole price of T+20 bps | Callable at greater of 100% of principal and make-whole price of T+25 bps |
| | Callable at 100% on or after January 21, 2026 | Callable at 100% on or after December 21, 2028 | Callable at 100% on or after September 21, 2048 |
| **Tax Redemption:** | Callable at 100% of principal | Callable at 100% of principal | Callable at 100% of principal |
| **Change of Control:** | Putable at 101% of principal | Putable at 101% of principal | Putable at 101% of principal |
| **Special Mandatory Redemption:** | Callable at 101% of principal | Callable at 101% of principal | Callable at 101% of principal |
| **CUSIP:** | 456873 AE8 | 456873 AD0 | 456873AF5 |
| **ISIN:** | US456873AE85 | US456873AD03 | US456873AF50 |
| **Clearing System:** | DTC | DTC | DTC |
| **Minimum Denominations:** | $2,000 | $2,000 | $2,000 |
| **Increments:** | $1,000 | $1,000 | $1,000 |
| **Trade Date:** | March 19, 2019 | March 19, 2019 | March 19, 2019 |
| **Settlement Date:** | March 21, 2019 (T+2) | March 21, 2019 (T+2) | March 21, 2019 (T+2) |
| **Joint Book-Running Managers:** | Citigroup Global Markets Inc. | | |
| | Goldman Sachs & Co. LLC | | |
| | J.P. Morgan Securities LLC | | |
| | Merrill Lynch, Pierce, Fenner & Smith Incorporated | | |
| | BNP Paribas Securities Corp. | | |
| | Credit Suisse Securities (USA) LLC | | |
| | Deutsche Bank Securities Inc. | | |
| | Mizuho Securities USA LLC | | |
| | MUFG Securities Americas Inc. | | |

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**(*) An explanation of the significance of ratings may be obtained from the rating agencies. Generally, rating agencies base their ratings on such material and information, and such of their own investigations, studies and assumptions, as they deem appropriate. The rating of the notes should be evaluated independently from similar ratings of other securities. A credit rating of a security is not a recommendation to buy, sell or hold securities and may be subject to review, revision, suspension, reduction or withdrawal at any time by the assigning rating agency.**

**Ingersoll Rand plc has filed a registration statement (including a prospectus and prospectus supplement) with the SEC for the offering of notes by Ingersoll-Rand Luxembourg Finance S.A. to which this communication relates. Before you invest, you should read the prospectus and prospectus supplement in that registration statement and other documents Ingersoll Rand plc has filed with the SEC for more complete information about the issuer, and this offering. You may get these documents for free by visiting**

**EDGAR on the SEC's website at www.sec.gov. Alternatively, the issuer, any underwriter or any dealer participating in the offering will arrange to send you the prospectus and the prospectus supplement if you request it by calling Citigroup Global Markets Inc. at 1-800-831-9146, Goldman Sachs & Co. LLC at 1-866-471-2526, J.P. Morgan Securities LLC collect at 1-212-834-4533, or Merrill Lynch, Pierce, Fenner & Smith Incorporated at 1-800-294-1322.**

**This pricing term sheet supplements the preliminary form of Prospectus Supplement issued by Ingersoll-Rand plc on March 19, 2019 relating to its Prospectus dated November 1, 2017.**

**SCHEDULE IV**

Investor Presentations

None.

**Exhibit 4.1**

**INGERSOLL-RAND LUXEMBOURG FINANCE S.A., as COMPANY,**

**INGERSOLL-RAND PLC,**

**INGERSOLL-RAND GLOBAL HOLDING COMPANY LIMITED,**

**INGERSOLL-RAND LUX INTERNATIONAL HOLDING COMPANY S.À R.L.,**

**INGERSOLL-RAND IRISH HOLDINGS UNLIMITED COMPANY, and**

**INGERSOLL-RAND COMPANY,**

**as GUARANTORS**

**AND**

**WELLS FARGO BANK, NATIONAL ASSOCIATION, as TRUSTEE**

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# FOURTH SUPPLEMENTAL INDENTURE

**Dated as of March 21, 2019**

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THIS FOURTH SUPPLEMENTAL INDENTURE, dated as of March 21, 2019, is among INGERSOLL-RAND LUXEMBOURG FINANCE S.A., a Luxembourg public limited liability company ( *société anonyme* ) with registered office at 1 avenue du Bois, L-1251 Luxembourg and registered with the Luxembourg Register of Commerce and Companies (RCS) under number B 189791 (the "Company"), INGERSOLL-RAND PLC, a public limited company duly organized and existing under the laws of Ireland ("IR Parent"), INGERSOLL-RAND GLOBAL HOLDING COMPANY LIMITED, a corporation incorporated in Delaware ("IR Global"), INGERSOLL-RAND LUX INTERNATIONAL HOLDING COMPANY S.À R.L., a Luxembourg private limited liability company ( *société à responsabilité limitée* ) with registered office at 1 avenue du Bois, L-1251 Luxembourg and registered with the RCS under number B 182971 ("Lux International"), INGERSOLL-RAND IRISH HOLDINGS UNLIMITED COMPANY, an Irish private unlimited company ("Irish Holdings"), and INGERSOLL-RAND COMPANY, a corporation incorporated in New Jersey ("IR Company" and, together with IR Parent, IR Global, Lux International, Irish Holdings and IR Company, the "Guarantors"), and WELLS FARGO BANK, NATIONAL ASSOCIATION, a national banking association, acting as Trustee under the Indenture referred to below (the "Trustee").

WITNESSETH:

WHEREAS, the Company has duly authorized the execution and delivery of an Indenture dated as of February 21, 2018, among the Company, the Guarantors and the Trustee (the "Indenture"), to provide for the issuance from time to time of its unsecured debentures, notes or other evidences of indebtedness to be issued in one or more series (collectively, the "Securities" and each, a "Security");

WHEREAS, each Guarantor has duly authorized the execution and delivery of the Indenture to provide for Guarantees of the Securities provided for therein, as endorsed on each Security and authenticated and delivered pursuant to the Indenture (collectively, the "Guarantees" and each, a "Guarantee");

WHEREAS, Section 901 of the Indenture provides, among other things, that the Company, the Guarantors and the Trustee may enter into indentures supplemental to the Indenture for, among other things, the purpose of establishing the form and terms of the Securities of any series, as permitted under Sections 201 and 301 of the Indenture, and the form and terms of the Guarantees, as permitted under Sections 201 and 206 of the Indenture;

WHEREAS, the Company has determined to issue a series of Securities entitled the "3.500% Senior Notes due 2026," (the "Senior Notes"), with such series guaranteed by the Guarantors pursuant to the Indenture;

WHEREAS, the Company and the Guarantors have each duly authorized the execution and delivery of this Fourth Supplemental Indenture in order to provide for certain supplements to the Indenture which shall only be applicable to the Senior Notes and the related Guarantees;

WHEREAS, all acts and things necessary to make this Fourth Supplemental Indenture a valid and binding agreement of each of the Company and the Guarantors according to its terms have been done and performed;

WHEREAS, all acts and things necessary to make the Senior Notes, when executed by the Company and authenticated and delivered by the Trustee as provided in the Indenture and this Fourth Supplemental Indenture, the valid and binding obligations of the Company have been done and performed; and

WHEREAS, all acts and things necessary to make the related Guarantees, when executed by the Guarantors and authenticated and delivered by the Trustee as provided in the Indenture and this Fourth Supplemental Indenture, the valid and binding obligations of the Guarantors have been done and performed;

NOW, THEREFORE, in consideration of the premises, of the purchase and acceptance of the Senior Notes by the Holders thereof, and of the sum of one dollar duly paid to it by the Trustee at the execution and delivery of these presents, the receipt whereof is hereby acknowledged, each of the Company and the Guarantors covenants and agrees with the Trustee to supplement the Indenture, only for purposes of the Senior Notes and the related Guarantees, as follows:

## ARTICLE 1
## DEFINITIONS

Section 101. Definitions . For all purposes of this Fourth Supplemental Indenture, except as otherwise expressly provided or unless the context otherwise requires, (i) references to any Article, Section or subdivision thereof are references to an Article, Section or other subdivision of this Fourth Supplemental Indenture and (ii) capitalized terms not otherwise defined herein shall have the meanings set forth in the Indenture.

## ARTICLE 2
## TERMS AND CONDITIONS OF THE SENIOR NOTES AND THE RELATED GUARANTEES

Section 201. Designation, Principal Amount and Terms . There is hereby authorized and established, pursuant to Section 301 of the Indenture, a series of Securities designated as the "3.500% Senior Notes due 2026," with such series guaranteed by the Guarantors pursuant to the Indenture.

(a) The 3.500% Senior Notes due 2026 and the related Guarantees shall be executed, authenticated and delivered in accordance with the provisions of, and shall in all respects be subject to, the terms, conditions and covenants of the Indenture and this Fourth Supplemental Indenture (including the form of Security set forth in Exhibit A-1 hereto and the form of Guarantee set forth in Exhibit A-2 hereto). Subject to Section 203 hereof, the aggregate principal amount of the 3.500% Senior Notes due 2026 which may initially be authenticated and

delivered under this Fourth Supplemental Indenture shall not, except as permitted by the provisions of the Indenture, exceed $400,000,000.

Section 202. Optional Redemption. The Company may, at its option, elect to redeem any or all of the outstanding Senior Notes, in whole or in part, at any time and from time to time prior to January 21, 2026, upon not less than 30 nor more than 60 days' prior written notice delivered electronically or mailed by first-class mail to the registered address of each Holder of the Senior Notes or otherwise in accordance with the procedures of the U.S. Depositary, at a Redemption Price equal to the greater of (1) 100% of the principal amount of the Senior Notes to be redeemed, or (2) as determined by the Quotation Agent (as defined below), the sum of the present values of the remaining scheduled payments of principal and interest on the Senior Notes to be redeemed that would be due if such series of notes matured on the Par Call Date (as defined below) (except that if the Redemption Date is not an interest payment date, the amount of the next succeeding scheduled interest payment will be reduced (solely for the purpose of this calculation) by the amount of interest accrued thereon to the Redemption Date, discounted to the Redemption Date on a semi-annual basis assuming a 360-day year consisting of twelve 30-day months at a discount rate equal to the Adjusted Treasury Rate (as defined below) plus 15 basis points, plus, in the case of each of clauses (1) and (2), accrued and unpaid interest on the principal amount of the Senior Notes being redeemed to, but not including, the Redemption Date.

The Company may, at its option, elect to redeem any or all of the outstanding Senior Notes, in whole or in part, at any time and from time to time on or after January 21, 2026, upon not less than 30 nor more than 60 days' prior written notice delivered electronically or mailed by first-class mail to the registered address of each Holder of the Senior Notes or otherwise in accordance with the procedures of the U.S. Depositary, at a Redemption Price equal to 100% of the principal amount of the Senior Notes to be redeemed, plus accrued and unpaid interest on the principal amount of the Senior Notes being redeemed to, but not including, the Redemption Date.

Unless the Company defaults in payment of the Redemption Price, interest shall cease to accrue on the Senior Notes or portions of the Senior Notes called for redemption on and after the Redemption Date.

"Adjusted Treasury Rate" means, with respect to any Redemption Date, the rate per year equal to the semi-annual equivalent yield to maturity or interpolated (on a day count basis) of the Comparable Treasury Issue, assuming a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for that Redemption Date.

"Comparable Treasury Issue" means the United States Treasury security selected by the Quotation Agent as having an actual or interpolated maturity comparable to the remaining term of the Senior Notes to be redeemed that would be used, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities

of comparable maturity to the remaining term of such Senior Notes (assuming, for the purposes of this definition, that the Senior Notes matured on the Par Call Date of the Senior Notes).

"Comparable Treasury Price" means, with respect to any Redemption Date, (i) the average of the Reference Treasury Dealer Quotations for that Redemption Date, after excluding the highest and lowest of the Reference Treasury Dealer Quotations, or (ii) if the Quotation Agent obtains fewer than four Reference Treasury Dealer Quotations, the average of the Reference Treasury Dealer Quotations so received.

"Par Call Date" means January 21, 2026.

"Quotation Agent" means Goldman Sachs & Co. LLC.

"Reference Treasury Dealer" means (i) each of Citigroup Global Markets Inc., Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated, and their respective successors, unless any of them ceases to be a primary U.S. Government securities dealer in New York City (a "Primary Treasury Dealer"), in which case the Company shall substitute another Primary Treasury Dealer, and (ii) any other Primary Treasury Dealers selected by the Quotation Agent.

"Reference Treasury Dealer Quotations" means, with respect to each Reference Treasury Dealer and any Redemption Date, the average, as determined by the Quotation Agent, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Issuer by that Reference Treasury Dealer at 5:00 p.m., New York City time, on the third Business Day preceding that Redemption Date.

Section 203. Additional Issuances . The Company may, at any time, without the consent of the Holders of the Senior Notes, issue additional Senior Notes of the same series having the same ranking and the same interest rate, maturity and other terms as any of the existing Senior Notes. Any additional Senior Notes having such similar terms, together with the existing Senior Notes, may constitute a single series of Senior Notes under the Indenture and this Fourth Supplemental Indenture; provided, however, if the additional Senior Notes are not fungible with the existing Senior Notes of such series for U.S. federal income tax purposes, such additional Senior Notes shall have a different CUSIP number. No additional Senior Notes may be issued if an Event of Default under the Indenture has occurred and is continuing with respect to the Senior Notes.

Section 204. Special Mandatory Redemption . The Company shall redeem the Senior Notes at a Redemption Price equal to 101% of the aggregate principal amount of the Senior Notes, plus accrued and unpaid interest from the date of initial issuance or the most recent interest payment date, but not including, the Special Mandatory Redemption Date (as defined below) subject to the right of holders of record on the relevant record date to receive interest due on the relevant Interest Payment Date) (the "Special Mandatory Redemption Price") if the acquisition (the "Acquisition") of Precision Flow Systems by IR Parent is not completed, or IR Parent's offer is terminated, on or before January 31, 2020.

If the Company is required to redeem the Senior Notes pursuant to this special mandatory redemption, the Company shall cause the notice of redemption to be delivered electronically or mailed by first-class mail to the registered address of each Holder of the Senior Notes or otherwise in accordance with the procedures of the U.S. Depositary, with a copy to the trustee, by the earlier of (1) January 29, 2020, if the Acquisition has not been completed by that date, or (2) five business days after the occurrence of the event that requires the Company to redeem such Senior Notes.

Unless the Company defaults in payment of the Redemption Price, interest shall cease to accrue on the Senior Notes on and after the Special Mandatory Redemption Date.

"Special Mandatory Redemption Date" means the earlier to occur of (i) January 31, 2020, if IR Parent has not completed the proposed Acquisition on or prior to January 31, 2020, or (ii) the 30th day (or if such day is not a business day, the first business day thereafter) following the termination of IR Parent's offer for any reason.

Section 205. Special Tax Redemption . Any Payor (as defined below) may elect to redeem the outstanding Senior Notes, in whole but not in part, at any time, upon not less than 30 nor more than 60 days' prior written notice delivered electronically or mailed by first-class mail to the registered address of each Holder of the Senior Notes or otherwise in accordance with the procedures of the U.S. Depositary, at a Redemption Price equal to 100% of the principal amount of the Senior Notes to be redeemed, plus accrued and unpaid interest thereon, if any, to, but not including, the date fixed for redemption (a "Tax Redemption Date"), and Additional Amounts (as defined below), if any, then due or becoming due on the Tax Redemption Date in the event (i) such Payor is, has become or would become obligated to pay, on the next date on which any amount would be payable with respect to the Senior Notes, any Additional Amounts or indemnification payments (other than in respect of documentary taxes) as a result of (A) a change or amendment in the laws or treaties (including any regulations or rulings promulgated thereunder) of a Relevant Taxing Jurisdiction; or (B) any change or amendment in the application, administration or interpretation of such laws, treaties, regulations or rulings (including pursuant to a holding, judgment or order by a court of competent jurisdiction); which change or amendment, in either case, is announced or becomes effective after the date hereof (or, if the applicable Relevant Taxing Jurisdiction became a Relevant Taxing Jurisdiction on a later date, after such later date) (each of the foregoing in clauses (A) and (B), a "Change in Tax Law"); and (ii) such Payor has determined in its business judgment that the obligation to pay such Additional Amounts cannot be avoided by the use of reasonable measures available to such Payor. Notwithstanding the foregoing, no such notice of redemption shall be given earlier than 90 days prior to the earliest date on which such Payor would, but for such redemption, be obligated to make such payment or withholding or later than 90 days after such Payor is first obligated to make such payment or withholding. Prior to the delivery or mailing of any notice of redemption of the Senior Notes pursuant to the foregoing, such Payor shall deliver to the Trustee (1) a certificate signed by a duly authorized officer stating that such Payor is entitled to effect the redemption and setting forth a statement of facts showing that the conditions precedent to the right of such Payor to so redeem have occurred and (2) an opinion of an independent tax counsel of recognized international standing to the effect that the circumstances referred to in clause (i) in

the first sentence of this Section 205 exist, and the Trustee shall accept such certificate and such opinion as sufficient evidence of the satisfaction of the conditions precedent above, which acceptance shall then be conclusive and binding on the Holders of Senior Notes.

Section 206. Tax Considerations for Holders . Any Payor may request at any time from Holders of Senior Notes who are "United States persons" within the meaning of Section 7701(a)(30) of the Internal Revenue Code of 1986, as amended (the "Code"), to provide a properly completed and duly executed U.S. Internal Revenue Service Form W-9 (or valid substitute form) and from Holders of Senior Notes who are not "United States persons" within the meaning of Section 7701(a)(30) of the Code to provide a properly completed and duly executed U.S. Internal Revenue Service Form W-8BEN, W-8ECI or W-8IMY (or valid substitute form). Any such request must be complied with by such Holder or Holders within 30 days' of the receipt thereof, such request to be made in writing and mailed by first-class mail to the registered address of such Holder or Holders. If a form previously delivered pursuant to this Section 206 expires or becomes obsolete, or if there is a change in circumstances requiring a change in the form previously delivered, the Holder that previously delivered such form shall deliver a new, properly completed and duly executed form on or before the date that the previously delivered form expires or becomes obsolete or promptly after the change in circumstances occurs.

Section 207. Additional Amounts .

All payments made by the Company or any Guarantor (except IR Global and IR Company) or a successor of the Company or such Guarantor (except IR Global and IR Company) (each a "Payor") on the Senior Notes in respect of interest, premium (if any) and principal shall be made without withholding or deduction for, or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature ("Taxes") unless the withholding or deduction of such Taxes is then required by law. If any deduction or withholding for, or on account of, any Taxes imposed or levied by or on behalf of:

(1) any jurisdiction from or through which payment on the Senior Notes or the applicable Guarantee is made in respect of interest, premium or principal, or any political subdivision or governmental authority thereof or therein having the power to tax; or

(2) any other jurisdiction in which a Payor is organized or otherwise considered to be a resident for tax purposes, or any political subdivision or governmental authority thereof or therein having the power to tax (each of clauses (1) and (2), a "Relevant Taxing Jurisdiction"),

shall at any time be required from any payments made with respect to the Senior Notes in respect of interest, premium or principal, the Payor shall pay (together with such payments) such additional amounts (the "Additional Amounts") as may be necessary in order that the net amounts received in respect of such payments by each beneficial owner of the Senior Notes or the Guarantee, as the case may be, after such withholding or deduction (including any such deduction or withholding from such Additional Amounts), equal the amounts which would have

been received in respect of such payments in the absence of such withholding or deduction; *provided* , *however* , that no such Additional Amounts shall be payable with respect to:

(1) any Taxes that would not have been so imposed but for the existence of any present or former connection between the beneficial owner (or between a fiduciary, settlor, beneficiary, partner, member, shareholder or other holder of equity interests of, or possessor of power over the relevant beneficial owner, if the relevant beneficial owner is an estate, nominee, trust, partnership, limited liability company, corporation or other entity) and the Relevant Taxing Jurisdiction (including the beneficial owner being a citizen or resident or national of, or carrying on a business or maintaining a permanent establishment in, or being physically present in, the Relevant Taxing Jurisdiction) other than by the mere ownership or holding of such note or enforcement of rights thereunder or under the Guarantee or the receipt of payments in respect thereof;

(2) any Taxes that would not have been so imposed if the beneficial owner had made a declaration of non-residence or any other claim or filing for exemption to which it is entitled ( *provided* that (x) such declaration of non-residence or other claim or filing for exemption is required by the applicable law of the Relevant Taxing Jurisdiction as a precondition to exemption from the requirement to deduct or withhold such Taxes and (y) at least 30 days prior to the first payment date with respect to which such declaration of non-residence or other claim or filing for exemption is required under the applicable law of the Relevant Taxing Jurisdiction, the relevant beneficial owner at that time has been notified by the Payor or any other person through whom payment may be made that a declaration of non-residence or other claim or filing for exemption is required to be made);

(3) any note presented for payment (where presentation is permitted or required) more than 30 days after the relevant payment is first made available for payment to the beneficial owner (except to the extent that the beneficial owner would have been entitled to Additional Amounts had the note been presented during such 30 day period);

(4) any Taxes that are payable otherwise than by withholding or deduction from a payment of the principal of, premium, if any, or interest, on the Senior Notes or under the Guarantee;

(5) any estate, inheritance, gift, value, use, sale, excise, transfer, personal property or similar tax, assessment or other governmental charge;

(6) any Taxes which could have been avoided by the presentation (where presentation is required) of the relevant note to another Paying Agent in a member state of the European Union; or

(7) any withholding or deduction required pursuant to an agreement described in Section 1471(b) of the Code, or otherwise imposed pursuant to Sections 1471 through 1474 of the Code, any regulations or agreements thereunder, any official interpretations thereof, or any treaty, law, regulation or other official guidance in any other jurisdiction implementing an intergovernmental approach thereto;

(8) any withholding or deduction imposed pursuant to the Luxembourg law of 23 December 2005 as amended, introducing a withholding tax on certain interest payments made or ascribed by Luxembourg paying agents to Luxembourg resident individuals; or

(9) any Taxes imposed or levied by reason of any combination of clauses (1) through (8) above.

Such Additional Amounts shall also not be payable where, had the beneficial owner of the note been the Holder of the note, it would not have been entitled to payment of Additional Amounts by reason of any of clauses (1) to (9) inclusive above.

The Payor shall (i) make any required withholding or deduction and (ii) remit the full amount deducted or withheld to the Relevant Taxing Jurisdiction in accordance with applicable law. The Payor shall use all reasonable efforts to obtain certified copies of tax receipts evidencing the payment of any Taxes so deducted or withheld from each Relevant Taxing Jurisdiction imposing such Taxes and shall provide such certified copies to each Holder. The Payor shall attach to each certified copy a certificate stating (x) that the amount of withholding Taxes evidenced by the certified copy was paid in connection with payments in respect of the principal amount of Senior Notes then outstanding and (y) the amount of such withholding Taxes paid per $1,000 principal amount of the Senior Notes. Copies of such documentation shall be available for inspection during ordinary business hours at the office of the Trustee by the Holders of the Senior Notes upon request and shall be made available at the offices of the Paying Agent.

At least 30 days prior to each date on which any payment under or with respect to the Senior Notes or the Guarantee is due and payable (unless such obligation to pay Additional Amounts arises shortly before or after the 30th day prior to such date, in which case it shall be promptly thereafter), if the Payor shall be obligated to pay Additional Amounts with respect to such payment, the Payor shall deliver to the Trustee an Officers' Certificate stating the fact that such Additional Amounts shall be payable, the amounts so payable and shall set forth such other information necessary to enable the Trustee to pay such Additional Amounts to Holders on the

payment date. Each such Officer's Certificate shall be relied upon until receipt of a further Officers' Certificate addressing such matters.

If the Payor conducts business in any jurisdiction (an "Additional Taxing Jurisdiction") other than a Relevant Taxing Jurisdiction and, as a result, is required by the law of such Additional Taxing Jurisdiction to deduct or withhold any amount on account of taxes imposed by such Additional Taxing Jurisdiction from payments under the Senior Notes or the Guarantee, as the case may be, which would not have been required to be so deducted or withheld but for such conduct of business in such Additional Taxing Jurisdiction, the Additional Amounts provision described above shall be considered to apply to such Holders or beneficial owners as if references in such provision to "Taxes" included taxes imposed by way of deduction or withholding by any such Additional Taxing Jurisdiction (or any political subdivision thereof or governmental authority therein).

Wherever in the Indenture, the Senior Notes or the Guarantee there are mentioned, in any context:

(1) the payment of principal or premium (if any),

(2) purchase prices in connection with a purchase of Senior Notes,

(3) interest, or

(4) any other amount payable on or with respect to the Senior Notes or the Guarantee,

such reference shall be deemed to include payment of Additional Amounts as described under this section to the extent that, in such context, Additional Amounts are, were or would be payable in respect thereof.

The Payor shall pay any present or future stamp, court or documentary taxes, or any other excise or property taxes, charges or similar levies which arise in any jurisdiction from the execution, delivery or registration of any Senior Notes or any other document or instrument referred to therein (other than a transfer of the Senior Notes), or the receipt of any payments with respect to the notes or the guarantee, excluding (i) any such taxes, charges' or similar levies imposed by Luxembourg in case the notes or the guarantee (and/or any documents in connection therewith) are (a) enclosed to a compulsorily registrable deed (acte obligatoirement enregistrable) or (b) deposited with the official records of a notary (déposé au rang des minutes d'un notaire) and (ii) any such taxes, charges or similar levies imposed by any jurisdiction other than a Relevant Taxing Jurisdiction, other than those resulting from, or required to be paid in connection with, the enforcement of the Senior Notes, the Guarantee or any other such document or instrument following the occurrence of any Event of Default with respect to the Senior Notes.

The foregoing obligations shall survive any termination, defeasance or discharge of the Indenture and shall apply *mutatis mutandis* to any jurisdiction in which any successor to a

Payor is organized or otherwise considered a resident for tax purposes or any political subdivision or governmental authority or agency thereof or therein.

Section 208. Offer to Redeem Upon Change of Control Triggering Event .

Upon the occurrence of a Change of Control Triggering Event, unless the Company has previously exercised its right to redeem the Senior Notes in full, each Holder of the Senior Notes shall have the right to require the Company to purchase all or a portion of such Holder's Senior Notes pursuant to the offer described below (the "Change of Control Offer") at a purchase price equal to 101% of the principal amount thereof plus accrued and unpaid interest, if any, to the date of purchase, subject to the rights of Holders of the Senior Notes on the relevant record date to receive interest due on the relevant interest payment date.

Within 30 days following the date upon which the Change of Control Triggering Event occurred, or at the Company's option, prior to any Change of Control but after the public announcement of the pending Change of Control, the Company shall be required to send, by electronic delivery or first class mail or otherwise in accordance with the procedures of the U.S. Depositary, a notice to each Holder of the Senior Notes, with a copy to the Trustee, which notice shall govern the terms of the Change of Control Offer. Such notice shall state:

(i) (a) if delivered or mailed following the date upon which a Change of Control Triggering Event has occurred, that a Change of Control Triggering Event has occurred and that such Holder of the Senior Notes has the right to require the Company to purchase all or a portion of such Holder's Senior Notes at a purchase price in cash equal to 101% of the principal amount thereof, plus accrued and unpaid interest, if any, to the date of purchase (subject to the right of Holders of the Senior Notes of record on the relevant record date to receive interest on the relevant interest payment date), or (b) if delivered or mailed prior to any Change of Control but after the public announcement of a pending Change of Control, that a Change of Control is pending and, upon the occurrence of a Change of Control Triggering Event, such Holder of the Senior Notes has the right to require the Company to purchase all or a portion of such Holder's Senior Notes at a purchase price in cash equal to 101% of the principal amount thereof, plus accrued and unpaid interest, if any, to the date of purchase (subject to the right of Holders of the Senior Notes of record on the relevant record date to receive interest on the relevant interest payment date) and that the Change of Control Offer is conditioned on the Change of Control being consummated on or prior to the Change of Control Payment Date;

(ii) the circumstances and relevant facts regarding such Change of Control Triggering Event;

(iii) the purchase date, which must be no earlier than 30 days nor later than 60 days from the date such notice is delivered or mailed, other than as may be required by law (the "Change of Control Payment Date"); and

(iv) the instructions determined by the Company, consistent with this Section, that a Holder of the Senior Notes must follow in order to have its Senior Notes purchased.

Holders of the Senior Notes electing to have Senior Notes purchased pursuant to a Change of Control Offer shall be required to surrender their Senior Notes, with the form entitled "Option of Holder to Elect Purchase" on the reverse of the Senior Notes completed, to the Paying Agent at the address specified in the notice, or transfer their Senior Notes to the Paying Agent by book-entry transfer pursuant to the applicable procedures of the Paying Agent, prior to the close of business on the third Business Day prior to the Change of Control Payment Date. Holders of the Senior Notes shall be entitled to withdraw their election if the Paying Agent receives not later than one Business Day prior to the purchase date a telegram, telex facsimile transmission or letter setting forth the name of the Holder of the Senior Notes and a statement that such Holder is withdrawing its election to have such Senior Notes purchased.

On the Change of Control Payment Date, the Company shall, to the extent lawful:

1. accept for payment all Senior Notes (or portions of Senior Notes) properly tendered pursuant to the Change of Control Offer; provided that the unpurchased portion of any Senior Note must be in a principal amount of $2,000 or an integral multiple of $1,000 in excess thereof;

2. deposit with the Paying Agent an amount equal to the aggregate payment in respect of all Senior Notes (or portions of Senior Notes) properly tendered pursuant to the Change of Control Offer; and

3. deliver or cause to be delivered to the Trustee the Senior Notes properly accepted for purchase, together with an Officer's Certificate stating the aggregate principal amount of the Senior Notes (or portions of Senior Notes) being purchased.

The Paying Agent shall promptly mail or transfer to each Holder of Senior Notes properly tendered the purchase price for the Senior Notes, and the Trustee shall promptly authenticate and mail (or cause to be transferred by book-entry) to each such Holder new Senior Notes equal in principal amount to any unpurchased portion of any Senior Notes surrendered; provided that each new Senior Note shall be in a principal amount of $2,000 or an integral multiple of $1,000 in excess thereof. A Senior Note shall be deemed to have been accepted for purchase at the time the Paying Agent mails or delivers payment therefor to the Surrendering Holder.

The Company shall not be required to make a Change of Control Offer if a third party makes such an offer in the manner, at the times and otherwise in compliance with the requirements in this Section 208 for such an offer made by the Company and such third party purchases all Senior Notes properly tendered and not withdrawn under its offer.

The Company shall comply with the requirements of Rule 14e-1 under the Exchange Act and any other securities laws and regulations thereunder to the extent those laws and regulations are applicable in connection with the purchase of the Senior Notes as a result of a Change of Control Triggering Event. To the extent that the provisions of any such securities laws or regulations conflict with the Change of Control Offer provisions of the Senior Notes, the

Company shall comply with the applicable securities laws and regulations and shall not be deemed to have breached its obligations under the Change of Control Offer provisions of the Senior Notes by virtue of such conflict.

Each of the Company and Guarantors shall use reasonable best efforts to ensure that at all times at least two Rating Agencies are providing a rating for the Senior Notes.

For purposes of the Change of Control Offer provisions of the Senior Notes, the following terms shall be applicable:

"Below Investment Grade Rating Event" means, with respect to the Senior Notes, such notes cease to be rated Investment Grade by at least two of the three Rating Agencies on any date during the period (the "Trigger Period") commencing 60 days prior to the first public announcement by IR Parent of any Change of Control (or pending Change of Control) and ending 60 days following the consummation of such Change of Control (which Trigger Period shall be extended if the rating of the Senior Notes is under publicly announced consideration for possible downgrade by any Rating Agency on such 60th day, such extension to last with respect to each Rating Agency until the date on which such Rating Agency considering such possible downgrade either (x) rates the Senior Notes below Investment Grade or (y) publicly announces that it is no longer considering the Senior Notes for possible downgrade; provided, that no such extension shall occur if on such 60th day the Senior Notes are rated Investment Grade not subject to review for possible downgrade by any Rating Agency).

"Change of Control" means the occurrence of any one of the following:

1) the direct or indirect sale, lease, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the assets of IR Parent and its subsidiaries taken as a whole to any "person" (as that term is used in Section 13(d) and Section 14(d) of the Exchange Act) other than to IR Parent or one of its subsidiaries;

2) the consummation of any transaction (including without limitation, any merger or consolidation) the result of which is that any "person" (as that term is used in Section 13(d) and Section 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 and Rule 13d-5 under the Exchange Act), directly or indirectly, of more than 50% of the outstanding Voting Stock of IR Parent, or other Voting Stock into which the Voting Stock of IR Parent is reclassified, consolidated, exchanged or changed, measured by voting power rather than number of shares;

3) the first day on which the majority of the members of the board of directors of IR Parent cease to be Continuing Directors;

4) IR Parent consolidates with, or merges with or into, any person, or any person consolidates with, or merges with or into, IR Parent, in any such event pursuant to a transaction in which any of the outstanding Voting Stock of IR Parent or such other person is converted into or exchanged for cash, securities or other property, other than

any such transaction where the shares of the Voting Stock of IR Parent outstanding immediately prior to such transaction constitute, or are converted into or exchanged for, a majority of the Voting Stock of the surviving person immediately after giving effect to such transaction;

5) the adoption of a plan relating to the liquidation or dissolution of IR Parent; or

6) the failure of IR Parent to own, directly or indirectly, at least 51% of the Voting Stock of the Company.

Notwithstanding the foregoing, a transaction shall not be deemed to involve a Change of Control under clause (2) above if (i) IR Parent becomes a direct or indirect wholly-owned subsidiary of a holding company and (ii) the shares of the Voting Stock of IR Parent outstanding immediately prior to such transaction constitute, or are converted into or exchanged for, a majority of the Voting Stock of such holding company immediately after giving effect to such transaction.

"Change of Control Triggering Event" means, with respect to the Senior Notes, the occurrence of both a Change of Control and a Below Investment Grade Rating Event with respect to the Senior Notes. Notwithstanding the foregoing, no Change of Control Triggering Event shall be deemed to have occurred in connection with any particular Change of Control unless and until such Change of Control has actually been consummated.

"Continuing Director" means, as of any date of determination, any member of the board of directors of IR Parent who: (1) was a member of such board of directors on the date of the issuance of the Senior Notes; or (2) was nominated for election or elected to such board of directors with the approval of a majority of the Continuing Directors who were members of such board of directors at the time of such nomination or election.

"Fitch" means Fitch Inc., a subsidiary of Fimalac, S.A., and its successors.

"Investment Grade" means (1) a rating of Baa3 or better by Moody's (or its equivalent under any successor rating category of Moody's); (2) a rating of BBB- or better by S&P (or its equivalent under any successor rating category of S&P); and (3) a rating of BBB- or better by Fitch (or its equivalent under any successor rating category of Fitch).

"Moody's" means Moody's Investors Service, Inc., a subsidiary of Moody's Corporation, and its successors.

"Rating Agency" means each of Moody's, S&P and Fitch; provided, that if any of Moody's, S&P and Fitch ceases to rate the Senior Notes or fails to make a rating of the Senior Notes publicly available for reasons outside of the Company's and the Guarantors' control, a "nationally recognized statistical rating organization," within the meaning of Rule 15c3-1(c)(2)(vi)(F) under the Exchange Act, selected by IR Global as a replacement agency for Moody's,

S&P or Fitch, or any of them, as the case may be, with respect to making a rating of the Senior Notes.

"S&P" means Standard & Poor's Ratings Services, a division of The McGraw-Hill Companies, Inc., and its successors.

"Voting Stock" of any specified person as of any date means the capital stock of such person that is at the time entitled to vote generally in the election of the board of directors of such person.

Section 209. Amendments or Supplements Without Consent of Holders. In addition to any permitted amendment or supplement to the Indenture pursuant to Section 901 of the Indenture, the Company, the Guarantors and the Trustee may amend or supplement the Senior Notes without notice to or the consent of any Holder of the Senior Notes:

(15) to conform this Fourth Supplemental Indenture and the form or terms of the Senior Notes to the section entitled "Description of the Notes" as set forth in the final prospectus supplement related to the offering and sale of the Senior Notes dated March 19, 2019;

(16) to add guarantees with respect to the Senior Notes;

(17) to provide for the issuance of additional Senior Notes in accordance with the Indenture and this Fourth Supplemental Indenture; or

(18) to amend the provisions of the Indenture and this Fourth Supplemental Indenture relating to the transfer and legending of the Senior Notes, including, without limitation, to facilitate the issuance and administration of the Senior Notes; provided that compliance with the Indenture and this Fourth Supplemental Indenture as so amended would not result in the Senior Notes being transferred in violation of the Securities Act of 1933, as amended, or any applicable securities law.

Section 210. Legend. The following legends shall appear on the face of all Global Securities and Definitive Securities issued under this Fourth Supplemental Indenture and the Indenture unless specifically stated otherwise in the applicable provisions of this Fourth Supplemental Indenture and the Indenture:

"THIS GLOBAL SECURITY IS HELD BY THE U.S. DEPOSITARY (AS DEFINED IN THE INDENTURE GOVERNING THIS SECURITY) OR ITS NOMINEE IN CUSTODY FOR THE BENEFIT OF THE BENEFICIAL OWNERS HEREOF, AND IS NOT TRANSFERABLE TO ANY PERSON UNDER ANY CIRCUMSTANCES EXCEPT THAT (I) THE TRUSTEE MAY MAKE SUCH NOTATIONS HEREON AS MAY BE REQUIRED PURSUANT TO THE INDENTURE, (II) THIS GLOBAL SECURITY MAY BE EXCHANGED IN WHOLE BUT NOT IN PART PURSUANT TO SECTION 305 OF THE INDENTURE, (III) THIS GLOBAL SECURITY MAY BE DELIVERED TO THE TRUSTEE FOR CANCELLATION PURSUANT TO SECTION 309 OF THE INDENTURE AND (IV) THIS GLOBAL SECURITY MAY BE TRANSFERRED TO A SUCCESSOR U.S. DEPOSITARY WITH THE PRIOR WRITTEN CONSENT OF THE ISSUER. UNLESS AND UNTIL IT IS EXCHANGED

IN WHOLE OR IN PART FOR SECURITIES IN DEFINITIVE FORM, THIS SECURITY MAY NOT BE TRANSFERRED EXCEPT AS A WHOLE BY THE U.S. DEPOSITARY TO A NOMINEE OF THE U.S. DEPOSITARY OR BY A NOMINEE OF THE U.S. DEPOSITARY TO THE U.S. DEPOSITARY OR ANOTHER NOMINEE OF THE U.S. DEPOSITARY OR BY THE U.S. DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR U.S. DEPOSITARY OR A NOMINEE OF SUCH SUCCESSOR U.S. DEPOSITARY. UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY (55 WATER STREET, NEW YORK, NEW YORK) ("DTC") TO THE ISSUER OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR SUCH OTHER NAME AS MAY BE REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR SUCH OTHER ENTITY AS MAY BE REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN."

## ARTICLE 3
## MISCELLANEOUS

Section 301. Execution as Supplemental Indenture. This Fourth Supplemental Indenture is hereby executed and shall be construed as an indenture supplemental to the Indenture and, as provided in the Indenture, this Fourth Supplemental Indenture forms a part thereof.

Section 302. Trust Indenture Act. If any provision hereof limits, qualifies or conflicts with another provision hereof which is required to be included in this Fourth Supplemental Indenture by any of the provisions of the Trust Indenture Act, such required provisions shall control.

Section 303. Effect of Headings. The Article and Section headings herein are for convenience only and shall not affect the construction hereof.

Section 304. Separability. In case any provision in this Fourth Supplemental Indenture or in any Senior Note or related Guarantees shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

Section 305. The Trustee. The Trustee shall not be responsible in any manner for or in respect of the validity or sufficiency of this Fourth Supplemental Indenture, or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely.

Section 306. Governing Law. This Fourth Supplemental Indenture, the Senior Notes and the related Guarantees shall be governed by and construed in accordance with the laws of the State of New York. For the avoidance of doubt, the application of article 470-1 to 470-19 (inclusive) of the Luxembourg law dated August 10, 1915 on commercial companies, as amended, is expressly excluded.

Section 307. Counterparts . This Fourth Supplemental Indenture may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such counterparts shall together constitute but one and the same instrument.

Section 308. Additional Guarantors . If at any time there is more than one Guarantor in respect of the Senior Notes, then each such Guarantor shall be deemed to Guarantee the Senior Notes jointly and severally with each other such Guarantor, and any reference in the Indenture and this Fourth Supplemental Indenture to "the Guarantor" shall be deemed to be a reference to each such Guarantor.

[ *Remainder of page left intentionally blank.* ]

IN WITNESS WHEREOF, the parties hereto have caused this Fourth Supplemental Indenture to be duly executed as of the day and year first above written.

INGERSOLL-RAND LUXEMBOURG FINANCE S.A.

By: /s/ Jeffrey Tallyen
Name: Jeffrey Tallyen
Title: Class A Director

By: /s/ Timea Orosz
Name: Timea Orosz
Title: Class B Director

INGERSOLL-RAND PUBLIC LIMITED COMPANY

By: /s/ Richard E. Daudelin
Name: Richard E. Daudelin
Title: Treasurer

INGERSOLL-RAND GLOBAL HOLDING COMPANY LIMITED

By: /s/ Scott R. Williams
Name: Scott R. Williams
Title: Assistant Treasurer

INGERSOLL-RAND LUX INTERNATIONAL HOLDING COMPANY S.À R.L

By: /s/ Pascal Campaignolle
Name: Pascal Campaignolle
Title: Class A Manager

By: /s/ Mark Lee
Name: Mark Lee
Title: Class B Manager

INGERSOLL-RAND IRISH HOLDINGS UNLIMITED COMPANY

By: /s/ Christopher Donohoe
Name: Christopher Donohoe
Title: Director

INGERSOLL-RAND COMPANY

By: /s/ Scott R. Williams
Name: Scott R. Williams
Title: Assistant Treasurer

WELLS FARGO BANK, NATIONAL ASSOCIATION as Trustee

By: /s/ Stefan Victory
Name: Stefan Victory
Title: Vice President

**EXHIBIT A-1**

**Form of 3.500% Senior Notes due 2026**

[Global Security Legend]

THIS GLOBAL SECURITY IS HELD BY THE U.S. DEPOSITARY (AS DEFINED IN THE INDENTURE GOVERNING THIS SECURITY) OR ITS NOMINEE IN CUSTODY FOR THE BENEFIT OF THE BENEFICIAL OWNERS HEREOF, AND IS NOT TRANSFERABLE TO ANY PERSON UNDER ANY CIRCUMSTANCES EXCEPT THAT (I) THE TRUSTEE MAY MAKE SUCH NOTATIONS HEREON AS MAY BE REQUIRED PURSUANT TO THE INDENTURE, (II) THIS GLOBAL SECURITY MAY BE EXCHANGED IN WHOLE BUT NOT IN PART PURSUANT TO SECTION 305 OF THE INDENTURE, (III) THIS GLOBAL SECURITY MAY BE DELIVERED TO THE TRUSTEE FOR CANCELLATION PURSUANT TO SECTION 309 OF THE INDENTURE AND (IV) THIS GLOBAL SECURITY MAY BE TRANSFERRED TO A SUCCESSOR U.S. DEPOSITARY WITH THE PRIOR WRITTEN CONSENT OF THE ISSUER. UNLESS AND UNTIL IT IS EXCHANGED IN WHOLE OR IN PART FOR SECURITIES IN DEFINITIVE FORM, THIS SECURITY MAY NOT BE TRANSFERRED EXCEPT AS A WHOLE BY THE U.S. DEPOSITARY TO A NOMINEE OF THE U.S. DEPOSITARY OR BY A NOMINEE OF THE U.S. DEPOSITARY TO THE U.S. DEPOSITARY OR ANOTHER NOMINEE OF THE U.S. DEPOSITARY OR BY THE U.S. DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR U.S. DEPOSITARY OR A NOMINEE OF SUCH SUCCESSOR U.S. DEPOSITARY. UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY (55 WATER STREET, NEW YORK, NEW YORK) ("DTC") TO THE ISSUER OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR SUCH OTHER NAME AS MAY BE REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR SUCH OTHER ENTITY AS MAY BE REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

No.

CUSIP No. _____

$ _____

INGERSOLL-RAND LUXEMBOURG FINANCE S.A., a Luxembourg public limited liability company ( *société anonyme* ) with registered office at 1 avenue du Bois, L-1251 Luxembourg and registered with the Luxembourg Register of Commerce and Companies (RCS) under number B 189791 (herein called the "Company", which term includes any successor company under the Indenture hereinafter referred to), for value received, hereby promises to pay to CEDE & CO., or registered assigns, the principal sum of $[_____] ([_____] DOLLARS)

[, as it may be increased or decreased as set forth on the Schedule of Exchanges of Interests in the Global Note attached hereto,] on March 21, 2026, and to pay interest thereon from and including March 21, 2019 (the "Original Issue Date"), or from the most recent Interest Payment Date to which interest has been paid or duly provided for, semiannually on March 21 and September 21 in each year, commencing September 21, 2019, at the rate per annum provided in the title hereof, until the principal hereof is paid or made available for payment.

The interest so payable, and punctually paid or duly provided for, on any Interest Payment Date will, as provided in such Indenture, be paid to the person in whose name this Security (or one or more Predecessor Securities) is registered at the close of business on the Regular Record Date for such interest, which shall be March 6 or September 6 (whether or not a Business Day), as the case may be, next preceding such Interest Payment Date. Any such interest not so punctually paid or duly provided for will forthwith cease to be payable to the Holder on such Regular Record Date and may either be paid to the person in whose name this Security (or one or more Predecessor Securities) is registered at the close of business on a Special Record Date for the payment of such Defaulted Interest to be fixed by the Trustee, notice whereof shall be given to Holders of Securities of this series not less than 10 days prior to such Special Record Date, or be paid at any time in any other lawful manner not inconsistent with the requirements of any securities exchange on which the Securities of this series may be listed, and upon such notice as may be required by such exchange, all as more fully provided in said Indenture.

Interest shall be computed on the basis of a year of twelve 30-day months.

Payment of the principal of (and premium, if any, on) and interest, if any, on this Security will be made at the office or agency of the Company maintained for that purpose in the Borough of Manhattan, The City of New York, in coin or currency of the United States of America, provided , however , that at the option of the Company payment of interest may be made by check mailed to the address of or funds transferred to the person entitled thereto as such address shall appear in the Security Register.

REFERENCE IS HEREBY MADE TO THE FURTHER PROVISIONS OF THIS SECURITY SET FORTH ON THE REVERSE HEREOF, WHICH FURTHER PROVISIONS SHALL FOR ALL PURPOSES HAVE THE SAME EFFECT AS IF SET FORTH AT THIS PLACE.

Unless the certificate of authentication hereon has been executed by the Trustee referred to on the reverse hereof by manual signature, this Security shall not be entitled to any benefit under the Indenture or be valid or obligatory for any purpose.

[ *Remainder of page left intentionally blank.* ]

IN WITNESS WHEREOF, the Company has caused this instrument to be duly executed and delivered on the date first written above.

INGERSOLL-RAND LUXEMBOURG FINANCE S.A.

By _____
Name:
Title:

This is one of the Securities of the series designated therein referred to in the within-mentioned Indenture.

Dated:

WELLS FARGO BANK, NATIONAL ASSOCIATION, as Trustee

By _____
Authorized Signatory

(Reverse of Note)

INGERSOLL-RAND LUXEMBOURG FINANCE S.A.

3.500% Senior Notes due 2026

This Security is one of a duly authorized issue of securities of the Company (herein called the "Securities"), issued and to be issued in one or more series under an Indenture, dated as of February 21, 2018, as supplemented (herein called the "Indenture"), among the Company, Ingersoll-Rand plc, Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Lux International Holding Company S.à r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company (herein called the "Guarantors", which term includes any successor guarantor under the Indenture) and Wells Fargo Bank, National Association, as Trustee (herein called the "Trustee", which term includes any successor trustee under the Indenture), to which Indenture and all indentures supplemental thereto reference is hereby made for a statement of the respective rights, limitations of rights, duties and immunities thereunder of the Company, the Guarantors, the Trustee and the Holders of the Securities and of the terms upon which the Securities are, and are to be, authenticated and delivered. This Security is one of the series designated on the face hereof, initially limited in aggregate principal amount to [_____].

The Securities of this series are subject to redemption upon not less than 30 or more than 60 days' notice delivered electronically or by mail to the Holders of such Securities at their addresses in the Security Register for such series or otherwise in accordance with the procedures of the U.S. Depositary, at any time and from time to time, prior to January 21, 2026, as a whole or in part, at the election of the Company, at a Redemption Price equal to the greater of:

(a) 100% of the principal amount of the Securities to be redeemed, or

(b) as determined by the Quotation Agent (as defined below), the sum of the present values of the remaining scheduled payments of principal and interest on the Securities to be redeemed that would be due if such series of Securities matured on the Par Call Date (as defined below) (except that if the Redemption Date is not an interest payment date, the amount of the next succeeding scheduled interest payment will be reduced (solely for the purpose of this calculation) by the amount of interest accrued thereon to the Redemption Date, discounted to the Redemption Date on a semi-annual basis assuming a 360-day year consisting of twelve 30-day months at a discount rate equal to the Adjusted Treasury Rate (as defined below) plus 15 basis points, plus, in the case of each of clauses (a) and (b), accrued and unpaid interest on the principal amount of the Securities to be redeemed to, but not including, the Redemption Date.

The Securities of this series are subject to redemption upon not less than 30 or more than 60 days' notice delivered electronically or by mail to the Holders of such Securities at their addresses in the Security Register for such series or otherwise in accordance with the procedures of the U.S. Depositary, in whole or in part at any time and from time to time on or after January 21, 2026, at a Redemption Price equal to 100% of the principal amount of the notes to be

redeemed, plus accrued and unpaid interest on the principal amount of the Securities to be redeemed to, but not including, the Redemption Date.

Unless the Company defaults in payment of the Redemption Price, interest will cease to accrue on the Securities or portions of the Securities called for redemption on and after the Redemption Date.

" Adjusted Treasury Rate " means, with respect to any Redemption Date, the rate per year equal to the semi-annual equivalent yield to maturity or interpolated (on a day count basis) of the Comparable Treasury Issue, assuming a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for that Redemption Date.

" Comparable Treasury Issue " means the United States Treasury security selected by the Quotation Agent as having an actual or interpolated maturity comparable to the remaining term of the Securities to be redeemed that would be used, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of comparable maturity to the remaining term of such Securities (assuming, for purposes of this definition, that the Securities matured on the Par Call Date).

" Comparable Treasury Price " means, with respect to any Redemption Date, (i) the average of the Reference Treasury Dealer Quotations for that Redemption Date, after excluding the highest and lowest of the Reference Treasury Dealer Quotations, or (ii) if the Quotation Agent obtains fewer than four Reference Treasury Dealer Quotations, the average of the Reference Treasury Dealer Quotations so received.

" Par Call Date " means January 21, 2026.

" Quotation Agent " means Goldman Sachs & Co. LLC.

" Reference Treasury Dealer " means (i) each of Citigroup Global Markets Inc., Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated, and their respective successors, unless any of them ceases to be a primary U.S. Government securities dealer in New York City (a "Primary Treasury Dealer"), in which case the Company shall substitute another Primary Treasury Dealer, and (ii) any other Primary Treasury Dealers selected by the Quotation Agent.

" Reference Treasury Dealer Quotations " means, with respect to each Reference Treasury Dealer and any Redemption Date, the average, as determined by the Quotation Agent, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Issuer by that Reference Treasury Dealer at 5:00 p.m., New York City time, on the third Business Day preceding that Redemption Date.

In the event of redemption of this Security in part only, a new Security or Securities of this series for the unredeemed portion hereof will be issued in the name of the Holder hereof upon the cancellation hereof.

Any Payor may elect to redeem the outstanding Securities, in whole but not in part, at any time, upon not less than 30 nor more than 60 days' prior written notice delivered electronically or mailed by first-class mail to the registered address of each Holder of the Securities or otherwise in accordance with the procedures of the U.S. Depositary, at a Redemption Price equal to 100% of the principal amount of the Securities to be redeemed, plus accrued and unpaid interest thereon, if any, to, but not including, the date fixed for redemption (a "Tax Redemption Date"), and Additional Amounts, if any, then due or becoming due on the Tax Redemption Date in the event (i) such Payor is, has become or would become obligated to pay, on the next date on which any amount would be payable with respect to the Securities, any Additional Amounts or indemnification payments (other than in respect of documentary taxes) as a result of (A) a change or amendment in the laws or treaties (including any regulations or rulings promulgated thereunder) of a Relevant Taxing Jurisdiction; or (B) any change or amendment in the application, administration or interpretation of such laws, treaties, regulations or rulings (including pursuant to a holding, judgment or order by a court of competent jurisdiction); which change or amendment, in either case, is announced or becomes effective after the date hereof (or, if the applicable Relevant Taxing Jurisdiction became a Relevant Taxing Jurisdiction on a later date, after such later date) (each of the foregoing in clauses (A) and (B), a "Change in Tax Law"); and (ii) the Company has determined in its business judgment that the obligation to pay such Additional Amounts cannot be avoided by the use of reasonable measures available to the Company.

Notwithstanding the foregoing, no such notice of redemption shall be given earlier than 90 days prior to the earliest date on which such Payor would, but for such redemption, be obligated to make such payment or withholding or later than 90 days after such Payor is first obligated to make such payment or withholding. Prior to the delivery or mailing of any notice of redemption of the Securities pursuant to the foregoing, such Payor shall deliver to the Trustee (1) a certificate signed by a duly authorized officer stating that such Payor is entitled to effect the redemption and setting forth a statement of facts showing that the conditions precedent to the right of such Payor to so redeem have occurred and (2) an opinion of an independent tax counsel of recognized international standing to the effect that the circumstances referred to in clause (i) in the first sentence of the previous paragraph exist, and the Trustee shall accept such certificate and such opinion as sufficient evidence of the satisfaction of the conditions precedent above, which acceptance shall then be conclusive and binding on the Holders of Securities.

The Company will be required to redeem the Securities of this series at a Redemption Price equal to 101% of the aggregate principal amount of the Securities, plus accrued and unpaid interest from the date of initial issuance or the most recent interest payment date to but excluding the special mandatory redemption date (subject to the right of holders of record on the relevant record date to receive interest due on the relevant Interest Payment Date) (the "Special Mandatory Redemption Price") if the acquisition (the "Acquisition") of PFS Systems by IR Parent is not completed, or IR Parent's offer is terminated, on or before January 31, 2020.

If the Company is required to redeem the Securities of this series pursuant to this special mandatory redemption, the Company shall cause the notice of redemption to be delivered electronically or by mail to the Holders of such Securities at their addresses in the Security

Register for such series or otherwise in accordance with the procedures of the U.S. Depositary, with a copy to the trustee, by the earlier of (1) January 29, 2020, if the Acquisition has not been completed by that date, or (2) five business days after the occurrence of the event that requires the Company to redeem such series of Securities. Unless the Company defaults in payment of the Redemption Price, interest shall cease to accrue on the Securities on and after the Special Mandatory Redemption Date.

" Special Mandatory Redemption Date " means the earlier to occur of (i) January 31, 2020 if IR Parent has not completed the proposed Acquisition on or prior to January 31, 2020, or (ii) the 30th day (or if such day is not a business day, the first business day thereafter) following the termination of IR Parent's offer for any reason.

The Securities of this series are subject to redemption upon the occurrence of a Change of Control Triggering Event. Unless the Company has exercised its right to redeem this Security in full as described above, the Indenture provides that each Holder of the Securities of this series will have the right to require the Company to purchase all or a portion of such Holder's Securities of this series pursuant to the offer described below (the "Change of Control Offer") at a purchase price equal to 101% of the principal amount thereof plus accrued and unpaid interest, if any, to the date of purchase, subject to the rights of Holders of Securities of this series on the relevant record date to receive interest due on the relevant interest payment date.

Within 30 days following the date upon which the Change of Control Triggering Event occurred, or at the Company's option, prior to any Change of Control but after the public announcement of the pending Change of Control, the Company will be required to send, by electronic delivery or first class mail or otherwise in accordance with the procedures of the U.S. Depositary, a notice to each Holder of the Securities of this series, with a copy to the Trustee, which notice will govern the terms of the Change of Control Offer. Such notice will state, among other things, the purchase date, which must be no earlier than 30 days nor later than 60 days from the date such notice is delivered or mailed, other than as may be required by law (the "Change of Control Payment Date"). The notice, if delivered or mailed prior to the date of consummation of the Change of Control, will state that the Change of Control Offer is conditioned on the Change of Control being consummated on or prior to the Change of Control Payment Date.

Holders electing to have Securities purchased pursuant to a Change of Control Offer will be required to surrender their Securities, with the form below entitled "Option of Holder to Elect Purchase" completed, to the paying agent at the address specified in the notice, or transfer their Securities to the paying agent by book-entry transfer pursuant to the applicable procedures of the paying agent, prior to the close of business on the third Business Day prior to the Change of Control Payment Date.

On the Change of Control Payment Date, the Company will, to the extent lawful:

1. accept for payment all Securities of this series (or portions of Securities of this series) properly tendered pursuant to the Change of Control Offer; provided that the unpurchased portion of any Security of this series must be in a principal amount of $2,000 or an integral multiple of $1,000 in excess thereof;

2. deposit with the paying agent an amount equal to the aggregate payment in respect of all Securities of this series (or portions of Securities of this series) properly tendered pursuant to the Change of Control Offer; and

3. deliver or cause to be delivered to the Trustee the Securities of this series properly accepted for purchase, together with an officer's certificate stating the aggregate principal amount of Securities of this series (or portions of Securities of this series) being purchased.

The paying agent will promptly mail to each Holder of properly tendered Securities the purchase price for the Securities, and the Trustee will promptly authenticate and mail (or cause to be transferred by book-entry) to each such Holder new Securities equal in principal amount to any unpurchased portion of any Securities surrendered; provided that each new Security will be in a principal amount of $2,000 or an integral multiple of $1,000 in excess thereof.

The Company will not be required to make a Change of Control Offer if a third party makes such an offer in the manner, at the times and otherwise in compliance with the requirements for such an offer made by the Company and such third party purchases all properly tendered Securities of this series not withdrawn under its offer.

The Company will comply with the requirements of Rule 14e-1 under the Exchange Act and any other securities laws and regulations thereunder to the extent those laws and regulations are applicable in connection with the purchase of the Securities of this series as a result of a Change of Control Triggering Event. To the extent that the provisions of any such securities laws or regulations conflict with the Change of Control Offer provisions of the Securities of this series, the Company will comply with the applicable securities laws and regulations and will not be deemed to have breached its obligations under the Change of Control Offer provisions of the Securities of this series by virtue of such conflict.

For purposes of the Change of Control Offer provisions of the Securities, the following terms will be applicable:

"Below Investment Grade Rating Event" means the Securities of this series cease to be rated Investment Grade by at least two of the three Rating Agencies on any date during the period (the "Trigger Period") commencing 60 days prior to the first public announcement by IR Parent of any Change of Control (or pending Change of Control) and ending 60 days following the consummation of such Change of Control (which Trigger Period will be extended if the rating of the Securities is under publicly announced consideration for possible downgrade by any Rating Agency on such 60th day, such extension to last with respect to each Rating Agency until the date on which such Rating Agency considering such possible downgrade either (x) rates the Securities below Investment Grade or (y) publicly announces that it is no longer considering the Securities for possible downgrade; provided, that no such extension will occur if on such 60th day the Securities are rated Investment Grade not subject to review for possible downgrade by any Rating Agency).

"Change of Control" means the occurrence of any one of the following:

1) the direct or indirect sale, lease, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the assets of IR Parent and its subsidiaries taken as a whole to any "person" (as that term is used in Section 13(d) and Section 14(d) of the Exchange Act) other than to IR Parent or one of its subsidiaries;

2) the consummation of any transaction (including without limitation, any merger or consolidation) the result of which is that any "person" (as that term is used in Section 13(d) and Section 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 and Rule 13d-5 under the Exchange Act), directly or indirectly, of more than 50% of the outstanding Voting Stock of IR Parent, or other Voting Stock into which the Voting Stock of IR Parent is reclassified, consolidated, exchanged or changed, measured by voting power rather than number of shares;

3) the first day on which the majority of the members of the board of directors of IR Parent cease to be Continuing Directors;

4) IR Parent consolidates with, or merges with or into, any person, or any person consolidates with, or merges with or into, IR Parent, in any such event pursuant to a transaction in which any of the outstanding Voting Stock of IR Parent or such other person is converted into or exchanged for cash, securities or other property, other than any such transaction where the shares of the Voting Stock of IR Parent outstanding immediately prior to such transaction constitute, or are converted into or exchanged for, a majority of the Voting Stock of the surviving person immediately after giving effect to such transaction;

5) the adoption of a plan relating to the liquidation or dissolution of IR Parent; or

6) the failure of IR Parent to own, directly or indirectly, at least 51% of the Voting Stock of the Company.

Notwithstanding the foregoing, a transaction will not be deemed to involve a Change of Control under clause (2) above if (i) IR Parent becomes a direct or indirect wholly-owned subsidiary of a holding company and (ii) the shares of the Voting Stock of IR Parent outstanding immediately prior to such transaction constitute, or are converted into or exchanged for, a majority of the Voting Stock of such holding company immediately after giving effect to such transaction.

"Change of Control Triggering Event" means the occurrence of both a Change of Control and a Below Investment Grade Rating Event. Notwithstanding the foregoing, no Change of Control Triggering Event will be deemed to have occurred in connection with any particular Change of Control unless and until such Change of Control has actually been consummated.

"Continuing Director" means, as of any date of determination, any member of the board of directors of IR Parent who: (1) was a member of such board of directors on the date of the issuance of the Securities of this series; or (2) was nominated for election or elected to such

board of directors with the approval of a majority of the Continuing Directors who were members of such board of directors at the time of such nomination or election.

"Fitch" means Fitch Inc., a subsidiary of Fimalac, S.A., and its successors.

"Investment Grade" means (1) a rating of Baa3 or better by Moody's (or its equivalent under any successor rating category of Moody's); (2) a rating of BBB- or better by S&P (or its equivalent under any successor rating category of S&P); and (3) a rating of BBB- or better by Fitch (or its equivalent under any successor rating category of Fitch).

"Moody's" means Moody's Investors Service, Inc., a subsidiary of Moody's Corporation, and its successors.

"Rating Agency" means each of Moody's, S&P and Fitch; provided, that if any of Moody's, S&P and Fitch ceases to rate the Securities of this series or fails to make a rating of the Securities of this series publicly available for reasons outside of the Company's and the Guarantors' control, a "nationally recognized statistical rating organization," within the meaning of Rule 15c3-1(c)(2)(vi)(F) under the Exchange Act, selected by the Company as a replacement agency for Moody's, S&P or Fitch, or any of them, as the case may be, with respect to making a rating of the Securities of this series.

"S&P" means Standard & Poor's Ratings Services, a division of The McGraw-Hill Companies, Inc., and its successors.

"Voting Stock" of any specified person as of any date means the capital stock of such person that is at the time entitled to vote generally in the election of the board of directors of such person.

The Indenture contains provisions for defeasance of (a) the entire indebtedness of this Security and (b) certain restrictive covenants upon compliance by the Company with certain conditions set forth therein.

If an Event of Default with respect to Securities of this series shall occur and be continuing, the principal of the Securities of this series may be declared due and payable in the manner and with the effect provided in the Indenture.

The Indenture permits, with certain exceptions as therein provided, the amendment thereof and the modification of the rights and obligations of the Company and the Guarantors and the rights of the Holders of the Securities of each series to be affected under the Indenture at any time by the Company, the Guarantors and the Trustee with the consent of the Holders of a majority in principal amount of the Securities at the time Outstanding of all series to be affected. The Indenture also contains provisions permitting the Holders of specified percentages in principal amount of the Securities at the time Outstanding of all series to be affected, on behalf of the Holders of all Securities of such series, to waive compliance by the Company and/or the Guarantors with certain provisions of the Indenture and certain past defaults under the Indenture and their consequences. Any such consent or waiver by the Holder of this Security shall be

conclusive and binding upon such Holder and upon all future Holders of this Security and of any Security issued upon the registration of transfer hereof or in exchange herefor or in lieu hereof, whether or not notation of such consent or waiver is made upon this Security.

No reference herein to the Indenture and no provision of this Security or of the Indenture shall alter or impair the obligation of the Company, which is absolute and unconditional, to pay the principal of (and premium, if any, on) and interest, if any, on this Security at the times, place and rate, and in the coin or currency, herein prescribed.

As provided in the Indenture and subject to certain limitations therein set forth, the transfer of this Security is registrable in the Security Register, upon surrender of this Security for registration of transfer at the office or agency of the Company in any place where the principal of (and premium, if any, on) and interest, if any, on this Security are payable, duly endorsed by, or accompanied by a written instrument of transfer in form satisfactory to the Company and the Security Registrar duly executed by, the Holder hereof or his or her attorney duly authorized in writing, and thereupon one or more new Securities of this series, of authorized denominations and for the same aggregate principal amount, will be issued to the designated transferee or transferees.

The Securities of this series are issuable only in registered form without coupons in denominations of $2,000 and integral multiples of $1,000 in excess thereof. As provided in the Indenture and subject to certain limitations therein set forth, Securities of this series are exchangeable for a like aggregate principal amount of Securities of this series of a different authorized denomination, as requested by the Holder surrendering the same.

No service charge shall be made for any such registration of transfer or exchange, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection therewith.

Prior to due presentment of this Security for registration of transfer, the Company, the Guarantors, the Trustee and any agent of the Company, the Guarantors or the Trustee may treat the person in whose name this Security is registered as the owner hereof for all purposes, whether or not this Security be overdue, and none of the Company, the Guarantors, the Trustee or any such agent shall be affected by notice to the contrary.

No recourse for the payment of the principal of (and premium, if any, on) or interest, if any, on this Security or any Guarantee endorsed hereon, or for any claim based hereon or thereon or otherwise in respect hereof or thereof, and no recourse under or upon any obligation, covenant or agreement of the Company or any Guarantor in the Indenture or in any indenture supplemental thereto, or in any Security or in any Guarantee, or because of the creation of any indebtedness represented thereby, shall be had against any incorporator, shareholder, officer or director, as such, past, present or future, of the Company or any Guarantor or of any successor corporation, either directly or through the Company or any Guarantor or any successor corporation, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise, all such liability being, by the acceptance hereof and as part of the consideration for the issue hereof, expressly waived and released.

**THIS SECURITY SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.**

All terms used in this Security which are defined in the Indenture shall have the meanings assigned to them in the Indenture. In the event that a provision of this Security conflicts with the Indenture, the terms of the Indenture will govern.

**Option of Holder to Elect Purchase**

If you want to elect to have this Security purchased by the Company pursuant to Section 208 of the Fourth Supplemental Indenture, check the box below:

If you want to elect to have only part of the Security purchased by the Company pursuant to Section 208 of the Fourth Supplemental Indenture, state the amount you elect to have purchased:

$_____

Date:_____

Your Signature: __

(Sign exactly as your name appears on the face of this Security)

Tax Identification No.: __

Signature Guarantee:** _____

_____

** Participant in a recognized Signature Guarantee Medallion Program (or other signature guarantor acceptable to the Trustee)

SCHEDULE OF EXCHANGES OF INTERESTS IN THE GLOBAL NOTE*

The initial outstanding principal amount of this Global Note is $_____. The following exchanges of a part of this Global Note for an interest in another Global Note or for a Definitive Note, or exchanges of a part of another Global or Definitive Note for an interest in this Global Note, have been made:

| Date of Exchange | Amount of decrease in Principal Amount | Amount of increase in Principal Amount | Amount of this Global Security | Principal Amount of this Global Security following such decrease or increase | Signature of authorized officer of Trustee or Note Custodian |
|---|---|---|---|---|---|

*This schedule should only be included if the Senior Notes are issued in global form.

**EXHIBIT A-2**

**Form of Guarantee to 3.500% Senior Notes due 2026**

For value received, each of Ingersoll-Rand plc, a company duly organized and existing under the laws of Ireland, Ingersoll-Rand Global Holding Company Limited, a corporation incorporated in Delaware, Ingersoll-Rand Lux International Holding Company S.à r.l., a Luxembourg private limited liability company ( *société à responsabilité limitée* ) with registered office at 1 avenue du Bois, L-1251 Luxembourg and registered with the Luxembourg Register of Commerce and Companies under number B 182971, Ingersoll-Rand Irish Holdings Unlimited Company, an Irish private limited company and Ingersoll-Rand Company, a corporation incorporated in New Jersey (each herein called a "Guarantor", which term includes any successor Person under the Indenture referred to in the Security upon which this Guarantee is endorsed), hereby irrevocably and unconditionally guarantees to the Holder of the Security upon which this Guarantee is endorsed and to the Trustee for itself and on behalf of each such Holder the due and punctual payment of the principal of (and premium, if any, on) and interest on such Security and the due and punctual payment of the sinking fund or analogous payments referred to therein, if any, when and as the same shall become due and payable, whether at the Stated Maturity, by declaration of acceleration, call for redemption or otherwise, according to the terms thereof and of the Indenture referred to therein, and all other amounts owed under the Indenture, all in accordance with and subject to the terms and limitations of the Security on which this Guarantee is endorsed and Article Thirteen of the Indenture. In case of the failure of Ingersoll-Rand Luxembourg Finance S.A., a Luxembourg public company limited by shares ( *société anonyme* ) (herein called the "Company", which term includes any successor Person under such Indenture), promptly to make any such payment of principal (and premium, if any) or interest or any such sinking fund or analogous payment, each Guarantor hereby agrees to cause any such payment to be made promptly when and as the same shall become due and payable, whether at the Stated Maturity or by declaration of acceleration, call for redemption or otherwise, and as if such payment were made by the Company, subject to the terms and limitations of Article Thirteen of the Indenture.

Each such Guarantor shall be deemed to Guarantee the Security jointly and severally with each other such Guarantor.

This Guarantee shall not be valid or obligatory for any purpose until the certificate of authentication of such Security shall have been manually executed by or on behalf of the Trustee under such Indenture.

All terms used in this Guarantee which are defined in such Indenture shall have the meanings assigned to them in such Indenture.

THIS GUARANTEE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

Executed and delivered on this [___] day of [_____], 2019.

Ingersoll-Rand plc

By _____
Name:
Title:

Ingersoll-Rand Global Holding Company Limited

By_____
Name:
Title:

Ingersoll-Rand Lux International Holding Company S.à r.l.

By_____
Name:
Title:

Ingersoll-Rand Company

By_____
Name:
Title:

**Exhibit 4.3**

**INGERSOLL-RAND LUXEMBOURG FINANCE S.A., as COMPANY,**

**INGERSOLL-RAND PLC,**

**INGERSOLL-RAND GLOBAL HOLDING COMPANY LIMITED,**

**INGERSOLL-RAND LUX INTERNATIONAL HOLDING COMPANY S.À R.L.,**

**INGERSOLL-RAND IRISH HOLDINGS UNLIMITED COMPANY, and**

**INGERSOLL-RAND COMPANY,**

**as GUARANTORS**

**AND**

**WELLS FARGO BANK, NATIONAL ASSOCIATION, as TRUSTEE**

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# FIFTH SUPPLEMENTAL INDENTURE

**Dated as of March 21, 2019**

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THIS FIFTH SUPPLEMENTAL INDENTURE, dated as of March 21, 2019, is among INGERSOLL-RAND LUXEMBOURG FINANCE S.A., a Luxembourg public limited liability company ( *société anonyme* ) with registered office at 1 avenue du Bois, L-1251 Luxembourg and registered with the Luxembourg Register of Commerce and Companies (RCS) under number B 189791 (the "Company"), INGERSOLL-RAND PLC, a public limited company duly organized and existing under the laws of Ireland ("IR Parent"), INGERSOLL-RAND GLOBAL HOLDING COMPANY LIMITED, a corporation incorporated in Delaware ("IR Global"), INGERSOLL-RAND LUX INTERNATIONAL HOLDING COMPANY S.À R.L., a Luxembourg private limited liability company ( *société à responsabilité limitée* ) with registered office at 1 avenue du Bois, L-1251 Luxembourg and registered with the RCS under number B 182971 ("Lux International"), INGERSOLL-RAND IRISH HOLDINGS UNLIMITED COMPANY, an Irish private unlimited company ("Irish Holdings"), and INGERSOLL-RAND COMPANY, a corporation incorporated in New Jersey ("IR Company" and, together with IR Parent, IR Global, Lux International, Irish Holdings and IR Company, the "Guarantors"), and WELLS FARGO BANK, NATIONAL ASSOCIATION, a national banking association, acting as Trustee under the Indenture referred to below (the "Trustee").

WITNESSETH:

WHEREAS, the Company has duly authorized the execution and delivery of an Indenture dated as of February 21, 2018, among the Company, the Guarantors and the Trustee (the "Indenture"), to provide for the issuance from time to time of its unsecured debentures, notes or other evidences of indebtedness to be issued in one or more series (collectively, the "Securities" and each, a "Security");

WHEREAS, each Guarantor has duly authorized the execution and delivery of the Indenture to provide for Guarantees of the Securities provided for therein, as endorsed on each Security and authenticated and delivered pursuant to the Indenture (collectively, the "Guarantees" and each, a "Guarantee");

WHEREAS, Section 901 of the Indenture provides, among other things, that the Company, the Guarantors and the Trustee may enter into indentures supplemental to the Indenture for, among other things, the purpose of establishing the form and terms of the Securities of any series, as permitted under Sections 201 and 301 of the Indenture, and the form and terms of the Guarantees, as permitted under Sections 201 and 206 of the Indenture;

WHEREAS, the Company has determined to issue a series of Securities entitled the "3.800% Senior Notes due 2029," (the "Senior Notes"), with such series guaranteed by the Guarantors pursuant to the Indenture;

WHEREAS, the Company and the Guarantors have each duly authorized the execution and delivery of this Fifth Supplemental Indenture in order to provide for certain supplements to the Indenture which shall only be applicable to the Senior Notes and the related Guarantees;

WHEREAS, all acts and things necessary to make this Fifth Supplemental Indenture a valid and binding agreement of each of the Company and the Guarantors according to its terms have been done and performed;

WHEREAS, all acts and things necessary to make the Senior Notes, when executed by the Company and authenticated and delivered by the Trustee as provided in the Indenture and this Fifth Supplemental Indenture, the valid and binding obligations of the Company have been done and performed; and

WHEREAS, all acts and things necessary to make the related Guarantees, when executed by the Guarantors and authenticated and delivered by the Trustee as provided in the Indenture and this Fifth Supplemental Indenture, the valid and binding obligations of the Guarantors have been done and performed;

NOW, THEREFORE, in consideration of the premises, of the purchase and acceptance of the Senior Notes by the Holders thereof, and of the sum of one dollar duly paid to it by the Trustee at the execution and delivery of these presents, the receipt whereof is hereby acknowledged, each of the Company and the Guarantors covenants and agrees with the Trustee to supplement the Indenture, only for purposes of the Senior Notes and the related Guarantees, as follows:

## ARTICLE ONE
## DEFINITIONS

Section 101. Definitions . For all purposes of this Fifth Supplemental Indenture, except as otherwise expressly provided or unless the context otherwise requires, (i) references to any Article, Section or subdivision thereof are references to an Article, Section or other subdivision of this Fifth Supplemental Indenture and (ii) capitalized terms not otherwise defined herein shall have the meanings set forth in the Indenture.

## ARTICLE TWO
## TERMS AND CONDITIONS OF THE SENIOR NOTES AND THE RELATED GUARANTEES

Section 201. Designation, Principal Amount and Terms . There is hereby authorized and established, pursuant to Section 301 of the Indenture, a series of Securities designated as the "3.800% Senior Notes due 2029," with such series guaranteed by the Guarantors pursuant to the Indenture.

(a) The 3.800% Senior Notes due 2029 and the related Guarantees shall be executed, authenticated and delivered in accordance with the provisions of, and shall in all respects be subject to, the terms, conditions and covenants of the Indenture and this Fifth Supplemental Indenture (including the form of Security set forth in Exhibit A-1 hereto and the form of Guarantee set forth in Exhibit A-2 hereto). Subject to Section 203 hereof, the aggregate principal amount of the 3.800% Senior Notes due 2029 which may initially be authenticated and

delivered under this Fifth Supplemental Indenture shall not, except as permitted by the provisions of the Indenture, exceed $750,000,000.

Section 202. Optional Redemption . The Company may, at its option, elect to redeem any or all of the outstanding Senior Notes, in whole or in part, at any time and from time to time prior to December 21, 2028, upon not less than 30 nor more than 60 days' prior written notice delivered electronically or mailed by first-class mail to the registered address of each Holder of the Senior Notes or otherwise in accordance with the procedures of the U.S. Depositary, at a Redemption Price equal to the greater of (1) 100% of the principal amount of the Senior Notes to be redeemed, or (2) as determined by the Quotation Agent (as defined below), the sum of the present values of the remaining scheduled payments of principal and interest on the Senior Notes to be redeemed that would be due if such series of notes matured on the Par Call Date (as defined below) (except that if the Redemption Date is not an interest payment date, the amount of the next succeeding scheduled interest payment will be reduced (solely for the purpose of this calculation) by the amount of interest accrued thereon to the Redemption Date, discounted to the Redemption Date on a semi-annual basis assuming a 360-day year consisting of twelve 30-day months at a discount rate equal to the Adjusted Treasury Rate (as defined below) plus 20 basis points, plus, in the case of each of clauses (1) and (2), accrued and unpaid interest on the principal amount of the Senior Notes being redeemed to, but not including, the Redemption Date.

The Company may, at its option, elect to redeem any or all of the outstanding Senior Notes, in whole or in part, at any time and from time to time on or after December 21, 2028, upon not less than 30 nor more than 60 days' prior written notice delivered electronically or mailed by first-class mail to the registered address of each Holder of the Senior Notes or otherwise in accordance with the procedures of the U.S. Depositary, at a Redemption Price equal to 100% of the principal amount of the Senior Notes to be redeemed, plus accrued and unpaid interest on the principal amount of the Senior Notes being redeemed to, but not including, the Redemption Date.

Unless the Company defaults in payment of the Redemption Price, interest shall cease to accrue on the Senior Notes or portions of the Senior Notes called for redemption on and after the Redemption Date.

"Adjusted Treasury Rate" means, with respect to any Redemption Date, the rate per year equal to the semi-annual equivalent yield to maturity or interpolated (on a day count basis) of the Comparable Treasury Issue, assuming a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for that Redemption Date.

"Comparable Treasury Issue" means the United States Treasury security selected by the Quotation Agent as having an actual or interpolated maturity comparable to the remaining term of the Senior Notes to be redeemed that would be used, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities

of comparable maturity to the remaining term of such Senior Notes (assuming, for the purposes of this definition, that the Senior Notes matured on the Par Call Date of the Senior Notes).

"Comparable Treasury Price" means, with respect to any Redemption Date, (i) the average of the Reference Treasury Dealer Quotations for that Redemption Date, after excluding the highest and lowest of the Reference Treasury Dealer Quotations, or (ii) if the Quotation Agent obtains fewer than four Reference Treasury Dealer Quotations, the average of the Reference Treasury Dealer Quotations so received.

"Par Call Date" means December 21, 2028.

"Quotation Agent" means Goldman Sachs & Co. LLC.

"Reference Treasury Dealer" means (i) each of Citigroup Global Markets Inc., Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated, and their respective successors, unless any of them ceases to be a primary U.S. Government securities dealer in New York City (a "Primary Treasury Dealer"), in which case the Company shall substitute another Primary Treasury Dealer, and (ii) any other Primary Treasury Dealers selected by the Quotation Agent.

"Reference Treasury Dealer Quotations" means, with respect to each Reference Treasury Dealer and any Redemption Date, the average, as determined by the Quotation Agent, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Issuer by that Reference Treasury Dealer at 5:00 p.m., New York City time, on the third Business Day preceding that Redemption Date.

Section 203. Additional Issuances . The Company may, at any time, without the consent of the Holders of the Senior Notes, issue additional Senior Notes of the same series having the same ranking and the same interest rate, maturity and other terms as any of the existing Senior Notes. Any additional Senior Notes having such similar terms, together with the existing Senior Notes, may constitute a single series of Senior Notes under the Indenture and this Fifth Supplemental Indenture; provided, however, if the additional Senior Notes are not fungible with the existing Senior Notes of such series for U.S. federal income tax purposes, such additional Senior Notes shall have a different CUSIP number. No additional Senior Notes may be issued if an Event of Default under the Indenture has occurred and is continuing with respect to the Senior Notes.

Section 204. Special Mandatory Redemption . The Company shall redeem the Senior Notes at a Redemption Price equal to 101% of the aggregate principal amount of the Senior Notes, plus accrued and unpaid interest from the date of initial issuance or the most recent interest payment date, but not including, the Special Mandatory Redemption Date (as defined below) subject to the right of holders of record on the relevant record date to receive interest due on the relevant Interest Payment Date) (the "Special Mandatory Redemption Price") if the acquisition (the "Acquisition") of Precision Flow Systems by IR Parent is not completed, or IR Parent's offer is terminated, on or before January 31, 2020.

If the Company is required to redeem the Senior Notes pursuant to this special mandatory redemption, the Company shall cause the notice of redemption to be delivered electronically or mailed by first-class mail to the registered address of each Holder of the Senior Notes or otherwise in accordance with the procedures of the U.S. Depositary, with a copy to the trustee, by the earlier of (1) January 29, 2020, if the Acquisition has not been completed by that date, or (2) five business days after the occurrence of the event that requires the Company to redeem such Senior Notes.

Unless the Company defaults in payment of the Redemption Price, interest shall cease to accrue on the Senior Notes on and after the Special Mandatory Redemption Date.

"Special Mandatory Redemption Date" means the earlier to occur of (i) January 31, 2020, if IR Parent has not completed the proposed Acquisition on or prior to January 31, 2020, or (ii) the 30th day (or if such day is not a business day, the first business day thereafter) following the termination of IR Parent's offer for any reason.

Section 205. Special Tax Redemption . Any Payor (as defined below) may elect to redeem the outstanding Senior Notes, in whole but not in part, at any time, upon not less than 30 nor more than 60 days' prior written notice delivered electronically or mailed by first-class mail to the registered address of each Holder of the Senior Notes or otherwise in accordance with the procedures of the U.S. Depositary, at a Redemption Price equal to 100% of the principal amount of the Senior Notes to be redeemed, plus accrued and unpaid interest thereon, if any, to, but not including, the date fixed for redemption (a "Tax Redemption Date"), and Additional Amounts (as defined below), if any, then due or becoming due on the Tax Redemption Date in the event (i) such Payor is, has become or would become obligated to pay, on the next date on which any amount would be payable with respect to the Senior Notes, any Additional Amounts or indemnification payments (other than in respect of documentary taxes) as a result of (A) a change or amendment in the laws or treaties (including any regulations or rulings promulgated thereunder) of a Relevant Taxing Jurisdiction; or (B) any change or amendment in the application, administration or interpretation of such laws, treaties, regulations or rulings (including pursuant to a holding, judgment or order by a court of competent jurisdiction); which change or amendment, in either case, is announced or becomes effective after the date hereof (or, if the applicable Relevant Taxing Jurisdiction became a Relevant Taxing Jurisdiction on a later date, after such later date) (each of the foregoing in clauses (A) and (B), a "Change in Tax Law"); and (ii) such Payor has determined in its business judgment that the obligation to pay such Additional Amounts cannot be avoided by the use of reasonable measures available to such Payor. Notwithstanding the foregoing, no such notice of redemption shall be given earlier than 90 days prior to the earliest date on which such Payor would, but for such redemption, be obligated to make such payment or withholding or later than 90 days after such Payor is first obligated to make such payment or withholding. Prior to the delivery or mailing of any notice of redemption of the Senior Notes pursuant to the foregoing, such Payor shall deliver to the Trustee (1) a certificate signed by a duly authorized officer stating that such Payor is entitled to effect the redemption and setting forth a statement of facts showing that the conditions precedent to the right of such Payor to so redeem have occurred and (2) an opinion of an independent tax counsel of recognized international standing to the effect that the circumstances referred to in clause (i) in

the first sentence of this Section 205 exist, and the Trustee shall accept such certificate and such opinion as sufficient evidence of the satisfaction of the conditions precedent above, which acceptance shall then be conclusive and binding on the Holders of Senior Notes.

Section 206. Tax Considerations for Holders . Any Payor may request at any time from Holders of Senior Notes who are "United States persons" within the meaning of Section 7701(a)(30) of the Internal Revenue Code of 1986, as amended (the "Code"), to provide a properly completed and duly executed U.S. Internal Revenue Service Form W-9 (or valid substitute form) and from Holders of Senior Notes who are not "United States persons" within the meaning of Section 7701(a)(30) of the Code to provide a properly completed and duly executed U.S. Internal Revenue Service Form W-8BEN, W-8ECI or W-8IMY (or valid substitute form). Any such request must be complied with by such Holder or Holders within 30 days' of the receipt thereof, such request to be made in writing and mailed by first-class mail to the registered address of such Holder or Holders. If a form previously delivered pursuant to this Section 206 expires or becomes obsolete, or if there is a change in circumstances requiring a change in the form previously delivered, the Holder that previously delivered such form shall deliver a new, properly completed and duly executed form on or before the date that the previously delivered form expires or becomes obsolete or promptly after the change in circumstances occurs.

Section 207. Additional Amounts .

All payments made by the Company or any Guarantor (except IR Global and IR Company) or a successor of the Company or such Guarantor (except IR Global and IR Company) (each a "Payor") on the Senior Notes in respect of interest, premium (if any) and principal shall be made without withholding or deduction for, or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature ("Taxes") unless the withholding or deduction of such Taxes is then required by law. If any deduction or withholding for, or on account of, any Taxes imposed or levied by or on behalf of:

(1) any jurisdiction from or through which payment on the Senior Notes or the applicable Guarantee is made in respect of interest, premium or principal, or any political subdivision or governmental authority thereof or therein having the power to tax; or

(2) any other jurisdiction in which a Payor is organized or otherwise considered to be a resident for tax purposes, or any political subdivision or governmental authority thereof or therein having the power to tax (each of clauses (1) and (2), a "Relevant Taxing Jurisdiction"),

shall at any time be required from any payments made with respect to the Senior Notes in respect of interest, premium or principal, the Payor shall pay (together with such payments) such additional amounts (the "Additional Amounts") as may be necessary in order that the net amounts received in respect of such payments by each beneficial owner of the Senior Notes or the Guarantee, as the case may be, after such withholding or deduction (including any such deduction or withholding from such Additional Amounts), equal the amounts which would have

been received in respect of such payments in the absence of such withholding or deduction; *provided* , *however* , that no such Additional Amounts shall be payable with respect to:

(1) any Taxes that would not have been so imposed but for the existence of any present or former connection between the beneficial owner (or between a fiduciary, settlor, beneficiary, partner, member, shareholder or other holder of equity interests of, or possessor of power over the relevant beneficial owner, if the relevant beneficial owner is an estate, nominee, trust, partnership, limited liability company, corporation or other entity) and the Relevant Taxing Jurisdiction (including the beneficial owner being a citizen or resident or national of, or carrying on a business or maintaining a permanent establishment in, or being physically present in, the Relevant Taxing Jurisdiction) other than by the mere ownership or holding of such note or enforcement of rights thereunder or under the Guarantee or the receipt of payments in respect thereof;

(2) any Taxes that would not have been so imposed if the beneficial owner had made a declaration of non-residence or any other claim or filing for exemption to which it is entitled ( *provided* that (x) such declaration of non-residence or other claim or filing for exemption is required by the applicable law of the Relevant Taxing Jurisdiction as a precondition to exemption from the requirement to deduct or withhold such Taxes and (y) at least 30 days prior to the first payment date with respect to which such declaration of non-residence or other claim or filing for exemption is required under the applicable law of the Relevant Taxing Jurisdiction, the relevant beneficial owner at that time has been notified by the Payor or any other person through whom payment may be made that a declaration of non-residence or other claim or filing for exemption is required to be made);

(3) any note presented for payment (where presentation is permitted or required) more than 30 days after the relevant payment is first made available for payment to the beneficial owner (except to the extent that the beneficial owner would have been entitled to Additional Amounts had the note been presented during such 30 day period);

(4) any Taxes that are payable otherwise than by withholding or deduction from a payment of the principal of, premium, if any, or interest, on the Senior Notes or under the Guarantee;

(5) any estate, inheritance, gift, value, use, sale, excise, transfer, personal property or similar tax, assessment or other governmental charge;

(6) any Taxes which could have been avoided by the presentation (where presentation is required) of the relevant note to another Paying Agent in a member state of the European Union; or

(7) any withholding or deduction required pursuant to an agreement described in Section 1471(b) of the Code, or otherwise imposed pursuant to Sections 1471 through 1474 of the Code, any regulations or agreements thereunder, any official interpretations thereof, or any treaty, law, regulation or other official guidance in any other jurisdiction implementing an intergovernmental approach thereto;

(8) any withholding or deduction imposed pursuant to the Luxembourg law of 23 December 2005 as amended, introducing a withholding tax on certain interest payments made or ascribed by Luxembourg paying agents to Luxembourg resident individuals; or

(9) any Taxes imposed or levied by reason of any combination of clauses (1) through (8) above.

Such Additional Amounts shall also not be payable where, had the beneficial owner of the note been the Holder of the note, it would not have been entitled to payment of Additional Amounts by reason of any of clauses (1) to (9) inclusive above.

The Payor shall (i) make any required withholding or deduction and (ii) remit the full amount deducted or withheld to the Relevant Taxing Jurisdiction in accordance with applicable law. The Payor shall use all reasonable efforts to obtain certified copies of tax receipts evidencing the payment of any Taxes so deducted or withheld from each Relevant Taxing Jurisdiction imposing such Taxes and shall provide such certified copies to each Holder. The Payor shall attach to each certified copy a certificate stating (x) that the amount of withholding Taxes evidenced by the certified copy was paid in connection with payments in respect of the principal amount of Senior Notes then outstanding and (y) the amount of such withholding Taxes paid per $1,000 principal amount of the Senior Notes. Copies of such documentation shall be available for inspection during ordinary business hours at the office of the Trustee by the Holders of the Senior Notes upon request and shall be made available at the offices of the Paying Agent.

At least 30 days prior to each date on which any payment under or with respect to the Senior Notes or the Guarantee is due and payable (unless such obligation to pay Additional Amounts arises shortly before or after the 30th day prior to such date, in which case it shall be promptly thereafter), if the Payor shall be obligated to pay Additional Amounts with respect to such payment, the Payor shall deliver to the Trustee an Officers' Certificate stating the fact that such Additional Amounts shall be payable, the amounts so payable and shall set forth such other information necessary to enable the Trustee to pay such Additional Amounts to Holders on the payment date. Each such Officer's Certificate shall be relied upon until receipt of a further Officers' Certificate addressing such matters.

If the Payor conducts business in any jurisdiction (an "Additional Taxing Jurisdiction") other than a Relevant Taxing Jurisdiction and, as a result, is required by the law of such Additional Taxing Jurisdiction to deduct or withhold any amount on account of taxes imposed by such Additional Taxing Jurisdiction from payments under the Senior Notes or the Guarantee, as the case may be, which would not have been required to be so deducted or withheld but for such conduct of business in such Additional Taxing Jurisdiction, the Additional Amounts provision described above shall be considered to apply to such Holders or beneficial owners as if references in such provision to "Taxes" included taxes imposed by way of deduction or withholding by any such Additional Taxing Jurisdiction (or any political subdivision thereof or governmental authority therein).

Wherever in the Indenture, the Senior Notes or the Guarantee there are mentioned, in any context:

(1) the payment of principal or premium (if any),

(2) purchase prices in connection with a purchase of Senior Notes,

(3) interest, or

(4) any other amount payable on or with respect to the Senior Notes or the Guarantee,

such reference shall be deemed to include payment of Additional Amounts as described under this section to the extent that, in such context, Additional Amounts are, were or would be payable in respect thereof.

The Payor shall pay any present or future stamp, court or documentary taxes, or any other excise or property taxes, charges or similar levies which arise in any jurisdiction from the execution, delivery or registration of any Senior Notes or any other document or instrument referred to therein (other than a transfer of the Senior Notes), or the receipt of any payments with respect to the notes or the guarantee, excluding (i) any such taxes, charges' or similar levies imposed by Luxembourg in case the notes or the guarantee (and/or any documents in connection therewith) are (a) enclosed to a compulsorily registrable deed (acte obligatoirement enregistrable) or (b) deposited with the official records of a notary (déposé au rang des minutes d'un notaire) and (ii) any such taxes, charges or similar levies imposed by any jurisdiction other than a Relevant Taxing Jurisdiction, other than those resulting from, or required to be paid in connection with, the enforcement of the Senior Notes, the Guarantee or any other such document or instrument following the occurrence of any Event of Default with respect to the Senior Notes.

The foregoing obligations shall survive any termination, defeasance or discharge of the Indenture and shall apply *mutatis mutandis* to any jurisdiction in which any successor to a Payor is organized or otherwise considered a resident for tax purposes or any political subdivision or governmental authority or agency thereof or therein.

Section 208. Offer to Redeem Upon Change of Control Triggering Event .

Upon the occurrence of a Change of Control Triggering Event, unless the Company has previously exercised its right to redeem the Senior Notes in full, each Holder of the Senior Notes shall have the right to require the Company to purchase all or a portion of such Holder's Senior Notes pursuant to the offer described below (the "Change of Control Offer") at a purchase price equal to 101% of the principal amount thereof plus accrued and unpaid interest, if any, to the date of purchase, subject to the rights of Holders of the Senior Notes on the relevant record date to receive interest due on the relevant interest payment date.

Within 30 days following the date upon which the Change of Control Triggering Event occurred, or at the Company's option, prior to any Change of Control but after the public announcement of the pending Change of Control, the Company shall be required to send, by electronic delivery or first class mail or otherwise in accordance with the procedures of the U.S. Depositary, a notice to each Holder of the Senior Notes, with a copy to the Trustee, which notice shall govern the terms of the Change of Control Offer. Such notice shall state:

(i) (a) if delivered or mailed following the date upon which a Change of Control Triggering Event has occurred, that a Change of Control Triggering Event has occurred and that such Holder of the Senior Notes has the right to require the Company to purchase all or a portion of such Holder's Senior Notes at a purchase price in cash equal to 101% of the principal amount thereof, plus accrued and unpaid interest, if any, to the date of purchase (subject to the right of Holders of the Senior Notes of record on the relevant record date to receive interest on the relevant interest payment date), or (b) if delivered or mailed prior to any Change of Control but after the public announcement of a pending Change of Control, that a Change of Control is pending and, upon the occurrence of a Change of Control Triggering Event, such Holder of the Senior Notes has the right to require the Company to purchase all or a portion of such Holder's Senior Notes at a purchase price in cash equal to 101% of the principal amount thereof, plus accrued and unpaid interest, if any, to the date of purchase (subject to the right of Holders of the Senior Notes of record on the relevant record date to receive interest on the relevant interest payment date) and that the Change of Control Offer is conditioned on the Change of Control being consummated on or prior to the Change of Control Payment Date;

(ii) the circumstances and relevant facts regarding such Change of Control Triggering Event;

(iii) the purchase date, which must be no earlier than 30 days nor later than 60 days from the date such notice is delivered or mailed, other than as may be required by law (the "Change of Control Payment Date"); and

(iv) the instructions determined by the Company, consistent with this Section, that a Holder of the Senior Notes must follow in order to have its Senior Notes purchased.

Holders of the Senior Notes electing to have Senior Notes purchased pursuant to a Change of Control Offer shall be required to surrender their Senior Notes, with the form entitled "Option of Holder to Elect Purchase" on the reverse of the Senior Notes completed, to the

Paying Agent at the address specified in the notice, or transfer their Senior Notes to the Paying Agent by book-entry transfer pursuant to the applicable procedures of the Paying Agent, prior to the close of business on the third Business Day prior to the Change of Control Payment Date. Holders of the Senior Notes shall be entitled to withdraw their election if the Paying Agent receives not later than one Business Day prior to the purchase date a telegram, telex facsimile transmission or letter setting forth the name of the Holder of the Senior Notes and a statement that such Holder is withdrawing its election to have such Senior Notes purchased.

On the Change of Control Payment Date, the Company shall, to the extent lawful:

1. accept for payment all Senior Notes (or portions of Senior Notes) properly tendered pursuant to the Change of Control Offer; provided that the unpurchased portion of any Senior Note must be in a principal amount of $2,000 or an integral multiple of $1,000 in excess thereof;

2. deposit with the Paying Agent an amount equal to the aggregate payment in respect of all Senior Notes (or portions of Senior Notes) properly tendered pursuant to the Change of Control Offer; and

3. deliver or cause to be delivered to the Trustee the Senior Notes properly accepted for purchase, together with an Officer's Certificate stating the aggregate principal amount of the Senior Notes (or portions of Senior Notes) being purchased.

The Paying Agent shall promptly mail or transfer to each Holder of Senior Notes properly tendered the purchase price for the Senior Notes, and the Trustee shall promptly authenticate and mail (or cause to be transferred by book-entry) to each such Holder new Senior Notes equal in principal amount to any unpurchased portion of any Senior Notes surrendered; provided that each new Senior Note shall be in a principal amount of $2,000 or an integral multiple of $1,000 in excess thereof. A Senior Note shall be deemed to have been accepted for purchase at the time the Paying Agent mails or delivers payment therefor to the Surrendering Holder.

The Company shall not be required to make a Change of Control Offer if a third party makes such an offer in the manner, at the times and otherwise in compliance with the requirements in this Section 208 for such an offer made by the Company and such third party purchases all Senior Notes properly tendered and not withdrawn under its offer.

The Company shall comply with the requirements of Rule 14e-1 under the Exchange Act and any other securities laws and regulations thereunder to the extent those laws and regulations are applicable in connection with the purchase of the Senior Notes as a result of a Change of Control Triggering Event. To the extent that the provisions of any such securities laws or regulations conflict with the Change of Control Offer provisions of the Senior Notes, the Company shall comply with the applicable securities laws and regulations and shall not be deemed to have breached its obligations under the Change of Control Offer provisions of the Senior Notes by virtue of such conflict.

Each of the Company and Guarantors shall use reasonable best efforts to ensure that at all times at least two Rating Agencies are providing a rating for the Senior Notes.

For purposes of the Change of Control Offer provisions of the Senior Notes, the following terms shall be applicable:

"Below Investment Grade Rating Event" means, with respect to the Senior Notes, such notes cease to be rated Investment Grade by at least two of the three Rating Agencies on any date during the period (the "Trigger Period") commencing 60 days prior to the first public announcement by IR Parent of any Change of Control (or pending Change of Control) and ending 60 days following the consummation of such Change of Control (which Trigger Period shall be extended if the rating of the Senior Notes is under publicly announced consideration for possible downgrade by any Rating Agency on such 60th day, such extension to last with respect to each Rating Agency until the date on which such Rating Agency considering such possible downgrade either (x) rates the Senior Notes below Investment Grade or (y) publicly announces that it is no longer considering the Senior Notes for possible downgrade; provided, that no such extension shall occur if on such 60th day the Senior Notes are rated Investment Grade not subject to review for possible downgrade by any Rating Agency).

"Change of Control" means the occurrence of any one of the following:

1) the direct or indirect sale, lease, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the assets of IR Parent and its subsidiaries taken as a whole to any "person" (as that term is used in Section 13(d) and Section 14(d) of the Exchange Act) other than to IR Parent or one of its subsidiaries;

2) the consummation of any transaction (including without limitation, any merger or consolidation) the result of which is that any "person" (as that term is used in Section 13(d) and Section 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 and Rule 13d-5 under the Exchange Act), directly or indirectly, of more than 50% of the outstanding Voting Stock of IR Parent, or other Voting Stock into which the Voting Stock of IR Parent is reclassified, consolidated, exchanged or changed, measured by voting power rather than number of shares;

3) the first day on which the majority of the members of the board of directors of IR Parent cease to be Continuing Directors;

4) IR Parent consolidates with, or merges with or into, any person, or any person consolidates with, or merges with or into, IR Parent, in any such event pursuant to a transaction in which any of the outstanding Voting Stock of IR Parent or such other person is converted into or exchanged for cash, securities or other property, other than any such transaction where the shares of the Voting Stock of IR Parent outstanding immediately prior to such transaction constitute, or are converted into or exchanged for, a majority of the Voting Stock of the surviving person immediately after giving effect to such transaction;

5) the adoption of a plan relating to the liquidation or dissolution of IR Parent; or

6) the failure of IR Parent to own, directly or indirectly, at least 51% of the Voting Stock of the Company.

Notwithstanding the foregoing, a transaction shall not be deemed to involve a Change of Control under clause (2) above if (i) IR Parent becomes a direct or indirect wholly-owned subsidiary of a holding company and (ii) the shares of the Voting Stock of IR Parent outstanding immediately prior to such transaction constitute, or are converted into or exchanged for, a majority of the Voting Stock of such holding company immediately after giving effect to such transaction.

"Change of Control Triggering Event" means, with respect to the Senior Notes, the occurrence of both a Change of Control and a Below Investment Grade Rating Event with respect to the Senior Notes. Notwithstanding the foregoing, no Change of Control Triggering Event shall be deemed to have occurred in connection with any particular Change of Control unless and until such Change of Control has actually been consummated.

"Continuing Director" means, as of any date of determination, any member of the board of directors of IR Parent who: (1) was a member of such board of directors on the date of the issuance of the Senior Notes; or (2) was nominated for election or elected to such board of directors with the approval of a majority of the Continuing Directors who were members of such board of directors at the time of such nomination or election.

"Fitch" means Fitch Inc., a subsidiary of Fimalac, S.A., and its successors.

"Investment Grade" means (1) a rating of Baa3 or better by Moody's (or its equivalent under any successor rating category of Moody's); (2) a rating of BBB- or better by S&P (or its equivalent under any successor rating category of S&P); and (3) a rating of BBB- or better by Fitch (or its equivalent under any successor rating category of Fitch).

"Moody's" means Moody's Investors Service, Inc., a subsidiary of Moody's Corporation, and its successors.

"Rating Agency" means each of Moody's, S&P and Fitch; provided, that if any of Moody's, S&P and Fitch ceases to rate the Senior Notes or fails to make a rating of the Senior Notes publicly available for reasons outside of the Company's and the Guarantors' control, a "nationally recognized statistical rating organization," within the meaning of Rule 15c3-1(c)(2)(vi)(F) under the Exchange Act, selected by IR Global as a replacement agency for Moody's, S&P or Fitch, or any of them, as the case may be, with respect to making a rating of the Senior Notes.

"S&P" means Standard & Poor's Ratings Services, a division of The McGraw-Hill Companies, Inc., and its successors.

"Voting Stock" of any specified person as of any date means the capital stock of such person that is at the time entitled to vote generally in the election of the board of directors of such person.

Section 209. Amendments or Supplements Without Consent of Holders. In addition to any permitted amendment or supplement to the Indenture pursuant to Section 901 of the Indenture, the Company, the Guarantors and the Trustee may amend or supplement the Senior Notes without notice to or the consent of any Holder of the Senior Notes:

(15) to conform this Fifth Supplemental Indenture and the form or terms of the Senior Notes to the section entitled "Description of the Notes" as set forth in the final prospectus supplement related to the offering and sale of the Senior Notes dated March 19, 2019;

(16) to add guarantees with respect to the Senior Notes;

(17) to provide for the issuance of additional Senior Notes in accordance with the Indenture and this Fifth Supplemental Indenture; or

(18) to amend the provisions of the Indenture and this Fifth Supplemental Indenture relating to the transfer and legending of the Senior Notes, including, without limitation, to facilitate the issuance and administration of the Senior Notes; provided that compliance with the Indenture and this Fifth Supplemental Indenture as so amended would not result in the Senior Notes being transferred in violation of the Securities Act of 1933, as amended, or any applicable securities law.

Section 210. Legend. The following legends shall appear on the face of all Global Securities and Definitive Securities issued under this Fifth Supplemental Indenture and the Indenture unless specifically stated otherwise in the applicable provisions of this Fifth Supplemental Indenture and the Indenture:

"THIS GLOBAL SECURITY IS HELD BY THE U.S. DEPOSITARY (AS DEFINED IN THE INDENTURE GOVERNING THIS SECURITY) OR ITS NOMINEE IN CUSTODY FOR THE BENEFIT OF THE BENEFICIAL OWNERS HEREOF, AND IS NOT TRANSFERABLE TO ANY PERSON UNDER ANY CIRCUMSTANCES EXCEPT THAT (I) THE TRUSTEE MAY MAKE SUCH NOTATIONS HEREON AS MAY BE REQUIRED PURSUANT TO THE INDENTURE, (II) THIS GLOBAL SECURITY MAY BE EXCHANGED IN WHOLE BUT NOT IN PART PURSUANT TO SECTION 305 OF THE INDENTURE, (III) THIS GLOBAL SECURITY MAY BE DELIVERED TO THE TRUSTEE FOR CANCELLATION PURSUANT TO SECTION 309 OF THE INDENTURE AND (IV) THIS GLOBAL SECURITY MAY BE TRANSFERRED TO A SUCCESSOR U.S. DEPOSITARY WITH THE PRIOR WRITTEN CONSENT OF THE ISSUER. UNLESS AND UNTIL IT IS EXCHANGED IN WHOLE OR IN PART FOR SECURITIES IN DEFINITIVE FORM, THIS SECURITY MAY NOT BE TRANSFERRED EXCEPT AS A WHOLE BY THE U.S. DEPOSITARY TO A NOMINEE OF THE U.S. DEPOSITARY OR BY A NOMINEE OF THE U.S. DEPOSITARY TO THE U.S. DEPOSITARY OR ANOTHER NOMINEE OF THE U.S. DEPOSITARY OR BY THE U.S. DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR U.S. DEPOSITARY OR A NOMINEE OF SUCH SUCCESSOR U.S. DEPOSITARY. UNLESS THIS CERTIFICATE IS PRESENTED BY AN

AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY (55 WATER STREET, NEW YORK, NEW YORK) ("DTC") TO THE ISSUER OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR SUCH OTHER NAME AS MAY BE REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR SUCH OTHER ENTITY AS MAY BE REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN."

## ARTICLE THREE
## MISCELLANEOUS

Section 301. Execution as Supplemental Indenture . This Fifth Supplemental Indenture is hereby executed and shall be construed as an indenture supplemental to the Indenture and, as provided in the Indenture, this Fifth Supplemental Indenture forms a part thereof.

Section 302. Trust Indenture Act . If any provision hereof limits, qualifies or conflicts with another provision hereof which is required to be included in this Fifth Supplemental Indenture by any of the provisions of the Trust Indenture Act, such required provisions shall control.

Section 303. Effect of Headings . The Article and Section headings herein are for convenience only and shall not affect the construction hereof.

Section 304. Separability . In case any provision in this Fifth Supplemental Indenture or in any Senior Note or related Guarantees shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

Section 305. The Trustee . The Trustee shall not be responsible in any manner for or in respect of the validity or sufficiency of this Fifth Supplemental Indenture, or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely.

Section 306. Governing Law . This Fifth Supplemental Indenture, the Senior Notes and the related Guarantees shall be governed by and construed in accordance with the laws of the State of New York. For the avoidance of doubt, the application of article 470-1 to 470-19 (inclusive) of the Luxembourg law dated August 10, 1915 on commercial companies, as amended, is expressly excluded.

Section 307. Counterparts . This Fifth Supplemental Indenture may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such counterparts shall together constitute but one and the same instrument.

Section 308. Additional Guarantors . If at any time there is more than one Guarantor in respect of the Senior Notes, then each such Guarantor shall be deemed to Guarantee the Senior Notes jointly and severally with each other such Guarantor, and any reference in the Indenture and this Fifth Supplemental Indenture to "the Guarantor" shall be deemed to be a reference to each such Guarantor.

[ *Remainder of page left intentionally blank.* ]

IN WITNESS WHEREOF, the parties hereto have caused this Fifth Supplemental Indenture to be duly executed as of the day and year first above written.

INGERSOLL-RAND LUXEMBOURG FINANCE S.A.

By: /s/ Jeffrey Tallyen
Name: Jeffrey Tallyen
Title: Class A Director

By: /s/ Timea Orosz
Name: Timea Orosz
Title: Class B Director

INGERSOLL-RAND PUBLIC LIMITED COMPANY

By: /s/ Richard E. Daudelin
Name: Richard E. Daudelin
Title: Treasurer

INGERSOLL-RAND GLOBAL HOLDING COMPANY LIMITED

By: /s/ Scott R. Williams
Name: Scott R. Williams
Title: Assistant Treasurer

INGERSOLL-RAND LUX INTERNATIONAL HOLDING COMPANY S.À R.L

By: /s/ Pascal Campaignolle
Name: Pascal Campaignolle
Title: Class A Manager

By: /s/ Mark Lee
Name: Mark Lee
Title: Class B Manager

INGERSOLL-RAND IRISH HOLDINGS UNLIMITED COMPANY

By: /s/ Christopher Donohoe
Name: Christopher Donohoe
Title: Director

INGERSOLL-RAND COMPANY

By: /s/ Scott R. Williams
Name: Scott R. Williams
Title: Assistant Treasurer

WELLS FARGO BANK, NATIONAL ASSOCIATION as Trustee

By: /s/ Stefan Victory
Name: Stefan Victory
Title: Vice President

**EXHIBIT A-1**

**Form of 3.800% Senior Notes due 2029**

[Global Security Legend]

THIS GLOBAL SECURITY IS HELD BY THE U.S. DEPOSITARY (AS DEFINED IN THE INDENTURE GOVERNING THIS SECURITY) OR ITS NOMINEE IN CUSTODY FOR THE BENEFIT OF THE BENEFICIAL OWNERS HEREOF, AND IS NOT TRANSFERABLE TO ANY PERSON UNDER ANY CIRCUMSTANCES EXCEPT THAT (I) THE TRUSTEE MAY MAKE SUCH NOTATIONS HEREON AS MAY BE REQUIRED PURSUANT TO THE INDENTURE, (II) THIS GLOBAL SECURITY MAY BE EXCHANGED IN WHOLE BUT NOT IN PART PURSUANT TO SECTION 305 OF THE INDENTURE, (III) THIS GLOBAL SECURITY MAY BE DELIVERED TO THE TRUSTEE FOR CANCELLATION PURSUANT TO SECTION 309 OF THE INDENTURE AND (IV) THIS GLOBAL SECURITY MAY BE TRANSFERRED TO A SUCCESSOR U.S. DEPOSITARY WITH THE PRIOR WRITTEN CONSENT OF THE ISSUER. UNLESS AND UNTIL IT IS EXCHANGED IN WHOLE OR IN PART FOR SECURITIES IN DEFINITIVE FORM, THIS SECURITY MAY NOT BE TRANSFERRED EXCEPT AS A WHOLE BY THE U.S. DEPOSITARY TO A NOMINEE OF THE U.S. DEPOSITARY OR BY A NOMINEE OF THE U.S. DEPOSITARY TO THE U.S. DEPOSITARY OR ANOTHER NOMINEE OF THE U.S. DEPOSITARY OR BY THE U.S. DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR U.S. DEPOSITARY OR A NOMINEE OF SUCH SUCCESSOR U.S. DEPOSITARY. UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY (55 WATER STREET, NEW YORK, NEW YORK) ("DTC") TO THE ISSUER OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR SUCH OTHER NAME AS MAY BE REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR SUCH OTHER ENTITY AS MAY BE REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

No. CUSIP No. _____

$ _____

INGERSOLL-RAND LUXEMBOURG FINANCE S.A., a Luxembourg public limited liability company ( *société anonyme* ) with registered office at 1 avenue du Bois, L-1251 Luxembourg and registered with the Luxembourg Register of Commerce and Companies (RCS) under number B 189791 (herein called the "Company", which term includes any successor company under the Indenture hereinafter referred to), for value received, hereby promises to pay to CEDE & CO., or registered assigns, the principal sum of $[_____] ([_____] DOLLARS)

[, as it may be increased or decreased as set forth on the Schedule of Exchanges of Interests in the Global Note attached hereto,] on March 21, 2029, and to pay interest thereon from and including March 21, 2019 (the "Original Issue Date"), or from the most recent Interest Payment Date to which interest has been paid or duly provided for, semiannually on March 21 and September 21 in each year, commencing September 21, 2019, at the rate per annum provided in the title hereof, until the principal hereof is paid or made available for payment.

The interest so payable, and punctually paid or duly provided for, on any Interest Payment Date will, as provided in such Indenture, be paid to the person in whose name this Security (or one or more Predecessor Securities) is registered at the close of business on the Regular Record Date for such interest, which shall be March 6 or September 6 (whether or not a Business Day), as the case may be, next preceding such Interest Payment Date. Any such interest not so punctually paid or duly provided for will forthwith cease to be payable to the Holder on such Regular Record Date and may either be paid to the person in whose name this Security (or one or more Predecessor Securities) is registered at the close of business on a Special Record Date for the payment of such Defaulted Interest to be fixed by the Trustee, notice whereof shall be given to Holders of Securities of this series not less than 10 days prior to such Special Record Date, or be paid at any time in any other lawful manner not inconsistent with the requirements of any securities exchange on which the Securities of this series may be listed, and upon such notice as may be required by such exchange, all as more fully provided in said Indenture.

Interest shall be computed on the basis of a year of twelve 30-day months.

Payment of the principal of (and premium, if any, on) and interest, if any, on this Security will be made at the office or agency of the Company maintained for that purpose in the Borough of Manhattan, The City of New York, in coin or currency of the United States of America, provided , however , that at the option of the Company payment of interest may be made by check mailed to the address of or funds transferred to the person entitled thereto as such address shall appear in the Security Register.

REFERENCE IS HEREBY MADE TO THE FURTHER PROVISIONS OF THIS SECURITY SET FORTH ON THE REVERSE HEREOF, WHICH FURTHER PROVISIONS SHALL FOR ALL PURPOSES HAVE THE SAME EFFECT AS IF SET FORTH AT THIS PLACE.

Unless the certificate of authentication hereon has been executed by the Trustee referred to on the reverse hereof by manual signature, this Security shall not be entitled to any benefit under the Indenture or be valid or obligatory for any purpose.

[ *Remainder of page left intentionally blank.* ]

IN WITNESS WHEREOF, the Company has caused this instrument to be duly executed and delivered on the date first written above.

INGERSOLL-RAND LUXEMBOURG FINANCE S.A.

By_____
Name:
Title:

This is one of the Securities of the series designated therein referred to in the within-mentioned Indenture.

Dated:

WELLS FARGO BANK, NATIONAL ASSOCIATION, as Trustee

By_____
Authorized Signatory

(Reverse of Note)

INGERSOLL-RAND LUXEMBOURG FINANCE S.A.

3.800% Senior Notes due 2029

This Security is one of a duly authorized issue of securities of the Company (herein called the "Securities"), issued and to be issued in one or more series under an Indenture, dated as of February 21, 2018, as supplemented (herein called the "Indenture"), among the Company, Ingersoll-Rand plc, Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Lux International Holding Company S.à r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company (herein called the "Guarantors", which term includes any successor guarantor under the Indenture) and Wells Fargo Bank, National Association, as Trustee (herein called the "Trustee", which term includes any successor trustee under the Indenture), to which Indenture and all indentures supplemental thereto reference is hereby made for a statement of the respective rights, limitations of rights, duties and immunities thereunder of the Company, the Guarantors, the Trustee and the Holders of the Securities and of the terms upon which the Securities are, and are to be, authenticated and delivered. This Security is one of the series designated on the face hereof, initially limited in aggregate principal amount to [_____].

The Securities of this series are subject to redemption upon not less than 30 or more than 60 days' notice delivered electronically or by mail to the Holders of such Securities at their addresses in the Security Register for such series or otherwise in accordance with the procedures of the U.S. Depositary, at any time and from time to time, prior to December 21, 2028, as a whole or in part, at the election of the Company, at a Redemption Price equal to the greater of:

(a) 100% of the principal amount of the Securities to be redeemed, or

(b) as determined by the Quotation Agent (as defined below), the sum of the present values of the remaining scheduled payments of principal and interest on the Securities to be redeemed that would be due if such series of Securities matured on the Par Call Date (as defined below) (except that if the Redemption Date is not an interest payment date, the amount of the next succeeding scheduled interest payment will be reduced (solely for the purpose of this calculation) by the amount of interest accrued thereon to the Redemption Date, discounted to the Redemption Date on a semi-annual basis assuming a 360-day year consisting of twelve 30-day months at a discount rate equal to the Adjusted Treasury Rate (as defined below) plus 20 basis points, plus, in the case of each of clauses (a) and (b), accrued and unpaid interest on the principal amount of the Securities to be redeemed to, but not including, the Redemption Date.

The Securities of this series are subject to redemption upon not less than 30 or more than 60 days' notice delivered electronically or by mail to the Holders of such Securities at their addresses in the Security Register for such series or otherwise in accordance with the procedures of the U.S. Depositary, in whole or in part at any time and from time to time on or after December 21, 2028, at a Redemption Price equal to 100% of the principal amount of the notes to

be redeemed, plus accrued and unpaid interest on the principal amount of the Securities to be redeemed to, but not including, the Redemption Date.

Unless the Company defaults in payment of the Redemption Price, interest will cease to accrue on the Securities or portions of the Securities called for redemption on and after the Redemption Date.

" Adjusted Treasury Rate " means, with respect to any Redemption Date, the rate per year equal to the semi-annual equivalent yield to maturity or interpolated (on a day count basis) of the Comparable Treasury Issue, assuming a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for that Redemption Date.

" Comparable Treasury Issue " means the United States Treasury security selected by the Quotation Agent as having an actual or interpolated maturity comparable to the remaining term of the Securities to be redeemed that would be used, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of comparable maturity to the remaining term of such Securities (assuming, for purposes of this definition, that such Securities matured on the Par Call Date).

" Comparable Treasury Price " means, with respect to any Redemption Date, (i) the average of the Reference Treasury Dealer Quotations for that Redemption Date, after excluding the highest and lowest of the Reference Treasury Dealer Quotations, or (ii) if the Quotation Agent obtains fewer than four Reference Treasury Dealer Quotations, the average of the Reference Treasury Dealer Quotations so received.

" Par Call Date " means December 21, 2028.

" Quotation Agent " means Goldman Sachs & Co. LLC.

" Reference Treasury Dealer " means (i) each of Citigroup Global Markets Inc., Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated, and their respective successors, unless any of them ceases to be a primary U.S. Government securities dealer in New York City (a "Primary Treasury Dealer"), in which case the Company shall substitute another Primary Treasury Dealer, and (ii) any other Primary Treasury Dealers selected by the Quotation Agent.

" Reference Treasury Dealer Quotations " means, with respect to each Reference Treasury Dealer and any Redemption Date, the average, as determined by the Quotation Agent, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Issuer by that Reference Treasury Dealer at 5:00 p.m., New York City time, on the third Business Day preceding that Redemption Date.

In the event of redemption of this Security in part only, a new Security or Securities of this series for the unredeemed portion hereof will be issued in the name of the Holder hereof upon the cancellation hereof.

Any Payor may elect to redeem the outstanding Securities, in whole but not in part, at any time, upon not less than 30 nor more than 60 days' prior written notice delivered electronically or mailed by first-class mail to the registered address of each Holder of the Securities or otherwise in accordance with the procedures of the U.S. Depositary, at a Redemption Price equal to 100% of the principal amount of the Securities to be redeemed, plus accrued and unpaid interest thereon, if any, to, but not including, the date fixed for redemption (a "Tax Redemption Date"), and Additional Amounts, if any, then due or becoming due on the Tax Redemption Date in the event (i) such Payor is, has become or would become obligated to pay, on the next date on which any amount would be payable with respect to the Securities, any Additional Amounts or indemnification payments (other than in respect of documentary taxes) as a result of (A) a change or amendment in the laws or treaties (including any regulations or rulings promulgated thereunder) of a Relevant Taxing Jurisdiction; or (B) any change or amendment in the application, administration or interpretation of such laws, treaties, regulations or rulings (including pursuant to a holding, judgment or order by a court of competent jurisdiction); which change or amendment, in either case, is announced or becomes effective after the date hereof (or, if the applicable Relevant Taxing Jurisdiction became a Relevant Taxing Jurisdiction on a later date, after such later date) (each of the foregoing in clauses (A) and (B), a "Change in Tax Law"); and (ii) the Company has determined in its business judgment that the obligation to pay such Additional Amounts cannot be avoided by the use of reasonable measures available to the Company.

Notwithstanding the foregoing, no such notice of redemption shall be given earlier than 90 days prior to the earliest date on which such Payor would, but for such redemption, be obligated to make such payment or withholding or later than 90 days after such Payor is first obligated to make such payment or withholding. Prior to the delivery or mailing of any notice of redemption of the Securities pursuant to the foregoing, such Payor shall deliver to the Trustee (1) a certificate signed by a duly authorized officer stating that such Payor is entitled to effect the redemption and setting forth a statement of facts showing that the conditions precedent to the right of such Payor to so redeem have occurred and (2) an opinion of an independent tax counsel of recognized international standing to the effect that the circumstances referred to in clause (i) in the first sentence of the previous paragraph exist, and the Trustee shall accept such certificate and such opinion as sufficient evidence of the satisfaction of the conditions precedent above, which acceptance shall then be conclusive and binding on the Holders of Securities.

The Company will be required to redeem the Securities of this series at a Redemption Price equal to 101% of the aggregate principal amount of the Securities, plus accrued and unpaid interest from the date of initial issuance or the most recent interest payment date to but excluding the special mandatory redemption date (subject to the right of holders of record on the relevant record date to receive interest due on the relevant Interest Payment Date) (the "Special Mandatory Redemption Price") if the acquisition (the "Acquisition") of PFS Systems by IR Parent is not completed, or IR Parent's offer is terminated, on or before January 31, 2020.

If the Company is required to redeem the Securities of this series pursuant to this special mandatory redemption, the Company shall cause the notice of redemption to be delivered electronically or by mail to the Holders of such Securities at their addresses in the Security

Register for such series or otherwise in accordance with the procedures of the U.S. Depositary, with a copy to the trustee, by the earlier of (1) January 29, 2020, if the Acquisition has not been completed by that date, or (2) five business days after the occurrence of the event that requires the Company to redeem such series of Securities. Unless the Company defaults in payment of the Redemption Price, interest shall cease to accrue on the Securities on and after the Special Mandatory Redemption Date.

" Special Mandatory Redemption Date " means the earlier to occur of (i) January 31, 2020 if IR Parent has not completed the proposed Acquisition on or prior to January 31, 2020, or (ii) the 30th day (or if such day is not a business day, the first business day thereafter) following the termination of IR Parent's offer for any reason.

The Securities of this series are subject to redemption upon the occurrence of a Change of Control Triggering Event. Unless the Company has exercised its right to redeem this Security in full as described above, the Indenture provides that each Holder of the Securities of this series will have the right to require the Company to purchase all or a portion of such Holder's Securities of this series pursuant to the offer described below (the "Change of Control Offer") at a purchase price equal to 101% of the principal amount thereof plus accrued and unpaid interest, if any, to the date of purchase, subject to the rights of Holders of Securities of this series on the relevant record date to receive interest due on the relevant interest payment date.

Within 30 days following the date upon which the Change of Control Triggering Event occurred, or at the Company's option, prior to any Change of Control but after the public announcement of the pending Change of Control, the Company will be required to send, by electronic delivery or first class mail or otherwise in accordance with the procedures of the U.S. Depositary, a notice to each Holder of the Securities of this series, with a copy to the Trustee, which notice will govern the terms of the Change of Control Offer. Such notice will state, among other things, the purchase date, which must be no earlier than 30 days nor later than 60 days from the date such notice is delivered or mailed, other than as may be required by law (the "Change of Control Payment Date"). The notice, if delivered or mailed prior to the date of consummation of the Change of Control, will state that the Change of Control Offer is conditioned on the Change of Control being consummated on or prior to the Change of Control Payment Date.

Holders electing to have Securities purchased pursuant to a Change of Control Offer will be required to surrender their Securities, with the form below entitled "Option of Holder to Elect Purchase" completed, to the paying agent at the address specified in the notice, or transfer their Securities to the paying agent by book-entry transfer pursuant to the applicable procedures of the paying agent, prior to the close of business on the third Business Day prior to the Change of Control Payment Date.

On the Change of Control Payment Date, the Company will, to the extent lawful:

1. accept for payment all Securities of this series (or portions of Securities of this series) properly tendered pursuant to the Change of Control Offer; provided that the unpurchased portion of any Security of this series must be in a principal amount of $2,000 or an integral multiple of $1,000 in excess thereof;

2. deposit with the paying agent an amount equal to the aggregate payment in respect of all Securities of this series (or portions of Securities of this series) properly tendered pursuant to the Change of Control Offer; and

3. deliver or cause to be delivered to the Trustee the Securities of this series properly accepted for purchase, together with an officer's certificate stating the aggregate principal amount of Securities of this series (or portions of Securities of this series) being purchased.

The paying agent will promptly mail to each Holder of properly tendered Securities the purchase price for the Securities, and the Trustee will promptly authenticate and mail (or cause to be transferred by book-entry) to each such Holder new Securities equal in principal amount to any unpurchased portion of any Securities surrendered; provided that each new Security will be in a principal amount of $2,000 or an integral multiple of $1,000 in excess thereof.

The Company will not be required to make a Change of Control Offer if a third party makes such an offer in the manner, at the times and otherwise in compliance with the requirements for such an offer made by the Company and such third party purchases all properly tendered Securities of this series not withdrawn under its offer.

The Company will comply with the requirements of Rule 14e-1 under the Exchange Act and any other securities laws and regulations thereunder to the extent those laws and regulations are applicable in connection with the purchase of the Securities of this series as a result of a Change of Control Triggering Event. To the extent that the provisions of any such securities laws or regulations conflict with the Change of Control Offer provisions of the Securities of this series, the Company will comply with the applicable securities laws and regulations and will not be deemed to have breached its obligations under the Change of Control Offer provisions of the Securities of this series by virtue of such conflict.

For purposes of the Change of Control Offer provisions of the Securities, the following terms will be applicable:

"Below Investment Grade Rating Event" means the Securities of this series cease to be rated Investment Grade by at least two of the three Rating Agencies on any date during the period (the "Trigger Period") commencing 60 days prior to the first public announcement by IR Parent of any Change of Control (or pending Change of Control) and ending 60 days following the consummation of such Change of Control (which Trigger Period will be extended if the rating of the Securities is under publicly announced consideration for possible downgrade by any Rating Agency on such 60th day, such extension to last with respect to each Rating Agency until the date on which such Rating Agency considering such possible downgrade either (x) rates the Securities below Investment Grade or (y) publicly announces that it is no longer considering the Securities for possible downgrade; provided, that no such extension will occur if on such 60th day the Securities are rated Investment Grade not subject to review for possible downgrade by any Rating Agency).

"Change of Control" means the occurrence of any one of the following:

1) the direct or indirect sale, lease, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the assets of IR Parent and its subsidiaries taken as a whole to any "person" (as that term is used in Section 13(d) and Section 14(d) of the Exchange Act) other than to IR Parent or one of its subsidiaries;

2) the consummation of any transaction (including without limitation, any merger or consolidation) the result of which is that any "person" (as that term is used in Section 13(d) and Section 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 and Rule 13d-5 under the Exchange Act), directly or indirectly, of more than 50% of the outstanding Voting Stock of IR Parent, or other Voting Stock into which the Voting Stock of IR Parent is reclassified, consolidated, exchanged or changed, measured by voting power rather than number of shares;

3) the first day on which the majority of the members of the board of directors of IR Parent cease to be Continuing Directors;

4) IR Parent consolidates with, or merges with or into, any person, or any person consolidates with, or merges with or into, IR Parent, in any such event pursuant to a transaction in which any of the outstanding Voting Stock of IR Parent or such other person is converted into or exchanged for cash, securities or other property, other than any such transaction where the shares of the Voting Stock of IR Parent outstanding immediately prior to such transaction constitute, or are converted into or exchanged for, a majority of the Voting Stock of the surviving person immediately after giving effect to such transaction;

5) the adoption of a plan relating to the liquidation or dissolution of IR Parent; or

6) the failure of IR Parent to own, directly or indirectly, at least 51% of the Voting Stock of the Company.

Notwithstanding the foregoing, a transaction will not be deemed to involve a Change of Control under clause (2) above if (i) IR Parent becomes a direct or indirect wholly-owned subsidiary of a holding company and (ii) the shares of the Voting Stock of IR Parent outstanding immediately prior to such transaction constitute, or are converted into or exchanged for, a majority of the Voting Stock of such holding company immediately after giving effect to such transaction.

"Change of Control Triggering Event" means the occurrence of both a Change of Control and a Below Investment Grade Rating Event. Notwithstanding the foregoing, no Change of Control Triggering Event will be deemed to have occurred in connection with any particular Change of Control unless and until such Change of Control has actually been consummated.

"Continuing Director" means, as of any date of determination, any member of the board of directors of IR Parent who: (1) was a member of such board of directors on the date of the issuance of the Securities of this series; or (2) was nominated for election or elected to such

board of directors with the approval of a majority of the Continuing Directors who were members of such board of directors at the time of such nomination or election.

"Fitch" means Fitch Inc., a subsidiary of Fimalac, S.A., and its successors.

"Investment Grade" means (1) a rating of Baa3 or better by Moody's (or its equivalent under any successor rating category of Moody's); (2) a rating of BBB- or better by S&P (or its equivalent under any successor rating category of S&P); and (3) a rating of BBB- or better by Fitch (or its equivalent under any successor rating category of Fitch).

"Moody's" means Moody's Investors Service, Inc., a subsidiary of Moody's Corporation, and its successors.

"Rating Agency" means each of Moody's, S&P and Fitch; provided, that if any of Moody's, S&P and Fitch ceases to rate the Securities of this series or fails to make a rating of the Securities of this series publicly available for reasons outside of the Company's and the Guarantors' control, a "nationally recognized statistical rating organization," within the meaning of Rule 15c3-1(c)(2)(vi)(F) under the Exchange Act, selected by the Company as a replacement agency for Moody's, S&P or Fitch, or any of them, as the case may be, with respect to making a rating of the Securities of this series.

"S&P" means Standard & Poor's Ratings Services, a division of The McGraw-Hill Companies, Inc., and its successors.

"Voting Stock" of any specified person as of any date means the capital stock of such person that is at the time entitled to vote generally in the election of the board of directors of such person.

The Indenture contains provisions for defeasance of (a) the entire indebtedness of this Security and (b) certain restrictive covenants upon compliance by the Company with certain conditions set forth therein.

If an Event of Default with respect to Securities of this series shall occur and be continuing, the principal of the Securities of this series may be declared due and payable in the manner and with the effect provided in the Indenture.

The Indenture permits, with certain exceptions as therein provided, the amendment thereof and the modification of the rights and obligations of the Company and the Guarantors and the rights of the Holders of the Securities of each series to be affected under the Indenture at any time by the Company, the Guarantors and the Trustee with the consent of the Holders of a majority in principal amount of the Securities at the time Outstanding of all series to be affected. The Indenture also contains provisions permitting the Holders of specified percentages in principal amount of the Securities at the time Outstanding of all series to be affected, on behalf of the Holders of all Securities of such series, to waive compliance by the Company and/or the Guarantors with certain provisions of the Indenture and certain past defaults under the Indenture and their consequences. Any such consent or waiver by the Holder of this Security shall be

conclusive and binding upon such Holder and upon all future Holders of this Security and of any Security issued upon the registration of transfer hereof or in exchange herefor or in lieu hereof, whether or not notation of such consent or waiver is made upon this Security.

No reference herein to the Indenture and no provision of this Security or of the Indenture shall alter or impair the obligation of the Company, which is absolute and unconditional, to pay the principal of (and premium, if any, on) and interest, if any, on this Security at the times, place and rate, and in the coin or currency, herein prescribed.

As provided in the Indenture and subject to certain limitations therein set forth, the transfer of this Security is registrable in the Security Register, upon surrender of this Security for registration of transfer at the office or agency of the Company in any place where the principal of (and premium, if any, on) and interest, if any, on this Security are payable, duly endorsed by, or accompanied by a written instrument of transfer in form satisfactory to the Company and the Security Registrar duly executed by, the Holder hereof or his or her attorney duly authorized in writing, and thereupon one or more new Securities of this series, of authorized denominations and for the same aggregate principal amount, will be issued to the designated transferee or transferees.

The Securities of this series are issuable only in registered form without coupons in denominations of $2,000 and integral multiples of $1,000 in excess thereof. As provided in the Indenture and subject to certain limitations therein set forth, Securities of this series are exchangeable for a like aggregate principal amount of Securities of this series of a different authorized denomination, as requested by the Holder surrendering the same.

No service charge shall be made for any such registration of transfer or exchange, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection therewith.

Prior to due presentment of this Security for registration of transfer, the Company, the Guarantors, the Trustee and any agent of the Company, the Guarantors or the Trustee may treat the person in whose name this Security is registered as the owner hereof for all purposes, whether or not this Security be overdue, and none of the Company, the Guarantors, the Trustee or any such agent shall be affected by notice to the contrary.

No recourse for the payment of the principal of (and premium, if any, on) or interest, if any, on this Security or any Guarantee endorsed hereon, or for any claim based hereon or thereon or otherwise in respect hereof or thereof, and no recourse under or upon any obligation, covenant or agreement of the Company or any Guarantor in the Indenture or in any indenture supplemental thereto, or in any Security or in any Guarantee, or because of the creation of any indebtedness represented thereby, shall be had against any incorporator, shareholder, officer or director, as such, past, present or future, of the Company or any Guarantor or of any successor corporation, either directly or through the Company or any Guarantor or any successor corporation, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise, all such liability being, by the acceptance hereof and as part of the consideration for the issue hereof, expressly waived and released.

**THIS SECURITY SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.**

All terms used in this Security which are defined in the Indenture shall have the meanings assigned to them in the Indenture. In the event that a provision of this Security conflicts with the Indenture, the terms of the Indenture will govern.

**Option of Holder to Elect Purchase**

If you want to elect to have this Security purchased by the Company pursuant to Section 208 of the Fifth Supplemental Indenture, check the box below:

If you want to elect to have only part of the Security purchased by the Company pursuant to Section 208 of the Fifth Supplemental Indenture, state the amount you elect to have purchased:

$_____

Date:_____

Your Signature: __

(Sign exactly as your name appears on the face of this Security)

Tax Identification No.: __

Signature Guarantee:** _____

_____

** Participant in a recognized Signature Guarantee Medallion Program (or other signature guarantor acceptable to the Trustee)

SCHEDULE OF EXCHANGES OF INTERESTS IN THE GLOBAL NOTE*

The initial outstanding principal amount of this Global Note is $_____. The following exchanges of a part of this Global Note for an interest in another Global Note or for a Definitive Note, or exchanges of a part of another Global or Definitive Note for an interest in this Global Note, have been made:

| Date of Exchange | Amount of decrease in Principal Amount | Amount of increase in Principal Amount | Amount of this Global Security | Principal Amount of this Global Security following such decrease or increase | Signature of authorized officer of Trustee or Note Custodian |
|---|---|---|---|---|---|

*This schedule should only be included if the Senior Notes are issued in global form.

**EXHIBIT A-2**

**Form of Guarantee to 3.800% Senior Notes due 2029**

For value received, each of Ingersoll-Rand plc, a company duly organized and existing under the laws of Ireland, Ingersoll-Rand Global Holding Company Limited, a corporation incorporated in Delaware, Ingersoll-Rand Lux International Holding Company S.à r.l., a Luxembourg private limited liability company ( *société à responsabilité limitée* ) with registered office at 1 avenue du Bois, L-1251 Luxembourg and registered with the Luxembourg Register of Commerce and Companies under number B 182971, Ingersoll-Rand Irish Holdings Unlimited Company, an Irish private limited company and Ingersoll-Rand Company, a corporation incorporated in New Jersey (each herein called a "Guarantor", which term includes any successor Person under the Indenture referred to in the Security upon which this Guarantee is endorsed), hereby irrevocably and unconditionally guarantees to the Holder of the Security upon which this Guarantee is endorsed and to the Trustee for itself and on behalf of each such Holder the due and punctual payment of the principal of (and premium, if any, on) and interest on such Security and the due and punctual payment of the sinking fund or analogous payments referred to therein, if any, when and as the same shall become due and payable, whether at the Stated Maturity, by declaration of acceleration, call for redemption or otherwise, according to the terms thereof and of the Indenture referred to therein, and all other amounts owed under the Indenture, all in accordance with and subject to the terms and limitations of the Security on which this Guarantee is endorsed and Article Thirteen of the Indenture. In case of the failure of Ingersoll-Rand Luxembourg Finance S.A., a Luxembourg public company limited by shares ( *société anonyme* ) (herein called the "Company", which term includes any successor Person under such Indenture), promptly to make any such payment of principal (and premium, if any) or interest or any such sinking fund or analogous payment, each Guarantor hereby agrees to cause any such payment to be made promptly when and as the same shall become due and payable, whether at the Stated Maturity or by declaration of acceleration, call for redemption or otherwise, and as if such payment were made by the Company, subject to the terms and limitations of Article Thirteen of the Indenture.

Each such Guarantor shall be deemed to Guarantee the Security jointly and severally with each other such Guarantor.

This Guarantee shall not be valid or obligatory for any purpose until the certificate of authentication of such Security shall have been manually executed by or on behalf of the Trustee under such Indenture.

All terms used in this Guarantee which are defined in such Indenture shall have the meanings assigned to them in such Indenture.

THIS GUARANTEE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

Executed and delivered on this [___] day of [_____], 2019.

Ingersoll-Rand plc

By _____
Name:
Title:

Ingersoll-Rand Global Holding Company Limited

By _____
Name:
Title:

Ingersoll-Rand Lux International Holding Company S.à r.l.

By_____
Name:
Title:

Ingersoll-Rand Company

By_____
Name:
Title:

**Exhibit 4.5**

**INGERSOLL-RAND LUXEMBOURG FINANCE S.A., as COMPANY,**

**INGERSOLL-RAND PLC,**

**INGERSOLL-RAND GLOBAL HOLDING COMPANY LIMITED,**

**INGERSOLL-RAND LUX INTERNATIONAL HOLDING COMPANY S.À R.L.,**

**INGERSOLL-RAND IRISH HOLDINGS UNLIMITED COMPANY, and**

**INGERSOLL-RAND COMPANY,**

**as GUARANTORS**

**AND**

**WELLS FARGO BANK, NATIONAL ASSOCIATION, as TRUSTEE**

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# SIXTH SUPPLEMENTAL INDENTURE

**Dated as of March 21, 2019**

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THIS SIXTH SUPPLEMENTAL INDENTURE, dated as of March 21, 2019, is among INGERSOLL-RAND LUXEMBOURG FINANCE S.A., a Luxembourg public limited liability company ( *société anonyme* ) with registered office at 1 avenue du Bois, L-1251 Luxembourg and registered with the Luxembourg Register of Commerce and Companies (RCS) under number B 189791 (the "Company"), INGERSOLL-RAND PLC, a public limited company duly organized and existing under the laws of Ireland ("IR Parent"), INGERSOLL-RAND GLOBAL HOLDING COMPANY LIMITED, a corporation incorporated in Delaware ("IR Global"), INGERSOLL-RAND LUX INTERNATIONAL HOLDING COMPANY S.À R.L., a Luxembourg private limited liability company ( *société à responsabilité limitée* ) with registered office at 1 avenue du Bois, L-1251 Luxembourg and registered with the RCS under number B 182971 ("Lux International"), INGERSOLL-RAND IRISH HOLDINGS UNLIMITED COMPANY, an Irish private unlimited company ("Irish Holdings"), and INGERSOLL-RAND COMPANY, a corporation incorporated in New Jersey ("IR Company" and, together with IR Parent, IR Global, Lux International, Irish Holdings and IR Company, the "Guarantors"), and WELLS FARGO BANK, NATIONAL ASSOCIATION, a national banking association, acting as Trustee under the Indenture referred to below (the "Trustee").

WITNESSETH:

WHEREAS, the Company has duly authorized the execution and delivery of an Indenture dated as of February 21, 2018, among the Company, the Guarantors and the Trustee (the "Indenture"), to provide for the issuance from time to time of its unsecured debentures, notes or other evidences of indebtedness to be issued in one or more series (collectively, the "Securities" and each, a "Security");

WHEREAS, each Guarantor has duly authorized the execution and delivery of the Indenture to provide for Guarantees of the Securities provided for therein, as endorsed on each Security and authenticated and delivered pursuant to the Indenture (collectively, the "Guarantees" and each, a "Guarantee");

WHEREAS, Section 901 of the Indenture provides, among other things, that the Company, the Guarantors and the Trustee may enter into indentures supplemental to the Indenture for, among other things, the purpose of establishing the form and terms of the Securities of any series, as permitted under Sections 201 and 301 of the Indenture, and the form and terms of the Guarantees, as permitted under Sections 201 and 206 of the Indenture;

WHEREAS, the Company has determined to issue a series of Securities entitled the "4.500% Senior Notes due 2049," (the "Senior Notes"), with such series guaranteed by the Guarantors pursuant to the Indenture;

WHEREAS, the Company and the Guarantors have each duly authorized the execution and delivery of this Sixth Supplemental Indenture in order to provide for certain supplements to the Indenture which shall only be applicable to the Senior Notes and the related Guarantees;

WHEREAS, all acts and things necessary to make this Sixth Supplemental Indenture a valid and binding agreement of each of the Company and the Guarantors according to its terms have been done and performed;

WHEREAS, all acts and things necessary to make the Senior Notes, when executed by the Company and authenticated and delivered by the Trustee as provided in the Indenture and this Sixth Supplemental Indenture, the valid and binding obligations of the Company have been done and performed; and

WHEREAS, all acts and things necessary to make the related Guarantees, when executed by the Guarantors and authenticated and delivered by the Trustee as provided in the Indenture and this Sixth Supplemental Indenture, the valid and binding obligations of the Guarantors have been done and performed;

NOW, THEREFORE, in consideration of the premises, of the purchase and acceptance of the Senior Notes by the Holders thereof, and of the sum of one dollar duly paid to it by the Trustee at the execution and delivery of these presents, the receipt whereof is hereby acknowledged, each of the Company and the Guarantors covenants and agrees with the Trustee to supplement the Indenture, only for purposes of the Senior Notes and the related Guarantees, as follows:

## ARTICLE ONE
## DEFINITIONS

Section 101. Definitions . For all purposes of this Sixth Supplemental Indenture, except as otherwise expressly provided or unless the context otherwise requires, (i) references to any Article, Section or subdivision thereof are references to an Article, Section or other subdivision of this Sixth Supplemental Indenture and (ii) capitalized terms not otherwise defined herein shall have the meanings set forth in the Indenture.

## ARTICLE TWO
## TERMS AND CONDITIONS OF THE SENIOR NOTES AND THE RELATED GUARANTEES

Section 201. Designation, Principal Amount and Terms . There is hereby authorized and established, pursuant to Section 301 of the Indenture, a series of Securities designated as the "4.500% Senior Notes due 2049," with such series guaranteed by the Guarantors pursuant to the Indenture.

(a) The 4.500% Senior Notes due 2049 and the related Guarantees shall be executed, authenticated and delivered in accordance with the provisions of, and shall in all respects be subject to, the terms, conditions and covenants of the Indenture and this Sixth Supplemental Indenture (including the form of Security set forth in Exhibit A-1 hereto and the form of Guarantee set forth in Exhibit A-2 hereto). Subject to Section 203 hereof, the aggregate principal amount of the 4.500% Senior Notes due 2049 which may initially be authenticated and

delivered under this Sixth Supplemental Indenture shall not, except as permitted by the provisions of the Indenture, exceed $350,000,000.

Section 202. Optional Redemption . The Company may, at its option, elect to redeem any or all of the outstanding Senior Notes, in whole or in part, at any time and from time to time prior to September 21, 2048, upon not less than 30 nor more than 60 days' prior written notice delivered electronically or mailed by first-class mail to the registered address of each Holder of the Senior Notes or otherwise in accordance with the procedures of the U.S. Depositary, at a Redemption Price equal to the greater of (1) 100% of the principal amount of the Senior Notes to be redeemed, or (2) as determined by the Quotation Agent (as defined below), the sum of the present values of the remaining scheduled payments of principal and interest on the Senior Notes to be redeemed that would be due if such series of notes matured on the Par Call Date (as defined below) (except that if the Redemption Date is not an interest payment date, the amount of the next succeeding scheduled interest payment will be reduced (solely for the purpose of this calculation) by the amount of interest accrued thereon to the Redemption Date, discounted to the Redemption Date on a semi-annual basis assuming a 360-day year consisting of twelve 30-day months at a discount rate equal to the Adjusted Treasury Rate (as defined below) plus 25 basis points, plus, in the case of each of clauses (1) and (2), accrued and unpaid interest on the principal amount of the Senior Notes being redeemed to, but not including, the Redemption Date.

The Company may, at its option, elect to redeem any or all of the outstanding Senior Notes, in whole or in part, at any time and from time to time on or after September 21, 2048, upon not less than 30 nor more than 60 days' prior written notice delivered electronically or mailed by first-class mail to the registered address of each Holder of the Senior Notes or otherwise in accordance with the procedures of the U.S. Depositary, at a Redemption Price equal to 100% of the principal amount of the Senior Notes to be redeemed, plus accrued and unpaid interest on the principal amount of the Senior Notes being redeemed to, but not including, the Redemption Date.

Unless the Company defaults in payment of the Redemption Price, interest shall cease to accrue on the Senior Notes or portions of the Senior Notes called for redemption on and after the Redemption Date.

"Adjusted Treasury Rate" means, with respect to any Redemption Date, the rate per year equal to the semi-annual equivalent yield to maturity or interpolated (on a day count basis) of the Comparable Treasury Issue, assuming a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for that Redemption Date.

"Comparable Treasury Issue" means the United States Treasury security selected by the Quotation Agent as having an actual or interpolated maturity comparable to the remaining term of the Senior Notes to be redeemed that would be used, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities

of comparable maturity to the remaining term of such Senior Notes (assuming, for the purposes of this definition, that the Senior Notes matured on the Par Call Date of the Senior Notes).

"Comparable Treasury Price" means, with respect to any Redemption Date, (i) the average of the Reference Treasury Dealer Quotations for that Redemption Date, after excluding the highest and lowest of the Reference Treasury Dealer Quotations, or (ii) if the Quotation Agent obtains fewer than four Reference Treasury Dealer Quotations, the average of the Reference Treasury Dealer Quotations so received.

"Par Call Date" means September 21, 2048.

"Quotation Agent" means Goldman Sachs & Co. LLC.

"Reference Treasury Dealer" means (i) each of Citigroup Global Markets Inc., Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated, and their respective successors, unless any of them ceases to be a primary U.S. Government securities dealer in New York City (a "Primary Treasury Dealer"), in which case the Company shall substitute another Primary Treasury Dealer, and (ii) any other Primary Treasury Dealers selected by the Quotation Agent.

"Reference Treasury Dealer Quotations" means, with respect to each Reference Treasury Dealer and any Redemption Date, the average, as determined by the Quotation Agent, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Issuer by that Reference Treasury Dealer at 5:00 p.m., New York City time, on the third Business Day preceding that Redemption Date.

Section 203. Additional Issuances . The Company may, at any time, without the consent of the Holders of the Senior Notes, issue additional Senior Notes of the same series having the same ranking and the same interest rate, maturity and other terms as any of the existing Senior Notes. Any additional Senior Notes having such similar terms, together with the existing Senior Notes, may constitute a single series of Senior Notes under the Indenture and this Sixth Supplemental Indenture; provided, however, if the additional Senior Notes are not fungible with the existing Senior Notes of such series for U.S. federal income tax purposes, such additional Senior Notes shall have a different CUSIP number. No additional Senior Notes may be issued if an Event of Default under the Indenture has occurred and is continuing with respect to the Senior Notes.

Section 204. Special Mandatory Redemption . The Company shall redeem the Senior Notes at a Redemption Price equal to 101% of the aggregate principal amount of the Senior Notes, plus accrued and unpaid interest from the date of initial issuance or the most recent interest payment date, but not including, the Special Mandatory Redemption Date (as defined below) subject to the right of holders of record on the relevant record date to receive interest due on the relevant Interest Payment Date) (the "Special Mandatory Redemption Price") if the acquisition (the "Acquisition") of Precision Flow Systems by IR Parent is not completed, or IR Parent's offer is terminated, on or before January 31, 2020.

If the Company is required to redeem the Senior Notes pursuant to this special mandatory redemption, the Company shall cause the notice of redemption to be delivered electronically or mailed by first-class mail to the registered address of each Holder of the Senior Notes or otherwise in accordance with the procedures of the U.S. Depositary, with a copy to the trustee, by the earlier of (1) January 29, 2020, if the Acquisition has not been completed by that date, or (2) five business days after the occurrence of the event that requires the Company to redeem such Senior Notes.

Unless the Company defaults in payment of the Redemption Price, interest shall cease to accrue on the Senior Notes on and after the Special Mandatory Redemption Date.

"Special Mandatory Redemption Date" means the earlier to occur of (i) January 31, 2020, if IR Parent has not completed the proposed Acquisition on or prior to January 31, 2020, or (ii) the 30th day (or if such day is not a business day, the first business day thereafter) following the termination of IR Parent's offer for any reason.

Section 205. Special Tax Redemption . Any Payor (as defined below) may elect to redeem the outstanding Senior Notes, in whole but not in part, at any time, upon not less than 30 nor more than 60 days' prior written notice delivered electronically or mailed by first-class mail to the registered address of each Holder of the Senior Notes or otherwise in accordance with the procedures of the U.S. Depositary, at a Redemption Price equal to 100% of the principal amount of the Senior Notes to be redeemed, plus accrued and unpaid interest thereon, if any, to, but not including, the date fixed for redemption (a "Tax Redemption Date"), and Additional Amounts (as defined below), if any, then due or becoming due on the Tax Redemption Date in the event (i) such Payor is, has become or would become obligated to pay, on the next date on which any amount would be payable with respect to the Senior Notes, any Additional Amounts or indemnification payments (other than in respect of documentary taxes) as a result of (A) a change or amendment in the laws or treaties (including any regulations or rulings promulgated thereunder) of a Relevant Taxing Jurisdiction; or (B) any change or amendment in the application, administration or interpretation of such laws, treaties, regulations or rulings (including pursuant to a holding, judgment or order by a court of competent jurisdiction); which change or amendment, in either case, is announced or becomes effective after the date hereof (or, if the applicable Relevant Taxing Jurisdiction became a Relevant Taxing Jurisdiction on a later date, after such later date) (each of the foregoing in clauses (A) and (B), a "Change in Tax Law"); and (ii) such Payor has determined in its business judgment that the obligation to pay such Additional Amounts cannot be avoided by the use of reasonable measures available to such Payor. Notwithstanding the foregoing, no such notice of redemption shall be given earlier than 90 days prior to the earliest date on which such Payor would, but for such redemption, be obligated to make such payment or withholding or later than 90 days after such Payor is first obligated to make such payment or withholding. Prior to the delivery or mailing of any notice of redemption of the Senior Notes pursuant to the foregoing, such Payor shall deliver to the Trustee (1) a certificate signed by a duly authorized officer stating that such Payor is entitled to effect the redemption and setting forth a statement of facts showing that the conditions precedent to the right of such Payor to so redeem have occurred and (2) an opinion of an independent tax counsel of recognized international standing to the effect that the circumstances referred to in clause (i) in

the first sentence of this Section 205 exist, and the Trustee shall accept such certificate and such opinion as sufficient evidence of the satisfaction of the conditions precedent above, which acceptance shall then be conclusive and binding on the Holders of Senior Notes.

Section 206. Tax Considerations for Holders . Any Payor may request at any time from Holders of Senior Notes who are "United States persons" within the meaning of Section 7701(a)(30) of the Internal Revenue Code of 1986, as amended (the "Code"), to provide a properly completed and duly executed U.S. Internal Revenue Service Form W-9 (or valid substitute form) and from Holders of Senior Notes who are not "United States persons" within the meaning of Section 7701(a)(30) of the Code to provide a properly completed and duly executed U.S. Internal Revenue Service Form W-8BEN, W-8ECI or W-8IMY (or valid substitute form). Any such request must be complied with by such Holder or Holders within 30 days' of the receipt thereof, such request to be made in writing and mailed by first-class mail to the registered address of such Holder or Holders. If a form previously delivered pursuant to this Section 206 expires or becomes obsolete, or if there is a change in circumstances requiring a change in the form previously delivered, the Holder that previously delivered such form shall deliver a new, properly completed and duly executed form on or before the date that the previously delivered form expires or becomes obsolete or promptly after the change in circumstances occurs.

Section 207. Additional Amounts .

All payments made by the Company or any Guarantor (except IR Global and IR Company) or a successor of the Company or such Guarantor (except IR Global and IR Company) (each a "Payor") on the Senior Notes in respect of interest, premium (if any) and principal shall be made without withholding or deduction for, or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature ("Taxes") unless the withholding or deduction of such Taxes is then required by law. If any deduction or withholding for, or on account of, any Taxes imposed or levied by or on behalf of:

(1) any jurisdiction from or through which payment on the Senior Notes or the applicable Guarantee is made in respect of interest, premium or principal, or any political subdivision or governmental authority thereof or therein having the power to tax; or

(2) any other jurisdiction in which a Payor is organized or otherwise considered to be a resident for tax purposes, or any political subdivision or governmental authority thereof or therein having the power to tax (each of clauses (1) and (2), a "Relevant Taxing Jurisdiction"),

shall at any time be required from any payments made with respect to the Senior Notes in respect of interest, premium or principal, the Payor shall pay (together with such payments) such additional amounts (the "Additional Amounts") as may be necessary in order that the net amounts received in respect of such payments by each beneficial owner of the Senior Notes or the Guarantee, as the case may be, after such withholding or deduction (including any such deduction or withholding from such Additional Amounts), equal the amounts which would have

been received in respect of such payments in the absence of such withholding or deduction; *provided* , *however* , that no such Additional Amounts shall be payable with respect to:

(1) any Taxes that would not have been so imposed but for the existence of any present or former connection between the beneficial owner (or between a fiduciary, settlor, beneficiary, partner, member, shareholder or other holder of equity interests of, or possessor of power over the relevant beneficial owner, if the relevant beneficial owner is an estate, nominee, trust, partnership, limited liability company, corporation or other entity) and the Relevant Taxing Jurisdiction (including the beneficial owner being a citizen or resident or national of, or carrying on a business or maintaining a permanent establishment in, or being physically present in, the Relevant Taxing Jurisdiction) other than by the mere ownership or holding of such note or enforcement of rights thereunder or under the Guarantee or the receipt of payments in respect thereof;

(2) any Taxes that would not have been so imposed if the beneficial owner had made a declaration of non-residence or any other claim or filing for exemption to which it is entitled ( *provided* that (x) such declaration of non-residence or other claim or filing for exemption is required by the applicable law of the Relevant Taxing Jurisdiction as a precondition to exemption from the requirement to deduct or withhold such Taxes and (y) at least 30 days prior to the first payment date with respect to which such declaration of non-residence or other claim or filing for exemption is required under the applicable law of the Relevant Taxing Jurisdiction, the relevant beneficial owner at that time has been notified by the Payor or any other person through whom payment may be made that a declaration of non-residence or other claim or filing for exemption is required to be made);

(3) any note presented for payment (where presentation is permitted or required) more than 30 days after the relevant payment is first made available for payment to the beneficial owner (except to the extent that the beneficial owner would have been entitled to Additional Amounts had the note been presented during such 30 day period);

(4) any Taxes that are payable otherwise than by withholding or deduction from a payment of the principal of, premium, if any, or interest, on the Senior Notes or under the Guarantee;

(5) any estate, inheritance, gift, value, use, sale, excise, transfer, personal property or similar tax, assessment or other governmental charge;

(6) any Taxes which could have been avoided by the presentation (where presentation is required) of the relevant note to another Paying Agent in a member state of the European Union; or

(7) any withholding or deduction required pursuant to an agreement described in Section 1471(b) of the Code, or otherwise imposed pursuant to Sections 1471 through 1474 of the Code, any regulations or agreements thereunder, any official interpretations thereof, or any treaty, law, regulation or other official guidance in any other jurisdiction implementing an intergovernmental approach thereto;

(8) any withholding or deduction imposed pursuant to the Luxembourg law of 23 December 2005 as amended, introducing a withholding tax on certain interest payments made or ascribed by Luxembourg paying agents to Luxembourg resident individuals; or

(9) any Taxes imposed or levied by reason of any combination of clauses (1) through (8) above.

Such Additional Amounts shall also not be payable where, had the beneficial owner of the note been the Holder of the note, it would not have been entitled to payment of Additional Amounts by reason of any of clauses (1) to (9) inclusive above.

The Payor shall (i) make any required withholding or deduction and (ii) remit the full amount deducted or withheld to the Relevant Taxing Jurisdiction in accordance with applicable law. The Payor shall use all reasonable efforts to obtain certified copies of tax receipts evidencing the payment of any Taxes so deducted or withheld from each Relevant Taxing Jurisdiction imposing such Taxes and shall provide such certified copies to each Holder. The Payor shall attach to each certified copy a certificate stating (x) that the amount of withholding Taxes evidenced by the certified copy was paid in connection with payments in respect of the principal amount of Senior Notes then outstanding and (y) the amount of such withholding Taxes paid per $1,000 principal amount of the Senior Notes. Copies of such documentation shall be available for inspection during ordinary business hours at the office of the Trustee by the Holders of the Senior Notes upon request and shall be made available at the offices of the Paying Agent.

At least 30 days prior to each date on which any payment under or with respect to the Senior Notes or the Guarantee is due and payable (unless such obligation to pay Additional Amounts arises shortly before or after the 30th day prior to such date, in which case it shall be promptly thereafter), if the Payor shall be obligated to pay Additional Amounts with respect to such payment, the Payor shall deliver to the Trustee an Officers' Certificate stating the fact that such Additional Amounts shall be payable, the amounts so payable and shall set forth such other information necessary to enable the Trustee to pay such Additional Amounts to Holders on the payment date. Each such Officer's Certificate shall be relied upon until receipt of a further Officers' Certificate addressing such matters.

If the Payor conducts business in any jurisdiction (an "Additional Taxing Jurisdiction") other than a Relevant Taxing Jurisdiction and, as a result, is required by the law of such Additional Taxing Jurisdiction to deduct or withhold any amount on account of taxes imposed by such Additional Taxing Jurisdiction from payments under the Senior Notes or the Guarantee, as the case may be, which would not have been required to be so deducted or withheld but for such conduct of business in such Additional Taxing Jurisdiction, the Additional Amounts provision described above shall be considered to apply to such Holders or beneficial owners as if references in such provision to "Taxes" included taxes imposed by way of deduction or withholding by any such Additional Taxing Jurisdiction (or any political subdivision thereof or governmental authority therein).

Wherever in the Indenture, the Senior Notes or the Guarantee there are mentioned, in any context:

(1) the payment of principal or premium (if any),

(2) purchase prices in connection with a purchase of Senior Notes,

(3) interest, or

(4) any other amount payable on or with respect to the Senior Notes or the Guarantee,

such reference shall be deemed to include payment of Additional Amounts as described under this section to the extent that, in such context, Additional Amounts are, were or would be payable in respect thereof.

The Payor shall pay any present or future stamp, court or documentary taxes, or any other excise or property taxes, charges or similar levies which arise in any jurisdiction from the execution, delivery or registration of any Senior Notes or any other document or instrument referred to therein (other than a transfer of the Senior Notes), or the receipt of any payments with respect to the notes or the guarantee, excluding (i) any such taxes, charges' or similar levies imposed by Luxembourg in case the notes or the guarantee (and/or any documents in connection therewith) are (a) enclosed to a compulsorily registrable deed (acte obligatoirement enregistrable) or (b) deposited with the official records of a notary (déposé au rang des minutes d'un notaire) and (ii) any such taxes, charges or similar levies imposed by any jurisdiction other than a Relevant Taxing Jurisdiction, other than those resulting from, or required to be paid in connection with, the enforcement of the Senior Notes, the Guarantee or any other such document or instrument following the occurrence of any Event of Default with respect to the Senior Notes.

The foregoing obligations shall survive any termination, defeasance or discharge of the Indenture and shall apply *mutatis mutandis* to any jurisdiction in which any successor to a Payor is organized or otherwise considered a resident for tax purposes or any political subdivision or governmental authority or agency thereof or therein.

Section 208. Offer to Redeem Upon Change of Control Triggering Event .

Upon the occurrence of a Change of Control Triggering Event, unless the Company has previously exercised its right to redeem the Senior Notes in full, each Holder of the Senior Notes shall have the right to require the Company to purchase all or a portion of such Holder's Senior Notes pursuant to the offer described below (the "Change of Control Offer") at a purchase price equal to 101% of the principal amount thereof plus accrued and unpaid interest, if any, to the date of purchase, subject to the rights of Holders of the Senior Notes on the relevant record date to receive interest due on the relevant interest payment date.

Within 30 days following the date upon which the Change of Control Triggering Event occurred, or at the Company's option, prior to any Change of Control but after the public announcement of the pending Change of Control, the Company shall be required to send, by electronic delivery or first class mail or otherwise in accordance with the procedures of the U.S. Depositary, a notice to each Holder of the Senior Notes, with a copy to the Trustee, which notice shall govern the terms of the Change of Control Offer. Such notice shall state:

(i) (a) if delivered or mailed following the date upon which a Change of Control Triggering Event has occurred, that a Change of Control Triggering Event has occurred and that such Holder of the Senior Notes has the right to require the Company to purchase all or a portion of such Holder's Senior Notes at a purchase price in cash equal to 101% of the principal amount thereof, plus accrued and unpaid interest, if any, to the date of purchase (subject to the right of Holders of the Senior Notes of record on the relevant record date to receive interest on the relevant interest payment date), or (b) if delivered or mailed prior to any Change of Control but after the public announcement of a pending Change of Control, that a Change of Control is pending and, upon the occurrence of a Change of Control Triggering Event, such Holder of the Senior Notes has the right to require the Company to purchase all or a portion of such Holder's Senior Notes at a purchase price in cash equal to 101% of the principal amount thereof, plus accrued and unpaid interest, if any, to the date of purchase (subject to the right of Holders of the Senior Notes of record on the relevant record date to receive interest on the relevant interest payment date) and that the Change of Control Offer is conditioned on the Change of Control being consummated on or prior to the Change of Control Payment Date;

(ii) the circumstances and relevant facts regarding such Change of Control Triggering Event;

(iii) the purchase date, which must be no earlier than 30 days nor later than 60 days from the date such notice is delivered or mailed, other than as may be required by law (the "Change of Control Payment Date"); and

(iv) the instructions determined by the Company, consistent with this Section, that a Holder of the Senior Notes must follow in order to have its Senior Notes purchased.

Holders of the Senior Notes electing to have Senior Notes purchased pursuant to a Change of Control Offer shall be required to surrender their Senior Notes, with the form entitled "Option of Holder to Elect Purchase" on the reverse of the Senior Notes completed, to the

Paying Agent at the address specified in the notice, or transfer their Senior Notes to the Paying Agent by book-entry transfer pursuant to the applicable procedures of the Paying Agent, prior to the close of business on the third Business Day prior to the Change of Control Payment Date. Holders of the Senior Notes shall be entitled to withdraw their election if the Paying Agent receives not later than one Business Day prior to the purchase date a telegram, telex facsimile transmission or letter setting forth the name of the Holder of the Senior Notes and a statement that such Holder is withdrawing its election to have such Senior Notes purchased.

On the Change of Control Payment Date, the Company shall, to the extent lawful:

1. accept for payment all Senior Notes (or portions of Senior Notes) properly tendered pursuant to the Change of Control Offer; provided that the unpurchased portion of any Senior Note must be in a principal amount of $2,000 or an integral multiple of $1,000 in excess thereof;

2. deposit with the Paying Agent an amount equal to the aggregate payment in respect of all Senior Notes (or portions of Senior Notes) properly tendered pursuant to the Change of Control Offer; and

3. deliver or cause to be delivered to the Trustee the Senior Notes properly accepted for purchase, together with an Officer's Certificate stating the aggregate principal amount of the Senior Notes (or portions of Senior Notes) being purchased.

The Paying Agent shall promptly mail or transfer to each Holder of Senior Notes properly tendered the purchase price for the Senior Notes, and the Trustee shall promptly authenticate and mail (or cause to be transferred by book-entry) to each such Holder new Senior Notes equal in principal amount to any unpurchased portion of any Senior Notes surrendered; provided that each new Senior Note shall be in a principal amount of $2,000 or an integral multiple of $1,000 in excess thereof. A Senior Note shall be deemed to have been accepted for purchase at the time the Paying Agent mails or delivers payment therefor to the Surrendering Holder.

The Company shall not be required to make a Change of Control Offer if a third party makes such an offer in the manner, at the times and otherwise in compliance with the requirements in this Section 208 for such an offer made by the Company and such third party purchases all Senior Notes properly tendered and not withdrawn under its offer.

The Company shall comply with the requirements of Rule 14e-1 under the Exchange Act and any other securities laws and regulations thereunder to the extent those laws and regulations are applicable in connection with the purchase of the Senior Notes as a result of a Change of Control Triggering Event. To the extent that the provisions of any such securities laws or regulations conflict with the Change of Control Offer provisions of the Senior Notes, the Company shall comply with the applicable securities laws and regulations and shall not be deemed to have breached its obligations under the Change of Control Offer provisions of the Senior Notes by virtue of such conflict.

Each of the Company and Guarantors shall use reasonable best efforts to ensure that at all times at least two Rating Agencies are providing a rating for the Senior Notes.

For purposes of the Change of Control Offer provisions of the Senior Notes, the following terms shall be applicable:

"Below Investment Grade Rating Event" means, with respect to the Senior Notes, such notes cease to be rated Investment Grade by at least two of the three Rating Agencies on any date during the period (the "Trigger Period") commencing 60 days prior to the first public announcement by IR Parent of any Change of Control (or pending Change of Control) and ending 60 days following the consummation of such Change of Control (which Trigger Period shall be extended if the rating of the Senior Notes is under publicly announced consideration for possible downgrade by any Rating Agency on such 60th day, such extension to last with respect to each Rating Agency until the date on which such Rating Agency considering such possible downgrade either (x) rates the Senior Notes below Investment Grade or (y) publicly announces that it is no longer considering the Senior Notes for possible downgrade; provided, that no such extension shall occur if on such 60th day the Senior Notes are rated Investment Grade not subject to review for possible downgrade by any Rating Agency).

"Change of Control" means the occurrence of any one of the following:

1) the direct or indirect sale, lease, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the assets of IR Parent and its subsidiaries taken as a whole to any "person" (as that term is used in Section 13(d) and Section 14(d) of the Exchange Act) other than to IR Parent or one of its subsidiaries;

2) the consummation of any transaction (including without limitation, any merger or consolidation) the result of which is that any "person" (as that term is used in Section 13(d) and Section 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 and Rule 13d-5 under the Exchange Act), directly or indirectly, of more than 50% of the outstanding Voting Stock of IR Parent, or other Voting Stock into which the Voting Stock of IR Parent is reclassified, consolidated, exchanged or changed, measured by voting power rather than number of shares;

3) the first day on which the majority of the members of the board of directors of IR Parent cease to be Continuing Directors;

4) IR Parent consolidates with, or merges with or into, any person, or any person consolidates with, or merges with or into, IR Parent, in any such event pursuant to a transaction in which any of the outstanding Voting Stock of IR Parent or such other person is converted into or exchanged for cash, securities or other property, other than any such transaction where the shares of the Voting Stock of IR Parent outstanding immediately prior to such transaction constitute, or are converted into or exchanged for, a majority of the Voting Stock of the surviving person immediately after giving effect to such transaction;

5) the adoption of a plan relating to the liquidation or dissolution of IR Parent; or

6) the failure of IR Parent to own, directly or indirectly, at least 51% of the Voting Stock of the Company.

Notwithstanding the foregoing, a transaction shall not be deemed to involve a Change of Control under clause (2) above if (i) IR Parent becomes a direct or indirect wholly-owned subsidiary of a holding company and (ii) the shares of the Voting Stock of IR Parent outstanding immediately prior to such transaction constitute, or are converted into or exchanged for, a majority of the Voting Stock of such holding company immediately after giving effect to such transaction.

"Change of Control Triggering Event" means, with respect to the Senior Notes, the occurrence of both a Change of Control and a Below Investment Grade Rating Event with respect to the Senior Notes. Notwithstanding the foregoing, no Change of Control Triggering Event shall be deemed to have occurred in connection with any particular Change of Control unless and until such Change of Control has actually been consummated.

"Continuing Director" means, as of any date of determination, any member of the board of directors of IR Parent who: (1) was a member of such board of directors on the date of the issuance of the Senior Notes; or (2) was nominated for election or elected to such board of directors with the approval of a majority of the Continuing Directors who were members of such board of directors at the time of such nomination or election.

"Fitch" means Fitch Inc., a subsidiary of Fimalac, S.A., and its successors.

"Investment Grade" means (1) a rating of Baa3 or better by Moody's (or its equivalent under any successor rating category of Moody's); (2) a rating of BBB- or better by S&P (or its equivalent under any successor rating category of S&P); and (3) a rating of BBB- or better by Fitch (or its equivalent under any successor rating category of Fitch).

"Moody's" means Moody's Investors Service, Inc., a subsidiary of Moody's Corporation, and its successors.

"Rating Agency" means each of Moody's, S&P and Fitch; provided, that if any of Moody's, S&P and Fitch ceases to rate the Senior Notes or fails to make a rating of the Senior Notes publicly available for reasons outside of the Company's and the Guarantors' control, a "nationally recognized statistical rating organization," within the meaning of Rule 15c3-1(c)(2)(vi)(F) under the Exchange Act, selected by IR Global as a replacement agency for Moody's, S&P or Fitch, or any of them, as the case may be, with respect to making a rating of the Senior Notes.

"S&P" means Standard & Poor's Ratings Services, a division of The McGraw-Hill Companies, Inc., and its successors.

"Voting Stock" of any specified person as of any date means the capital stock of such person that is at the time entitled to vote generally in the election of the board of directors of such person.

Section 209. Amendments or Supplements Without Consent of Holders. In addition to any permitted amendment or supplement to the Indenture pursuant to Section 901 of the Indenture, the Company, the Guarantors and the Trustee may amend or supplement the Senior Notes without notice to or the consent of any Holder of the Senior Notes:

(15) to conform this Sixth Supplemental Indenture and the form or terms of the Senior Notes to the section entitled "Description of the Notes" as set forth in the final prospectus supplement related to the offering and sale of the Senior Notes dated March 19, 2019;

(16) to add guarantees with respect to the Senior Notes;

(17) to provide for the issuance of additional Senior Notes in accordance with the Indenture and this Sixth Supplemental Indenture; or

(18) to amend the provisions of the Indenture and this Sixth Supplemental Indenture relating to the transfer and legending of the Senior Notes, including, without limitation, to facilitate the issuance and administration of the Senior Notes; provided that compliance with the Indenture and this Sixth Supplemental Indenture as so amended would not result in the Senior Notes being transferred in violation of the Securities Act of 1933, as amended, or any applicable securities law.

Section 210. Legend. The following legends shall appear on the face of all Global Securities and Definitive Securities issued under this Sixth Supplemental Indenture and the Indenture unless specifically stated otherwise in the applicable provisions of this Sixth Supplemental Indenture and the Indenture:

"THIS GLOBAL SECURITY IS HELD BY THE U.S. DEPOSITARY (AS DEFINED IN THE INDENTURE GOVERNING THIS SECURITY) OR ITS NOMINEE IN CUSTODY FOR THE BENEFIT OF THE BENEFICIAL OWNERS HEREOF, AND IS NOT TRANSFERABLE TO ANY PERSON UNDER ANY CIRCUMSTANCES EXCEPT THAT (I) THE TRUSTEE MAY MAKE SUCH NOTATIONS HEREON AS MAY BE REQUIRED PURSUANT TO THE INDENTURE, (II) THIS GLOBAL SECURITY MAY BE EXCHANGED IN WHOLE BUT NOT IN PART PURSUANT TO SECTION 305 OF THE INDENTURE, (III) THIS GLOBAL SECURITY MAY BE DELIVERED TO THE TRUSTEE FOR CANCELLATION PURSUANT TO SECTION 309 OF THE INDENTURE AND (IV) THIS GLOBAL SECURITY MAY BE TRANSFERRED TO A SUCCESSOR U.S. DEPOSITARY WITH THE PRIOR WRITTEN CONSENT OF THE ISSUER. UNLESS AND UNTIL IT IS EXCHANGED IN WHOLE OR IN PART FOR SECURITIES IN DEFINITIVE FORM, THIS SECURITY MAY NOT BE TRANSFERRED EXCEPT AS A WHOLE BY THE U.S. DEPOSITARY TO A NOMINEE OF THE U.S. DEPOSITARY OR BY A NOMINEE OF THE U.S. DEPOSITARY TO THE U.S. DEPOSITARY OR ANOTHER NOMINEE OF THE U.S. DEPOSITARY OR BY THE U.S. DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR U.S. DEPOSITARY OR A NOMINEE OF SUCH SUCCESSOR U.S. DEPOSITARY. UNLESS THIS CERTIFICATE IS PRESENTED BY AN

AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY (55 WATER STREET, NEW YORK, NEW YORK) ("DTC") TO THE ISSUER OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR SUCH OTHER NAME AS MAY BE REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR SUCH OTHER ENTITY AS MAY BE REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN."

## ARTICLE THREE
## MISCELLANEOUS

Section 301. Execution as Supplemental Indenture . This Sixth Supplemental Indenture is hereby executed and shall be construed as an indenture supplemental to the Indenture and, as provided in the Indenture, this Sixth Supplemental Indenture forms a part thereof.

Section 302. Trust Indenture Act . If any provision hereof limits, qualifies or conflicts with another provision hereof which is required to be included in this Sixth Supplemental Indenture by any of the provisions of the Trust Indenture Act, such required provisions shall control.

Section 303. Effect of Headings . The Article and Section headings herein are for convenience only and shall not affect the construction hereof.

Section 304. Separability . In case any provision in this Sixth Supplemental Indenture or in any Senior Note or related Guarantees shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

Section 305. The Trustee . The Trustee shall not be responsible in any manner for or in respect of the validity or sufficiency of this Sixth Supplemental Indenture, or for or in respect of the recitals contained herein, all of which recitals are made by the Company solely.

Section 306. Governing Law . This Sixth Supplemental Indenture, the Senior Notes and the related Guarantees shall be governed by and construed in accordance with the laws of the State of New York. For the avoidance of doubt, the application of article 470-1 to 470-19 (inclusive) of the Luxembourg law dated August 10, 1915 on commercial companies, as amended, is expressly excluded.

Section 307. Counterparts . This Sixth Supplemental Indenture may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such counterparts shall together constitute but one and the same instrument.

Section 308. Additional Guarantors . If at any time there is more than one Guarantor in respect of the Senior Notes, then each such Guarantor shall be deemed to Guarantee the Senior Notes jointly and severally with each other such Guarantor, and any reference in the Indenture and this Sixth Supplemental Indenture to "the Guarantor" shall be deemed to be a reference to each such Guarantor.

[ *Remainder of page left intentionally blank.* ]

IN WITNESS WHEREOF, the parties hereto have caused this Sixth Supplemental Indenture to be duly executed as of the day and year first above written.

INGERSOLL-RAND LUXEMBOURG FINANCE S.A.

By: /s/ Jeffrey Tallyen
Name: Jeffrey Tallyen
Title: Class A Director

By: /s/ Timea Orosz
Name: Timea Orosz
Title: Class B Director

INGERSOLL-RAND PUBLIC LIMITED COMPANY

By: /s/ Richard E. Daudelin
Name: Richard E. Daudelin
Title: Treasurer

INGERSOLL-RAND GLOBAL HOLDING COMPANY LIMITED

By: /s/ Scott R. Williams
Name: Scott R. Williams
Title: Assistant Treasurer

INGERSOLL-RAND LUX INTERNATIONAL HOLDING COMPANY S.À R.L

By: /s/ Pascal Campaignolle
Name: Pascal Campaignolle
Title: Class A Manager

By: /s/ Mark Lee
Name: Mark Lee
Title: Class B Manager

INGERSOLL-RAND IRISH HOLDINGS UNLIMITED COMPANY

By: /s/ Christopher Donohoe
Name: Christopher Donohoe
Title: Director

INGERSOLL-RAND COMPANY

By: /s/ Scott R. Williams
Name: Scott R. Williams
Title: Assistant Treasurer

WELLS FARGO BANK, NATIONAL ASSOCIATION as Trustee

By: /s/ Stefan Victory
Name: Stefan Victory
Title: Vice President

**EXHIBIT A-1**

**Form of 4.500% Senior Notes due 2049**

[Global Security Legend]

THIS GLOBAL SECURITY IS HELD BY THE U.S. DEPOSITARY (AS DEFINED IN THE INDENTURE GOVERNING THIS SECURITY) OR ITS NOMINEE IN CUSTODY FOR THE BENEFIT OF THE BENEFICIAL OWNERS HEREOF, AND IS NOT TRANSFERABLE TO ANY PERSON UNDER ANY CIRCUMSTANCES EXCEPT THAT (I) THE TRUSTEE MAY MAKE SUCH NOTATIONS HEREON AS MAY BE REQUIRED PURSUANT TO THE INDENTURE, (II) THIS GLOBAL SECURITY MAY BE EXCHANGED IN WHOLE BUT NOT IN PART PURSUANT TO SECTION 305 OF THE INDENTURE, (III) THIS GLOBAL SECURITY MAY BE DELIVERED TO THE TRUSTEE FOR CANCELLATION PURSUANT TO SECTION 309 OF THE INDENTURE AND (IV) THIS GLOBAL SECURITY MAY BE TRANSFERRED TO A SUCCESSOR U.S. DEPOSITARY WITH THE PRIOR WRITTEN CONSENT OF THE ISSUER. UNLESS AND UNTIL IT IS EXCHANGED IN WHOLE OR IN PART FOR SECURITIES IN DEFINITIVE FORM, THIS SECURITY MAY NOT BE TRANSFERRED EXCEPT AS A WHOLE BY THE U.S. DEPOSITARY TO A NOMINEE OF THE U.S. DEPOSITARY OR BY A NOMINEE OF THE U.S. DEPOSITARY TO THE U.S. DEPOSITARY OR ANOTHER NOMINEE OF THE U.S. DEPOSITARY OR BY THE U.S. DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR U.S. DEPOSITARY OR A NOMINEE OF SUCH SUCCESSOR U.S. DEPOSITARY. UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY (55 WATER STREET, NEW YORK, NEW YORK) ("DTC") TO THE ISSUER OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR SUCH OTHER NAME AS MAY BE REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR SUCH OTHER ENTITY AS MAY BE REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

No.

CUSIP No. _____

$ _____

INGERSOLL-RAND LUXEMBOURG FINANCE S.A., a Luxembourg public limited liability company ( *société anonyme* ) with registered office at 1 avenue du Bois, L-1251 Luxembourg and registered with the Luxembourg Register of Commerce and Companies (RCS) under number B 189791 (herein called the "Company", which term includes any successor company under the Indenture hereinafter referred to), for value received, hereby promises to pay to CEDE & CO., or registered assigns, the principal sum of $[_____] ([_____] DOLLARS)

[, as it may be increased or decreased as set forth on the Schedule of Exchanges of Interests in the Global Note attached hereto,] on March 21, 2049, and to pay interest thereon from and including March 21, 2019 (the "Original Issue Date"), or from the most recent Interest Payment Date to which interest has been paid or duly provided for, semiannually on March 21 and September 21 in each year, commencing September 21, 2019, at the rate per annum provided in the title hereof, until the principal hereof is paid or made available for payment.

The interest so payable, and punctually paid or duly provided for, on any Interest Payment Date will, as provided in such Indenture, be paid to the person in whose name this Security (or one or more Predecessor Securities) is registered at the close of business on the Regular Record Date for such interest, which shall be March 6 or September 6 (whether or not a Business Day), as the case may be, next preceding such Interest Payment Date. Any such interest not so punctually paid or duly provided for will forthwith cease to be payable to the Holder on such Regular Record Date and may either be paid to the person in whose name this Security (or one or more Predecessor Securities) is registered at the close of business on a Special Record Date for the payment of such Defaulted Interest to be fixed by the Trustee, notice whereof shall be given to Holders of Securities of this series not less than 10 days prior to such Special Record Date, or be paid at any time in any other lawful manner not inconsistent with the requirements of any securities exchange on which the Securities of this series may be listed, and upon such notice as may be required by such exchange, all as more fully provided in said Indenture.

Interest shall be computed on the basis of a year of twelve 30-day months.

Payment of the principal of (and premium, if any, on) and interest, if any, on this Security will be made at the office or agency of the Company maintained for that purpose in the Borough of Manhattan, The City of New York, in coin or currency of the United States of America, provided , however , that at the option of the Company payment of interest may be made by check mailed to the address of or funds transferred to the person entitled thereto as such address shall appear in the Security Register.

REFERENCE IS HEREBY MADE TO THE FURTHER PROVISIONS OF THIS SECURITY SET FORTH ON THE REVERSE HEREOF, WHICH FURTHER PROVISIONS SHALL FOR ALL PURPOSES HAVE THE SAME EFFECT AS IF SET FORTH AT THIS PLACE.

Unless the certificate of authentication hereon has been executed by the Trustee referred to on the reverse hereof by manual signature, this Security shall not be entitled to any benefit under the Indenture or be valid or obligatory for any purpose.

[ *Remainder of page left intentionally blank.* ]

IN WITNESS WHEREOF, the Company has caused this instrument to be duly executed and delivered on the date first written above.

INGERSOLL-RAND LUXEMBOURG FINANCE S.A.

By _____
Name:
Title:

This is one of the Securities of the series designated therein referred to in the within-mentioned Indenture.

Dated:

WELLS FARGO BANK, NATIONAL ASSOCIATION, as Trustee

By _____
Authorized Signatory

(Reverse of Note)

INGERSOLL-RAND LUXEMBOURG FINANCE S.A.

4.500% Senior Notes due 2049

This Security is one of a duly authorized issue of securities of the Company (herein called the "Securities"), issued and to be issued in one or more series under an Indenture, dated as of February 21, 2018, as supplemented (herein called the "Indenture"), among the Company, Ingersoll-Rand plc, Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Lux International Holding Company S.à r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company (herein called the "Guarantors", which term includes any successor guarantor under the Indenture) and Wells Fargo Bank, National Association, as Trustee (herein called the "Trustee", which term includes any successor trustee under the Indenture), to which Indenture and all indentures supplemental thereto reference is hereby made for a statement of the respective rights, limitations of rights, duties and immunities thereunder of the Company, the Guarantors, the Trustee and the Holders of the Securities and of the terms upon which the Securities are, and are to be, authenticated and delivered. This Security is one of the series designated on the face hereof, initially limited in aggregate principal amount to [_____].

The Securities of this series are subject to redemption upon not less than 30 or more than 60 days' notice delivered electronically or by mail to the Holders of such Securities at their addresses in the Security Register for such series or otherwise in accordance with the procedures of the U.S. Depositary, at any time and from time to time, prior to September 21, 2048, as a whole or in part, at the election of the Company, at a Redemption Price equal to the greater of:

(a) 100% of the principal amount of the Securities to be redeemed, or

(b) as determined by the Quotation Agent (as defined below), the sum of the present values of the remaining scheduled payments of principal and interest on the Securities to be redeemed that would be due if such series of Securities matured on the Par Call Date (as defined below) (except that if the Redemption Date is not an interest payment date, the amount of the next succeeding scheduled interest payment will be reduced (solely for the purpose of this calculation) by the amount of interest accrued thereon to the Redemption Date, discounted to the Redemption Date on a semi-annual basis assuming a 360-day year consisting of twelve 30-day months at a discount rate equal to the Adjusted Treasury Rate (as defined below) plus 25 basis points, plus, in the case of each of clauses (a) and (b), accrued and unpaid interest on the principal amount of the Securities to be redeemed to, but not including, the Redemption Date.

The Securities of this series are subject to redemption upon not less than 30 or more than 60 days' notice delivered electronically or by mail to the Holders of such Securities at their addresses in the Security Register for such series or otherwise in accordance with the procedures of the U.S. Depositary, in whole or in part at any time and from time to time on or after September 21, 2048, at a Redemption Price equal to 100% of the principal amount of the

Securities to be redeemed, plus accrued and unpaid interest on the principal amount of the Securities to be redeemed to, but not including, the Redemption Date.

Unless the Company defaults in payment of the Redemption Price, interest will cease to accrue on the Securities or portions of the Securities called for redemption on and after the Redemption Date.

" Adjusted Treasury Rate " means, with respect to any Redemption Date, the rate per year equal to the semi-annual equivalent yield to maturity or interpolated (on a day count basis) of the Comparable Treasury Issue, assuming a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for that Redemption Date.

" Comparable Treasury Issue " means the United States Treasury security selected by the Quotation Agent as having an actual or interpolated maturity comparable to the remaining term of the Securities to be redeemed that would be used, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of comparable maturity to the remaining term of such Securities (assuming, for purposes of this definition, that such Securities matured on the Par Call Date).

" Comparable Treasury Price " means, with respect to any Redemption Date, (i) the average of the Reference Treasury Dealer Quotations for that Redemption Date, after excluding the highest and lowest of the Reference Treasury Dealer Quotations, or (ii) if the Quotation Agent obtains fewer than four Reference Treasury Dealer Quotations, the average of the Reference Treasury Dealer Quotations so received.

" Par Call Date " means September 21, 2048.

" Quotation Agent " means Goldman Sachs & Co. LLC.

" Reference Treasury Dealer " means (i) each of Citigroup Global Markets Inc., Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated, and their respective successors, unless any of them ceases to be a primary U.S. Government securities dealer in New York City (a "Primary Treasury Dealer"), in which case the Company shall substitute another Primary Treasury Dealer, and (ii) any other Primary Treasury Dealers selected by the Quotation Agent.

" Reference Treasury Dealer Quotations " means, with respect to each Reference Treasury Dealer and any Redemption Date, the average, as determined by the Quotation Agent, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Issuer by that Reference Treasury Dealer at 5:00 p.m., New York City time, on the third Business Day preceding that Redemption Date.

In the event of redemption of this Security in part only, a new Security or Securities of this series for the unredeemed portion hereof will be issued in the name of the Holder hereof upon the cancellation hereof.

Any Payor may elect to redeem the outstanding Securities, in whole but not in part, at any time, upon not less than 30 nor more than 60 days' prior written notice delivered electronically or mailed by first-class mail to the registered address of each Holder of the Securities or otherwise in accordance with the procedures of the U.S. Depositary, at a Redemption Price equal to 100% of the principal amount of the Securities to be redeemed, plus accrued and unpaid interest thereon, if any, to, but not including, the date fixed for redemption (a "Tax Redemption Date"), and Additional Amounts, if any, then due or becoming due on the Tax Redemption Date in the event (i) such Payor is, has become or would become obligated to pay, on the next date on which any amount would be payable with respect to the Securities, any Additional Amounts or indemnification payments (other than in respect of documentary taxes) as a result of (A) a change or amendment in the laws or treaties (including any regulations or rulings promulgated thereunder) of a Relevant Taxing Jurisdiction; or (B) any change or amendment in the application, administration or interpretation of such laws, treaties, regulations or rulings (including pursuant to a holding, judgment or order by a court of competent jurisdiction); which change or amendment, in either case, is announced or becomes effective after the date hereof (or, if the applicable Relevant Taxing Jurisdiction became a Relevant Taxing Jurisdiction on a later date, after such later date) (each of the foregoing in clauses (A) and (B), a "Change in Tax Law"); and (ii) the Company has determined in its business judgment that the obligation to pay such Additional Amounts cannot be avoided by the use of reasonable measures available to the Company.

Notwithstanding the foregoing, no such notice of redemption shall be given earlier than 90 days prior to the earliest date on which such Payor would, but for such redemption, be obligated to make such payment or withholding or later than 90 days after such Payor is first obligated to make such payment or withholding. Prior to the delivery or mailing of any notice of redemption of the Securities pursuant to the foregoing, such Payor shall deliver to the Trustee (1) a certificate signed by a duly authorized officer stating that such Payor is entitled to effect the redemption and setting forth a statement of facts showing that the conditions precedent to the right of such Payor to so redeem have occurred and (2) an opinion of an independent tax counsel of recognized international standing to the effect that the circumstances referred to in clause (i) in the first sentence of the previous paragraph exist, and the Trustee shall accept such certificate and such opinion as sufficient evidence of the satisfaction of the conditions precedent above, which acceptance shall then be conclusive and binding on the Holders of Securities.

The Company will be required to redeem the Securities of this series at a Redemption Price equal to 101% of the aggregate principal amount of the Securities, plus accrued and unpaid interest from the date of initial issuance or the most recent interest payment date to but excluding the special mandatory redemption date (subject to the right of holders of record on the relevant record date to receive interest due on the relevant Interest Payment Date) (the "Special Mandatory Redemption Price") if the acquisition (the "Acquisition") of PFS Systems by IR Parent is not completed, or IR Parent's offer is terminated, on or before January 31, 2020.

If the Company is required to redeem the Securities of this series pursuant to this special mandatory redemption, the Company shall cause the notice of redemption to be delivered electronically or by mail to the Holders of such Securities at their addresses in the Security

Register for such series or otherwise in accordance with the procedures of the U.S. Depositary, with a copy to the trustee, by the earlier of (1) January 29, 2020, if the Acquisition has not been completed by that date, or (2) five business days after the occurrence of the event that requires the Company to redeem such series of Securities. Unless the Company defaults in payment of the Redemption Price, interest shall cease to accrue on the Securities on and after the Special Mandatory Redemption Date.

" Special Mandatory Redemption Date " means the earlier to occur of (i) January 31, 2020 if IR Parent has not completed the proposed Acquisition on or prior to January 31, 2020, or (ii) the 30th day (or if such day is not a business day, the first business day thereafter) following the termination of IR Parent's offer for any reason.

The Securities of this series are subject to redemption upon the occurrence of a Change of Control Triggering Event. Unless the Company has exercised its right to redeem this Security in full as described above, the Indenture provides that each Holder of the Securities of this series will have the right to require the Company to purchase all or a portion of such Holder's Securities of this series pursuant to the offer described below (the "Change of Control Offer") at a purchase price equal to 101% of the principal amount thereof plus accrued and unpaid interest, if any, to the date of purchase, subject to the rights of Holders of Securities of this series on the relevant record date to receive interest due on the relevant interest payment date.

Within 30 days following the date upon which the Change of Control Triggering Event occurred, or at the Company's option, prior to any Change of Control but after the public announcement of the pending Change of Control, the Company will be required to send, by electronic delivery or first class mail or otherwise in accordance with the procedures of the U.S. Depositary, a notice to each Holder of the Securities of this series, with a copy to the Trustee, which notice will govern the terms of the Change of Control Offer. Such notice will state, among other things, the purchase date, which must be no earlier than 30 days nor later than 60 days from the date such notice is delivered or mailed, other than as may be required by law (the "Change of Control Payment Date"). The notice, if delivered or mailed prior to the date of consummation of the Change of Control, will state that the Change of Control Offer is conditioned on the Change of Control being consummated on or prior to the Change of Control Payment Date.

Holders electing to have Securities purchased pursuant to a Change of Control Offer will be required to surrender their Securities, with the form below entitled "Option of Holder to Elect Purchase" completed, to the paying agent at the address specified in the notice, or transfer their Securities to the paying agent by book-entry transfer pursuant to the applicable procedures of the paying agent, prior to the close of business on the third Business Day prior to the Change of Control Payment Date.

On the Change of Control Payment Date, the Company will, to the extent lawful:

1. accept for payment all Securities of this series (or portions of Securities of this series) properly tendered pursuant to the Change of Control Offer; provided that the unpurchased portion of any Security of this series must be in a principal amount of $2,000 or an integral multiple of $1,000 in excess thereof;

2. deposit with the paying agent an amount equal to the aggregate payment in respect of all Securities of this series (or portions of Securities of this series) properly tendered pursuant to the Change of Control Offer; and

3. deliver or cause to be delivered to the Trustee the Securities of this series properly accepted for purchase, together with an officer's certificate stating the aggregate principal amount of Securities of this series (or portions of Securities of this series) being purchased.

The paying agent will promptly mail to each Holder of properly tendered Securities the purchase price for the Securities, and the Trustee will promptly authenticate and mail (or cause to be transferred by book-entry) to each such Holder new Securities equal in principal amount to any unpurchased portion of any Securities surrendered; provided that each new Security will be in a principal amount of $2,000 or an integral multiple of $1,000 in excess thereof.

The Company will not be required to make a Change of Control Offer if a third party makes such an offer in the manner, at the times and otherwise in compliance with the requirements for such an offer made by the Company and such third party purchases all properly tendered Securities of this series not withdrawn under its offer.

The Company will comply with the requirements of Rule 14e-1 under the Exchange Act and any other securities laws and regulations thereunder to the extent those laws and regulations are applicable in connection with the purchase of the Securities of this series as a result of a Change of Control Triggering Event. To the extent that the provisions of any such securities laws or regulations conflict with the Change of Control Offer provisions of the Securities of this series, the Company will comply with the applicable securities laws and regulations and will not be deemed to have breached its obligations under the Change of Control Offer provisions of the Securities of this series by virtue of such conflict.

For purposes of the Change of Control Offer provisions of the Securities, the following terms will be applicable:

"Below Investment Grade Rating Event" means the Securities of this series cease to be rated Investment Grade by at least two of the three Rating Agencies on any date during the period (the "Trigger Period") commencing 60 days prior to the first public announcement by IR Parent of any Change of Control (or pending Change of Control) and ending 60 days following the consummation of such Change of Control (which Trigger Period will be extended if the rating of the Securities is under publicly announced consideration for possible downgrade by any Rating Agency on such 60th day, such extension to last with respect to each Rating Agency until the date on which such Rating Agency considering such possible downgrade either (x) rates the Securities below Investment Grade or (y) publicly announces that it is no longer considering the Securities for possible downgrade; provided, that no such extension will occur if on such 60th day the Securities are rated Investment Grade not subject to review for possible downgrade by any Rating Agency).

"Change of Control" means the occurrence of any one of the following:

1) the direct or indirect sale, lease, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the assets of IR Parent and its subsidiaries taken as a whole to any "person" (as that term is used in Section 13(d) and Section 14(d) of the Exchange Act) other than to IR Parent or one of its subsidiaries;

2) the consummation of any transaction (including without limitation, any merger or consolidation) the result of which is that any "person" (as that term is used in Section 13(d) and Section 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 and Rule 13d-5 under the Exchange Act), directly or indirectly, of more than 50% of the outstanding Voting Stock of IR Parent, or other Voting Stock into which the Voting Stock of IR Parent is reclassified, consolidated, exchanged or changed, measured by voting power rather than number of shares;

3) the first day on which the majority of the members of the board of directors of IR Parent cease to be Continuing Directors;

4) IR Parent consolidates with, or merges with or into, any person, or any person consolidates with, or merges with or into, IR Parent, in any such event pursuant to a transaction in which any of the outstanding Voting Stock of IR Parent or such other person is converted into or exchanged for cash, securities or other property, other than any such transaction where the shares of the Voting Stock of IR Parent outstanding immediately prior to such transaction constitute, or are converted into or exchanged for, a majority of the Voting Stock of the surviving person immediately after giving effect to such transaction;

5) the adoption of a plan relating to the liquidation or dissolution of IR Parent; or

6) the failure of IR Parent to own, directly or indirectly, at least 51% of the Voting Stock of the Company.

Notwithstanding the foregoing, a transaction will not be deemed to involve a Change of Control under clause (2) above if (i) IR Parent becomes a direct or indirect wholly-owned subsidiary of a holding company and (ii) the shares of the Voting Stock of IR Parent outstanding immediately prior to such transaction constitute, or are converted into or exchanged for, a majority of the Voting Stock of such holding company immediately after giving effect to such transaction.

"Change of Control Triggering Event" means the occurrence of both a Change of Control and a Below Investment Grade Rating Event. Notwithstanding the foregoing, no Change of Control Triggering Event will be deemed to have occurred in connection with any particular Change of Control unless and until such Change of Control has actually been consummated.

"Continuing Director" means, as of any date of determination, any member of the board of directors of IR Parent who: (1) was a member of such board of directors on the date of the issuance of the Securities of this series; or (2) was nominated for election or elected to such

board of directors with the approval of a majority of the Continuing Directors who were members of such board of directors at the time of such nomination or election.

"Fitch" means Fitch Inc., a subsidiary of Fimalac, S.A., and its successors.

"Investment Grade" means (1) a rating of Baa3 or better by Moody's (or its equivalent under any successor rating category of Moody's); (2) a rating of BBB- or better by S&P (or its equivalent under any successor rating category of S&P); and (3) a rating of BBB- or better by Fitch (or its equivalent under any successor rating category of Fitch).

"Moody's" means Moody's Investors Service, Inc., a subsidiary of Moody's Corporation, and its successors.

"Rating Agency" means each of Moody's, S&P and Fitch; provided, that if any of Moody's, S&P and Fitch ceases to rate the Securities of this series or fails to make a rating of the Securities of this series publicly available for reasons outside of the Company's and the Guarantors' control, a "nationally recognized statistical rating organization," within the meaning of Rule 15c3-1(c)(2)(vi)(F) under the Exchange Act, selected by the Company as a replacement agency for Moody's, S&P or Fitch, or any of them, as the case may be, with respect to making a rating of the Securities of this series.

"S&P" means Standard & Poor's Ratings Services, a division of The McGraw-Hill Companies, Inc., and its successors.

"Voting Stock" of any specified person as of any date means the capital stock of such person that is at the time entitled to vote generally in the election of the board of directors of such person.

The Indenture contains provisions for defeasance of (a) the entire indebtedness of this Security and (b) certain restrictive covenants upon compliance by the Company with certain conditions set forth therein.

If an Event of Default with respect to Securities of this series shall occur and be continuing, the principal of the Securities of this series may be declared due and payable in the manner and with the effect provided in the Indenture.

The Indenture permits, with certain exceptions as therein provided, the amendment thereof and the modification of the rights and obligations of the Company and the Guarantors and the rights of the Holders of the Securities of each series to be affected under the Indenture at any time by the Company, the Guarantors and the Trustee with the consent of the Holders of a majority in principal amount of the Securities at the time Outstanding of all series to be affected. The Indenture also contains provisions permitting the Holders of specified percentages in principal amount of the Securities at the time Outstanding of all series to be affected, on behalf of the Holders of all Securities of such series, to waive compliance by the Company and/or the Guarantors with certain provisions of the Indenture and certain past defaults under the Indenture and their consequences. Any such consent or waiver by the Holder of this Security shall be

conclusive and binding upon such Holder and upon all future Holders of this Security and of any Security issued upon the registration of transfer hereof or in exchange herefor or in lieu hereof, whether or not notation of such consent or waiver is made upon this Security.

No reference herein to the Indenture and no provision of this Security or of the Indenture shall alter or impair the obligation of the Company, which is absolute and unconditional, to pay the principal of (and premium, if any, on) and interest, if any, on this Security at the times, place and rate, and in the coin or currency, herein prescribed.

As provided in the Indenture and subject to certain limitations therein set forth, the transfer of this Security is registrable in the Security Register, upon surrender of this Security for registration of transfer at the office or agency of the Company in any place where the principal of (and premium, if any, on) and interest, if any, on this Security are payable, duly endorsed by, or accompanied by a written instrument of transfer in form satisfactory to the Company and the Security Registrar duly executed by, the Holder hereof or his or her attorney duly authorized in writing, and thereupon one or more new Securities of this series, of authorized denominations and for the same aggregate principal amount, will be issued to the designated transferee or transferees.

The Securities of this series are issuable only in registered form without coupons in denominations of $2,000 and integral multiples of $1,000 in excess thereof. As provided in the Indenture and subject to certain limitations therein set forth, Securities of this series are exchangeable for a like aggregate principal amount of Securities of this series of a different authorized denomination, as requested by the Holder surrendering the same.

No service charge shall be made for any such registration of transfer or exchange, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection therewith.

Prior to due presentment of this Security for registration of transfer, the Company, the Guarantors, the Trustee and any agent of the Company, the Guarantors or the Trustee may treat the person in whose name this Security is registered as the owner hereof for all purposes, whether or not this Security be overdue, and none of the Company, the Guarantors, the Trustee or any such agent shall be affected by notice to the contrary.

No recourse for the payment of the principal of (and premium, if any, on) or interest, if any, on this Security or any Guarantee endorsed hereon, or for any claim based hereon or thereon or otherwise in respect hereof or thereof, and no recourse under or upon any obligation, covenant or agreement of the Company or any Guarantor in the Indenture or in any indenture supplemental thereto, or in any Security or in any Guarantee, or because of the creation of any indebtedness represented thereby, shall be had against any incorporator, shareholder, officer or director, as such, past, present or future, of the Company or any Guarantor or of any successor corporation, either directly or through the Company or any Guarantor or any successor corporation, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise, all such liability being, by the acceptance hereof and as part of the consideration for the issue hereof, expressly waived and released.

**THIS SECURITY SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.**

All terms used in this Security which are defined in the Indenture shall have the meanings assigned to them in the Indenture. In the event that a provision of this Security conflicts with the Indenture, the terms of the Indenture will govern.

**Option of Holder to Elect Purchase**

If you want to elect to have this Security purchased by the Company pursuant to Section 208 of the Sixth Supplemental Indenture, check the box below:

If you want to elect to have only part of the Security purchased by the Company pursuant to Section 208 of the Sixth Supplemental Indenture, state the amount you elect to have purchased:

$_____

Date:_____

Your Signature: __

(Sign exactly as your name appears on the face of this Security)

Tax Identification No.: __

Signature Guarantee:** _____

_____

** Participant in a recognized Signature Guarantee Medallion Program (or other signature guarantor acceptable to the Trustee)

SCHEDULE OF EXCHANGES OF INTERESTS IN THE GLOBAL NOTE*

The initial outstanding principal amount of this Global Note is $_____. The following exchanges of a part of this Global Note for an interest in another Global Note or for a Definitive Note, or exchanges of a part of another Global or Definitive Note for an interest in this Global Note, have been made:

| Date of Exchange | Amount of decrease in Principal Amount | Amount of increase in Principal Amount | Amount of this Global Security | Principal Amount of this Global Security following such decrease or increase | Signature of authorized officer of Trustee or Note Custodian |
|---|---|---|---|---|---|

*This schedule should only be included if the Senior Notes are issued in global form.

**EXHIBIT A-2**

**Form of Guarantee to 4.500% Senior Notes due 2049**

For value received, each of Ingersoll-Rand plc, a company duly organized and existing under the laws of Ireland, Ingersoll-Rand Global Holding Company Limited, a corporation incorporated in Delaware, Ingersoll-Rand Lux International Holding Company S.à r.l., a Luxembourg private limited liability company ( *société à responsabilité limitée* ) with registered office at 1 avenue du Bois, L-1251 Luxembourg and registered with the Luxembourg Register of Commerce and Companies under number B 182971, Ingersoll-Rand Irish Holdings Unlimited Company, an Irish private limited company and Ingersoll-Rand Company, a corporation incorporated in New Jersey (each herein called a "Guarantor", which term includes any successor Person under the Indenture referred to in the Security upon which this Guarantee is endorsed), hereby irrevocably and unconditionally guarantees to the Holder of the Security upon which this Guarantee is endorsed and to the Trustee for itself and on behalf of each such Holder the due and punctual payment of the principal of (and premium, if any, on) and interest on such Security and the due and punctual payment of the sinking fund or analogous payments referred to therein, if any, when and as the same shall become due and payable, whether at the Stated Maturity, by declaration of acceleration, call for redemption or otherwise, according to the terms thereof and of the Indenture referred to therein, and all other amounts owed under the Indenture, all in accordance with and subject to the terms and limitations of the Security on which this Guarantee is endorsed and Article Thirteen of the Indenture. In case of the failure of Ingersoll-Rand Luxembourg Finance S.A., a Luxembourg public company limited by shares ( *société anonyme* ) (herein called the "Company", which term includes any successor Person under such Indenture), promptly to make any such payment of principal (and premium, if any) or interest or any such sinking fund or analogous payment, each Guarantor hereby agrees to cause any such payment to be made promptly when and as the same shall become due and payable, whether at the Stated Maturity or by declaration of acceleration, call for redemption or otherwise, and as if such payment were made by the Company, subject to the terms and limitations of Article Thirteen of the Indenture.

Each such Guarantor shall be deemed to Guarantee the Security jointly and severally with each other such Guarantor.

This Guarantee shall not be valid or obligatory for any purpose until the certificate of authentication of such Security shall have been manually executed by or on behalf of the Trustee under such Indenture.

All terms used in this Guarantee which are defined in such Indenture shall have the meanings assigned to them in such Indenture.

THIS GUARANTEE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

Executed and delivered on this [___] day of [_____], 2019.

Ingersoll-Rand plc

By _____
Name:
Title:

Ingersoll-Rand Global Holding Company Limited

By _____
Name:
Title:

Ingersoll-Rand Lux International Holding Company S.à r.l.

By _____
Name:
Title:

Ingersoll-Rand Company

By _____
Name:
Title:

**EXHIBIT 5.1**

[LETTERHEAD OF SIMPSON THACHER & BARTLETT LLP]

March 21, 2019

Ingersoll-Rand plc
170/175 Lakeview Dr.
Airside Business Park
Swords, Co. Dublin
Ireland

Ladies and Gentlemen:

We have acted as United States counsel to Ingersoll-Rand plc, an Irish public limited company ("IR-plc"), Ingersoll-Rand Lux International Holding Company S.à r.l., a Luxembourg private limited liability company ( *société à responsabilité limitée* ) ("Lux International"), Ingersoll-Rand Global Holding Company Limited, a Delaware corporation ("IR-Global"), Ingersoll-Rand Irish Holdings Unlimited Company, an Irish private unlimited company ("Irish Holdings") and Ingersoll-Rand Company, a New Jersey corporation ("IR-Company" and, together with IR-plc, Lux International and Irish Holdings, the "Non-Delaware Guarantors" and, the Non-Delaware Guarantors together with IR-Global, the "Guarantors") and Ingersoll-Rand Luxembourg Finance S.A., a Luxembourg public company limited by shares ( *société anonyme* ) (the "Issuer" and, together with the Guarantors, the "IR Entities"), in connection with the Registration Statement on Form S-3 (File No. 333-221265) (the "Registration Statement") filed by the IR Entities with the U.S. Securities and Exchange Commission (the "Commission") under the U.S. Securities Act of 1933, as amended, relating to the issuance by the Issuer from time to time of debt securities and the issuance by the Guarantors of guarantees with respect to such debt securities.

We have examined the Registration Statement; the Underwriting Agreement, dated March 19, 2019 (the "Underwriting Agreement"), among the Issuer, the Guarantors and the underwriters named therein pursuant to which such underwriters have agreed to purchase $400,000,000 aggregate principal amount of 3.500% Senior Notes due 2026 (the "2026 Notes"), $750,000,000 aggregate principal amount of 3.800% Senior Notes due 2029 (the "2029 Notes") and $350,000,000 aggregate principal amount of 4.500% Senior Notes due 2049 (the "2049 Notes" and, together with the 2026 Notes and the 2029 Notes, the "Notes") issued by the Issuer and unconditionally guaranteed by the Guarantors; the Indenture, dated as of February 21, 2018 (the "Base Indenture"), as supplemented by the fourth supplemental indenture, dated as of March 21, 2019 (the "2026 Notes Supplemental Indenture"), relating to the 2026 Notes, as further supplemented by the fifth supplemental indenture, dated as of March 21, 2019 (the "2029 Notes Supplemental Indenture"), relating to the 2029 Notes and as further supplemented by the sixth supplemental indenture, dated as of March 21, 2019 (the "2049 Notes Supplemental Indenture" and, together with the 2026 Notes Supplemental Indenture and the 2029 Notes Supplemental Indenture, the "Supplemental Indentures" and, the Supplemental Indentures together with the Base Indenture, the "Indenture"), relating to the 2049 Notes, each among the Issuer, the Guarantors and Wells Fargo Bank, National Association, as trustee (the "Trustee"); duplicates of the global notes representing the Notes; and the guarantees annexed to the Notes (the "Guarantees"). In addition, we have examined, and have relied as to matters of fact upon, originals, or duplicates or certified or conformed copies, of such records, agreements, documents and other instruments and such certificates or comparable documents of public officials and of officers and representatives of the IR Entities and have made such other investigations as we have deemed relevant and necessary in connection with the opinions hereinafter set forth.

In rendering the opinions set forth below, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as duplicates or certified or conformed copies and the authenticity of the originals of such latter documents. We also have assumed that the Indenture is the valid and legally binding obligation of the Trustee.

In rendering the opinions set forth below, we have assumed further that (1) the Issuer and each Non-Delaware Guarantor is validly existing and in good standing under the law of the jurisdiction in which it is organized and has duly authorized, executed, issued and delivered the Underwriting Agreement, the Indenture, the Notes and its Guarantee, as applicable, in accordance with its organizational documents and the law of the jurisdiction in which it is organized, (2) the execution, issuance, delivery and performance by the Issuer and each Non-Delaware Guarantor of the Underwriting Agreement, the Indenture, the Notes and its Guarantee, as applicable, do not constitute a breach or violation of its organizational documents or violate the law of the jurisdiction in which it is organized or any other jurisdiction (except that no such assumption is made with respect to the law of the State of New York or the Delaware General Corporation Law (the "DGCL")) and (3) the execution, issuance, delivery and performance by the Issuer and each Guarantor of the Underwriting Agreement, the Indenture, the Notes and its Guarantee, as applicable, do not constitute a breach or default under any agreement or instrument which is binding upon the Issuer or any such Guarantor.

Based upon the foregoing, and subject to the qualifications, assumptions and limitations stated herein, we are of the opinion that:

1. Assuming due authentication thereof by the Trustee and upon payment and delivery in accordance with the provisions of the Underwriting Agreement, the Notes will constitute

valid and legally binding obligations of the Issuer, enforceable against the Issuer in accordance with their terms.

2. Assuming due authentication of the Notes by the Trustee and upon payment for and delivery of the Notes in accordance with the Underwriting Agreement, the Guarantees will constitute valid and legally binding obligations of the Guarantors enforceable against the Guarantors in accordance with their terms.

Our opinions set forth above are subject to (i) the effects of bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally, (ii) general equitable principles (whether considered in a proceeding in equity or at law), (iii) an implied covenant of good faith and fair dealing and (iv) to the effects of the possible judicial application of foreign laws or foreign governmental or judicial action affecting creditors' rights. In addition, we express no opinion as to the validity, legally binding effect or enforceability of (i) the waiver of rights and defenses contained in Sections 117(b) and 1301(b) of the Base Indenture or (ii) Section 110 of the Base Indenture and Section 304 of each of the Supplemental Indentures relating to the severability of provisions of the Indenture.

In connection with the provisions of the Indenture and the Underwriting Agreement whereby the parties submit to the jurisdiction of any U.S. federal court in the Borough of Manhattan, The City of New York, we note the limitations of 28 U.S.C. Sections 1331 and 1332 on subject matter jurisdiction of the U.S. federal courts. In connection with the provisions of the Indenture and the Underwriting Agreement which relate to forum selection (including, without limitation, any waiver of any objection to venue or any objection that a court is an inconvenient forum), we note that under N.Y.C.P.L.R. Section 510 a New York State court may have discretion to transfer the place of trial, and under 28 U.S.C. Section 1404(a) a United States District Court has discretion to transfer an action from one U.S. federal court to another. We also note that the recognition and enforcement

in New York State courts or U.S. federal courts sitting in the State of New York of a foreign judgment obtained against the Issuer and the Guarantors is subject to the Uniform Foreign Money—Judgments Recognition Act (53 C.P.L.R. §5301 et. seq.).

We do not express any opinion herein concerning any law other than the law of the State of New York and the DGCL.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Current Report on Form 8-K of IR-plc filed with the Commission in connection with the offer and sale of the Notes by the Issuer and the issuance of the Guarantees by the Guarantors and to the use of our name under the caption "Legal Matters" in the prospectus included in the Registration Statement.

Very truly yours,

/s/ Simpson Thacher & Bartlett LLP

SIMPSON THACHER & BARTLETT LLP

**Exhibit 5.2**

21 March 2019

**PRIVATE AND CONFIDENTIAL**

To:

Ingersoll-Rand public limited company (" **IR plc** ") incorporated in Ireland under registered number 469272

170/175 Lakeview Dr.
Airside Business Park
Swords, Co. Dublin
Ireland

Ingersoll-Rand Irish Holdings Unlimited Company (" **Irish Holdings** ") incorporated in Ireland under registration number 296444

Monivea Road,
Mervue,
Galway

Ladies and Gentlemen:

**1. Basis of Opinion**

1.1 We act as solicitors in Ireland for IR plc and Irish Holdings. Together, IR plc and Irish Holdings are referred to in this Opinion as the " **Companies** " and each a " **Company** ". We have been requested to furnish this Opinion in connection with the entry into of the Transaction Documents by the Companies in their capacity as Guarantors of the Notes (the " **Transaction** ") to be issued and sold by Ingersoll-Rand Luxembourg Finance S.A. (the " **Issuer** ") and unconditionally guaranteed by IR plc, Irish Holdings, Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Lux International Holding Company S.à r.l. and Ingersoll-Rand Company (collectively, the " **Guarantors** "). This Opinion is solely for the benefit of the addressees of this Opinion (the " **Addressees** ") and may not be relied upon, used, transmitted, referred to, quoted from, circulated, copied, filed with any governmental agency or authority, disseminated or disclosed by or to any other person or entity for any purposes without our prior written consent, provided that it may be disclosed to regulatory authorities to whom disclosure may be required by applicable laws or regulations and to an Addressee's legal advisers on the basis that it is for information only, such persons may not rely upon this Opinion, we have no responsibility to such persons in connection with this Opinion and such persons are bound by restrictions as to disclosure and reliance set out in this Opinion. Notwithstanding the foregoing this Opinion may be filed by the Companies or their advisors with the U.S. Securities and Exchange Commission in connection with the Registration Statement (as defined herein) relating to the Notes or any filing on Form 8-K and/or any filing relating to the Notes (provided that only the Addressees may rely on this Opinion).

1.2 This Opinion is given on the basis that our clients are the Companies (alone). For the purposes of giving this Opinion we have taken instructions solely from the Companies (and their US counsel, Simpson, Thacher & Bartlett LLP).

1.3 This Opinion is confined to and given in all respects on the basis of the laws of Ireland in force as at the date hereof as currently applied by the courts of Ireland. We have made no investigations of and we express no opinion as to the laws of any other jurisdiction or the effect thereof. In particular, we express no opinion on the laws of the European Union as they affect any jurisdiction other than Ireland. We have assumed without investigation that insofar as the laws of any jurisdiction other than Ireland are relevant, such laws do not prohibit and are not inconsistent with any of the obligations or rights expressed in the Transaction Documents or the Transaction.

1.4 This Opinion is also strictly confined to:

(a) the matters expressly stated herein and is not to be read as extending by implication or otherwise to any other matter; and

(b) the Transaction Documents (and no other documents whatsoever) and the Searches,

and is subject to the assumptions and qualifications set out below.

1.5 In giving this Opinion, we have relied upon the Secretary's Certificate and the Searches and we give this Opinion expressly on the terms that no further investigation or diligence in respect of any matter referred to in the Secretary's Certificate or the Searches is required of us.

1.6 No opinion is expressed as to the taxation consequences of the Transaction Documents or the Transaction.

1.7 For the purpose of giving this Opinion, we have examined copies sent, by email in pdf or other electronic format, to us of the Transaction Documents.

1.8 All words and phrases defined in the Transaction Documents and not defined herein shall have the same meanings herein as are respectively assigned to them in the Transaction Documents. References in this Opinion to the:

(a) " **Companies Act** " means the Companies Act 2014 (as amended);

(b) " **Authorised Signatory** " means:

(i) in respect of IR plc, each of:

(A) the Chief Executive Officer;

(B) the President;

(C) the Chief Financial Officer;

(D) the Treasurer;

(E) the Assistant Treasurer;

(F) any Vice President; or

(G) the Secretary,

(ii) in respect of Irish Holdings, its directors.

(c) " **Base Indenture** " means the indenture relating to the Notes dated February 21 2018 among the Issuer, IR plc, Irish Holdings and the other Guarantors and the Trustee;

(d) " **Base Prospectus** " means the Issuer's and the Guarantors' registration statement on Form S-3 (File No. 333-221265) dated November 1, 2017 forming part of the Registration Statement at the time it became effective;

(e) " **Board Resolutions** " means, in respect of each Company, the resolutions of the directors of that Company approving the Transaction, copies of which are attached to the Secretary's Certificate applicable to that Company;

(f) " **CRO** " means the Irish Companies Registration Office;

(g) " **Guarantees** " means guarantees of the Notes as provided under section 206 of the Indenture (and "its Guarantee" means, in respect of a Company, the Guarantee issued by it);

(h) " **Indenture** " means the Base Indenture as supplemented by the Supplemental Indenture;

(i) " **Ireland** " means Ireland exclusive of Northern Ireland and " **Irish** " shall be construed accordingly;

(j) " **Notes** " has meanings given to that term in the Underwriting Agreement;

(k) " **Preliminary Prospectus Supplement** " means the Preliminary Prospectus Supplement relating to the Notes dated March 19, 2019;

(l) " **Prospectus** " means the Base Prospectus as supplemented by the Prospectus Supplement;

(m) " **Prospectus Supplement** " means the prospectus supplement dated

March 19, 2019 together with the Preliminary Prospectus Supplement, each with respect to the offering of the Notes

and the Guarantees;

(n) " **Registration Statement** " means the Issuer's and the Guarantors' registration statement on Form S-3 (File No. 333-221265) filed with the U.S. Securities and Exchange Commission on 1 November 2017;

(o) " **Revenue Commissioners** " means the Irish Revenue Commissioners;

(p) " **Searches** " means the searches listed in paragraph 1.9;

(q) " **Secretary's Certificate** " means, in respect of each Company, a certificate of the Secretary IR plc, dated the date hereof, attaching in respect of the applicable Company:

(i) its certificate of incorporation;

(ii) its memorandum and articles of association;

(iii) its certificate of a public company entitled to commence business;

(iv) the applicable Board Resolutions;

(r) " **Supplemental Indentures** " means, collectively:

(i) an indenture dated March 21, 2019 between the parties to the Base Indenture and which is supplemental to the Base Indenture and which relates to the 2026 Notes (as defined in the Underwriting Agreement);

(ii) an indenture dated March 21, 2019 between the parties to the Base Indenture and which is supplemental to the Base Indenture and which relates to the 2029 Notes (as defined in the Underwriting Agreement); and

(iii) an indenture dated March 21, 2019 between the parties to the Base Indenture and which is supplemental to the Base Indenture and which relates to the 2049 Notes (as defined in the Underwriting Agreement);

(s) " **Transaction Documents** " means the Indenture, the Underwriting Agreement, the Notes and the Guarantees;

(t) " **Trustee** " means the Wells Fargo Bank, N.A. as trustee of the Notes.

(u) " **Underwriting Agreement** " means the Underwriting Agreement dated

March 19, 2019 among the Issuer, the Guarantors and (on behalf of themselves and each of the Underwriters named therein) Citigroup Global Markets Inc., Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated; and

(v) " **UA Signing Date** " means March 19, 2019.

1.9 For the purpose of giving this Opinion, we have caused to be made the following legal searches against each Company on the date of this Opinion:

(a) on its file maintained by the Registrar of Companies in the CRO for mortgages, debentures or similar charges or notices thereof and for the appointment of any examiner or liquidator;

(a) in the Judgments Office of the High Court for unsatisfied judgments, orders, decrees and the like for the twelve years immediately preceding the date of the search;

(b) in the Central Office of the High Court of Dublin for any proceedings filed by or against either Company in the five years prior to the date of the Searches and for any petitions filed in respect of the applicable Company; and

(c) on the register of persons disqualified or restricted from acting as directors of companies incorporated in Ireland, which is maintained by the Registrar of Companies in the CRO, against the names of the current directors of the applicable Company as identified in the search results referred to at sub-paragraph (a) above.

1.10 This Opinion is governed by and is to be construed in accordance with the laws of Ireland (as interpreted by the courts of Ireland at the date hereof and anyone seeking to rely on this Opinion agrees for our benefit that the courts of Ireland shall have exclusive jurisdiction to settle any dispute arising out of, or in connection with this Opinion). This Opinion speaks only as of its date. We assume no obligation to update this Opinion at any time in the future or to advise you of any change in law, change in interpretation of law or change in the practice of the Revenue Commissioners which may occur after the date of

this Opinion.

2. **Opinion**

Subject to the assumptions and qualifications set out in this Opinion, we are of the opinion that:

2.1 **Corporate status**

(a) IR plc has been duly incorporated and is validly existing as a public limited company under the laws of Ireland.

(b) Irish Holdings is a private unlimited company, is duly incorporated and validly existing under the laws of Ireland.

2.2 **Corporate capacity**

Each Company has all requisite corporate power and authority to enter into, execute, deliver and perform its respective obligations under Transaction Documents to which it is a party and to take all action as may be necessary to complete the transactions contemplated thereby.

2.3 **Corporate authorisation**

The execution, delivery and performance by each Company of the Transaction Documents and the Guarantees to which it is party, and the consummation of the transactions contemplated thereby:

(a) have been duly authorised by all necessary corporate action on the part of that Company; and

(b) do not and will not violate, conflict with or constitute a default under (i) any law, order, rule, decree, statute or regulation of Ireland or any political subdivision thereof; or (ii) the memorandum and articles of association of that Company.

2.4 **Due execution**

The Transaction Documents to which each Company is a party have been duly executed by that Company.

2.5 **Authorisations and approvals**

All necessary action required to be taken by each Company pursuant to the laws of Ireland has been taken by or on behalf of that Company and all the necessary authorisations and approvals of governmental authorities in Ireland have been duly obtained, for the issue by each Company of its Guarantees.

2.6 **Guarantees**

Assuming they have been delivered and authenticated pursuant to and in accordance with the terms of the Transaction Documents (to the extent such authentication and delivery is governed by law other than Irish law), each Company will, as a matter of Irish law, have validly issued its Guarantees.

3. **Assumptions**

For the purpose of giving this Opinion we assume the following, without any responsibility on our part if any assumption proves to have been untrue as we have not verified independently any assumption:

*Authenticity and bona fides*

3.1 The truth, completeness, accuracy and authenticity of all copy letters, resolutions, certificates, permissions, minutes, authorisations and all other documents of any kind submitted to us as originals or copies of originals, and (in the case of copies) conformity to the originals of copy documents, the genuineness of all signatures, stamps and seals thereon, that any signatures are the signatures of the persons who they purport to be and that each original was executed in the manner appearing on the copy.

3.2 That the Transaction Documents have been executed in a form and content having no material difference to the final drafts provided to us and have been delivered by the parties thereto and are not subject to any escrow arrangements.

3.3 That the copies produced to us of minutes of meetings and/or of resolutions correctly record the proceedings at such meetings and/or the subject matter which they purport to record and that any meetings referred to in such copies were duly convened, duly quorate and held and all formalities were duly observed, that those present at any such meetings were entitled to attend and vote at the meeting and acted bona fide throughout, that no further resolutions have been passed or corporate or other

action taken which would or might alter the effectiveness thereof and that such resolutions have not been amended or rescinded and are in full force and effect.

3.4 That each director of IR plc and Irish Holdings has disclosed any interest which he may have in the Transaction in accordance with the provisions of the Companies Acts and the Articles of Association of each Company and none of the directors of either Company have any interest in the Transaction except to the extent permitted by the Articles of Association of that Company.

3.5 The absence of fraud, coercion, duress or undue influence and lack of bad faith on the part of the parties to the Transaction Documents and their respective officers, employees, agents and (with the exception of Arthur Cox) advisers.

*Accuracy of Searches and the Secretary's Certificate*

3.6 That, based only on the searches referred to in paragraph 1.9(d), no person who has been appointed or acts in any way, whether directly or indirectly, as a director or secretary of, or who has been concerned in or taken part in the promotion of, either Company has:

(a) been the subject of any declaration, order or deemed order for disqualification or restriction under the Companies Act (including Part 14, Chapters 3 and 4 thereof) or any analogous legislation; or

(b) received any notice under the Companies Act (including Part 14, Chapter 5 thereof) or any analogous legislation regarding a disqualification or restriction undertaking.

3.7 The accuracy and completeness of the information disclosed in the Searches and that such information is accurate as of the date of this Opinion and has not since the time of such search been altered. In this connection, it should be noted that (a) the matters disclosed in the Searches may not present a complete summary of the actual position on the matters we have caused searches to be conducted for, (b) the position reflected by the Searches may not be fully up-to-date and (c) searches at the CRO do not necessarily reveal whether or not a prior charge has been created or a resolution has been passed or a petition presented or any other action taken for the winding-up of, or the appointment of a receiver or an examiner to, a Company or its assets.

3.8 The truth, completeness and accuracy of all representations and statements as to factual matters contained in the Secretary's Certificate at the time they were made and at all times thereafter.

*Commercial Benefit*

3.9 That the Transaction Documents have been entered into for bona fide commercial purposes, on arm's length terms and for the benefit of each party thereto and are in those parties' respective commercial interests and for their respective corporate benefit.

*Consumer Law*

3.10 That no party to the Transaction Documents is a "consumer" for the purposes of Irish law or a "personal consumer" for the purposes of the Central Bank of Ireland's Consumer Protection Code 2012.

*No other information and compliance*

3.11 That the Transaction Documents are all the documents relating to the subject matter of the Transaction and that there are no agreements or arrangements of any sort in existence between the parties to the Transaction Documents and/or any other party which in any way amend or vary or are inconsistent with the terms of the Transaction Documents or in any way bear upon or are inconsistent with the opinions stated herein.

*Authority, Capacity, Execution and Enforceability*

3.12 That the parties to the Transaction Documents (other than IR plc and Irish Holdings to the extent opined on herein) are (and were on the UA Signing Date) duly incorporated and validly in existence and that they and their respective signatories have (and had on the UA Signing Date) the appropriate capacity, power and authority to execute the Transaction Documents to which they are a party, to exercise and perform their respective rights and obligations thereunder and to render those Transaction Documents and all obligations thereunder legal, valid, binding and enforceable on them, and that each party to the Transaction Documents (other than IR plc and Irish Holdings to the extent opined on herein) has taken all necessary corporate action and other steps to execute, deliver, exercise and perform the Transaction Documents to which it is a party and the rights and obligations set out therein.

3.13 That the execution, delivery and performance of the Transaction Documents:

(a) did not, does not and will not contravene the laws of any jurisdiction outside Ireland;

(b) did not, does not and will not result in any breach of any agreement, instrument or obligation to which either Company is a party; and

(c) was not, is not and will not be illegal or unenforceable by virtue of the laws of any jurisdiction outside Ireland.

3.14 That the Companies were not mistaken in entering into the Transaction Documents as to any material relevant fact.

3.15 That the Transaction Documents constitute legal, valid and binding obligations of the parties thereto enforceable in accordance with their respective terms under the laws of any relevant jurisdiction other than Ireland insofar as opined on herein.

3.16 That the full and final versions of each of the Transaction Documents was presented to each Company for execution.

*Solvency and Insolvency*

3.17 That:

(a) each Company was not unable to pay its debts within the meaning of Sections 509(3) and 570 of the Companies Act or any analogous provisions under any applicable laws immediately after the execution and delivery of the Transaction Documents;

(b) each Company will not as a consequence of doing any act or thing which any Transaction Document contemplates, permits or requires the relevant party to do, be unable to pay its debts within the meaning of such Sections or any analogous provision under any applicable laws;

(c) no liquidator, receiver or examiner or other similar or analogous officer has been appointed in relation to a Company or any of its assets or undertaking; and

(d) no petition for the making of a winding-up order or the appointment of an examiner or any similar officer or any analogous procedure has been presented in relation to either Company.

3.18 That, upon the opening of any insolvency proceedings pursuant to Regulation (EU) 2015/848 of the European Parliament and of the Council of 20 May 2015 on insolvency proceedings (recast) (the " **Recast EU Insolvency Regulation** "), the Company will have its " *centre of main interests* " (as that term is used in Article 3(1) of the Recast EU Insolvency Regulation) in Ireland being the jurisdiction in which the Company has its registered office and will not have an " *establishment* " (being any place of operations where a debtor carries out or has carried out in the 3-month period prior to the request to open main insolvency proceedings a non-transitory economic activity with human means and assets) as defined in Article 2(10) of the Recast EU Insolvency Regulation outside Ireland.

*Financial Assistance and Connected Transactions.*

3.19 Neither Company is by entering into the Transaction Documents or performing its obligations thereunder, providing financial assistance for the purpose of an acquisition (by way of subscription, purchase, exchange or otherwise) made or to be made by any person of any shares in the Company or its holding company which would be prohibited by Section 82 of the Companies Act.

3.20 That none of the transactions contemplated by the Transaction Documents are prohibited by virtue of Section 239 of the Companies Act, which prohibits certain transactions between companies and its directors or persons connected with its directors.

*Foreign Laws*

3.21 That as a matter of all relevant laws (other than the laws of Ireland):

(a) all consents, approvals, notices, filings, recordations, publications, registrations and other steps necessary or desirable to permit the execution, delivery (where relevant) and performance of the Transaction Documents or to perfect, protect or preserve any of the interests created by the Transaction Documents have been obtained, made or done, or will be obtained, made or done, within any relevant time period(s); and

(b) the legal effect of the Transaction Documents, and the Transaction, and the creation of any interest the subject thereof will be (and, in the case of the Underwriting Agreement, were), upon execution and, where relevant, delivery of the Transaction Documents, effective.

4. **Qualifications**

The opinions set out in this Opinion are subject to the following reservations:

*General Matters*

4.1 A determination or a certificate as to any matter provided for in the Transaction Documents may be held by an Irish court not to be final, conclusive or binding if such determination or certificate could be shown to have an unreasonable, incorrect or arbitrary basis or not to have been given or made in good faith.

4.2 Where a party to a Transaction Document is vested with a discretion or may determine a matter in its opinion, Irish law may require that such discretion is exercised reasonably or that such opinion is based upon reasonable grounds.

4.3 A particular course of dealing among the parties or an oral amendment, variation or waiver may result in an Irish court finding that the terms of the Transaction Documents have been amended, varied or waived even if such course of dealing or oral amendment, variation or waiver is not reflected in writing among the parties.

4.4 No opinion is expressed on any deed of assignment, transfer, accession or similar document executed after the date of this opinion in relation to any of the rights and obligations contained in the Transaction Documents.

4.5 No opinion is expressed on any deed or agreement envisaged by the Transaction Documents to be entered at a future date or any future action taken by a party under the Transaction Documents.

4.6 An Irish court may refuse to give effect to any undertaking contained in the Transaction Documents that one party would pay another party's legal expenses and costs in respect of any action before the courts of Ireland particularly where such an action is unsuccessful.

*Judgments*

4.7 There is a possibility that an Irish court would hold that a judgment on the Transaction, whether given in an Irish court or elsewhere, would supersede the relevant agreement or instrument to all intents and purposes, so that any obligation thereunder which by its terms would survive such judgment might not be held to do so.

*Due Diligence and Searches*

4.8 We have not investigated the nature of or the title to property and assets the subject of the Transaction Documents or insurance, merger/competition, regulatory or environmental status or compliance nor have we considered any implications or perfection or other requirements arising in respect thereof. Other than the Searches, we have not conducted any other searches whatsoever. We have conducted no due diligence nor checked the regulatory status or compliance of either Company or any of its affiliates or shareholders, or banks, or any other person. We have not conducted any due diligence on the status of any person, and in particular have not considered any due diligence on any of the Purchasers, or enquired or investigated as to whether they hold appropriate licenses or approvals.

*Execution of Documents*

4.9 We note the decision in the English case of ***R (on the application of Mercury Tax Ltd) v. Revenue and Customs Commissioners*** [2008] EWHC 2721. Although this decision will not be binding on the courts of Ireland it will be considered as persuasive authority. One of the decisions in that case would appear to indicate that a previously executed signature page from one document may not be transferred to another document, even where the documents in question are simply updated versions of the same document. Our Opinion is qualified by reference to the above referenced decision.

*Sanctions*

4.10 If a party to any Transaction Document is, or any payment pursuant to any Transaction Document is made to, by or in respect of, a person:

(a) listed on or owned or controlled by a person listed on a list maintained by a sanctions authority or a person acting on behalf of such a person;

(b) located in or organised under the laws of a country or territory that is, or whose government is, the subject of country-wide or territory-wide sanctions (or a person owned or controlled by, or acting on behalf of, such a person); or

(c) otherwise a subject of or target of sanctions,

then performance of certain obligations to that party, or dealing with payments to and from that party, may be prohibited under sanctions law with any breach of sanctions law also resulting in prosecution and penalties.

Yours faithfully,

_ /s/ Arthur Cox_____
**ARTHUR COX**

**Exhibit 5.3**

**[LETTERHEAD OF LOYENS & LOEFF LUXEMBOURG SARL]**

Ingersoll–Rand plc
170/175 Lakeview Drive
Airside Business Park
Swords, Co. DUBLIN
Ireland

March 21, 2019

Dear Sirs,

**Ingersoll–Rand Luxembourg Finance S.A. – Form S-3 Registration Statement**

**1 INTRODUCTION**

1.1 We have acted as Luxembourg counsel for (i) Ingersoll–Rand Luxembourg Finance S.A., a Luxembourg public limited liability company ( *société anonyme* ) with registered office at 1 avenue du Bois, L-1251 Luxembourg and registered with the Luxembourg Register of Commerce and Companies ( **RCS** ) under number B 189791 ( **IR Lux** ) and (ii) Ingersoll–Rand Lux International Holding Company S.à r.l., a Luxembourg private limited liability company ( *société à responsabilité limitée* ) with registered office at 1 avenue du Bois, L-1251 Luxembourg and registered with the Luxembourg Register of Commerce and Companies ( **RCS** ) under number B 182971 ( **Lux International** , together with IR Lux, the **Companies** ).

This legal opinion (the **Opinion** ) is furnished to you in connection with the issuance of (a) $400,000,000 principal amount of 3.500% Unsecured Senior Notes due 2026 (the **2026 Notes** ), (b) $750,000,000 principal amount of 3.800% Unsecured Senior Notes due 2029

(the **2029 Notes** ) and (c) $350,000,000 principal amount of 4.500% Unsecured Notes due 2049 (the **2049 Notes** and together with the 2026 Notes and the 2029 Notes, the **Notes** ) issued by IR Lux and unconditionally guaranteed by Ingersoll-Rand public limited company, Ingersoll-Rand Irish Holdings Unlimited Company, Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Company and Lux International (the **Guarantors** ).

**2 SCOPE OF INQUIRY**

2.1 For the purpose of this Opinion, we have examined executed copies the following documents (the **Opinion Documents** ):

(a) the base indenture governed by the laws of the State of New York (USA), dated February 21, 2018, entered into by and among IR Lux, the Guarantors and Wells

Fargo Bank, National Association, as trustee, registrar, paying agent and transfer agent (the **Indenture** );

(b) the fourth supplemental indenture, dated as March 21, 2019, relating to the 2026 Notes and the fifth supplemental indenture, dated as of March 21, 2019, relating to the 2029 Notes, and the sixth supplemental indenture, dated as of March 21, 2019, relating to the 2049 Notes (the **Supplemental Indentures** );

(c) four global notes representing the Notes, dated March 21, 2019 (the **Global Notes** );

2.2 We have also examined a copy of the following documents:

(a) the articles of association of IR Lux, as enacted in the notarial deed of incorporation dated August 21, 2014 and drawn up by Maître Francis Kesseler, Notary then residing in Esch-sur-Alzette, Grand Duchy of Luxembourg ( **IR Lux Articles** );

(b) the consolidated articles of association of Lux International as at January 5, 2018, as drawn up by Maître Henri Beck, Notary residing in Echternach, Grand Duchy of Luxembourg (the **Lux International Articles** , together with the IR Lux Articles, the **Articles** );

(c) the resolutions of the directors of the IR Lux, as set out in the minutes of the meetings of the board of directors of IR Lux held on March 18, 2019, pertaining to the Opinion Documents (the **IR Lux Board Resolutions** );

(d) the resolutions of the managers of Lux International, as set out in the minutes of the meeting of the board of managers of Lux International held on March 18, 2019, pertaining to the Opinion Documents (the **Lux International Board Resolutions** , together with the IR Lux Board Resolutions, the **Board Resolutions** );

(e) excerpts pertaining to IR Lux and Lux International delivered by the RCS and dated March 21, 2019 (the **Excerpts** ); and

(f) certificates of absence of judicial decisions ( *certificat de non-inscription d'une décision judiciaire* ) pertaining to IR Lux and Lux International, delivered by the RCS on the date of this Opinion with respect to the situation of IR Lux and Lux International as at one day prior to date of this Opinion (the **RCS Certificates** ).

**3 ASSUMPTIONS**

We have assumed the following:

3.1 the genuineness of all signatures, stamps and seals of the persons purported to have signed the relevant documents and the authenticity of all documents submitted to us as originals and the conformity to the originals of all documents submitted to us as copies;

3.2 all factual matters and statements relied upon or assumed in this Opinion are and were true and complete on the date of execution of the Opinion Documents (and any documents in connection therewith);

3.3 the Articles and the Board Resolutions are in full force and effect, have not been amended, rescinded, revoked or declared null and void, and there has been no change in the respective board of managers of the Companies;

3.4 the information contained in the Excerpts and the RCS Certificates is true and accurate at the date of this Opinion;

3.5 the due compliance with all requirements (including, without limitation, the obtaining of the necessary consents, licences, approvals and authorisations, the making of the necessary filings, registrations and notifications and the payment of stamp duties and other taxes) under any laws (other than Luxembourg law) in connection with the Opinion Documents (and any documents in connection therewith); and

3.6 there are no provisions in the laws of any jurisdiction outside Luxembourg, which would adversely affect, or otherwise have any negative impact on this Opinion.

**4 OPINION**

Based upon the assumptions made above and subject to the qualifications set out below and any factual matter not disclosed to us, we are of the following opinion:

4.1 IR Lux is a public limited liability company (société anonyme), incorporated and validly existing under Luxembourg law for an unlimited duration.

4.2 Lux International is a private limited liability company (société à responsabilité limitée), incorporated and validly existing under Luxembourg law for an unlimited duration.

4.3 The Companies have the corporate power to enter into and perform the obligations expressed to be assumed by it under the Opinion Documents.

4.4 The Opinion Documents have been duly authorised by all requisite corporate action on the part of the Companies respectively and the Opinion Documents have been duly executed and delivered by the Companies.

**5 QUALIFICATIONS**

This Opinion is subject to the following qualifications:

5.1 Our Opinion is subject to all limitations resulting from the application of Luxembourg public policy rules, overriding statutes and mandatory laws as well as to all limitations by reasons of bankruptcy ( *faillite* ), composition with creditors ( *concordat* ), suspension of payments ( *sursis de paiement* ), controlled management ( *gestion contrôlée* ), or the appointment of a

temporary administrator ( *administrateur provisoire* ) and any similar Luxembourg or foreign proceedings affecting the rights of creditors generally ( **Insolvency Proceedings** ).

5.2 Our opinion that the Companies exist validly is based on the Articles, the Excerpts and the RCS Certificates (which confirms in particular that no judicial decisions in respect of bankruptcy ( *faillite* ), composition with creditors ( *concordat* ), suspension of payments ( *sursis de paiement* ), controlled management ( *gestion contrôlée* ), or the appointment of a temporary administrator ( *administrateur provisoire* ) pertaining to the Companies have been registered with the RCS). The Articles, the Excerpts and the RCS Certificates are, however, not capable of revealing conclusively whether or not the Companies are subject to any Insolvency Proceedings.

**6 MISCELLANEOUS**

6.1 This Opinion is as of this date and is given on the basis of Luxembourg laws in effect and as published, construed and applied by Luxembourg courts, as of such date. We undertake no obligation to update it or to advise of any changes in such laws or their construction or application. We express no opinion, nor do we imply any opinion, as to any laws other than Luxembourg laws.

6.2 This Opinion is strictly limited to the Opinion Documents and the matters expressly set forth therein. No other opinion is, or may be, implied or inferred therefrom.

6.3 This Opinion is given on the express condition, accepted by each person entitled to rely on it, that this Opinion and all rights, obligations, issues of interpretation and liabilities in relation to it are governed by, and shall be construed in accordance with, Luxembourg law and any action or claim in relation to it can be brought exclusively before the Luxembourg courts.

6.4 This Opinion is issued by Loyens & Loeff Luxembourg SARL. Individuals or legal entities that are involved in the services provided by or on behalf of Loyens & Loeff Luxembourg SARL cannot be held liable in any manner whatsoever.

6.5 This Opinion is given to you solely for your benefit in connection with the Opinion Documents. It may be disclosed to your legal advisers but for information purposes only. This Opinion may not be relied upon by anyone else and it may not be quoted or referred to in any public document, or filed with any authority or other person without our written consent.

6.6 Notwithstanding the above, we consent to the filing of this opinion as an exhibit to the current report on Form 8-K of Ingersoll-Rand plc for incorporation by reference into the Form S-3 Registration Statement filed by the Companies, and we further consent to the use of our name under the caption “Service of Process and Enforcement of Liabilities” in such Form S-3 Registration Statement and the prospectus that forms a part thereof.

6.7 Notwithstanding the above, this Opinion may be disclosed to rating agencies, insofar as they wish to know that an opinion has been given and to be made aware of its terms, provided that they may not rely on this Opinion for their own benefit or that of any other person.

Yours faithfully,
Loyens & Loeff Luxembourg SARL

_ /s/ Thierry Lohest_____
Thierry Lohest
Avocat à la Cour

**Exhibit 5.4**

**[LETTERHEAD OF McCARTER & ENGLISH, LLP]**

March 21, 2019

Ingersoll-Rand Luxembourg Finance S.A.
c/o Ingersoll-Rand plc
170/175 Lakeview Dr.
Airside Business Park
Swords, Co., Dublin
Ireland

Re: Ingersoll-Rand Luxembourg Finance S.A.
Ingersoll-Rand Public Limited Company
Ingersoll-Rand Global Holding Company Limited
Ingersoll-Rand Lux International Holding Company S.à.r.l.
Ingersoll-Rand Irish Holdings Unlimited Company
Ingersoll-Rand Company
Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as special New Jersey counsel to Ingersoll-Rand Company, a New Jersey corporation (the " **Co-Guarantor** "), in connection with the Registration Statement on Form S-3 (the " **Registration Statement** "), filed on November 1, 2017 by Ingersoll-Rand Luxembourg Finance S.A., a Luxembourg public company limited by shares *(société anonyme)* (" **Issuer** "), Ingersoll-Rand Global Holding Company Limited, a Delaware corporation (" **IR Global** "), Ingersoll-Rand Public Limited Company, an Ireland public limited company (" **IR plc** "), Ingersoll-Rand Lux International Holding Company S.à.r.l., a Luxembourg private limited liability company *(société à responsabilité limitée)* (" **Lux International** "), Ingersoll-Rand Irish Holdings Unlimited Company, an Ireland private unlimited company (" **Irish Holdings** ") and the Co-Guarantor (collectively with IR Global, IR plc, Lux International and Irish Holdings, the " **Guarantors** ") with the Securities and Exchange Commission (the " **Commission** ") under the Securities Act of 1933, as amended, (the " **Act** "). The Registration Statement relates to, among other things, the registration under the Securities Act, and the issuance and sale pursuant to Rule 415 under the Securities Act, of (i) senior notes in the aggregate principal amount of $400,000,000 which will bear interest at 3.500% and will mature on March 21, 2026 (the " **2026 Notes** "), (ii) senior notes in the aggregate principal amount of $750,000,000 which will bear interest at 3.800% and will mature on March 21, 2029 (the " **2029 Notes** ") and (iii) senior notes in the aggregate principal amount of $350,000,000 which will bear interest at 4.500% and will mature on March 21, 2049 (the " **2049 Notes** "; and collectively with the 2026 Notes and 2029 Notes, the

" **Notes** ") to be issued by the Issuer and the guarantees (the " **Guarantees** ") of the Guarantors with respect to the same. The Notes and the Guarantees are to be issued under an Indenture dated as of February 21, 2018 (the " **Base Indenture** ") by and among the Issuer, the Guarantors and Wells Fargo Bank, National Association, as trustee (in such capacity, the " **Trustee** "), as supplemented, including by (1) the Fourth Supplemental Indenture dated as of March 21, 2019 (the " **Fourth Supplemental Indenture** ") by and among the Issuer, the Guarantors and the Trustee relating to the 2026 Notes, (2) the Fifth Supplemental Indenture dated as of March 21, 2019 (the " **Fifth Supplemental Indenture** ") by and among the Issuer the Guarantors and the Trustee relating to the 2029 Notes and (3) the Sixth Supplemental Indenture dated as of March 21, 2019 (the " **Sixth Supplemental Indenture** "; and together with the Fourth Supplemental Indenture and the Fifth Supplemental Indenture, the " **Supplemental Indentures** "; the Base Indenture and the Supplemental Indentures are referred to herein as the " **Indenture** ") by and among the Issuer the Guarantors and the Trustee relating to the 2049 Notes. The form of the Indenture was filed as an exhibit to the Registration Statement. The Guarantees will be issued in the form set forth as an exhibit to the Indenture. This opinion is being delivered in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Act.

In connection with this opinion, we have examined originals or copies, certified or otherwise identified to our satisfaction, of:

(i) the Registration Statement;

(ii) the Prospectus Supplement to the Prospectus dated November 1, 2017 relating to the Notes;

(iii) the Restated Certificate of Incorporation of the Co-Guarantor, as amended to date;

(iv) the certificate of good standing certified by the Treasurer of the State of New Jersey on March 21, 2019;

(v) the By-laws of the Co-Guarantor, as currently in effect;

(vi) the Indenture and the Notes;

(vii) the Guarantees; and

(viii) certain resolutions adopted by the Board of Directors of the Co-Guarantor (the "Board of Directors") on March 18, 2019 relating to, among other things, the Guarantees.

We have also examined originals or copies, certified or otherwise identified to our satisfaction, of such records of the Co-Guarantor and such agreements, certificates of public officials, certificates of officers or other representatives of the Co-Guarantor, and such other documents, certificates and records as we have deemed necessary or appropriate as a basis for the opinions set forth herein.

In our examination, we have assumed the legal capacity of all natural persons, the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified, conformed, photostatic, electronic or facsimile copies and the authenticity of the originals of such copies. As to any facts material to the opinions expressed herein which were not independently established or verified, we have relied upon oral or written statements and representations of officers and other representatives of the Co-Guarantor and others. In making our examination of executed documents or documents to be executed, we have assumed that the parties thereto, other than the Co-Guarantor, have the power, corporate or otherwise, to enter into and perform all obligations thereunder and have also assumed the due authorization by all requisite action, corporate or other, and the execution and delivery by such parties of such documents, and, as to parties including the Co-Guarantor, the validity and binding effect on such parties. We have assumed that the Notes will be manually signed or countersigned, as the case may be, by duly authorized officers of the Trustee. In addition, we have also assumed that the terms of the Notes and Guarantees do not, and that the execution and delivery by the Co-Guarantor of, and the performance of its obligations under, the Indenture and the Guarantees will not, violate, conflict with or constitute a default under (i) any law, rule or regulation to which the Co-Guarantor is subject (except that we do not make the assumption set forth in this clause (i) with respect to the Opined on Law (as defined below)), (ii) any judicial or regulatory order or decree of any governmental authority (except that we do not make the assumption set forth in this clause (ii) with respect to the Opined on Law) or (iii) any consent, approval, license, authorization or validation of, or filing, recording or registration with any governmental authority (except that we do not make the assumption set forth in this clause (iii) with respect to the Opined on Law).

Our opinions set forth below are limited to the New Jersey Business Corporation Act (the " **NJBCA** ") and to the extent that judicial or regulatory orders or decrees or consents, approvals, licenses, authorizations, validations, filings, recordings or registrations with governmental authorities are relevant, to those required under the NJBCA (all of the foregoing being referred to as " **Opined on Law** "). We do not express any opinion with respect to the laws of any jurisdiction other than the Opined on Law or as to the effect of any such non-Opined on Law on the opinions herein stated. Further, we have assumed that the Indenture has been and continues to be qualified under the Trust Indenture Act of 1939, as amended. This opinion is limited to the laws, including the rules and regulations, as in effect on the date hereof, which laws are subject to change with possible retroactive effect.

In rendering the opinions set forth below, we have assumed that (i) the Issuer and Lux International have been duly organized and are validly existing under the laws of Luxembourg, IR plc and Irish Holdings have been duly organized and are validly existing under the laws of Ireland and IR Global has been duly incorporated and is validly existing under the laws of Delaware, (ii) the Issuer and each Guarantor (other than the Co-Guarantor) has duly authorized, executed and delivered the Indenture, in each case in accordance with its respective organization documents and the laws of Luxembourg, in the case of the Issuer and Lux International, the laws of Ireland, in the case of IR plc and Irish Holdings and the laws of Delaware in the case of IR Global, (iii) the execution, delivery and performance by the Issuer and each Guarantor of the Indenture does not and will not violate the laws of Luxembourg, in the case of the Issuer and Lux International, the laws of Ireland, in the case of IR plc and Irish Holdings and the laws of Delaware in the case of IR Global, or the laws of any other jurisdiction (except that no such assumption is made with respect to the laws of the State of New Jersey), and (iv) the execution, delivery and performance by the Issuer and each Guarantor (other than the Co-Guarantor) of the Indenture does not and will not constitute a breach or violation of, or require any consent to be obtained under, any agreement or instrument which is binding upon such Issuer or such Guarantor or its respective organizational documents.

Based upon and subject to the foregoing and to the other qualifications and limitations set forth herein, we are of the opinion that:

1. The Co-Guarantor is validly existing as a corporation in good standing under the laws of the State of New Jersey. The Co-Guarantor has the corporate power and authority to enter into and perform its obligations under the Indenture and the Guarantees.

2. The Indenture and the Guarantees have been duly authorized, executed and delivered by the Co-Guarantor and are legal, valid and binding obligations of the Co-Guarantor, enforceable against the Co-Guarantor in accordance with their respective terms.

We hereby consent to the filing of this opinion with the Commission as an exhibit to the Registration Statement. We also hereby consent to the use of our name under the heading “Legal Matters” in the prospectus which forms a part of the Registration Statement. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission promulgated thereunder. This opinion is expressed as of the date hereof unless otherwise expressly stated, and we disclaim any undertaking to advise you of any subsequent changes in the facts stated or assumed herein or of any subsequent changes in applicable laws.

Very truly yours,

/s/ McCarter & English, LLP
McCARTER & ENGLISH, LLP