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2017

% change

Climate

¢

9,342.3

\$

8,407.2

11.1%

Industrial

2,430.8

2,172.3

11.9%

Total

\$

11,773.1

\$ 10,579.5

Climate

Net revenues for the nine months ended September 30, 2018 increased by 11.1% or \$935.1 million, compared with the same period of 2017. Higher volumes and improved pricing were the primary drivers of the year-over-year increase.

The components of the period change are as follows:

Volume/product mix 7.9 %

Acquisitions 1.1 % Pricing 1.2 %

Currency translation 0.9 % Total 11.1%

Industrial

Net revenues for the nine months ended September 30, 2018 increased by 11.9% or \$258.5 million, compared with the same period of 2017. Higher volumes and improved pricing were the primary drivers of the year-over-year increase. The components of the period change are as follows:

 $\begin{tabular}{lll} Volume/product mix 7.2 & \% \\ Acquisitions & 1.2 & \% \\ Pricing & 1.5 & \% \\ Currency translation & 2.0 & \% \\ Total & 11.9 & \% \\ \end{tabular}$

Operating Income/Margin
Operating margin increased to 12.5% for the nine months ended September 30, 2018 compared to 12.1% for the same period of 2017. The increase was primarily the result of higher volumes, improved pricing and increased productivity.

These amounts were partially offset by material and other inflation, higher investment and restructuring spending.

Dollar amounts in millions	Income	Operating Income (Expense)	Period Change	2018 Operat Margin	ting n	2017 Opera Margi	ting n
Climate	\$1,378.7	\$1,224.5	\$154.2	14.8	%	14.6	%
Industrial	291.8	247.0	44.8	12.0	%	11.4	%
Unallocated corporate expenses	(199.8)	(192.8)	(7.0)) N/A		N/A	
Total	\$1,470.7	\$1,278.7	\$192.0	12.5	%	12.1	%

Climate

Operating margin increased to 14.8% for the nine months ended September 30, 2018 compared to 14.6% for the same period of 2017. The increase was primarily the result of improved pricing and increased productivity. Higher volumes and incremental operating income from acquisitions further contributed to the year-over-year increase. These amounts were partially offset by material and other inflation, higher investment and restructuring spending.

Industrial

Operating margin increased to 12.0% for the nine months ended September 30, 2018 compared to 11.4% for the same period of 2017. The increase was primarily the result of higher volumes, improved pricing and increased productivity. These amounts were partially offset by material and other inflation, higher investment and restructuring spending. Unallocated Corporate Expenses

Unallocated corporate expenses for the nine months ended September 30, 2018 increased by \$7.0 million compared with the same period of 2017. Lower functional costs and the timing of project spending were more than offset by higher compensation and benefit charges related to variable compensation and restructuring actions.

Interest Expense

Interest expense for the nine months ended September 30, 2018 increased \$9.7 million compared with the same period of 2017. During the first quarter of 2018, we issued \$1.15 billion of senior notes and redeemed \$1.1 billion of senior notes. The increase primarily relates to the redemption of the senior notes in which we recognized \$15.4 million of premium expense and \$1.2 million of unamortized costs in Interest expense. This amount was partially offset by lower interest rates on the new senior notes issued during the period.

Other Income/(Expense), Net

The components of Other income/(expense), net for the nine months ended September 30 are as follows:

In millions 2018 2017
Interest income \$6.3 \$6.7
Exchange gain (loss) (14.2) (3.5)
Other components of net periodic benefit cost (16.0) (21.7)
Other activity, net 7.9 (5.3)
Other income/(expense), net \$(16.0) \$(23.8)

Other income /(expense), net includes the results from activities other than normal business operations such as interest income and foreign currency gains and losses on transactions that are denominated in a currency other than an entity's functional currency. In addition, we include the components of net periodic benefit cost for pension and post retirement obligations other than the service cost component. Other activity, net includes items associated with Trane for the settlement and defense of asbestos-related claims, insurance settlements on asbestos-related matters and the revaluation of its liability for potential future claims.

Provision for Income Taxes

For the nine months ended September 30, 2018, our effective tax rate was 12.5% which is lower than the U.S. statutory rate of 21% primarily due to the \$75.5 million of measurement period adjustments associated with the Act and a \$28.5 million reduction in a deferred tax asset valuation allowance for certain state net deferred tax assets. Measurement period adjustments associated with the transition tax and the change in permanent reinvestment assertion primarily relate to the realization of foreign tax credits and result from the filing of the U.S. Federal income tax return, legislative guidance issued during the quarter and revised projections of future foreign sourced income during the carryforward period. The reduction in the valuation allowance for certain state net deferred tax assets is primarily the result of revised projections of future state taxable income during the carryforward period. In addition, the lower effective income tax rate was driven by excess tax benefits from employee share-based payments and a reduction to the interest liability associated with our unrecognized tax benefits. These amounts were partially offset by U.S. state and local income taxes and certain non-deductible employee expenses. The effective tax rate for the nine months ended September 30, 2017 was 22.3% which was lower than the U.S. statutory rate of 35% primarily due to excess tax benefits from employee share-based payments, the provision to return true-up due to the filing of the U.S. Federal income tax return, a reduction of a previously accrued tax liability due to obtaining approval from a local non-U.S. tax authority and earnings in non-U.S. jurisdictions, which in aggregate have a lower effective tax rate. These amounts were partially offset by a non-cash charge during the second quarter of 2017 related to the establishment of a valuation allowance on certain net deferred tax assets in Brazil of approximately \$33 million. In general, when comparing the results of multiple reporting periods, among other factors, the mix of earnings between U.S. and foreign jurisdictions can cause variability on our overall effective tax rate.

Liquidity and Capital Resources

We assess our liquidity in terms of our ability to generate cash to fund our operating, investing and financing activities. In doing so, we review and analyze our current cash on hand, the number of days our sales are outstanding, inventory turns, capital expenditure commitments and income tax payments. Our cash requirements primarily consist of the following:

Funding of working capital

Funding of capital expenditures

Debt service requirements

Our primary sources of liquidity include cash balances on hand, cash flows from operations, proceeds from debt offerings, commercial paper, and borrowing availability under our existing credit facilities. We earn a significant amount of our operating income in jurisdictions where it is deemed to be permanently reinvested. Our most prominent jurisdiction of operation is the U.S. We expect existing cash and cash equivalents available to the U.S. operations, the cash generated by our U.S. operations, our committed credit lines as well as our expected ability to access the capital and debt markets will be sufficient to fund our U.S. operating and capital needs for at least the next twelve months and

thereafter for the foreseeable future. In addition, we expect existing non-U.S. cash and cash equivalents and the cash generated by our non-U.S. operations will be sufficient to fund our non-U.S. operating and capital needs for at least the next twelve months and thereafter for the foreseeable future.

As of September 30, 2018, we had approximately \$1.0 billion of cash and cash equivalents on hand, of which approximately \$0.7 billion was held by non-U.S. subsidiaries. Cash and cash equivalents held by our non-U.S. subsidiaries are generally available for use in our U.S. operations via intercompany loans, equity infusions or via distributions from direct or indirectly owned non-U.S. subsidiaries for which we do not assert permanent reinvestment. As a result of the Tax Cuts and Jobs Act, additional repatriation

Debt and Credit Facilities

opportunities to access cash and cash equivalents held by non-U.S. subsidiaries have been created. In general, repatriation of cash to the U.S. can be completed with no significant incremental U.S. tax. However, to the extent that we repatriate funds from non-U.S. subsidiaries for which we assert permanent reinvestment to fund our U.S. operations, we would be required to accrue and pay applicable non-U.S. taxes. As of September 30, 2018, we currently have no plans to repatriate funds from subsidiaries for which we assert permanent reinvestment. Share repurchases are made from time to time in accordance with our capital allocation strategy, subject to market conditions and regulatory requirements. In February 2017, our Board of Directors authorized the repurchase of up to \$1.5 billion of our ordinary shares (the 2017 Authorization). Repurchases under this program, which began in May 2017, totaled approximately \$600 million at December 31, 2017 and are held in treasury. During the nine months ended September 30, 2018, we repurchased and canceled approximately \$514 million of our ordinary shares leaving approximately \$386 million remaining under the 2017 Authorization at September 30, 2018. In October 2018, our Board of Directors authorized the repurchase of up to \$1.5 billion of our ordinary shares upon completion of the 2017 Authorization.

In June 2018, we announced an increase in our quarterly share dividend from \$0.45 to \$0.53 per ordinary share. This reflects an 18% increase that began with our September 2018 payment. We continue to be active with acquisitions and joint venture activity. Since the beginning of 2018, we entered into a joint venture and acquired several businesses, including channel acquisitions, that complement existing products and services further growing our product portfolio. In addition, we incur ongoing costs associated with restructuring initiatives intended to result in improved operating performance, profitability and working capital levels. Actions associated with these initiatives may include workforce reductions, improving manufacturing productivity, realignment of management structures and rationalizing certain assets. We expect that our available cash flow, committed credit lines and access to the capital markets will be sufficient to fund share repurchases, dividends, ongoing restructuring actions, acquisitions and joint venture activity. Liquidity

The following table contains several key measures of our financial condition and liquidity at the period ended:

In millions	September 30, December 31,			
III IIIIIIOIIS	2018	2017		
Cash and cash equivalents	\$ 1,022.5	\$ 1,549.4		
Short-term borrowings and current maturities of long-term debt	350.6	1,107.0		
Long-term debt	3,739.8	2,957.0		
Total debt	4,090.4	4,064.0		
Total Ingersoll-Rand plc shareholders' equity	7,308.1	7,140.3		
Total equity	7,343.2	7,206.9		
Debt-to-total capital ratio	35.8 %	36.1	%	

Our short-term obligations primarily consist of current maturities of long-term debt and commercial paper. We have outstanding \$343.0 million of fixed rate debentures that contain a put feature that the holders may exercise on each anniversary of the issuance date. If exercised, we are obligated to repay in whole or in part, at the holder's option, the outstanding principal amount (plus accrued and unpaid interest) of the debentures held by the holder. In addition, we also maintain a commercial paper program which is used for general corporate purposes. Under the program, the maximum aggregate amount of unsecured commercial paper notes available to be issued, on a private placement basis, is \$2 billion as of September 30, 2018. We had no outstanding balance under our commercial paper program at September 30, 2018 and December 31, 2017. See Note 6 to the Consolidated Financial Statements for additional information regarding the terms of our short-term obligations.

Our long-term obligations primarily consist of long-term debt with final maturity dates ranging between 2019 and 2048. In addition, we maintain two 5-year, \$1.0 billion revolving credit facilities. Each senior unsecured credit facility provides support for our commercial paper program and can be used for working capital and other general corporate purposes. Total commitments of \$2.0 billion were unused at September 30, 2018 and December 31, 2017. On April 17, 2018, the Company entered into a new 5-year, \$1.0 billion senior unsecured credit facility and terminated its 5-year, \$1.0 billion facility set to expire in March 2019. As a result, the current maturity dates of the

revolving credit facilities are March 2021 and April 2023.

In February 2018, the Company issued \$1.15 billion principal amount of senior notes in three tranches through an indirect, wholly-owned subsidiary. The tranches consist of \$300 million aggregate principal amount of 2.900% senior notes due 2021, \$550 million aggregate principal amount of 3.750% senior notes due 2028 and \$300 million aggregate principal amount of 4.300% senior notes due 2048. In March 2018, the Company used the proceeds to fund the redemption of \$750 million aggregate principal amount of

6.875% senior notes due 2018 and \$350 million aggregate principal amount of 2.875% senior notes due 2019, with the remainder used for general corporate purposes. As a result of the early redemption, the Company recognized \$15.4 million of premium expense and \$1.2 million of unamortized costs in Interest expense. See Note 6 and Note 20 to the Condensed Consolidated Financial Statements for additional information regarding the terms of our long-term obligations and their related guarantees.

Cash Flows

The following table reflects the major categories of cash flows for the nine months ended September 30. For additional details, see the Condensed Consolidated Statements of Cash Flows in the condensed consolidated financial statements.

In millions 2018 2017

Net cash provided by (used in) continuing operating activities \$946.4 \$890.8

Net cash provided by (used in) continuing investing activities (520.6) (206.4)

Net cash provided by (used in) continuing financing activities (868.9) (1,222.5)

Operating Activities

Net cash provided by continuing operating activities for the nine months ended September 30, 2018 was \$946.4 million, of which net income provided \$1,520.2 million after adjusting for non-cash transactions. Changes in assets and liabilities, net used \$573.8 million. Improvements in accounts payable were more than offset by the seasonal increase to inventory balances and higher outstanding accounts receivable from higher sales volumes. Net cash provided by continuing operating activities for the nine months ended September 30, 2017 was \$890.8 million, of which net income provided \$1,281.8 million after adjusting for non-cash transactions. Changes in assets and liabilities, net used \$391.0 million. Improvements in accounts payable were more than offset by the seasonal increase to inventory balances and higher outstanding accounts receivable.

Investing Activities

Cash flows from investing activities represents inflows and outflows regarding the purchase and sale of assets. Primary activities associated with these items include capital expenditures, proceeds from the sale of property, plant and equipment, acquisitions, investment in joint ventures and divestitures. During the nine months ended September 30, 2018, net cash used in investing activities from continuing operations was \$520.6 million. The primary driver of the usage is attributable to the acquisition of several businesses and the investment of a 50% ownership interest in a joint venture with Mitsubishi. The total outflow, net of cash acquired, was \$281.5 million. Other outflows included capital expenditures which totaled \$251.2 million. Net cash used in investing activities from continuing operations for the nine months ended September 30, 2017 was \$206.4 million. The primary driver of the usage was attributable to capital expenditures of \$149.9 million. In addition, we acquired several businesses during the period that complement existing products and services. The total outflow for acquisitions, net of cash acquired was \$60.3 million during the period.

Financing Activities

Cash flows from financing activities represents inflows and outflows that account for external activities affecting equity and debt. Primary activities associated with these actions include paying dividends to shareholders, repurchasing our own shares, issuing our own stock and debt transactions. During the nine months ended September 30, 2018, net cash used in financing activities from continuing operations was \$868.9 million. Primary drivers of the cash outflow include dividends paid to ordinary shareholders of \$351.2 million and the repurchase of \$514.1 million in ordinary shares. In addition, we issued \$1.15 billion of senior notes during the three months ended March 31, 2018. The issuance was predominately offset by the redemption of \$1.1 billion of senior notes. Net cash used in financing activities from continuing operations for the nine months ended September 30, 2017 was \$1,222.5 million. Dividends paid to ordinary shareholders of \$318.0 million and the repurchase of \$911.1 million in ordinary shares were the primary drivers of the cash outflow for the period.

Discontinued Operations

Cash flows from discontinued operations primarily represent costs associated with postretirement benefits, product liability and legal costs (mostly asbestos-related) from previously sold businesses. Net cash used in discontinued operating activities for the nine months ended September 30, 2018 and 2017 primarily relates to postretirement

benefits and asbestos-related matters. In addition, net cash used in discontinued operating activities for the nine months ended September 30, 2017 includes the proceeds from settlements with insurance carriers related to asbestos.

Pensions

Our investment objective in managing defined benefit plan assets is to ensure that all present and future benefit obligations are met as they come due. We seek to achieve this goal while trying to mitigate volatility in plan funded status, contribution and expense by better matching the characteristics of the plan assets to that of the plan liabilities. We use a dynamic approach to asset allocation whereby a plan's allocation to fixed income assets increases as the plan's funded status improves. We monitor plan funded status and asset allocation regularly in addition to investment manager performance.

We monitor the impact of market conditions on our defined benefit plans on a regular basis. None of our defined benefit pension plans have experienced a significant impact on their liquidity due to the volatility in the markets. The Company currently projects that it will contribute approximately \$80 million to its plans worldwide in 2018. For further details on pension plan activity, see Note 9 to the condensed consolidated financial statements.

For a further discussion of Liquidity and Capital Resources, refer to Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," contained in the Company's Annual Report on Form 10-K for the period ended December 31, 2017.

Commitments and Contingencies

We are involved in various litigations, claims and administrative proceedings, including those related to asbestos, environmental, and product liability matters. Amounts recorded for identified contingent liabilities are estimates, which are reviewed periodically and adjusted to reflect additional information when it becomes available. Subject to the uncertainties inherent in estimating future costs for contingent liabilities, except as expressly set forth in Note 19 to the condensed consolidated financial statements, management believes that the liability which may result from these legal matters would not have a material adverse effect on our financial condition, results of operations, liquidity or cash flows.

Critical Accounting Policies

Management's Discussion and Analysis of Financial Condition and Results of Operations are based upon our condensed consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of financial statements in conformity with those accounting principles requires management to use judgments in making estimates and assumptions based on the relevant information available at the end of each period. These estimates and assumptions have a significant effect on reported amounts of assets and liabilities, revenue and expenses, as well as the disclosure of contingent assets and liabilities because they result primarily from the need to make estimates and assumptions on matters that are inherently uncertain. Actual results may differ from estimates.

Management believes there have been no significant policy changes during the nine months ended September 30, 2018, to the items that we disclosed as our critical accounting policies in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2017 except for certain policy changes due to the adoption of ASC 606. Refer to Note 2, "Recent Accounting Pronouncements" and Note 11, "Revenue" for additional information related to the adoption of ASC 606. Recent Accounting Pronouncements

See Note 2 to the Condensed Consolidated Financial Statements for a discussion of recent accounting pronouncements.

Safe Harbor Statement

Certain statements in this report, other than purely historical information, are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These forward-looking statements generally are identified by the words "believe," "project," "expect," "anticipate," "estimate," "forecast," "outlook," "intend," "strategy," "plan," "may," "cou" "would," "will be," "will continue," "will likely result," or the negative thereof or variations thereon or similar terminology generally intended to identify forward-looking statements.

Forward-looking statements may relate to such matters as projections of revenue, margins, expenses, tax provisions, earnings, cash flows, benefit obligations, share or debt repurchases or other financial items; any statements of the plans, strategies and objectives of management for future operations, including those relating to any statements

concerning expected development, performance or market share relating to our products and services; any statements regarding future economic conditions or our performance; any statements regarding pending investigations, claims or disputes; any statements of expectation or belief; and any statements of assumptions underlying any of the foregoing. These statements are based on currently available information and our current assumptions, expectations and projections about future events. While we believe that our assumptions, expectations and projections are reasonable in view of the currently available information, you are cautioned not to place undue reliance on our forward-looking statements. You are advised to review any further disclosures we make on related subjects in materials we

file with or furnish to the SEC. Forward-looking statements speak only as of the date they are made and are not guarantees of future performance. They are subject to future events, risks and uncertainties - many of which are beyond our control - as well as potentially inaccurate assumptions, that could cause actual results to differ materially from our expectations and projections. We do not undertake to update any forward-looking statements.

Factors that might affect our forward-looking statements include, among other things:

overall economic, political and business conditions in the markets in which we operate;

the demand for our products and services;

competitive factors in the industries in which we compete;

changes in tax laws and requirements (including tax rate changes, new tax laws, new and/or revised tax law interpretations and any legislation that may limit or eliminate potential tax benefits resulting from our incorporation in a non-U.S. jurisdiction, such as Ireland);

trade protection measures such as import or export restrictions and requirements, the imposition of tariffs and quotas or revocation or material modification of trade agreements;

the outcome of any litigation, governmental investigations or proceedings;

the outcome of any income tax audits or settlements;

interest rate fluctuations and other changes in borrowing costs;

other capital market conditions, including availability of funding sources;

currency exchange rate fluctuations, exchange controls and currency devaluations;

availability of and fluctuations in the prices of key commodities;

impairment of our goodwill, indefinite-lived intangible assets and/or our long-lived assets;

elimate change, changes in weather patterns, natural disasters and seasonal fluctuations;

the impact of potential information technology or data security breaches; and

the strategic acquisition of businesses, product lines and joint ventures;

Some of the significant risks and uncertainties that could cause actual results to differ materially from our expectations and projections are described more fully in the "Risk Factors" section of this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the fiscal year ended December 31, 2017. There may also be other factors that have not been anticipated or that are not described in our periodic filings with the SEC, generally because we did not believe them to be significant at the time, which could cause results to differ materially from our expectations.

Item 3 – Quantitative and Qualitative Disclosures about Market Risk

For a discussion of the Company's exposure to market risk, refer to Part II, Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," contained in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017. There has been no significant change in our exposure to market risk as of the third quarter of 2018.

Item 4 – Controls and Procedures

The Company's management, including its Chief Executive Officer and Chief Financial Officer, have conducted an evaluation of the effectiveness of disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)), as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded as of September 30, 2018, that the disclosure controls and procedures are effective in ensuring that all material information required to be filed in this Quarterly Report on Form 10-Q has been recorded, processed, summarized and reported when required and the information is accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

There has been no change in the Company's internal control over financial reporting that occurred during the third quarter of 2018 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1 – Legal Proceedings

In the normal course of business, we are involved in a variety of lawsuits, claims and legal proceedings, including commercial and contract disputes, employment matters, product liability claims, asbestos-related claims, environmental liabilities, intellectual property disputes, and tax-related matters. In our opinion, pending legal matters are not expected to have a material adverse impact on our results of operations, financial condition, liquidity or cash flows.

Asbestos-Related Matters

Certain of our wholly-owned subsidiaries and former companies are named as defendants in asbestos-related lawsuits in state and federal courts. In virtually all of the suits, a large number of other companies have also been named as defendants. The vast majority of those claims allege injury caused by exposure to asbestos contained in certain historical products, primarily pumps, boilers and railroad brake shoes. None of our existing or previously-owned businesses were a producer or manufacturer of asbestos.

See also the discussion contained in our Annual Report on Form 10-K for the period ended December 31, 2017 under Part II, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations and also Note 19 to the condensed consolidated financial statements in this Form 10-Q.

Item 1A – Risk Factors

There have been no material changes to our risk factors contained in our Annual Report on Form 10-K for the period ended December 31, 2017 and our Quarterly Report on Form 10-Q for the period ended March 31, 2018. For a further discussion of our Risk Factors, refer to the "Risk Factors" discussion contained in our Annual Report on Form 10-K for the period ended December 31, 2017 and our Quarterly Report on Form 10-Q for the period ended March 31, 2018. Item 2 - Unregistered Sales of Equity Securities and Use of Proceeds

Issuer Purchases of Equity Securities

The following table provides information with respect to purchases of our ordinary shares during the third quarter of 2018:

Period	Total number of shares purchased (000's) (a) (b)	price	Total number of shares purchased as part of program (000's) (a)	still available to be purchased under the program
July 1- July 30	0.2	\$ 90.28		(\$000's) (a) \$ 400,017
August 1- August 31	145.6	96.13	145.3	386,050
September 1- September 30		_	_	386,050
Total	145.8	\$96.12	145.3	

- (a) Share repurchases are made from time to time in accordance with our capital allocation strategy, subject to market conditions and regulatory requirements. In February 2017, our Board of Directors authorized the repurchase of up to \$1.5 billion of our ordinary shares (the 2017 Authorization). In October 2018, our Board of Directors authorized the repurchase of up to \$1.5 billion of our ordinary shares upon completion of the 2017 Authorization. Neither repurchase program has a prescribed expiration date.
- (b) We may also reacquire shares outside of the repurchase program from time to time in connection with the surrender of shares to cover taxes on vesting of share based awards. We reacquired 191 shares in July and 335 shares in August in transactions outside of the repurchase programs.

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Item 6 – Exhibits (a) Exhibits Method of Exhibit No. Description Filing Certification of Chief Executive Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a), as Filed 31.1 Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. herewith. Certification of Chief Financial Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a), as Filed 31.2 Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. herewith. Certifications of Chief Executive Officer and Chief Financial Officer Pursuant to Rule Furnished 32 13a-14(b) or Rule 15d-14(b) and 18 U.S.C. Section 1350, as Adopted Pursuant to Section herewith. 906 of the Sarbanes-Oxley Act of 2002. The following materials from the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018, formatted in XBRL (Extensible Business Reporting Language): Filed 101 (i) the Condensed Consolidated Statements of Comprehensive Income, (ii) the Condensed herewith. Consolidated Balance Sheets, (iii) the Condensed Consolidated Statement of Cash Flows, and (iv) Notes to Condensed Consolidated Financial Statements. 50

INGERSOLL-RAND PLC

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 thereunto duly authorized.

INGERSOLL-RAND PLC (Registrant)

Date: October 24, 2018/s/ Susan K. Carter

Susan K. Carter, Senior Vice President and Chief Financial Officer Principal Financial Officer

Date: October 24, 2018/s/ Christopher J. Kuehn

Christopher J. Kuehn, Vice President and Chief Accounting Officer Principal Accounting Officer