Ingersoll-Rand plc
Form 10-Q
May 01, 2019
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

x QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended March 31, 2019
or
o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission File Number 001-34400

INGERSOLL-RAND PUBLIC LIMITED COMPANY
(Exact name of registrant as specified in its charter)

Ireland	98-0626632
(State or other jurisdiction of incorporation or organization)	(I.R.S. 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)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES x NO ¨
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). YES x NO ¨
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer	x	Accelerated filer	¨
Non-accelerated filer	¨	Smaller reporting company	¨
		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. ¨

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

YES ¨ NO x

The number of ordinary shares outstanding of Ingersoll-Rand plc as of April 19, 2019 was 241,158,226.

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PART I - FINANCIAL INFORMATION

Item 1. Financial Statements

INGERSOLL-RAND PLC
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited)

	Three months ended March 31,	
In millions, except per share amounts	2019	2018
Net revenues	$3,575.9	$3,384.5
Cost of goods sold	(2,517.3)	(2,420.2)
Selling and administrative expenses	(740.1)	(720.9)
Operating income	318.5	243.4
Interest expense	(50.9)	(72.9)
Other income/(expense), net	(18.8)	(4.0)
Earnings before income taxes	248.8	166.5
Provision for income taxes	(43.0)	(33.0)
Earnings from continuing operations	205.8	133.5
Discontinued operations, net of tax	(2.1)	(9.4)
Net earnings	203.7	124.1
Less: Net earnings attributable to noncontrolling interests	(3.8)	(3.7)
Net earnings attributable to Ingersoll-Rand plc	$199.9	$120.4
Amounts attributable to Ingersoll-Rand plc ordinary shareholders:		
Continuing operations	$202.0	$129.8
Discontinued operations	(2.1)	(9.4)
Net earnings	$199.9	$120.4
Earnings (loss) per share attributable to Ingersoll-Rand plc ordinary shareholders:		
Basic:		
Continuing operations	$0.83	$0.52
Discontinued operations	(0.01)	(0.04)
Net earnings	$0.82	$0.48
Diluted:		
Continuing operations	$0.82	$0.51
Discontinued operations	—	(0.03)
Net earnings	$0.82	$0.48
Weighted-average shares outstanding:		
Basic	242.5	250.4
Diluted	245.2	253.0
Total comprehensive income	$209.6	$276.6
Less: Total comprehensive income attributable to noncontrolling interests	4.2	4.1
Total comprehensive income attributable to Ingersoll-Rand plc	$205.4	$272.5

See accompanying notes to Condensed Consolidated Financial Statements.

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INGERSOLL-RAND PLC
CONDENSED CONSOLIDATED BALANCE SHEETS

In millions	(Unaudited) March 31, 2019	December 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 1,907.4	$ 903.4
Accounts and notes receivable, net	2,710.3	2,679.2
Inventories, net	1,983.7	1,677.8
Other current assets	483.3	471.6
Total current assets	7,084.7	5,732.0
Property, plant and equipment, net	1,738.4	1,730.8
Goodwill	5,968.6	5,959.5
Intangible assets, net	3,608.5	3,634.7
Other noncurrent assets	1,380.8	857.9
Total assets	$ 19,781.0	$ 17,914.9
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	$ 1,800.1	$ 1,705.3
Accrued compensation and benefits	363.4	531.6
Accrued expenses and other current liabilities	1,950.6	1,728.2
Short-term borrowings and current maturities of long-term debt	374.4	350.6
Total current liabilities	4,488.5	4,315.7
Long-term debt	5,226.5	3,740.7
Postemployment and other benefit liabilities	1,191.4	1,192.9
Deferred and noncurrent income taxes	527.2	538.4
Other noncurrent liabilities	1,424.6	1,062.4
Total liabilities	12,858.2	10,850.1
Equity:		
Ingersoll-Rand plc shareholders’ equity:		
Ordinary shares	265.5	266.4
Ordinary shares held in treasury, at cost	(1,719.4)	(1,719.4)
Retained earnings	9,298.3	9,439.8
Accumulated other comprehensive income (loss)	(958.6)	(964.1)
Total Ingersoll-Rand plc shareholders’ equity	6,885.8	7,022.7
Noncontrolling interests	37.0	42.1
Total equity	6,922.8	7,064.8
Total liabilities and equity	$ 19,781.0	$ 17,914.9

See accompanying notes to Condensed Consolidated Financial Statements.

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INGERSOLL-RAND PLC
CONDENSED CONSOLIDATED STATEMENTS OF EQUITY
(Unaudited)

In millions, except per share amounts	Total equity	Ordinary shares Amount	Ordinary shares Shares	Ordinary shares held in treasury, at cost	Capital in excess of par value	Retained earnings	Accumulated other comprehensive income (loss)	Noncontrolling Interest
Balance at December 31, 2018	$7,064.8	$266.4	266.4	$(1,719.4)	$ —	$9,439.8	$ (964.1)	$ 42.1
Net earnings	203.7	—	—	—	—	199.9	—	3.8
Other comprehensive income (loss)	5.9	—	—	—	—	—	5.5	0.4
Shares issued under incentive stock plans	6.3	1.5	1.5	—	4.8	—	—	—
Repurchase of ordinary shares	(250.0)	(2.4)	(2.4)	—	(34.6)	(213.0)	—	—
Share-based compensation	29.0	—	—	—	29.7	(0.7)	—	—
Dividends declared to noncontrolling interest	(9.3)	—	—	—	—	—	—	(9.3)
Cash dividends declared	(127.7)	—	—	—	—	(127.7)	—	—
Other	0.1	—	—	—	0.1	—	—	—
Balance at March 31, 2019	$6,922.8	$265.5	265.5	$(1,719.4)	$ —	$9,298.3	$ (958.6)	$ 37.0

In millions, except per share amounts	Total equity	Ordinary shares Amount	Ordinary shares Shares	Ordinary shares held in treasury, at cost	Capital in excess of par value	Retained earnings	Accumulated other comprehensive income (loss)	Noncontrolling Interest
Balance at December 31, 2017	$7,206.9	$274.0	274.0	$(1,719.4)	$461.3	$8,903.2	$ (778.8)	$ 66.6
Net earnings	124.1	—	—	—	—	120.4	—	3.7
Other comprehensive income (loss)	152.5	—	—	—	—	—	152.1	0.4
Shares issued under incentive stock plans	6.6	1.3	1.3	—	5.3	—	—	—
Repurchase of ordinary shares	(250.0)	(2.8)	(2.8)	—	(247.2)	—	—	—
Share-based compensation	30.0	—	—	—	30.5	(0.5)	—	—
Dividends declared to noncontrolling interest	(11.0)	—	—	—	—	—	—	(11.0)
Adoption of ASU 2014-09	2.4	—	—	—	—	2.4	—	—
Adoption of ASU 2016-16	(9.1)	—	—	—	—	(9.1)	—	—
Cash dividends declared	(112.0)	—	—	—	—	(112.0)	—	—
Balance at March 31, 2018	$7,140.4	$272.5	272.5	$(1,719.4)	$249.9	$8,904.4	$ (626.7)	$ 59.7

See accompanying notes to Condensed Consolidated Financial Statements.

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INGERSOLL-RAND PLC
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

In millions	Three months ended March 31, 2019	2018
Cash flows from operating activities:		
Net earnings	$203.7	$124.1
Discontinued operations, net of tax	2.1	9.4
Adjustments for non-cash transactions:		
Depreciation and amortization	89.3	93.4
Changes in assets and liabilities, net	(400.5)	(330.7)
Other non-cash items, net	68.3	58.0
Net cash provided by (used in) continuing operating activities	(37.1)	(45.8)
Net cash provided by (used in) discontinued operating activities	(15.5)	(20.4)
Net cash provided by (used in) operating activities	(52.6)	(66.2)
Cash flows from investing activities:		
Capital expenditures	(60.8)	(52.8)
Acquisitions of businesses, net of cash acquired	(22.0)	(201.6)
Other investing activities, net	6.4	(3.3)
Net cash provided by (used in) continuing investing activities	(76.4)	(257.7)
Cash flows from financing activities:		
Short-term borrowings (payments), net	23.9	247.9
Proceeds from long-term debt	1,497.9	1,147.0
Payments of long-term debt	—	(1,115.4)
Net proceeds from (payments of) debt	1,521.8	279.5
Debt issuance costs	(10.6)	(8.5)
Dividends paid to ordinary shareholders	(127.7)	(111.6)
Dividends paid to noncontrolling interests	(9.3)	(11.0)
Repurchase of ordinary shares	(250.0)	(250.0)
Other financing activities, net	5.9	5.2
Net cash provided by (used in) continuing financing activities	1,130.1	(96.4)
Effect of exchange rate changes on cash and cash equivalents	2.9	46.0
Net increase (decrease) in cash and cash equivalents	1,004.0	(374.3)
Cash and cash equivalents - beginning of period	903.4	1,549.4
Cash and cash equivalents - end of period	$1,907.4	$1,175.1

See accompanying notes to Condensed Consolidated Financial Statements.

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INGERSOLL-RAND PLC
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1. Basis of Presentation

The accompanying unaudited condensed consolidated financial statements of Ingersoll-Rand plc (Plc or Parent Company), a public limited company incorporated in Ireland in 2009, and its consolidated subsidiaries (collectively, the Company), reflect the consolidated operations of the Company and have been prepared in accordance with United States Securities and Exchange Commission (SEC) interim reporting requirements. Accordingly, the accompanying condensed consolidated financial statements do not include all disclosures required by accounting principles generally accepted in the United States of America (GAAP) for full financial statements and should be read in conjunction with the consolidated financial statements included in the Ingersoll-Rand plc Annual Report on Form 10-K for the year ended December 31, 2018. In the opinion of management, the accompanying condensed consolidated financial statements contain all adjustments, which include only normal recurring adjustments, necessary to fairly state the condensed consolidated results for the interim periods presented.

Note 2. Recent Accounting Pronouncements

The Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) is the sole source of authoritative GAAP other than SEC issued rules and regulations that apply only to SEC registrants. The FASB issues an Accounting Standards Update (ASU) to communicate changes to the codification. The Company considers the applicability and impact of all ASU's. ASU's not listed below were assessed and determined to be either not applicable or are not expected to have a material impact on the consolidated financial statements.

Recently Adopted Accounting Pronouncements

In February 2018, the FASB issued ASU 2018-02, "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income" (ASU 2018-02), which allows companies to reclassify stranded tax effects in Accumulated other comprehensive income (loss) that have been caused by the Tax Cuts and Jobs Act of 2017 (the Act) to Retained earnings for each period in which the effect of the change in the U.S. federal corporate income tax rate is recorded. ASU 2018-02 is effective for annual reporting periods beginning after December 15, 2018 with early adoption permitted. However, the FASB made the reclassification optional. As a result, the Company assessed the impact of the ASU on its financial statements and did not exercise the option to reclassify the stranded tax effects caused by the Act.

In February 2016, the FASB issued ASU 2016-02, “Leases” (ASC 842), which requires the lease rights and obligations arising from lease contracts, including existing and new arrangements, to be recognized as assets and liabilities on the balance sheet. The Company adopted this standard using a modified-retrospective approach as of January 1, 2019. Under this approach, the Company recognized and recorded a right-of-use (ROU) asset and related lease liability on the Condensed Consolidated Balance Sheet of $521 million with no impact to Retained earnings. Reporting periods prior to January 1, 2019 continue to be presented in accordance with previous lease accounting guidance under GAAP. As part of the adoption, the Company elected the package of practical expedients permitted under the transition guidance which includes the ability to carry forward historical lease classification. Refer to Note 9, “Leases,” for a further discussion on the adoption of ASC 842.

Recently Issued Accounting Pronouncements

In August 2018, the FASB issued ASU 2018-15, "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract" (ASU 2018-15), which aligns the requirements for capitalizing implementation costs in a cloud-computing arrangement service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. In addition, the guidance also clarifies the presentation requirements for reporting such costs in the financial statements. ASU 2018-15 is effective for annual reporting periods beginning after December 15, 2019 with early adoption permitted. The Company is currently assessing the impact of the ASU on its financial statements.

Note 3. Inventories

Depending on the business, U.S. inventories are stated at the lower of cost or market using the last-in, first-out (LIFO) method or the lower of cost or market using the first-in, first-out (FIFO) method. Non-U.S. inventories are primarily stated at the lower of cost or market using the FIFO method.

The major classes of inventory were as follows:

In millions	March 31, 2019	December 31, 2018
Raw materials	$ 609.7	$ 550.5
Work-in-process	211.7	182.0
Finished goods	1,245.2	1,028.8
	2,066.6	1,761.3
LIFO reserve	(82.9)	(83.5)
Total	$ 1,983.7	$ 1,677.8

The Company performs periodic assessments to determine the existence of obsolete, slow-moving and non-saleable inventories and records necessary provisions to reduce such inventories to net realizable value. Reserve balances, primarily related to obsolete and slow-moving inventories, were $121.5 million and $119.9 million at March 31, 2019 and December 31, 2018, respectively.

Note 4. Goodwill

The Company records as goodwill the excess of the purchase price over the fair value of the net assets acquired in a business combination. Measurement period adjustments may be recorded once a final valuation has been performed. Goodwill is tested and reviewed annually for impairment during the fourth quarter or whenever there is a significant change in events or circumstances that indicate that the fair value of the asset may be less than the carrying amount of the asset.

The changes in the carrying amount of goodwill for the three months ended March 31, 2019 were as follows:

In millions	Climate	Industrial	Total
Net balance as of December 31, 2018	$ 5,099.2	$ 860.3	$ 5,959.5
Acquisitions	14.6	—	14.6
Currency translation	(2.8)	(2.7)	(5.5)
Net balance as of March 31, 2019	$ 5,111.0	$ 857.6	$ 5,968.6

The net goodwill balances at March 31, 2019 and December 31, 2018 include $2,496.0 million of accumulated impairment. The accumulated impairment relates entirely to a charge in the fourth quarter of 2008 associated with the Climate segment.

Note 5. Intangible Assets

Indefinite-lived intangible assets are tested and reviewed annually for impairment during the fourth quarter or whenever there is a significant change in events or circumstances that indicate that the fair value of the asset may be less than the carrying amount of the asset. All other intangible assets with finite useful lives are amortized on a straight-line basis over their estimated useful lives.

The gross amount of the Company’s intangible assets and related accumulated amortization were as follows:

In millions	March 31, 2019 Gross carrying amount	Accumulated amortization	Net carrying amount	December 31, 2018 Gross carrying amount	Accumulated amortization	Net carrying amount
Completed technologies/patents	$207.7	$ (183.5)	$24.2	$206.6	$ (182.0)	$24.6
Customer relationships	2,094.0	(1,207.3)	886.7	2,086.8	(1,176.3)	910.5
Other	84.4	(55.9)	28.5	84.5	(54.4)	30.1
Total finite-lived intangible assets	2,386.1	(1,446.7)	939.4	2,377.9	(1,412.7)	965.2
Trademarks (indefinite-lived)	2,669.1	—	2,669.1	2,669.5	—	2,669.5
Total	$5,055.2	$ (1,446.7)	$3,608.5	$5,047.4	$ (1,412.7)	$3,634.7

Intangible asset amortization expense was $34.7 million and $35.2 million for the three months ended March 31, 2019 and 2018, respectively.

Note 6. Debt and Credit Facilities

Short-term borrowings and current maturities of long-term debt consisted of the following:

In millions	March 31, 2019	December 31, 2018
Debentures with put feature	$ 343.0	$ 343.0
Commercial Paper	23.9	—
Other current maturities of long-term debt	7.5	7.6
Total	$ 374.4	$ 350.6

Commercial Paper Program

The Company uses borrowings under its commercial paper program for general corporate purposes. The maximum aggregate amount of unsecured commercial paper notes available to be issued, on a private placement basis, under the commercial paper program is $2.0 billion. The Company had an outstanding balance of $23.9 million under its commercial paper program as of March 31, 2019. However, no amounts were outstanding at December 31, 2018.

Debentures with Put Feature

At March 31, 2019 and December 31, 2018, the Company had $343.0 million of fixed rate debentures outstanding which contain a put feature that the holders may exercise on each anniversary of the issuance date. If exercised, the Company is obligated to repay in whole or in part, at the holder’s option, the outstanding principal amount of the debentures plus accrued interest. If these options are not exercised, the final contractual maturity dates would range between 2027 and 2028. Holders of these debentures had the option to exercise the put feature on $37.2 million of the outstanding debentures in February 2019, subject to the notice requirement. No material exercises were made.

Long-term debt, excluding current maturities, consisted of the following:

In millions	March 31, 2019	December 31, 2018
2.625% Senior notes due 2020	$ 299.5	$ 299.4
2.900% Senior notes due 2021	298.5	298.3
9.000% Debentures due 2021	124.9	124.9
4.250% Senior notes due 2023	697.3	697.1
7.200% Debentures due 2020-2025	44.8	44.8
3.550% Senior notes due 2024	496.1	495.9
6.480% Debentures due 2025	149.7	149.7
3.500% Senior notes due 2026	396.4	—
3.750% Senior notes due 2028	544.6	544.5
3.800% Senior notes due 2029	743.0	—
5.750% Senior notes due 2043	494.3	494.3
4.650% Senior notes due 2044	295.8	295.8
4.300% Senior notes due 2048	295.9	295.9
4.500% Senior notes due 2049	345.4	—
Other loans and notes	0.3	0.1
Total	$ 5,226.5	$ 3,740.7

Issuance of Senior Notes

In March 2019, the Company issued $1.5 billion principal amount of senior notes in three tranches through an indirect, wholly-owned subsidiary. The tranches consist of $400 million aggregate principal amount of 3.500% senior notes due 2026, $750 million aggregate principal amount of 3.800% senior notes due 2029 and $350 million aggregate principal amount of 4.500% senior notes due 2049. The notes are fully and unconditionally guaranteed by each of 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. The Company has the option to redeem the notes in whole or in part at any time, prior to their stated maturity date at redemption prices set forth in the indenture agreement. The notes are subject to certain customary covenants, however, none of these covenants are considered restrictive to the Company’s operations. The Company intends to use the net proceeds to finance a pending acquisition (Refer to Note 17, "Acquisitions and Divestitures" for a further discussion on the pending acquisition). During the three months ended March 31, 2019, the Company capitalized $13.1 million of debt issuance costs which will be amortized over the remaining life of the debt.

Other Credit Facilities

The Company maintains two 5-year, $1.0 billion revolving credit facilities (the Facilities) through its wholly-owned subsidiaries, Ingersoll-Rand Global Holding Company Limited and Ingersoll-Rand Luxembourg Finance S.A. (collectively, the Borrowers). Each senior unsecured credit facility, one of which matures in March 2021 and the other in April 2023, provides support for the Company's commercial paper program and can be used for working capital and other general corporate purposes. Ingersoll-Rand plc, Ingersoll-Rand Irish Holdings Unlimited Company, Ingersoll-Rand Lux International Holding Company S.à.r.l. and Ingersoll-Rand Company each provide irrevocable and unconditional guarantees for these Facilities. In addition, each Borrower will guarantee the obligations under the Facilities of the other Borrower. Total commitments of $2.0 billion were unused at March 31, 2019 and December 31, 2018.

Fair Value of Debt

The carrying value of the Company's short-term borrowings is a reasonable estimate of fair value due to the short-term nature of the instruments. The fair value of the Company's debt instruments at March 31, 2019 and December 31, 2018 was $5.9 billion and $4.2 billion, respectively. The Company measures the fair value of its long-term debt instruments for disclosure purposes based upon observable market prices quoted on public exchanges for similar assets. These fair value inputs are considered Level 2 within the fair value hierarchy. The methodologies used by the Company to determine the fair value of its long-term debt instruments at March 31, 2019 are the same as those used at December 31, 2018.

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Note 7. Financial Instruments

In the normal course of business, the Company is exposed to certain risks arising from business operations and economic factors. These fluctuations can increase the cost of financing, investing and operating the business. The Company may use various financial instruments, including derivative instruments, to manage the risks associated with interest rate, commodity price and foreign currency exposures. These financial instruments are not used for trading or speculative purposes. The Company recognizes all derivatives on the Consolidated Balance Sheet at their fair value as either assets or liabilities.

On the date a derivative contract is entered into, the Company designates the derivative instrument as a cash flow hedge of a forecasted transaction or as an undesignated derivative. The Company formally documents its hedge relationships, including identification of the derivative instruments and the hedged items, as well as its risk management objectives and strategies for undertaking the hedge transaction. This process includes linking derivative instruments that are designated as hedges to specific assets, liabilities or forecasted transactions.

The Company assesses at inception and at least quarterly thereafter, whether the derivatives used in cash flow hedging transactions are highly effective in offsetting the changes in the cash flows of the hedged item. To the extent the derivative is deemed to be a highly effective hedge, the fair market value changes of the instrument are recorded to Accumulated other comprehensive income (AOCI). If the hedging relationship ceases to be highly effective, or it becomes probable that a forecasted transaction is no longer expected to occur, the hedging relationship will be undesignated and any future gains and losses on the derivative instrument will be recorded in Net earnings.

The fair values of derivative instruments included within the Condensed Consolidated Balance Sheets were as follows:

	Derivative assets		Derivative liabilities	
In millions	March 31, 2019	December 31, 2018	March 31, 2019	December 31, 2018
Derivatives designated as hedges:				
Currency derivatives designated as hedges	$0.9	$ 1.3	$2.5	$ 0.7
Derivatives not designated as hedges:				
Currency derivatives not designated as hedges	0.5	0.9	0.8	0.6
Total derivatives	$1.4	$ 2.2	$3.3	$ 1.3

Asset and liability derivatives included in the table above are recorded within Other current assets and Accrued expenses and other current liabilities, respectively.

Currency Derivative Instruments

The notional amount of the Company's currency derivatives was $0.4 billion and $0.6 billion at March 31, 2019 and December 31, 2018, respectively. At March 31, 2019 and December 31, 2018, a net loss of $1.0 million and a net gain of $0.5 million, net of tax, respectively, was included in AOCI related to the fair value of the Company's currency derivatives designated as accounting hedges. The amount expected to be reclassified into Net earnings over the next twelve months is a loss of $1.0 million. The actual amounts that will be reclassified to Net earnings may vary from this amount as a result of changes in market conditions. Gains and losses associated with the Company's currency derivatives not designated as hedges are recorded in Net earnings as changes in fair value occur. At March 31, 2019, the maximum term of the Company's currency derivatives was approximately 12 months, except for currency derivatives in place related to a certain long-term contract.

Other Derivative Instruments

Prior to 2015, the Company utilized forward-starting interest rate swaps and interest rate locks to manage interest rate exposure in periods prior to the anticipated issuance of certain fixed-rate debt. These instruments were designated as cash flow hedges and had a notional amount of $1.3 billion. Consequently, when the contracts were settled upon the issuance of the underlying debt, any realized gains or losses in the fair values of the instruments were deferred into AOCI. These deferred gains or losses are subsequently recognized in Interest expense over the term of the related notes. The net unrecognized gain in AOCI was $6.5 million at March 31, 2019 and $6.7 million at December 31, 2018. The net deferred gain at March 31, 2019 will continue to be amortized over the term of notes with maturities ranging from 2023 to 2044. The amount expected to be amortized over the next twelve months is a net gain of $0.7

million. The Company has no forward-starting interest rate swaps or interest rate lock contracts outstanding at March 31, 2019 or December 31, 2018.

The following table represents the amounts associated with derivatives designated as hedges affecting Net earnings and AOCI for the three months ended March 31:

In millions	Amount of gain (loss) recognized in AOCI 2019	2018	Location of gain (loss) reclassified from AOCI and recognized into Net earnings	Amount of gain (loss) reclassified from AOCI and recognized into Net earnings 2019	2018
Currency derivatives designated as hedges	$ (1.5)	$ 2.1	Cost of goods sold	$ (0.3)	$ (0.4)
Interest rate swaps & locks	—	—	Interest expense	0.2	(0.6)
Total	$ (1.5)	$ 2.1		$ (0.1)	$ (1.0)

The following table represents the amounts associated with derivatives not designated as hedges affecting Other income/(expense), net for the three months ended March 31:

In millions	Amount of gain (loss) recognized in Net earnings 2019	2018
Currency derivatives not designated as hedges	$ (3.1)	$ 9.7
Total	$ (3.1)	$ 9.7

The gains and losses associated with the Company's undesignated currency derivatives are materially offset in Other income/(expense), net by changes in the fair value of the underlying transactions.

The following table presents the effects of the Company's designated financial instruments on the associated financial statement line item within the Consolidated Statement of Comprehensive Income where the financial instrument are recorded for the three months ended March 31:

	Classification and amount of gain (loss) recognized in income on cash flow hedging relationships			
	2019		2018	
In millions	Cost of goods sold	Interest expense	Cost of goods sold	Interest expense
Total amounts presented in the Consolidated Statements of Comprehensive Income	$(2,517.3)	$(50.9)	$(2,420.2)	$(72.9)
Gain (loss) on cash flow hedging relationships				
Currency derivatives:				
Amount of gain (loss) reclassified from AOCI and recognized into Net earnings	$(0.3)	$—	$(0.4)	$—
Amount excluded from effectiveness testing recognized in net earnings based on changes in fair value and amortization	$(0.6)	$—	$—	$—
Interest rate swaps & locks:				
Amount of gain (loss) reclassified from AOCI and recognized into Net earnings	$—	$0.2	$—	$(0.6)

Concentration of Credit Risk

The counterparties to the Company's forward contracts consist of a number of investment grade major international financial institutions. The Company could be exposed to losses in the event of nonperformance by the counterparties. However, the credit ratings and the concentration of risk in these financial institutions are monitored on a continuous basis and present no significant credit risk to the Company.

Note 8. Fair Value Measurements

ASC 820, "Fair Value Measurement," (ASC 820) defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. ASC 820 also establishes a three-level fair value hierarchy that prioritizes information used in developing assumptions when pricing an asset or liability as follows:

- Level 1: Observable inputs such as quoted prices in active markets;
- Level 2: Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and
- Level 3: Unobservable inputs where there is little or no market data, which requires the reporting entity to develop its own assumptions.

ASC 820 requires the use of observable market data, when available, in making fair value measurements. When inputs used to measure fair value fall within different levels of the hierarchy, the level within which the fair value measurement is categorized is based on the lowest level input that is significant to the fair value measurement.

The following table presents the Company’s fair value hierarchy for those assets and liabilities measured at fair value on a recurring basis as of March 31, 2019:

In millions	Fair Value	Fair value measurements Level 1	Level 2	Level 3
Assets:				
Derivative instruments	$ 1.4	$ —	$ 1.4	$ —
Liabilities:				
Derivative instruments	$ 3.3	$ —	$ 3.3	$ —

The following table presents the Company’s fair value hierarchy for those assets and liabilities measured at fair value on a recurring basis as of December 31, 2018:

In millions	Fair Value	Fair value measurements Level 1	Level 2	Level 3
Assets:				
Derivative instruments	$ 2.2	$ —	$ 2.2	$ —
Liabilities:				
Derivative instruments	$ 1.3	$ —	$ 1.3	$ —

Derivative instruments include forward foreign currency contracts and instruments related to non-functional currency balance sheet exposures. The fair value of the derivative instruments are determined based on a pricing model that uses spot rates and forward prices from actively quoted currency markets that are readily accessible and observable.

The carrying values of cash and cash equivalents, accounts receivable, and accounts payable are a reasonable estimate of their fair value due to the short-term nature of these instruments. These methodologies used by the Company to determine the fair value of its financial assets and liabilities at March 31, 2019 are the same as those used at December 31, 2018. There have been no transfers between levels of the fair value hierarchy.

Note 9. Leases

The Company’s lease portfolio includes various contracts for real estate, vehicles, information technology and other equipment. At contract inception, the Company determines a lease exists if the contract conveys the right to control an identified asset for a period of time in exchange for consideration. Control is considered to exist when the lessee has the right to obtain substantially all of the economic benefits from the use of an identified asset as well as the right to direct the use of that asset. If a contract is considered to be a lease, the Company recognizes a lease liability based on the present value of the future lease payments, with an offsetting entry to recognize a right-of-use asset. Options to extend or terminate a lease are included when it is reasonably certain an option will be exercised. As a majority of the Company’s leases do not provide an implicit rate within the lease, an incremental borrowing rate is used which is based on information available at the commencement date.

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The following table includes a summary of the Company's lease portfolio and Balance Sheet classification:

In millions	Classification	March 31, 2019	January 1, 2019
Assets			
Operating lease right-of-use assets (1)	Other noncurrent assets	$ 526.6	$ 517.1
Liabilities			
Operating lease current	Other current liabilities	163.7	160.3
Operating lease noncurrent	Other noncurrent liabilities	367.9	360.5

(1) Per ASC 842, prepaid lease payments and lease incentives are recorded as part of the right-of-use asset. The net impact was $5.0 million and $3.7 million at March 31, 2019 and January 1, 2019, respectively.

The Company elected the practical expedient as an accounting policy election by class of underlying asset to account for each separate lease component of a contract and its associated non-lease component as a single lease component. This practical expedient was applied to all underlying asset classes. In addition, the Company elected the practical expedient to utilize a portfolio approach for the vehicle, information technology and equipment asset classes as the application of the lease model to the portfolio would not differ materially from the application of the lease model to the individual leases within the portfolio.

The following table includes lease costs and related cash flow information for the three months ended March 31:

In millions	Three months ended 2019
Operating lease expense	$ 49.7
Variable lease expense	7.4
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	49.4
Right-of-use assets obtained in exchange for new operating lease liabilities	57.8

Operating lease expense is recognized on a straight-line basis over the lease term. In addition, the Company has certain leases that contain variable lease payments which are based on an index, a rate referenced in the lease or on the actual usage of the leased asset. These payments are not included in the right-to-use asset or lease liability and are expensed as incurred as variable lease expense. The Company elected the practical expedient as an accounting policy election by class of underlying asset to not apply the balance sheet recognition criteria required in ASC 842 to leases with an initial lease term of twelve months or less. Payments for these leases are recognized on a straight-line basis over the lease term.

Maturities of lease obligations were as follows:

In millions	March 31, 2019
Operating leases	
Remaining nine months of 2019	$ 139.9
2020	152.7
2021	112.4
2022	66.9
2023	40.7
After 2023	78.4
Total lease payments	$ 591.0
Less: Interest	(59.4)
Present value of lease liabilities	$ 531.6

At March 31, 2019, the weighted average remaining lease term was 4.7 years with a weighted average discount rate of 3.8%.

Prior Period Disclosures

As a result of adopting ASC 842 on January 1, 2019, the Company is required to present future minimum lease commitments for operating leases having initial or noncancellable lease terms in excess of one year that were previously disclosed in our 2018 Annual Report on Form 10-K and accounted for under previous lease guidance. Commitments as of December 31, 2018 were as follows:

In millions	December 31, 2018
Operating leases	
2019	$ 197.1
2020	152.0
2021	107.4
2022	68.4
2023	42.2
After 2023	42.7
Total	$ 609.8

Note 10. Pensions and Postretirement Benefits Other than Pensions

The Company sponsors several U.S. defined benefit and defined contribution plans covering substantially all of the Company's U.S. employees. Additionally, the Company has many non-U.S. defined benefit and defined contribution plans covering eligible non-U.S. employees. Postretirement benefits other than pensions (OPEB) provide healthcare benefits, and in some instances, life insurance benefits for certain eligible employees.

Pension Plans

The noncontributory defined benefit pension plans covering non-collectively bargained U.S. employees provide benefits on a final average pay formula while plans for most collectively bargained U.S. employees provide benefits on a flat dollar benefit formula or a percentage of pay formula. The non-U.S. pension plans generally provide benefits based on earnings and years of service. The Company also maintains additional other supplemental plans for officers and other key or highly compensated employees.

The components of the Company’s net periodic pension benefit cost for the three months ended March 31 were as follows:

In millions	Three months ended 2019			2018		
Service cost	$	18.1		$	17.9	
Interest cost	29.8			27.0		
Expected return on plan assets	(34.6		)	(36.9		)
Net amortization of:						
Prior service costs	1.2			1.1		
Net actuarial (gains) losses	13.4			12.5		
Net periodic pension benefit cost	$	27.9		$	21.6	
Net curtailment and settlement (gains) losses	1.6			—		
Net periodic pension benefit cost after net curtailment and settlement (gains) losses	$	29.5		$	21.6	
Amounts recorded in continuing operations:						
Operating income	$	17.1		$	17.6	

Other income/(expense), net	9.4		1.9	
Amounts recorded in discontinued operations	3.0		2.1	
Total	$	29.5	$	21.6

The Company made contributions to its defined benefit pension plans of $18.6 million and $10.9 million during the three months ended March 31, 2019 and 2018, respectively. The Company currently projects that it will contribute approximately $104 million to its plans worldwide in 2019.

Postretirement Benefits Other Than Pensions

The Company sponsors several postretirement plans that provide for healthcare benefits, and in some instances, life insurance benefits that cover certain eligible employees. These plans are unfunded and have no plan assets, but are instead funded by the Company on a pay-as-you-go basis in the form of direct benefit payments. Generally, postretirement health benefits are contributory with contributions adjusted annually. Life insurance plans for retirees are primarily noncontributory.

The components of net periodic postretirement benefit cost for the three months ended March 31 were as follows:

	Three months ended	
In millions	2019	2018
Service cost	$0.6	$0.7
Interest cost	3.9	3.8
Net amortization of:		
Prior service gains	(0.1)	(1.0)
Net actuarial (gains) losses	(1.6)	—
Net periodic postretirement benefit cost	$2.8	$3.5
Amounts recorded in continuing operations:		
Operating income	$0.6	$0.7
Other income/(expense), net	1.7	2.0
Amounts recorded in discontinued operations	0.5	0.8
Total	$2.8	$3.5

Note 11. Equity

The authorized share capital of Ingersoll-Rand plc is 1,185,040,000 shares, consisting of (1) 1,175,000,000 ordinary shares, par value $1.00 per share, (2) 40,000 ordinary shares, par value EUR 1.00 and (3) 10,000,000 preference shares, par value $0.001 per share. There were no Euro-denominated ordinary shares or preference shares outstanding at March 31, 2019 or December 31, 2018.

Changes in ordinary shares and treasury shares for the three months ended March 31, 2019 were as follows:

In millions	Ordinary shares issued	Ordinary shares held in treasury
December 31, 2018	266.4	24.5
Shares issued under incentive plans, net	1.5	—
Repurchase of ordinary shares	(2.4)	—
March 31, 2019	265.5	24.5

Share repurchases are made from time to time in accordance with management's capital allocation strategy, subject to market conditions and regulatory requirements. Shares acquired and canceled upon repurchase are accounted for as a reduction of Ordinary Shares and Capital in excess of par value, or Retained earnings to the extent Capital in excess of par value is exhausted. Shares acquired and held in treasury are presented separately on the balance sheet as a reduction to Equity and recognized at cost. In October 2018, the Company's Board of Directors authorized the repurchase of up to $1.5 billion of its ordinary shares under a share repurchase program (2018 Authorization) upon completion of the prior authorized share repurchase program. During the three months ended March 31, 2019, the Company repurchased and canceled approximately $250 million of its ordinary shares leaving approximately $1.25 billion remaining under the 2018 Authorization.

Accumulated Other Comprehensive Income (Loss)

The changes in Accumulated other comprehensive income (loss) for the three months ended March 31, 2019 was as follows:

In millions	Derivative Instruments	Pension and OPEB	Foreign Currency Translation	Total
Balance at December 31, 2018	$ 6.7	$(454.0)	$ (516.8)	$(964.1)
Other comprehensive income (loss) before reclassifications	(1.5)	0.3	(2.4)	(3.6)
Amounts reclassified from AOCI	0.1	12.9	—	13.0
Provision for income taxes	(0.4)	(3.5)	—	(3.9)
Net current period other comprehensive income (loss)	$ (1.8)	$9.7	$ (2.4)	$5.5
Balance at March 31, 2019	$ 4.9	$(444.3)	$ (519.2)	$(958.6)

The changes in Accumulated other comprehensive income (loss) for the three months ended March 31, 2018 was as follows:

In millions	Derivative Instruments	Pension and OPEB	Foreign Currency Translation	Total
Balance at December 31, 2017	$ 4.7	$(494.3)	$ (289.2)	$(778.8)
Other comprehensive income (loss) before reclassifications	2.1	(4.6)	143.9	141.4
Amounts reclassified from AOCI	1.0	12.6	—	13.6
Provision for income taxes	(0.3)	(2.6)	—	(2.9)
Net current period other comprehensive income (loss)	$ 2.8	$5.4	$ 143.9	$152.1
Balance at March 31, 2018	$ 7.5	$(488.9)	$ (145.3)	$(626.7)

The reclassifications out of Accumulated other comprehensive income (loss) for the three months ended March 31 were as follows:

In millions	Three months ended 2019	2018
Derivative Instruments		
Reclassifications of deferred (gains) losses (1)	$0.1	$1.0
Provision for (benefit from) income taxes	0.3	0.2
Reclassifications, net of taxes	$0.4	$1.2
Pension and Postretirement benefits		
Amortization of service costs (2)	$1.1	$0.1
Amortization of actuarial losses (2)	11.8	12.5
Provision for (benefit from) income taxes	(3.5)	(2.6)
Reclassifications, net of taxes	$9.4	$10.0
Total reclassifications, net of taxes	$9.8	$11.2

(1) Reclassifications of interest rate swaps and locks are reflected within Interest expense; reclassifications of currency derivatives designated as hedges are reflected in Cost of goods sold.

(2) Reclassifications of the service cost component of pension and postretirement benefit costs are reflected within Operating income; the remaining components are included within Other income/(expense), net.

Note 12. Revenue

The Company recognizes revenue when control of a good or service promised in a contract (i.e., performance obligation) is transferred to a customer. Control is obtained when a customer has the ability to direct the use of and obtain substantially all of the remaining benefits from that good or service. A majority of the Company's revenues are recognized at a point-in-time as control is transferred at a distinct point in time per the terms of a contract. However, a portion of the Company's revenues are recognized over time as the customer simultaneously receives control as the Company performs work under a contract.

Disaggregated Revenue

Net revenues by destination for the three months ended March 31 were as follows:

	Three months ended	
In millions	2019	2018
Climate		
United States	$1,940.0	$1,711.8
Non-U.S.	863.7	898.0
Total Climate	$2,803.7	$2,609.8
Industrial		
United States	$390.8	$414.6
Non-U.S.	381.4	360.1
Total Industrial	$772.2	$774.7

Net revenues by major type of good or service for the three months ended March 31 were as follows:

	Three months ended	
In millions	2019	2018
Climate		
Equipment	$1,938.3	$1,771.5
Services and parts	865.4	838.3
Total Climate	$2,803.7	$2,609.8
Industrial		
Equipment	$462.2	$470.6
Services and parts	310.0	304.1
Total Industrial	$772.2	$774.7

Revenue from goods and services transferred to customers at a point in time accounted for approximately 85% of the Company's revenue for the three months ended March 31, 2019.

Contract Balances

The opening and closing balances of contract assets and contract liabilities arising from contracts with customers for the period ended March 31, 2019 and December 31, 2018 were as follows:

In millions	March 31, 2019	December 31, 2018
Contract assets	$ 222.5	$ 210.9
Contract liabilities	893.4	846.2

The timing of revenue recognition, billings and cash collections results in accounts receivable, contract assets, and customer advances and deposits (contract liabilities) on the Condensed Consolidated Balance Sheet. In general, the Company receives payments from customers based on a billing schedule established in its contracts. Contract assets relate to the conditional right to consideration for any completed performance under the contract when costs are incurred in excess of billings under the percentage-of-completion methodology. Accounts receivable are recorded when the right to consideration becomes unconditional. Contract liabilities relate to payments received in advance of performance under the contract or when the Company has a right to consideration that is unconditional before it transfers a good or service to the customer. Contract liabilities are recognized as revenue as (or

when) the Company performs under the contract. During the three months ended March 31, 2019, changes in contract asset and liability balances were not materially impacted by any other factors.

Approximately 30% of the contract liability balance at December 31, 2018 was recognized as revenue during the three months ended March 31, 2019. Additionally, approximately 27% of the contract liability balance at March 31, 2019 was classified as noncurrent and not expected to be recognized as revenue in the next 12 months.

Note 13. Share-Based Compensation

The Company accounts for stock-based compensation plans in accordance with ASC 718, "Compensation - Stock Compensation" (ASC 718), which requires a fair-value based method for measuring the value of stock-based compensation. Fair value is measured once at the date of grant and is not adjusted for subsequent changes. The Company’s share-based compensation plans include programs for stock options, restricted stock units (RSUs), performance share units (PSUs) and deferred compensation.

Compensation Expense

Share-based compensation expense is related to continuing operations and is included in Selling and administrative expenses. The expense recognized for the three months ended March 31 was as follows:

	Three months ended	
In millions	2019	2018
Stock options	$11.8	$12.3
RSUs	13.0	13.3
Performance shares	4.4	4.4
Deferred compensation	0.9	1.0
Other	1.4	(0.2)
Pre-tax expense	31.5	30.8
Tax benefit	(7.6)	(7.5)
After-tax expense	$23.9	$23.3

Grants issued during the three months ended March 31 were as follows:

	2019		2018	
	Number granted	Weighted-average fair value per award	Number granted	Weighted-average fair value per award
Stock options	1,259,344	$ 17.09	1,414,411	$ 15.57
RSUs	242,104	$ 100.70	279,901	$ 89.97
Performance shares (1)	306,352	$ 110.57	352,794	$ 106.09

(1) The number of performance shares represents the maximum award level.

Stock Options / RSUs

Eligible participants may receive (i) stock options, (ii) RSUs or (iii) a combination of both stock options and RSUs. The fair value of each of the Company’s stock option and RSU awards is expensed on a straight-line basis over the required service period, which is generally the 3-year vesting period. However, for stock options and RSUs granted to retirement eligible employees, the Company recognizes an expense for the entire fair value at the grant date.

The average fair value of the stock options granted is determined using the Black-Scholes option-pricing model. The following assumptions were used during three the months ended March 31:

	2019	2018
Dividend yield	2.09 %	2.00 %
Volatility	21.46%	21.65%
Risk-free rate of return	2.49 %	2.48 %
Expected life in years	4.8	4.8

A description of the significant assumptions used to estimate the fair value of the stock option awards is as follows:

- Volatility - The expected volatility is based on a weighted average of the Company’s implied volatility and the most recent historical volatility of the Company’s stock commensurate with the expected life.
- Risk-free rate of return - The Company applies a yield curve of continuous risk-free rates based upon the published U.S. Treasury spot rates on the grant date.
- Expected life - The expected life of the Company’s stock option awards represents the weighted-average of the actual period since the grant date for all exercised or canceled options and an expected period for all outstanding options.
- Dividend yield - The Company determines the dividend yield based upon the expected quarterly dividend payments as of the grant date and the current fair market value of the Company’s stock.
- Forfeiture Rate - The Company analyzes historical data of forfeited options to develop a reasonable expectation of the number of options to forfeit prior to vesting per year. This expected forfeiture rate is applied to the Company’s ongoing compensation expense; however, all expense is adjusted to reflect actual vestings and forfeitures.

Performance Shares

The Company has a Performance Share Program (PSP) for key employees. The program provides awards in the form of PSUs based on performance against pre-established objectives. The annual target award level is expressed as a number of the Company's ordinary shares based on the fair market value of the Company's stock on the date of grant. All PSUs are settled in the form of ordinary shares.

Beginning with the 2018 grant year, PSU awards are earned based 50% upon a performance condition, measured by relative Cash Flow Return on Invested Capital (CROIC) to the industrial group of companies in the S&P 500 Index over a 3-year performance period, and 50% upon a market condition, measured by the Company's relative total shareholder return (TSR) as compared to the TSR of the industrial group of companies in the S&P 500 Index over a 3-year performance period. The fair value of the market condition is estimated using a Monte Carlo Simulation approach in a risk-neutral framework based upon historical volatility, risk-free rates and correlation matrix. Awards granted prior to 2018 are earned based 50% upon a performance condition, measured by relative EPS growth to the industrial group of companies in the S&P 500 Index over a 3-year performance period, and 50% upon a market condition, measured by the Company's relative TSR as compared to the TSR of the industrial group of companies in the S&P 500 Index over a 3-year performance period.

Deferred Compensation

The Company allows key employees to defer a portion of their eligible compensation into a number of investment choices, including its ordinary share equivalents. Any amounts invested in ordinary share equivalents will be settled in ordinary shares of the Company at the time of distribution.

Note 14. Restructuring Activities

The Company incurs costs associated with announced restructuring initiatives intended to result in improved operating performance, profitability and working capital levels. Actions associated with these initiatives may include workforce reduction, improving manufacturing productivity, realignment of management structures and rationalizing certain assets. The following table details restructuring charges recorded during the three months ended March 31:

	Three months ended	
In millions	2019	2018
Climate	$5.2	$3.9
Industrial	11.0	35.7
Corporate and Other	0.9	4.8
Total	$17.1	$44.4
Cost of goods sold	$13.8	$36.5
Selling and administrative expenses	3.3	7.9
Total	$17.1	$44.4

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The changes in the restructuring reserve for the three months ended March 31, 2019 were as follows:

In millions	Climate	Industrial	Corporate and Other	Total
December 31, 2018	$ 18.9	$ 29.9	$ 2.6	$ 51.4
Additions, net of reversals (1)	5.2	5.4	0.9	11.5
Cash paid/other	(7.2)	(12.4)	(1.2)	(20.8)
March 31, 2019	$ 16.9	$ 22.9	$ 2.3	$ 42.1

(1) Excludes the non-cash costs of asset rationalizations ($5.6 million).

Current restructuring actions include general workforce reductions as well as the closure and consolidation of certain manufacturing facilities in an effort to improve the Company's cost structure. During the three months ended March 31, 2019, costs associated with announced restructuring actions primarily included the following:

- the plan to close a U.S. manufacturing facility within the Industrial segment and relocate production to other U.S. and Non-U.S. facilities announced in 2019; and
- the plan to close two U.S. manufacturing facilities within the Climate segment and relocate production to another existing U.S. facility announced in 2018; and
- the plan to close a Non-U.S. manufacturing facility within the Industrial segment and relocate to other U.S. and Non-U.S. facilities announced in 2018.

Amounts recognized primarily relate to severance and exit costs. In addition, the Company also includes costs that are directly attributable to the restructuring activity but do not fall into the severance, exit or disposal categories. As of March 31, 2019, the Company had $42.1 million accrued for costs associated with its ongoing restructuring actions, of which a majority is expected to be paid within one year. These actions primarily relate to workforce reduction benefits.

Note 15. Other Income/(Expense), Net

The components of Other income/(expense), net for the three months ended March 31 are as follows:

	Three months ended	
In millions	2019	2018
Interest income (loss)	$ (0.6)	$ 3.6
Exchange gain (loss)	(4.3)	(7.3)
Other components of net periodic benefit cost	(11.1)	(3.9)
Other activity, net	(2.8)	3.6
Other income/(expense), net	$ (18.8)	$ (4.0)

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, the Company includes 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 U.S. Inc. for the settlement and defense of asbestos-related claims, insurance settlements on asbestos-related matters and the revaluation of asbestos recoveries. Refer to Note 20, "Commitments and Contingencies," for more information regarding asbestos-related matters.

Note 16. Income Taxes

The Company accounts for its Provision for income taxes in accordance with ASC 740, which requires an estimate of the annual effective income tax rate for the full year to be applied to the respective interim period, taking into account year-to-date amounts and projected results for the full year. For the three months ended March 31, 2019 and March 31, 2018, the Company's effective income tax rate was 17.3% and 19.8%, respectively. The effective income tax rate for the three months ended March 31, 2019 was lower than the U.S. statutory rate of 21% primarily due to excess tax benefits from employee share-based payments, the deduction for Foreign Derived Intangible Income and earnings in non-U.S. jurisdictions, which in aggregate have a lower effective tax rate. These amounts were partially offset by U.S. state and local taxes and certain non-deductible employee expenses. The effective tax rate for the three months ended March 31, 2018 was lower than the U.S. statutory rate of 21% primarily due to excess tax benefits from employee share-based payments and earnings in non-U.S. jurisdictions, which in aggregate have a lower effective tax rate. These amounts were partially offset by U.S. state and local income taxes.

Total unrecognized tax benefits as of March 31, 2019 and December 31, 2018 were $87.3 million and $83.0 million, respectively. Although management believes its tax positions and related provisions reflected in the Condensed Consolidated Financial Statements are fully supportable, it recognizes that these tax positions and related provisions may be challenged by various tax authorities. These tax positions and related provisions are reviewed on an ongoing basis and are adjusted as additional facts and information become available, including progress on tax audits, changes in interpretations of tax laws, developments in case law and closing of statute of limitations. To the extent that the ultimate results differ from the original or adjusted estimates of the Company, the effect will be recorded in Provision for income taxes.

The Provision for income taxes involves a significant amount of management judgment regarding interpretation of relevant facts and laws in the jurisdictions in which the Company operates. Future changes in applicable laws, projected levels of taxable income and tax planning could change the effective tax rate and tax balances recorded by the Company. In addition, tax authorities periodically review income tax returns filed by the Company and can raise issues regarding its filing positions, timing and amount of income or deductions, and the allocation of income among the jurisdictions in which the Company operates. A significant period of time may elapse between the filing of an income tax return and the ultimate resolution of an issue raised by a revenue authority with respect to that return. In the normal course of business, the Company is subject to examination by taxing authorities throughout the world, including such major jurisdictions as Brazil, Canada, China, France, Germany, Ireland, Italy, Mexico, Spain, the Netherlands, the United Kingdom and the United States. These examinations on their own, or any subsequent litigation related to the examinations, may result in additional taxes or penalties against the Company. If the ultimate result of these audits differ from
original or adjusted estimates, they could have a material impact on the Company’s tax provision. In general, the examination of the Company’s material tax returns is complete or effectively settled for the years prior to 2008, with certain matters prior to 2008 being resolved through appeals and litigation and also unilateral procedures as provided for under double tax treaties.

Note 17. Acquisitions and Divestitures

Acquisitions

During the three months ended March 31, 2019, the Company entered into a final, binding and irrevocable offer letter with Silver II GP Holdings S.C.A., an affiliate of BC Partners Advisors L.P. and The Carlyle Group (the Seller) pursuant to which the Company made a binding offer to acquire the precision flow systems management business (PFS) for approximately $1.45 billion in cash, subject to working capital and certain other adjustments (the Acquisition). PFS is a manufacturer of precision flow control equipment including precision dosing pumps and controls that serve the global water, oil and gas, agriculture, industrial and specialty market segments. The offer was subject to completion of the information and consultation processes with employee representative bodies of PFS in applicable jurisdictions. The process was completed in April 2019 and the Seller accepted the offer. Completion of the Acquisition is subject to customary closing conditions and is expected to close mid-year 2019 subject to regulatory approvals. The results of PFS will be included in the Company’s consolidated financial statements as of the date of acquisition and reported within the Industrial segment.

Divestitures

The Company has retained costs from previously sold businesses that primarily include ongoing expenses for postretirement benefits, product liability and legal costs. In addition, the Company includes amounts related to the 2013 spin-off of our commercial and residential security business, now an independent public company operating under the name of Allegion plc (Allegion). The components of Discontinued operations, net of tax for the three months ended March 31 were as follows:

	Three months ended	
In millions	2019	2018
Pre-tax earnings (loss) from discontinued operations	$(1.9)	$(12.1)
Tax benefit (expense)	(0.2)	2.7
Discontinued operations, net of tax	$(2.1)	$(9.4)

Pre-tax earnings (loss) from discontinued operations includes costs associated with Ingersoll Rand Company 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. Refer to Note 20, "Commitments and Contingencies," for more information related to asbestos.

Note 18. Earnings Per Share (EPS)

Basic EPS is calculated by dividing Net earnings attributable to Ingersoll-Rand plc by the weighted-average number of ordinary shares outstanding for the applicable period. Diluted EPS is calculated after adjusting the denominator of the basic EPS calculation for the effect of all potentially dilutive ordinary shares, which in the Company’s case, includes shares issuable under share-based compensation plans. The following table summarizes the weighted-average number of ordinary shares outstanding for basic and diluted earnings per share calculations for the three months ended March 31:

	Three months ended	
In millions, except per share amounts	2019	2018
Weighted-average number of basic shares	242.5	250.4
Shares issuable under incentive stock plans	2.7	2.6
Weighted-average number of diluted shares	245.2	253.0
Anti-dilutive shares	1.4	1.7
Dividends declared per ordinary share	$0.53	$0.45

Note 19. Business Segment Information

The accounting policies of the operating segments are the same as those described in the summary of significant accounting policies except that the operating segments’ results are prepared on a management basis that is consistent with the manner in which the Company prepares financial information for internal review and decision making. The Company largely evaluates performance based on Segment operating income and Segment operating margins. Intercompany sales between segments are considered immaterial.

The Company's Climate segment delivers energy-efficient products and innovative energy services. It includes Trane® and American Standard® Heating & Air Conditioning which provide heating, ventilation and air conditioning (HVAC) systems, and commercial and residential building services, parts, support and controls; energy services and building automation through Trane Building Advantage and Nexia; and Thermo King® transport temperature control solutions.

The Company's Industrial segment delivers products and services that enhance energy efficiency, productivity and operations. It includes compressed air and gas systems and services, power tools, material handling systems, ARO® fluid management equipment, as well as Club Car ® golf, utility and consumer low-speed vehicles.

Segment operating income is the measure of profit and loss that the Company's chief operating decision maker uses to evaluate the financial performance of the business and as the basis for performance reviews, compensation and resource allocation. For these reasons, the Company believes that Segment operating income represents the most relevant measure of segment profit and loss.

A summary of operations by reportable segment for the three months ended March 31 was as follows:

	Three months ended	
In millions	2019	2018
Net revenues		
Climate	$2,803.7	$2,609.8
Industrial	772.2	774.7
Total	$3,575.9	$3,384.5
Segment operating income		
Climate	$313.1	$260.4
Industrial	83.9	59.9
Unallocated corporate expense	(78.5)	(76.9)
Operating income	$318.5	$243.4

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Note 20. Commitments and Contingencies
The Company is involved in various litigations, claims and administrative proceedings, including those related to environmental, asbestos, and product liability matters. In accordance with ASC 450, "Contingencies" (ASC 450), the Company records accruals for loss contingencies when it is both probable that a liability will be incurred and the amount of the loss can be reasonably estimated. 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 this note, management believes that any liability which may result from these legal matters would not have a material adverse effect on the financial condition, results of operations, liquidity or cash flows of the Company.
Environmental Matters
The Company continues to be dedicated to environmental and sustainability programs to minimize the use of natural resources, and reduce the utilization and generation of hazardous materials from our manufacturing processes and to remediate identified environmental concerns. As to the latter, the Company is currently engaged in site investigations and remediation activities to address environmental cleanup from past operations at current and former manufacturing facilities.
The Company is sometimes a party to environmental lawsuits and claims and has received notices of potential violations of environmental laws and regulations from the Environmental Protection Agency and similar state authorities. It has also been identified as a potentially responsible party (PRP) for cleanup costs associated with off-site waste disposal at federal Superfund and state remediation sites. For all such sites, there are other PRPs and, in most instances, the Company’s involvement is minimal.
In estimating its liability, the Company has assumed it will not bear the entire cost of remediation of any site to the exclusion of other PRPs who may be jointly and severally liable. The ability of other PRPs to participate has been taken into account, based on the Company's understanding of the parties’ financial condition and probable contributions on a per site basis. Additional lawsuits and claims involving environmental matters are likely to arise from time to time in the future.
Reserves for environmental matters are classified as Accrued expenses and other current liabilities or Other noncurrent liabilities based on their expected term. As of March 31, 2019 and December 31, 2018, the Company has recorded reserves for environmental matters of $42.0 million and $41.2 million, respectively. Of these amounts, $36.8 million and $36.1 million, respectively, relate to remediation of sites previously disposed of by the Company.
Asbestos-Related Matters
Certain wholly-owned subsidiaries and former companies of ours 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 have been filed against either Ingersoll-Rand Company or Trane U.S. Inc. (Trane) and generally allege injury caused by exposure to asbestos contained in certain historical products sold by Ingersoll-Rand Company or Trane, primarily pumps, boilers and railroad brake shoes. None of our existing or previously-owned businesses were a producer or manufacturer of asbestos.
The Company engages an outside expert to perform a detailed analysis and project an estimated range of the Company’s total liability for pending and unasserted future asbestos-related claims. In accordance with ASC 450, the Company records the liability at the low end of the range as it believes that no amount within the range is a better estimate than any other amount. Asbestos-related defense costs are excluded from the liability and are recorded separately as services are incurred. The methodology used to prepare estimates relies upon and includes the following factors, among others:

- the outside expert’s interpretation of a widely accepted forecast of the population likely to have been occupationally exposed to asbestos;
- epidemiological studies estimating the number of people likely to develop asbestos-related diseases such as mesothelioma and lung cancer;
- the Company’s historical experience with the filing of non-malignancy claims and claims alleging other types of malignant diseases filed against the Company relative to the number of lung cancer claims filed against the Company;
- the outside expert’s analysis of the number of people likely to file an asbestos-related personal injury claim against the Company based on such epidemiological and historical data and the Company’s claims history;

- an analysis of the Company’s pending cases, by type of disease claimed and by year filed;
- an analysis of the Company’s history to determine the average settlement and resolution value of claims, by type of disease claimed;

- an adjustment for inflation in the future average settlement value of claims, at a 2.5% annual inflation rate, adjusted downward to 1.0% to take account of the declining value of claims resulting from the aging of the claimant population; and
- an analysis of the period over which the Company has and is likely to resolve asbestos-related claims against it in the future (currently projected through 2053).

At March 31, 2019 and December 31, 2018, over 75 percent of the open and active claims against the Company are non-malignant or unspecified disease claims. In addition, the Company has a number of claims which have been placed on inactive or deferred dockets and expected to have little or no settlement value against the Company.

The Company’s liability for asbestos-related matters and the asset for probable asbestos-related insurance recoveries were included in the following balance sheet accounts:

In millions	March 31, 2019	December 31, 2018
Accrued expenses and other current liabilities	$ 65.5	$ 63.3
Other noncurrent liabilities	526.8	548.3
Total asbestos-related liabilities	$ 592.3	$ 611.6
Other current assets	$ 70.0	$ 69.2
Other noncurrent assets	191.2	199.0
Total asset for probable asbestos-related insurance recoveries	$ 261.2	$ 268.2

The Company's asbestos insurance receivables related to Ingersoll-Rand Company and Trane were $139.6 million and $121.6 million at March 31, 2019, and $141.7 million and $126.5 million at December 31, 2018. The receivable attributable to Trane for probable insurance recoveries as of March 31, 2019 is entirely supported by settlement agreements between Trane and the respective insurance carriers. Most of these settlement agreements constitute “coverage-in-place” arrangements, in which the insurer signatories agree to reimburse Trane for specified portions of its costs for asbestos bodily injury claims and Trane agrees to certain claims-handling protocols and grants to the insurer signatories certain releases and indemnifications.

The costs associated with the settlement and defense of asbestos-related claims, insurance settlements on asbestos-related matters and the revaluation of the Company's liability for potential future claims are included in the income statement within continuing operations or discontinued operations depending on the business to which they relate. Income and expenses associated with Ingersoll-Rand Company's asbestos-related matters are recorded within discontinued operations as they relate to previously divested businesses, primarily Ingersoll-Dresser Pump, which was sold by the Company in 2000. Income and expenses associated with Trane’s asbestos-related matters are recorded within Other income/(expense), net as part of continuing operations.

The income (expense) associated with these transactions, for the three months ended March 31, were as follows:

	Three months ended	
In millions	2019	2018
Continuing operations	$(1.8)	$1.5
Discontinued operations	(3.0)	(7.2)
Total	$(4.8)	$(5.7)

In 2012 and 2013, Ingersoll-Rand Company filed actions in the Superior Court of New Jersey, Middlesex County, seeking a declaratory judgment and other relief regarding the Company's rights to defense and indemnity for asbestos claims. The defendants were several dozen solvent insurance companies, including companies that had been paying a portion of Ingersoll-Rand Company's asbestos claim defense and indemnity costs. The responding defendants generally challenged the Company's right to recovery, and raised various coverage defenses. Since filing the actions, Ingersoll Rand Company has settled with approximately two-thirds of the insurer defendants, and has dismissed one of the actions in its entirety.

The Company continually monitors the status of pending litigation that could impact the allocation of asbestos claims against the Company's various insurance policies. The Company has concluded that its Ingersoll-Rand Company insurance receivable is probable of recovery because of the following factors:

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- Ingersoll-Rand Company has reached favorable settlements regarding asbestos coverage claims for the majority of its recorded asbestos-related insurance receivable;
- a review of other companies in circumstances comparable to Ingersoll-Rand Company, including Trane, and the success of other companies in recovering under their insurance policies, including Trane's favorable settlement discussed above;
- the Company's confidence in its right to recovery under the terms of its policies and pursuant to applicable law; and
- the Company's history of receiving payments under the Ingersoll-Rand Company insurance program, including under policies that had been the subject of prior litigation.

The amounts recorded by the Company for asbestos-related liabilities and insurance-related assets are based on currently available information. The Company’s actual liabilities or insurance recoveries could be significantly higher or lower than those recorded if assumptions used in the calculations vary significantly from actual results. Key variables in these assumptions include the number and type of new claims to be filed each year, the average cost of resolution of each such new claim, the resolution of coverage issues with insurance carriers, and the solvency risk with respect to the Company’s insurance carriers. Furthermore, predictions with respect to these variables are subject to greater uncertainty as the projection period lengthens. Other factors that may affect the Company’s liability include uncertainties surrounding the litigation process from jurisdiction to jurisdiction and from case to case, reforms that may be made by state and federal courts, and the passage of state or federal tort reform legislation.

The aggregate amount of the stated limits in insurance policies available to the Company for asbestos-related claims acquired, over many years and from many different carriers, is substantial. However, limitations in that coverage, primarily due to the considerations described above, are expected to result in the projected total liability to claimants substantially exceeding the probable insurance recovery.

Warranty Liability

Standard product warranty accruals are recorded at the time of sale and are estimated based upon product warranty terms and historical experience. The Company assesses the adequacy of its liabilities and will make adjustments as necessary based on known or anticipated warranty claims, or as new information becomes available.

The changes in the standard product warranty liability for the three months ended March 31 were as follows:

In millions	2019	2018
Balance at beginning of period	$278.9	$270.5
Reductions for payments	(33.8)	(35.5)
Accruals for warranties issued during the current period	36.9	34.0
Changes to accruals related to preexisting warranties	(1.1)	1.0
Translation	(0.4)	1.5
Balance at end of period	$280.5	$271.5

Standard product warranty liabilities are classified as Accrued expenses and other current liabilities or Other noncurrent liabilities based on their expected term. The Company's total current standard product warranty reserve at March 31, 2019 and December 31, 2018 was $152.5 million and $149.5 million, respectively.

The Company's extended warranty liability represents the deferred revenue associated with its extended warranty contracts and is amortized into Net revenues on a straight-line basis over the life of the contract, unless another method is more representative of the costs incurred. The Company assesses the adequacy of its liability by evaluating the expected costs under its existing contracts to ensure these expected costs do not exceed the extended warranty liability.

The changes in the extended warranty liability for the three months ended March 31 were as follows:

In millions	2019	2018
Balance at beginning of period	$292.2	$293.0
Amortization of deferred revenue for the period	(27.2)	(26.0)
Additions for extended warranties issued during the period	28.4	23.8
Changes to accruals related to preexisting warranties	(0.2)	(0.3)
Translation	—	0.4
Balance at end of period	$293.2	$290.9

The extended warranty liability is classified as Accrued expenses and other current liabilities or Other noncurrent liabilities based on the timing of when the deferred revenue is expected to be amortized into revenue. The Company's total current extended warranty liability at March 31, 2019 and December 31, 2018 was $103.4 million and $103.1 million, respectively.

Note 21. Guarantor Financial Information

Ingersoll-Rand plc (Plc or Parent Company) and certain of its 100% directly or indirectly owned subsidiaries provide guarantees of public debt issued by other 100% directly or indirectly owned subsidiaries. The following condensed consolidating financial information is provided so that separate financial statements of these subsidiary issuer and guarantors are not required to be filed with the U.S. Securities and Exchange Commission.

The following table shows the Company's guarantor relationships as of March 31, 2019:

Parent, issuer or guarantors	Notes issued	Notes guaranteed [1]
Ingersoll-Rand plc (Plc)	None	All registered notes and debentures
Ingersoll-Rand Irish Holdings Unlimited Company (Irish Holdings)	None	All notes issued by Global Holding and Lux Finance
Ingersoll-Rand Lux International Holding Company S.à.r.l. (Lux International)	None	All notes issued by Global Holding and Lux Finance
Ingersoll-Rand Global Holding Company Limited (Global Holding)	2.900% Senior notes due 2021 4.250% Senior notes due 2023 3.750% Senior notes due 2028 5.750% Senior notes due 2043 4.300% Senior notes due 2048	All notes issued by Lux Finance
Ingersoll-Rand Company (New Jersey)	9.000% Debentures due 2021 7.200% Debentures due 2019-2025 6.480% Debentures due 2025 Puttable debentures due 2027-2028	All notes issued by Global Holding and Lux Finance
Ingersoll-Rand Luxembourg Finance S.A. (Lux Finance)	2.625% Notes due 2020 3.550% Notes due 2024 3.500% Notes due 2026 3.800% Notes due 2029 4.650% Notes due 2044 4.500% Notes due 2049	All notes and debentures issued by Global Holding and New Jersey

(1) All subsidiary issuers and all guarantors provide irrevocable guarantees of borrowings, if any, made under revolving credit facilities.

Each subsidiary debt issuer and guarantor is owned 100% directly or indirectly by the Parent Company. Each guarantee is full and unconditional, and provided on a joint and several basis. There are no significant restrictions of the Parent Company, or any guarantor, to obtain funds from its subsidiaries, such as provisions in debt agreements that prohibit dividend payments, loans or advances to the parent by a subsidiary.

Basis of presentation

The following Condensed Consolidating Financial Statements present the financial position, results of operations and cash flows of each issuer or guarantor on a legal entity basis. The financial information for all periods has been presented based on the Company's legal entity ownerships and guarantees outstanding at March 31, 2019. Assets and liabilities are attributed to each issuer and guarantor generally based on legal entity ownership. Investments in subsidiaries of the Parent Company, subsidiary guarantors and issuers represent the proportionate share of their subsidiaries' net assets. Certain adjustments are needed to consolidate the Parent Company and its subsidiaries, including the elimination of investments in subsidiaries and related activity that occurs between entities in different columns. These adjustments are presented in the Consolidating Adjustments column. This basis of presentation is intended to comply with the specific reporting requirements for subsidiary issuers and guarantors, and is not intended to present the Company’s financial position or results of operations or cash flows for any other purpose.

Condensed Consolidating Statement of Comprehensive Income
For the three months ended March 31, 2019

In millions	Plc	Irish Holdings	Lux International	Global Holding	New Jersey	Lux Finance	Other Subsidiaries	Consolidating Adjustments	Consolidated
Net revenues	$—	$ —	$ —	$—	$ 325.4	$—	$ 3,340.4	$ (89.9)	$ 3,575.9
Cost of goods sold	—	—	—	—	(251.8)	—	(2,355.4)	89.9	(2,517.3)
Selling and administrative expenses	(1.7)	—	(0.2)	(0.1)	(108.7)	(0.1)	(629.3)	—	(740.1)
Operating income (loss)	(1.7)	—	(0.2)	(0.1)	(35.1)	(0.1)	355.7	—	318.5
Equity earnings (loss) in subsidiaries, net of tax	229.0	229.1	142.5	161.2	162.3	43.1	—	(967.2)	—
Interest expense	—	—	—	(26.6)	(11.6)	(12.7)	—	—	(50.9)
Intercompany interest and fees	(29.0)	—	9.0	(61.3)	49.5	1.4	30.4	—	—
Other income/(expense), net	—	—	59.1	—	(7.3)	—	(70.6)	—	(18.8)
Earnings (loss) before income taxes	198.3	229.1	210.4	73.2	157.8	31.7	315.5	(967.2)	248.8
Benefit (provision) for income taxes	1.6	—	—	20.5	9.9	—	(75.0)	—	(43.0)
Earnings (loss) from continuing operations	199.9	229.1	210.4	93.7	167.7	31.7	240.5	(967.2)	205.8
Discontinued operations, net of tax	—	—	—	—	(6.3)	—	4.2	—	(2.1)
Net earnings (loss)	199.9	229.1	210.4	93.7	161.4	31.7	244.7	(967.2)	203.7
Less: Net earnings attributable to noncontrolling interests	—	—	—	—	—	—	(3.8)	—	(3.8)
Net earnings (loss) attributable to Ingersoll-Rand plc	$ 199.9	$ 229.1	$ 210.4	$ 93.7	$ 161.4	$ 31.7	$ 240.9	$ (967.2)	$ 199.9
Other comprehensive income (loss), net of tax	5.5	5.6	3.8	0.6	0.8	2.8	0.8	(14.4)	5.5
Comprehensive income (loss) attributable to Ingersoll-Rand plc	$ 205.4	$ 234.7	$ 214.2	$ 94.3	$ 162.2	$ 34.5	$ 241.7	$ (981.6)	$ 205.4

Condensed Consolidating Statement of Comprehensive Income
For the three months ended March 31, 2018

in millions	Plc	Irish Holdings	Lux International	Global Holding	New Jersey	Lux Finance	Other Subsidiaries	Consolidating Adjustments	Consolidated
Net revenues	$—	$—	$ —	$—	$347.6	$—	$3,140.7	$(103.8)	$3,384.5
Cost of goods sold	—	—	—	—	(253.8)	—	(2,270.2)	103.8	(2,420.2)
Selling and administrative expenses	(1.7)	—	—	(0.1)	(136.3)	—	(582.8)	—	(720.9)
Operating income (loss)	(1.7)	—	—	(0.1)	(42.5)	—	287.7	—	243.4
Equity earnings (loss) in subsidiaries, net of tax	124.2	123.5	110.9	118.3	162.7	39.2	—	(678.8)	—
Interest expense	—	—	—	(50.3)	(11.8)	(10.6)	(0.2)	—	(72.9)
Intercompany interest and fees	(1.0)	—	4.0	(27.8)	6.3	(2.4)	20.9	—	—
Other income/(expense), net	—	—	—	0.7	(3.6)	0.1	(1.2)	—	(4.0)
Earnings (loss) before income taxes	121.5	123.5	114.9	40.8	111.1	26.3	307.2	(678.8)	166.5
Benefit (provision) for income taxes	(1.1)	—	0.3	17.7	16.4	—	(66.3)	—	(33.0)
Earnings (loss) from continuing operations	120.4	123.5	115.2	58.5	127.5	26.3	240.9	(678.8)	133.5
Discontinued operations, net of tax	—	—	—	—	(9.3)	—	(0.1)	—	(9.4)
Net earnings (loss)	120.4	123.5	115.2	58.5	118.2	26.3	240.8	(678.8)	124.1
Less: Net earnings attributable to noncontrolling interests	—	—	—	—	—	—	(3.7)	—	(3.7)
Net earnings (loss) attributable to Ingersoll-Rand plc	$120.4	$123.5	$ 115.2	$58.5	$118.2	$26.3	$237.1	$(678.8)	$120.4
Other comprehensive income (loss), net of tax	152.1	151.9	144.2	105.8	105.2	37.3	145.8	(690.2)	152.1
Comprehensive income (loss) attributable to Ingersoll-Rand plc	$272.5	$275.4	$ 259.4	$164.3	$223.4	$63.6	$382.9	$(1,369.0)	$272.5

Condensed Consolidating Balance Sheet
March 31, 2019

In millions	Plc	Irish Holdings	Lux International	Global Holding	New Jersey	Lux Finance	Other Subsidiaries	Consolidating Adjustments	Consolidated
ASSETS									
Current assets:									
Cash and cash equivalents	$—	$0.1	$0.1	$—	$—	$1,207.3	$699.9	$—	$1,907.4
Accounts and notes receivable, net	—	—	0.2	—	167.0	—	2,543.1	—	2,710.3
Inventories, net	—	—	—	—	159.7	—	1,824.0	—	1,983.7
Other current assets	2.0	—	7.7	—	113.4	—	360.9	(0.7)	483.3
Intercompany receivables	98.0	—	27.1	—	4,148.8	304.5	5,237.9	(9,816.3)	—
Total current assets	100.0	0.1	35.1	—	4,588.9	1,511.8	10,665.8	(9,817.0)	7,084.7
Property, plant and equipment, net	—	—	0.1	—	304.0	—	1,434.3	—	1,738.4
Goodwill and other intangible assets, net	—	—	—	—	430.1	—	9,147.0	—	9,577.1
Other noncurrent assets	—	—	8.0	179.7	782.8	—	746.4	(336.1)	1,380.8
Investments in consolidated subsidiaries	9,452.4	9,410.9	4,011.7	11,886.6	10,158.5	1,309.7	—	(46,229.8)	—
Intercompany notes receivable	—	—	1,331.9	—	—	—	2,249.7	(3,581.6)	—
Total assets	$9,552.4	$9,411.0	$5,386.8	$12,066.3	$16,264.3	$2,821.5	$24,243.2	$(59,964.5)	$19,781.0
LIABILITIES AND EQUITY									
Current liabilities:									
Accounts payable and accrued expenses	$10.3	$—	$—	$77.4	$641.6	$20.6	$3,364.9	$(0.7)	$4,114.1
Short-term borrowings and current maturities of long-term debt	—	—	—	—	350.3	23.9	0.2	—	374.4
Intercompany payables	2,656.3	—	1,419.9	3,601.1	1,783.4	0.4	355.2	(9,816.3)	—
	2,666.6	—	1,419.9	3,678.5	2,775.3	44.9	3,720.3	(9,817.0)	4,488.5

Total current liabilities									
Long-term debt	—	—	—	2,330.6	319.5	2,576.2	0.2	—	5,226.5
Other noncurrent liabilities	—	—	—	5.9	1,283.5	—	2,189.9	(336.1)	3,143.2
Intercompany notes payable	—	—	—	2,249.7	—	—	1,331.9	(3,581.6)	—
Total liabilities	2,666.6	—	1,419.9	8,264.7	4,378.3	2,621.1	7,242.3	(13,734.7)	12,858.2
Equity:									
Total equity	6,885.8	9,411.0	3,966.9	3,801.6	11,886.0	200.4	17,000.9	(46,229.8)	6,922.8
Total liabilities and equity	$9,552.4	$9,411.0	$ 5,386.8	$12,066.3	$16,264.3	$2,821.5	$24,243.2	$(59,964.5)	$19,781.0

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Condensed Consolidating Balance Sheet
December 31, 2018

In millions	Plc	Irish Holdings	Lux International	Global Holding	New Jersey	Lux Finance	Other Subsidiaries	Consolidating Adjustments	Consolidated
ASSETS									
Current assets:									
Cash and cash equivalents	$—	$0.1	$0.2	$—	$363.5	$—	$539.6	$—	$903.4
Accounts and notes receivable, net	—	—	0.1	—	183.4	—	2,495.7	—	2,679.2
Inventories, net	—	—	—	—	146.6	—	1,531.2	—	1,677.8
Other current assets	0.2	—	7.8	—	101.0	—	363.4	(0.8)	471.6
Intercompany receivables	59.5	—	3.9	—	3,851.0	0.1	3,838.0	(7,752.5)	—
Total current assets	59.7	0.1	12.0	—	4,645.5	0.1	8,767.9	(7,753.3)	5,732.0
Property, plant and equipment, net	—	—	0.1	—	314.6	—	1,416.1	—	1,730.8
Goodwill and other intangible assets, net	—	—	—	—	432.1	—	9,162.1	—	9,594.2
Other noncurrent assets	—	—	8.0	180.0	498.1	—	610.6	(438.8)	857.9
Investments in consolidated subsidiaries	9,308.9	9,267.8	3,935.4	11,743.2	9,923.2	1,264.2	—	(45,442.7)	—
Intercompany notes receivable	—	—	—	—	—	—	2,249.7	(2,249.7)	—
Total assets	$9,368.6	$9,267.9	$3,955.5	$11,923.2	$15,813.5	$1,264.3	$22,206.4	$(55,884.5)	$17,914.9
LIABILITIES AND EQUITY									
Current liabilities:									
Accounts payable and accrued expenses	$11.3	$—	$0.1	$41.7	$599.6	$6.9	$3,306.3	$(0.8)	$3,965.1
Short-term borrowings and current maturities of long-term debt	—	—	—	—	350.4	—	0.2	—	350.6
	2,334.6	—	132.9	3,518.7	1,700.9	0.2	65.2	(7,752.5)	—

Intercompany payables									
Total current liabilities	2,345.9	—	133.0	3,560.4	2,650.9	7.1	3,371.7	(7,753.3)	4,315.7
Long-term debt	—	—	—	2,330.0	319.5	1,091.0	0.2	—	3,740.7
Other noncurrent liabilities	—	—	—	5.5	1,100.5	—	2,126.5	(438.8)	2,793.7
Intercompany notes payable	—	—	—	2,249.7	—	—	—	(2,249.7)	—
Total liabilities	2,345.9	—	133.0	8,145.6	4,070.9	1,098.1	5,498.4	(10,441.8)	10,850.1
Equity:									
Total equity	7,022.7	9,267.9	3,822.5	3,777.6	11,742.6	166.2	16,708.0	(45,442.7)	7,064.8
Total liabilities and equity	$9,368.6	$9,267.9	$3,955.5	$11,923.2	$15,813.5	$1,264.3	$22,206.4	$(55,884.5)	$17,914.9

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Condensed Consolidating Statement of Cash Flows
For the three months ended March 31, 2019

in millions	Plc	Irish Holdings	Lux International	Global Holding	New Jersey	Lux Finance	Other Subsidiaries	Consolidating Adjustments	Consolidated
CASH FLOWS FROM OPERATING ACTIVITIES:									
Net cash provided by (used in) continuing operating activities	$92.9	$ —	$ (0.1)	$(21.2)	$(346.8)	$(1.0)	$ 239.1	$ —	$(37.1)
Net cash provided by (used in) discontinued operating activities	—	—	—	—	(19.7)	—	4.2	—	(15.5)
Net cash provided by (used in) operating activities	92.9	—	(0.1)	(21.2)	(366.5)	(1.0)	243.3	—	(52.6)
CASH FLOWS FROM INVESTING ACTIVITIES:									
Capital expenditures	—	—	—	—	(6.7)	—	(54.1)	—	(60.8)
Acquisitions of businesses, net of cash acquired	—	—	—	—	—	—	(22.0)	—	(22.0)
Other investing activities, net	—	—	—	—	1.0	—	5.4	—	6.4
Intercompany investing activities, net	—	—	0.6	—	2.5	(303.1)	66.1	233.9	—
Net cash provided by (used in) continuing investing activities	—	—	0.6	—	(3.2)	(303.1)	(4.6)	233.9	(76.4)
CASH FLOWS FROM FINANCING ACTIVITIES:									
Net proceeds from (payments of) debt	—	—	—	—	—	1,521.8	—	—	1,521.8
Debt issuance costs	—	—	—	—	(0.2)	(10.4)	—	—	(10.6)
Dividends paid to ordinary shareholders	(127.7)	—	—	—	—	—	—	—	(127.7)
Dividends paid to noncontrolling interests	—	—	—	—	—	—	(9.3)	—	(9.3)
Repurchase of ordinary shares	(250.0)	—	—	—	—	—	—	—	(250.0)
Other financing activities, net	6.3	—	—	—	(0.4)	—	—	—	5.9
Intercompany financing activities, net	278.5	—	(0.6)	21.2	6.8	—	(72.0)	(233.9)	—
Net cash provided by (used in) continuing financing activities	(92.9)	—	(0.6)	21.2	6.2	1,511.4	(81.3)	(233.9)	1,130.1
Effect of exchange rate changes on cash and cash equivalents	—	—	—	—	—	—	2.9	—	2.9
Net increase (decrease) in cash and cash equivalents	—	—	(0.1)	—	(363.5)	1,207.3	160.3	—	1,004.0
	—	0.1	0.2	—	363.5	—	539.6	—	903.4

Cash and cash equivalents - beginning of period									
Cash and cash equivalents - end of period	$—	$ 0.1	$ 0.1	$—	$—	$1,207.3	$ 699.9	$ —	$ 1,907.4

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Condensed Consolidating Statement of Cash Flows
For the three months ended March 31, 2018

in millions	Plc	Irish Holdings	Lux International	Global Holding	New Jersey	Lux Finance	Other Subsidiaries	Consolidating Adjustments	Consolidated
CASH FLOWS FROM OPERATING ACTIVITIES:									
Net cash provided by (used in) continuing operating activities	$102.6	$ —	$ —	$(32.2)	$19.6	$(0.3)	$(135.5)	$ —	$(45.8)
Net cash provided by (used in) discontinued operating activities	—	—	—	—	(20.3)	—	(0.1)	—	(20.4)
Net cash provided by (used in) operating activities	102.6	—	—	(32.2)	(0.7)	(0.3)	(135.6)	—	(66.2)
CASH FLOWS FROM INVESTING ACTIVITIES:									
Capital expenditures	—	—	—	—	(8.8)	—	(44.0)	—	(52.8)
Acquisitions of businesses, net of cash acquired	—	—	—	—	—	—	(201.6)	—	(201.6)
Other investing activities, net	—	—	(4.0)	—	—	—	0.7	—	(3.3)
Intercompany investing activities, net	—	—	(0.5)	—	(208.8)	—	287.0	(77.7)	—
Net cash provided by (used in) continuing investing activities	—	—	(4.5)	—	(217.6)	—	42.1	(77.7)	(257.7)
CASH FLOWS FROM FINANCING ACTIVITIES:									
Net proceeds from (payments of) debt	—	—	—	31.6	—	247.9	—	—	279.5
Debt issuance costs	—	—	—	(8.5)	—	—	—	—	(8.5)
Dividends paid to ordinary shareholders	(111.6)	—	—	—	—	—	—	—	(111.6)
Dividends paid to noncontrolling interests	—	—	—	—	—	—	(11.0)	—	(11.0)
Repurchase of ordinary shares	(250.0)	—	—	—	—	—	—	—	(250.0)
Other financing activities, net	6.6	—	—	—	(0.4)	—	(1.0)	—	5.2
Intercompany financing activities, net	252.4	—	4.0	9.1	(105.0)	(247.5)	9.3	77.7	—
Net cash provided by (used in) continuing financing activities	(102.6)	—	4.0	32.2	(105.4)	0.4	(2.7)	77.7	(96.4)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	—	—	—	46.0	—	46.0
Net increase (decrease) in cash and cash equivalents	—	—	(0.5)	—	(323.7)	0.1	(50.2)	—	(374.3)
Cash and cash equivalents - beginning of period	—	—	0.6	—	359.3	—	1,189.5	—	1,549.4
Cash and cash equivalents - end of period	$—	$ —	$ 0.1	$—	$35.6	$0.1	$1,139.3	$ —	$1,175.1

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Note 22. Proposed Reverse Morris Trust Transaction

In April 2019, the Company and Gardner Denver Inc. (GDI) announced that they had entered into definitive agreements pursuant to which the Company will separate its Industrial segment businesses (IR Industrial) by way of spin-off to the Company’s shareholders and then combine it with GDI. The combined company (IndustrialCo) will be composed of the entirety of IR Industrial and GDI, including, subject to closing, the Company’s pending acquisition of PFS, which is expected to close mid-2019. The Company’s HVAC and transport refrigeration businesses, reported under the Climate segment, will focus on climate control solutions for buildings, homes and transportation (ClimateCo).

The transaction will be effected through a “Reverse Morris Trust” transaction, pursuant to which IR Industrial is expected to be spun-off to the Company’s shareholders and simultaneously merged with and surviving as a wholly-owned subsidiary of GDI. At the time of close, ClimateCo will receive $1.9 billion in cash from GDI. In the merger, existing shareholders of the Company will receive 50.1% of the shares of IndustrialCo on a fully diluted basis. Existing GDI shareholders will receive 49.9% of the shares of IndustrialCo on a fully diluted basis. The transaction is expected to be tax-free to the Company’s and GDI’s respective shareholders for U.S. federal income tax purposes.

The transaction is expected to close by early 2020, subject to approval by GDI’s shareholders, regulatory approvals and customary closing conditions.

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Item 2 – Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following Management’s Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements that involve risks and uncertainties. Our actual results may differ materially from the results discussed in the forward-looking statements. Factors that might cause a difference include, but are not limited to, those discussed under Part II, Item 1A – Risk Factors in this Quarterly Report on Form 10-Q; and under Part I, Item 1A – Risk Factors in the Annual Report on Form 10-K for the fiscal year ended December 31, 2018. The following section is qualified in its entirety by the more detailed information, including our financial statements and the notes thereto, which appears elsewhere in this Quarterly Report.

Overview

Organizational

We are a diversified, global company that provides products, services and solutions to enhance the quality, energy efficiency and comfort of air in homes and buildings, transport and protect food and perishables and increase industrial productivity and efficiency. Our business segments consist of Climate and Industrial, both with strong brands and highly differentiated products within their respective markets. We generate revenue and cash primarily through the design, manufacture, sale and service of a diverse portfolio of industrial and commercial products that include well-recognized, premium brand names such as Ingersoll-Rand®, Trane®, Thermo King®, American Standard®, ARO®, and Club Car®.

To achieve our mission of being a world leader in creating comfortable, sustainable and efficient environments, we continue to focus on growth by increasing our recurring revenue stream from parts, service, controls, used equipment and rentals; and to continuously improve the efficiencies and capabilities of the products and services of our businesses. We also continue to focus on operational excellence strategies as a central theme to improving our earnings and cash flows.

Trends and Economic Events

We are a global corporation with worldwide operations. As a global business, our operations are affected by worldwide, regional and industry-specific economic factors, as well as political factors, wherever we operate or do business. Our geographic and industry diversity, and the breadth of our product and services portfolios, have helped mitigate the impact of any one industry or the economy of any single country on our consolidated operating results. Given the broad range of products manufactured and geographic markets served, management uses a variety of factors to predict the outlook for the Company. We monitor key competitors and customers in order to gauge relative performance and the outlook for the future. We regularly perform detailed evaluations of the different market segments we are serving to proactively detect trends and to adapt our strategies accordingly. In addition, we believe our order rates are indicative of future revenue and thus are a key measure of anticipated performance. In those industry segments where we are a capital equipment provider, revenues depend on the capital expenditure budgets and spending patterns of our customers, who may delay or accelerate purchases in reaction to changes in their businesses and in the economy.

Current economic conditions are showing positive trends in each of the segments in which we participate. Heating, Ventilation, and Air Conditioning (HVAC) equipment replacement, services, controls and aftermarket continue to experience strong demand. In addition, Residential and Commercial markets have seen continued momentum in the United States, positively impacting the results of our HVAC businesses. Global Industrial markets remain largely supportive of continued growth in both equipment and services. While geopolitical uncertainty exists in markets such as Europe, Asia and Latin America, we are confident we will continue our strong performance globally. In 2019, we expect positive growth in both our Climate and Industrial segments, each benefiting from operational excellence initiatives, new product launches and continued productivity programs.

We believe we have a solid foundation of global brands that are highly differentiated in all of our major product lines. Our growing geographic and industry diversity coupled with our large installed product base provides growth opportunities within our service, parts and replacement revenue streams. In addition, we are investing substantial resources to innovate and develop new products and services which we expect will drive our future growth.

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Significant Events

Pending Acquisition

During the three months ended March 31, 2019, we entered into a final, binding and irrevocable offer letter with Silver II GP Holdings S.C.A., an affiliate of BC Partners Advisors L.P. and The Carlyle Group (the Seller) pursuant to which we made a binding offer to acquire the precision flow systems management business (PFS) for approximately $1.45 billion in cash, subject to working capital and certain other adjustments (the Acquisition). PFS is a manufacturer of precision flow control equipment including precision dosing pumps and controls that serve the global water, oil and gas, agriculture, industrial and specialty market segments. The offer was subject to completion of the information and consultation processes with employee representative bodies of PFS in applicable jurisdictions. The process was completed in April 2019 and the Seller accepted the offer. Completion of the Acquisition is subject to customary closing conditions and is expected to close mid-year 2019 subject to regulatory approvals. The results of PFS will be included in our consolidated financial statements as of the date of acquisition and reported within the Industrial segment.

Issuance of Senior Notes

In March 2019, we issued $1.5 billion principal amount of senior notes in three tranches through an indirect, wholly-owned subsidiary. The tranches consist of $400 million aggregate principal amount of 3.500% senior notes due 2026, $750 million aggregate principal amount of 3.800% senior notes due 2029 and $350 million aggregate principal amount of 4.500% senior notes due 2049. We intend to use the net proceeds to finance the pending acquisition of PFS.

Share Repurchase Program and Dividends

Share repurchases are made from time to time in accordance with management's capital allocation strategy, subject to market conditions and regulatory requirements. In October 2018, our Board of Directors authorized the repurchase of up to $1.5 billion of our ordinary shares under a share repurchase program (2018 Authorization) upon completion of the prior authorized share repurchase program. During the three months ended March 31, 2019, we repurchased and canceled approximately $250 million of our ordinary shares leaving approximately $1.25 billion remaining under the 2018 Authorization at March 31, 2019. 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 dividend payment.

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Results of Operations

Our Climate segment delivers energy-efficient products and innovative energy services. It includes Trane® and American Standard® Heating & Air Conditioning which provide heating, ventilation and air conditioning (HVAC) systems, and commercial and residential building services, parts, support and controls; energy services and building automation through Trane Building Advantage and Nexia; and Thermo King® transport temperature control solutions.

Our Industrial segment delivers products and services that enhance energy efficiency, productivity and operations. It includes compressed air and gas systems and services, power tools, material handling systems, ARO® fluid management equipment, as well as Club Car ® golf, utility and consumer low-speed vehicles.

Segment operating income is the measure of profit and loss that our chief operating decision maker uses to evaluate the financial performance of the business and as the basis for performance reviews, compensation and resource allocation. For these reasons, we believe that Segment operating income represents the most relevant measure of segment profit and loss. We define Segment operating margin as Segment operating income as a percentage of Net revenues.

Three Months Ended March 31, 2019 Compared to the Three Months Ended March 31, 2018

Dollar amounts in millions	2019	2018	Period Change	2019 % of revenues	2018 % of revenues
Net revenues	$3,575.9	$3,384.5	$191.4		
Cost of goods sold	(2,517.3)	(2,420.2)	(97.1)	70.4 %	71.5 %
Selling and administrative expenses	(740.1)	(720.9)	(19.2)	20.7 %	21.3 %
Operating income	318.5	243.4	75.1	8.9 %	7.2 %
Interest expense	(50.9)	(72.9)	22.0		
Other income/(expense), net	(18.8)	(4.0)	(14.8)		
Earnings before income taxes	248.8	166.5	82.3		
Provision for income taxes	(43.0)	(33.0)	(10.0)		
Earnings from continuing operations	205.8	133.5	72.3		
Discontinued operations, net of tax	(2.1)	(9.4)	7.3		
Net earnings	$203.7	$124.1	$79.6		

Net Revenues

Net revenues for the three months ended March 31, 2019 increased by 5.7%, or $191.4 million, compared with the same period in 2018, which resulted from the following:

Volume/product mix	5.8 %
Pricing	2.3 %
Currency translation	(2.4)%
Total	5.7 %

The increase was primarily driven by higher volumes in both our Climate and Industrial segments. Improved pricing further contributed to the year-over-year increase. However, each segment was impacted by unfavorable foreign currency exchange rate movements.

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Our revenues by segment for the three months ended March 31 were as follows:

Dollar amounts in millions	2019	2018	% change
Climate	$2,803.7	$2,609.8	7.4 %
Industrial	772.2	774.7	(0.3)%
Total	$3,575.9	$3,384.5	

Climate

Net revenues for the three months ended March 31, 2019 increased by 7.4% or $193.9 million, compared with the same period of 2018.The components of the period change were as follows:

Volume/product mix	7.1 %
Pricing	2.4 %
Currency translation	(2.1)%
Total	7.4 %

Industrial

Net revenues for the three months ended March 31, 2019 decreased by 0.3% or $2.5 million, compared with the same period of 2018. The components of the period change were as follows:

Volume/product mix	1.5 %
Pricing	1.4 %
Currency translation	(3.2)%
Total	(0.3)%

Operating Income/Margin

Operating margin increased to 8.9% for the three months ended March 31, 2019 compared to 7.2% for the same period of 2018. The increase was primarily driven by pricing improvements in excess of material inflation (0.7%) , productivity benefits in excess of other inflation (0.5%) as well as higher volume/product mix (0.3%). In addition, lower spending on restructuring actions more than offset unfavorable foreign currency exchange rate movements (0.2%).

Our Operating income and Operating margin by segment were as follows:

Dollar amounts in millions	2019 Operating Income (Expense)	2018 Operating Income (Expense)	Period Change	2019 Operating Margin	2018 Operating Margin
Climate	$ 313.1	$ 260.4	$ 52.7	11.2 %	10.0 %
Industrial	83.9	59.9	24.0	10.9 %	7.7 %
Unallocated corporate expenses	(78.5)	(76.9)	(1.6)	N/A	N/A
Total	$ 318.5	$ 243.4	$ 75.1	8.9 %	7.2 %

Climate

Operating margin increased to 11.2% for the three months ended March 31, 2019 compared to 10.0% for the same period of 2018. The increase was primarily driven by pricing improvements in excess of material inflation and productivity benefits in excess of other inflation. Year-over-year impacts of volume/product mix, foreign currency exchange rate movements and investment spending remained relatively flat.

Industrial

Operating margin increased to 10.9% for the three months ended March 31, 2019 compared to 7.7% for the same period of 2018. The increase was primarily the result of lower spending on restructuring actions and productivity benefits in excess of other inflation. These amounts were partially offset by material inflation in excess of pricing improvements and unfavorable foreign currency exchange rate movements.

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Unallocated Corporate Expenses

Unallocated corporate expense for the three months ended March 31, 2019 increased by $1.6 million compared with the same period of 2018. Higher compensation and benefit charges related to variable compensation and transaction costs associated with the pending acquisition of PFS more than offset lower functional costs.

Interest Expense

Interest expense for the three months ended March 31, 2019 decreased by $22.0 million compared with the same period of 2018. The decrease primarily relates to the redemption of $1.1 billion of senior notes during the first quarter of 2018 in which we recognized $15.4 million of premium expense and $1.2 million of unamortized costs in Interest expense. In addition, lower interest rates on new debt issuances contributed to the year-over-year reduction.

Other Income/(Expense), Net

The components of Other income/(expense), net for the three months ended March 31 were as follows:

In millions	2019	2018
Interest income (loss)	$(0.6)	$3.6
Exchange gain (loss)	(4.3)	(7.3)
Other components of net periodic benefit cost	(11.1)	(3.9)
Other activity, net	(2.8)	3.6
Other income/(expense), net	$(18.8)	$(4.0)

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 U.S. Inc. (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 three months ended March 31, 2019, our effective tax rate was 17.3% which is lower than the U.S. Statutory rate of 21% primarily due to excess tax benefits from employee share-based payments, the deduction for Foreign Derived Intangible Income and earnings in non-U.S. jurisdictions, which in aggregate have a lower effective tax rate. 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 three months ended March 31, 2018 was 19.8% which is lower than the U.S. statutory rate of 21% primarily due to excess tax benefits from employee share-based payments and earnings in non-U.S. jurisdictions, which in aggregate have a lower effective tax rate. These amounts were partially offset by U.S. state and local income taxes.

Discontinued Operations

The components of Discontinued operations, net of tax for the three months ended March 31 were as follows:

In millions	2019	2018
Pre-tax earnings (loss) from discontinued operations	$(1.9)	$(12.1)
Tax benefit (expense)	(0.2)	2.7
Discontinued operations, net of tax	$(2.1)	$(9.4)

Discontinued operations are retained costs from previously sold businesses that primarily include ongoing expenses for postretirement benefits, product liability and legal costs. In addition, we include costs associated with Ingersoll-Rand Company for the settlement and defense of asbestos-related claims, insurance settlements on asbestos-related matters and the revaluation of our liability for potential future claims. A portion of the tax benefit (expense) in each period represents adjustments for certain tax matters associated with the 2013 spin-off of our commercial and residential security business, now an independent public company operating under the name of Allegion plc (Allegion).

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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
- Dividend payments
- Debt service requirements

Our primary sources of liquidity include cash balances on hand, cash flow 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 March 31, 2019, we had $1,907.4 million of cash and cash equivalents on hand, of which $1,833.4 million 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 in 2017, additional repatriation 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 March 31, 2019, 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 management's capital allocation strategy, subject to market conditions and regulatory requirements. In October 2018, our Board of Directors authorized the repurchase of up to $1.5 billion of our ordinary shares under a share repurchase program (2018 Authorization) upon completion of the prior authorized share repurchase program. During the three months ended March 31, 2019, we repurchased and canceled approximately $250 million of our ordinary shares leaving approximately $1.25 billion remaining under the 2018 Authorization at March 31, 2019. 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 dividend 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 expect to close on our pending acquisition of PFS mid-year 2019 and utilize the $1.5 billion proceeds of our debt issuance completed during the period to fund the transaction. Lastly, 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.

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Liquidity

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

In millions	March 31, 2019	December 31, 2018
Cash and cash equivalents	$1,907.4	$ 903.4
Short-term borrowings and current maturities of long-term debt	374.4	350.6
Long-term debt	5,226.5	3,740.7
Total debt	5,600.9	4,091.3
Total Ingersoll-Rand plc shareholders' equity	6,885.8	7,022.7
Total equity	6,922.8	7,064.8
Debt-to-total capital ratio	44.7 %	36.7 %

Debt and Credit Facilities

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 $2.0 billion. We had an outstanding balance of $23.9 million under our commercial paper program at March 31, 2019. However, no amounts were outstanding at December 31, 2018. See Note 6 to the Condensed 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 2020 and 2049. In addition, we maintain two 5-year, $1.0 billion revolving credit facilities. Each senior unsecured credit facility, one of which matures in March 2021 and the other in April 2023, 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 March 31, 2019 and December 31, 2018. See Note 6 and Note 21 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 three months ended March 31. For additional details, see the Condensed Consolidated Statements of Cash Flows in the condensed consolidated financial statements.

In millions	2019	2018
Net cash provided by (used in) continuing operating activities	$(37.1)	$(45.8)
Net cash provided by (used in) continuing investing activities	(76.4)	(257.7)
Net cash provided by (used in) continuing financing activities	1,130.1	(96.4)

Operating Activities

Net cash used in continuing operating activities for the three months ended March 31, 2019 was $37.1 million, of which net income provided $363.4 million after adjusting for non-cash transactions. Changes in assets and liabilities, net used $400.5 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 used in continuing operating activities for the three months ended March 31, 2018 was $45.8 million, of which net income provided $284.9 million after adjusting for non-cash transactions. Changes in assets and liabilities, net used $330.7 million. Improvements in accounts receivable and accounts payable were more than offset by the seasonal increase to inventory balances.

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 three months ended March 31, 2019, net cash used in investing activities from continuing operations was $76.4 million. The primary driver of the usage is attributable to capital expenditures, which totaled $60.8 million. In addition, channel acquisitions that complement existing products and services were $22.0 million, net of cash acquired. Net cash used in investing activities from continuing operations for the three months ended March 31, 2018 was $257.7

million. The primary driver of the usage was attributable to acquisitions during the period. The total outflow, net of cash acquired, was $201.6 million. In addition, capital expenditures totaled $52.8 million.

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 three months ended March 31, 2019, net cash provided by financing activities from continuing operations was $1,130.1 million. The primary driver of the inflow related to the issuance of $1.5 billion of senior notes during the period to fund the pending acquisition of PFS. This amount was partially offset by dividends paid to ordinary shareholders of $127.7 million and the repurchase of $250.0 million in ordinary shares. Net cash used in financing activities from continuing operations for the three months ended March 31, 2018 was $96.4 million. Primary drivers of the cash outflow include dividends paid to ordinary shareholders of $111.6 million and the repurchase of $250.0 million in ordinary shares. These amounts were partially offset by borrowings from commercial paper during the period. 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.

Discontinued Operations

Cash flows from discontinued operations primarily represent ongoing costs associated with postretirement benefits, product liability and legal costs from previously sold businesses. Net cash used in discontinued operating activities for the three months ended March 31, 2019 and 2018 primarily relates to ongoing costs.

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 $104 million to its plans worldwide in 2019. For further details on pension plan activity, see Note 10 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, 2018.

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 20 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 three months ended March 31, 2019, 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, 2018 except for certain policy changes due to the adoption of ASC 842, "Leases." Refer to Note 2, "Recent Accounting Pronouncements" and Note 9, "Leases" for additional information related to the adoption of ASC 842.

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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,” “coul “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;
- climate 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, 2018. 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.

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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, 2018. There has been no significant change in our exposure to market risk as of the first quarter of 2019.

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 March 31, 2019, 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 first quarter of 2019 that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting.

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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, 2018 under Part II, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations and also Note 20 to the condensed consolidated financial statements in this Form 10-Q.

Item 1A – Risk Factors

Other than as noted below, 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, 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, 2018.

The proposed Reverse Morris Trust transaction with Gardner Denver Inc. (GDI) is subject to various risks and uncertainties, and there is no assurance that the transaction will be completed on the terms or timeline contemplated, if at all.

The proposed separation of our Industrial segment businesses by way of spin-off to our shareholders and subsequent merger of the Industrial segment businesses into GDI, creating a combined company (IndustrialCo) may not be completed as currently contemplated or at all. Completion of the pending Reverse Morris Trust transaction is subject to the satisfaction or waiver of a number of conditions, including the receipt of approval of GDI stockholders and regulatory approvals, and there can be no assurance that we will receive the required approvals in a timely manner or at all, or that such approvals will not contain adverse conditions.

The completion of the pending Reverse Morris Trust transaction is also subject to our receipt of an opinion (i) from U.S. tax counsel regarding the qualification of each of the distribution of shares of a company comprised of our Industrial segment businesses to our shareholders, certain internal transactions undertaken in anticipation of such distribution and the subsequent merger of this company with GDI as a tax-free transaction for U.S. federal income tax purposes and (ii) from Irish tax counsel that there will be no adverse Irish tax consequences, other than in respect of certain tax matters relevant only to certain of our Irish shareholders, as a result of the transaction. The completion of the transaction is also subject to the receipt by GDI of an opinion from its U.S. tax counsel regarding the qualification of the merger as a tax-free transaction for U.S. federal income tax purposes.

If the transaction is not completed or not completed in the timeframe expected, our business, financial results and stock price may be adversely affected.

We are subject to business uncertainties while the Reverse Morris Trust transaction with GDI is pending and the transaction may have an adverse effect on us even if not completed.

Uncertainty about the effect of the pending Reverse Morris Trust transaction with GDI on our employees, customers, partners, and suppliers may have adverse effects on our business, financial condition and results of operations. Our employees may be distracted due to uncertainty about their future roles with each of the separate companies pending the completion of the transaction, and we may face challenges in attracting, retaining and motivating key employees. Some of our suppliers or customers may delay or defer decisions or may end their relationships with us or our Industrial segment businesses, which could negatively affect revenues, earnings and cash flows of ours and our

Industrial segment businesses. Execution of the proposed transaction will require significant time and attention from management, which may distract management from the operation of our businesses and the execution of other initiatives that may have been beneficial to us. Any delays in completion of the proposed Reverse Morris Trust transaction may increase the amount of time, effort, and expense that we devote to the transaction. We will be required to pay certain costs and expenses relating to the transaction, such as legal, accounting and other professional fees, whether or not it is completed. We may experience negative reactions from the financial markets if we fail to complete the transaction. Any of these factors could have a material adverse effect on our financial condition, results of operations, cash flows and trading price.

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We may be unable to achieve some or all of the benefits that we expect to achieve from the transaction.
Although we believe that the pending Reverse Morris Trust transaction will provide financial, operational, managerial and other benefits to us and our shareholders, the transaction may not provide the results on the scope or on the scale we anticipate, and the assumed benefits of the transaction may not be fully realized. Accordingly, the transaction might not provide us and our shareholders benefits or value in excess of the benefits and value that might have been created or realized had we retained the Industrial segment businesses or undertaken another strategic alternative involving such businesses. Following the separation, distribution and subsequent merger, our remaining company will be less diversified with a focus on the climate control solutions for buildings, homes and transportation and may be more vulnerable to changing market conditions, which could materially adversely affect our business, results of operations and financial condition. These changes may not meet some shareholders' investment strategies, which could cause investors to sell their shares of our common stock and result in a decrease in the market price of our common stock.
There can be no assurances as to the value of the shares of IndustrialCo to be received by our stockholders in the Reverse Morris Trust transaction.
Our existing stockholders will receive 50.1% of the shares of IndustrialCo if the Reverse Morris Trust transaction is completed. The actual value of the IndustrialCo common stock to be received by our stockholders will depend on the value of such shares at the time of closing of the transaction, and our stockholders may receive more or less than the current value of our Industrial segment businesses. Following the Reverse Morris Trust transaction, our Industrial segment businesses and the GDI business could face difficulties in integrating their businesses, or the combined company could fail to realize the anticipated synergies, growth opportunities and other expected operational and financial benefits, as a result of which our stockholders may not receive the anticipated benefits of the merger.
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 first quarter of 2019:

Period	Total number of shares purchased (000's) (a) (b)	Average price paid per share (a) (b)	Total number of shares purchased as part of program (000's) (a)	Approximate dollar value of shares still available to be purchased under the program ($000's) (a)
January 1 - January 31	6.2	$91.97	—	$ 1,499,967
February 1 - February 28	2,235.7	103.30	1,924.9	1,301,501
March 1 - March 31	485.7	106.10	485.7	1,249,967
Total	2,727.6	$103.77	2,410.6	

(a) Share repurchases are made from time to time in accordance with management's capital allocation strategy, subject to market conditions and regulatory requirements. In October 2018, our Board of Directors authorized the repurchase of up to $1.5 billion of our ordinary shares under a share repurchase program (2018 Authorization) upon completion of the prior authorized share repurchase program. During the three months ended March 31, 2019, we repurchased and canceled approximately $250 million of our ordinary shares leaving approximately $1.25 billion remaining under the 2018 Authorization at March 31, 2019.
(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 6,188 shares in January and 310,810 shares in February in transactions outside of the repurchase programs.

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Item 6 – Exhibits
(a) Exhibits

Exhibit No.	Description	Method of Filing
31.1	Certification of Chief Executive Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Filed herewith.
31.2	Certification of Chief Financial Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Filed herewith.
32	Certifications of Chief Executive Officer and Chief Financial Officer Pursuant to Rule 13a-14(b) or Rule 15d-14(b) and 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	Furnished herewith.
101	The following materials from the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2019, formatted in XBRL (Extensible Business Reporting Language): (i) the Condensed Consolidated Statements of Comprehensive Income, (ii) the Condensed Consolidated Balance Sheets, (iii) the Condensed Consolidated Statement of Cash Flows, and (iv) Notes to Condensed Consolidated Financial Statements.	Filed herewith.

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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: April 30, 2019 /s/ Susan K. Carter
Susan K. Carter, Senior Vice President
and Chief Financial Officer
Principal Financial Officer

Date: April 30, 2019 /s/ Christopher J. Kuehn
Christopher J. Kuehn, Vice President
and Chief Accounting Officer
Principal Accounting Officer