

ROGERS CORP
Form 10-Q
November 02, 2018

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 2018

or

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 1-4347

ROGERS CORPORATION
(Exact Name of Registrant as Specified in its Charter)

Massachusetts 06-0513860
(State or Other Jurisdiction of (I. R. S. Employer Identification No.)
Incorporation or Organization)

2225 W. Chandler Blvd., Chandler, Arizona 85224-6155
(Address of Principal Executive Offices) (Zip Code)
Registrant's telephone number, including area code: (480) 917-6000

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 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 No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the 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 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 Act). Yes No
The number of shares outstanding of the registrant's capital stock as of October 26, 2018 was 18,389,455.

ROGERS CORPORATION
FORM 10-Q

September 30, 2018

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Forward-Looking Statements

This Quarterly Report on Form 10-Q contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. See “Forward-Looking Statements” in Item 2, Management’s Discussion and Analysis of Financial Condition and Results of Operations for additional information.

Part I – Financial Information

Item 1. Financial Statements

ROGERS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(Unaudited)

(Dollars and shares in thousands, except per share amounts)

	Three Months Ended		Nine Months Ended	
	September 30,	September 30,	September 30,	September 30,
	2018	2017	2018	2017
Net sales	\$226,863	\$ 206,783	\$656,149	\$ 612,035
Cost of sales	147,733	124,595	423,741	368,951
Gross margin	79,130	82,188	232,408	243,084
Selling, general and administrative expenses	39,943	39,010	123,080	113,590
Research and development expenses	7,630	7,411	24,514	21,512
Restructuring and impairment charges	1,052	962	2,015	2,767
Other operating (income) expense, net	863	(4,387)	(3,111)	(5,329)
Operating income	29,642	39,192	85,910	110,544
Equity income in unconsolidated joint ventures	1,642	1,384	4,453	3,359
Other income (expense), net	(680)	1,991	(647)	3,370
Interest expense, net	(2,000)	(1,639)	(4,503)	(4,834)
Income before income tax expense	28,604	40,928	85,213	112,439
Income tax expense	8,870	15,396	22,014	38,979
Net income	\$19,734	\$ 25,532	\$63,199	\$ 73,460
Basic earnings per share	\$1.07	\$ 1.40	\$3.44	\$ 4.05
Diluted earnings per share	\$1.06	\$ 1.37	\$3.39	\$ 3.97
Shares used in computing:				
Basic earnings per share	18,403	18,181	18,360	18,126
Diluted earnings per share	18,678	18,588	18,649	18,503

The accompanying notes are an integral part of the condensed consolidated financial statements.

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ROGERS CORPORATION
 CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
 (Unaudited)
 (Dollars in thousands)

	Three Months Ended		Nine Months Ended	
	September 30,	September 30,	September 30,	September 30,
	2018	2017	2018	2017
Net income	\$19,734	\$ 25,532	\$63,199	\$ 73,460
Foreign currency translation adjustment	(1,608)	6,407	(9,901)	23,136
Derivative instruments designated as cash flow hedges:				
Unrealized gain (loss) on derivative instruments held at period end, net of tax (Note 6)	211	(51)	1,308	(487)
Unrealized loss reclassified into earnings (Note 6)	—	115	—	222
Accumulated other comprehensive loss pension and post-retirement benefits:				
Actuarial net gain (loss) incurred in fiscal year, net of tax (Note 6)	—	(300)	—	35
Pension and postretirement benefit plans reclassified into earnings:				
Amortization of loss, net of tax (Note 6)	44	—	131	36
Other comprehensive income (loss)	(1,353)	6,171	(8,462)	22,942
Comprehensive income	\$18,381	\$ 31,703	\$54,737	\$ 96,402

The accompanying notes are an integral part of the condensed consolidated financial statements.

ROGERS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
(Unaudited)
(Dollars and shares in thousands)

	September 30, 2018	December 31, 2017
Assets		
Current assets		
Cash and cash equivalents	\$ 149,556	\$ 181,159
Accounts receivable, less allowance for doubtful accounts of \$1,143 and \$1,525	155,706	140,562
Contract assets	20,260	—
Inventories	125,885	112,557
Prepaid income taxes	2,820	3,087
Current portion of asbestos-related insurance receivables	5,682	5,682
Assets held for sale	—	896
Other current assets	12,416	10,580
Total current assets	472,325	454,523
Property, plant and equipment, net of accumulated depreciation of \$308,126 and \$289,909	241,504	179,611
Investments in unconsolidated joint ventures	17,812	18,324
Deferred income taxes	4,478	6,008
Goodwill	266,304	237,107
Other intangible assets, net of amortization	181,618	160,278
Asbestos-related insurance receivables	63,511	63,511
Other long-term assets	21,873	5,772
Total assets	\$ 1,269,425	\$ 1,125,134
Liabilities and Shareholders' Equity		
Current liabilities		
Accounts payable	\$ 39,999	\$ 36,116
Accrued employee benefits and compensation	27,598	39,394
Accrued income taxes payable	9,189	6,408
Current portion of capital lease obligations	436	579
Current portion of asbestos-related liabilities	5,682	5,682
Other accrued liabilities	24,686	25,629
Total current liabilities	107,590	113,808
Borrowings under revolving credit facility	233,482	130,982
Non-current portion of capital lease obligations	4,786	5,873
Pension liability	268	8,720
Retiree health care and life insurance benefits	1,685	1,685
Asbestos-related liabilities	69,560	70,500
Non-current income tax	10,707	12,823
Deferred income taxes	10,936	10,706
Other long-term liabilities	4,028	3,464
Commitments and contingencies (Note 14)		
Shareholders' equity		
Capital Stock - \$1 par value; 50,000 authorized shares; 18,390 and 18,255 shares issued and outstanding	18,390	18,255
Additional paid-in capital	129,659	128,933
Retained earnings	751,951	684,540
Accumulated other comprehensive loss	(73,617) (65,155)

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Total shareholders' equity	826,383	766,573
Total liabilities and shareholders' equity	\$ 1,269,425	\$ 1,125,134

The accompanying notes are an integral part of the condensed consolidated financial statements.

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ROGERS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(Unaudited)

(Dollars and shares in thousands)

	Nine Months Ended	
	September 30, 2018	September 30, 2017
Operating Activities:		
Net income	\$63,199	\$ 73,460
Adjustments to reconcile net income to cash provided by operating activities:		
Depreciation and amortization	35,320	32,679
Equity compensation expense	8,536	8,508
Deferred income taxes	(17)	10,452
Equity in undistributed income of unconsolidated joint ventures	(4,453)	(3,359)
Dividends received from unconsolidated joint ventures	4,431	616
Pension and postretirement benefits	(1,193)	(1,177)
Realized (gain) loss from sale of property, plant and equipment	(161)	(5,329)
Impairment of assets/investments	477	341
(Benefit) provision for doubtful accounts	(264)	(553)
Proceeds from insurance related to operations	—	932
Changes in operating assets and liabilities, excluding effects of acquisitions:		
Accounts receivable	(14,012)	(12,772)
Contract assets	(20,260)	—
Inventories	(11,840)	(16,573)
Pension and postretirement benefit contributions	(25,347)	(372)
Other current assets	146	(1,283)
Accounts payable and other accrued expenses	(4,354)	13,325
Other, net	3,216	956
Net cash provided by operating activities	33,424	99,851
Investing Activities:		
Acquisition of business, net of cash received	(78,571)	(60,191)
Capital expenditures	(36,557)	(17,678)
Isola asset acquisition	(43,434)	—
Proceeds from insurance claims	—	1,040
Proceeds from the sale of property, plant and equipment, net	1,027	8,130
Net cash used in investing activities	(157,535)	(68,699)
Financing Activities:		
Proceeds from long-term borrowings	102,500	—
Line of credit issuance costs	—	(1,169)
Repayment of debt principal and capital lease obligations	(1,046)	(110,285)
Repurchases of capital stock	(2,999)	—
Proceeds from the exercise of stock options, net	734	1,926
Payments of taxes related to net share settlement of equity awards	(6,492)	(5,145)
Proceeds from issuance of shares to employee stock purchase plan	1,082	895
Net cash provided by (used in) financing activities	93,779	(113,778)
Effect of exchange rate fluctuations on cash	(1,271)	5,852

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Net decrease in cash and cash equivalents	(31,603)	(76,774)
Cash and cash equivalents at beginning of period	181,159	227,767
Cash and cash equivalents at end of period	\$149,556	\$ 150,993

Supplemental Disclosures:

Cash paid during the year for:

Interest, net of amounts capitalized	\$4,662	\$ 4,539
Income taxes	\$23,357	\$ 23,989

The accompanying notes are an integral part of the condensed consolidated financial statements.

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ROGERS CORPORATION
 CONDENSED CONSOLIDATED STATEMENT OF SHAREHOLDERS' EQUITY
 (Unaudited)
 (Dollars in thousands)

	Capital Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Shareholders' Equity
Balance at December 31, 2017	\$ 18,255	\$ 128,933	\$ 684,540	\$ (65,155)	\$ 766,573
Net income	—	—	63,199	—	63,199
Other comprehensive income (loss)	—	—	—	(8,462)	(8,462)
Stock options exercised	19	715	—	—	734
Stock issued to directors	12	(12)	—	—	—
Shares issued for employee stock purchase plan	12	1,070	—	—	1,082
Shares issued for vested restricted stock units, net of cancellations for tax withholding	115	(6,607)	—	—	(6,492)
Shares repurchased	(23)	(2,976)	—	—	(2,999)
Cumulative-effect adjustment of revenue recognition ASC 606	—	—	4,212	—	4,212
Equity compensation expense	—	8,536	—	—	8,536
Balance at September 30, 2018	\$ 18,390	\$ 129,659	\$ 751,951	\$ (73,617)	\$ 826,383

The accompanying notes are an integral part of the condensed consolidated financial statements.

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ROGERS CORPORATION
 NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
 (Unaudited)

Note 1 – Basis of Presentation

As used herein, the terms “Company,” “Rogers,” “we,” “us,” “our” and similar terms mean Rogers Corporation and its subsidiaries, unless the context indicates otherwise.

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) for interim financial information. Accordingly, these statements do not include all of the information and footnotes required by GAAP for complete financial statements. In our opinion, the accompanying condensed consolidated financial statements include all normal recurring adjustments necessary for their fair presentation in accordance with GAAP. All significant intercompany transactions have been eliminated.

On January 1, 2018, the Company adopted ASU 2017-07, Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Post-Retirement Benefit Cost. Upon adoption, the Company reclassified \$0.4 million and \$1.2 million in net periodic pension benefits from Selling, general and administrative expenses (SG&A) to “Other income (expense), net” for the three and nine months ended September 30, 2017, respectively. See Note 21, “Recent Accounting Standards” for further information.

Interim results are not necessarily indicative of results for a full year. For further information regarding our accounting policies, refer to the audited consolidated financial statements and footnotes thereto included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017.

Note 2 – Fair Value Measurements

The accounting guidance for fair value measurements establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value:

Level 1 – Quoted prices in active markets for identical assets or liabilities.

Level 2 – Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

From time to time we enter into various instruments that require fair value measurement, including foreign currency contracts, copper derivative contracts and interest rate swaps. Derivative instruments measured at fair value on a recurring basis, categorized by the level of inputs used in the valuation, consist of:

	Derivative Instruments at Fair Value as of September 30, 2018			
(Dollars in thousands)	Level 1	Level 2	Level 3	Total
Foreign currency contracts	\$-\$342	\$	-\$342	
Copper derivative contracts	\$-\$631	\$	-\$631	
Interest rate swap	\$-\$1,710	\$	-\$1,710	
	Derivative Instruments at Fair Value as of December 31, 2017			
(Dollars in thousands)	Level 1	Level 2	Level 3	Total
Foreign currency contracts	\$-(396)	\$	-(396)	
Copper derivative contracts	\$-\$2,016	\$	-\$2,016	
Interest rate swap	\$-\$41	\$	-\$41	

Note 3 – Hedging Transactions and Derivative Financial Instruments

We are exposed to certain risks related to our ongoing business operations. The primary risks being managed through our use of derivative instruments are foreign currency exchange rate risk and commodity pricing risk (primarily related to copper). During 2017, we entered into an interest rate swap to hedge interest rate risk. We do not use derivative financial instruments for trading or speculative purposes. The valuation of derivative contracts used to manage each of these risks is described below:

Foreign Currency - The fair value of any foreign currency option derivative is based upon valuation models applied to current market information such as strike price, spot rate, maturity date and volatility, and by reference to market values resulting from an over-the-counter market or obtaining market data for similar instruments with similar characteristics.

Commodity - The fair value of copper derivatives is computed using a combination of intrinsic and time value valuation models. The intrinsic valuation model reflects the difference between the strike price of the underlying copper derivative instrument and the current prevailing copper prices in an over-the-counter market at period end. The time value valuation model incorporates the constant changes in the price of the underlying copper derivative instrument, the time value of money, the underlying copper derivative instrument's strike price and the remaining time to the underlying copper derivative instrument's expiration date from the period end date. Overall, fair value is a function of five primary variables: price of the underlying instrument, time to expiration, strike price, interest rate, and volatility.

Interest Rates - The fair value of interest rate swap instruments is derived by comparing the present value of the interest rate forward curve against the present value of the swap rate, relative to the notional amount of the swap. The net value represents the estimated amount we would receive or pay to terminate the agreements. Settlement amounts for an "in the money" swap would be adjusted down to compensate the counterparty for cost of funds, and the adjustment is directly related to the counterparties' credit ratings.

The guidance for the accounting and disclosure of derivatives and hedging transactions requires companies to recognize all of their derivative instruments as either assets or liabilities at fair value in the statements of financial position. The accounting for changes in the fair value (i.e., gains or losses) of a derivative instrument depends on whether it has been designated and qualifies for hedge accounting treatment as defined under the applicable accounting guidance. For derivative instruments that are designated and qualify for hedge accounting treatment as cash flow hedges (i.e., hedging the exposure to variability in expected future cash flows that is attributable to a particular risk), the effective portion of the gain or loss on the derivative instrument is reported as a component of other comprehensive income (loss). This gain or loss is reclassified into earnings in the same line item of the condensed consolidated statements of operations associated with the forecasted transaction and in the same period or periods during which the hedged transaction affects earnings. As of September 30, 2018 and 2017, only our interest rate swap qualified for hedge accounting treatment as a cash flow hedge. For the nine months ended September 30, 2018 and 2017, the hedge was highly effective.

Foreign Currency

During the three months ended September 30, 2018, we entered into Korean Won, Japanese Yen, Euro, Hungarian Forint and Chinese Renminbi forward contracts. We entered into these foreign currency forward contracts to mitigate certain global transactional exposures. These contracts do not qualify for hedge accounting treatment. As a result, any fair value adjustments required on these contracts are recorded in "Other income (expense), net" in our condensed consolidated statements of operations in the period in which the adjustment occurs.

As of September 30, 2018 the notional values of these foreign currency forward contracts were:

Notional Values of Foreign Currency Derivatives	
KRW/USD	2,650,560,000
JPY/EUR	¥465,000,000
EUR/USD	€12,413,251
EUR/HUF	€1,582,984
USD/CNY	\$10,637,837

Commodity

We currently have 23 outstanding contracts to hedge exposure related to the purchase of copper in our Power Electronics Solutions (PES) and Advanced Connectivity Solutions (ACS) operating segments. These contracts are held with financial institutions and are intended to offset rising copper prices. These contracts provide some coverage over the forecasted 2018 and 2019 monthly copper exposure and do not qualify for hedge accounting treatment. As a result, any fair value adjustments required on these contracts are recorded in "Other income (expense), net" in our condensed consolidated statements of operations in the period in which the adjustment occurs. The notional values of our copper contracts outstanding as of September 30, 2018 were:

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Volume of Copper Derivatives

October 2018 - December 2018	153 metric tons per month
January 2019 - March 2019	189 metric tons per month
April 2019 - June 2019	188 metric tons per month
July 2019 - September 2019	191 metric tons per month
October 2019 - December 2019	144 metric tons per month

Interest Rates

In 2017, we entered into an interest rate swap to hedge the variable interest rate on \$75 million of our \$450 million revolving credit facility. This transaction has been designated as a cash flow hedge and qualifies for hedge accounting treatment. See Note 12, "Debt" for further discussion regarding the revolving credit facility.

Effects on Financial Statements:

(Dollars in thousands)		Location	The Effect of		Fair Values of Derivative Instruments as of September 30, 2018
			Current Derivative Instruments on the Financial Statements for the period ended September 30, 2018	Gain (Loss)	
			Three Months Ended	Nine Months Ended	
Foreign Exchange Contracts					
Contracts not designated as hedging instruments		Other income (expense), net	\$29	\$(95)	\$ 342
Copper Derivatives					
Contracts not designated as hedging instruments		Other income (expense), net	\$(453)	\$(1,637)	\$ 631
Interest Rate Swap					
Contracts designated as hedging instruments		Other comprehensive income (loss)	\$270	\$1,669	\$ 1,710

(Dollars in thousands)		Location	The Effect of		Fair Values of Derivative Instruments as of September 30, 2017
			Current Derivative Instruments on the Financial Statements for the period ended September 30, 2017	Gain (Loss)	
Foreign Exchange Contracts					
Contracts not designated as hedging instruments		Other income (expense), net	\$29	\$(95)	\$ 342
Copper Derivatives					
Contracts not designated as hedging instruments		Other income (expense), net	\$(453)	\$(1,637)	\$ 631
Interest Rate Swap					
Contracts designated as hedging instruments		Other comprehensive income (loss)	\$270	\$1,669	\$ 1,710

		Three Months Ended	Nine Months Ended	(Other Accrued Liabilities)
Foreign Exchange Contracts	Location			
Contracts not designated as hedging instruments	Other income (expense), net	(198)	(382)	(382)
Copper Derivatives				
Contracts not designated as hedging instruments	Other income (expense), net	474	578	1,534
Interest Rate Swap				
Contracts designated as hedging instruments	Other comprehensive income (loss)	100	(415)	(638)

Note 4 – Inventories

Inventories are valued at the lower of cost or net realizable value. Inventories were as follows at the end of the periods noted below:

(Dollars in thousands)	September 30, 2018	December 31, 2017
Raw materials	\$ 57,928	\$ 43,092
Work-in-process	29,884	28,133
Finished goods	38,073	41,332
Total inventories	\$ 125,885	\$ 112,557

Note 5 – Acquisitions

Griswold LLC

On July 6, 2018, we acquired 100% of the membership interests in Griswold LLC (Griswold) for an aggregate purchase price of \$78.6 million, net of cash acquired, pursuant to the terms of the Membership Interest Purchase Agreement, dated July 6, 2018 by and among the Company and the owners of Griswold (the MIPA). We used borrowings of \$82.5 million under our revolving credit facility to fund the acquisition. There is a possible earn-out capped at \$3.0 million based on certain of Griswold's 2018 product sales. We have determined that the probability of the earn-out is extremely low, and as a result, have assigned no fair value to the contingent consideration as of the valuation date.

Griswold is a leading manufacturer of a wide range of high-performance engineered cellular elastomer and microcellular polyurethane products and solutions across the automotive, transportation, medical, office products, printing and electronics industries. The acquisition built on our existing Elastomeric Material Solutions (EMS) platform of highly engineered materials and added new products and capabilities to the portfolio of our EMS operating segment.

The acquisition has been accounted for in accordance with applicable purchase accounting guidance. We recorded goodwill primarily related to the expected synergies from combining operations and the value of Griswold's existing workforce. We also recorded other intangible assets related to acquired customer relationships, developed technology, trademarks and trade names, and a covenant not to compete. As of the filing date of this Form 10-Q, the purchase accounting and purchase price allocation for the Griswold acquisition are preliminary, as we continue to refine our valuation of certain acquired assets and assumed liabilities.

The following table represents the fair values assigned to the acquired assets and liabilities assumed in the transaction:

(Dollars in thousands)	July 6, 2018
Assets:	
Accounts receivable, less allowance for doubtful accounts	\$2,553
Inventories	2,998
Other current assets	154
Property, plant & equipment	7,554
Other intangible assets	34,120
Goodwill	32,305
Total assets	79,684
Liabilities:	
Accounts payable	711
Accrued employee benefits and compensation	299
Other accrued liabilities	103
Total liabilities	1,113
Fair value of net assets acquired	\$78,571

The other intangible assets consist of customer relationships valued at \$22.1 million, developed technology valued at \$9.6 million, trademarks and trade names valued at \$1.8 million, and a covenant not to compete valued at \$0.6 million. The fair value of acquired identified other intangible assets was determined by applying the income approach, using several significant unobservable inputs for projected cash flows and a discount rate. These inputs are considered Level 3 under the fair value measurements and disclosure guidance.

The weighted average amortization period for the other intangible asset classes are 9.5 years for customer relationships, 3.5 years for developed technology, 10.4 years for trademarks and trade names, and 3.2 years for a covenant not to compete, resulting in amortization expenses ranging from \$0.7 million to \$3.0 million annually. The estimated annual future amortization expense is \$0.6 million for the remainder of 2018, \$2.8 million for 2019, \$3.0 million for 2020, and \$2.8 million for 2021, and \$2.7 million for 2022.

During 2018, we incurred transaction costs of \$1.1 million related to the Griswold acquisition, which were recorded within "Selling, general and administrative expenses" in the condensed consolidated statements of operations. The results of Griswold have been included in our condensed consolidated financial statements only for the period subsequent to the completion of the acquisition on July 6, 2018, through September 30, 2018. Griswold's net sales for that period totaled \$6.9 million.

Diversified Silicone Products

On January 6, 2017, we acquired the principal operating assets of Diversified Silicone Products, Inc. (DSP), pursuant to the terms of the Asset Purchase Agreement by and among the Company, DSP and the principal shareholders of DSP (the Purchase Agreement). Pursuant to the terms of the Purchase Agreement, we acquired certain assets and assumed certain liabilities of DSP for a total purchase price of approximately \$60.2 million. We used borrowings of \$30.0 million under our revolving credit facility in addition to cash on hand to fund the acquisition.

DSP is a custom silicone product development and manufacturing business and its acquisition expanded the portfolio of our EMS operating segment in cellular sponge and specialty extruded silicone profile technologies, while strengthening existing expertise in precision-calendered silicone and silicone formulating and compounding. The results of DSP have been included in our condensed consolidated financial statements only for the periods subsequent to the completion of our acquisition on January 6, 2017.

Pro Forma Financial Information

The following unaudited pro forma financial information presents the combined results of operations of Rogers, Griswold, and DSP as if the Griswold acquisition had occurred on January 1, 2017 and as if the DSP acquisition had occurred on January 1, 2016. The unaudited pro forma financial information is not intended to represent or be indicative of our consolidated results of operations that would have been reported had the Griswold and DSP acquisitions been completed as of January 1, 2017 and January 1, 2016, respectively, and should not be taken as indicative of our future consolidated results of operations.

	Three Months Ended	Nine Months Ended	Three Months Ended	Nine Months Ended
(Dollars in thousands)	September 30, 2018 (unaudited)	September 30, 2018 (unaudited)	September 30, 2017 (unaudited)	September 30, 2017 (unaudited)
Net sales	\$ 226,863	\$ 670,936	\$ 219,707	\$ 650,806
Net income	20,765	63,204	26,174	74,483

Isola Asset Acquisition

On August 28, 2018, the Company entered into an Asset Purchase Agreement (APA) with Isola USA Corp. (Isola) to acquire a production facility and related machinery and equipment located in Chandler Arizona for cash consideration of \$43.4 million. In connection with the APA, the Company also entered into a Transition Services Agreement and a Lease Agreement with Isola whereby Isola leases back a portion of the facility and related machinery and equipment from the Company during the transition period through December 31, 2019. We used \$43.4 million in cash on hand to fund the asset purchase. This transaction was evaluated under Accounting Standards Codification (ASC) Topic 805 Business Combinations and was determined to be an asset acquisition as the transaction did not meet the definition of a business.

The assets acquired in connection with the acquisition were recorded by the Company at their estimated relative fair values as follows:

	August
(Dollars in thousands)	28, 2018
Land	\$6,104
Buildings	8,401
Machinery and equipment	18,616
Equipment in process	12,633
Total property, plant and equipment	\$45,754

The \$45.8 million of capitalized cost summarized above includes both lease consideration valued at \$2.0 million and transaction costs incurred of \$0.4 million.

During the third quarter of 2018, the Company recognized \$0.2 million of imputed income related to the lease as well as by \$0.9 million of depreciation on leased assets in "Other operating (income) expense, net."

Note 6 – Accumulated Other Comprehensive Loss

The changes in accumulated other comprehensive loss by component for the nine months ended September 30, 2018 and 2017 were as follows:

(Dollars and accompanying footnotes in thousands)	Foreign currency translation adjustments	Funded status of pension plans and other postretirement benefits ⁽¹⁾	Unrealized gain (loss) on derivative instruments (²)	Total
Beginning Balance December 31, 2017	\$ (17,983)	\$ (47,198)	\$ 26	\$(65,155)
Other comprehensive income (loss) before reclassifications	(9,901)	—	1,308	(8,593)
Amounts reclassified from accumulated other comprehensive loss	—	131	—	131
Net current-period other comprehensive income (loss)	(9,901)	131	1,308	(8,462)
Ending Balance September 30, 2018	\$ (27,884)	\$ (47,067)	\$ 1,334	\$(73,617)
Beginning Balance December 31, 2016	\$ (46,446)	\$ (45,816)	\$ —	\$(92,262)
Other comprehensive income (loss) before reclassifications	23,136	—	(487)	22,649
Actuarial net gain incurred in the fiscal year	—	35	—	35
Amounts reclassified from accumulated other comprehensive loss	—	36	222	258
Net current-period other comprehensive income (loss)	23,136	71	(265)	22,942
Ending Balance September 30, 2017	\$ (23,310)	\$ (45,745)	\$ (265)	\$(69,320)

(1) Net of taxes of \$9,523 and \$9,563 as of September 30, 2018 and December 31, 2017, respectively. Net of taxes of \$9,122 and \$9,160 as of September 30, 2017 and December 31, 2016, respectively.

(2) Net of taxes of \$375 and \$15 as of September 30, 2018 and December 31, 2017, respectively. Net of taxes of \$151 and \$0 as of September 30, 2017 and December 31, 2016, respectively.

Note 7 – Earnings Per Share

The following table sets forth the computation of basic and diluted earnings per share for the periods indicated:

(Dollars and shares in thousands, except per share amounts)	Three Months Ended		Nine Months Ended	
	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017
Numerator:				
Net income	\$19,734	\$ 25,532	\$63,199	\$ 73,460
Denominator:				
Weighted-average shares outstanding - basic	18,403	18,181	18,360	18,126
Effect of dilutive shares	275	407	289	377
Weighted-average shares outstanding - diluted	18,678	18,588	18,649	18,503
Basic earnings per share	\$1.07	\$ 1.40	\$3.44	\$ 4.05
Diluted earnings per share	\$1.06	\$ 1.37	\$3.39	\$ 3.97

Certain potential options to purchase shares may be excluded from the calculation of diluted weighted-average shares outstanding where their exercise price is greater than the average market price of our capital stock during the relevant reporting period. For the three months ended September 30, 2018, 37,700 shares were excluded. For the three months ended September 30, 2017, no shares were excluded.

Note 8 – Equity Compensation

Performance-Based Restricted Stock Units

As of September 30, 2018, we had performance-based restricted stock units from 2016, 2017 and 2018 outstanding. These awards generally cliff vest at the end of a three year measurement period. However, employees whose employment terminates during the measurement period due to death, disability, or, in certain cases, retirement may receive a pro-rata payout based on the number of days they were employed during the measurement period. Participants are eligible to be awarded shares ranging from 0% to 200% of the original award amount, based on certain defined performance measures.

The 2016, 2017 and 2018 awards have one measurement criteria: the three year total shareholder return (TSR) on the performance of our capital stock as compared to that of a specified group of peer companies. The TSR measurement criteria of the awards is considered a market condition. As such, the fair value of this measurement criteria was determined on the grant date using a Monte Carlo simulation valuation model. We recognize compensation expense on all of these awards on a straight-line basis over the vesting period with no changes for final projected payout of the awards. We account for forfeitures as they occur.

Below were the assumptions used in the Monte Carlo calculation:

	September 17, 2018	February 8, 2018	February 2, 2017
Expected volatility	36.6%	34.8%	33.6%
Expected term (in years)	3.0	3.0	3.0
Risk-free interest rate	2.85%	2.28%	1.38%

Expected volatility – In determining expected volatility, we have considered a number of factors, including historical volatility.

Expected term – We use the measurement period of the award to determine the expected term assumption for the Monte Carlo simulation valuation model.

Risk-free interest rate – We use an implied “spot rate” yield on U.S. Treasury Constant Maturity rates as of the grant date for our assumption of the risk-free interest rate.

Expected dividend yield – We do not currently pay dividends on our capital stock; therefore, a dividend yield of 0% was used in the Monte Carlo simulation valuation model.

The following table summarizes the change in number of performance-based restricted stock units outstanding for the nine months ended September 30, 2018:

	Performance-Based Restricted Stock Units
Awards outstanding at December 31, 2017	169,202
Awards granted	75,760
Stock issued	(81,230)
Awards forfeited	(18,599)
Awards outstanding at September 30, 2018	145,133

During the three and nine months ended September 30, 2018, we recognized compensation expense for performance-based restricted stock units of approximately \$1.3 million and \$3.1 million, respectively. During the three and nine months ended September 30, 2017, we recognized compensation expense for performance-based restricted stock units of approximately \$1.4 million and \$2.9 million, respectively.

Time-Based Restricted Stock Units

As of September 30, 2018, we had time-based restricted stock unit awards from 2014, 2015, 2016, 2017 and 2018 outstanding. The 2015, 2016, 2017 and 2018 grants all ratably vest on the first, second and third anniversaries of the original grant date. The remaining outstanding 2014 grants cliff vest on December 17, 2018, the fourth anniversary of the original grant date. Each restricted stock unit represents a right to receive one share of the Rogers' capital stock at the end of the vesting period. The fair value of the award is determined by the market value of the underlying stock price at the grant date. We recognize compensation expense on all of these awards on a straight-line basis over the vesting period. We account for forfeitures as they occur.

The following table summarizes the change in number of time-based restricted stock units outstanding for the nine months ended September 30, 2018:

	Time-Based Restricted Stock Units
Awards outstanding at December 31, 2017	173,331
Awards granted	44,610
Stock issued	(79,375)
Awards forfeited	(16,302)
Awards outstanding at September 30, 2018	122,264

During the three and nine months ended September 30, 2018, we recognized compensation expense for time-based restricted stock units of approximately \$1.4 million and \$4.2 million, respectively. During the three and nine months ended September 30, 2017, we recognized compensation expense for time-based restricted stock units of approximately \$1.6 million and \$4.2 million, respectively.

Deferred Stock Units

We grant deferred stock units to non-management directors. These awards are fully vested on the date of grant and the related shares are generally issued on the 13-month anniversary of the grant date unless the individual elects to defer the receipt of those shares. Each deferred stock unit results in the issuance of one share of Rogers' capital stock. The grant of deferred stock units is typically done annually during the second quarter of each year. The fair value of the award is determined by the market value of the underlying stock price at the grant date.

The following table summarizes the change in number of deferred stock units outstanding during the nine months ended September 30, 2018:

	Deferred Stock Units
Awards outstanding at December 31, 2017	9,250
Awards granted	8,400

Stock issued (9,250)
Awards outstanding at September 30, 2018 8,400

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During the three months ended September 30, 2018, we recognized no compensation expense associated with the deferred stock units. During the nine months ended September 30, 2018, we recognized \$0.9 million of compensation expense associated with the deferred stock units. During the three and nine months ended September 30, 2017, we recognized compensation expense associated with the deferred stock units of \$0.1 million and \$1.0 million, respectively.

Stock Options

Stock options have been granted under various equity compensation plans, and they generally became exercisable in one-third increments on the second, third and fourth anniversaries of the grant dates. The maximum contractual term for all options was normally ten years. We used the Black-Scholes option-pricing model to calculate the grant-date fair value of an option. We have not granted any stock options since the first quarter of 2012.

The following table summarizes the change in number of stock options outstanding for the nine months ended September 30, 2018:

	Options Outstanding	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Life in Years	Aggregate Intrinsic Value
Outstanding at December 31, 2017	33,283	\$ 36.40	2.2	\$4,177,655
Options exercised	(19,183)	\$ 38.26		
Options forfeited	—	\$ —		
Options outstanding, vested and exercisable at September 30, 2018	14,100	\$ 33.88	2.5	\$1,599,534

During the nine months ended September 30, 2018, the total intrinsic value of options exercised (i.e., the difference between the market price at time of exercise and the price paid by the individual to exercise the options) was \$2.2 million, and the total amount of cash received from the exercise of these options was \$0.7 million.

Employee Stock Purchase Plan

We have an employee stock purchase plan (ESPP) that allows eligible employees to purchase, through payroll deductions, shares of our capital stock at a discount to fair market value. The ESPP has two six month offering periods each year, the first beginning in January and ending in June and the second beginning in July and ending in December. The ESPP contains a look-back feature that allows the employee to acquire shares of our capital stock at a 15% discount from the underlying market price at the beginning or end of the applicable period, whichever is lower. We recognize compensation expense on this plan ratably over the offering period based on the fair value of the anticipated number of shares that will be issued at the end of each offering period. Compensation expense is adjusted at the end of each offering period for the actual number of shares issued. Fair value is determined based on two factors: (i) the 15% discount on the underlying stock's market value on the first day of the applicable offering period and (ii) the fair value of the look-back feature determined by using the Black-Scholes option-pricing model. We recognized approximately \$0.1 million of compensation expense associated with the plan in each of the three-month periods ended September 30, 2018 and 2017 and approximately \$0.3 million of compensation expense associated with each of the nine-month periods ended September 30, 2018 and 2017.

Note 9 – Pension Benefits and Other Postretirement Benefit Plans

We have two qualified noncontributory defined benefit pension plans: 1) the Rogers Corporation Employee's Pension Plan for unionized hourly employees (the Union Plan); and 2) the Rogers Corporation Defined Benefit Pension Plan for (i) all other U.S. employees hired before December 31, 2007 who are salaried employees or non-union hourly employees and (ii) employees of the acquired Arlon business (the Rogers Plan).

The Company also maintains the Rogers Corporation Amended and Restated Pension Restoration Plan effective as of January 1, 2004 and the Rogers Corporation Amended and Restated Pension Restoration Plan effective as of January 1, 2005 (collectively, the Nonqualified Plans). The Nonqualified Plans serve to restore certain retirement benefits that might otherwise be lost due to limitations imposed by federal law on qualified pension plans, as well as to provide supplemental retirement benefits, for certain senior executives of the Company.

In addition, we sponsor multiple fully insured or self-funded medical plans and life insurance plans for certain retirees. The measurement date for all plans is December 31 for each respective plan year.

Pension Plan Proposed Termination

The Company currently intends to terminate the Rogers Plan and has requested a determination letter from the Internal Revenue Service (IRS). The termination of the Rogers Plan remains subject to final approval by both management and the IRS. The Company plans to provide for lump sum distributions or annuity payments in connection with the termination of the Rogers Plan and we expect the settlement process to be completed in the first half of 2019. The Company lacks sufficient information as of September 30, 2018 to determine the financial impact of the proposed plan termination. At this time, there are no plans to terminate the Union Plan.

Components of Net Periodic (Benefit) Cost

The components of net periodic (benefit) cost for the periods indicated were:

(Dollars in thousands)	Pension Benefits				Retirement Health and Life Insurance Benefits			
	Three Months Ended		Nine Months Ended		Three Months Ended		Nine Months Ended	
	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017
Change in benefit obligation:	2018	2017	2018	2017	2018	2017	2018	2017
Service cost	\$—	\$—	\$—	\$—	\$17	\$12	\$55	\$68
Interest cost	1,692	1,837	5,064	5,519	16	20	47	51
Expected return of plan assets	(2,164)	(2,302)	(6,497)	(6,920)	—	—	—	—
Amortization of prior service credit	—	—	—	—	(400)	(411)	(1,201)	(1,191)
Amortization of net loss (gain)	457	445	1,370	1,311	—	16	—	(15)
Net periodic (benefit) cost	\$(15)	\$(20)	\$(63)	\$(90)	\$(367)	\$(363)	\$(1,099)	\$(1,087)

Employer Contributions

There were no required contributions to our qualified defined benefit pension plans for the three and nine months ended September 30, 2018, and we are not required to make additional contributions to these plans for the remainder of 2018. We made a voluntary contribution of \$25.0 million to the Rogers Plan during the third quarter of 2018 as part of the proposed plan termination process. No additional voluntary contributions were made to our qualified defined benefit pension plans for the nine months ended September 30, 2018. We paid \$0.2 million and \$0.4 million in required contributions to our qualified defined benefit pension plans for the three and nine months ended September 30, 2017. No voluntary contributions were made to our qualified defined benefit pension plans for the three and nine months ended September 30, 2017.

As there is no funding requirement for the non-qualified unfunded noncontributory defined benefit pension plan or the retiree health and life insurance benefit plans, benefit payments made during the year are funded directly by the Company.

Note 10 – Segment Information

Our reporting structure is comprised of the following operating segments: ACS, EMS and PES. Our non-core businesses are reported in the Other operating segment. We believe this structure aligns our external reporting presentation with how we currently manage and view our business internally.

On January 1, 2018, we adopted ASU 2014-09, Revenue from Contracts with Customers. See Note 19, “Revenue from Contracts with Customers” for further information about this adoption. The Company sells products to fabricators and distributors who then sell directly into various end markets. End markets within the ACS operating segment include wireless infrastructure, aerospace and defense, auto safety and connectivity, and consumer electronics. End markets within the EMS operating segment include general industrial, portable electronics, mass transit, and automotive. End markets within the PES operating segment include industrial, e-mobility, renewable energy, mass transit, and micro channel coolers. End markets in the Other operating segment include automotive and industrial. The following table presents a disaggregation of revenue from contracts with customers for the periods indicated; inter-segment sales have been eliminated from the net sales data:

(Dollars in thousands)	Advanced Connectivity Solutions	Elastomeric Material Solutions	Power Electronics Solutions	Other	Total
Three Months Ended September 30, 2018					
Net sales - recognized over time	\$ —	\$ 1,790	\$ 54,797	\$ 3,067	\$ 59,654
Net sales - recognized at a point in time	71,854	93,998	425	932	167,209
Total net sales	\$ 71,854	\$ 95,788	\$ 55,222	\$ 3,999	\$ 226,863
Operating income	\$ 8,451	\$ 15,924	\$ 4,067	\$ 1,200	\$ 29,642
Three Months Ended September 30, 2017 ⁽¹⁾					
Net sales - recognized over time	\$ —	\$ 562	\$ 45,752	\$ 4,823	\$ 51,137
Net sales - recognized at a point in time	72,713	81,677	657	599	155,646
Total net sales	\$ 72,713	\$ 82,239	\$ 46,409	\$ 5,422	\$ 206,783
Operating income	\$ 14,278	\$ 17,727	\$ 5,340	\$ 1,847	\$ 39,192
Nine Months Ended September 30, 2018					
Net sales - recognized over time	\$ —	\$ 3,731	\$ 165,248	\$ 12,332	\$ 181,311
Net sales - recognized at a point in time	221,685	249,356	1,334	2,463	474,838
Total net sales	\$ 221,685	\$ 253,087	\$ 166,582	\$ 14,795	\$ 656,149
Operating income	\$ 26,946	\$ 38,505	\$ 15,328	\$ 5,131	\$ 85,910
Nine Months Ended September 30, 2017 ⁽¹⁾					
Net sales - recognized over time	\$ —	\$ 1,644	\$ 131,433	\$ 14,661	\$ 147,738
Net sales - recognized at a point in time	225,595	235,029	1,533	2,140	464,297
Total net sales	\$ 225,595	\$ 236,673	\$ 132,966	\$ 16,801	\$ 612,035
Operating income	\$ 46,773	\$ 44,451	\$ 13,744	\$ 5,576	\$ 110,544

⁽¹⁾ For comparison purposes, this table reflects the disaggregation of 2017 revenue in accordance with Accounting Standards Codification 606, Revenue from Contracts with Customers (ASC 606).

Information relating to our segment operations by geographic area for the three months ended September 30, 2018 and 2017 was as follows:

(Dollars in thousands) Net Sales ⁽¹⁾

Region/Country	Advanced Materials				Other	Total
	Connectivity Solutions	Material Solutions	Elastomeric Solutions	Power Electronics		
September 30, 2018						
United States	12,889	37,691	10,738	1,029		62,347
Other Americas	674	8,196	145	138		9,153
Total Americas	13,563	45,887	10,883	1,167		71,500
China	34,798	30,849	10,432	811		76,890
Other APAC	14,962	11,807	6,348	666		33,783
Total APAC	49,760	42,656	16,780	1,477		110,673
Germany	3,515	2,019	15,464	159		21,157
Other EMEA	5,016	5,226	12,095	1,196		23,533
Total EMEA	8,531	7,245	27,559	1,355		44,690
Total net sales	71,854	95,788	55,222	3,999		226,863
September 30, 2017						
United States	11,401	34,163	6,739	1,355		53,658
Other Americas	581	2,496	286	156		3,519
Total Americas	11,982	36,659	7,025	1,511		57,177
China	34,561	28,881	8,083	1,241		72,766
Other APAC	15,138	8,923	5,569	756		30,386
Total APAC	49,699	37,804	13,652	1,997		103,152
Germany	6,062	2,122	14,009	185		22,378
Other EMEA	4,970	5,654	11,723	1,729		24,076
Total EMEA	11,032	7,776	25,732	1,914		46,454
Total net sales	72,713	82,239	46,409	5,422		206,783

⁽¹⁾ Net sales are allocated to countries based on the location of the customer. The table above includes countries with 10% or more of net sales for the periods indicated.

Information relating to our segment operations by geographic area for the nine months ended September 30, 2018 and 2017 was as follows:

Region/Country	Net Sales ⁽¹⁾				Total
	Advanced Connectivity Solutions	Elastomeric Material Solutions	Power Electronics Solutions	Other	
September 30, 2018					
United States	39,615	111,160	27,595	3,151	181,521
Other Americas	2,257	12,176	826	694	15,953
Total Americas	41,872	123,336	28,421	3,845	197,474
China	100,337	75,714	28,794	3,539	208,384
Other APAC	48,888	29,291	19,891	2,108	100,178
Total APAC	149,225	105,005	48,685	5,647	308,562
Germany	14,588	7,356	46,697	491	69,132
Other EMEA	16,000	17,390	42,779	4,812	80,981
Total EMEA	30,588	24,746	89,476	5,303	150,113
Total net sales	221,685	253,087	166,582	14,795	656,149
September 30, 2017					
United States	35,996	108,163	22,447	3,918	170,524
Other Americas	2,306	7,957	847	533	11,643
Total Americas	38,302	116,120	23,294	4,451	182,167
China	105,939	68,349	22,334	3,655	200,277
Other APAC	48,049	27,558	15,844	2,673	94,124
Total APAC	153,988	95,907	38,178	6,328	294,401
Germany	18,924	6,770	39,324	526	65,544
Other EMEA	14,381	17,876	32,170	5,496	69,923
Total EMEA	33,305	24,646	71,494	6,022	135,467
Total net sales	225,595	236,673	132,966	16,801	612,035

(1) Net sales are allocated to countries based on the location of the customer. The table above includes countries with 10% or more of net sales for the periods indicated.

Note 11 – Joint Ventures

As of September 30, 2018, we had two joint ventures, each 50% owned, which were accounted for under the equity method of accounting.

Joint Venture	Location	Operating Segment	Fiscal Year-End
Rogers INOAC Corporation (RIC)	Japan	Elastomeric Material Solutions	October 31
Rogers INOAC Suzhou Corporation (RIS)	China	Elastomeric Material Solutions	December 31

We recognized equity income related to the joint ventures of \$1.6 million and \$4.5 million for the three and nine months ended September 30, 2018, respectively. We recognized equity income related to the joint ventures of \$1.4 million and \$3.4 million for the three and nine months ended September 30, 2017, respectively. These amounts are included in the condensed consolidated statements of operations.

The summarized financial information for the joint ventures for the periods indicated was as follows:

(Dollars in thousands)	Three Months Ended		Nine Months Ended	
	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017
Net sales	\$15,216	\$ 14,020	\$43,466	\$ 38,653
Gross profit	\$6,119	\$ 5,463	\$16,897	\$ 14,832
Net income	\$3,284	\$ 2,768	\$8,906	\$ 6,718

Receivables from and payables to joint ventures arise during the normal course of business from transactions between us and the joint ventures. As of September 30, 2018 and December 31, 2017, we had receivables of \$1.5 million and \$3.7 million, respectively, due from RIC, RIS, our affiliated partner in the joint ventures, as well as its subsidiaries. As of September 30, 2018 and December 31, 2017, we owed payables of \$1.8 million and \$2.1 million, respectively, to RIC and RIS.

Note 12 – Debt

On February 17, 2017, we entered into a secured five year credit agreement with JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto (the Third Amended Credit Agreement), which increased the principal amount of our revolving credit facility to up to \$450.0 million borrowing capacity, with sublimits for multicurrency borrowings, letters of credit and swing-line notes, and provided an additional \$175.0 million accordion feature. Borrowings may be used to finance working capital needs, for letters of credit and for general corporate purposes in the ordinary course of business, including the financing of permitted acquisitions (as defined in the Third Amended Credit Agreement).

In third quarter of 2018, we borrowed \$82.5 million under the revolving credit facility to fund the acquisition of Griswold and an additional \$20.0 million to fund the Rogers Plan as part of the proposed plan termination process. Borrowings under the Third Amended Credit Agreement can be made as alternate base rate loans or euro-currency loans. Alternate base rate loans bear interest that includes a base reference rate plus a spread of 37.5 to 75.0 basis points, depending on our leverage ratio. The base reference rate is the greater of the prime rate; federal funds effective rate (or the overnight bank funding rate, if greater) plus 50 basis points; or adjusted 1-month LIBOR plus 100 basis points. Euro-currency loans bear interest based on adjusted LIBOR plus a spread of 137.5 to 175.0 basis points, depending on our leverage ratio.

In addition to interest payable on the principal amount of indebtedness outstanding from time to time under the Third Amended Credit Agreement, we are required to pay a quarterly fee of 20 to 30 basis points (based upon our leverage ratio) of the unused amount of the lenders' commitments under the Third Amended Credit Agreement.

The Third Amended Credit Agreement contains customary representations, warranties, covenants, mandatory prepayments and events of default under which our payment obligations may be accelerated. If an event of default occurs, the lenders may, among other things, terminate their commitments and declare all outstanding borrowings to be immediately due and payable together with accrued interest and fees. The financial covenants include requirements to maintain (1) a leverage ratio of no more than 3.25 to 1.00, subject to an election to increase the maximum leverage ratio to 3.50 to 1.00 for one fiscal year in connection with a permitted acquisition, and (2) an interest coverage ratio of no less than 3.00 to 1.00.

All obligations under the Third Amended Credit Agreement are guaranteed by each of our existing and future material domestic subsidiaries, as defined in the Third Amended Credit Agreement (the Guarantors). The obligations are also secured by a Third Amended and Restated Pledge and Security Agreement, dated as of February 17, 2017, entered into by us and the Guarantors which grants to the administrative agent, for the benefit of the lenders, a security interest, subject to certain exceptions, in substantially all of the non-real estate assets of the Guarantors. These assets include, but are not limited to, receivables, equipment, intellectual property, inventory, and stock in certain subsidiaries.

All revolving loans are due on the maturity date, February 17, 2022. We are not required to make any quarterly principal payments under the Third Amended Credit Agreement, and as of September 30, 2018 we have \$233.5 million in outstanding borrowings under our revolving credit facility.

At September 30, 2018, we have \$1.8 million of outstanding line of credit issuance costs that will be amortized over the life of the Third Amended Credit Agreement, which will terminate in February 2022. We recorded amortization expense of \$0.1 million for each of the three-month periods ended September 30, 2018 and 2017, and \$0.4 million for each of the nine-month periods ended September 30, 2018 and 2017, respectively, related to these deferred costs.

In March 2017, we entered into an interest rate swap to hedge the variable interest rate on \$75.0 million of our \$450.0 million revolving credit facility. See further discussion in Note 3, "Hedging Transactions and Derivative Financial Instruments."

Restriction on Payment of Dividends

Our Third Amended Credit Agreement generally permits us to pay cash dividends to our shareholders, provided that (i) no default or event of default has occurred and is continuing or would result from the dividend payment and (ii) our leverage ratio does not exceed 2.75 to 1.00. If our leverage ratio exceeds 2.75 to 1.00, we may nonetheless make up to \$20.0 million in restricted payments, including cash dividends, during the fiscal year, provided that no default or event of default has occurred and is continuing or would result from the payments. Our leverage ratio did not exceed 2.75 to 1.00 as of September 30, 2018.

Capital Leases

We have a capital lease obligation related to our manufacturing facility in Eschenbach, Germany. Under the terms of the leasing agreement, we have an option to purchase the property upon the expiration of the lease in 2021 at a price which is the greater of (i) the then-current market value or (ii) the residual book value of the land including the buildings and installations thereon. The total obligation recorded for the lease as of September 30, 2018 is \$5.2 million. Depreciation expense related to this capital lease was \$0.1 million for each of the three-month periods ended September 30, 2018 and 2017, and was \$0.2 million for each of the nine-month periods ended September 30, 2018 and 2017. These expenses are included as depreciation expense in cost of sales on our condensed consolidated statements of operations. Accumulated depreciation at September 30, 2018 and December 31, 2017 was \$3.2 million and \$3.3 million, respectively.

We also incurred interest expense on this capital lease of \$0.1 million for each of the three-month periods ended September 30, 2018 and 2017 and \$0.1 million for each of the nine-month periods ended September 30, 2018 and 2017. Interest expense related to the debt recorded on the capital lease is included in interest expense on the condensed consolidated statements of operations.

Note 13 – Goodwill and Other Intangible Assets

On July 6, 2018, we acquired Griswold. For further detail on the goodwill and other intangible assets recorded in connection with the acquisition, see Note 5 - Acquisitions.

Goodwill

The changes in the carrying amount of goodwill for the period ending September 30, 2018, by operating segment, were as follows:

(Dollars in thousands)	Advanced	Elastomeric Power		Other	Total
	Connectivity Solutions	Material Solutions	Electronics Solutions		
December 31, 2017	\$ 51,693	\$ 111,575	\$ 71,615	\$ 2,224	\$ 237,107
Acquisition	—	32,305	—	—	32,305
Foreign currency translation adjustment	—	(631)	(2,477)	—	(3,108)
September 30, 2018	\$ 51,693	\$ 143,249	\$ 69,138	\$ 2,224	\$ 266,304

Other Intangible Assets

(Dollars in thousands)	September 30, 2018			December 31, 2017		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Customer relationships	\$ 149,933	\$ 27,985	\$ 121,948	\$ 128,907	\$ 22,514	\$ 106,393
Technology	81,840	36,974	44,866	73,891	33,491	40,400
Trademarks and trade names	12,024	2,934	9,090	10,213	2,157	8,056
Covenants not to compete	1,340	200	1,140	1,799	1,108	691
Total definite-lived other intangible assets	245,137	68,093	177,044	214,810	59,270	155,540
Indefinite-lived other intangible asset	4,574	—	4,574	4,738	—	4,738
Total other intangible assets	\$ 249,711	\$ 68,093	\$ 181,618	\$ 219,548	\$ 59,270	\$ 160,278

Gross and net carrying amounts and accumulated amortization may differ from prior periods due to foreign exchange rate fluctuations.

Amortization expense for the three and nine months ended September 30, 2018 was approximately \$4.4 million and \$12.1 million, respectively. Amortization expense for the three and nine months ended September 30, 2017 was approximately \$3.8 million and \$11.0 million, respectively. The estimated future amortization expense is \$4.4 million for the remainder of 2018 and \$17.8 million, \$14.7 million, \$13.9 million and \$13.3 million for 2019, 2020, 2021 and 2022, respectively.

The indefinite-lived other intangible asset was acquired as part of the acquisition of Curamik Electronics GmbH. This asset is assessed for impairment annually, and between annual assessments if an event occurs or circumstances change that indicate the carrying value may not be recoverable.

The definite-lived other intangible assets are amortized using a fair value methodology that is based on the projected economic use of the related underlying asset. The weighted average remaining amortization period as of September 30, 2018, by definite-lived other intangible asset class, is presented in the table below:

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Definite-Lived Other Intangible Asset Class	Weighted Average Remaining Amortization Period
Customer relationships	7.7
Technology	4.4
Trademarks and trade names	5.1
Covenants not to compete	2.3
Total definite-lived other intangible assets	6.7

Note 14 – Commitments and Contingencies

Descriptions of the principal environmental and legal proceedings in which we are engaged are set forth below:

Voluntary Corrective Action Program

Our location in Rogers, Connecticut is part of the Connecticut Voluntary Corrective Action Program (VCAP). As part of this program, we partnered with the Connecticut Department of Energy and Environmental Protection (CT DEEP) to determine the corrective actions to be taken at the site related to contamination issues. We evaluated this matter and completed internal due diligence work related to the site in the fourth quarter of 2015. Remediation activities on the site are ongoing and are recorded as reductions to the accrual as they are incurred. We have incurred aggregate remediation costs of \$0.7 million through September 30, 2018, and the accrual for future remediation efforts is \$1.7 million.

PCB Contamination

We have been working with CT DEEP and the United States Environmental Protection Agency, Region I, in connection with certain polychlorinated biphenyl (PCB) contamination at our facility in Woodstock, Connecticut. The issue was originally discovered in the soil at the facility in the late 1990s, which has been remediated. Further contamination was later found in the groundwater beneath the property, which was addressed with the installation of a pump and treat system in 2011. The future costs related to the maintenance of the groundwater pump and treat system now in place at the site are expected to be minimal. We believe that the remaining remediation activity will continue for several more years and no time frame for completion can be estimated at the present time.

PCB contamination at this facility was also found in the buildings and courtyards original to the site, in addition to surrounding areas, including an on-site pond. We have completed remediation activities for the buildings and courtyards. We currently have a reserve of \$0.2 million for the pond remediation recorded in our condensed consolidated statements of financial position. We believe this reserve will be adequate to cover the remaining remediation work related to the pond contamination based on the information known at this time. However, if additional contamination is found, the cost of the remaining remediation may increase.

Asbestos Litigation

We, like many other industrial companies, have been named as a defendant in a number of lawsuits filed in courts across the country by persons alleging personal injury from exposure to products containing asbestos. We have never mined, milled, manufactured or marketed asbestos; rather, we made and provided to industrial users a limited number of products that contained encapsulated asbestos, but we stopped manufacturing these products in the late 1980s. Most of the claims filed against us involve numerous defendants, sometimes as many as several hundred.

The following table summarizes the change in number of asbestos claims outstanding during the nine months ended September 30, 2018:

	Asbestos Claims
Claims outstanding at December 31, 2017	687
New claims filed	194
Pending claims concluded	(163)
Claims outstanding at September 30, 2018	718

For the nine months ended September 30, 2018, 143 claims were dismissed and 20 claims were settled. Settlements totaled approximately \$5.9 million for the nine months ended September 30, 2018.

We recognize a liability for asbestos-related contingencies that are probable of occurrence and reasonably estimable. In connection with the recognition of liabilities for asbestos related matters, we record asbestos-related insurance receivables that are deemed probable. Our estimates of asbestos-related contingent liabilities and related insurance receivables are based on an independent actuarial analysis and an independent insurance usage analysis prepared annually by third parties. The actuarial analysis contains numerous assumptions, including general assumptions regarding the asbestos-related product liability litigation environment and company-specific assumptions regarding claims rates (including diseases alleged), dismissal rates, average settlement costs and average defense costs. The insurance usage analysis considers, among other things, applicable deductibles, retentions and policy limits, the solvency and historical payment experience of various insurance carriers, the likelihood of recovery as estimated by external legal counsel and existing insurance settlements.

We review our asbestos-related forecasts annually in the fourth quarter of each year unless facts and circumstances materially change during the year, at which time we would analyze these forecasts. During 2017, we reviewed the projections of our current and future asbestos claims, and determined it was appropriate to extend the liability projection period to cover all current and future claims through 2058. We based our conclusion on our history and experience with the claims data, the diminished volatility and consistency of observable claims data, the period of time that has elapsed since we stopped manufacturing products that contained encapsulated asbestos and an expectation of a downward trend in claims due to the average age of our claimants, which is approaching the average life expectancy. As a result, we believe we are now able to make a reasonable estimate of the actuarially determined liability for current and future asbestos claims through 2058, the expected end of our asbestos liability exposure. As of December 31, 2017, the balances of the asbestos-related claims and insurance receivables, which are projected to cover all current and future claims through 2058, were \$76.2 million and \$69.2 million, respectively. To date, the defense and settlement costs of our asbestos-related product liability litigation have been substantially covered by insurance. We have identified continuous coverage for primary, excess and umbrella insurance from the 1950s through the mid-1980s, except for a period in the early 1960s, with respect to which we have entered into an agreement for primary, but not excess or umbrella, coverage. In addition, we have entered into a cost sharing agreement with most of our primary, excess and umbrella insurance carriers to facilitate the ongoing administration and payment of claims by the carriers. The cost sharing agreement may be terminated by any party, but will continue until a party elects to terminate it. As of the filing date for this report, the agreement has not been terminated, and no carrier had informed us it intended to terminate the agreement. During the first quarter of 2018, we received notice that primary coverage for a period of eight years and excess coverage for a period of two years had been exhausted, and as a result, we incurred indemnity and defense costs of \$0.5 million and \$1.0 million for the three and nine months ended September 30, 2018, respectively. These costs reduced our existing asbestos-related liabilities to \$75.2 million as of September 30, 2018. We expect to exhaust individual primary, excess and umbrella coverages over time, and there is no assurance that such exhaustion will not accelerate due to additional claims, damages and settlements or that coverage will be available as expected.

The amounts recorded for the asbestos-related liabilities and the related insurance receivables described above were based on facts known at the time and a number of assumptions. However, projecting future events, such as the number of new claims to be filed each year, the average cost of disposing of such claims, the length of time it takes to dispose of such claims, coverage issues among insurers and the continuing solvency of various insurance companies, as well as the numerous uncertainties surrounding asbestos litigation in the United States could cause the actual liability and insurance recoveries for us to be higher or lower than those projected or recorded.

There can be no assurance that our accrued asbestos liabilities will approximate our actual asbestos-related settlement and defense costs, or that our accrued insurance recoveries will be realized. We believe that it is reasonably possible that we may incur additional charges for our asbestos liabilities and defense costs in the future, which could exceed existing reserves and insurance recovery, but we are unable to estimate the amount of such additional liabilities and costs. We will continue to vigorously defend ourselves and believe we have substantial unutilized insurance coverage to mitigate future costs related to this matter.

General Litigation

In addition to the above issues, the nature and scope of our business brings us in regular contact with the general public and a variety of businesses and government agencies. Such activities inherently subject us to the possibility of litigation, including environmental and product liability matters that are defended and handled in the ordinary course of business. We have established accruals for matters for which management considers a loss to be probable and reasonably estimable. It is the opinion of management that facts known at the present time do not indicate that such litigation, after taking into account insurance coverage and the aforementioned accruals, will have a material adverse impact on our results of operations, financial position or cash flows.

Note 15 – Share Repurchases

On August 6, 2015, we initiated a share repurchase program (the Program) of up to \$100.0 million of the Company's capital stock. We initiated the Program to mitigate dilutive effects of stock option exercises and vesting of restricted stock units granted by the Company, in addition to enhancing shareholder value. The Program has no expiration date, and may be suspended or discontinued at any time without notice. As of September 30, 2018, \$49.0 million remained available for repurchase under the Program.

We repurchased the following shares of capital stock during the three and nine months ended September 30, 2018:

	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2018
(Dollars in thousands)		
Shares of capital stock repurchased	—	23,138
Value of capital stock repurchased	\$	—\$ 2,999

All repurchases were made using cash from operations.

Note 16 – Income Taxes

Our effective income tax rate was 31.0% and 37.6% for the three months ended September 30, 2018 and 2017, respectively. Our effective income tax rate was 25.8% and 34.6% for the nine months ended September 30, 2018 and 2017, respectively. The decrease, compared to the same periods in 2017, was primarily due to a lower U.S. effective tax rate, as a result of U.S. tax reform, a change in valuation allowance established against deferred tax assets related to capital losses recorded in 2017, a release of reserves for uncertain tax positions and changes in pretax mix across jurisdictions with disparate tax rates, partially offset by an increase in current year accruals for uncertain tax positions and a decrease in excess tax deductions on equity compensation.

The total amount of unrecognized tax benefits as of September 30, 2018 was \$11.9 million, of which \$10.4 million would affect our effective tax rate if recognized. It is reasonably possible that approximately \$3.6 million of our unrecognized tax benefits as of September 30, 2018 will reverse within the next twelve months.

We recognize interest and penalties related to unrecognized tax benefits through income tax expense. As of September 30, 2018, we had \$0.8 million accrued for the payment of interest.

We are subject to taxation in the U.S. and various state and foreign jurisdictions. With few exceptions, we are no longer subject to examinations by tax authorities for years prior to 2013.

Note 17 – Restructuring and Impairment Charges

Global Headquarters Relocation

In the second quarter of 2017, we completed the physical relocation of our global headquarters from Rogers, Connecticut to Chandler, Arizona. We recorded an immaterial amount of expense in the three months ended September 30, 2018 and \$0.6 million of expense in the three months ended September 30, 2017, related to this project. Additionally, we recorded \$0.5 million and \$2.4 million in the nine months ended September 30, 2018 and 2017, respectively, related to this project. Severance activity related to the headquarters relocation is presented in the table below for the nine months ended September 30, 2018:

	Severance Related to Headquarters Relocation
(Dollars in thousands)	
Balance at December 31, 2017	\$ 183
Provisions	118
Payments	(264)
Balance at September 30, 2018	\$ 37

The fair value of the total severance benefits to be paid (including payments already made) in connection with the relocation is \$1.1 million, of which we expensed an immaterial amount in the three months ended September 30, 2018 and 2017 and \$0.1 million and \$0.4 million in the nine months ended September 30, 2018 and 2017, respectively. The

total severance costs are being expensed ratably over the required service period for the affected employees.

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Facility Consolidation

On April 24, 2018, we made the decision to relocate our Santa Fe Springs, California operations to the Company's facilities in Carol Stream, Illinois and Bear, Delaware. We expect to incur restructuring expenses of approximately \$2.0 million in connection with the closure and transfer of production capabilities to the Carol Stream, Illinois and Bear, Delaware facilities. These costs include approximately \$0.8 million in severance and retention expenses and \$1.2 million of costs related to the relocation of equipment. The Company estimates that approximately \$1.5 million and \$0.5 million of the costs will be incurred in fiscal years 2018 and 2019, respectively. Completion of the transfer, and start-up of production at the Carol Stream, Illinois and Bear, Delaware facilities, is expected to require capital expenditures of approximately \$1.2 million to \$1.4 million. We recorded \$0.5 million and \$1.0 million of expense related to this project in the three and nine months ended September 30, 2018, respectively. Severance activity related to the facility consolidation is presented in the table below for the nine months ended September 30, 2018:

(Dollars in thousands)	Severance Related to Facility Consolidation
Balance at December 31, 2017	\$ —
Provisions	395
Payments	(14)
Balance at September 30, 2018	\$ 381

The fair value of the total severance benefits to be paid (including payments already made) in connection with the relocation is \$0.8 million. This total is being expensed ratably over the required service period for the affected employees. We incurred \$0.3 million and \$0.6 million of severance related expenses during the three and nine months ended September 30, 2018, respectively.

Note 18 – Assets Held for Sale

In the second quarter of 2017, we began actively marketing for sale unutilized property in Chandler, Arizona, consisting of a building and two adjacent parcels of land with an aggregate net book value of \$0.9 million. In the second quarter of 2018, we completed the sale of the building and one parcel of land and recognized a gain on sale of approximately \$0.4 million in operating income. The remaining parcel of land, which was previously classified as held for sale, had a net book value of \$0.4 million and was reclassified in the third quarter of 2018 to held and used as the initial held for sale classification had surpassed one year.

Note 19 – Revenue from Contracts with Customers

Revenue Recognition

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers, to achieve a consistent application of revenue recognition, resulting in a single revenue model to be applied by reporting companies under U.S. generally accepted accounting principles. Under the new model, recognition of revenue occurs when a customer obtains control of promised goods or services in an amount that reflects the consideration to which the providing entity expects to be entitled in exchange for those goods or services. In addition, the new standard requires that reporting companies disclose the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers.

We recognize revenue when all of the following criteria are met: (1) we have entered into a binding agreement, (2) the performance obligations have been identified, (3) the transaction price to the customer has been determined, (4) the transaction price has been allocated to the performance obligations in the contract, and (5) the performance obligations have been satisfied. The majority of our shipping terms permit us to recognize revenue at point of shipment. Some shipping terms require the goods to be through customs or be received by the customer before title passes. In those instances, revenue is not recognized until either the customer has received the goods or they have passed through customs, depending on the circumstances. Shipping and handling costs are treated as fulfillment costs. Sales tax or VAT are excluded from the measurement of the transaction price.

The Company manufactures some products to customer specifications which are customized to such a degree that it is unlikely that another entity would purchase these products or that we could modify these products for another

customer. These products are deemed to have no alternative use to the Company whereby we have an enforceable right to payment evidenced by contractual termination clauses. In accordance with ASC 606, for those circumstances we recognize revenue on an over-time basis. Revenue recognition does not occur until the product meets the definition of “no alternative use” and therefore, items that have not yet reached that point in the production process are not included in the population of items with over-time revenue recognition.

As appropriate, we record estimated reductions to revenue for customer returns, allowances, and warranty claims. Provisions for such reductions are made at the time of sale and are typically derived from historical trends and other relevant information.

Performance Obligations

Manufactured goods are our primary performance obligations. Revenue related to our performance obligations is predominantly recognized at a point in time consistent with our shipping terms. For certain products that meet the criteria of no alternative use whereby the Company has the right to payment, we recognize revenue on an over-time basis.

The selection of a method to measure progress toward completion of a contract requires judgment and is based on the nature of the products or services to be provided. We use the cost incurred method to measure the progress of our contracts with no alternative use products whereby the Company has the right to payment as we believe it is the best depiction of the transferring of value to the customer. Under the cost incurred method, the extent of progress toward completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the contract. Contract costs include labor, materials and subcontractors costs, as well as an allocation of indirect costs. Revenues, including estimated fees or profits, are recorded as costs are incurred.

Performance obligations are typically satisfied within three months of receipt of a customer order; therefore, a change in cost estimates will not have a material impact on the percentage of completion noted at the prior quarter end. Our typical payment terms with customers range from 30 days to 105 days. Product pricing is determined and negotiated on a standalone basis. Product pricing is determined without consideration for the pricing, margin, or other information specific to other products that the same customer or other parties related to that customer may also purchase, whether in the same or a different contract. Management allocates the transaction price to its performance obligations primarily based on stand-alone selling prices that may have been developed via specific customer quote for no alternative use products and non-standard products or standard price lists for standard products. The accounting for the estimate of variable consideration is consistent with our current practice.

Contract modifications occur when there is a change to the products, price, or both. Contract modifications are treated as a separate contract if there are additions to promised goods and services that are distinct and if the price for that separate performance obligation reflects the stand-alone selling price for those goods or services. However, if the obligations in the contract modification are not distinct and are part of a single performance obligation that is only partially satisfied, the contract is not determined to be a separate contract and is accounted for as a revision to an existing contract. These modifications are accounted for prospectively when remaining promises are distinct from those previously transferred, or through a cumulative catch-up adjustment.

Contract Balances

The Company has contract assets primarily related to unbilled revenue for revenue recognized related to products that are deemed to have no alternative use whereby we have the right to payment. Revenue is recognized in advance of billing to the customer in these circumstances as billing is typically performed at the time of shipment to the customer. The unbilled revenue is included in the contract assets on the condensed consolidated statements of financial position. The Company did not have any contract liabilities as of September 30, 2018.

The following table presents contract assets by operating segment as of September 30, 2018:

	September 30, 2018			
	Advanced	Electronic Power	Other	Total
(Dollars in thousands)	Manufacturing	Manufacturing	Manufacturing	
	Solutions	Solutions		
Contract Assets	725	17,484	2,051	20,260

No impairment losses were recognized during the three and nine months ended September 30, 2018 on any receivables or contract assets arising from our contracts with customers.

Transition

We adopted ASU 2014-09 in the first quarter of 2018 retrospectively with the cumulative effect of applying the standard recognized at the date of implementation and without restatement of comparative periods. This application of the new standard resulted in an increase to the January 1, 2018 balance of retained earnings of approximately \$4.2 million, net of tax.

The guidance was applied to all contracts that were not completed at the date of implementation. The primary reason for the impact of adoption is due to over-time revenue recognition.

If the criteria for over-time recognition are not met, revenue is recognized at a point in time. In considering at what point in time control of the product or service has transferred to the customer, we consider qualitative factors such as: 1) present right to payment; 2) legal title to the asset; 3) physical possession; 4) risks and rewards of ownership; and, 5) customer acceptance.

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The impact of adoption using the modified retrospective method on the Company's condensed consolidated financial statements is as follows:

Condensed Consolidated Statements of Financial Position:	As of	
	December 31, 2017	January 1, 2018
(Dollars in thousands)	Under ASC 605	Under Impact of ASC 606 Adoption
Contract assets	\$ 18,099	\$ 18,099
Inventory	112,537	100,250
Deferred income tax liability	10,780	12,286
Retained earnings	684,340	688,752

The following tables set forth the amount by which each financial statement line item is affected in the current reporting period by the application of ASC 606, as compared to the guidance that was in effect before its adoption. The impact of adoption on the condensed consolidated financial statements as of and for the three and nine months ended September 30, 2018 is as follows:

Condensed Consolidated Statements of Operations:	Three Months Ended		
	September 30, 2018	September 30, 2018	September 30, 2018
(In thousands, except per share amounts)	Under ASC 605	Under Impact of ASC 606 Adoption	Under ASC 606
Net sales	\$ 228,536	\$ (1,673)	\$ 226,863
Cost of sales	148,870	(1,137)	147,733
Income tax expense	9,020	(150)	8,870
Net income	20,120	(386)	19,734

Basic earnings per share	\$ 1.09	\$ (0.02)	\$ 1.07
Diluted earnings per share	\$ 1.08	\$ (0.02)	\$ 1.06

Condensed Consolidated Statements of Operations:	Nine Months Ended		
	September 30, 2018	September 30, 2018	September 30, 2018
(In thousands, except per share amounts)	Under ASC 605	Under Impact of ASC 606 Adoption	Under ASC 606
Net sales	\$ 653,988	\$ 2,161	\$ 656,149
Cost of sales	422,272	1,469	423,741
Income tax expense	21,831	183	22,014
Net income	62,690	509	63,199

Basic earnings per share	\$ 3.41	\$ 0.03	\$ 3.44
Diluted earnings per share	\$ 3.36	\$ 0.03	\$ 3.39

Condensed Consolidated Statements of Financial Position:	As of	
	September 30, 2018	September 30, 2018
(Dollars in thousands)	Under ASC 605	Under Impact of ASC 606 Adoption

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Contract assets	\$-20,260	\$ 20,260
Inventory	130,677)	125,885
Deferred income tax liability	9,17,264	10,936
Retained earnings	747,239	751,951

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Condensed Consolidated Statements of Cash Flows:	Nine Months Ended		
	September 30, 2018		September 30, 2018
(Dollars in thousands)	Under ASC 605	Impact of Adoption	Under ASC 606
Cash provided by operating activities:			
Net income	\$62,690	\$ 509	\$ 63,199
Deferred income taxes	(200)	183	(17)
Contract assets	—	(20,260)	(20,260)
Inventories	(25,617)	13,777	(11,840)
Other, net	(2,575)	5,791	3,216
Net cash provided by operating activities	33,424	—	33,424

Practical Expedients

The Company recognizes the incremental costs of obtaining a contract as an expense when incurred as the amortization period of the asset is expected to be one year or less. The Company does not adjust the promised amount of consideration for the effects of a significant financing component as we expect, at contract inception, that the period between when the transfer of goods to our customer occurs and when the customer fully pays for the goods will be one year or less. We do not disclose the Company's unsatisfied performance obligations as they are part of contracts that have an original expected duration of one year or less.

Note 20 – Supplemental Financial Information

The components of Other operating (income) expense, net are as follows:

(Dollars in thousands)	Three Months Ended		Nine Months Ended	
	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017
Gain from antitrust litigation settlement	\$—	\$ —	\$(3,591)	\$ —
Loss (gain) on sale of long-lived assets	222	(4,387)	(161)	(5,329)
Lease income	(237)	—	(237)	—
Depreciation on leased assets	878	—	878	—
	\$863	\$(4,387)	\$(3,111)	\$(5,329)

In the first quarter of 2018, we recorded a gain from the settlement of antitrust litigation in the amount of \$3.6 million as a result of the settlement of a class action lawsuit, filed in 2005, which alleged that Dow Chemical Company and other urethane raw material suppliers unlawfully agreed to fix, raise, maintain or stabilize the prices of Polyether Polyol Products sold in the United States from January 1, 1999 through December 31, 2004 in violation of the federal antitrust laws.

In the second quarter of 2018, we completed the sale of a building and a parcel of land in Arizona that had been classified as held for sale as of June 30, 2017 and recognized a gain on sale of approximately \$0.4 million.

In the third quarter of 2017, we completed the sale of a facility located in Belgium that had been classified as held for sale as of June 30, 2017 and recognized a gain on sale of approximately \$4.4 million.

In the first quarter of 2017, we completed the sale of a parcel of land in Belgium that had been classified as held for sale as of December 31, 2016 and recognized a gain on sale of approximately \$0.9 million.

In the third quarter of 2018, we recognized lease income of approximately \$0.2 million and recognized related depreciation on leased assets of approximately \$0.9 million in connection with the transitional leaseback of a portion of the facility and certain machinery and equipment acquired from Isola in August 2018.

Note 21 – Recent Accounting Standards

In August 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2018-14, Compensation - Retirement Benefits - Defined Benefit Plans - General (Subtopic 715-20): Disclosure Framework - Changes to the Disclosure Requirements for Defined Benefit Plans, which modifies the disclosure requirements for employers that sponsor defined benefit plans or other postretirement plans. This ASU is effective for our fiscal year ending December 31, 2020 and permits early adoption. ASU 2018-14 is required to be applied on a

retrospective basis to all periods presented. The Company is currently evaluating the potential impact of adopting this guidance on our consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement. This ASU modifies the disclosure requirements for fair value measurements by removing the requirement to disclose the amount and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy and the policy for timing of such transfers. This ASU expands the disclosure requirements for Level 3 fair value measurements, primarily focused on changes in unrealized gains and losses included in other comprehensive income (loss). This ASU is effective for our fiscal year ending December 31, 2020 and for the interim periods within that year. Early adoption is permitted. ASU 2018-13 is generally required to be applied retrospectively to all periods presented upon their effective date with the exception of certain amendments, which should be applied prospectively to the most recent interim or annual period presented in the year of adoption. This ASU permits early adoption. The Company is currently evaluating the potential impact of adopting this guidance on our consolidated financial statements.

In March 2018, the FASB issued ASU No. 2018-05, Income Taxes (Topic 740): Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118. This ASU adds guidance that answers questions regarding how certain income tax effects from the Tax Cuts and Jobs Act (the Act) should be applied to companies' financial statements. The guidance also lists which financial statement disclosures are required under a measurement period approach.

In February 2018, the FASB issued ASU No. 2018-02, Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income. This ASU allows for reclassification of stranded tax effects resulting from the Act from accumulated other comprehensive income to retained earnings. This ASU is effective for fiscal years beginning after December 15, 2018, with early adoption permitted. The Company is currently evaluating the method and impact the adoption of ASU 2018-02 will have on the Company's consolidated financial statements and disclosures.

In January 2018, the FASB released guidance on the accounting for tax on the Global Intangible Low Tax Income (GILTI) provisions of the Act. The GILTI provisions impose a tax on foreign income in excess of a deemed return on tangible assets of foreign corporations. The guidance indicates that accounting for deferred taxes related to GILTI inclusions or treating any taxes on GILTI inclusions as period costs are both acceptable methods subject to an accounting policy election. Effective in the first quarter of 2018, the Company has elected to treat any potential GILTI inclusions as a period cost.

In December 2017, Staff Accounting Bulletin No. 118 (SAB 118) was issued to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. In accordance with SAB 118, the Company recorded provisional estimates for the deferred tax expense recorded in connection with the remeasurement of certain deferred tax assets and tax expense associated with the mandatory deemed repatriation of foreign earnings at December 31, 2017. The Company has continued to gather and analyze information associated with these provisional estimates and did not record any adjustments during the three and nine months ended September 30, 2018. Any adjustment to these amounts will be recorded to tax expense in the fourth quarter of 2018 when the analysis is complete.

In May 2017, the FASB issued ASU No. 2017-09, Compensation - Stock Compensation (Topic 718): Scope of Modification Accounting. This ASU clarifies which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting. ASU No. 2017-09 is effective for interim and annual reporting periods beginning after December 15, 2017. Adoption of this standard will be applied prospectively to awards modified on or after the adoption date. The impact of this new standard will depend on the extent and nature of future changes to the terms and conditions of the Company's share-based payment awards. The Company adopted this standard on January 1, 2018, which did not have a material effect on the condensed consolidated financial statements.

In March 2017, the FASB issued ASU No. 2017-07, Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Post-Retirement Benefit Cost. The changes to the standard require employers to report the service cost component in the same line item as other compensation costs arising from services rendered by employees during the reporting period. The other components of net periodic pension benefit costs will be presented in the statement of operations separately from the service cost and outside of a subtotal of

operating income from operations. In addition, only the service cost component may be eligible for capitalization where applicable. ASU 2017-07 became effective for annual periods beginning after December 15, 2017. The Company adopted this standard on January 1, 2018. In conjunction with the adoption of this guidance, the Company reclassified \$0.4 million and \$1.2 million in net periodic pension benefits from “Selling, general and administrative expenses” to “Other income (expense), net” for the three and nine months ended September 30, 2017, respectively.

In February 2016, the FASB issued ASU No. 2016-02, Leases, which sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract (i.e., lessees and lessors). The new standard requires lessees to classify leases as either finance or operating leases and record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. An accounting policy election may be made to account for leases with a term of 12 months or less similar to existing guidance for operating leases today. ASU No. 2016-02 supersedes the existing guidance on accounting for leases. In July 2018, the FASB issued ASU No. 2018-11, Leases (Topic 842): Targeted Improvements, which allows for an optional transition method for the adoption of Topic 842. The two permitted transition methods are now the modified retrospective approach, which applies the new lease requirements at the beginning of the earliest period presented, and the optional transition method, which applies the new lease requirements through a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. The Company intends to adopt the standard on January 1, 2019 using the optional transition method. The Company also intends to elect the practical expedients that allows us to carry forward the historical lease classification. The Company has established an inventory of existing leases and implemented a new process of evaluating the classification of each lease. The Company is currently evaluating the potential changes of this guidance and quantifying the impact to our future financial reporting disclosures and designing and implementing related processes and controls. The Company does not expect this guidance to have a significant impact on our results of operations or statements of cash flows.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

As used herein, the "Company," "Rogers," "we," "us," "our" and similar terms include Rogers Corporation and its subsidiaries unless the context indicates otherwise.

Forward-Looking Statements

This Quarterly Report on Form 10-Q includes "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements are generally accompanied by words such as "anticipate," "assume," "believe," "could," "estimate," "expect," "forecast," "goal," "intend," "may," "might," "plan," "potential," "predict," "project," "should," "seek," "target" or similar expressions that indicate uncertainty as to future events or outcomes. Forward-looking statements are based on assumptions and beliefs that we believe to be reasonable; however, assumed facts almost always vary from actual results, and the differences between assumed facts and actual results could be material depending upon the circumstances. Where we express an expectation or belief as to future results, that expectation or belief is expressed in good faith and based on assumptions believed to have a reasonable basis. We cannot assure you, however, that the stated expectation or belief will occur or be achieved or accomplished. Among the factors that could cause our results to differ materially from those indicated by forward-looking statements are risks and uncertainties inherent in our business including, without limitation:

- failure to capitalize on, volatility within, or other adverse changes with respect to the Company's growth drivers, including advanced mobility and advanced connectivity, such as delays in adoption or implementation of new technologies;
- uncertain business, economic and political conditions in the United States and abroad, particularly in China, South Korea, Germany, Hungary and Belgium, where we maintain significant manufacturing, sales or administrative operations;
- changes in trade policy, tariff regulation or other trade restrictions, including between the United States and China;
- fluctuations in foreign currency exchange rates;
- our ability to develop innovative products and have them incorporated into end-user products and systems;
- the extent to which end-user products and systems incorporating our products achieve commercial success;
- the ability of our sole or limited source suppliers to deliver certain key raw materials, including commodities, to us in a timely or cost-effective manner;
- intense global competition affecting both our existing products and products currently under development;
- failure to realize, or delays in the realization of, anticipated benefits of acquisitions and divestitures due to, among other things, the existence of unknown liabilities or difficulty integrating acquired businesses;
- our ability to attract and retain management and skilled technical personnel;
-

our ability to protect our proprietary technology from infringement by third parties and/or allegations that our technology infringes third party rights;

• changes in effective tax rates or tax laws and regulations in the jurisdictions in which we operate;

• failure to comply with financial and restrictive covenants in our credit agreement or restrictions on our operational and financial flexibility due to such covenants;

• the outcome of ongoing and future litigation, including our asbestos-related product liability litigation;

• changes in environmental laws and regulations applicable to our business; and

• disruptions in, or breaches of, our information technology systems.

Our forward-looking statements are expressly qualified by these cautionary statements, which you should consider carefully, along with the risks discussed in this section and elsewhere in this report, our Annual Report on Form 10-K for the year ended December 31, 2017 (the Annual Report) and our subsequent reports filed with the Securities and Exchange Commission, any of which could cause actual results to differ materially from historical results or anticipated results. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, unless required by law.

The following discussion and analysis of our financial condition and results of operations should be read together with our condensed consolidated financial statements and the related notes that appear elsewhere in this Form 10-Q along with our audited consolidated financial statements and the related notes thereto in our Annual Report.

Executive Summary

Company Background and Strategy

Rogers Corporation designs, develops, manufactures and sells high-quality and high-reliability engineered materials and components for mission critical applications. We operate principally three strategic operating segments: Advanced Connectivity Solutions (ACS), Elastomeric Material Solutions (EMS) and Power Electronics Solutions (PES). We have a history of innovation and have established Innovation Centers for our leading research and development activities in Chandler, Arizona, Burlington, Massachusetts, Eschenbach, Germany and Suzhou, China. We are headquartered in Chandler, Arizona.

Our growth strategy is based upon the following principles: (1) market-driven organization, (2) innovation leadership, (3) synergistic mergers and acquisitions, and (4) operational excellence. As a market-driven organization, we are focused on growth drivers, including advanced mobility and advanced connectivity. More specifically, the key trends and markets that affect our business include the increased use of advanced driver assistance systems and adoption of electric and hybrid electric vehicles and new technology adoption in the telecom industry, including next generation wireless infrastructure. In addition to our focus on advanced mobility and advanced connectivity, we also sell into a variety of other end markets including renewable energy, aerospace and defense and diverse general industrial applications.

Our sales and marketing approach is based on addressing these trends, while our strategy focuses on factors for success as a manufacturer of engineered materials and components: quality, service, cost, efficiency, innovation and technology. We have expanded our capabilities through organic investment and acquisitions and strive to ensure high quality solutions for our customers. We continue to review and re-align our manufacturing and engineering footprint in an effort to attain a leading competitive position globally. We have established or expanded our capabilities in various locations in support of our customers' growth initiatives.

We seek to enhance our operational and financial performance by investing in research and development, manufacturing and materials efficiencies, and new product initiatives that respond to the needs of our customers. We strive to evaluate operational and strategic alternatives to improve our business structure and align our business with the changing needs of our customers and major industry trends affecting our business.

On July 6, 2018, we acquired 100% of the membership interests of Griswold LLC (Griswold), a leading manufacturer of a wide range of high-performance engineered cellular elastomer and microcellular polyurethane products and solutions.

On August 28, 2018, we acquired a production facility and related machinery and equipment located in Chandler Arizona from Isola USA Corp (Isola).

2018 Third Quarter Executive Summary

In the third quarter of 2018 as compared to the third quarter of 2017, our net sales increased 9.7% to \$226.9 million, gross margin decreased approximately 480 basis points to 34.9%, and operating margin decreased approximately 590 basis points to 13.1%. The following key factors should be considered when reviewing our results of operations, financial condition and liquidity for the third quarter of 2018:

Our net sales increase in the third quarter of 2018 was attributable to increases in net sales in our EMS and PES strategic operating segments. The increase in net sales was driven in part by net sales of \$6.9 million, or 3.3%, related to our acquisition of Griswold. Net sales were favorably impacted by higher demand in electric and hybrid electric vehicles applications in the PES operating segment and higher demand in automotive, portable electronics and general industrial applications in the EMS operating segment, partially offset by lower demand in wireless 4G LTE and automotive radar applications in the ACS operating segment. The adoption of new accounting guidance for revenue recognition unfavorably impacted net sales in the third quarter of 2018 by \$1.7 million, or 0.8%. See Note 19, "Revenue from Contracts with Customers," as well as "Segment Sales and Operations" for further discussion. Net sales were also favorably impacted by \$0.8 million, or 0.4%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar.

Our gross margin decreased approximately 480 basis points in the third quarter of 2018. Our gross margin decreased to 34.9% in the third quarter of 2018 as a result of strategic investments in capacity optimization and infrastructure to support future growth initiatives, increased costs for raw materials and facility consolidation, unfavorable absorption of fixed costs, as well as new product launch.

Our operating income decreased to \$29.6 million in the third quarter of 2018, as compared to \$39.2 million in the third quarter of 2017, leading to a decrease in operating margin of approximately 590 basis points. This decrease resulted primarily from a decrease in gross margin and a non-recurring \$4.4 million gain on the sale of a facility in Belgium in the third quarter of 2017. This was furthered by a \$0.9 million increase in selling, general & administrative (SG&A) expenses and a \$0.2 million increase in research and development (R&D) expenses. The increase in SG&A expenses was driven by increases in acquisition and integration expenses as well as other intangible assets amortization related to Griswold. SG&A expenses decreased as a percentage of net sales from 18.9% in the third quarter of 2017 to 17.6% in the third quarter of 2018.

We are an innovation company, and in the third quarter of 2018 we continued our investment in R&D, with R&D expenses comprising 3.4% of our quarterly net sales. R&D expenses were \$7.6 million in the third quarter of 2018, which was an increase of \$0.2 million, a decrease of approximately 20 basis points as a percentage of net sales, from the third quarter of 2017. We have made concerted efforts to realign our R&D organization to better fit the future direction of our Company, including dedicating resources to focus on current product extensions and enhancements to meet our expected short-term and long-term technology needs.

We acquired Griswold in July 2018, as we continue to execute on our synergistic acquisition strategy. Acquisitions are a core part of our growth strategy, and the Griswold acquisition extends the product portfolio and technology capabilities of our EMS operating segment. Griswold is a leading manufacturer of a wide range of high-performance engineered cellular elastomer and microcellular polyurethane products and solutions across the automotive, transportation, medical, office products, printing and electronics industries. We financed our acquisition of Griswold with \$82.5 million in borrowings under our revolving credit facility. As a result, borrowings under our revolving credit facility increased in the third quarter of 2018.

In preparation for expected demand in advanced connectivity and advanced mobility, we acquired a production facility and related machinery and equipment from Isola in August 2018. We intend to use the purchased assets for capacity expansion within our ACS operating segment in contemplation of expected future demand from our 5G customers. We financed the asset acquisition with \$43.4 million in cash on hand.

Results of Operations

The following table sets forth, for the periods indicated, selected operations data expressed as a percentage of net sales:

	Three Months Ended			Nine Months Ended		
	September 30, 2018	September 30, 2017	%	September 30, 2018	September 30, 2017	%
Net sales	100.0	100.0	%	100.0	100.0	%
Gross margin	34.9	39.7	%	35.4	39.7	%
Selling, general and administrative expenses	17.6	18.9	%	18.8	18.6	%
Research and development expenses	3.4	3.6	%	3.7	3.5	%
Restructuring and impairment charges	0.5	0.5	%	0.3	0.5	%
Other operating (income) expense, net	0.4	(2.1))%	(0.5)	(0.9))%
Operating income	13.1	19.0	%	13.1	18.1	%
Equity income in unconsolidated joint ventures	0.7	0.7	%	0.7	0.5	%
Other income (expense), net	(0.3)	1.0	%	(0.1)	0.6	%
Interest expense, net	(0.9)	(0.8))%	(0.7)	(0.8))%
Income before income tax expense	12.6	19.8	%	13.0	18.4	%
Income tax expense	3.9	7.4	%	3.4	6.4	%
Net income	8.7	12.3	%	9.6	12.0	%

Net Sales and Gross Margin

(Dollars in thousands)	Three Months Ended			Nine Months Ended		
	September 30, 2018	September 30, 2017	Percent Change	September 30, 2018	September 30, 2017	Percent Change
Net sales	\$226,863	\$206,783	9.7%	\$656,149	\$612,035	7.2%
Gross margin	34.9	39.7	%	35.4	39.7	%

Net sales increased by 9.7% in the third quarter of 2018 compared to the third quarter of 2017. The EMS and PES operating segments had net sales increases of 16.5% and 19.0%, respectively, while the ACS operating segment had a net sales decrease of 1.2%. The increase in net sales was driven in part by net sales of \$6.9 million, or 3.3%, related to our acquisition of Griswold. Net sales were favorably impacted by higher demand in electric and hybrid electric vehicles applications in the PES operating segment and higher demand in automotive, portable electronics and general industrial applications in the EMS operating segment, partially offset by lower demand in wireless 4G LTE and automotive radar applications in the ACS operating segment. The adoption of new accounting guidance for revenue recognition unfavorably impacted net sales in the third quarter of 2018 by \$1.7 million, or 0.8%. Net sales were also favorably impacted by \$0.8 million, or 0.4%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar.

On a year to date basis, net sales increased by 7.2% during the first nine months of 2018 compared to the first nine months of 2017. The EMS and PES operating segments had net sales increases of 6.9% and 25.3%, respectively, while the ACS operating segment had a net sales decrease of 1.7%. The increase in net sales was primarily driven by favorable currency fluctuations of \$18.6 million, or 3.0%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar, as well as net sales of \$6.9 million, or 1.1%, related to our acquisition of Griswold. Net sales were also favorably impacted by higher demand in electric and hybrid electric vehicles, renewable energy and variable frequency motor drives applications in the PES operating segment, as well as in portable electronics and automotive applications in the EMS operating segment, partially offset by lower demand in wireless 4G LTE and portable electronics applications in the ACS operating segment. The adoption of new accounting guidance for revenue recognition unfavorably impacted net sales in the first nine months of 2018 by \$2.2 million, or 0.9%.

Gross margin as a percentage of net sales decreased approximately 480 basis points to 34.9% in the third quarter of 2018 compared to 39.7% in the third quarter of 2017. Gross margin in the third quarter of 2018 was unfavorably impacted by strategic investments in capacity optimization and infrastructure to support future growth initiatives, increased costs for raw materials, facility consolidation and new product launch, as well as unfavorable absorption of fixed costs. The adoption of new accounting guidance for revenue recognition unfavorably impacted gross margin in the third quarter of 2018 by \$0.5 million, or 0.6%.

Gross margin as a percentage of net sales decreased approximately 430 basis points to 35.4% in the first nine months of 2018 from 39.7% in the first nine months of 2017. Gross margin in the first nine months of 2018 was unfavorably impacted by strategic investments in capacity optimization and infrastructure to support future growth initiatives, increased costs for copper commodities and other raw materials, machine downtime, facility consolidation and multi-site product qualification, including freight, as well as unfavorable absorption of fixed costs. The adoption of new accounting guidance for revenue recognition favorably impacted gross margin in the first nine months of 2018 by \$0.7 million.

Selling, General and Administrative Expenses

(Dollars in thousands)	Three Months Ended			Nine Months Ended		
	September 30, 2018	September 30, 2017	Percent Change	September 30, 2018	September 30, 2017	Percent Change
Selling, general and administrative expenses	\$39,943	\$ 39,010	2.4%	\$ 123,080	\$ 113,590	8.4%
Percentage of net sales	17.6 %	18.9 %		18.8 %	18.6 %	

SG&A expenses increased 2.4% in the third quarter of 2018 from the third quarter of 2017, primarily due to a \$0.6 million increase in other intangible assets amortization related to our acquisition of Griswold and a \$0.4 million increase in acquisition expenses, partially offset by overall net reductions in compensation and benefits. SG&A decreased as a percent of net sales to 17.6% in the third quarter of 2018 from 18.9% in the third quarter of 2017. SG&A expenses increased 8.4% from the first nine months of 2017, primarily due to a \$4.2 million increase in sales and marketing investments to support future growth initiatives, a \$3.1 million increase in severance expense, a \$1.1 million increase in other intangible assets amortization and a \$0.6 million increase in acquisition expenses. SG&A increased as a percent of net sales to 18.8% in the first nine months of 2018 from 18.6% from the first nine months of 2017.

Research and Development Expenses

(Dollars in thousands)	Three Months Ended			Nine Months Ended		
	September 30, 2018	September 30, 2017	Percent Change	September 30, 2018	September 30, 2017	Percent Change
Research and development expenses	\$7,630	\$ 7,411	3.0%	\$24,514	\$ 21,512	14.0%
Percentage of net sales	3.4 %	3.6 %		3.7 %	3.5 %	

R&D expenses increased 3.0% in the third quarter of 2018 from the third quarter of 2017, and increased 14.0% in the first nine months of 2018 from the first nine months of 2017. The increases are due to concerted efforts to realign our R&D organization to better fit the future direction of our Company, including dedicating resources to focus on current product extensions and enhancements to meet our expected short-term and long-term technology needs.

Restructuring and Impairment Charges and Other Operating Expenses (Income), Net

(Dollars in thousands)	Three Months Ended			Nine Months Ended		
	September 30, 2018	September 30, 2017	Percent Change	September 30, 2018	September 30, 2017	Percent Change
Restructuring and impairment charges	\$1,052	\$ 962	9.4%	\$2,015	\$ 2,767	9.4%
Other operating (income) expense, net	863	(4,387)	(119.7)%	(3,111)	(5,329)	(119.7)%

We incurred restructuring charges associated with the relocation of our global headquarters from Rogers, Connecticut to Chandler, Arizona and the relocation of our Santa Fe Springs, California operations to the Company's facilities in Carol Stream, Illinois and Bear, Delaware. We recognized \$0.5 million of restructuring charges associated with the facility consolidation in the third quarter of 2018, and \$0.6 million of restructuring charges related to the headquarters relocation in the third quarter of 2017. We recognized \$0.5 million and \$1.0 million of restructuring charges associated with the headquarters relocation and facility consolidation, respectively, in the first nine months of 2018, and \$2.4 million of restructuring charges related to the headquarters relocation during the nine months ended September 30, 2017. We did not recognize any restructuring charges related to the facility consolidation in the three and nine months ended September 30, 2017. We estimate that approximately \$0.5 million of additional costs will be

incurred in the fourth quarter of 2018, with \$0.5 million of remaining costs expected to be incurred in 2019.

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In the third quarter of 2018, we recognized lease income of approximately \$0.2 million and recognized related depreciation on leased assets of approximately \$0.9 million in connection with the transitional leaseback of a portion of the facility and certain machinery and equipment acquired from Isola in August 2018. In the third quarter of 2017, we recognized other operating income of \$4.4 million. Additionally, in the first nine months of 2018, we recognized other operating income of \$0.4 million as a result of the sale of a building and a parcel of land in Arizona that had been classified as held for sale as of June 30, 2017, and we recorded a gain from the settlement of antitrust litigation in the amount of \$3.6 million. In the first nine months of 2017, we recognized other operating income of \$5.3 million as a result of the sales of a facility located in Belgium that had been classified as held for sale as of June 30, 2017 as well as a parcel of land in Belgium that had been classified as held for sale as of December 31, 2016.

Equity Income in Unconsolidated Joint Ventures

(Dollars in thousands)	Three Months Ended			Nine Months Ended		
	September 2018	September 2017	Percent Change	September 2018	September 2017	Percent Change
Equity income in unconsolidated joint ventures	\$ 1,642	\$ 1,384	18.6%	\$ 4,453	\$ 3,359	32.6%

Equity income in unconsolidated joint ventures increased 18.6% in the third quarter of 2018 from the third quarter of 2017, and increased 32.6% in the first nine months of 2018 from the first nine months of 2017. The increases were due to higher demand, primarily in portable electronics applications.

Other Income (Expense), Net

(Dollars in thousands)	Three Months Ended			Nine Months Ended		
	September 2018	September 2017	Percent Change	September 2018	September 2017	Percent Change
Other income (expense), net	\$(680)	\$ 1,991	(134.2)%	\$(647)	\$ 3,370	(119.2)%

Other income (expense), net decreased 134.2% in the third quarter of 2018 from the third quarter of 2017, and decreased 119.2% in the first nine months of 2018 from the first nine months of 2017. The decreases were due to declines in the value of our copper derivatives and unfavorable changes in foreign currency transaction costs.

Interest Expense, Net

(Dollars in thousands)	Three Months Ended			Nine Months Ended		
	September 2018	September 2017	Percent Change	September 2018	September 2017	Percent Change
Interest expense, net	\$(2,000)	\$ (1,639)	22.0%	\$(4,503)	\$ (4,834)	(6.8)%

Interest expense, net, increased by 22.0% in the third quarter of 2018 from the third quarter of 2017 due to higher average outstanding balances on our revolving credit facility in the third quarter of 2018 compared to the third quarter of 2017. This is a result of new borrowings under our revolving credit facility during the third quarter of 2018 to fund the acquisition of Griswold and our voluntary pension contribution in connection with the proposed plan termination process, as well as reductions in the balance of our revolving credit facility in the third quarter of 2017 resulting from a discretionary payment of \$60.0 million.

Interest expense, net, decreased by 6.8% in the first nine months of 2018 from the first nine months of 2017 due to a lower average outstanding balance on our revolving credit facility in the first nine months of 2018 compared to the first nine months of 2017. This is a result of discretionary payments of \$50.0 million and \$60.0 million during the second and third quarters of 2017, respectively, to reduce our outstanding borrowings under our revolving credit facility, partially offset by new borrowings under our revolving credit facility during the third quarter of 2018 to fund the acquisition of Griswold and our voluntary pension contribution in connection with the proposed plan termination process.

Income Taxes

(Dollars in thousands)	Three Months Ended			Nine Months Ended		
	September 30, 2018	September 30, 2017	Percent Change	September 30, 2018	September 30, 2017	Percent Change
Income tax expense	\$8,870	\$15,396	(42.4)%	\$22,014	\$38,979	(43.5)%
Effective tax rate	31.0 %	37.6 %		25.8 %	34.6 %	

Our effective income tax rate was 31.0% and 37.6% for the three months ended September 30, 2018 and 2017, respectively. Our effective income tax rate was 25.8% and 34.6% for the nine months ended September 30, 2018 and 2017, respectively. The decrease, compared to the same periods in 2017, was primarily due to a lower U.S. effective tax rate, as a result of U.S. tax reform, a change in valuation allowance established against deferred tax assets related to capital losses recorded in 2017, a release of reserves for uncertain tax positions and changes in pretax mix across jurisdictions with disparate tax rates, partially offset by an increase in current year accruals for uncertain tax positions and a decrease in excess tax deductions on equity compensation.

Segment Sales and Operations

Advanced Connectivity Solutions

(Dollars in thousands)	Three Months Ended		Nine Months Ended	
	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017
Net sales	\$71,854	\$72,713	\$221,685	\$225,595
Operating income	\$8,451	\$14,278	\$26,946	\$46,773

The ACS operating segment is comprised of high frequency circuit material products used for making circuitry that receives, processes and transmits high frequency communications signals, in a wide variety of applications and markets, including wireless communications, wired infrastructure, high reliability, automotive radar, and aerospace and defense, among others. In August 2018, we purchased assets from Isola for \$43.4 million to expand capacity in the ACS operating segment in an effort to prepare for potential demand from our 5G customers.

Q3 2018 versus Q3 2017

ACS net sales decreased by 1.2% in the third quarter of 2018 compared to the third quarter of 2017. The decrease in net sales over the third quarter of 2017 was primarily driven by lower demand in wireless 4G LTE and automotive radar applications. The adoption of new accounting guidance for revenue recognition did not impact ACS net sales in the third quarter of 2018.

Operating income decreased by 40.8% in the third quarter of 2018 from the third quarter of 2017. As a percentage of net sales, operating income in the third quarter of 2018 was 11.8%, an approximately 780 basis point decrease as compared to the 19.6% reported in the third quarter of 2017. The decrease in operating income is primarily due to lower net sales and a continuation of overhead costs related to strategic investments in capacity optimization and infrastructure to support future growth initiatives. The adoption of new accounting guidance for revenue recognition did not impact ACS operating income in the third quarter of 2018.

YTD 2018 versus YTD 2017

ACS net sales decreased by 1.7% in the first nine months of 2018 compared to the first nine months of 2017. The decrease in net sales was primarily driven by lower demand in wireless 4G LTE and portable electronics applications, partially offset by favorable currency fluctuations of \$3.8 million, or 1.7%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar, as well as higher demand in automotive radar applications. The adoption of new accounting guidance for revenue recognition did not impact ACS net sales in the first nine months of 2018.

Operating income decreased by 42.4% in the first nine months of 2018 from the first nine months of 2017. As a percentage of net sales, the first nine months of 2018 operating income was 12.2%, an approximately 850 basis point decrease as compared to the 20.7% reported in the first nine months of 2017. The decrease in operating income is due to lower net sales, increased costs for copper commodities and multi-site product qualification, including freight, lower capacity utilization due to process issues and machine downtime, as well as strategic investments in capacity optimization, infrastructure and sales and marketing to support future growth initiatives. The adoption of new

accounting guidance for revenue recognition did not impact ACS operating income in the first nine months of 2018.

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Elastomeric Material Solutions

(Dollars in thousands)	Three Months Ended		Nine Months Ended	
	September 2018	September 2017	September 2018	September 2017
Net sales	\$95,788	\$ 82,239	\$253,087	\$ 236,673
Operating income	\$15,924	\$ 17,727	\$38,505	\$ 44,451

The EMS operating segment is comprised of polyurethane and silicone foam products, which are sold into a wide variety of applications and markets, including general industrial, portable electronics, automotive, mass transit and consumer applications. In July 2018, we acquired Griswold, a leading manufacturer of a wide range of high-performance engineered cellular elastomer and microcellular polyurethane products and solutions. We are in the process of integrating Griswold into the EMS operating segment.

Q3 2018 versus Q3 2017

EMS net sales increased by 16.5% in the third quarter of 2018 compared to the third quarter of 2017. The increase in net sales over the third quarter of 2017 was primarily driven by net sales related to our acquisition of Griswold of \$6.9 million, or 8.4%, along with higher demand in automotive, portable electronics and general industrial applications. The adoption of new accounting guidance for revenue recognition favorably impacted EMS net sales in the third quarter of 2018 by \$0.3 million, or 0.4%.

Operating income decreased by 10.2% in the third quarter of 2018 from the third quarter of 2017. As a percentage of net sales, third quarter of 2018 operating income was 16.6%, an approximately 500 basis point decrease as compared to the 21.6% reported in the third quarter of 2017. The decrease in operating income is primarily due to increased costs for raw materials and facility consolidation, unfavorable absorption of fixed costs, increases in other intangible assets amortization and increased costs for acquisition and integration activities. These increased costs were partially offset by \$1.1 million of operating income related to our acquisition of Griswold and discretionary cost control. The adoption of new accounting guidance for revenue recognition favorably impacted EMS operating income in the third quarter of 2018 by a \$0.1 million, or 0.6%.

YTD 2018 versus YTD 2017

EMS net sales increased by 6.9% in the first nine months of 2018 compared to the first nine months of 2017. The increase in net sales was primarily driven by net sales related to our acquisition of Griswold of \$6.9 million, or 2.9%, and favorable currency fluctuations of \$4.3 million, or 1.8%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar, along with higher demand in portable electronics and automotive applications. The adoption of new accounting guidance for revenue recognition favorably impacted EMS net sales in the first nine months of 2018 by \$0.5 million, or 0.2%.

Operating income decreased by 13.4% in the first nine months of 2018 from the first nine months of 2017. As a percentage of net sales, the first nine months of 2018 operating income was 15.2%, an approximately 360 basis point decrease as compared to the 18.8% reported in the first nine months of 2017. The decrease in operating income is primarily due to increased costs for raw materials and facility consolidation, unfavorable absorption of fixed costs, strategic investments in sales and marketing to support future growth initiatives, as well as increases in other intangible assets amortization. These increased costs were partially offset by a \$3.6 million gain on settlement from antitrust class action litigation, as discussed in Note 20, "Supplemental Financial Information," \$1.1 million of operating income related to our acquisition of Griswold and discretionary cost control. The adoption of new accounting guidance for revenue recognition favorably impacted EMS operating income in the first nine months of 2018 by \$0.1 million, or 0.2%.

Power Electronics Solutions

(Dollars in thousands)	Three Months Ended		Nine Months Ended	
	September 2018	September 2017	September 2018	September 2017
Net sales	\$55,222	\$ 46,409	\$166,582	\$ 132,966
Operating income	\$4,067	\$ 5,340	\$15,328	\$ 13,744

The PES operating segment is comprised of two product lines - curamik[®] direct-bonded copper (DBC) substrates that are used primarily in the design of intelligent power management devices, such as IGBT (insulated gate bipolar transistor) modules that enable a wide range of products including highly efficient industrial motor drives, wind and solar energy converters and electrical systems in automobiles, and ROLINX[®] busbars that are used primarily in power distribution systems products in electric and hybrid electric vehicles and clean technology applications.

Q3 2018 versus Q3 2017

PES net sales increased by 19.0% in the third quarter of 2018 from the third quarter of 2017. Net sales increased in electric and hybrid electric vehicles applications primarily due to higher demand. The adoption of new accounting guidance for revenue recognition unfavorably impacted PES net sales in the third quarter of 2018 by \$0.6 million, or 1.3%. Net sales were impacted by favorable currency fluctuations of \$0.4 million, or 0.8%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar.

Operating income for the quarter decreased by 23.8% in the third quarter of 2018 from the third quarter of 2017. As a percentage of net sales, third quarter of 2018 operating income was 7.4%, an approximately 410 basis point decrease as compared to the 11.5% reported in the third quarter of 2017. The decrease in operating income is primarily due to strategic investments in capacity optimization to support future growth initiatives, as well as increased costs for facility consolidation and new product launch, partially offset by increases in net sales from higher demand. The adoption of new accounting guidance for revenue recognition unfavorably impacted PES operating income in the third quarter of 2018 by \$0.2 million, or 3.7%.

YTD 2018 versus YTD 2017

PES net sales increased by 25.3% in the first nine months of 2018 from the first nine months of 2017. Net sales increased in electric and hybrid electric vehicles, renewable energy and variable frequency motor drives applications, primarily due to higher demand. Net sales were also impacted by favorable currency fluctuations of \$10.0 million, or 7.5%, due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar. The adoption of new accounting guidance for revenue recognition favorably impacted PES net sales in the first nine months of 2018 by \$4.0 million, or 3.0%.

Operating income increased 11.5% in the first nine months of 2018 from the first nine months of 2017. As a percentage of net sales, the first nine months of 2018 operating income was 9.2%, an approximately 110 basis point increase as compared to the 10.3% reported in the first nine months of 2017. The adoption of new accounting guidance for revenue recognition favorably impacted PES operating income in the first nine months of 2018 by \$1.3 million, or 9.5%. The increase in operating income is also due to increases in net sales from higher demand, partially offset by strategic investments in capacity optimization and sales and marketing to support future growth initiatives, a provision for a commercial settlement, increased costs for facility consolidation and new product launch, as well as process issues.

Other

(Dollars in thousands)	Three Months Ended		Nine Months Ended	
	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017
Net sales	\$3,999	\$ 5,422	\$14,795	\$ 16,801
Operating income	\$1,200	\$ 1,847	\$5,131	\$ 5,576

The Other operating segment consists of our elastomer rollers and floats business, as well as our inverter distribution business.

Q3 2018 versus Q3 2017

Net sales in this segment decreased by 26.2% in the third quarter of 2018 from the third quarter of 2017. The decrease in net sales over the third quarter of 2017 was primarily driven by the adoption of new accounting guidance for revenue recognition, which resulted in a \$1.4 million unfavorable impact, or 25.8%.

Operating income decreased 35.0% in the third quarter of 2018 compared to the third quarter of 2017. As a percentage of net sales, third quarter of 2018 operating income was 30.0%, an approximately 410 basis point decrease as compared to the 34.1% reported in the third quarter of 2017. This decrease in operating income was primarily driven by lower net sales. Operating income in the third quarter of 2018 was unfavorably impacted by \$0.4 million, or 21.7%, from the adoption of new accounting guidance for revenue recognition.

YTD 2018 versus YTD 2017

Net sales in this segment decreased by 11.9% in the first nine months of 2018 from the first nine months of 2017. The decrease in net sales was primarily driven by the adoption of new accounting guidance for revenue recognition, which resulted in a \$2.3 million unfavorable impact, or 13.7%. Currency fluctuations had a \$0.5 million favorable impact on

net sales during the first nine months of 2018 due to the appreciation in value of the Euro and Renminbi relative to the U.S. dollar.

Operating income decreased by 8.0% in the first nine months of 2018 from the first nine months of 2017. As a percentage of net sales, third quarter of 2018 operating income was 34.7%, an approximately 150 basis point increase as compared to the 33.2% reported in the third quarter of 2017. This decrease in operating income was primarily driven by lower net sales, partially offset by operational improvements and efficiency initiatives. Operating income in the first nine months of 2018 was unfavorably impacted by \$0.7 million, or 12.6%, from the adoption of new accounting guidance for revenue recognition.

Liquidity, Capital Resources and Financial Position

We believe that our existing sources of liquidity and cash flows that are expected to be generated from our operations, together with our available credit facilities, will be sufficient to fund our operations, currently planned capital expenditures, research and development efforts and our debt service commitments. We regularly review and evaluate the adequacy of our cash flows, borrowing facilities and banking relationships seeking to ensure that we have the appropriate access to cash to fund both our near-term operating needs and our long-term strategic initiatives.

(Dollars in thousands)

	September 30, 2018	December 31, 2017
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Key Balance Sheet Accounts:

Cash and cash equivalents	\$ 149,556	\$ 181,159
Accounts receivable, net	\$ 155,706	\$ 140,562
Contract assets	\$ 20,260	\$ —
Inventories	\$ 125,885	\$ 112,557
Borrowings under revolving credit facility	\$ 233,482	\$ 130,982

As of September 30, 2018, cash and cash equivalents were \$149.6 million as compared to \$181.2 million as of December 31, 2017, a decrease of \$31.6 million, or 17.4%. This decrease was primarily due to \$78.6 million paid for the Griswold acquisition, net of cash, \$36.6 million in capital expenditures, \$43.4 million paid for the Isola asset acquisition, and \$25.3 million in pension and other postretirement benefits contributions, along with \$6.5 million in tax payments related to net share settlement of equity awards and \$3.0 million in repurchases of capital stock. This activity was partially offset by \$102.5 million in borrowings under our revolving credit facility, of which \$82.5 million and \$20.0 million were used to fund the Griswold acquisition and the voluntary pension plan contribution, respectively, and by cash generated by operations.

The following table illustrates the location of our cash and cash equivalents by our three major geographic areas as of the periods indicated:

(Dollars in thousands)	September 30, 2018	December 31, 2017
United States	\$ 42,175	\$ 35,653
Europe	69,750	41,307
Asia	37,631	104,199
Total cash and cash equivalents	\$ 149,556	\$ 181,159

Approximately \$107.4 million of our cash and cash equivalents were held by non-U.S. subsidiaries as of September 30, 2018. As a result of U.S. tax reform, unremitted earnings as of December 31, 2017 were subjected to U.S. tax through the transition tax, but a portion could be subject to additional foreign income taxes if they are redeployed outside of their country of origin. With the exception of certain of our Chinese subsidiaries, we have historically asserted and continue to assert that foreign earnings are indefinitely reinvested. While we have not changed our assertion with respect to foreign earnings compared to prior years, we are currently evaluating the impact of U.S. tax reform on our global structure and any associated impacts it may have on our assertion on a go forward basis, and as such have not changed our assertion with respect to distribution of earnings that would require the accrual of additional deferred income taxes.

Significant changes in our balance sheet accounts from December 31, 2017 to September 30, 2018 were as follows: Accounts receivable increased 10.8% to \$155.7 million as of September 30, 2018, from \$140.6 million at December 31, 2017. The increase from year-end was primarily due to higher net sales at the end of the third quarter of 2018 compared to at the end of the 2017.

We recorded contract assets of \$20.3 million as of September 30, 2018 related to the adoption of ASU 2014-09. See further discussion in Note 19, "Revenue from Contracts with Customers" to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q.

Inventory increased 11.8% to \$125.9 million as of September 30, 2018, from \$112.6 million at December 31, 2017, as a result of our acquisition of Griswold, inventory buildup to meet future demand in anticipation of long supply lead times, supplier transition, safety stock replenishment and raw material increases, partially offset by the impact from

the adoption of new accounting guidance for revenue recognition. See discussion in Note 19, "Revenue from Contracts with Customers."

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Accrued employee benefits and compensation decreased to \$27.6 million as of September 30, 2018, from \$39.4 million at December 31, 2017. This decrease is primarily due to incentive compensation payouts of \$18.2 million that occurred during 2018, partially offset by \$5.2 million of accruals for projected incentive compensation payouts for the current performance year.

Goodwill increased 12.3% to \$266.3 million as of September 30, 2018, from \$237.1 million at December 31, 2017. The increase is primarily due to the acquisition of Griswold in July 2018.

Other intangible assets, net of amortization increased 13.3% to \$181.6 million as of September 30, 2018, from \$160.3 million at December 31, 2017. This overall increase is primarily due to the acquisition of Griswold in July 2018. During the nine months ended September 30, 2018, we repurchased 23,138 shares of our capital stock for \$3.0 million under a \$100.0 million share repurchase program approved by our Board of Directors on August 6, 2015. The share repurchase program has no expiration date and may be suspended or discontinued at any time without notice. As of September 30, 2018, \$49.0 million remained for repurchase under our share repurchase program. All purchases were made using cash from operations.

On February 17, 2017, we entered into a secured five year credit agreement with JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto (the Third Amended Credit Agreement), which increased the principal amount of our revolving credit facility to up to \$450.0 million borrowing capacity, with sublimits for multicurrency borrowings, letters of credit and swing-line notes, and provided an additional \$175.0 million accordion feature. Borrowings may be used to finance working capital needs, for letters of credit and for general corporate purposes in the ordinary course of business, including the financing of permitted acquisitions (as defined in the Third Amended Credit Agreement).

All revolving loans are due on the maturity date, February 17, 2022. We are not required to make any quarterly principal payments under the Third Amended Credit Agreement. As of September 30, 2018, we have \$233.5 million in outstanding borrowings under our revolving credit facility.

Our Third Amended Credit Agreement generally permits us to pay cash dividends to our shareholders, provided that (i) no default or event of default has occurred and is continuing or would result from the dividend payment and (ii) our leverage ratio does not exceed 2.75 to 1.00. If our leverage ratio exceeds 2.75 to 1.00, we may nonetheless make up to \$20.0 million in restricted payments, including cash dividends, during the fiscal year, provided that no default or event of default has occurred and is continuing or would result from the payments. Our leverage ratio did not exceed 2.75 to 1.00 as of September 30, 2018.

During the third quarter of 2018, there were not any material new developments related to our capital leases. Refer to Note 12, "Debt" to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q for further discussion on liquidity matters.

Contingencies

During the third quarter of 2018, we did not become aware of any material developments related to environmental matters, our asbestos litigation or other contingencies or incur any material costs or capital expenditures related to such matters. Refer to Note 14, "Commitments and Contingencies" to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q for further discussion on these contingencies.

Off-Balance Sheet Arrangements

As of September 30, 2018, we did not have any off-balance sheet arrangements that have or are, in the opinion of management, likely to have a current or future material effect on our financial condition or results of operations.

Critical Accounting Policies

Revenue Recognition

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers, to achieve a consistent application of revenue recognition, resulting in a single revenue model to be applied by reporting companies under U.S. generally accepted accounting principles. With the adoption of ASU 2014-09, we recognize revenue when all of the following criteria are met: (1) we have entered into a binding agreement, (2) the performance obligations have been identified, (3) the transaction price to the customer has been determined, (4) the transaction price has been allocated to the performance obligations in the contract, and (5) the performance obligations have been satisfied. The majority of our shipping terms permit us to recognize revenue at point of shipment. Some shipping terms require the

goods to be through customs or be received by the customer before title passes. In those instances, revenue is not recognized until either the customer has received the goods or they have passed through customs, depending on the circumstances. Shipping and handling costs are treated as fulfillment costs. Sales tax or VAT are excluded from the measurement of the transaction price.

Recent Accounting Pronouncements

See Note 21, "Recent Accounting Standards" to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q for discussion of recent accounting pronouncements including expected dates of adoption.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There have been no material changes in our exposure to market risk during the third quarter of 2018. For discussion of our exposure to market risk, refer to Item 7A, Quantitative and Qualitative Disclosures About Market Risk, contained in our Annual Report.

Item 4. Controls and Procedures

EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES

The Company, with the participation of our Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act), as of September 30, 2018. The Company's disclosure controls and procedures are designed (i) to ensure that information required to be disclosed by it in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and (ii) to ensure that information required to be disclosed in the reports the Company files or submits under the Exchange Act is accumulated and communicated to its management, including its Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Based on their evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that the Company's disclosure controls and procedures were effective as of September 30, 2018.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

There were no changes in the Company's internal control over financial reporting during its most recently completed fiscal quarter that have materially affected or are reasonably likely to materially affect the Company's internal control over financial reporting, as defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act. This evaluation excluded the operations of Griswold LLC, which we acquired on July 6, 2018. As part of the ongoing integration activities for this acquisition, we are completing an assessment of Griswold's existing controls and incorporating our controls and procedures into the acquired operations, as appropriate.

Part II - Other Information

Item 1. Legal Proceedings

See a discussion of environmental, asbestos and other litigation matters in Note 14, "Commitments and Contingencies," to the condensed consolidated financial statements in Part I, Item 1 of this Form 10-Q.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Items 2 (a) and (b) are not applicable

(c) Share Repurchases

(Dollars in thousands, except per share amounts)

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet be Purchased under the Plans or Programs
March 1, 2018 to March 31, 2018	23,138	\$ 129.62	23,138	\$ 49,013
July 1, 2018 to July 31, 2018	—	\$—	—	\$ 49,013
August 1, 2018 to August 31, 2018	—	\$—	—	\$ 49,013
September 1, 2018 to September 30, 2018	—	\$—	—	\$ 49,013

During the nine months ended September 30, 2018, we repurchased 23,138 shares of our capital stock for \$3.0 million under a \$100.0 million share repurchase program approved by our Board of Directors in 2015. The share repurchase program has no expiration date and may be suspended or discontinued at any time without notice. As of September 30, 2018, \$49.0 million remained for repurchase under the share repurchase program. All repurchases were made using cash from operations. Our share repurchases may occur from time to time through open market purchases, privately negotiated transactions or plans designed to comply with Rule 10b5-1 promulgated under the Securities Exchange Act of 1934, as amended.

Item 6. Exhibits

List of Exhibits:

- 3.1 Restated Articles of Organization of Rogers Corporation, as amended, incorporated by reference to Exhibit 3a to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2006 (the 2006 Form 10-K) (File No. 001-04347).
- 3.2 Amended and Restated Bylaws of Rogers Corporation, effective February 11, 2016, incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on February 26, 2016.
- 10.1 Letter Agreement between the Company and Michael M. Ludwig, dated August 28, 2018, filed herewith
- 31.1 Certification of President and Chief Executive Officer (Principal Executive Officer) pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.
- 31.2 Certification of Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer) pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.

32 Certification of President and Chief Executive Officer (Principal Executive Officer) and Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer) pursuant to Rule 13a-14(b) of the Securities Exchange Act of 1934 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 Rogers Corporation's Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2018 formatted in XBRL (Extensible Business Reporting Language): (i) Condensed Consolidated Statements of Operations for the three and nine months ended September 30, 2018 and September 30, 2017, (ii) Condensed Consolidated Statements of Comprehensive Income (Loss) for the three and nine months ended September 30, 2018 and September 30, 2017, (iii) Condensed Consolidated Statements of Financial Position at September 30, 2018 and December 31, 2017, (iv) Condensed Consolidated Statements of Cash Flows for the nine months ended September 30, 2018 and September 30, 2017 and (v) Notes to Condensed Consolidated Financial Statements.

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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.

ROGERS CORPORATION

(Registrant)

/s/ Michael M. Ludwig

Michael M. Ludwig

Senior Vice President, Chief Financial Officer and Treasurer

Dated: November 1, 2018